PROCEEDINGS

ONE HUNDRED AND TWENTY NINTH ANNUAL MEETING

of the

UNITED STATES ANIMAL HEALTH ASSOCIATION

Gaylord Rockies Hotel
Aurora, Colorado
October 30-November 5, 2025

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Special Thanks to all Committee Chairs and Presenters for contributions to these proceedings.

ABOUT USAHA

USAHA's Vision and Mission

The United States Animal Health Association (USAHA) is the leading forum for animal health issues in the United States, promoting active participation from industry, academia, and government. USAHA provides a national venue for stakeholders to identify the most effective methods to protect and improve animal health and welfare and public health.

The United States Animal Health Association develops and promotes sound animal health solutions for the public good.

USAHA MEMBERSHIP

State Official Agency Members (50)

Alabama
Alaska
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
Florida
Georgia
Hawaii
Idaho
Illinois
Indiana
Iowa
Kansas
Kentucky
Louisiana
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New Hampshire
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North Dakota
Ohio
Oklahoma
Oregon
Pennsylvania
Rhode Island
South Carolina
South Dakota
Tennessee
Texas
Utah
Vermont
Virginia
Washington
West Virginia
Wisconsin
Wyoming

Federal Official Agency Members (14)

U.S. Department of Homeland Security
U.S. Forest Service
USDA, Agriculture Marketing Service
USDA, Agriculture Research Service
USDA, APHIS, Veterinary Services
USDA, APHIS, Wildlife Services
USDA, Food Safety Inspection Service
USDA, National Institute of Food and Agriculture
USDHHS, Centers for Disease Control and Prevention
USDHHS, Food and Drug Administration, Center for Veterinary Medicine
USDI, U.S. Fish and Wildlife Service*
USDI, National Park Service
USDI, USGS, National Wildlife Health Center
USDOE, Lawrence Livermore National Laboratory

Territory and Sovereign Agency Members (1)

North Mariana Island*

International Animal Health Agencies (4)

Australia*
Canada
Mexico*
New Zealand*

**Inactive for 2025*

ABOUT USAHA (continued)

Allied Industry Organizations (39)

Alpaca Owners Association
American Association of Avian Pathologists
American Association of Bovine Veterinarians
American Association of Small Ruminant Practitioners
American Association of Swine Veterinarians
American Association of Veterinary Laboratory Diagnosticians
American Association of Wildlife Veterinarians
American Association of Zoo Veterinarians
American College of Veterinary Preventative Medicine
American Dairy Goat Association
American Farm Bureau Federation
American Horse Council
American Sheep Industry Association
American Veterinary Medical Association
Animal Health Institute
Association of American Veterinary Medical Colleges
Association of American Feed Control Officials
Association of Fish & Wildlife Agencies
Exotic Wildlife Association
Livestock Exporters Association, USA
Livestock Marketing Association
National Aquaculture Association
National Association of Federal Veterinarians
National Association of State Departments of Agriculture
National Association of State Public Health Veterinarians
National Bison Association
National Cattlemen's Beef Association
National Institute for Animal Agriculture
National Milk Producers Federation
National Pork Board
National Pork Producers Council
National Renderers Association
National Turkey Federation
North American Deer Farmers Association
North American Elk Breeders Association
Professional Rodeo Cowboys Association
US Cattle Trace
U.S. Poultry & Egg Association
USA Poultry and Egg Export Council

District Delegates

Northeast: R. Gibson, D. McElhaney
North Central: J. Eggers
South: L. O. Lollis; A. Torres
West: M. Zaluski, H.M. Richards

Individual Members: 736
Life Members: 137
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I. 2025 Officers and Directors

A. Officers

2024-2025 Executive Committee



Front row (from left): *Steve Crawford,* NH*,* Immediate Past President; *Peter Mundschenk*, SC, President; *Charles Broaddus*, VA, President Elect
Back row (from left): *Kaitlynn Levine*, VT, Third Vice President; *Kathy Simmons*, DC, Second Vice President; *Beth Thompson, SD*, Treasurer; *Justin Smith,* KS, First Vice President
.

B. USAHA Board of Directors, 2025

Name		Affiliation
Tony	Frazier	Alabama Dept of Agric
Sarah	Coburn	Alaska Dept of Environmental Conservation
Signe	Balch	Alpaca Owners Assn
Eric	Gingerich	American Assn of Avian Pathologists
Chris	Ashworth	American Assn of Bovine Practitioners
Cindy	Wolf	American Assn of Small Ruminant Practitioners
Harry	Snelson	American Assn of Swine Veterinarians
David	Zeman	American Assn of Vet Laboratory Diagnosticians
Anne	Justice-Allen	American Assn of Wildlife Veterinarians
Robert	Hilsenroth	American Assn of Zoo Veterinarians
Lori	Reynolds	American Dairy Goat Assn
Scott	Bennett	American Farm Bureau Federation
Amy	Hendrickson	American Sheep Industry Assn
Michael	Costin	American Veterinary Medical Assn
Julie	Broadway	American Horse Council
MJ	McNamee	Animal Health Institute
Ryan	Wolker	Arizona Dept of Agric
Andrew	Fidler	Arkansas Livestock and Poultry Commission
Kevin	Cain	Assn of American Vet Medical Colleges
Colin	Gillin	Assn of Fish & Wildlife Agencies
Annette	Jones	California Dept of Food and Agric
Mary Jane	Ireland	Canadian Food Inspection Agency
Colin	Basler	Centers for Disease Control and Prevention
Mike	Neault	Clemson Univ/ SC Livestock Poultry Health
Maggie	Baldwin	Colorado Dept of Agric
Thamus	Morgan	Connecticut Dept of Agric
Karen	Lopez	Delaware Dept of Agric
Ken	Yancey	Exotic Wildlife Assn
Michael	Short	Florida Dept of Agric and Consumer Services
William	Flynn	Food and Drug Administration - CVM
Janemarie	Hennebelle	Georgia Dept of Agric
Isaac	Maeda	Hawaii Dept of Agric
Scott	Leibsle	Idaho Dept of Agric
Mark	Ernst	Illinois Dept of Agric
Kyle	Shipman	Indiana Board of Animal Health
Jeff	Kaisand	Iowa Dept of Agric

Justin	Smith	Kansas Dept of Agric
Steve	Velasco	Kentucky Dept of Agric
Gerardo	Quaassdorff	Livestock Exporters Assn
Kevin	Thielen	Livestock Marketing Assn
Daniel	Myrick	Louisiana Dept of Agric and Forestry
Rachael	Fiske	Maine Dept of Agric
Jennifer	Trout	Maryland Dept of Agric
Lorraine	O'Connor	Massachusetts Dept of Agric Resources
Nora	Wineland	Michigan Dept of Agric
Brian	Hoefs	Minnesota Board of Animal Health
James	Watson	Mississippi Board of Animal Health
Steve	Strubberg	Missouri Dept of Agric
Tahnee	Szymanski	Montana Dept of Livestock
Kim	Conway	National Assn of State Public Health Veterinarians
Tom	Bragg	National Bison Assn
Kathryn	Simmons	National Cattlemen's Beef Assn
J.J.	Jones	National Institute for Animal Agriculture
Jamie	Jonker	National Milk Producers Federation
Dustin	Oedekoven	National Pork Board
Ashley	Johnson	National Pork Producers Council
Charles	Starkey	National Renderers Assn
Lindy	Froebel	National Turkey Federation
Jamee	Eggers	NCUSAHA
Roger	Dudley	Nebraska Dept of Agric
David	McElhaney	NEUSAHA
Robert	Gibson	NEUSAHA
Peter	Mundschenk	Executive Committee - Western District
Mark	Prescott	New Hampshire Dept of Agric
Amar	Patil	New Jersey Dept of Agric
Sammie	Uhrig	New Mexico Livestock Board
Joy	Bennett	New York State Dept of Agric/Markets
Shawn	Schafer	North Am Deer Farmers Assn
Travis	Lowe	North Am Elk Breeders Assn
Michael	Martin	North Carolina Dept of Agric
Ethan	Andress	North Dakota Board of Animal Health
Dennis	Summers	Ohio Dept of Agric
Rod	Hall	Oklahoma Dept of Agric
Ryan	Scholz	Oregon Dept of Agric
Alex	Hamberg	Pennsylvania Dept of Agric

Scott	Marshall	Rhode Island Div of Agric
Alberto	Torres	SAHA
L. Gene	Lollis	SAHA
Beth	Thompson	South Dakota Animal Industry Board
Samantha	Beaty	Tennessee Dept of Agric
Denise	Heard	U.S. Poultry and Egg Assn
J Lee	Alley	USAHA Past President
Philip	Bradshaw	USAHA Past President
Richard	Breitmeyer	USAHA Past President
Stephen	Crawford	USAHA Past President
Barb	Determan	USAHA Past President
Kristin	Haas	USAHA Past President
Steven	Halstead	USAHA Past President
Charlie	Hatcher	USAHA Past President
Bob	Hillman	USAHA Past President
Donald	Hoenig	USAHA Past President
Bruce	King	USAHA Past President
Maxwell	Lea, Jr.	USAHA Past President
Donald	Lein	USAHA Past President
Bret	Marsh	USAHA Past President
David	Marshall	USAHA Past President
Michael	Marshall	USAHA Past President
Richard	McCapes	USAHA Past President
David	Meeker	USAHA Past President
Lee	Myers	USAHA Past President
Boyd	Parr	USAHA Past President
John	Ragan	USAHA Past President
Steve	Rommereim	USAHA Past President
David	Schmitt	USAHA Past President
H. Wesley	Towers	USAHA Past President
Max	Van Buskirk	USAHA Past President
Richard	Willer	USAHA Past President
Larry	Williams	USAHA Past President
Rosemary	Sifford	USDA-APHIS-VS
Sarah	Bevins	USDA-APHIS-WS
Roxann	Motroni	USDA-ARS
Kathy	Bjork	USDA-NIFA
LeAnn	White	USGS-National Wildlife Health Center*
Amanda	Price	Utah Dept of Agric

Kaitlynn	Levine	Vermont Dept of Agric
Charles	Broaddus	Virginia Dept of Agric
Amber	Itle	Washington State Dept of Agric
James	Maxwell	West Virginia Dept of Agric
Darlene	Konkle	Wisconsin Dept of Agric
Brian	McCluskey	WSLHA
Tim	Richards	WSLHA
Hallie	Hasel	Wyoming Livestock Board

**Recused from active voting.*

C. 2025 USAHA Committees

- Committee on Animal Emergency Management
- USAHA/AAVLD Committee on Animal Health Information Systems
- Committee on Animal Welfare
- USAHA/AAVLD Committee on Aquaculture
- Committee on Biologics and Biotechnology
- Committee on Cattle and Bison
    - Subcommittee on Brucellosis
    - Subcommittee on Cattle Disease Traceability
    - Subcommittee on Trichomoniasis
    - Subcommittee on Tuberculosis
- USAHA/AAVLD Committee on Diagnostic Laboratory and Veterinary Workforce Development
- Committee on Equine
- Committee on Farmed Cervidae
- USAHA/AAVLD Committee on Food and Feed Safety
- Committee on Foreign and Emerging Diseases
- Committee on Government Relations
- Committee on Global Animal Health and Trade
- USAHA/AAVLD Committee on National Animal Health Laboratory Network (NAHLN)
- Committee on Nominations and Resolutions
- Committee on Parasitic and Vector Borne Diseases
- Committee on Program
- Committee on One Health
    - Subcommittee on Pharmaceutical Issues
    - Subcommittee on Rabies
    - Subcommittee on Salmonella

- Committee on Poultry and Other Avian Species
    - Subcommittee on Avian Influenza (AI) and Newcastle Disease (NDV)
- Committee on Sheep, Goats and Camelids
    - Subcommittee on Scrapie and Identification
- Committee on Swine
- Committee on Wildlife

Rosters of each committee as of the 2025 Annual Meeting are included within each report.

A current listing for committee rosters can be found on the USAHA web site, listed under each committee page, respectively.

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II. A. USAHA/AAVLD AWARDS LUNCHEON

WELCOME AND INVOCATION

Peter Mundschenk and *Tonya LeRoith*

MEMORIAL SERVICE

Justin Smith

Colleagues, let us take a moment to humbly pause to remember those that have served with us over the years, but have since passed on. Let us keep in mind that life is fragile. Let us also enjoy the memories and contributions from these individuals, and the fellowship that we have shared. We wish for peace among their families and friends, and that we carry forward their dedication in the work that we do here. Please take a moment and reflect on these individuals as I read their names:

- Dr. Clarence Siroky, ID (January 2025)
- Dr. Arthur A Bickford, CA (August 2023)
- Dr. Edward Charles Roukema, VA (July 2021)
- Dr. Wade L Kadel, KY (November 2023)
- Mr. George Teagarden, KS (September 2025)
- Dr. Donald S. Davis (January 2025)
- Dr. Floyd Wilson, MS (January 2025)
- Dr. Shankar Mondal, MD (November 2024)

May they rest in peace, and may their memories be cherished by all who knew them.

AWARDS LUNCHEON SPONSOR'S RECOGNITION

Special Thanks to Our
2025 Awards Luncheon Sponsors

GlobalVetLink



Aaron Avery

Trace First, Ltd.



Michael McGrath

NATIONAL ASSEMBLY AWARD
Presented by *Steve Strubberg*



Dr. Nora Wineland

The National Assembly Award is given to an active regulatory official or an industry representative for outstanding service in animal health regulatory programs.

Dr. Nora Wineland was recognized for her collaboration, planning, and transparency during recent HPAI in dairy cows. She has provided invaluable service to several states through her well planned and open data gathering during the outbreak of HPAI in dairy cows in Michigan. Her foresight to gather as much data as possible along with her open and clear presentation of those data to the Assembly in timely manner made it possible for us to craft orders and refine plans for both the prevention of and response to HPAI in neighboring states. Dr. Wineland's presences on calls and willingness to take questions both during Assembly meetings and after hours in smaller groups, provided much needed data, advice, and experienced guidance to both protect animal health while minimizing the impact on farming and animal movements.

The National Assembly is grateful for Dr. Wineland's approach and team spirit has protected animal health in multiple states.

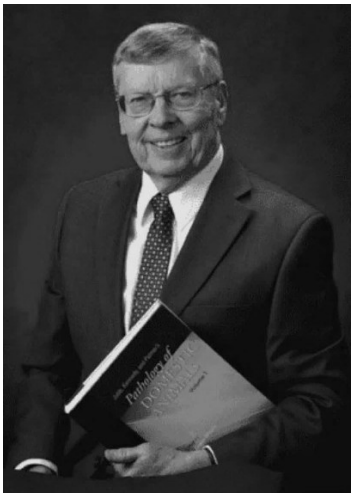
APHIS ADMINISTRATOR'S AWARD
Presented by *Rosemary Sifford*
with video accolades by Michael Watson



Dr. Kevin Snekvik

Congratulations to Dr. Kevin Snekvik, Washington Animal Disease Diagnostic Laboratory Executive Director, on receiving the highest award from APHIS for his dedicated service and commitment to safeguarding U.S. agriculture.

AAVLD DISTINGUISHED SERVICE AWARD



Grant Maxie, DVM, PhD, Diplomate ACVP

The Distinguished Service Award honors those members who have generously volunteered their time, energy, and professionalism to substantially enrich and advance AAVLD and diagnostic medicine.

AAVLD E.P. POPE AWARD



Amy Swinford, DVM, MS, Diplomate (Emeritus) ACVM

This is AAVLD's highest award, presented to an individual who has made noteworthy contributions to the AAVLD and the field of veterinary diagnostic laboratory medicine.

AAVLD LIFETIME MEMBERSHIP AWARDS

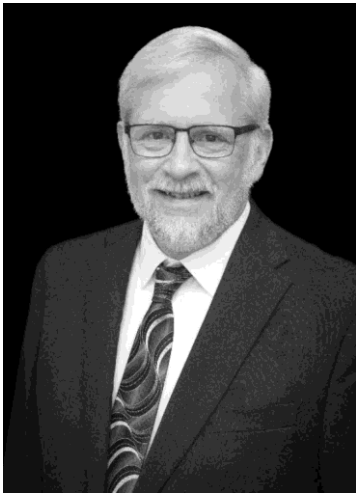
In recognition of longevity as an active contributing member of AAVLD.



Amy K. Swinford, DVM, MS
Diplomate (Emeritus) ACVM



Claire Buchanan Andreasen, DVM, PhD



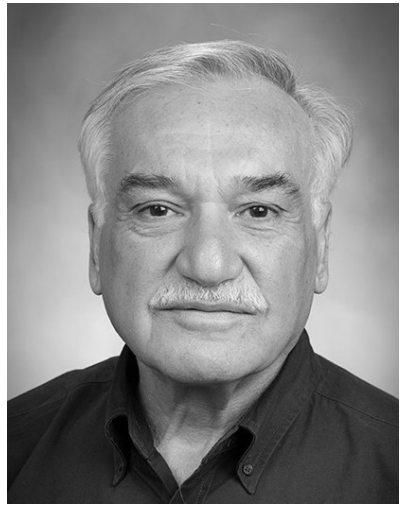
Bill G. Van Alstine, DVM, PhD



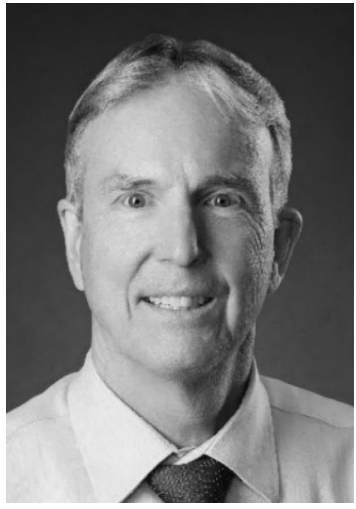
Robert H. Poppenga, DVM, PhD



François Elvinger, Dr.med.vet., PhD., dipl. ACVPM&ECVPH



Mo Salman, DVM, MPVM, PhD DACVPM, FACE, Hon. Dipl. AVOHS



William C. Wilson, PhD

USAHA FEDERAL PARTNERSHIP AWARD
Presented by *Dr. Peter Mundschenk*



Dr. Brenda Morningstar-Shaw

The USAHA Federal Partnership Award is designated for the recognition of a federal employee* that has demonstrated commendable service to the betterment of animal health in the United States. The recipient need not be a member of USAHA, but have a positive impact on animal health related to the work of USAHA

It is with great pride and deep admiration that I stand before you today to honor a remarkable individual whose dedication, expertise, and service have left an indelible mark on both the National Poultry Improvement Plan and the United States Animal Health Association - Dr. Brenda Morningstar-Shaw.

Brenda is not just a scientist of distinction; she is a tireless volunteer, a trusted colleague, and a cornerstone of collaborative progress in our field. Her contributions span nearly two decades of unwavering commitment to improving poultry health and advancing diagnostic excellence across the nation.

As a longtime member of the Salmonella Subcommittee under the NPIP Technical Advisory Committee, Brenda has brought unparalleled insight into classical Salmonella serotyping. Her work evaluating new diagnostic assays has been instrumental in shaping the tools we rely on today. She has given countless hours - often behind the scenes - ensuring that every assay is rigorously reviewed and tested before reaching official NPIP meetings.

Since 2009, Brenda has been the driving force behind the NPIP Salmonella Diagnostic Workshops, training laboratory technicians from nearly 100 authorized labs across the country. Her role is far more than instructional - she organizes lectures, prepares labs, secures supplies, and teaches with clarity and passion. Thanks to her efforts, these technicians

earn certifications that keep their labs authorized and our poultry industry safe and thriving.

Her impact doesn't stop there. Brenda has been a vital contributor to USAHA Annual Meetings since 2006, offering critical updates from the National Veterinary Services Laboratory. Her reports on Salmonella trends and serotypes have helped shape internal validations and fostered collaborations that continue to benefit all those involved.

As Brenda retired from federal service in 2025, we reflect not only on her career but on the contributions she has made. She is sought after by peers for her wisdom, relied upon by NPIP staff for her problem-solving, and admired by all who have had the privilege to work alongside her.

Brenda Morningstar-Shaw embodies the very spirit of this award—honor, trust, enthusiasm, and excellence.

Unfortunately, Brenda is unable to join us today to accept the award. We spoke with her last week, and she kindly provided the following comments:

"I'm truly humbled to be nominated for the United States Animal Health Association's Federal Partnership Award. This recognition means a great deal as I close this chapter of my career. I've been fortunate to work alongside so many dedicated professionals whose teamwork and commitment have made a real difference in animal and public health. I'm grateful to the USAHA and to all my colleagues and partners for their support, collaboration, and the friendships that have made this journey so rewarding. Thank you for your support and for sharing this journey with me."

USAHA MEDAL OF DISTINCTION AWARD
Presented by *Dr. Peter Mundschenk*



Dr. Valerie Ragan

Our next award is the highest honor one can receive from USAHA, the Medal of Distinction. The USAHA Medal of Distinction is awarded annually to recognize a distinguished USAHA member who has demonstrated outstanding leadership, provided exemplary service, and have made significant contributions to the advancement of the Association.

It is both a privilege and a profound honor to stand before you tonight as we celebrate a woman whose impact on veterinary medicine has been nothing short of transformative - Dr. Valerie Ragan.

For over four decades, Dr. Ragan has not only shaped the field of veterinary medicine but has redefined what it means to lead with purpose, passion, and vision. As the director of the Center for Public and Corporate Veterinary Medicine at Virginia Tech since 2009, she has guided countless veterinarians - students and seasoned professionals alike - toward fulfilling careers beyond the clinic walls.

She has been a pioneer, a mentor, a visionary. Valerie began her USAHA membership in 1994. She helped launch the Student Travel Awards Program with USAHA in 2011, opening doors for hundreds of students to explore public veterinary medicine. She has written coursework, advised professionals across the country, and even now, is finishing a book to help others navigate career transitions. While this may be the most unique contribution to USAHA, she has worn many other leadership hats, including chairing the USAHA/AAVLD Committee on Diagnostic Laboratory & Veterinary Workforce Development, and been a driving force on several others, particularly on Tuberculosis and Brucellosis.

Dr. Ragan has always believed that veterinary medicine is not a one-size-fits-all profession. She has championed the idea that “there is a place for every veterinarian in veterinary medicine,” and through her mentorship, she has helped others find that place. Whether it was a student unsure of their path, a mid-career professional seeking change, or a colleague navigating uncharted territory, Valerie was there - with wisdom, empathy, and a roadmap.

Her own journey is a testament to reinvention. From small animal practice to becoming one of the nation’s foremost experts on brucellosis at the USDA, and then returning to her beloved Virginia Tech to lead and inspire, Dr. Ragan has never stopped evolving. She once said, “I don’t like the word retire - it sounds like you’re tired again. I’m graduating.” And indeed, she is graduating into a new chapter, one filled with writing, consulting, family, and, no doubt, continued influence.

Dr. Ragan, your legacy is not just in the programs you’ve built or the policies you’ve shaped - it’s in the people you’ve empowered. You’ve shown us that veterinary medicine is a vast and vibrant field, and that with courage and curiosity, we can all find our place in it.

On behalf of our organizations, your students, and the countless lives you’ve touched - thank you. Thank you for your leadership, your generosity, and your unwavering belief in the potential of others – and connecting all these students to the work of USAHA and AAVLD.

She and her husband John, a past president of USAHA, will carry the distinct designation of the first and only husband-wife to receive this award. Congratulations on this well-deserved recognition. We wish you all the best in your retirement – or rather graduation.

II. B. USAHA/AAVLD PRESIDENT'S DINNER AND KEYNOTE

SPONSORS' RECOGNITION



Special thanks to Boehringer Ingelheim for their support of the Annual Meeting and President's Dinner.

USAHA PRESIDENT

Dr. Peter Mundschenk



Good evening.

As I look back over my five years in this association - and especially this past year as your president - one word comes to mind: **Resilience.**

- Resilience isn't just about bouncing back.
- It's about moving forward - adapting, learning, and growing stronger *because* of challenges, not in spite of them.

1. Our Association's Journey

Over the last five years, we have stayed true to our purpose and kept moving forward.

- These years have tested all of us:
  economic shifts, resource limits, uncertainty, and even the isolation that came when we couldn't connect in person.
- And yet - **here we are.**
- We didn't just endure; we evolved.
  - We kept programs running.
  - We learned to work in virtual and hybrid spaces.
  - We found creative ways to collaborate, educate, and lead.

2. Resilience Starts with People

Resilience isn't built by organizations - it's built by individuals.

- It's the committee member who steps up to take on new responsibilities, like the NWS meeting this fall.
- It's the staff who adapt with grace, balancing constant change while keeping everything moving forward.

- Every one of you here has contributed to that shared resilience.

3. Resilience Is About Community

Beyond individuals, resilience thrives in community.

- It's about lifting one another up.
- It's about sharing ideas, offering help without hesitation, and remembering we are stronger together.
- This connects directly to another important aspect - **psychological resilience.**

4. Psychological Resilience

We all face stress, fatigue, and uncertainty - especially in times of tight budgets, shifting priorities, or disease challenges.

- Even the strongest among us can feel our "resilience tank" running low.
- I like to think of it not as a car running out of gas, but as a **scuba diver's air tank.**
  (Add story of diving in Grand Cayman here)
  - Divers plan their turnaround point - when to head back before the tank runs low.
  - Ignore that, and you risk running out of air.
  - But divers also have a *buddy* - someone who can share air when needed, so everyone gets back safely.
- In the same way, we depend on each other. Without community and connection, we risk drowning in our challenges.
- We all need to refill our tanks - through rest, support, and renewal.

5. Fostering Resilience as Leaders

As leaders and members of this association, we can build a culture that promotes resilience.

- Create an environment of care and understanding.
- Value people for who they are, not just for what they do.
- Encourage balance, mental health, and mutual support.

Closing

As I wrap up, I want to say **thank you.**

- To my family and friends, for helping me stay resilient.
- To our staff, committees, and every member here - your dedication and teamwork are the heart of this association.
- I look forward to continuing this journey with all of you in the years to come.

Together, we are resilient.

Thank you.

AAVLD PRESIDENT

Dr. Tonya LeRoith



Clinical Professor in the Department of Biomedical Sciences and Pathobiology at Virginia Tech, Dr. LeRoith currently serves as the Director of Virginia Tech Animal Laboratory Services (ViTALS). She teaches pathology and virology, and supports infectious disease, cancer, and immune-mediated disease research. She completed an anatomic pathology residency and PhD at Washington State University under the guidance of Terry McElwain and Tim Baszler who first introduced her to AAVLD. She took her first faculty position at Virginia Tech in 2005 and became Diplomate of the American College of Veterinary Pathology (Anatomic Pathology) in 2006. In 2012, she was appointed as the Director of the ViTALS lab with the goal of AAVLD accreditation. ViTALS was given provisional accreditation in 2016 and has been fully accredited since 2017.

KEYNOTE ADDRESS

Fireside Chat



Front Left: *Bruce Akey, John Clifford, Jerry Saliki, Don Lein, Valerie Ragan.*

Dr. Charlie Broaddus and Dr. Ashely Hill provided an introduction highlighting a unique and special Keynote program for the 2025 Annual Meeting.

Tonight, we recognize that we have some phenomenal experts that are part of our USAHA and AAVLD family, who have contributed greatly to animal health advances over many decades, and who are considered by many to be "Titans of the Profession." These individuals have great experience and insight, and I am excited to hear what they want to share with those of us that continue in their footsteps, to help support U.S. livestock and poultry health, and the overall success of animal agriculture in America, in our work every day.

We have no shortage of these "Titans" in our midst, many of whom are humble and underrecognized for the contributions they have made over the years. So, in full recognition of the fact that many of you sitting in the audience have similar great advice to share, we are very pleased that the following individuals will be sharing their thoughts with us this evening, and I will ask that they please make their way to the stage and find a comfortable seat – and settle in with a glass of wine if so desired - as we read their names:

- Dr. Don Lein is the former Director of the Animal Health Diagnostic Center at Cornell University as well as Emeritus Professor of population medicine and diagnostic sciences. He is a pioneer in both diagnostic medicine and disease control, and has served as president of both the American Association of Veterinary Diagnostic Laboratories (AAVLD) and the United States Animal Health Association (USAHA in addition to other leadership roles. He was involved in numerous

disease control programs over the years, and oversaw New York's wildlife rabies vaccination program for 14 years.

- Dr. John Clifford currently works for USAPEEC as a veterinary trade advisor, where he provides input on World Organization of Animal Health (WOAH) Chapters that affect poultry and advice on USDA policy that is related to poultry. Previously he was employed for 33 years with USDA, culminating as the Chief Veterinary Officer for USDA-VS for 12 years, where he provided leadership in protection of our nation's animal health, and also served for 12 years as the US Delegate to WOAH and ensured continued international trade opportunities as the Chief Trade Advisor for Veterinary Services.
- Dr. Valerie Ragan is the immediate past director of the Center for Public and Corporate Veterinary Medicine with the Virginia-Maryland College of Veterinary Medicine (VMCVM) at Virginia Tech, and also works internationally on brucellosis eradication and veterinary capacity building. Ragan spent 17 years with USDA, serving as National Brucellosis Epidemiologist and assistant deputy administrator for VS. She was awarded AVMA's Public Service Award in 2017. Valerie has worked in private industry, government, and academia, and in all of these roles, has impacted generations of veterinarians.
- Dr. Jerry Saliki obtained his DVM degree from University of Liège, Belgium, and a PhD in Virology from Cornell University. During his doctoral studies, he worked at the Plum Island Animal Disease Center. He then served as Diagnostic Virologist at the Oklahoma Animal Disease Diagnostic Laboratory (OADDL), as Virologist and Lab Director at the Athens Veterinary Diagnostic Laboratory (University of Georgia), and is currently Lab Director back in Oklahoma. He has been an AAVLD member for more than 30 years, serving as Editor-in-Chief of JVDI from 2003 to 2014, and as President in 2021-22.
- In addition, we are very fortunate to have Dr. Bruce Akey, certainly a "Titan" as well, be able to facilitate the discussion. Dr. Akey has been a director of veterinary diagnostic laboratories in three states - VA, NY, and TX- overseeing and providing leadership for both daily operations as well as strategic directions. He now provides private consulting services on a wide range of laboratory operational aspects and has led or participated in multiple laboratory operational reviews and planning efforts. He is a past President of AAVLD

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II. C. JOINT SCIENTIFIC SESSION PAPERS, ABSTRACTS AND POSTERS

1. Papers and Abstracts

Comparison of antibiograms generated using the AMR visualizer RShiny app for feline urine isolates from veterinary labs across the USA (2024) – C. Guarino

First detection of avian metapneumovirus subtype A with H7N9 highly pathogenic avian influenza in a Mississippi broiler breeder flock – N. Armour Manginsay

Identification of antigens unique to Theileria orientalis Ikeda over Multiple infection types – C. Burgess

Network-based evaluation of cattle traceability with EID tags – M. Smith

Lab-led investigation of surgical site infections: Identifying pathogens and risk factors in companion animals – C. King

A quantitative model of the risk of FMD transmission following cattle movements during an outbreak – T. Dunlea

Comparison of PCR detection of PRRSV and PEDV from paper environmental samplers – B. Armenta-Leyva

Genomic insights and antimicrobial resistance of Pasteurella multocida strains isolated from pigs – M. Hakimi

Improving non-invasive diagnosis of cutaneous and gastrointestinal forms of Pythium insidiosum infections in dogs: Complementary roles of serum-based ELISA and PCR – S. Barua

Susceptibility of dry cattle to infection with highly pathogenic avian influenza H5N1 – K. Cool

Bovine abortion attributed to highly pathogenic avian influenza (HPAI) H5N1 clade 2.3. 4.4b – J. Ochoa

Detection of highly pathogenic influenza virus (HPAIV H5N1) clade 2.3.

4.4b in five aborted bovine placentas – M. Macías-Rioseco
Optimized nucleic acid extraction protocols for detecting avian influenza A virus in extended bovine semen – A. Lim

Prevalence and risk factors for equine hepacivirus (EqHV), parvovirus-hepatitis (EqPV-H), and pegivirus (EPgV) in Alabama, USA – S. Barua

Enhancing adaptability: Simulation of pooling optimization approaches for reduction in resource consumption, processing time, and adjusting to lapses in testing capacity – C. Burgess

Using game theory to assess the optimal allocation of limited vaccine doses in foot-and-mouth disease outbreaks: a stochastic framework – K. Moreno-Torres

Performance of the African swine fever and classical swine fever sick pig surveillance component at the University of Minnesota and Iowa State University Veterinary Diagnostic Laboratories – M. Schultze

Interstitial pneumonia in donkeys – N. Streitenberger

Comparison of the diagnostic performance of commercial PRRSV RT-qPCR assays using oral fluid samples of known status – B. Armenta-Leyva

A highly sensitive FRET-qPCR for differentiating three canine dermatophytes: Trichophyton mentagrophytes, Microsporum canis, and Nannizzia gypsea – N. Iduu

Hepatic necrosis in a Dorper sheep due to Paraclostridium sordellii – M. Macías-Rioseco

Paraclostridium sordellii enteritis, peritonitis and presumptive terminal septicemia in a domestic cat – T. Cornish

Comparison of antibiograms generated using the AMR visualizer RShiny app for feline urine isolates from veterinary labs across the USA (2024)

Cassandra M. Guarino[1], Stephen D. Cole[2], Rachel Saltus[1], Kurtis Sobkowich[3], Wendy Beauvais[4], Emma Bollig[5], Melissa Boyd[5], Anne Deckert[3], Jaclyn Dietrich[2], Amelia Frye[1], Amy Fridlund[4], Anil Gayatri[1], Jennifer Granick[5], Lynn Guptill[4], Abdolreza Mosaddegh[6], Maho Okumura[2], Zvonimir Poljak[3], Giovanna Roberto[4], Donald Szlosek[7], Scott Weese[3], Casey Cazer[1]

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Antimicrobial resistance (AMR) is a rapidly increasing problem in veterinary medicine with potential significant public health impacts. Cumulative antibiograms can help to combat AMR when used cautiously to guide empiric therapy and to monitor changes of AMR in a population. Antibiograms are often time-consuming for laboratories to generate and there is a need for veterinary-specific tools to rapidly and reliably produce them. The aim of this study was to pilot antibiogram generation using the AMR Visualizer RShiny App across multiple veterinary sites and to compare results. Following a training session, each site (Cornell University, University of Minnesota, Purdue University, and University of Pennsylvania) used antimicrobial susceptibility testing data from their respective diagnostic laboratory to generate antibiograms for major feline uropathogens isolated in 2024. CLSI urinary breakpoints were used for interpretation Prevalence of susceptibility to first-line urinary tract infection (UTI) antimicrobial drugs (ampicillin (AMP) or amoxicillin (AMX), amoxicillin-clavulanate (AMC) and trimethoprimsulfamethoxazole (TMS)) were compared across sites. Additionally, academic center antibiograms were also compared to antibiograms generated with the AMR Visualizer from national data at a large commercial reference diagnostic laboratory. Across all sites, *E. coli* was the most common feline uropathogen followed by *Enterococcus faecalis* and then *Staphylococcus* spp. Challenges for antibiogram generation were also identified across sites.

There were sufficient feline isolates (n>30 based on CLSI recommendations) for *E. coli* (n=3 sites), *Enterococcus* spp. (n=2 sites), and *Staphylococcus* spp. (n=2 sites). Feline isolate susceptibility prevalence ranges (and national prevalence) for each bug-drug combination were as follows: AMP susceptibility for *E. coli* was 61-100% (national AMX 68%) and *Enterococcus* spp. 87-92% (AMX 93%). AMC susceptibility for *E. coli* was 85-100% (85%), *Enterococcus* spp. 87% (94%), and *Staphylococcus* spp. 82% (87%). TMS susceptibility for *E. coli* was 93-100% (97%) and *Staphylococcus* spp. 97%

(91%). This pilot project demonstrated the utility of a common antibiogram tool for generating and comparing antibiograms across multiple veterinary sites. Challenges that arose included insufficient isolate numbers, variation of antimicrobials tested across laboratories, nuances in data export and structure, and changed breakpoints during the testing period. The antibiograms suggest that AMP, AMC, and TMS are still appropriate first-line empiric choices to treat feline UTI, although AMP susceptibility is low for *E. coli* in some areas. Future directions include generation of additional antibiograms for other infection types and continued refinement of the AMR Visualizer RShiny App.

First detection of avian metapneumovirus subtype A with H7N9 highly pathogenic avian influenza in a Mississippi broiler breeder flock

Natalie Kathleen Armour Manginsay[1], Martha Pulido-Landinez[1], Lifang Yan[2], Mia Torchetti[3], Isabella Hannay Proctor[1], Heidi Huffman Rose[2], Hope Martin[4]

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Avian metapneumovirus (aMPV) is a highly contagious virus in the family *Pneumoviridae*, genus *Metapneumovirus* which causes swollen head syndrome in chickens and rhinotracheitis in turkeys. aMPV subtypes A and B were detected for the first time in the United States in early 2024 and have since spread across much of the country, with profound impacts on chicken and turkey health.

Avian influenza virus is a high consequence poultry pathogen, with subtypes H5 and H7 of greater concern because of the potential to mutate from low pathogenic avian influenza (LPAI) to highly pathogenic avian influenza (HPAI) in gallinaceous poultry. While H7 HPAI viruses had not been detected in commercial poultry in the United States since 2017, HPAI H5 clade 2.3.4.4b viruses have caused a panzootic in recent years with intercontinental transmission and affected poultry flocks across all U.S. states.

In February 2025, four live 37.5-week-old broiler breeder hens from one of four houses on a farm of 47,700 birds with a history of increased mortality and neurologic signs were submitted to the Poultry Research and Diagnostic Laboratory (PRDL) for necropsy. Birds were lethargic, with dyspnea and opisthotonus. Cellulitis and cranial osteomyelitis, lymphocytic meningitis, tracheitis, airsacculitis and oophoritis were present in all four birds. Avian metapneumovirus subtype A (aMPV-A) infection with secondary *Escherichia coli* meningitis was identified by RT-PCR and aerobic culture, respectively. Negative RT-PCR results excluded other respiratory differentials, including avian influenza (AI). aMPV-A infection was subsequently identified by RT-PCR in all houses on the farm.

Nine days after this submission, sera for routine AI ELISA testing were received from three houses on the farm.18 of 30 samples tested positive by AI ELISA and AI AGID; subsequent testing of 15 of 17 serum samples by the National Veterinary Services Laboratories (NVSL, Ames, IA) identified titers to H7 (≥1:8) by hemagglutination inhibition. Two days after the serum submission, mortality in one house dramatically increased to 1,500 birds in 24 hours, and the PRDL received a submission of pooled oropharyngeal swabs in BHI broth for AI RT-PCR testing from that house. Samples tested positive by AI and H7

RT-PCR, and NVSL confirmed North American lineage H7N9 virus with additional basic amino acids at the hemagglutinin cleavage site. The clinical presentation of the birds, accumulation of basic amino acids at the hemagglutinin cleavage site, and antibody responses to H7 provide evidence of prolonged virus circulation in gallinaceous poultry followed by mutation from LPAI to HPAI.

Fortunately, even with enhanced surveillance, no other farms were identified to be affected by the H7N9 virus.

This report summarizes the first detection of both aMPV-A and North American HPAI H7N9 in Mississippi poultry.

To the authors' knowledge, this is the first report of HPAI H7N9 in chickens that were also infected with aMPV-A.

Identification of antigens unique to *Theileria orientalis* Ikeda over multiple infection types

Catie Burgess[1,2], S. Michelle Todd[3,4], Annmarie Pudlo[4], Sierra Guynn[1], Sahar Abdelrazek[1], Lauren Ibarguen[5], Kevin Lahmers[1,3]

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Theileria orientalis Ikeda has been an emerging parasite of cattle in North America since 2017, causing costly clinical outbreaks of Bovine Infectious Anemia when introduced to naïve stock in regions where the Longhorned tick vector is present. With no effective vaccine or approved treatment, the rapid spread of the Longhorned tick, and the ineffectiveness of vector control, surveillance testing to define endemic/non-endemic regions and avoid the introduction of infected stock to non-endemic areas with the Longhorned tick is the only mitigation strategy currently available. While current surveillance through rtPCR can accommodate large testing volumes, it is limited in that it may require an additional assay to determine the infecting genotype and it cannot distinguish acute from persistent stages of infection, both of which have major implications for clinical outcome. Serological assays have the potential to make up for these deficits by using antigens unique to genotype or infection stage. Currently no such antigens have been identified, but likely exist given the previously shown genetic diversity between *T. orientalis* genotypes and differential gene expression between infection stages. Piroplasms were isolated from 30mL of blood from six persistently infected heifers for RNA sequencing. Non-host sequences that mapped to the Ikeda genome were then mapped to two other *T. orientalis* genotypes found in North America, Buffeli and Chitose, to determine which expressed genes were unique to Ikeda. Proteins of the 16 most highly expressed Ikeda-unique genes that were predicted to be extra-cellular (n=11) or membrane embedded (n=5) were recombinantly expressed via Chinese Hamster Ovary cells (GenScript, USA). These antigen candidates were ELISA screened using plasma from natural infection of three different types: persistent Ikeda, acute Ikeda, and Chitose, as well as uninfected plasma to serve as a control. Of the 3,561 genes identified via RNA sequencing, 27.9% were unique to the Ikeda genotype. Seropositivity (OD ratio > 2) was observed for at least one infection type in 12 of the 16 antigen candidates, with varying OD ratios observed between infection types for multiple candidates. Further analysis using varying analyte concentrations will be required to develop parameters that allow for specific identification of genotype and/or infection stage. These results demonstrate promise in the ability to develop a more specific serological assay to enhance surveillance efforts for Ikeda and limit its spread to non-endemic areas where clinical outbreaks are the costliest.

Network-based evaluation of cattle traceability with EID tags

MaRyka Smith, Michael Sanderson

Center for Outcomes Research and Epidemiology,
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College of Veterinary Medicine, Manhattan, KS

In the event of an animal disease outbreak in the United States (US), animal health officials must identify diseased and at-risk animals to begin control efforts. The recent goals for enhanced animal traceability in the US are focused on using electronic identification (EID) tags and digital records. The objective of this project was to simulate a complete national movement network and compare it to a partially observed EID network to assess the impacts of adopting EID technology in cattle movement tracing.

InterSpread Plus (ISP) was used to generate the complete national cattle movement network. Movement rates and the national population were derived from the FMD national model. The simulation was run for 60 days with no movement restrictions. Farms and markets represent network nodes.

The comparison (observed) network, was created by farms/markets (nodes) using EID tags and EID readers. Nodes were randomly assigned their tagging status with a 25% likelihood (low EID use), 50% likelihood (medium EID use), or 75% likelihood (high EID use). Similarly, reader status was assigned to nodes with a 50% likelihood for all scenarios. To be an observed movement, the source node must tag, and the destination node must have a reader.

All other movements are unobserved. The 3 scenarios were simulated 10 times each. For analysis, the average number of nationwide daily movements and the overall average degree were calculated. The overall average degree describes the average number of connections (movements in or out) per node over all 60 days.

The complete network contained approximately 58,000 nationwide movements per day from ~ 890,000 cattle farms and markets and an overall average degree of 7.8 movements per node. In the observed network with low EID rate, the daily number of movements observed was approximately 7,300, and the average degree decreased to 0.9 movements. For the medium EID rate, approximately 14,500 daily movements were observed with an average degree of 1.9 movements. For the high EID rate, approximately 21,600 daily movements were observed and an average degree of 2.9 movements. This represents a reduced number of contacts that can be found when tracing from an infected node.

These results show the potential impact EID use could have on the number of cattle movements that can be digitally traced in a disease outbreak investigation. Non-EID movements may still be traceable by traditional methods, but they delay identification of at-risk farms and slow outbreak control efforts. Ongoing modeling work in this project includes tracing the contacts

made by farms during consignment sorting and mixing at auction market sites, incorporating unique tagging and reader rates dependent on the farm type (e.g. cow-calf or dairy), and tracing the specific farm contacts in a potential causal infection chain. The results of this project can aid animal health officials in traceability program implementation, policy decisions and disease control efforts.

Lab-led investigation of surgical site infections: Identifying pathogens and risk factors in companion animals

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Healthcare-associated infections (HAIs), including surgical site infections (SSIs), pose a major threat to human and animal health as they are often caused by multidrug-resistant infections, leading to complications, extended hospital stays, increased costs, increased care giver stress, and even mortality. In 2021, The Ohio State University Veterinary Medical Center implemented a hospital-wide HAI tracking program through a collaboration between the Antimicrobial Stewardship Program (ASP) and the Clinical Microbiology Laboratory (CML) to investigate SSIs and implement targeted infection prevention and control (IPC) measures.

The primary objectives of the program were to identify risk factors associated with the development of SSIs, characterize the bacterial pathogens involved, and develop IPC strategies to reduce SSIs in the hospital. A retrospective matched case-control study was conducted using passive surveillance through the CML to identify SSI cases in canine and feline patients between February 2021 and May 2023. Data were extracted from the hospital's electronic medical record system, laboratory information management system, and an AI research tool.

Out of 418 suspected HAI cases, 172 met inclusion criteria and were matched to controls by species, surgical procedure, and procedure date (±3 months), resulting in a total study population of 344 patients. Collected data included patient demographics, perioperative variables, microbiological findings, antimicrobial usage, and SSI outcomes. Univariable analyses were used to assess preliminary risk factors, and descriptive statistics characterized SSI cases.

The majority of SSIs were superficial incisional (77%), followed by deep incisional (21%) and organ/space infections (2%). *Staphylococcus pseudintermedius* was the most frequently isolated bacteria (n = 66, 25%).

Notably, multidrug-resistant organisms accounted for 18% of all bacterial isolates recovered (n = 49). Amoxicillinclavulanate was the most prescribed antimicrobial, though treatment adjustments were frequently required based on antimicrobial susceptibility results. Significant risk factors ($p < 0.05$) for SSI development from univariable analysis included patient weight, surgical and anesthetic duration, hospital stay length, and owner compliance. Analysis revealed that SSI cases had an average total cost that was $2,441.60 higher than controls. Unsurprisingly, SSI cases also required more bandage changes, rechecks, and antimicrobials compared to controls.

Multivariable logistic regression identified owner compliance, surgery duration, preoperative medication use, and weight as significant factors. The findings of this study, among the first case-control analyses, will guide the development of SSI-specific IPC strategies in collaboration with surgical teams. This work highlights the need for integrated IPC and ASPs, supported by CMLs, to reduce the impact of SSIs and address ongoing antimicrobial resistance in veterinary medicine.

A quantitative model of the risk of FMD transmission following cattle movements during an outbreak

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[2]Department of Statistics, Kansas State University, Manhattan, KS

Foot and Mouth Disease (FMD), a major economic threat to the U.S. cattle industry, is primarily spread between farms by the movement of livestock. The Secure Beef Supply (SBS) project offers guidelines to control the spread of infection, but there are no quantitative assessments of FMD transmission risk under the current SBS recommendations. Overly restrictive movement control measures could severely disrupt business continuity; thus, balanced and effective outbreak management strategies are essential. This study estimates the transmission risk of cattle movements during an FMD outbreak.

Simulations from InterSpread Plus (ISP, a spatially explicit, stochastic FMD spread model) were used to estimate local, indirect, and direct daily incidence risk for cattle farms within 200 km of an infected premises (IP). For infected farms, within-herd disease dynamics and active observational surveillance was used to estimate the probability of detection prior to shipment. Movement farms were categorized as uninfected, infected but not detected, or infected and detected. Risk from shipment of an infected but undetected farm to another farm or auction market was estimated. For auction market shipments, the number of infected sale lots was estimated from consignment lot sorting, mixing, and transmission within the auction market.

Local transmission was the predominant risk for farms within 3 km of an infected premises (IP), with infection risk decreasing sharply as distance increased. Increasing the number of direct cattle shipments received increased infection risk for the movement farm. Movement farm biosecurity reduced infection probability, however, farms within 3 km of an IP still faced substantial risk. Shipments of cattle from infected but undetected farms to auction markets increased the number of infected sale lots, with the extent of spread influenced by the number of infected animals in each shipment and the degree of sorting or mixing at the market. FMD transmission resulting in new infections within the auction market was low due to the short time period of contact.

In an FMD outbreak, prompt and focused disease control programs will be necessary for disease eradication.

Quantitative assessment of cattle movement risk based on the risk of herd infection and probability of detection prior to movement can help to estimate the risk of specific cattle movements and avoid overly restrictive controls that impede business continuity. The results of this study will enhance our ability to make safe, informed cattle movement decisions, helping to control the impact of an FMD outbreak and mitigate disruptions to business continuity in the cattle industry.

Comparison of PCR detection of PRRSV and PEDV from paper environmental samplers

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Leave-in-place paper samplers may provide a practical, low-cost tool for environmental surveillance of pathogens in livestock production settings. However, until proven otherwise, it is reasonable to assume that paper composition affects liquid sorption, nucleic acid stability, and nucleic acid release – factors critical for downstream molecular testing. This study (1) evaluated nine paper types for liquid recovery and (2) compared four selected papers for RNA recovery of PRRSV and PEDV under different elution conditions.

In Experiment 1 (recovery of liquid), nine paper products were immersed in water (1000 to 3000 ul), and the volume of liquid recovered was measured: (1) Whatman 903, (2) FTA Classic, (3) Reemay polyester, (4) Swiffer dry cloth, (5) SmartSolve water-soluble, (6) dry surface polyester, (7) tacky surface polyester, (8) starch foam, and (9) blue shop towel. Paper product, immersion volume, and their interaction significantly affected liquid recovery ($p < 0.05$). Products 3 and 4 showed the highest recovery (up to 90% of the immersion volume at higher volumes), while products 5 and 8 showed the lowest recovery (< 35%).

In Experiment 2 (RNA recovery), swatches of four products (1-4) were inoculated with 300 ul of four 4-fold dilutions of PRRSV and PEDV, and dried. Thereafter, RNA was eluted using 2 ml of one of three buffers (PCRgrade water, Tris-EDTA, or lysis buffer) and RT-qPCR performed using commercial reagents. A positive control consisting of 300 ul of a specific 4-fold dilution added directly into 2 ml of each buffer was included to represent maximal theoretical recovery. RNA recovery across the dilution series was summarized using area under the curve (AUC) analysis. Products 3 and 4, when eluted with lysis buffer, produced mean AUC values not significantly different from positive controls ($p > 0.05$) for both viruses. That is, under the conditions of this study, testing either of these combinations produced comparable results to testing the positive control itself. Products 1 and 2 yielded significantly lower AUC values under most elution conditions ($p < 0.05$), indicating reduced RNA recovery.

These results demonstrated that both paper and buffer selection significantly influence the performance of environmental paper samplers for RNA detection. Based on these data, products 3 and 4 showed strong potential for further development in leave-in-place environmental surveillance systems targeting PRRSV, PEDV, and likely other viral pathogens in swine production settings.

Genomic insights and antimicrobial resistance of *Pasteurella multocida* strains isolated from pigs

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Pasteurella multocida is a gram-negative coccobacillus that serves as an opportunistic pathogen in pigs, primarily causing pneumonic pasteurellosis and, to a lesser extent, atrophic rhinitis. As a key contributor to the porcine respiratory disease complex, *P. multocida* infection leads to significant economic losses due to reduced weight gain and mortality. Despite its importance, there is limited genomic characterization of the isolates associated with pasteurellosis in pigs.

Whole genome sequencing (WGS) was conducted for 21 *P. multocida* isolates obtained from swine clinical cases submitted to the ISU VDL between 2019 and 2024, most (n=19) from midwestern farms. The age of the pigs varied from 3 to 14 weeks, including 3 sows.

WGS identified 11 capsule type A and 10 capsule type D isolates, originated from various sites, including nasal (n=6, 2 type A and 4 type D) and lung (n=6, 4 type A and 2 type D) samples, and 9 samples from systemic sites (5 type A and 4 type D), including heart (2), spleen (2), brain (2), liver (1), kidney (1), and joint (1).

Two of the nasal isolates (1 type A and 1 type D) were associated with suppurative rhinitis and nasal discharge. Five lung isolates were linked to bronchopneumonia, while systemic isolates were associated with various conditions, including sepsis, pericarditis, arthritis, bronchopneumonia, and meningoencephalitis. Most pigs had co-infections with other pathogens such as PRRSv, influenza, *Streptococcus suis*, *Glaesserella parasuis*, and *Mycoplasma hyorhinis*.

The most common sequence types (STs), based on multi-locus sequence types (MLST), were ST11 (n=6), ST75 (n=5), ST50 (n=4), and ST10 (n=4). There seems to be no association between the capsule type and MLST profile with the origin of the isolate or lesion observed. Additionally, several virulence genes were identified in all isolates based on genome analysis, including iron acquisition genes (*exb, tonB*), adhesins (*fimA, hsf-2, pfhA*), protectins (*oma87, ompA, ompH*), sialidases (*nanB, nanH*), and superoxide dismutase (*sodA, sodC*). Interestingly, the toxin gene (*toxA*) was detected in only one nasal type D.

Phenotypic antimicrobial susceptibility testing showed all isolates were susceptible to ampicillin (MIC90 ≤0.25), ceftiofur (MIC90 ≤0.25), enrofloxacin (MIC90 ≤0.125), florfenicol (MIC90=0.5), penicillin (MIC90 ≤0.125), tildipirosin (MIC90=4), tilmicosin (MIC90=16), and tulathromycin (MIC90 ≤8). Eighty-six percent of the isolates weresusceptible to tetracycline (MIC50 ≤0.5, MIC90=8). While the *Tet-34* gene was found in all isolates, *TetB* or *TetJ* was only detected in isolates phenotypically resistant to tetracycline.

This study highlights that virulence-associated genes are widely distributed among *P. multocida* strains isolated from diseased pigs. Additionally, these isolates are mostly susceptible to antibiotics used in the swine industry.

Future studies should include additional isolates to represent the swine population more broadly.

Improving non-invasive diagnosis of cutaneous and gastrointestinal forms of *Pythium insidiosum* infections in dogs: Complementary roles of serum-based ELISA and PCR

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Pythiosis is an emerging infectious disease of increasing concern in both veterinary and human medicine. It is mainly caused by the oomycete *Pythium insidiosum*. The disease is most commonly reported in tropical and subtropical regions, and within the United States, it is endemic to the Southeast and Gulf Coast. To evaluate the diagnostic performance of ELISA and PCR for detecting pathogenic oomycete infections in dogs and assess correlations with clinical presentation and treatment status. ELISA was used to detect anti-*Pythium* antibodies, and a serum-based triplex PCR targeted *Pythium insidiosum*, *Lagenidium giganteum* f. *caninum*, and *Paralagenidium karlingii* DNA. Clinical records were reviewed for a subset of cases. Statistical analyses included chi-square tests, ANOVA, and non-parametric comparisons.

Among confirmed positive submissions, ELISA detected anti-*Pythium* antibodies in 99.4% (182/183) and PCR detected *Pythium* DNA in 45.5% (72/158), highlighting ELISA's exceptional sensitivity at the time of diagnosis.

Across all 697 samples tested by both methods, 69 (9.9%) were positive and 495 (71.0%) were negative by both assays, yielding an overall concordance rate of 81%. PCR identified five cases that were ELISA-negative or suspect, while 128 ELISA-positive or suspect cases were PCR-negative. Dogs testing positive were predominantly outdoor breeds (e.g., Great Pyrenees, Goldendoodles, German Shorthaired Pointers), with higher detection rates than indoor breeds like French Bulldogs. Notably, PCR identified six *Lagenidium* infections in dogs suspected of pythiosis but negative for *Pythium* antibody and DNA.

ELISA and PCR demonstrate strong overall concordance but differ in diagnostic sensitivity and the stage of infection they best detect. ELISA is highly effective for initial diagnosis and for monitoring treatment response, whereas PCR may be more useful for identifying active infection or relapse. This largest-to-date study of canine pythiosis supports the combined use of ELISA and PCR to enhance diagnostic accuracy, improve detection of misdiagnosed *Lagenidium* infections, and guide clinical decision-making and epidemiologic surveillance of this emerging and serious disease.

Susceptibility of dry cattle to infection with highly pathogenic avian influenza H5N1

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Dairy farms infected with highly pathogenic avian influenza virus (HPAIV) H5N1 clade 2.3.4.4b have emerged as a new source for cross-species transmission. Contact with infected cows or raw dairy products have resulted in direct and indirect transmission to humans and numerous other mammalian species. Recent detections of D1.1 in dairy herds suggest that reintroduction from wild birds or other sources is a constant threat. Critical gaps still remain regarding the basic epidemiology of the disease and hinder comprehensive risk assessment and mitigation strategies.

Cow-to-cow transmission is thought to occur primarily via milk and milk-associated activities. So far, not much is known about the susceptibility of cows in the dry period. Here, we demonstrate that cows in the dry period are highly susceptible to infection with HPAIV H5N1 clade 2.3.4.4b.

In this study, five Jersey cows, 21 days into dry-off, were subjected to intramammary inoculation with bovine H5N1 clade 2.3.4.4b virus, genotype B3.13. To determine the impact of viral dose on clinical and pathological outcomes, individual quarters for each cow were inoculated with 103, 104 or 105 TCID50 per quarter. Clinical observations and sampling were conducted on a daily basis to monitor overall health conditions and viral shedding. Post-mortem examinations were conducted on days 3, 4, 5, 7, and 10 post-infection (n=1/day).

The clinical course of H5N1 infection in dry cows was similar to that of cows in lactation. All virus-inoculated quarters became infected and lower viral dose was associated with a delayed onset of mastitis and maximal viral shedding. No systemic disease was observed. These results suggest that cows in the dry phase are highly susceptible to HPAIV H5N1 infection and therefore a suitable model to study various aspects of H5N1 pathogenesis and immune responses in cattle. Although clinical and pathological similarities are apparent between cows in lactation and cows during dry-off, clinical disease is reported primarily in lactating cows in the field. Together, these data seem to support current hypothesis that milk and milk-associated activities serve as likely routes for transmission within herds, although other routes cannot be excluded.

Bovine abortion attributed to highly pathogenic avian influenza (HPAI) H5N1 clade 2.3. 4.4b

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The highly pathogenic avian influenza (HPAI) H5N1 virus clade 2.3.4.4b, which has been circulating in thousands of wild and domestic birds since January 2022, first spilled over into dairy cattle in the United States in March 2024. Anecdotally there were reports of HPAI associated dairy cattle abortions in mid-to-late gestation that were thought to be secondary to fever and the effects of an exaggerated cytokine response. Here we describe four HPAI H5N1 virus associated abortion outbreaks in four separate California dairies. Thirty fetuses were submitted from predominately first calf heifers, although all lactations were reported, and gestation ranged from 3 months to term.

The fetuses grossly demonstrated marked bicavitary effusion, marked myocardial streaking, pulmonary interlobular edema, and a cobblestone liver. Histopathology revealed random areas of lymphocytic myocarditis, myocardial necrosis and mineralization, lymphocytic interstitial pneumonia, necrotizing bronchiolitis, and in some cases lymphocytic encephalitis. Twenty-eight of the thirty lung swabs were positive via reverse transcriptase (RT-qPCR) tests targeting the matrix, H7 and H5 genes and a cleavage site within the H5 gene specific for the Eurasian lineage goose/Guangdong H5 clade 2.3.4.4b of avian influenza virus. This is the first report of HPAI H5N1 viral induced mammalian fetal lesions in the literature.

Detection of highly pathogenic influenza virus (HPAIV H5N1) clade 2.3. 4.4b in five aborted bovine placentas

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In March 2024, highly pathogenic influenza virus H5N1 (HPAIV H5N1) was identified in dairy cattle in the United States. To date, placentitis associated with HPAIV H5N1 infection leading to abortion has not been documented in cattle. We describe a cluster of five dairy cows with a history of abortion and placentitis linked to HPAIV H5N1 infection. In all cases, only placentas were submitted for examination. Grossly, one placenta showed mild multifocal intercotyledonary edema, while the others were unremarkable. Histologically, there were random areas of mineralization in one placenta and mild neutrophilic placentitis in another one; no significant microscopic changes were observed in any of the other placentas. *Mannheimia granulomatis* and *Streptococcus uberis* were isolated from one placenta each. No bacterial organisms were isolated from the other placentas. All five placentas tested positive for Influenza A virus by PCR, and also were positive for H5GsGD and H5 genes of avian influenza.

Optimized nucleic acid extraction protocols for detecting avian influenza A virus in extended bovine semen

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In 2022, the H5N1 highly pathogenic avian influenza (HPAI) outbreak started in the United States and spread to cattle in March 2024. HPAI Infections in lactating cattle yields high viral load in the mammary tissue and milk, assisting in dissemination in the cattle population, and the spill back to the poultry. Specific pathogen-free semen by PCR testing is a requirement for semen exportation. While scientific evidence indicates the lack of HPAI in bull semen, the current evolving situation in the United States prompted an HPAI detection semen extraction protocol due to potential trade implications.

The NAHLN-approved extraction kits for influenza A virus (IAV) testing were explored in 88 negative milk-based or egg-yolk-based extended semen samples. Exogenous extraction controls were spiked into the lysis solution and extracted using both manufacturer-recommended and lab-developed protocols for the MagMAX CORE and IndiMag Pathogen kits. Extracts were PCR using an WVDL in-house Influenza A PCR assay. Analytical sensitivity for IAV was evaluated with the limit of detection (LOD) of three IAV reference strains and 27 IAV-spiked semen samples. Next, 34 previously confirmed positive semen samples naturally infected with various pathogens were tested using WVDL in-house PCR to assess the sensitivity of the refined extraction protocols.

After evaluating numerous MagMAX CORE and IndiMag Pathogen protocols, the standard IndiMag Pathogen kit with 100 ul input effectively minimized PCR inhibitory effects. The standard MagMAX CORE protocol had inhibition with egg yolk-based semen, which improved with Proteinase K pre-treatment. Testing of naturally infected positive semen yielded a 97.1% and 88.2% diagnostic sensitivity for the 100ul input IndiMag Pathogen protocol, and the modified MagMAX CORE protocol, respectively, with a 100% passing criteria for exogenous control for both protocols. Ultimately, 5-6 logs of linearity for the three IAV reference strains and 100% analytical sensitivity for the 27 IAV-spiked semen samples was observed using the IndiMag Pathogen protocol.

This study validated an extraction protocol that efficiently removes PCR inhibitors and demonstrates high sensitivity for disease detection in milk-based and egg-yolk-based extended semen samples. This solution can be seamlessly adapted for HPAI detection in semen samples.

Prevalence and risk factors for equine hepacivirus (EqHV), parvovirus-hepatitis (EqPV-H), and pegivirus (EPgV) in Alabama, USA

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The prevalence and risk factors associated with equine hepacivirus (EqHV), equine parvovirus-hepatitis (EqPV-H), and equine pegivirus (EPgV) in the United States remain poorly characterized. This retrospective study (2023–2025) screened 574 equine plasma/serum samples collected in Alabama using PCR-based assays. Statistical analyses were performed to evaluate pathogen prevalence and associated risk factors, including age, sex, and breed. Quantitative PCRs identified EqHV in 6.96% of samples, EqPV-H in 18.09%, and EPgV in 4.35%. One horse tested positive for both EqHV and EqPV-H.

Multivariable logistic regression revealed no significant association between EqHV positivity and either age or sex. However, breed was significantly associated: Quarter Horses had nearly four times the odds of EqHV positivity (OR = 3.86; 95% CI: 1.57–10.9; $p = 0.006$), and Thoroughbreds had even higher odds (OR = 7.90; 95% CI: 2.67–25.0; $p < 0.001$).

For EqPV-H, both age and sex were significant predictors. Males were more likely to test positive than females (72% vs. 28%, OR = 2.19; 95% CI: 1.32–3.74; $p = 0.003$), and each additional year of age increased the odds by 6% (OR = 1.06; 95% CI: 1.03–1.10; $p < 0.001$). Tennessee Walking Horses had significantly increased odds of EqPV-H positivity compared to the reference group (OR = 3.08; 95% CI: 1.45–6.48; $p = 0.003$).

EPgV status was not significantly associated with sex or age, but Tennessee Walking Horses had higher odds of positivity (OR = 4.94; 95% CI: 1.34–17.7; $p = 0.013$) compared to the reference group.

This study provides novel insights into the prevalence and epidemiologic patterns of these emerging equine viruses in Alabama. Further studies are warranted to expand sample collection across additional states and evaluate potential impacts on equine health and performance.

Enhancing adaptability: Simulation of pooling optimization approaches for reduction in resource consumption, processing time, and adjusting to lapses in testing capacity

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Sample pooling is a longstanding strategy to enhance testing capacity and reduce resource consumption while meeting testing demands in disease surveillance. Achieving such benefits depends on how well the number of samples pooled is optimized to the prevalence of infection in the sampled population. However, prevalence is often unknown and can be difficult to anticipate, resulting in suboptimal and possibly costly pooling. Several methods have been developed to approximate an appropriate pool size for a population when exact prevalence is unknown, including universally applying one pool size (Fixed pooling), historical prevalence optimization (HP), or prevalence estimation testing (PET). Each method differs in its demands on laboratory workflow, and the accuracy of optimization. It is not well understood how the unique trade-offs of different optimization methods relate to changing operational constraints in surveillance testing. This study aims to better define trade-offs between optimization methods and determine relative advantages/disadvantages under different operational constrains including staffing and equipment shortages, as well as variable priorities including resource conservation, reducing processing time, and reducing hands-on time. Monte carlo simulations of six different optimization methods were trialed using historical data from Virginia Tech COVID-19 surveillance, with true optimized pooling and individual testing (no pooling) simulated as controls. Fixed pooling with a conservative pool size (4 samples), HP, and PET resulted in test counts that were not statistically different from true optimized pooling ($p > 0.05$). Processing time was assessed through a discrete event simulation and showed when laboratory capacity was low the processing time of most pooling methods was comparable to that of individual testing, but when capacity increased individual testing became a faster option than pooling on average. In all capacity conditions, when daily sample intake was less than 500 samples individual testing was faster but required more hands-on time than pooling. Distinct and contrasting trade-offs were observed in large-scale surveillance

and outbreak scenarios with individual testing being slower than most pooling methods in most capacity conditions for large scale surveillance, but often faster in the outbreak scenario when capacity was not minimal. Taken together, these results show shifting relative advantages of optimization methods, with advantages observed in conservative fixed pooling and HP optimization for resource conservation, PET for reducing hands-on time, and individual testing for lowering processing time unless testing capacity is reduced, in which case conservative fixed and HP pooling is more efficient. This study demonstrates the importance of flexibly applying different pooling optimization methods to be responsive to dynamics needs and limitations in surveillance testing.

Using game theory to assess the optimal allocation of limited vaccine doses in foot-and-mouth disease outbreaks: a stochastic framework

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The response to a livestock transboundary infectious disease outbreak will likely outpace available resources, necessitating strategies to inform decisions about allocating limited resources across multiple stakeholders with competing goals. Game theory is a tool to account for multiple decision makers and decision criteria and can help stakeholders analyze their decisions, knowing that others' decisions will impact their outcomes and vice versa, potentially identifying mutually advantageous outcomes. This study developed a stochastic game theory framework to examine vaccine allocation in a series of simultaneous multi-player decision sets and rules of vaccine allocation.

We modeled eleven foot-and-mouth disease (FMD) scenarios using InterSpread Plus. States were denoted as decision maker one (DM1; the index state), and decision maker two (DM2; a group of three neighboring states).

Each decision maker could request all or a share of available vaccines. Vaccine was allocated by state request under four rules: 1) prioritized allocation to the index state, 2) prioritized allocation to neighboring states, 3) equal prioritization of all states, 4) allocation based on the percentage of dairy cattle in each state. For each scenario, 300 iterations were completed using matched random seeds. Two outcome criteria, outbreak size and duration, were ranked for each matched iteration and treated as the payoffs of DMs. Nash equilibrium and Pareto optimal solutions were summarized across scenarios and iterations within each rule and evaluated per allocation rule according to game theory equilibrium principles. Across all rules, shared allocation between states was a Pareto optimal outcome, where any change in decision (choice to vaccinate and/or willingness to share) does not result in improved outcomes for both decision makers. Rule 3 (Equal priority) and shared allocation of vaccine to states resulted in the most consistent Nash equilibria and Pareto optimal outcomes. In our results, rule 3 (Equal priority) is more likely to result in favorable societal level outcomes even when states are making self-interested decisions. This stochastic framework incorporates epidemiological data and accounts for the payoffs resulting from multiple stakeholders' choices. This approach can aid in decision making for scarce resource allocation in contexts where individual payoffs depend upon others' choices. Additionally, these findings contribute to approaches to improve preparedness for an outbreak of FMD in disease-free regions.

Performance of the African swine fever and classical swine fever sick pig surveillance component at the University of Minnesota and Iowa State University Veterinary Diagnostic Laboratories

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Currently, the United States (US) is free of African swine fever and classical swine fever (ASF, CSF), two foreign animal diseases of pigs. However, if they were ever introduced, they would cause severe impacts to animal health and trade. To detect a potential introduction as quickly as possible, the US Department of Agriculture operates a comprehensive, nationwide surveillance plan for ASF and CSF. The Sick Pig Veterinary Diagnostic Laboratory (VDL) surveillance component of this plan uses a risk-based approach for active surveillance by targeting sick pig cases submitted to approved VDLs. Sick pig cases are reviewed by VDL pathologists and diagnosticians, and those with an approved specimen type (spleen/spleen swabs, tonsil, lymph nodes, whole blood/blood swabs) and clinical signs, pathology, or history consistent with ASF/CSF can be tested via an approved PCR. The Sick Pig VDL component is highly valuable because of its risk-based approach, but its implementation at the lab-level and coverage of sick pig cases have not yet been fully evaluated.

Here, we aimed to evaluate the Sick Pig VDL surveillance component at two major VDLs for sick pig cases: the University of Minnesota (UMN-VDL) and Iowa State University VDLs (ISU-VDL). De-identified data from approximately 2022-2024 were received from UMN-VDL (all swine cases) and ISU-VDL (only swine tissue cases, histopathology and necropsy). Data were descriptively analyzed, and odds ratios (OR) and unpaired t-tests were used for comparisons between ASF/CSF-tested and non-tested cases.

UMN-VDL received 29,012 tissue and non-tissue swine cases from 35 states. Of these, 1,490 cases (5% of all cases/54% of tissue cases) from 18 states were tested for ASF/CSF. ISU-VDL received 20,601 tissue cases from 46 states. Of these, 6,864 cases (33%) were tested for ASF/CSF. All ASF/CSF tests from both labs were negative with no false positives. ASF/CSF testing was consistent over time and was mostly from swine-dense states (IA, MN, NC). Both labs tested the majority of cases that had an ASF/CSF-approved specimen (UMN=81%, ISU=63%).

However, the eligibility of cases for the Sick Pig VDL component could not be fully evaluated because data on presenting clinical signs/history and a full list of specimens submitted with each case were not available. Spleen/ spleen swabs were most commonly used for ASF/CSF tests. At both labs, tissue cases with pigs ≤180 days were significantly more likely to be tested than those >180 days (UMN-VDL: OR=1.70, 95% CI: 1.21-2.39; ISU-VDL: OR=1.74, 95% CI: 1.42-2.12). The odds of being an ASF/CSF-tested case were higher in nursery/finishing farms compared to sows and breeding/replacement. Overall, tissue submissions were lower from adult pigs. These results strongly support that the Sick Pig VDL component is implemented at a high level at UMN-VDL and ISU-VDL, and that it efficiently rules out ASF/CSF in sick commercial pigs.

Interstitial pneumonia in donkeys

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Respiratory disease is a major cause of morbidity and mortality in equids. While spontaneous respiratory disease outbreaks have been documented in donkeys, interstitial pneumonias remain poorly characterized. This retrospective study investigated cases of interstitial pneumonia in donkeys, with emphasis on pathology and etiology.

Thirty-nine donkeys submitted for necropsy at the California Animal Health and Food Safety Laboratory System were diagnosed with pneumonia between 1992 and 2023. Fourteen of the 39 cases (36%) exhibited lesions consistent with bronchointerstitial (n=11) or interstitial (n=3) pneumonia and were included in the study. Clinical history, gross and microscopic findings, and ancillary test results were analyzed. Real-time PCR targeting influenza A virus (IAV), asinine herpesvirus 2 (AsHV-2), AsHV-3, and AsHV-5 was performed on formalin-fixed, paraffinembedded lung tissue from all cases. In situ hybridization for equid herpesvirus 1 (EHV-1) was also conducted.

Twenty-nine per cent of the cases occurred in fall, 14% in winter, 21% in spring, and 36% in summer. Affected animals included juveniles (n=5) and adults (n=9). Grossly, all lungs were diffusely overinflated, moist, and rubbery, with occasional dark red, firm foci (n=12). Key microscopic findings included type II pneumocyte hyperplasia (n=10), bronchiolar epithelial necrosis (n=10), pulmonary interstitial fibrosis (n=9), hyaline membranes (n=5), and vasculitis (n=3). Lesions consistent with concurrent bacterial pneumonia were present in 10 of 14 cases (71%). No other significant gross or microscopic lesions were observed in any of the animals. Bacterial and/or viral coinfections were identified in 8 of 14 cases (57%). Streptococcus zooepidemicus was the most frequently isolated bacterium (6/14). Viral detection included AsHV-5 (4/14), AsHV-3 (3/14), IAV (3/14), and EHV-1 (3/14).

Pulmonary fibrosis was a consistent finding in AsHV-5–positive cases (4/4), and vasculitis was noted in 2 of 3 EHV-1–positive cases.

This study provides insights into the etiology and pathology of interstitial and bronchointerstitial pneumonia in donkeys, and serves as a reference for clinicians and pathologists. AsHV-5, AsHV-3, IAV, and EHV-1 were commonly detected viruses and likely contributed to the development of interstitial lung lesions. These viruses may have predisposed animals to secondary pulmonary bacterial infections, which were common among the studied cases.

Comparison of the diagnostic performance of commercial PRRSV RT-qPCR assays using oral fluid samples of known status

Betsy Armenta-Leyva[1], Gaurav Rawal[1], Jianqiang Zhang[1], Berenice Munguia-Ramirez[1], Danyang Zhang[1], Grzegorz Tarasiuk[1], Rolf Rauh[2], Kyoung-Jin Yoon[1], Rodger Main[1], Luis G. Gimenez-Lirola[1], Jeffrey Zimmerman[1]

[1]Veterinary Diagnostic and Production Animal Medicine, Iowa State University, Ames, IA; [2]Tetracore Inc., Rockville, MD

Diagnostic performance of RT-qPCR protocols is often evaluated using raw quantification cycle (Cq) values.

However, Cqs lack a defined quantitative scale, are affected by assay-specific factors, and do not support statistically valid comparisons between protocols or diagnostic cutoffs. To address these limitations, Armenta-Leyva et al. (2023) proposed normalizing RT-qPCR responses (efficiency standardized Cqs or "ECqs" calculated as ECq = E-ΔCq). Normalization accounts for amplification efficiency, enables valid inter-assay and inter-laboratory comparisons, and supports the calculation of statistically valid diagnostic cutoffs.

We used ECqs to assess the diagnostic performance of 9 combinations of commercial nucleic extraction kits and RT-qPCR assays for PRRSV RNA detection in swine oral fluids. The 3 × 3 full factorial design included 3 extraction kits: (1) Applied Biosystems MagMAX−96 Pathogen RNA/DNA Kit, (2) IndiMag Pathogen Kit, and (3) VetAlert MagBead Total Nucleic Acid Extraction; and 3 RT-qPCR assays: (A) Applied Biosystems VetMAX PRRSV EU & NA, (B) Indical Bioscience virotype PRRSV RT-PCR, and (C) Tetracore EZ-PRRSV Real-Time PCR. Each unique extraction × PCR combination was labeled using a 2-character label (e.g., 1A = extraction 1 with PCR A), resulting in 9 protocols (1A through 3C).

We tested 308 pen-based oral fluid samples, including 96 negative and 212 positive samples, from pigs experimentally inoculated with various PRRSV-2 isolates (Rawal et al., 2023). ECqs were calculated as described by Armenta-Leyva et al. (2023) and the responses evaluated by ROC analysis using the pROC package in R with 1,000 cluster bootstrap replicates performed at the pen level. For each protocol, diagnostic sensitivity (Se) and specificity (Sp) and 95% confidence intervals were estimated at ECq thresholds of 0.10 to 0.50.

Optimal performance, i.e., best balance of Se and Sp, varied by protocol:

1A - ECq cutoff 0.2 - Se = 92.5% (88.1, 98), Sp = 100% (100, 100)
1B - ECq cutoff 0.1 - Se = 97.6% (95.4, 100), Sp = 100% (100, 100)
1C - ECq cutoff 0.4 - Se = 84.4% (78.6, 89.8), Sp = 100% (100, 100)
2A - ECq cutoff 0.2 - Se = 92.9% (87.6, 97.8), Sp = 95.8% (95.8, 95.8)
2B - ECq cutoff 0.2 - Se = 93.8% (88.8, 98.2), Sp = 100% (100, 100)
2C - ECq cutoff 0.2 - Se = 83.5% (76.4, 91.2), Sp = 99% (99, 99)
3A - ECq cutoff 0.2 - Se = 86.8% (79.7, 94.4), Sp = 100% (100, 100)

3B - ECq cutoff 0.2 - Se = 95.2% (92.2, 98.1), Sp = 100% (100, 100)
3C - ECq cutoff 0.2 - Se = 89.1% (83.3, 94), Sp = 99% (99, 99)

Findings confirmed that both extraction and amplification impacted RT-qPCR performance reinforcing the need to evaluate diagnostic workflows as integrated systems rather than as standalone components. Unlike an approach based on Cqs, ROC analysis of ECq values provided a statistically valid approach for estimating diagnostic performance of PCR-based assays.

References

Armenta-Leyva et al. 2023. *J Vet Diagn Invest* 35:78-85.
Rawal et al. 2023. *Viruses* 15:2233.

A highly sensitive FRET-qPCR for differentiating three canine dermatophytes: *Trichophyton mentagrophytes*, *Microsporum canis*, and *Nannizzia gypsea*

Nneka Vivian Iduu, Rae Kantzler, Kelly Chenoweth, Donna Raiford, Chengming Wang

Auburn University, Auburn, AL

Conventional diagnosis of dermatophytosis relies on fungal culture and microscopic examination, which are often time-consuming and lack sensitivity. This study aimed to develop a highly sensitive real-time PCR assay capable of simultaneously detecting and differentiating three important canine dermatophytes: *Trichophyton mentagrophytes*, *Microsporum canis*, and *Nannizzia gypsea*. We established a dual-emission fluorescence resonance energy transfer (FRET) real-time PCR targeting the *chitin synthase 1 (CHS1)* gene, achieving a detection limit as low as one gene copy per reaction. High-resolution melting curve analysis revealed distinct melting profiles, enabling accurate discrimination among the three species. The assay was rigorously validated using four reference strains and 14 clinical isolates and demonstrated no cross-reactivity with DNAs from *Nocardia* spp., *Aspergillus* spp., *Fusarium*, *Sporothrix* spp., or *Candida* spp. This novel FRET-qPCR provides a rapid, specific, and highly sensitive method for the simultaneous detection and differentiation of canine dermatophytes, representing a valuable tool for improving diagnostic accuracy and facilitating molecular surveillance. Further evaluation using clinical samples is warranted.

Hepatic necrosis in a Dorper sheep due to *Paraclostridium sordellii*

Melissa Macías-Rioseco[1], Jennine Nicole Ochoa[2,1], Raul Resedendiz-Pozos[2,1], Todd Cornish[2,1], Robert B. Moeller[2,1], Francisco A. Uzal[2,1]

[1]California Animal Health and Food Safety, University of California, Davis, Tulare, CA; [2]University of California, Davis, Tulare, CA

A female, 11-month-old Dorper sheep was submitted for necropsy to the Tulare Branch of the California Animal Health and Food Safety in the fall 2024. The carcass was in fair to good postmortem condition (and good nutritional/ body condition). Grossly there was unilateral severe necrotizing pleuritis. Histopathology revealed random areas of hepatic necrosis with bile stasis and intralesional bacterial rods. *Paraclostridium sordellii* was isolated from liver and spleen. Immunohistochemistry (IHC) for *P. sordellii* was positive within areas of necrosis in the liver and in the spleen. *P.sordellii* (formerly *Clostridium sordellii/ Paeniclostridium sordellii)* is a gram-positive, anaerobic, sporeforming bacterium that can cause gas gangrene in humans and animal species, and recently has been associated with enterocolitis in horses. Diagnosis is typically confirmed through bacterial culture, PCR, fluorescent antibody test and/or IHC. Hepatitis associated with this microorganism has not been reported before in sheep.

Paraclostridium sordellii enteritis, peritonitis and presumptive terminal septicemia in a domestic cat

Todd Cornish, Melissa Macías-Rioseco, Jennine Nicole Ochoa, Raul Resedendiz-Pozos, Maria D. Soper, Antonia Quiggle

California Animal Health & Food Safety Laboratory, UC Davis School of Veterinary Medicine, Tulare, CA A three-month-old, male castrate, Maine Coon kitten was found dead one week after neutering. The kitten was placed on oral antibiotics following surgery and was recovering uneventfully prior to death. The kitten was submitted for necropsy and associated testing. At necropsy the kitten was fair to good postmortem condition and good body condition with adequate adipose stores. Lung was congested, there was a small amount of pericardial effusion (5 ml), and there was a more pronounced peritoneal effusion (100 ml) containing fibrin strands and sheets of fibrin on serosal surfaces of liver, stomach, and segments of small intestine. In the mid-jejunum there was 3mm, oval, antimesenteric perforating ulcer with ragged hemorrhagic margins and with loose fibrinous adhesions to mesentery. Microscopically there was a locally extensive necrotizing and hemorrhagic enteritis containing abundant bacteria (short rods and plump bacilli) at the site. Hemorrhage and necrosis extended into the submucosa and there was an associated fibrinous peritonitis containing similar bacteria flanking the ulcer. *Paeniclostridium sordellii* and hemolytic *Escherichia coli* were isolated from a swab of the ulcerated mucosa and abundant *P. sordellii* organisms were observed by immunohistochemistry within the lesions and in blood vessels in many distant organs (lung, liver, spleen, mesentery lymph nodes, kidney and brain). *Paeniclostridium sordellii* can produce two important toxins (lethal and hemorrhagic toxins) that target endothelial cells and contribute to rapid onset of vascular damage with edema, hemorrhage, and subsequent tissue necrosis. Myositis/cellulitis, and to a lesser extent enterocolitis, are associated with this bacterium in herbivores, but very rarely in carnivores. Other than a single sudden death event involving captive African lions, to our knowledge this is the first known report of *Paeniclostridium sordellii*associated disease in a felid.

II. C. 2. POSTERS

Comparative analysis of PRRSV shedding patterns in weaned pigs vaccinated with six MLV strains: A multi-sample assessment under experimental conditions – H. Tong

Presumed primary pulmonary mast cell tumor in a dog – J. Ragsdale

Metastatic solid mammary carcinoma and nodular thyroid amyloidosis in a javelina (Dicotyles tajacu) – J. Ragsdale

Chronic congestive heart failure and associated hepatic and extra-hepatic lesions in two aborted Holstein fetuses infected with bovine viral diarrhea virus – M. Macías-Rioseco

IR-Biotyper application for outbreak investigations of Salmonella enterica serovar Dublin in dairy farms – G. Gioia

High-resolution melting curve FRET-qPCR rapidly distinguishes Streptococcus equi subsp. equi and zooepidemicus – N. Iduu

Comparative analysis of PRRSV shedding patterns in weaned pigs vaccinated with six MLV strains: A multi-sample assessment under experimental conditions

Hao Tong[1], Gaurav Rawal[1], Marcelo Almeida[2], Phillip Gauger[2], Ethan Aljets[2], Jianqiang Zhang[1]

[1]VDPAM, Iowa State University, Ames, IA; [2]Iowa State University, Ames, IA

Porcine reproductive and respiratory syndrome virus (PRRSV) stands as a significant challenge to the global swine industry. Although commercial modified-live virus vaccines are widely used to mitigate the impact of PRRSV, limited data are available on their viral shedding patterns in various specimen types after vaccination.

Seventy PRRSV-naïve weaned pigs were randomly assigned to 7 groups (10 pigs/group). At 0 days post-vaccination (DPV), Group 1 (G1) received virus-negative medium while Groups 2-7 received one of the following vaccines: Prime Pac PRRS (G2), Ingelvac PRRS ATP (G3), Fostera PRRS (G4), Ingelvac PRRS MLV (G5), Prevacent PRRS (G6), and PRRSGard (G7). At 35 DPV, all pigs were challenged with a heterologous wild-type L1C.5 PRRSV strain. Individual serum, nasal swab (NS), oral swab (OS), and fecal swab (FS) samples were collected at 0, 2, 4, 7, 10, 14, 21, 28, 35, 37, 39, and 49 DPV. For assessing vaccine virus shedding in this study, all samples were tested by the respective vaccine-specific real-time RT-PCR assays that do not cross-react with the challenge virus. CT<37 was considered positive for data analysis.

All specimens in G1 remained negative for vaccine viruses throughout the study. At 2 DPV, serum positivity was 100% in G6, 90% in G2 and G4, 50% in G3 and G5, and 30% in G7. At 39 DPV, it ranged from 0% (G6) to 80% (G7), and all serum samples were negative at 49 DPV. Vaccine virus was detected in NS samples starting from 4 DPV with positivity of 90% in G2, 80% in G4 and G6, and 50-60% in G3, G5, and G7. All NS samples were negative at 39 and 49 DPV. OS positivity also began at 4 DPV, ranging from 0% (G3 and G7) to 80% (G2). By 39 DPV, only one pig in G3 remained positive; all OS samples were negative at 49 DPV. For FS samples, all pigs were negative at 4 DPV except one in G6. At 7 DPV, FS positivity ranged from 10% (G4) to 80% (G5). From 35-49 DPV, FS samples in G2 and G4-G6 were negative. In G3, one pig tested positive in FS at 35-37 DPV but was negative thereafter. In G7, FS positivity was 50%, 30%, 10% and 0% at 35, 37, 39, and 49 DPV, respectively.

From 0-49 DPV, vaccine-specific PCRs revealed significant differences in mean PRRSV RNA levels in serum samples between some vaccinated groups. Overall, G7 had significantly higher RNA levels than G2, while no other group differences were statistically significant. Viral loads in NS, OS, and FS samples are not described here due to space limit but will be presented at the conference.

In summary, this study assessed vaccine virus shedding and viral load dynamics following vaccination with six PRRSV-2 vaccines under experimental conditions. The onset and duration of vaccine virus shedding varied between

vaccine groups. These findings provide useful insights regarding the detection timeline of vaccine viruses, aiding in vaccine performance evaluation and selection of appropriate diagnostic strategies when there is a need to distinguish vaccine from wild-type virus.

Presumed primary pulmonary mast cell tumor in a dog

John Ragsdale, Norbert Takacs

NMDA Veterinary Diagnostic Services, Albuquerque, NM

The entire left caudal lung lobe from a 2-years-old, female, Chihuahua dog was submitted in 10% buffered neutral formalin for histopathology. The dog had a two months' history of coughing that was not responsive to antibiotic therapy. Thoracic radiographs and thoracic ultrasound identified consolidation of the left caudal lung lobe. The left caudal lung lobe was surgically removed, placed in formalin, and submitted for histopathology.

The lung lobe was firm, consolidated, and almost completely effaced by firm and tan homogeneous tissue. Microscopically, the submitted lung lobe contained an infiltrative and variably cellular mass of poorly differentiated mast cells that were arranged in sheets suspended in a fibrovascular stroma with variable amounts of collagen. The cells were round with lightly eosinophilic cytoplasm and a round nucleus with a small number of cells containing a few faint basophilic cytoplasmic granules that were metachromatic with Giemsa and T-Blue stains. There was marked cellular and nuclear pleomorphism with large numbers of giant karyomegalic cells. There were thirteen mitotic figures per ten high power fields. The stroma contained large numbers of eosinophils with multiple bright pink foci of collagen bundles surrounded by degranulated eosinophils, which were further surrounded by macrophages. There were small numbers of necrotic foci in the mass. There were small numbers of arterioles where the tunica media was infiltrated by eosinophils, mast cells and macrophages. A few of the affected arterioles contained fibrin thrombi. The bronchi and bronchioles in the mass often contained mucus and eosinophils. The alveoli adjacent to the mass contained edema and moderate numbers of macrophages. The pleura adjacent to the mass was occasionally thickened by infiltrates of neoplastic mast cells that extend to the pleural surface. The lung mass was diagnosed as a mast cell tumor.

Mast cell tumors are common tumors in the skin of dogs. Less common locations of non-visceral canine mast cell tumors include the subcutis, conjunctiva, oral mucosa, and intramuscular. Visceral mast cell tumors are uncommon and occur mainly in the gastrointestinal tract. Primary pulmonary mast cell tumors are rare in dogs with primary lung tumors and metastatic pulmonary neoplasia being much more common in the lungs of dogs. Cutaneous mast cell tumors can metastasize to the lymph nodes, liver, and spleen. Metastasis to other viscera, including the lungs, can occur in dogs, and metastasis to the viscera from an aggressive cutaneous mast cell tumor must be ruled out prior to diagnosing a primary visceral mast cell tumor. Thus, metastasis of a cutaneous mast cell tumor to the lungs has to be considered in this case. However, the dog did not have a history of any cutaneous mast cell tumors. The dog was lost to follow-up and survival information is not known. The biological behavior of primary pulmonary mast cell tumors in dogs is not known.

Metastatic solid mammary carcinoma and nodular thyroid amyloidosis in a javelina (*Dicotyles tajacu*)

John Ragsdale[1], Norbert Takacs[1], Keiichi Kuroki[2]

[1]NMDA Veterinary Diagnostic Services, Albuquerque, NM;
[2]MU Veterinary Medical Diagnostic Laboratory, Columbia, MO

A greater than 20-years-old, 20 kg, female, javelina from a zoological park was submitted for postmortem examination. The javelina had been losing weight with a decreased appetite for a month. It was found laterally recumbent and was euthanized.

The javelina was in poor body condition with little to no body fat. There was an 11.0 x 9.5 x 5.0 cm, multilobular tan mass in the left caudal abdominal mammary gland. The left inguinal lymph node, lungs, right and left kidney, and spleen contained variably sized tan masses. The left and right lobes of the thyroid gland were enlarged and contained numerous variably sized, firm, and light tan masses. There were two small red masses in the caudal aspect of the left cerebral hemisphere of the brain.

Microscopically, the mammary gland contained an infiltrative and variably cellular mass of neoplastic mammary epithelium. The cells were arranged in lobules that consist of solid sheets of cells suspended in a fibrovascular stroma. There were foci of similar neoplastic mammary epithelial cells in the lungs, inguinal lymph node, kidneys,and the brain. The interstitium of the thyroid gland contained multiple foci of extracellular light pink amorphous material that stained positive with Congo red stain for amyloid that forms masses in the thyroid gland. The amyloid was mixed with thyroid follicular epithelium that stained positive for thyroglobulin and negative for calcitonin using immunohistochemistry. The red pulp of the spleen contained a single focus of amyloid. There was also a hyperplasia of a parathyroid gland and atherosclerosis in the abdominal aorta.

Javelina, or collared peccaries (*Dicotyles tajacu*), are pig-like artiodactyl mammals of the family *Tayassuidae* native to the southwestern United States with a range that extends to South America. In the veterinary literature, javelina are often grouped with the true *Suidae* because they are susceptible to the same diseases. Neoplasia is infrequently reported in suids (*Suidae* and *Tayassuidae*), and it is usually reported in older animals. Neoplasia that has been reported in javelina includes a mammary ductal carcinoma in a 10-years-old female javelina, a mucocutaneous extramedullary plasmacytoma with lymph node involvement in a 3-years-old female javelina, and a cutaneous squamous cell carcinoma in a 26-years-old female javelina (unpublished personal data).

Amyloidosis is uncommon in true *Suidae*. There has been one report of glomerular amyloidosis in an elderly javelina. Amyloidosis in the thyroid gland of domestic animals has most commonly been reported in cases of medullary thyroid carcinoma, but spontaneous thyroid amyloidosis can occur in aged

microminipigs. The amyloid in this javelina was causing enlargement of the thyroid gland due to amyloid in the interstitium between thyroid follicles and was not associated with a medullary thyroid carcinoma. In people, thyroid amyloidosis that causes enlargement of the thyroid gland is called amyloid goiter.

Chronic congestive heart failure and associated hepatic and extra-hepatic lesions in two aborted Holstein fetuses infected with bovine viral diarrhea virus

Melissa Macías-Rioseco[1], Jennine Nicole Ochoa[1], Raul Resedendiz-Pozos[1], Todd Cornish[1], Robert B. Moeller[1], Raissa Moreira[2], Yisell Perdomo[2], Ludmila Slimovich[2], Ingryd Merchioratto[2], Marina Beron[2], Federico Giannitti[2]

[1]California Animal Health and Food Safety, Tulare Branch, University of California, Davis, Tulare, CA;
[2]Plataforma de Investigación en Salud Animal, Instituto Nacional de Investigación Agropecuaria, La Estanzuela, Uruguay

Two male Holstein fetuses aborted at ~240 (fetus A) and ~270 (fetus B) days of gestation were submitted for necropsy and diagnostic work-up to the California Animal Health and Food Safety Laboratory, Tulare branch and the Instituto Nacional de Investigación Agropecuaria, La Estanzuela, Uruguay. Gross examination of fetus A revealed an enlarged liver with rounded margins and ascites. The heart had a mottled epicardium and multifocal pale streaks in the myocardium. Microscopically, the liver exhibited moderate centrilobular fibrosis with ectatic bile ducts and bile stasis and there was lymphoid depletion in the thymus. Fetus B was underweighted for its gestational age (23.7 kg). It had ascites, hydrothorax, and subcutaneous edema. The heart was hypertrophic and weighed 0.4 kg, representing 1.7% of BW (normal range 0.6-0.7% of BW). There was severe diffuse chronic hepatopathy with effacement of the lobular architecture, fibrosis, hepatocellular atrophy, regeneration and necrosis, and canalicular and ductular cholestasis ("nutmeg" liver). Altogether, these changes in fetus B were consistent with chronic congestive heart failure secondary to hypertrophic cardiomyopathy. Bovine viral diarrhea virus (BVDV) was detected by RT-qPCR in fresh/frozen tissues in both cases. PCR testing and/or microbiological culture for other abortifacient pathogens, including *Leptospira* spp., *Campylobacter* spp., *Brucella abortus, Neospora caninum*, *Tritrichomonas foetus* and bovine herpesvirus-1 were all negative. BVDV can cause infertility, early and late embryonic death, as well as fetal loss including resorption, mummification, or abortion. Infection with noncytopathic BVDV strains between 2 to 4 months of gestation may result in the birth of clinically normal, but persistently infected calves, which serve as major sources of viral spread within and between the herds. BVDV infection has been associated with myocarditis, myocardial necrosis, myocardial mineralization, and vasculitis in various organs including the heart. Affected fetuses may show significant ascites, a dilated round heart, and chronic passive hepatic congestion. Here, we describe two abortion cases due to BVDV infection, each presenting with chronic hepatopathy (including striking hepatic fibrosis) secondary to cardiac abnormalities. These findings underscore the importance of including BVDV as a differential diagnosis in bovine abortion cases, particularly when hepatic or cardiac lesions are present.

IR-Biotyper application for outbreak investigations of *Salmonella enterica* serovar Dublin in dairy farms.

Gloria Gioia, Elisha Frye, Rebecca June Franklin-Guild, Francisco Leal Yepes, Cassandra M. Guarino

Cornell University, Ithaca, NY

Salmonella enterica serovar Dublin (*S.* Dublin) is a cattle-adapted serotype increasingly found in dairy facilities, causing severe disease and mortality in naïve youngstock, and becoming endemic in herds due to difficulty identifying carrier cattle and eradicating the pathogen. *S.* Dublin is also a public health concern, as it is zoonotic and multi-drug resistant. Identifying the source(s) of *S.* Dublin introduction and persistence on farms is essential to contain and stop its spread.

In 2025, a large commercial dairy farm in New York State (Farm A) experienced its first *S.* Dublin outbreak. *S.* Dublin was identified in mastitic milk samples from three individual cows, all from different parities and stages of lactation. Subsequently, a calf on the farm that had recently received the commercial *S.* Dublin vaccine EnterVene®-d died. An *S.* Dublin isolate was cultured from the calf's spleen. The vaccine strain was submitted for comparison. The vaccine strain, unlike the clinical isolate, was not able to grow on minimal media.

Our laboratory evaluated the *S.* Dublin strains from Farm A using the Bruker IR-Biotyper® (IRBT). The IRBT uses Fourier transformed infrared to detect phenotypic differences within species and is purported to be useful for bacterial outbreak investigations. The IRBT can be used to serogroup *Salmonella* spp. but, to our knowledge, has not previously been used to evaluate variation within serotype.

S. Dublin isolates were grown on TSA agar for 18-24hr at 35°C in ambient atmosphere with and without 5% sheep blood and 0.1% esculin for vitality checks. In addition to the vaccine strain and strains from Farm A, an isolate from each of three other farms (B, C, and D) in New York State that had concurrent cases of S. Dublin identified from mastitic milk samples were evaluated. The recovery of *S.* Dublin from mastitic milk from multiple cows on different farms within a short timeframe was unique, as *S.* Dublin is typically cultured from calf tissue samples or bovine feces, and only infrequently from milk. The eight *S.* Dublin isolates, including technical replicates, were analyzed using Biotyper 4.06 software. Both a dendrogram, calculated by UPGMA clustering of the pairwise Euclidean distances of the isolate spectra, and a 3D scatter plot created by linear discriminant analysis (LDA), showed comparable results. The vaccine strain clustered separately from all wild-type strains. Isolates from Farm A belonged to two different clusters, suggesting at least two independent introductions of *S.* Dublin onto this farm.

Three isolates from Farm A clustered together with the strains from Farms B and C. Farms A and B share the same heifer raiser, suggesting a possible

association among those two entities. Genetic testing is currently underway to further substantiate these phenotypic findings. The data presented here demonstrate the potential for IRBT applications in epidemiologic tracing of an *S.* Dublin outbreak on a dairy farm.

High-resolution melting curve FRET-qPCR rapidly distinguishes *Streptococcus equi* subsp. *equi* and *zooepidemicus*

Nneka Vivian Iduu[1,2], Donna Raiford[1,3], Noah D. Cohen[4], Kerstin K. Landrock[4], Chengming Wang[1,2]

[1]Pathobiology, Auburn University, Auburn, AL; [2]Molecular Diagnostic Laboratory, Auburn University, Auburn, AL; [3]Bacteriology and Mycology Laboratory, Auburn University, Auburn, AL; [4]Department of Large Animal Clinical Sciences, Texas A&M University, College Station, TX

Streptococcus equi subsp. *equi* (SEE) causes strangles, a highly contagious and reportable disease in horses, while *S. equi* subsp. *zooepidemicus* (SEZ) is an opportunistic pathogen commonly associated with respiratory, reproductive, and wound infections. Accurate and rapid differentiation between SEE and SEZ is critical for appropriate case management, outbreak control, and reporting. However, current diagnostic approaches are limited by turnaround time and potential misclassification due to their biochemical and genetic similarity.

We developed a fluorescence resonance energy transfer (FRET)-based real-time PCR (qPCR) assay coupled with high-resolution melting (HRM) analysis to distinguish SEE from SEZ using single-nucleotide polymorphisms (SNPs) in the 23S rRNA gene. The assay uses subspecies-specific probes and melting temperature (Tm) shifts to differentiate pure and mixed infections without post-PCR processing. The complete workflow—from DNA extraction to result interpretation—was completed in under two hours.

The assay showed high sensitivity (limit of detection: 1 genome copy/reaction) and 100% concordance with whole-genome sequencing. Among 127 equine clinical samples, SEZ was detected in 82% (104/127) and SEE in 18% (23/127). SEE was primarily associated with guttural pouch samples, while SEZ predominated in eye, sinus, transtracheal aspirate, uterine, and wound samples. One nasal swab isolate originally identified as SEE by biochemical methods was reclassified as SEZ by FRET-qPCR, confirmed by whole-genome sequencing.

This rapid and accurate FRET-qPCR assay supports timely, subspecies-level diagnosis of *S. equi* infections, providing a valuable tool for equine disease surveillance and clinical decision-making.

II. D. USAHA MEMBERSHIP MEETINGS

USAHA MEMBERSHIP MEETING
Monday, November 3, 2025
Peter Mundschenk, Presiding

The Membership Meeting was called to order by Dr. Peter Mundschenk. Special thanks was given to Boehringer Ingelheim, represented by Dr. Joanne Maki, for their support of the luncheon.

REPORT OF THE COMMITTEE ON NOMINATIONS
Steve Crawford

The following slate of officers and district delegates was presented to the membership. Action on this slate will be taken at the Wednesday membership meeting.

2025-2026 OFFICER NOMINATIONS

PRESIDENT .....Charles Broaddus, Richmond, VA

PRESIDENT-ELECT .....Justin Smith, Manhattan, KS

FIRST VICE-PRESIDENT.....Kathryn Simmons, Washington, DC

SECOND VICE-PRESIDENT.....Kaitlynn Levine, Montpelier, VT

THIRD VICE-PRESIDENT ..... Scott Leibsle, Boise, ID

TREASURER .....Nora Wineland, Lansing, MI

DISTRICT DELEGATES

NORTHEAST ..... Dave McElhaney, PA
Robert Gibson, NH

NORTH CENTRAL..... Jamee Eggers, IA

SOUTH.....Gene Lollis, FL
Alberto Torres, AR

WEST.....H. M. Richards, III, HI
Marty Zaluski, MT

TREASURER REPORT 2024-2025

Beth Thompson

The United States Animal Health Association (USAHA), as an organization, operates on a sound financial basis. USAHA uses an outside firm for tax preparation and financial planning. USAHA also utilizes the Committee on Audit (Committee) for financial guidance. A summary of the Committee's discussion and recommendations is included in this report below.

As of June 30, 2025, CD and reserves total is $512,614.90. There is still room for improvement to meet the 2-year reserve policy in place for USAHA operating expenses. Current yearly operating expenses are approximately $392,000.

The Association income for the year (July 1, 2024 – June 30, 2025) was $790,715.04. This total includes the following, noting that InterstateLivestock.com is pass through funding:

Total member dues $212,767.50

Total USAHA/AAVLD annual meeting $463,289.77

Revenue $719,715.04

InterstateLivestock.com $71,000.00

Importantly, the Association realized a net income of $5,964.13. In the prior year, there was a net loss in net income of $128,023.17.

Based on the foregoing, the USAHA Executive Committee is recommending the following increases to USAHA membership dues, effective Jan 1, 2026*:

Individuals to $250 (from $215)

Allied and Official Memberships to $950 (from $850)

Additional considerations going forward:

• The Association will expect a decrease in return from the meeting this year, due in part to the lack of federal participation. This is offset by decreased food costs, and related items.

• The longer-term financial involvement of federal partners continues to be an unknown.

• The New World screwworm (NWS) symposium was profitable; similar meetings in the future may yield additional revenue, be valuable for members, and attract additional membership.

The Committee met on November 2, 2025, and reviewed the Statement of Financial Position (June 30, 2025), Profit and Loss Summary (June 30, 2025) and the proposed budget for FY 2025-26. The Committee noted that USAHA's reserves have improved and is encouraged by the year's net income. The Committee considered the USAHA Executive Committee's recommendation of an increase in dues and supported the increase as there was no increase in dues in the prior year. A motion to approve the financial report and recommend approval of the proposed budget was seconded, and passed by the Committee.

*Reminder this is not fully recognized for a year and a half, due to accounting best practices to defer a portion on the calendar year.

STATE OF THE ASSOCIATION

Peter Mundschenk

As we all know, the cost of doing business is rising - and quickly. You'll hear more about that in the Treasurer's report. The good news is: USAHA remains strong - both fiscally and operationally.

Your Executive Committee continues to work hard - not only to solve today's challenges, but to anticipate and manage the ones coming down the road. I just want to touch on a few highlights.

First, the NWS meeting - our midyear "hot topic" session - was a great success. The white paper is still in the works since the timing was close to our annual meeting, but the model worked well. We're planning another one late next spring, so if your committee has an idea, please let us know early. We want these to keep addressing real, timely issues.

Second, the DAL membership project continues to expand engagement and participation - especially from producers. That effort is making a difference in attendance and involvement, which strengthens us all.

Next, state accreditation - this long-term project will be discussed at the Board meeting tomorrow, with an open opportunity for discussion Wednesday morning during the hot topic sessions.

We've also continued quarterly meetings with the VS leadership team. Those have been incredibly useful - not only for resolving issues more smoothly, but for building relationships and understanding on both sides.

Another ongoing effort is finding better ways to use social media to promote USAHA and highlight our members. If you have articles, photos, or news from your work, please send them to the office - they're great for both our social channels and the quarterly newsletter.

At the end of the day, USAHA remains the place where organizations and people come for the right answer. That reputation comes not just from our name, but from the network of dedicated people behind it - all of you. Maintaining that network takes effort, but it's what keeps us strong and trusted.

The Executive Committee is always open to your ideas and input on how to keep improving this organization. Please don't hesitate to reach out to any of us.

Thank you all for what you do to keep USAHA moving forward.

Dr. Mundschenk next recognized the following outgoing committee chairs for their service:

- Maggie Highland, Sheep, Goats and Camelids
- Nora Wineland, NAHLN
- Paul Zajick, Aquaculture

USAHA MEMBERSHIP MEETING
Wednesday, November 5, 2025
Peter Mundschenk, Presiding

The second Membership Meeting was called to order by Dr. Peter Mundschenk.

REPORT OF THE COMMITTEE ON NOMINATIONS
Steve Crawford

The following slate of officers and district delegates was presented to the membership for action.

2025-2026 OFFICER NOMINATIONS

PRESIDENT .....Charles Broaddus, Richmond, VA

PRESIDENT-ELECT .....Justin Smith, Manhattan, KS

FIRST VICE-PRESIDENT.....Kathryn Simmons, Washington, DC

SECOND VICE-PRESIDENT ..... Kaitlynn Levine, Montpelier, VT

THIRD VICE-PRESIDENT .....Scott Leibsle, Boise, ID

TREASURER.....Nora Wineland, Lansing, MI

DISTRICT DELEGATES

NORTHEAST.....Dave McElhaney, PA
Robert Gibson, NH

NORTH CENTRAL..... Jamee Eggers, IA

SOUTH..... Gene Lollis, FL
Alberto Torres, AR

WEST.....H. M. Richards, III, HI
Marty Zaluski, MT

A motion was made to accept the Nominations Report as presented, seconded and approved.

Recognition of Outgoing Treasurer



President *Peter Mundschenk (right)* presented outgoing Treasurer *Beth Thompson (left)* with an award of appreciation. Dr. Thompson served as treasurer from 2020-2025.

Passing of the Presidential Gavel

Immediate Past President *Peter Mundschenk (left)* presented incoming President *Charlie Broaddus (right)* with his president's gavel and pin.



Recognition of Immediate Past President

Stephen Crawford (left) presented Peter Mundschenk (right) with the Past President's plaque, recognizing his dedicated leadership and service to USAHA.



Executive Director's Report
Ben Richey



Welcome for the last go-round. I'm glad you're here.

I don't know about you, but I feel more tired this year than others. Not sure if it's altitude or life in general. I do know one thing though, that the people of this organization – you all – keep me rolling, because it is rewarding to work for you and with you in this great group we call USAHA. So, thanks for being here.

Our numbers are still good, aside from most of our federal members, everyone else still showed up! Total attendance is approaching 1050, so good all things considered.

I first want to thank our committee leaders for navigating uncertainty in planning. Thanks for your persistence, your flexibility and for just getting it done in top form.

Thank you to Dr. Baldwin and her staff – you've been gracious hosts and appreciate the support this week.

I want to give a shout out to Dr. Haas, who's been spearheading the USAHA Newsletter – I hope she'll continue to bring her genuine and personal approach to it!

To Kim, your continued contributions to this meeting cannot be overstated. You are the glue that makes our workroom successful. Thank you.

There is the work of Kaylin, who is flying solo this week. She has – as always – gone above and beyond with a smile to make sure all the details are taken care of here.

For Kelly, who's done the heavy lifting for this meeting this year. I could say a lot more, but what needs to be said is a heartfelt thank you.

I want to especially thank Dr. Pete for his unwaivering leadership this year as president. It's been a year full of challenges on many fronts, and I am grateful for your calm and thoughtful presence in handling everything.

Dr. Crawford, as you rotate off the EC for what I can only assume is the last time, I wish you well and look forward to following your journey.

Dr. Thompson, you will be sorely missed on the EC, but you will bless everyone in Virgina, just as you have all of us.

As always, we will turn the page on the EC and with that comes the excitement of another year, the dynamics of the EC shift, and I have no doubt that Dr. Broaddus will continue the tradition of exemplary leadership of the USAHA president. Thanks to all of you for this opportunity, I am blessed. And I’m not gonna lie, I’m ready to be back home with my family, and I’m sure I’m not the only one in the room. Thank you all!

REPORT OF THE COMMITTEE ON NOMINATIONS & RESOLUTIONS

Steve Crawford

The Committee on Nominations and Resolutions presented its report with the following recommendations on 24 Resolutions submitted by committees:

The following Resolutions were held for individual action, with final action indicated.

- 18: Approved as Amended.
- 21: Approved as Amended.
- 22: Approved as Amended.
- 23: Approved as Amended.

- 14: Not Approved
- 19: Not Approved

All other resolutions were approved by consent calendar by the Membership.

The detailed report of the Committee on Nominations and Resolutions is included in these proceedings, Section E.

With no other business, the meeting was adjourned.

II. E. COMMITTEE REPORTS

COMMITTEE ON ANIMAL EMERGENCY MANAGEMENT

Chair: Cheryl Eia, IA

Vice Chair: Sarah Bailey, FL

Samantha Allen, Gary Anderson, Sarah Bailey, Maggie Baldwin, Lisa Becton, Oriana Beemer, Danelle Bickett-Weddle, Carolynn Bissett, Richard Breitmeyer, Charlie Broaddus, Diana Care, Kim Conway, Stephen Crawford, Carrie Cremers, Evelyn Crish, Tarrie Crnic, Marie Culhane, Susan Culp, S. Peder Cuneo, Joanna Davis, Bryan Deimeke, Amy Delgado, Barbara Determan, Rose Digianantonio, Zoey Dinkla, Brandon Dominguez, Leah Dorman, Roger Dudley, Tracy DuVernoy, Maria Cooper, Jamee Eggers, Cheryl Eia, Dee Ellis, François Elvinger, Rachael Fiske, Larry Forgey, Anna Forseth, Jane Galyon, Samantha Gibbs, Michael Gilsdorf, Garrett Girk, Gail Golab, Steve Goldsmith, Chelsea Good, Alicia Gorczyca-Southerland, Kristin Haas, Britney Hagood, Rod Hall, Alex Hamberg, Catherine Harris, Charles Hatcher, Carl Heckendorf, Julie Helm, Janemarie Hennebelle, Warren Hess, Jeff Hill, Siddra Hines, Heather Hirst, Brian Hoefs, Don Hoenig, Daniel Hougentogler, Nicki Humphrey, Aimee Hunt, Lucy Hunt, Carla Huston, K. Fred Gingrich II, T.R. Lansford III, Amber Itle, Annette Jones, J.J. Jones, Jamie Jonker, M. Gatz Riddell Jr., John Sanders Jr., Jeffrey Kaisand, Diane Kitchen, Patrice Klein, Kavishti Kokaram, Darlene Konkle, Margo Kunz, Dale Lauer, Elizabeth Lautner, Molly Lee, Jane Lewis, Mary Jane Lis, Lindsey Long, Kathryn MacDonald, Gustavo Machado, Kevin Maher, Bret Marsh, Scott Marshall, Michael Martin, Miriam Martin, Chuck Massengill, James Maxwell, Kathy McNamara, Sara McReynolds, Miranda Medrano, Mendel Miller, Gay Miller, Peter Mundschenk, Mandy Murray, Katie Murray, Lee Myers, Michael Neafsey, Mike Neault, Cheryl Nelson, Megan Niederwerder, Kayla Niel, Kathleen O'Hara, Michael Odian, Dusty Oedekoven, Kristy Pabilonia, Elizabeth Parker, Steve Parker, Boyd Parr, Amar Patil, Meredith Petersen, Bill Pittenger, Barbara Porter-Spalding, Amanda Price, Jeanne Rankin, Gwendy Reyes-Illg, Jonathan Roberts, Susan Rollo, Jim Roth, Marisa Rotolo, E Sabo, Mo Salman, Patty Scharko, Joni Scheftel, Jean Schmidt, David Schmitt, Ryan Scholz, Adrian Self, Carry Sexton, Kristy Shaw, Kyle Shipman, Kathy Simmons, Whitnie Smartt, Julie Smith, Justin Smith, Harry Snelson, Sandra Strilec, Steve Strubberg, Dennis Summers, Kasia Szymanska, Tahnee Szymanski, Todd Tedrow, Beth Thompson, Jesica Thompson, Jimmy Tickel, Peter Timoney, Megan Toms, Alberto Torres, Shauna Voss, Julie Wallin, James Watson, Patrick Webb, Jennifer Weber, Kelli Werling, Stephanie Wetter, Rodney White, John Williams, Amber Wilson, Josh Winegarner, Ryan Wolker, Mark Wood, Valeriia Yustyniuk.

The Committee met during the 2025 Annual Meeting in Aurora, Colorado on November 3 at 3:15 p.m. There were approximately 36 members and 50 guests in attendance. According to headcounts taken during the meeting, there were 96 people present for the business meeting and approximately 144 people present during the presentations.

The Committee meeting was adjourned at 5:13 p.m.

Committee Business:

The Committee reviewed and discussed resolutions from 2023 and 2024 and interim or final response regarding those resolutions.

No new business was introduced at the meeting.

2023 Resolution Number 16 Foot-and-Mouth Disease Vaccine Distribution – National Veterinary Stockpile Partnership with an Independent Vaccine Distribution Company

An interim response was received in 2024, and discussion was tabled at the 2024 meeting to be discussed later in 2025. Discussion: Explanation of state plan and identified distribution system; each state will currently have to contract for vaccination distribution logistics and develop a plan. Resolution remains tabled awaiting status update from USDA.

2024 Resolution Number 10 - *Increased Funding for Research and Operations at the Unites States Department of Agriculture, Agricultural Research Services National Animal Disease Center*

This is a funding request for ARS funding for research which was sent to Congress. No response was received. Membership did not provide any feedback or discussion on this resolution.

2024 Resolution Number 16 - *Emergency Management Compacts for Agriculture*

We need USDA to provide names of people in the positions identified in the resolution. With staffing changes there are no currently identified participants. This resolution is a front door approach to USDA; Back door approach is through National Alliance of State Animal and Agriculture Emergency Programs. (National Alliance of State Animal and Agricultural Emergency Programs (NASAAEP) works on the natural disaster side with emphasis on non-governmental organizations (NGOs)). Recommend USAHA and NASAAEP work together from both the disaster response and disease response perspectives and include public. Entertain the idea of hosting a joint meeting.

2024 Resolution Number 17 - *Secure Food Supply Plans: Management and Updates*

2024 #17 Secure Food Supply Plans management of plans and updates, reviews. Membership did not provide any feedback or discussion on this resolution.

Presentations and Reports

Introduction to Using Nitrogen for Whole House Gassing for a Depopulation Method for Floor-Raised Poultry and Laying Hens

Lucia Hunt, Minnesota Department of Agriculture

This presentation provides a high-level overview of the nitrogen whole house gassing method, a project made possible through National Animal Disease Preparedness and Response Program (NADPRP) funding. It covers the background of this depopulation method and why we think it is a promising addition to the methods currently available. The components of each trial, including procuring liquid nitrogen, sealing the barn, and data collection will be detailed. Our project is in its first phases so complete data results aren't available to report at this time.

Planning and Preparing for New World Screwworm: Texas' multi-agency collaboration approach

T.R. Lansford III and *Holli Tietjen-Hale*, Texas Animal Health Commission (TAHC)

Over a year ago, the northward movement of New World Screwworm (NWS) in Central America piqued the interest of TAHC leadership. Following discussions with government and industry partners, TAHC recognized the importance of proactive planning for a potential NWS incursion. The threat was significant enough to warrant taking the first steps toward preparedness. Now, TAHC is confident that initiating this process early was the right decision. This presentation will outline our current status in the planning and preparedness process, steps taken to accomplish this tasking, emphasize the importance of collaboration with various partners as a critical component, and review how these efforts are creating a comprehensive and evolving strategy to ensure Texas—and potentially the broader U.S.—is ready to respond effectively to an NWS incursion.

USAHA/AAVLD COMMITTEE ON ANIMAL HEALTH SURVEILLANCE AND INFORMATION SYSTEMS

Co-Chair: Brian McCluskey, CO
Co-Chair: Leticia Linhares, IA

Bruce Akey, Carissa Allen, Sarah Bailey, Maggie Baldwin, Lisa Becton, Oriana Beemer, Randy Berghefer, Wendy Black, Paola Boggiatto, Charlie Broaddus, Tasha Bunting, Leticia Caldas-Monterio-Linhares, Evelyn Crish, Kim Conway, Katie Cornille, Michael Costin, Marie Culhane, Susan Culp, Cole Vanicek, Amy Delgado, Barbara Determan, Andrew Di Salvo, Brandon Dominguez, Maria Cooper, Donald Lein, Dee Ellis, François Elvinger, Anna Forseth, Garrett Girk, Gail Golab, Steve Goldsmith, Alicia Gorczyca-Southerland, Gillian Gwartz, Kristin Haas, Britney Hagood, Patrick Halbur, Rod Hall, Catherine Harris, Charles Hatcher, Karyn Havas, Carl Heckendorf, Janemarie Hennebelle, Ashley Hill, Heather Hirst, Aimee Hunt, Annette Jones, M. Gatz Riddell Jr., John Sanders Jr., Jeffrey Kaisand, Diane Kitchen, Kavishti Kokaram, Berend Koops, Elizabeth Lautner, Scott Leibsle, Sasha Lisowski, Jim Logan, Gustavo Machado, Kelli Maddock, Rodger Main, Edie Marshall, Michael Martin, Miriam Martin, Brian McCluskey, Patrick McDonough, Sara McReynolds, Miranda Medrano, Gay Miller, Peter Mundschenk, Mandy Murray, Michael Neafsey, Mike Neault, Rahul Nelli, Megan Niederwerder, Kathleen O'Hara, Elizabeth Parker, Boyd Parr, Amar Patil, Bill Pittenger, Roman Pogranichniy, Barbara Porter-Spalding, Amanda Price, Valerie Ragan, Emily Ratsep, Cassidy Rist, Tanya Rossi, Marisa Rotolo, Michael Russell, Mo Salman, Susan Sanchez, Mike Sanderson, Rachel Schambow, Ryan Scholz, Janine Seetahal, Kyle Shipman, Justin Smith, Jayme Souza-Neto, Dennis Summers, Beth Thompson, Megan Toms, Alberto Torres, Jerry Torrison, Giovani Trevisan, Hannah Varnell, Binu Velayudhan, Clint Waddell, Patrick Webb, Jennifer Weber, Nora Wineland, Ryan Wolker, Marty Zaluski, Qirui Zhang.

The Committee met in person at the 2025 annual meeting in Aurora, Colorado on Monday, November 3, commencing at 10:00 a.m. An initial headcount determined that 115 individuals were present in the meeting room and standing at the access door. Attendance was taken online through the QR code sign. No discussion was warranted on previous resolutions. One proposed resolution was sent electronically to committee members in advance for consideration and discussion at the in-person gathering. No resolutions were brought forward from the floor.

The meeting was adjourned at 12:03 p.m.

Presentations and Reports

Equine Disease Surveillance

Angela Pelzel-McCluskey, USDA-APHIS, Veterinary Services (VS)

Dr. Angela Pelzel-McCluskey provided an overview of the equine regulatory diseases and their associated surveillance streams in which detailed data management and information sharing are routinely employed beyond that which is captured through USDA's National Animal Health Reporting System (NAHRS). The Equine Disease Communication Center (EDCC), a joint industry-state-federal initiative launched in 2015, serves as a public-facing online platform providing equine infectious disease alerts which have been diagnostically confirmed and approved for information release by state animal health officials (www.equinediseasecc.org). The Equine Arbovirus Dashboard (https://www.aphis.usda.gov/livestock-poultry-disease/equine/arbovirus-dashboard) is a recently deployed online tool publicly available on the USDA-APHIS website which provides up-to-date information on confirmed cases of Eastern equine encephalitis and West Nile virus in horses in an interactive and searchable format.

One of the highest volume animal disease surveillance streams in the world, equine infectious anemia (EIA) active testing the U.S. averages approximately 1.3 million tests per year. Conducted by nearly 400 EIA-approved laboratories, monthly summary testing data flows directly from laboratories to USDA-APHIS's Data Integration Services (DIS) platform where it is readily accessible by state and federal animal health officials. Innovations to the data entry pathway in 2025 have improved data quality and validation by allowing laboratories the option of direct data entry into DIS via secure weblink unique to the laboratory and accessible without previously cumbersome eAuthentication steps. A publicly available online EIA Dashboard is planned in the future to replace posted annual reports and provide an interactive and searchable platform for EIA data similar to that currently provided by the Equine Arbovirus Dashboard. Descriptions of data currently available via annual reports (EIA and equine piroplasmosis) and recent outbreak situation reports (vesicular stomatitis, contagious equine metritis) are also covered in the presentation. Finally, an overview of a broad-based equine health data platform under development in DIS for internal USDA-APHIS users is provided along with a description of intended use and future capabilities for more robust equine disease reporting.

CDFA's Dairy H5N1 Surveillance Lessons Learned

Nicki Humphrey, California Department of Food and Agriculture

Dr. Nicki Humphrey outlined that on August 30, 2024, H5N1 was confirmed in a California dairy, initiating the need for a milk surveillance program. California Department of Food and Agriculture (CDFA) Animal Health Branch (AHB) utilized Microsoft Excel, Emergency Management Response System (EMRS), and California's state database, Emerging Threats (ET), to validate dairy business names and addresses and capture surveillance data. The method of collecting milk surveillance samples shifted as the outbreak expanded, beginning with providing producers with sample kits and having them submit samples direct from the dairy to the laboratory.

CDFA realized challenges with producers submitting samples and within the first few months shifted to utilizing the state or county milk inspectors to collect samples within 10-20 km surveillance zones around H5N1 positive dairies. As the outbreak expanded further it became evident that statewide surveillance would be necessary at a frequency and volume that could not be managed by the milk inspectors. CDFA, in partnership with dairy creameries and their laboratories, shifted to utilizing bulk tank samples collected by creameries at the time of milk pickup on dairies. Throughout the incident, CDFA has tracked the results in an excel spreadsheet that is used by the Results Coordinator to contact dairy producers via email or phone with their individual results.

CDFA epidemiologists utilized data generated from surveillance samples to develop more robust case definitions for negative, redetected and requarantined herd status that were then acted upon with placing or removing movement controls. Surveillance data was also utilized to inform poultry producers when the virus had been detected near their operations. Through the process of collecting and evaluating surveillance samples CDFA has learned finding ways to automate processes helps enhance surveillance and efficiently utilize resources. CDFA in collaboration with NAHLN laboratories continues to explore ways to automate surveillance sampling and hopes to eventually have a producer portal for ease of accessing results.

Avian Metapneumovirus Surveillance Conducted During Outbreaks
Ben Wileman, Select Genetics

This presentation utilized the recent Avian Metapneumovirus (AMPV) outbreak as a case study to analyze areas for improvement in monitoring systems for future emerging disease situations. The speaker highlighted the unique diagnostic challenges encountered during the early phase of the outbreak and discussed strategies to enhance preparedness for future diseases. The session examined ongoing case identification efforts, which were complicated by a litany of concurrent infections across various poultry species, and explored the implications for real-time case identification and the development of simple case definitions. Additionally, the presentation addressed the challenges of tracking AMPV cases at local, state, and national levels and considered how these tracking efforts influence control strategies and regulatory responses.

PRRSV Surveillance
Daniel Linhares, Iowa State University

Dr. Linhares highlighted the Porcine Outbreak Management Program (POMP) as a structured, field-epidemiology surveillance system that standardizes the capture, interpretation, and benchmarking of outbreak data for PRRSV events across U.S. swine producers. POMP applies standardized disease classification consistent with American Association of Swine Veterinarians (AASV) guidelines, ensuring consistent case definitions and comparability across systems. Each enrolled herd contributes information on

herd features, diagnostic data, and productivity records collected before, during, and after outbreak events. Diagnostic monitoring is powered by Animal Health Monitoring and Evaluation System (AHMES), which compiles weekly PRRSV RT-qPCR results and ORF5 genomic sequencing data. This integration allows investigators to track longitudinal changes in herd disease status, identify variant lineages, and align those findings with management and recovery strategies.

Aligned with the meeting's theme, "Lessons Learned from recent surveillance conducted during outbreaks," we emphasize how the POMP infrastructure transforms raw outbreak data into actionable intelligence that strengthens national animal-health resilience. Core analytical outputs—such as time-to-stability (TTS), time-to-baseline production (TTBP), and total piglet losses (TPL)—provide objective recovery metrics for benchmarking within and between systems. The program also provides benchmarking comparisons within and between producers. These combined surveillance layers—standardized disease classification, continuous molecular and productivity monitoring, and producer-facing analytics—illustrate how structured field epidemiology can enhance early detection, inform intervention effectiveness, and harmonize surveillance data flows across state, industry, and federal partners.

USDA Surveillance Standards Update

Sunny Geiser-Novotny, USDA-APHIS, Veterinary Services (VS) Strategy & Policy

Sunny outlined that in FY24, APHIS-VS awarded a contract to develop a message that provides a comprehensive, standardized data format for information collected related to animal health regulatory activities. Building on the success of the previous models of message development, VS developed an Animal Health Regulatory Message Schema (AHRMS) in collaboration with the USAHA Committee on Animal Health Surveillance and Information Systems (CAHSIS), State Animal Health Officials and software vendors. The AHRMS and associated guidance document has been completed. Software vendors participated in the development of the schema and are in varying stages of enabling their systems for the publishing of and subscription to receive messages utilizing AHRMS.

AHRMS allows testing and vaccination data collected animal side on a mobile device to be messaged near real-time to the systems authorized to receive it – USAHerds/AgEnterprise, CoreOne, private State instances, Surveillance Collaboration Services (SCS). This schema addresses the long standing requests for data sharing with data seamlessly integrated into State and Federal databases upon submission without duplicative data entry into multiple systems in order to access the data; and provides near real time availability of data for animal health officials facilitating timely monitoring and analysis of animal health programs to allow for informed decisions, policy changes, response to ad hoc requests, reporting and risk management.

Committee Business:

Reports from the Electronic Certificate of Veterinary Inspection (eCVI) and permitting subcommittees were not delivered at the meeting due to the absence of Dr. Ryan Scholz who had been scheduled to deliver those reports.

There were no resolutions introduced during the 2024 meeting. One resolution for 2025 was discussed titled “Transition to electronic interstate certificates of veterinary inspection.” Discussion included one submitted amendment by Dr. Scott Leibsle, Idaho State Veterinarian, and two amendments proposed in the meeting by Dr. Sarah Tomlinson. A unanimous vote to accept the resolution by the committee was taken.

COMMITTEE ON ANIMAL WELFARE
Chair: Liz Cox, CA
Vice Chair: Molly Parker, NC

Bobby Acord, Paul Anderson, Ethan Andress, Michael Annis, Chris Ashworth, Maggie Baldwin, Peter Belinsky, Carolynn Bissett, Charlie Broaddus, Tasha Bunting, Katy Burden, Beth Carlson, Michael Carter, Lindy Froebel, Tim Condict, Liz Cox, Stephen Crawford, Carrie Cremers, Evelyn Crish, Marie Culhane, Susan Culp, Jill DeSau, Barbara Determan, Leah Dorman, Mark Drew, Roger Dudley, Jamee Eggers, Dee Ellis, Joseph Essler, Kathy Finnerty, Rachael Fiske, Katie Flynn, Larry Forgey, Anna Forseth, Heather Fowler, Karen Fox, Tolani Francisco, Samantha Gibbs, Colin Gillin, Eric Gingerich, Gail Golab, Eric Gonder, Tony Good, Chelsea Good, Alicia Gorczyca-Southerland, Gillian Gwartz, Kristin Haas, Thomas Hairgrove, Rod Hall, Steve Halstead, Nathan Harvey, Hallie Hasel, Charles Hatcher, Karyn Havas, Carl Heckendorf, Julie Helm, Janemarie Hennebelle, Julia Herman, Maggie Highland, Jeff Hill, Robert Hilsenroth, Heather Hirst, Don Hoenig, Daniel Hougentogler, Lucy Hunt, K. Fred Gingrich II, Tim Richards III, Amber Itle, Ashley Johnson, Annette Jones, J.J. Jones, Jamie Jonker, M. Gatz Riddell Jr., Anne Justice-Allen, Jeffrey Kaisand, Donna Kelly, Diane Kitchen, Patrice Klein, James Kober, Berend Koops, Karla Kretschmer, Scott Larsen, Dale Lauer, Maureen Lee-Dutra, Mary Jane Lis, Sasha Lisowski, Roxanne Lotts, Travis Lowe, Mark Luedtke, Bret Marsh, Scott Marshall, David Marshall, Michael Martin, Miriam Martin, Chuck Massengill, Kathy McNamara, Sara McReynolds, Mendel Miller, Gay Miller, Peter Mundschenk, Mandy Murray, Mike Neault, Cheryl Nelson, Kayla Niel, Dusty Oedekoven, Gary Olson, Elizabeth Parker, Molly Parker, Boyd Parr, Amar Patil, Elisabeth Patton, Allison Phibbs, Bill Pittenger, John Ragan, Gwendy Reyes-Illg, Cassidy Rist, Susan Rollo, Marisa Rotolo, Mark Ruder, Katie Rumsey, Michael Russell, E Sabo, Shawn Schafer, Anna Schilling, Jean Schmidt, David Schmitt, Laurie Seale, Kyle Shipman, Kathy Simmons, Staci Slager, Julie Smith, Harry Snelson, Sandra Strilec, Dennis Summers, Tahnee Szymanski, Beth Thompson, Alberto Torres, Charles Vail, Hannah Varnell, Dustin Weaver, Patrick Webb, Jennifer Weber, Stephanie Wetter, Ben Wileman, Michelle Willette, Ross Wilson, Josh Winegarner, Nora Wineland, Cindy Wolf, Sara Wyckoff, Ken Yancey.

The Committee met during the 2025 Annual Meeting in Aurora, Colorado on November 4 at 3:15 p.m. There were 40 members and 49 guests in attendance. Molly Parker, Vice Chair, wasn't able to attend.

Presentations and Reports

National Animal Disease Preparedness and Response Program (NADPRP) High Expansion Nitrogen Foam Update from California
Liz Cox, California Department of Food and Agriculture (CDFA)

Current depopulation of commercial poultry is limited to a few methodologies. In larger poultry operations, the options that can be rapidly implemented are very labor intensive or are a last result option from an animal welfare perspective. Depopulation via the inhalation of inert gas, such as nitrogen, is an approved method in American Veterinary Medical Association (AVMA) Guidelines for Depopulation of Animals. The obstacle to using nitrogen in the in depopulation of poultry has been how to deliver the nitrogen to the birds for the purpose of death. High-expansion nitrogen foam is a method to deliver nitrogen around the animals, creating the anoxic environment. High-expansion nitrogen foam requires less water and introduces less weight into raised floor facilities compared to currently used foam methodologies. Nitrogen foam has the potential to allow for depopulation in a wider array of poultry facilities, and other species, in a more humane manner than what is currently available. It also provides the advantage of reducing the exposure of personnel to zoonotic agents, such as Highly Pathogenic Avian Influenza (HPAI). Furthermore, the marked reduction in water usage reduces the logistical challenges of delivering water remote farms on specific schedules.

The CDFA received NADPRP funding to perform field demonstration studies utilizing high-expansion nitrogen foam in real world empty poultry barns of different styles. CDFA worked with Animal Emergency Services (AES) to perform two on-farm demonstrations of filling empty poultry barns with high-expansion nitrogen foam. Information learned during these pilot studies helped to formulate the next NADPRP funded high-expansion nitrogen foam demonstration studies in Pennsylvania. Before the technology of high-expansion nitrogen foam can be used in the field in response to a disease outbreak in poultry where depopulation is warranted.

Nitrogen Whole House Gas Depopulation presentation
Jeff Hill, Livestock Welfare Strategies
Utilization of Inert Gas Technologies for the Mass Depopulation of Poultry:

Whole-barn carbon dioxide (CO2) gassing is a common method utilized worldwide for responding to disease outbreaks requiring the depopulation of large numbers of poultry in a timely manner. However, since September of 2021, there has been supply disruptions and shortages of CO2. The ongoing outbreak of Highly Pathogenic Avian Influenza (HPAI) has further highlighted the fragility and exacerbated the shortages of the CO2 supply for on-farm depopulation during emergency response.

Anoxia due to exposure to inert gases (N, AR, etc.) for the euthanasia, slaughter and depopulation of poultry has been evaluated and deemed acceptable worldwide. “Nitrogen is an inert gas (physiologically inert) and therefore does not induce a sense of breathlessness and thus does not cause aversive reactions in the birds” (Berg 2007). Previous research has shown unconsciousness, and ultimate death was gradually induced in poultry (hens, broilers, and chicks) without indications of distress when N2 was slowly introduced, and Anoxic conditions maintained at less than 2%.

Even though approved as a method for euthanasia of poultry and demonstrated effective under research conditions, historically the use of nitrogen for whole barn gassing has been extremely limited. However, there have been few published reports indicating liquid nitrogen (LIN) and N2 have been used for the in-house killing of laying hens in battery cage systems within Europe (Berg, 2007; Raj, 2008).

The limited use of N2 for whole barn gassing of poultry is due to these anticipated difficulties (AVMA, 2019):

- Human safety.
- Controlling gas flow and distribution throughout the barn.
- The amount of N2 gas required based on the diminishing rate of change dynamics during the wash in/wash out process necessary to reach and maintain less than 2% oxygen level throughout the entire volume of the barn.
- Time required to fill the barn with sufficient N2 to ensure less than 2% oxygen level, with the ventilation shut down.
- Animal welfare concerns during inert gassing especially regarding oxygen deprivation and when utilizing.

A Swine Veterinarian's Perspective on Sow Housing Regulations
Clayton Johnson, Carthage Veterinary Services

The regulation of sow housing in the United States is increasingly shaped by state-level legislation and ballot initiatives. While these efforts are motivated by public concern for animal welfare, they often impose rigid, prescriptive requirements that fail to reflect the complexity of swine husbandry. California's Proposition 12 is an example; by mandating specific space requirements without addressing broader care practices, it has inadvertently contributed to increased sow aggression, injuries, and even higher mortality rates. What was intended to enhance welfare has, in some cases, reduced it, illustrating the risks of policy that informed more by perception than science.

If each state continues to establish its own sow housing regulations, the U.S. will inevitably face a patchwork of numerous different standards. Such fragmentation guarantees inconsistency, inefficiency, and confusion, while ensuring that not all sows are housed under the best possible conditions. Simply put, there cannot be 50 versions of "best" welfare standards. Producers, veterinarians, and caretakers will be forced to navigate conflicting rules that are neither sustainable nor at times, not truly beneficial for animals.

A more effective path forward is the development of a unified, national standard for sow housing, one that is rooted in science, guided by veterinary expertise, and aligned with internationally recognized benchmarks. Rather than focusing narrowly on prescriptive space allocations, a national standard should incorporate outcome-based measures that reflect true welfare, such as body condition, lameness prevalence, injury rates, sow longevity, and mortality. Fortunately, there are examples of similar infrastructure in place to

support such an approach. The Common Swine Industry Audit (CSIA), collaboratively developed by veterinarians, scientists, producers, and processors provides a consistent, reliable, and science-driven auditing system. Built from the Pork Quality Assurance® Plus (PQA Plus®) site assessment program, the CSIA evaluates 27 key aspects of swine care, including animal records, facilities, and caretaker training, with a strong emphasis on animal-based outcome measures. Unlike legislated sow housing standards, the CSIA framework allows for continuous improvement. A group of experts comprises the CSIA Task Force which meets annually to review audit data, incorporate new scientific advances, respond to stakeholder feedback, and adapt to evolving consumer expectations. Unlike static legislative mandates, the CSIA is a dynamic framework that evolves with science and practice, allowing us to apply innovation to sow housing and improving the well-being of sows using the best science available in the future.

Complementing this, the PQA Plus® and Transport Quality Assurance® (TQA®) programs provide nationally standardized training, certification, and accountability for caretakers and transporters. Importantly, these programs were recently confirmed as fully compliant with ISO Technical Specification 34700, which aligns with World Organization for Animal Health (WOAH) animal welfare standards. This international recognition affirms these programs meet rigorous, globally accepted criteria for welfare. Like CSIA, PQA and TQA have an update process and timeline allowing for continuous improvement. Updated on a three-year cycle, PQA and TQA incorporate new scientific evidence, stakeholder feedback, and evolving market expectations ensuring continuous improvement and relevance.

Together, these systems CSIA, PQA Plus, and TQA demonstrate that the U.S. has a framework to maintain and continuously improve a science-based, nationally consistent, internationally respected welfare framework. They provide measurable, auditable, and transparent tools to safeguard animal well-being across diverse production systems, while maintaining consumer confidence in the safety and quality of U.S. pork.

For these reasons, I request U.S. animal health officials support a national standard for sow housing, developed and overseen by animal health professionals, rather than endorsing fragmented, state-by-state mandates. A coordinated national approach would:

- Ensure consistency and fairness across states, avoiding regulatory fragmentation.
- Prioritize outcome-based welfare improvements over arbitrary space requirements.
- Evolve dynamically with science, market demands, and practical experience.
- Align with international standards.

By building on existing programs that are already ISO-compliant and WOAH-aligned, the U.S. can advance sow welfare in a way that is

sustainable, scientifically defensible, and responsive to both animal needs and societal expectations.

Committee Business:

Due to meeting running long Jackie Wepruk from Canadian National Farm Animal Care did not present on Canadian Codes of Practice. Animal Welfare Committee will have her present virtually to the committee at a future date.

Passed Resolution: *Accessibility of Nitrogen-Based Depopulation Methods for Response to Highly Pathogenic Avian Influenza.*

Dr. Molly Parker will be stepping down as Vice Chair and Dr. Ben Wileman will now be serving as Vice Chair with the appointment of USAHA president.

USAHA/AAVLD COMMITTEE ON AQUACULTURE

Chair: Paul Zajicek, FL
Vice Chair: Reddy Bommineni, FL

Dorothy Bailey, Peter Belinsky, Randy Berghefer, Carolynn Bissett, Reddy Bommineni, Beverly Byrum, Michael Carter, Christine Casey, Sarah Coburn, Kim Conway, Beate Crossley, Glenda Dvorak, Colin Gillin, Gail Golab, Keith Haffer, Rod Hall, Alex Hamberg, Kathleen Hartman, Nathan Harvey, Jennifer Haugland, Eileen Henderson, Janemarie Hennebelle, Warren Hess, Don Hoenig, John Sanders Jr., Jeffrey Kaisand, William Keleher, Donna Kelly, Lester Khoo, Diane Kitchen, Patrice Klein, Darlene Konkle, Berend Koops, Kevin Lahmers, Christina Loiacono, Scott Marshall, Miriam Martin, Michael Martin, Peter Mundschenk, Gleeson Murphy, Mike Neault, Michael Odian, Richard Oliver, Lanny Pace, Amar Patil, Olivia Perkins, Allison Phibbs, Bill Pittenger, Amanda Price, Suelee Robbe-Austerman, Jim Roth, Sherri Russell, E Sabo, Shanna Siegel, Heindrich Snyman, Dennis Summers, Rachel Tell, Jennifer Weber, Marcus Webster, John Williams, Nora Wineland, Ryan Wolker, Paul Zajicek.

The Committee met during the 2025 Annual Meeting in Aurora Colorado on November 3 at 3:15 p.m. There were 12 members and 19 guests in attendance. The Chair opened the meeting by welcoming members, introducing the Committee Vice Chair and acknowledging distinguished guests: Dr. Kevin Snekvik, recipient of the 2025 APHIS Administrator's Award, and Dr. Brianna Schur, Acting Associate Deputy Administrator USDA, Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS), Strategy and Policy.

The Chair noted the great diversity of aquatic animals and plants grown within U.S. aquaculture, regulatory complexity governing the farming community, huge variety of farm sizes, designs and operations and the variety of markets farmers have developed to support small farm economics. As a compliment to this diversity is the variety of organizations with a role in aquaculture. Today, he noted, the Committee will benefit from presentations representative of this organizational diversity.

Presentations and Reports

The AFS Fish Health Section's "Blue Book" Disease Manual Enters a New Phase

Linda D. Rhodes, American Fisheries Society

Since 1975, the Fish Health Section of the American Fisheries Society has published a disease and diagnostics manual for finfish and shellfish pathogens, colloquially called the "Blue Book". Over the years, it has undergone periodic updates for new pathogens and tests for pathogens. For the past two years, a major revision of the Blue Book was conducted to incorporate guidance for surveillance, diagnostics, and testing decisions, in

addition to updating disease information. This revision is intended to benefit the aquatic animal health community, which includes practitioners in industry and natural resource agencies.

Not Just a Drop in the Water: The Work of the AAFV
Robert Martinez, American Association of Fish Veterinarians (AAFV)

The American Association of Fish Veterinarians is an association of licensed North American veterinarians who practice fish medicine either as part of their traditional practice; with or alongside their institutional employment; or as their main species group within their "fish practice."

Our Mission is to further the art and science of fish veterinary medicine by enhancing and promoting knowledge, proficiency, professional standards, and viability of fish medicine for veterinarians; increase the value, visibility, and acceptance of fish veterinary medicine for our stakeholders; and, ultimately, to improve fish, human, and environmental health.

We provide support for our members through our subcommittees and AVMA liaisons. We provide free fish CE to our members and the general public through VIN.com. We are supporters of the American Board of Veterinary Practitioners (ABVP) Fish Practice, a recognized veterinary specialty. We have an annual conference to provide a meeting place for liked-minded fish veterinarians, students, and paraprofessionals. We aim to advance the quality and stature of clinical fish veterinary practice.

From Policy to Practice: Advancing Animal Welfare and Responsible Pet Ownership
Sandy Moore, Pet Advocacy Network

The Pet Advocacy Network translates science-based policy into daily practices by breeders, wholesalers, retailers and consumers across the companion animal trade. The presentation highlights practical frameworks that promote animal welfare and biosecurity, including industry standards, retailer training, and collaboration with veterinarians, diagnostic laboratories, and regulators. Brief case examples illustrate humane handling and transport, risk-based safeguards to prevent disease introduction, and data-driven education that improves outcomes for animals and consumers. Attendees will benefit from three takeaways: 1) how to align regulatory goals with workable industry protocols, 2) where public-private partnerships accelerate compliance and welfare gains, and 3) which targeted policy levers deliver the highest impact with broad stakeholder support.

Committee Business:

Two 2022 resolutions were discussed to decide whether they should be identified as:

- Active - The Resolution continues to be relevant. APHIS-VS should continue to work to accomplish the recommended action(s).
- Resolved – task is accomplished.

- Archive – no longer relevant, or issue has evolved (either by new resolutions or change in direction).

2022 Resolution 12 - *Comprehensive Aquaculture Health Program Standards*

The Chair noted APHIS-VS has halted Comprehensive Aquaculture Health Program Standards (CAHPS) rulemaking and Executive Order 14192 directed agencies to eliminate ten regulations for every new regulation. He commented it is unlikely a CAHPS rule will move forward.

The Committee recognized CAHPS is a highly valued farmed aquatic animal health management system by the aquaculture community. Farms are voluntarily adopting their concepts, their logical, common sense and effective approach. However, the current rulemaking environment is of a nature that the Committee will monitor and revive this Resolution when appropriate.

Members moved, seconded and passed unanimously a motion that Resolution 12 be archived.

2022 Resolution 13 - *Import Health Requirements for Live Aquatic Animals*

The Chair noted that during November and December 2024, APHIS-VS declared country freedom for six pathogens: *Marteilia refringens, Marteilioides chungmuensis, Perkinsus olseni*, epizootic hematopoietic necrosis virus, salmonid alphavirus and *Gyrodactylus salaris*.

Resolution 13 requested the Agency to declare the country free of four pathogens (salmon alphavirus, epizootic hematopoietic necrosis virus, yellowhead virus-1, and *Perkinsus olseni*). The recent agency effort did so for three of the four pathogens. Committee resolutions subsequent to 2022 address yellowhead virus-1.

Members moved, seconded and passed unanimously a motion recommending Resolution 13 be archived in recognition of the work accomplished by APHIS-VS.

2025 Resolution - *Import Health Requirements for Declared Freedom Aquatic Animal Pathogens*

The Chair presented a Resolution emailed to the Committee several weeks before the meeting. The Resolution urges APHIS-VS to implement import controls to exclude the six pathogens which the agency has recently declared freedom. The Committee discussed the Resolution and edited the language import controls to exclude host animals susceptible to the six pathogens from which the U.S. has declared freedom.

The Committee moved, seconded and passed unanimously the revised resolution.

Chair Nominations

The Chair reported his retirement and welcomed members to volunteer to fill the soon to be vacant Chair position. Nominations would be provided to the USAHA President for selection.

Dr. Marcus Webster, Associate State Veterinarian, Animal Industry Division, Georgia Department of Agriculture, rose to the occasion. The Chair invited Dr. Webster to introduce himself to the Committee. He expressed his considerable and keen interest in aquaculture and to serve as chair. The Committee welcomed him with an enthusiastic ovation.

Aquaculture Biosecurity

The Chair shared a National Animal Disease Preparedness and Response Program (NADPRP) funded aquaculture biosecurity educational project completed by Dr. Glenda Dvorak of Iowa State University was announced this past Friday. The products included tip sheets, videos, and infographics focused on land-based fish, crustacean and bivalve mollusc farms. Dr. Molly Lee, Director, The Center for Food Security and Public Health, Iowa State University, shared with the Committee a flyer and additional information. Information and the farmer friendly tools can be accessed at https://www.cfsph.iastate.edu/biosecurity/aquaculture/.

The Committee adjourned at 4:55 p.m.

COMMITTEE ON BIOLOGICS AND BIOTECHNOLOGY

Chair: Alan Young, SD
Vice Chair: Scott McVey, NE

Gary Anderson, Chris Ashworth, Randy Berrier, Duane Chappell, Carrie Cremers, Evelyn Crish, Maria Cooper, Joanna Davis, Barbara Determan, Brandon Dominguez, James England, James Evermann, William Fales, Patricia Foley, Jane Galyon, Douglas Gladue, Gail Golab, Steve Goldsmith, Alicia Gorczyca-Southerland, Keith Haffer, Rod Hall, Kuki Hansen, Joe Huff, K. Fred Gingrich II, Jeffrey Kaisand, Darlene Konkle, Elizabeth Lautner, John Lawrence, Molly Lee, Sabrina Lee, Kimberly Lehman, Rick Linscott, Sasha Lisowski, Joanne Maki, Miriam Martin, Scott McVey, Steve Parker, Boyd Parr, Amar Patil, Brent Pepin, Allison Phibbs, Marisa Rotolo, Travis Schaal, Julia Schaar, Janine Seetahal, Kathy Simmons, Shri Singh, Susan Stehman, Kasia Szymanska, Beth Thompson, Alberto Torres, Stephen White, Josh Winegarner, Steven Witte, Ryan Wolker, Mark Wood, Alan Young.

The Committee met during the 2025 Annual Meeting in Aurora, Colorado on November 4 at 10:15 a.m. There were 13 members and 10 guests in attendance. Brief introductions were provided by the Chair, Dr. Alan Young. The agenda was reviewed and there were no amendments.

Presentations and Reports

USDA-CVB Update

Amy Gill, Center for Veterinary Biologics (CVB)

Dr. Gill presented a summary of the actions of the USDA-APHIS-CVB (on behalf of the CVB Director, Dr. Geetha Srinivas). With regard to workforce development, the CVB biological laboratory will be hiring a director in the near future. This position came about indirectly as a result of the modernization efforts collaboratively with the Animal Health Institute (AHI). The CVB has been very active and there are now 81 licensed establishments and 1,378 currently manufactured licensed products. The CVB completed testing and release of over 14,200 serials, 82 facility inspections, and reviewed over 2,800 submitted dossiers. There are several efforts ongoing to continue Veterinary International Conference of Harmonization (VICH) harmonization through standardizing testing for monoclonal antibody products, extraneous agent testing, reagent testing (sourced from animals), as well as in vitro batch potency testing. A non-viable and non-replicating vaccine for high path avian influenza virus infection of dairy cows was licensed in May of 2025. Other discussions included an anticipated notice allowing concurrent testing of master seeds and master cells with pre-license serials and EU-licensed metapneumovirus vaccines for poultry.

AHI Update
M.J. McNamee, Animal Health Institute (AHI)

Dr. McNamee Briefly discuss the role of the Animal Health Institute (AHI) and introduced the president of that organization, Martha Scott Poindexter. In collaboration with Health for Animals, the AHI is working to improve animal health and the availability of mitigating tools by directing efforts towards regulatory reform, international tariff management, and control of New World Screwworm infestation. The AHI is working with CAST to develop a technical information webinar about New World Screwworm infestation education. There are many aspects to these efforts, but these include enhanced efficiency, modernization of the biologicals industry reflecting evolved technology, controlling the potential negative impacts of tariffs, and uncontrolled spread of new world screwworm. Many of these same principles can be applied to both the biologicals as well as the pharmaceutical industries.

National Bio and Agro-Defense Facility (NBAF) Bioproduction Module Update
Michael Puckette, USDA-APHIS

Dr. Puckette provided an overview of NBAF's Biologics Development Module (BDM). It is a proof-of-concept facility that will take NBAF's basic research and translate it into applied science such as vaccines and other disease countermeasures. He began with a description and summary of the history of USDA, Agricultural Research Service (ARS) operations on Plum Island in New York. He described how the research units had limited opportunity and resources to interact directly with the development of new vaccines or diagnostic reagents. The BDM is a facility designed to address that need and provide facilities for development of manufacturing processes for essential biological products needed to mitigate outbreaks of animal health threats, whether a danger to human health or to food security. The BDM will collaborate with industry partners to transfer research into veterinary medical countermeasures used to prevent or fight animal disease outbreaks around the world. It will focus efforts on the early research to early development phases of research, performing proof-of-concept studies for safety and efficacy, while scaling up processes and developing analytical tools for project support. It is anticipated that such work will derisk and improve the efficiency of transfer of developed manufacturing processes to the biological industries.

Update on State Outreach regarding Conditional Licensed Products
Julia Schaar, Medgene

The presentation regarding the Updates on the Request for Review of State Regulations recapped efforts to address inconsistencies in state-level requirements for distributing conditionally licensed veterinary biologics, which are federally licensed through USDA-APHIS Center for Veterinary Biologics (CVB). Conditionally licensed products, including autogenous and

prescription platform biologics, require approval from individual State Animal Health Officials (SAHOs) prior to distribution, which leads to significant variation in state requirements. A working group was formed to conduct outreach at regional USAHA meetings in 2025. The group developed a survey to assess state practices and regulatory variations. Additionally, findings from an Animal Health Institute (AHI) survey were shared during the presentation, revealing that states often request additional documentation, such as adverse event reports, product details, and licensing information. Many firms feel these demands exceed state authority, and question how these entities handle required confidential business information. Next steps include distributing the survey to SAHOs via USAHA and NASAHO, reviewing responses, and presenting recommendations for regulatory standardization.

Committee Business:

There were no resolutions forwarded.

COMMITTEE ON CATTLE AND BISON

Chair: Janemarie Hennebelle, GA
Vice Chair: Amber Itle, WA

Bruce Addison, Carissa Allen, Erika Alt, Gary Anderson, Ethan Andress, Chris Ashworth, Maggie Baldwin, Samantha Beaty, Oriana Beemer, Peter Belinsky, Joy Bennett, Randy Berrier, Danelle Bickett-Weddle, Carolynn Bissett, Paola Boggiatto, Tom Bragg, Richard Breitmeyer, Charlie Broaddus, Charles Brown II, Tasha Bunting, Beth Carlson, Michael Carter, Shannon Cerveny, Brian Collins, Kathleen Connell, Karen Conyngham, Maria Cooper, Katie Cornille, Michael Costin, Chelsea Crawford, Stephen Crawford, Susan Culp, Jill DeSau, Barbara Determan, Stephanie Dickens, Rose Digianantonio, Bud Dinges, Brandon Dominguez, Leah Dorman, Mark Drew, Roger Dudley, Sean Eastman, Misty Edmondson, Cheryl Eia, Dee Ellis, Philip Elzer, James England, James Evermann, William Fales, Victoria Fields, Kathy Finnerty, John Fischer, Larry Forgey, Karen Fox, Tony Frazier, Michael Gilsdorf, K. Fred Gingrich II, Garrett Girk, Tony Good, Chelsea Good, Alicia Gorczyca-Southerland, Michael Greenlee, Dale Grotelueschen, Gillian Gwartz, Dan Hadacek, Keith Haffer, Britney Hagood, Thomas Hairgrove, Rod Hall, Steve Halstead, Alex Hamberg, Catherine Harris, Nephi Harvey, Nathan Harvey, Hallie Hasel, Joshua Hayes, Carl Heckendorf, Julie Helm, Janemarie Hennebelle, Terry Hensley, Julia Herman, Ashley Hill, Bob Hillman, Siddra Hines, Heather Hirst, Don Hoenig, Noah Hull, Nicki Humphrey, Aimee Hunt, Carla Huston, Amber Itle, Nancy Jackson, Beth Johnson, Annette Jones, Jamie Jonker, Robert Cobb Jr., Anne Justice-Allen, Jeffrey Kaisand, Diane Kitchen, Patrice Klein, Kavishti Kokaram, Darlene Konkle, Berend Koops, Amanda Kravitz, Margo Kunz, T.R. Lansford III, Scott Larsen, John Lawrence, Gregory Ledbetter, Molly Lee, Kimberly Lehman, Scott Leibsle, Donald Lein, Kaitlynn Levine, Jane Lewis, Ailam Lim, Rick Linscott, Mary Jane Lis, Sasha Lisowski, Coleman Locke, Jim Logan, Gene Lollis, Lindsey Long, Travis Lowe, Mark Luedtke, Kevin Maher, Bret Marsh, Scott Marshall, Michael Martin, Miriam Martin, Chuck Massengill, Meghan May, Patrick McDonough, Dave McElhaney, Sara McReynolds, Mendel Miller, Gay Miller, Cheryl Miller, Rebecca Mitchell, Richard Mock, Peter Mundschenk, Gleeson Murphy, Mandy Murray, Katie Murray, Daniel Myrick, Mike Neault, Cheryl Nelson, Susan Noh, Michael Odian, Dusty Oedekoven, Steve Olsen, Gary Olson, Mitchell Palmer, Elizabeth Parker, Boyd Parr, Amar Patil, Elisabeth Patton, Allison Phibbs, Bill Pittenger, Keith Poulsen, Amanda Price, Valerie Ragan, Jennifer Ramsey, Jeanne Rankin, Jamie Retallick, Tim Richards III, M. Gatz Riddell Jr., Melissa Macias Rioseco, Suelee Robbe-Austerman, Jonathan Roberts, Susan Rollo, Mark Ruder, E Sabo, Mo Salman, Mike Sanderson, Shawn Schafer, Patty Scharko, Anna Schilling, David Schmitt, Ryan Scholz, Laurie Seale, Kyle Shipman, Michael Short, Kathy Simmons, Shri Singh, Staci Slager, Whitnie Smartt, Julie Smith, Justin Smith, Rebecca Smith, Ben Smith, Susan Stehman, Gary Stone, Sandra Strilec, Steve Strubberg, Dennis Summers, Diane Sutton, Tahnee

Szymanski, Tyler Thacker, Beth Thompson, Hannah Varnell, James Watson, Dustin Weaver, Marcus Webster, Scott Wells, Ross Wilson, Josh Winegarner, Nora Wineland, David Winters, Steven Witte, Cindy Wolf, Ryan Wolker, Mark Wood, Alan Young, Marty Zaluski, Glen Zebarth

The Committee met during the 2025 Annual Meeting in Aurora, Colorado on November 4. There were 66 members and 33 guests in attendance. Notes for presentations and the business meeting are included with this report.

The meeting was called to order at 10:20 a.m. by committee chair, Dr. Janemarie Hennebelle. It was established that a quorum had been met for the committee to meet and vote on all business, including resolutions. The meeting agenda was presented; a review was done of the mission statement and the committee operating procedure.

Presentations and Reports

SMS Plan and Gaps in FMD Bulk Tank Milk Testing

Miquela Hanselman, National Milk Producers Federation (NMPF) and *Danelle Bickett-Weddle*, Preventalytics

The National Milk Producers Federation received a National Animal Disease Preparedness and Response (NADPRP) grant with four objectives. This presentation reviewed objective three to identify, propose, and implement updates to the Secure Milk Supply (SMS) plan materials based on stakeholder input and surveys including State Animal Health Officials (SAHOs), technical community and stakeholders. Most participants agree that the industry should expand SMS to include highly pathogenic avian influenza (HPAI), a contagious disease. The SMS plan updates include movement permit guidance criteria and documentation for dairy farms located within a foot-and-mouth Disease (FMD) control area for milk, cattle and products. Submit comments by December 20 on the NMPF website: www.nationaldariyfarm.com. An informational webinar will be held on November 21. Register at: https://us06web.zoom.us/meeting/register/SYdGNyVJRNWJJnAzOsgDtw#/registration

NMPF is leading another NADPRP funded project to explore gaps in implementation of polymerase chain reaction (PCR) bulk tank milk test for FMD surveillance. They held two stakeholder forums, interviewed FMD experts, captured lessons learned from HPAI and conducted a literature review. The outcome is to create a white paper describing current gaps and guidance to build on potential uses of rRT PCR assay for FMD in bulk tank milk in the United States (2017). NMPF will share the white paper broadly and request review and comments from stakeholders.

NWS Lessons from Mexico

Blain Junfin, The Insectary

A “boots on the ground” perspective of New World Screwworm (NWS) response in Mexico was summarized. Many government agencies are involved in response and in implementation of the program. The program includes inspection, prevention, monitoring, control, biological, residuals, pour-ons / tags, diagnosis, collection and removal of larvae, submit samples, treat, sterile fly release. A number of variables related to the process were discussed, including 1) Defined border, 2) Economics, 3) Education, 4) Livestock prices. Mexican cattle sales are through auction, order buyer, direct and central distribution. Risk factors such as animals that reside on the Mexican/ Guatemalan border, feral dogs, hunting ranches, and small cow calf operations are harder to control. Dairies, large feedlots, and packing plants are sophisticated and compliant with inspection and reporting. Control of NWS is just as important for Mexico as it is for the U.S.

Application of Genomic Epidemiology to Mitigate the Impact of Mycoplasma Bovis in American Bison Populations

Springer Browne, Homestead Veterinary Services LLC

Mycoplasma bovis emerged as a primary respiratory pathogen for American bison in the early 2000’s, with reported mortalities of 25-45% to naive herds. A concerted collaborative effort to address this disease began in 2021, with federal, academic, and private sector involvement. The use of genomic epidemiology has been instrumental to develop mitigation factors to address Mycoplasma bovis, including vaccine development, diagnostic capacity, and public health interventions.

A historical perspective, literature review and research findings for *Mycoplasma bovis* (M bovis) in bison was presented. *M bovis* in bison causes severe disease with mortality up to 60% and became part of the USDA livestock indemnity program in 2022. Three key categories of research were presented: 1) Diagnostics, 2) Preventative, 3) Epidemiology. Key findings for Diagnostics include using deep swabs for more effective sampling, a strong humoral response is beneficial and is probably involved in clearance of *M bovis* from bison. Key findings in Preventative include studies looking at vaccine potential and identifying proteins for targets, the value of titers, potential for an injectable subunit vaccine, the efficacy of modified live *Mannheimia haemolytica* expressing *M bovis* as a carrier for vaccine. Key findings for Epidemiology include *M bovis* case control survey and found risk factors to be herd size and shared fence line with cattle and persistence, maintenance of subclinical infections- calves and yearlings becoming asymptomatic carrier for up to a year, superficial sampling can be adequate in an outbreak, whole genome sequencing (WGS) maps of an *M bovis* isolates at USDA National Veterinary Services Laboratories (NVSL), a study of *M bovis* in infections in free ranging pronghorn and separate unrelated outbreaks, a wildlife reservoir or spillover not related to cattle/ bison, WGS

mapping from Turner Ranches from 2007-2024, persistence of infection over ten years with multiple clades, historical line of *M bovis* >500 isolations from 1967- 2025.

Committee Business:
New Business - Resolutions were reviewed by the primary Committee on Cattle and Bison on virtual meetings and email.

Subcommittee Reports for Brucellosis, Trichomoniasis, Cattle Disease Traceability were sent out by email November 3, 2025. The Tuberculosis report was sent November 4, 2025. Reports were moved forward for consent and approval. A motion and vote to approve the consent calendar passed.

The Subcommittee on Brucellosis had no resolutions.

The Subcommittee on Trichomoniasis had no resolutions.

The Subcommittee on Cattle Disease Traceability had no resolutions.

The Subcommittee on Tuberculosis had no resolutions.

One resolution was introduced directly to the Committee on Cattle and Bison: *Revise the Federal Order Requiring Testing for and Reporting of Highly Pathogenic Avian Influenza (HPAI) in Livestock Testing Order to recognize state Stage 4 "Unaffected" status*

The United States Animal Health Association urges the USDA-APHIS to revise the April 29, 2024, Federal Order to recognize the Stage 4 "unaffected" state status and allow the interstate movement of lactating dairy cattle without requiring H5N1 pre-movement testing of individual cows from these low risk states to Stage 4 unaffected states, or from a Voluntary Monitored Unaffected Herd, thereby reducing unnecessary regulatory burden, facilitating interstate commerce, and decreasing strain on NAHLN sites.

Motion to introduce the first resolution moved to discussion. The discussion addressed removal of "to Stage 4 unaffected states". The motion to amend the language passed with no discussion. The vote on the resolution as amended passed.
Old Business was summarized, and previous resolutions were reviewed (2021-2024).

2024 Resolution Responses

Resolution 18: *Research Support for National Regulatory Programs*

The United States Animal Health Association (USAHA) urges the United States Department of Agriculture (USDA) to increase its support of brucellosis and tuberculosis research at the USDA, Agricultural Research Service National Animal Disease Center in Ames, IA. This investment is critical to supporting ongoing and future national eradication programs for these diseases. The USAHA supports priorities that ensure adequate funding for scientific personnel, high-containment facilities, and equipment to enable continued advancements in disease prevention and control. Financial support of brucellosis research should occur regardless of select agent

status. The USAHA encourages USDA to work with USAHA to prioritize research that includes this need.

- No response received to date. Additional follow-up will be needed.
- Request to USAHA Executive Committee to get a response on the resolution.
- GRC topic: bring this up to USDA to request responses to previous resolutions.

Resolution 19: ***Use of Official 900-Series Electronic Identification Tags in Non-United States Born Cattle and Bison***

- Discussed during virtual meeting in August.
- Response is sufficient for the current time; however additional follow-up will be needed.

Resolution 20: ***Funding for Supporting Research in Mycoplasma bovis and other Emerging Disease Threats of Bison***

The United States Animal Health Association (USAHA) urges Congress to appropriate funding to support *Mycoplasma bovis* and other emerging disease work in bison, and to support a dedicated captive bison research facility. Funding appropriation amount will be determined through a USAHA Cattle and Bison Committee working group consisting of the National Bison Association and state animal health officials, with input from relevant federal partners.

- Working group convened to put together specific ask, location and expense. Worked with stakeholders and visited National Wildlife Research Center and proposed as the location. National Bison Association lobbied Congress for a $3 million request for FY ’26 budget.
- Brought up at the GRC this year (2025).

It was proposed that responses are adequate but additional follow up is needed for all 2023 resolutions. Motion to approve and vote passed.

Three Year Resolution Review

Resolution 1: ***Approval of Trichomoniasis Testing Laboratories (2021)***

The United States Animal Health Association encourages all states to update their trichomoniasis and import requirements to allow official trichomoniasis testing in either an American Association of Veterinary Laboratory Diagnosticians Accredited laboratory or an ISO17025 accredited laboratory.

- No response received to date.

Resolution 29: ***Development of Voluntary Proficiency Testing for Laboratories Performing Trichomoniasis PCR Testing in Cattle (2023)***

The United States Animal Health Association (USAHA) requests that the National Assembly of State Animal Health Officials (NASAHO) work with the United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services to develop a voluntary proficiency testing program for laboratories performing trichomoniasis polymerase chain reaction (PCR) testing in cattle utilizing the advice of a designated working group of trichomoniasis diagnostic experts as determined by USAHA and NASAHO. USAHA further requests that USAHA and NASAHO members encourage state diagnostic laboratories to participate in voluntary trichomoniasis PCR proficiency testing on a regular basis.

- Path forward established from the subcommittee to meet with key diagnosticians to rerun the trial with ISDA and NVSL.

Both trich resolutions have sufficient response but follow up needed, approved and passed by vote.

Resolution #33: *Cattle Contact Tracing System (2023)*

The United States Animal Health Association urges state animal health officials and the United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services to work with industry to enhance cattle contact tracing efforts for economically significant diseases through collaboration and sharing of current cattle contact traceability data. This data should utilize and grow the cattle contact trace infrastructure in which readers can collect and share the critical data points (ID, Time, Date & GPS Location).

- Response is adequate and complete. USDA is doing that using AHER.
- Propose that response is complete. Motion to approve and vote passed.

Resolution # 32: *Standardization of State Cattle and Bison Import Requirements Regarding Brucellosis (2023)*

In the absence of significant program deficits found during the triennial review process, the United States Animal Health Association urges state animal health officials to eliminate state and region-specific brucellosis import requirements for cattle and bison beyond assurance that shipments meet state of origin Designated Surveillance Area requirements.

*No formal response received.

- Subcommittee on Brucellosis had additional discussion.
- Propose that sufficient for this time but more formal follow-up is needed. Motion to approve and vote passed.

Meeting was adjourned by the Chair at 12:28 p.m.

Addendums attached:

Subcommittee Reports

- Brucellosis
- Cattle Disease Traceability
- Trichomoniasis
- Tuberculosis

SUBCOMMITTEE ON BRUCELLOSIS

Chair: Scott Leibsle, ID
Vice-Chair: Tom Bragg, SD

Samantha Allen, Ethan Andress, Maggie Baldwin, Joy Bennett, Randy Berrier, Paola Boggiatto, Tom Bragg, Charles Brown II, Beth Carlson, Katie Cornille, Chelsea Crawford, Stephanie Dickens, Bud Dinges, Brandon Dominguez, Mark Drew, Roger Dudley, Dee Ellis, Michael Gilsdorf, Garrett Girk, Chelsea Good, Alicia Gorczyca-Southerland, Cassandra Guarino, Gillian Gwartz, Thomas Hairgrove, Rod Hall, Alex Hamberg, Hallie Hasel, Tricia Hebdon, Janemarie Hennebelle, Siddra Hines, Aimee Hunt, Jeffrey Kaisand, Diane Kitchen, Kavishti Kokaram, Karla Kretschmer, Kimberly Lehman, Scott Leibsle, Rick Linscott, Jim Logan, Roxanne Lotts, Travis Lowe, Sara McReynolds, Mendel Miller, Gay Miller, Peter Mundschenk, Mandy Murray, Katie Murray, Cheryl Nelson, Dusty Oedekoven, Steve Olsen, Mitchell Palmer, Elizabeth Parker, Boyd Parr, Amar Patil, Elisabeth Patton, Amanda Price, M. Gatz Riddell Jr., Valerie Ragan, Jennifer Ramsey, Suelee Robbe-Austerman, Jonathan Roberts, E Sabo, Shawn Schafer, Patty Scharko, David Schmitt, Ryan Scholz, Laurie Seale, Kathy Simmons, Justin Smith, Ben Smith, Steve Strubberg, Dennis Summers, Diane Sutton, Tahnee Szymanski, Tyler Thacker, Beth Thompson, Hannah Varnell, Dustin Weaver, Ken Yancey, Marty Zaluski, Alex Zingher.

The Subcommittee met on Sunday, November 2, from 8:00–9:47 a.m. There were 31 members and 24 guests in attendance.

Presentations and Reports

Greater Yellowstone Area (GYA) State Updates and State Reviews Idaho
Scott Leibsle, Idaho State Department of Agriculture (ISDA)

Idaho has completed the assurance test on the one affected domestic cervidae herd that was released from quarantine in 2024. The affected herd of 350 head of domestic elk was located well within Idaho's Designated Surveillance Area (DSA). In the fall of 2019, one cow elk sent to slaughter was identified as a reactor and, as a result, a whole herd test identified six additional affected elk. The reactor elk were slaughtered and tissues collected. Genotyping of affected elk matched previous genotyping of brucellosis affected wild elk in the area. Upon epidemiological investigation, it was determined that a wild elk had ingressed into the domestic elk facility during the prior 12-month period. No out of state movement, other than direct to slaughter, has occurred from the affected premises since the quarantine was initiated in 2019.

The final assurance test and post-test management requirements were completed on the one affected Idaho cattle herd and the quarantine was officially released in June 2025. In September of 2023, an adult longhorn cow

tested brucella acidified plate agglutination (BAPA) positive at a livestock market within the DSA. This animal and its cohort were held in quarantine at the livestock market until laboratory results could be verified. Blood from that animal was sent to the Idaho Brucellosis Laboratory where the sample tested BAPA positive with an FPA of 75.8 Delta mP. NVSL results were FPAs of 58.3 Delta mP and 62.5 Delta mP and Complement fixation was Positive 4+@1:640. The animal was sent to slaughter and tissues were collected for culture. *Brucella abortus* was cultured from mandibular lymph nodes, ovaries, and mammary glands. Whole herd tests were completed in October 2023, January 2024 and June 2024 (post-calving) that resulted in all animals testing negative. This herd remained under quarantine until June 2025 when the producer finally elected to sterilize all calves born during quarantine period. The producer remains largely uncooperative, but to avoid future interaction with ISDA, he elected to sell his bull and pursue no future breeding of his herd.

In FY25, approximately 8,157 head of cattle have been tested to meet Idaho's DSA testing requirements with more cattle to be tested later this fall as they return from summer grazing. This number does not include DSA cattle slaughtered at facilities that continue testing for brucellosis, cattle from areas of the state outside of the DSA that were tested to meet other states import requirements, or cattle returning from DSAs in Montana and Wyoming. From Oct 1, 2024-Sept 30, 2025, the Idaho Brucellosis Laboratory conducted a total of 382,813 brucellosis tests including live animal and slaughter samples. This was slightly less, but similar to the 386,519 samples tested by the Idaho Brucellosis Laboratory in FY24.

The Idaho Department of Fish & Game (IDFG) continues to conduct wild elk surveillance within and outside the borders of Idaho's DSA. Wild elk surveillance is rotated around the DSA boundary and any positives from previous years. In 2024-2025 the wild elk surveillance will continue to focus on hunting units west of the DSA, along the Montana border northwest of the current Idaho DSA boundary, and the southern areas of the DSA. Idaho Fish and Game and ISDA continue to identify known elk-cattle interactions in an area just northwest of the DSA where some positive elk have also been found. ISDA continues to work with the producers and veterinarians to test non-DSA herds in this location in hopes of achieving early identification of reactor herds that may be experience increased elk-cattle interaction outside of the formal DSA boundary. The Idaho Brucellosis Coordination Team, consisting of ISDA, IDFG and Idaho Veterinary Services (VS) personnel, continues to meet annually to discuss surveillance and mitigation strategies and make improvements as needed.

USDA-APHIS-VS reviewed Idaho's Brucellosis Program as part of the normal tri-annual review in August 2024. Overall, the program was given verbal good marks, and the final report verified the strength of Idaho's program and ability to identify reactor animals early on in the infection process. Future in-person program audits have been discontinued by USDA

given the stellar performance of Idaho and the other GYA states in each of their triennial audits.

Montana

Tahnee Szymanski, Montana Department of Livestock

During the year from July 2024 to June 2025, the Montana Designated Surveillance Area (DSA) was utilized by roughly 480 herds (both seasonal and year-round) containing roughly 137,000 cattle. The DSA represents approximately 5% of the Montana cattle herd and 5% of Montana's land mass. During that time, 83,727 DSA cattle were brucellosis tested while an additional 8,275 were tested for other reasons such as international shipment outside of the DSA.

Montana is currently managing two brucellosis affected herds. Both are long-term brucellosis affected herds that do not have a practical means to keep elk from mixing with females during the high-risk period for brucellosis transmission. These herds remain under quarantine and market livestock only to slaughter. Montana did have a detection of brucellosis in a bovine bull in July of 2025. Based upon the epidemiological investigation of the herd and no additional reactors detected in the herd, the herd was released from quarantine in in October 2025. The herd was located within the DSA in Beaverhead County.

The Department of Livestock partners with Montana Fish Wildlife Parks annually to conduct live animal surveillance on elk populations around the perimeter of the DSA in response to knowledge about elk movement on the landscape. Testing in late winter 2025 was conducted in the Crazy Mountains on the NE edge of the DSA. Fifty elk were captured as part of the surveillance with all animals testing negative. During the 2026 capture season, elk will be captured in the Northern Big Horn Mountains, an area in proximity to serological positive elk in Wyoming.

Montana conducts an annual review of compliance with brucellosis regulations. In FY25, there was a high level of compliance (97% plus compliance). Common reasons for non-compliance are movement out of the DSA without a test and testing conducted later, producers operating under an outdated agreement, and movements in feeding channels that could not be verified.

Wyoming

Hallie Hasel, Wyoming Livestock Board (WLSB)

Wyoming's Brucellosis Designated Surveillance Area (DSA) boundaries were adopted in 2011 based upon Wyoming Game and Fish surveillance data. Wyoming's current brucellosis rules and surveillance program provide sufficient data to allow the state to remain brucellosis free with regards to trade.

Brucellosis surveillance within Wyoming is outlined in the Wyoming Livestock Board's Chapter 2 Brucellosis Management and Mitigation rules,

Chapter 6 Risk Mitigation Activities and Compensation, and Chapter 25 Brucellosis Quarantine Mitigation. The surveillance program requires brucellosis testing upon change of ownership and/or movement outside of the DSA, official brucellosis vaccination or spay of all female bovine, and slaughter surveillance of all bovine over 12 months of age at state inspected custom slaughter facilities.

Wyoming is a brand inspection state, requiring brand inspection between counties and prior to out of state movement. Brand inspectors verify compliance with brucellosis testing requirements for cattle moving within and out of the DSA. Wyoming is able to gather an estimate of the number of cattle grazing within the DSA based upon brand inspection documents.

Due to demographic and land use changes, cattle inventory continues to decline within the DSA.

WY FY25 Brucellosis Data

Data source	Head
Brucellosis tests	79,028
Brucellosis Vacc Adult	6,656
Brucellosis Vacc Calfhood	151,328
Total Brucellosis Vacc	157,984

Brucellosis risk mitigation assessments and herd plans are encouraged for all herds grazing within the DSA. Herd plans provide owners with brucellosis mitigation recommendations based on their risk assessment. Data from Wyoming Game and Fish Department (WGFD) elk brucellosis surveillance also aids in determining overall risk for DSA cattle. Approximately 200 cattle herds reside, either full or part-time, within the DSA. WLSB maintains 150-175 herd plans with annual renewal for DSA herds.

WLSB has three rule chapters relating to brucellosis: Chapter 6 Brucellosis Mitigation Activities and Compensation, Chapter 20 Indemnity rules, and Chapter 25 Brucellosis Quarantine Mitigation Expense Reimbursement. Wyoming enjoys an excellent interagency working relationship between the WLSB, Wyoming State Veterinary Laboratory, WGFD, Wyoming Department of Health, and the USDA Animal and Plant Health Inspection Service. This enables us to fluidly and transparently deal with issues surrounding brucellosis in the DSA.

Wyoming has one herd in Park County under quarantine for brucellosis due to elk commingling during winter weather. Producers in Park County are faced with increasing elk herd numbers and continual commingling between elk and cattle. Changing land is having a significant impact on elk winter feeding areas in portions of Park County. WLSB and the Wyoming Game and Fish Department worked jointly to provide two brucellosis education meetings for producers in Park County during FY24-25.

Brucellosis data for Wyoming will eventually be shared on the WLSB website. The website is currently under reconstruction with a completion date of mid-2026.

Assessing Idaho's Brucellosis Risk Using Unique Wildlife Data
Tricia Hebdon, Idaho Dept of Fish & Game

Wild bison and elk in the greater Yellowstone area GYE) are the last remaining reservoir of *Brucella abortus* in the U.S. Eliminating *B. abortus* from this area is challenging because of the multi-state and federal jurisdictions in Idaho, Montana and Wyoming and the migratory nature of wild elk in these jurisdictions.

In 2018, Secretarial Order 3362 was implemented to improve habitat quality in western big-game winter range and migration corridors. This Order directs the Department of the Interior to work in close partnership with states across the West to enhance and improve the quality of big-game winter range and migration corridor habitat on Federal lands to conserve and manage big-game species.

In the past five years, big game migration corridors and winter ranges have been mapped across the western U.S., providing a better understanding of seasonal animal movements, critical habitats and the risk of disease transmission for numerous species. Further analysis of elk migration and winter range mapping data will allow GYE states to better provide current *B. abortus* disease risk assessments, provide future risk forecasting, allocate limited resources and provide critical education to producers in these high-risk areas within and around the states DSA's. Improved coordination between the state and federal agencies managing agricultural and natural resources will also assist in ensuring enhanced data sharing and continued monitoring of wildlife populations.

Brucellosis Research Update
Steven Olsen, USDA-ARS-NADC
Topics covered included:

- Concurrent vaccination with modified-live virus (MLV) bovine viral diarrhea (BVD) & infectious bovine rhinotracheitis (IBR) along with RB51. There are differences in the immune response for both RB51 as well as the MLV viruses when given concurrently. There is also an effect on immune response with concurrent BCG administration.
- Persistent RB51 shedding in the milk of Jersey Cattle was evaluated up to 18 months after administration
- Susceptibility of naïve animals is different between bison, elk, and cattle.
- Comparing efficacy of Parental RB51 vaccination in different species including bison, elk, cattle. Bison tend to require a booster dose to acquire similar immunity. Also emphasized is the fact that, in all

species, the vaccine helps with preventing abortions but does not prevent infection and does not prevent seroconversion.
- Brucellosis abortus genomes were compared among different species and indicates that there are some differences between them.
- Evaluation of brucellosis serologic tests (enzyme-linked immunosorbent assay (ELISA), fluorescence polarization assay (FPA), etc.) for use on *Brucella suis* in swine is being performed
- Diagnostic strategies for *Brucella sp* are being evaluated to determine best practices.

Subcommittee Business:

The business meeting was called to order at 9:42 a.m. The only order of business was the review of USAHA Resolution 17 from 2024 (renewed from 2021) to urge additional funds to be provided to Agricultural Research Service (ARS) in the pursuit of brucellosis research. USDA has given no response to this resolution which is similar to previous resolution responses regarding improved funding.

No new resolutions were presented to the current committee.

Dr Scott Liebsle has elected to move on as the Western District Representative on the USAHA Executive Committee. Dr. Teckla Webb, Wyoming State Assistant Veterinarian, has offered to take over the role as Chair of the Subcommittee on Brucellosis so her name will be forwarded to the USAHA president for approval. Dr Tom Bragg will remain as the Vice-Chair.

The meeting was adjourned at 9.46 a.m.

SUBCOMMITTEE ON CATTLE DISEASE TRACEABILITY

Chair: Ethan Andress, SD
Vice Chair: Martin Zaluski, MT

Bunting, Katie Cornille, Michael Costin, Susan Culp, Barbara Determan, Rose Digianantonio, Roger Dudley, Misty Edmondson, Dee Ellis, K. Fred Gingrich II, Garrett Girk, Chelsea Good, Alicia Gorczyca-Southerland, Callahan Grund, Gillian Gwartz, Dan Hadacek, Britney Hagood, Thomas Hairgrove, Rod Hall, Alex Hamberg, Catherine Harris, Nephi Harvey, Nathan Harvey, David Hecimovich, Julie Helm, Amy Hendrickson, Janemarie Hennebelle, Aimee Hunt, Amber Itle, Beth Johnson, J.J. Jones, Jeffrey Kaisand, Diane Kitchen, Kavishti Kokaram, Darlene Konkle, Berend Koops, Kimberly Lehman, Scott Leibsle, Kaitlynn Levine, Sasha Lisowski, Kevin Maher, Miriam Martin, Dave McElhaney, Sara McReynolds, Gay Miller, Cheryl Miller, Rebecca Mitchell, Mandy Murray, Mike Neault, Cheryl Nelson, Dusty Oedekoven, Elizabeth Parker, Boyd Parr, Amar Patil, Brent Pepin, Allison Phibbs, Bill Pittenger, Amanda Price, M. Gatz Riddell Jr., Jonathan Roberts, Joan Dean Rowe, Michael Russell, E Sabo, Mike Sanderson, Ryan Scholz, Carry Sexton, Kyle Shipman, Michael Short, Kathy Simmons, Staci Slager, Sandra Strilec, Dennis Summers, Diane Sutton, Tahnee Szymanski, Beth Thompson, Alex Turner, Hannah Varnell, Dustin Weaver, Ross Wilson, Josh Winegarner, Ryan Wolker, Marty Zaluski.

The Subcommittee met during the 2025 Annual Meeting in Aurora, Colorado on November 2. There were 35 members and 25 guests in attendance.

Chair Dr. Andress reviewed the history and purpose of the Subcommittee from USAHA website as the source.

USDA Update

Brianna Schur, USDA-APHIS, Veterinary Services (VS)

Dr. Schur gave an update on current staffing levels at USDA-APHIS-VS and challenges and priorities in the face of simultaneous threats including New World screwworm (NWS), highly pathogenic avian influenza (HPAI), and the government shutdown.

National Assembly of State Animal Health Officials Review of eCVI Platforms

Scott Leibsle, Idaho Department of Agriculture

Idaho State Veterinarian provided a summary of the recent activities of the National Assembly of State Animal Health Officials (NASAHO) eCVI vendor review group (NASAHO eCVI review committee) chaired by Miranda Junker, Bureau Chief Animal Health, Idaho Department of Agriculture, and Ryan Scholz, DVM, Oregon State Veterinarian.

The NASAHO eCVI review committee is updating the review process for eCVI platforms to include data for multiple species. Reviews will be conducted on a quarterly basis. Existing platforms will have 90 days to

demonstrate consistency with the updated standards and should expect to submit updated documents for the review in April 2026. Trace First TraceVet eCVI has been approved by NASAHO. The Extended Equine Certificate of Veterinary Inspection (EECVI) Memorandum of Understanding (MOU) is up for renewal - no major changes have been implemented, only more descriptive and consistent language.

Alternative Movement Documents

Chelsea Good, Good & Associates on behalf of Livestock Marketing Association, *Justin Smith*, Kansas Department of Agriculture, *Marty Zaluski*, GlobalVetLink

Justin Smith and Chelsea Good spoke about alternative movement documents, and Martin Zaluski shared several scenarios where alternative movement documents could foster greater compliance with interstate traceability regulations.

Federal law allows shipping and receiving state veterinarians to agree upon the use of an alternative movement document instead of an Interstate Certificates of Veterinary Inspection (ICVI) (9 CFR 86.5(c)(6)). This alternative document can be created by a veterinarian or another qualified individual.

Kansas, LMA, and other interested states would like to develop and utilize electronic alternative movement documents for feeder cattle movement. The goals would be to improve the accuracy and speed of animal movement data that is shared with state and federal animal health officials while also providing a workable mechanism for parties to be compliant with current regulations.

The platform would allow livestock markets and dealers to have direct input of movement data. Use of alternative movement documents will be via a pre-approved permission basis, with only those entities approved by a state veterinarian able to participate in the system.

A pilot project would focus on feeder cattle (under 18 months of age) originating from a livestock market. The platform would be electronic and allow the destination to be amended within a specified timeframe.

There is interest from application developers. GlobalVetLink has dedicated time to create a prototype, which has led to determination of what information would be collected.

The next step suggested is a Memorandum of Understanding (MOU) between states willing to utilize the system to accept alternative movement documents.

State Animal Disease Traceability (ADT) Coordinators Group

Garrett Girk, Kansas Department of Agriculture

Garrett Girk, Kansas Animal Disease Traceability Coordinator, provided an overview of the State Animal Disease Traceability (ADT) Coordinator monthly calls, including the group’s priorities, national ADT challenges, and opportunities for future innovation.

Key priorities highlighted included expanding national use of electronic Certificates of Veterinary Inspection (eCVIs) with the goal of becoming 85% electronic by 2028 and strengthening communication and collaboration across states on ADT-related issues. Girk also addressed challenges such as incomplete or inaccurate tag distribution records in Animal Identification Number Management System (AIMS) from electronic identification ear tags (EID) tag manufactures and distributors, insufficient tag retirement from slaughter, and varying levels of technical expertise among producers, veterinarians, and state agencies.

Finally, the presentation outlined several forward-looking strategies to enhance animal disease traceability nationwide. These emerging approaches include leveraging artificial intelligence for predictive modeling and anomaly detection, enhancing movement data analytics for outbreak response, integrating digital herd management platforms, and utilizing alternative movement documentation systems, other animal identification usages and movement documentation types.

Panel Discussion on Slaughter Channel Movements:
Diane Kitchen, Florida Department of Agriculture and Consumer Services (Moderator), *Bud Dinges*, Texas Animal Health Commission, *Samantha Beaty*, Tennessee Department of Agriculture, *Roger Dudley*, Nebraska Department of Agriculture, *Scott Leibsle*, Idaho Department of Agriculture

Background: Historically, to facilitate continuity of business and minimize handling of cattle moving from production premises to slaughter establishments for harvest, exemptions have been allowed to the requirement for official identification and interstate certificate of veterinary inspection (ICVI). The specifics of this timeline have led to much confusion within our industries and frequent failures and limitations for our animal disease traceability (ADT) programs. Many state animal health officials have expressed concerns with the porous nature of the “slaughter channels” and the impact this may have on significant animal health outbreaks.

Definitions and exemptions from 9CFR86 Final Rule on Animal Disease Traceability
86.1 Directly. Moved in a means of conveyance, without stopping to unload while en route, except for stops of less than 24 hours to feed, water, or rest the animals being moved, and with no commingling of animals at such stops.

86.2 (e) - The interstate movement requirements in this part do not apply to the movement of covered livestock if: (1) The movement occurs entirely within Tribal land that straddles a State line and the Tribe has a separate traceability system from the States in which its lands are located; or (2) The movement is to a custom slaughter facility in accordance with Federal and State regulations for preparation of meat.

86.4 (b) (1) (ii) - Cattle and bison may also be moved interstate without official identification if they are moved directly to a recognized slaughtering establishment or directly to no more than one approved livestock facility and then directly to a recognized slaughtering establishment, where they are harvested within 3 days of arrival; and
(A) They are moved interstate with a USDA-approved backtag; or
(B) A USDA-approved backtag is applied to the cattle or bison at the recognized slaughtering establishment or federally approved livestock facility.
(C) If a determination to hold the cattle or bison for more than 3 days is made after the animals arrive at the slaughter establishment, the animals must be officially identified in accordance with §86.4(d)(4)(ii).

86.5 (c) - Cattle and bison moved interstate must be accompanied by an ICVI unless: (1) They are moved directly to a recognized slaughtering establishment, or directly to an approved livestock facility and then directly to a recognized slaughtering establishment.

Introduction – please include a brief overview of the slaughter channels in your state

- Number of FSIS facilities
- Number of State facilities
- Species represented
- Other slaughter channels
- Estimated slaughter numbers moving in and out of your state

Questions for Panelists

1. Describe the most common diversions from direct to slaughter in your state
    a. Role of brokers and dealers in the porous reality of "slaughter channels".
        i. For your state, how significant is the interstate importation of animals under the "exemption" as moving "direct to slaughter".
        ii. What species are involved?
            1. What are the differences between species?
            2. Intrastate vs Interstate movements
        iii. Do you find slaughter ID in animals which are not in direct to slaughter situations?
    b. Are there differences between federal plants vs state plants?
    c. Do you have any solutions which have worked in your state?
2. Extended holds of animals which are being exempted as "slaughter animals"
    a. Where are the animals being held?
        i. Livestock market
        ii. Feeding locations

iii. Slaughter Establishment or connected premises

b. Which species seem to be involved?
c. Reasons for holds
d. Are there differences between federal plants vs state plants?
e. Are any of these locations applying Official ID after 3 days or ever?
f. Do you have any solutions which have worked in your state?

Summary of Panel Discussion

All states represented have only federally inspected facilities with a mix of full FSIS inspected establishments and custom exempt. Specialty or ritual slaughter establishments were also a common thread among our states.

- States have variations in whether they are import or export heavy state based on number of establishments and species of interest.
  - ID, NB – net import state
  - TN, FL – net export state
  - TX had more facilities than other states; species differences in export vs import
- Discussion of diversion – all recognize as a significant issue for ADT program
  - Many of the animals do ultimately end up at slaughter but often have been at other locations prior to slaughter and delays
  - Dealers and small slaughter facilities much greater issue than larger FSIS establishments (high volume). Fat stock channels more direct than cull stock.
  - Utilization of electronic records in livestock markets go a long way to providing some ability to trace. Specifically, SaleTime platform and the sharing of information with SAHOs have been helpful.
  - Frequently small volume movements have “no documentation” and this limits states ability to do follow up or awareness of destinations.
  - Mix of whether states have regulatory framework for “dealer”.
  - TX has some processes for quarantined feedyards for cutter and untested bulls from LM which are inspected and regulated.
- Holding of slaughter channel cattle
  - Slaughter channel cattle being held at any of these locations are not having official identification added in 3 days.
  - Holds are more likely for smaller facilities but also occur at pens adjacent to larger establishments.
  - Holds are minimal for fat cattle and more common in small ruminants. Commercial swine holds are uncommon.

- Most states report LM holds of days; Florida has experienced holds of weeks; all report high degree of BT loss.
- Holds reported to feed or due to trucking issues
- Panel and audience have seen slaughter tags in animals at non-slaughter destinations.

Committee Business:

Previous resolutions were reviewed by the primary Committee on Cattle and Bison.

Noted that a proposed resolution on electronic CVI requirements had been referred to the USAHA/AAVLD Committee on Animal Health Surveillance and Information Systems.

The subcommittee did not have any business items.

SUBCOMMITTEE ON TRICHOMONIASIS

Chair: Jim Logan, WY
Vice Chair: Bud Dinges, TX

Gary Anderson, Maggie Baldwin, Charles Brown II, Brian Collins, Chelsea Crawford, Bud Dinges, Brandon Dominguez, Roger Dudley, Misty Edmondson, Garrett Girk, Thomas Hairgrove, Rod Hall, Carl Heckendorf, Janemarie Hennebelle, Terry Hensley, Julia Herman, Carla Huston, Tyler Jumper, Jeffrey Kaisand, Diane Kitchen, Kavishti Kokaram, Scott Leibsle, Jim Logan, Peter Mundschenk, Gleeson Murphy, Mandy Murray, Cheryl Nelson, Dusty Oedekoven, Boyd Parr, Amanda Price, M. Gatz Riddell Jr., Jonathan Roberts, E Sabo, Ryan Scholz, Kathy Simmons, Shri Singh, Justin Smith, Ben Smith, Dennis Summers, Tahnee Szymanski, Beth Thompson, Hannah Varnell.

The Subcommittee met during the 2025 Annual Meeting in Aurora, Colorado on November 3. There were 31 members and 33 guests present. The meeting was called to order at 7:00 a.m. by Chair, Dr. Jim Logan.

The subcommittee members were reminded of the Subcommittee Mission Statement “To provide a forum for the latest science and regulatory efforts for control of trichomoniasis in cattle.”

Bovine trichomoniasis is subject to import requirements by numerous states as it causes significant economic cost to cattle producing states. Currently there are no formal requirements or proficiency exercises for laboratories conducting this testing and regulations are determined by individual states and their livestock import regulations.

Presentations and Reports

Comparing vaginal douche, cervicovaginal mucus, and uterine lavage for diagnosis of Tritrichomonas foetus in naive heifers exposed to a naturally infected bull

Dane Schwartz, Auburn University

Trichomoniasis, caused by the obligate extracellular protozoan Tritrichomonas foetus (T. foetus), is a venereal disease of cattle. T. foetus enters the cow through coitus and establishes infection throughout the entire reproductive tract. Inflammation of the reproductive tract secondary to T. foetus infection commonly results in embryonic loss resulting in prolonged interestrus intervals, low pregnancy rates, lighter weaning weights, and increased culling of open cows. Consequently, there is little known about sampling for T. foetus in the female. To the authors knowledge this is the first critical evaluation into sampling of different anatomical regions in the cow using real time polymerase chain reaction (qPCR). We hypothesize that 1) Samples taken from the uterus will more often be positive for T. foetus compared to samples from the vagina and cervix, 2) The prevalence of positive samples decreases over time regardless of sample location. The

objective of the study was to compare samples taken from vaginal douche, cervicovaginal mucus, and low volume uterine lavage for diagnosis of T. foetus in naive heifers exposed to a naturally infected bull using qPCR.

Eleven 14-month-old crossbred virgin Bos taurus heifers were utilized in this study. Heifers were exposed for 30 days (September 24, 2024 – October 24, 2024) to a 5-year-old bull naturally infected with T. foetus. Starting 30 days after the introduction of the bull, three sampling time periods were performed 21 days apart (T1: October 24, 2024, T2: November 13, 2024, T3: December 5, 2024). At each sampling period samples were collected in sequence of ascending anatomy: vaginal douche, cervical mucus aspirate, and low volume uterine lavage. At the conclusion of each sampling day, all samples were transported to the Texas A&M Veterinary Diagnostic Laboratory (TVMDL) Canyon, Texas location. Samples were submitted for individual qPCR.

A total of 82 samples taken from 11 heifers over three sampling time points (T1, T2 and T3) and three sampling locations (vaginal douche, cervical mucus aspirate, and low volume uterine lavage) were collected. Twelve out of the 82 samples (14.6%) were positive on qPCR. Time significantly impacted the PCR results ($p = 0.005$), while location did not ($p= 0.87$). There was no significant difference between the time points. The positive samples were from two heifers, #32 and #36, at T1 and T2. For the two positive heifers all three specimens were positive at each respective time point. The two positive heifers were subsequently negative for specimens collected at T3. A uterine sample was not obtained for heifer #32 at T3. All other heifers were negative at all timepoints.

In summary, results show that there is no significant difference in sampling location, but there is in time. Although a small study, data suggests that the location of sampling is not important, but that sampling should occur within 51 days of exposure for best outcomes.

Study to determine Trich prevalence in non-tested Texas bulls at Slaughter
Tom Hairgrove for Hailey Shaw, Texas A&M AgriLife Extension

Bovine Trichomoniasis (Trich) is a venereal disease of cattle caused by the protozoan Tritrichomonas foetus. Transmission of T. foetus occurs during natural breeding, allowing the bull and the cow to infect each other. Infected cows can eventually clear the infection, while the bull remains infected for life. The bull is persistently infected, with the organism residing on the surface of the penis and prepuce. The bull does not mount an immune response but serves as a sentinel for T. foetus in a regulatory control program.
Rationale For the Research Project:

The Texas Animal Health Regulations currently require testing all bulls for T. foetus upon changing possession or when adjacent to an infected herd. Producers are not required to test bulls destined for slaughter, and a producer’s herd could unknowingly have undetected chronic Trichomoniasis, creating a biosecurity threat to neighbors. This project targets untested Texas

bulls destined for slaughter to estimate the prevalence and geographical distribution of bovine trichomoniasis. Information gained will target producer education to areas with higher prevalence and higher geographical distribution of bovine trichomoniasis, which is essential to the success of a state control program. +-

Research Design and Methods:

This project involves collecting and testing bull penile tissue for T. foetus at slaughter. According to USDA estimates, 320,000 breeding beef bulls are in Texas. Estimating a 5% prevalence of Tritrichomonas foetus, testing 1,000 bulls provides a 95% confidence interval of 3.7%-6.5% confidence. Penile tissue samples collected from 1,000 bulls over 12 months will be analyzed. RT-PCR testing on tissue extracted in phosphate-buffered saline will be conducted at the Texas A&M Veterinary Medical Diagnostic Laboratory. For this research, we obtained penile tissue samples from Texas bulls harvested at Lonestar Beef Processors, San Angelo, Texas. This allows tracing the bulls to the auction market, but not to the producer. At harvest, approximately four inches of the distal penis is removed and individually bagged, identifying only the market of origin. In the Laboratory, we extracted approximately 5mm of tissue from the penis and placed it in a 2ml Falcon tube with 1.5 mL of phosphate-buffered saline (PBS) and two metal beads. The samples were sent to the Texas A&M Veterinary Medical Diagnostic Laboratory (TVMDL) for processing and testing with a Quantitative real-time PCR (qPCR).

Results:

To date, we have collected 782 samples and calculated the prevalence of Trichomoniasis in Texas as 4.35%. The estimated geographical concentration and higher prevalence of Bovine Trichomoniasis are observed in East Texas.

A corresponding economic impact analysis was provided by David P. Anderson, Professor and Extension Economist at Texas A&M AgriLife Extension Service, and that is shared below:

OFFICE OF AGRICULTURAL ECONOMICS

TEXAS A&M AGRILIFE EXTENSION

Economic Impacts of Trich in the Cattle Herd

David P. Anderson
Professor and Extension Economist
Texas A&M AgriLife Extension Service

- Economic losses in the cow herd come from the reduced number of calves born and lighter calves (fewer pounds sold) due to a more inconsistent calving season.
- USDA's 2025 data for the Texas cattle inventory indicates 4.075 million beef cows and 320,000 bulls. That is 13 cows per bull, on average, across the state.
- An 84 percent calf crop is assumed in non-infected herds. Chronically infected herds are assumed to have a 73 percent calf crop. Infected herds produce 22 fewer pounds per calf, on average, due to later-born calves.
- An infection rate of 4.4 percent of all bulls is assumed based on recent slaughterhouse surveillance (Hairgrove, et al., 2025).
- The incidence of trich at this rate is estimated to reduce the number of calves produced in Texas by 20,134 head annually. At a value of $366 per cwt in 2025 for 550-pound calves, that equals **$40.5 million** in lost calf production.
- A trich infected herd results in an extended calving season. This results in fewer pounds of calves being produced from those sold. The lost value of pounds due to the extended calving season is estimated to be an additional **$13.1 million**.
- The total lost value of calves due to trich infection is an estimated **$53.7 million**.
- New research at other universities indicates that actual infection rates may be double the 4.4 percent infection rate assumed based on raising the CT cutoff value from 35 to 37. If that is the case, the losses due to trich would be an estimated **$107.3 million**.

Educational programs of the Texas A&M AgriLife Extension Service are open to all people without regard to race, color, sex, disability, religion, age, or national origin. The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating

Proficiency Testing Pilot Project for Trichomoniasis

Suelee Robbe- Austerman, National Veterinary Services Laboratories (NVSL)

NVSL Proficiency Test Pilot Panel Creation: Following the 2024 subcommittee meeting, the Idaho State Department of Agriculture Animal Health Laboratory (ISDA-AHL) prepared nine bulk cultures (25 mL each) at three different Ct ranges: Low (20-24), Moderate (28-32), and High (34-36). The National Veterinary Services Laboratory (NVSL) was responsible for aliquoting, creating, and qualifying the panels prior to shipment. This allowed blinded duplicates to evaluate within-laboratory repeatability, consisting of three sets of each Ct level (totaling 18 samples) and two negative samples.

Analysis: NVSL was to analyze the results based on standard criteria but would not provide an overall pass/fail score. A sample was considered valid only if 80% of laboratories correctly classified it. Summary results were to be shared with the committee before distribution, with only the State Animal Health Official (SAHO) and the individual laboratory receiving specific results for that laboratory.

Results: Twenty laboratories participated in the panel, however the results were problematic across laboratories. The proficiency test was rendered invalid because the test material was found to be unevenly aliquoted into the test vials, causing a lack of consistency between lots. Laboratories were advised not to consider the results reflective of their performance.

Tentative Insights: Analysis of the results suggested that some laboratories were choosing to report samples with high Ct values that crossed the threshold as negative. The National Veterinary Services Laboratories (NVSL) recommended as a general practice that laboratories should not lower sensitivity to reduce cross-contamination. Only one laboratory appeared to incorrectly classify the negative samples, which was believed to be a reporting error.

Path Forward:

The plan, with concurrence from the committee is to meet with laboratory experts (Laboratory Directors and Molecular Diagnostics Section Heads/Parasitology Section Heads) virtually with a plan to redo the panel as a joint effort between ISDA-AHL and NVSL. Key steps include ideas to improve the variation within aliquots; identify five laboratories to take the panel in advance to qualify it; resend the new panel to the original 20 laboratories at no cost; allow other laboratories (potentially up to 25 total) to participate for the current user fee.

When completed, the National Assembly of State Animal Health Officials (NASAHO) will evaluate the results of the proficiency testing program and determine an appropriate level at which laboratories should be considered proficient, as well as how frequently proficiency testing should be conducted for renewal. NASAHO would use the model in use for electronic certificates of veterinary inspection (ECVIs) as a template to evaluate results.

Subcommittee Business:

There were no resolutions and no new business brought before the subcommittee.

The meeting was adjourned at 8:00 a.m.

SUBCOMMITTEE ON TUBERCULOSIS

Chair: Beth Carlson, ND
Vice Chair: Elisabeth Patton, WI

Gary Anderson, Signe Balch, Maggie Baldwin, Joy Bennett, Carolynn Bissett, Paola Boggiatto, Charles Brown II, Beth Carlson, Shannon Cerveny, Tim Condict, Katie Cornille, Michael Costin, Chelsea Crawford, Jill DeSau, Stephanie Dickens, Bud Dinges, Roger Dudley, K. Fred Gingrich II, Garrett Girk, Alicia Gorczyca-Southerland, Dan Hadacek, Rod Hall, Eve Hanks, Janemarie Hennebelle, Terry Hensley, Aimee Hunt, Amber Itle, Jamie Jonker, Jeffrey Kaisand, Diane Kitchen, Kavishti Kokaram, Karla Kretschmer, Scott Larsen, Kimberly Lehman, Scott Leibsle, Donald Lein, Ailam Lim, Rick Linscott, Lindsey Long, Roxanne Lotts, Travis Lowe, Sara McReynolds, Cheryl Miller, Mandy Murray, Katie Murray, Cheryl Nelson, Dusty Oedekoven, Steve Olsen, Mitchell Palmer, Elizabeth Parker, Boyd Parr, Amar Patil, Elisabeth Patton, Olivia Perkins, Suelee Robbe-Austerman, Jonathan Roberts, E Sabo, Shawn Schafer, Ryan Scholz, Laurie Seale, Kyle Shipman, Kathy Simmons, Shri Singh, Justin Smith, Ben Smith, Susan Stehman, Dennis Summers, Diane Sutton, Tahnee Szymanski, Tyler Thacker, Beth Thompson, Hannah Varnell, Scott Wells, Ross Wilson, Josh Winegarner, Nora Wineland, Ryan Wolker, Ken Yancey.

The Committee met during the 2025 Annual Meeting in Aurora, Colorado on November 3 at 8:00 a.m. A total of 46 members and 50 guests attended the meeting. Dr. Beth Carlson welcomed committee members and guests, introduced Dr. Elisabeth Patton as Vice Chair, and determined there was quorum for the committee to meet and vote on committee business.

Dr. Carlson provided a review of the agenda and the mission and operating procedure for the Tuberculosis (TB) subcommittee, as well as the process for recommendations and resolutions.

Presentations and Reports

Tuberculosis Scientific Advisory Working Group

The Tuberculosis Scientific Advisory Working Group, led by Dr. Beth Carlson, met at 7:00 a.m. on Monday, November 3, 2025, immediately prior to the Subcommittee on Tuberculosis.

Update on TB Initiative and TB Vaccine studies

Heather Martinez, USDA-APHIS, Veterinary Services (VS)

The Bacillus Calmette–Guérin (BCG) Vaccination Project, a joint effort of both the United States and Mexican governments, continues to progress and bring in valuable data. We are currently late in the fourth year of this five-year study and are continuing to work with our partner dairies for vaccinations, antemortem testing, and slaughter inspections. Mexico's federal and Baja

California state agencies continue to be heavily involved in this project. The field team has maintained the 3:1 blinded BCG vaccine: placebo ratio within all four dairies, and enrolled calves continue to receive vaccine before two months of age, the majority of which receive vaccine before one month of age. Enrolled animals greater than two months of age undergo antemortem testing every six months, which includes skin testing, taking nasal swabs, and a blood sample for QuantiFERON-Gold testing (QFT), and eligible animals also receive a booster vaccine. Animals still do not undergo any management changes and enter production as they would normally. At the time of slaughter, enrolled animals continue to be necropsied by project field staff and tissue samples are submitted to NVSL for diagnostics.

As of July 31, 2025, there are 4,521, animals vaccinated in the project. 1,881 animals have been revaccinated with the same lot originally received, and 1,420 (75.5%) have been revaccinated with active BCG. From preliminary field data, overall enrolled animal deaths are at 18.8% (850/4,521) from the start of the project on December 1, 2021, to July 31, 2025. Overall mortality of enrolled animals within individual dairies ranges between 11.5-31.1%. Analytics were performed with updated enrolled animal numbers and were consistent with previous results, showing that there is no increased risk of mortality in BCG-vaccinated animals vs placebo-vaccinated animals (RR = 0.99, 95% CI: 0.96-1.02).

Animals that are eligible for slaughter inspection must be greater than six months of age at death. This consists of 50.5% (429/850) of the enrolled animal deaths. Since onboarding our additional field veterinarian, made possible by the Cooperative Agreement with Universidad Autónoma de Baja California (initiated in September 2023), our slaughter inspection rate has increased from 60% through June 2024 to 83% through July 2025, for a total of 301 necropsies from 363 animals sent to slaughter.

Updated analysis on unblinded slaughter inspection data shows that of the 281 animals with diagnostic results, 199 have a final diagnosis. 149/199 (74.9%) animals were confirmed infected by culture. There are similar vaccination rates, 76.5% and 76.0%, respectively, in the infected and non-infected groups. Histologically, 206/275 (74.9%) animals had histocompatible results, and 69/281 (25.1%) were not histocompatible. Of the histocompatible animals, 154/206 (74.8%) were BCG-vaccinated, and in the non-histocompatible group, 55/69 (79.7%) animals were BCG-vaccinated.

Vaccine efficacy was calculated to be 6.9% (95% CI: 0, 43.05), showing that the risk of a positive *M. bovis* histology result in BCG-vaccinated cattle is 6.9% less than animals vaccinated with a placebo. Vaccine metrics will continue to be evaluated to monitor for increased efficacy and statistical significance. While vaccine efficacy continues to be low, data are trending to show that BCG-vaccinated animals may have 0.88 times the odds of being infected with *M. bovis* (95% CI: 0.356, 2.168; not statistically significant) as compared to placebo-vaccinated animals. Revaccination also does not appear to be associated with decreased infection at this time.

Disease severity is recorded via pathology scoring of enrolled animals that are inspected and lesion descriptions recorded at slaughter. For animals with a known infection status, 95/135 (70.4%) had lesions, further broken down into mild, moderate or severe, and animals are categorized as “severe”, 27/135 are “moderate”, 51/135 are “mild”, and 40/135 (29.6%) had no gross lesions (NGL) identified. Interestingly, eight NGL animals were found to be infected (culture positive), and 6/51 (11.7%) animals with mild lesions had lesions that were not associated with *M. bovis* infection (culture negative). All other lesions were associated with *M. bovis* infection. Pathology scoring is ongoing as animals are sent to slaughter. Previous analysis showed a statistically significant correlation between severity of disease and vaccination status of necropsied animals. Updated analyses show similar findings; however, at this time, none are statistically significant: BCG-vaccinated animals have 0.57 times the odds of having lesions associated with *M. bovis* infection compared to placebo-vaccinated animals (95% CI: 0.243, 1.350).

While interim analyses are not statistically significant for vaccine efficacy and disease severity, the nasal swab results collected at antemortem testing show an obvious trend, as the proportion of PCR detections over time decreases across and within all participating dairies. Overall, 85.2% of nasal swabs from all dairies were undetected during testing round 2 (when nasal swabbing was initiated), 94.7% were undetected in testing round 3, 99.3% in testing round 4, and at this point in testing round 5 (Dairy 3 results are pending), 99.8% are undetected. Although nasal swabbing has not been shown to be representative of animal shedding of *M. bovis*, it may indicate decreased environmental contamination due to decreased shedding of animals as BCG vaccination rates increase. Development of a protocol for collection of individual animal milk samples from enrolled animals is underway and is crucial to detect decreased animal bacterial shedding.

In addition to individual animal milk sampling, there is other work in the BCG Vaccination Project that is invaluable. Continued QFT testing and results analysis, part of the larger ongoing QFT validation work at NVSL, is an important part of antemortem testing in this vaccinated population. Effects of bovine tuberculosis on production and health parameters will still be evaluated as vaccinated animals enter production. Dairy management factors that affect slaughter rates and animal longevity also need to be studied and adjusted for in-disease analyses. We will also start using a lyophilized BCG vaccine that will ease the burden for vaccine handling. Evaluation of differences in vaccine performance will be crucial to understand if the lyophilized product can continue to be used in this manner in future research in areas where maintaining cold-chain is a large burden. There is also the opportunity to evaluate other modalities for antemortem *M. bovis* testing, including the use of novel skin testing antigens that can differentiate between vaccinated and infected animals. Lastly, this project is the first of its kind, in that animals are vaccinated under field conditions of the Mexican

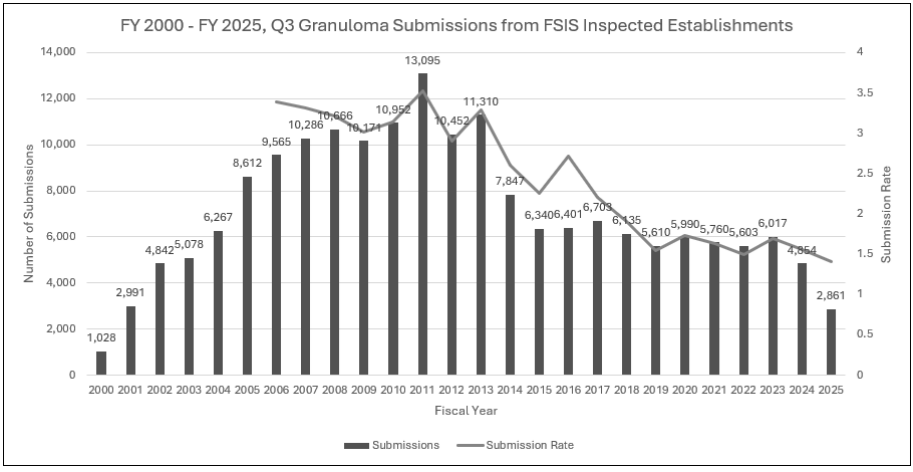
diary industry and are then followed through the typical production cycle. This allows us to evaluate the ability of the vaccine to combat disease outside of laboratory conditions and understand how best it can be utilized in the field.

Rapid Tuberculosis (TB) Peptide Lateral Flow Assay (LFA) Bovine Test
Mark Boyle, MAP/PATH LLC

MAP/PATH is introducing a next-generation alternative: the PEPTAK™ rapid, point-of-care blood test via a lateral flow assay that provides a definitive answer in 15 minutes. Unlike the skin test, which depends on a delayed immune response, PEPTAK™ directly detects TB-specific peptides circulating in the bloodstream. This allows for earlier detection of both latent and active disease states and removes the need for laboratory infrastructure, specialized training, or multiple farm visits.

National Tuberculosis Update
Suelee Robbe-Austerman, National Veterinary Services Laboratories (NVSL)

- **Primary Surveillance: FSIS Slaughter Surveillance** remains the main method for identifying TB-infected herds, with a goal of one granuloma submission per 2,000 head of fed cattle slaughtered. Other surveillance such as live animal testing includes movement testing, area surveillance, epidemiological investigation, and whole-herd testing. Slaughter surveillance has been trending down over the last couple of years after stabilizing in in 2015.



- **FY 2025 TB Slaughter Surveillance Cases:** Six histocompatible and PCR positive cases, four from adult cattle, and two from Mexican Fed Cattle (Colorado, Texas) identified through slaughter surveillance. Three TB-affected herds were noted in New Mexico

(NM 25A, -test and remove plan), Texas (TX 25A, test and remove plan) and South Dakota (SD 25A, depopulated)

Cervid TB Surveillance

- **DPP Test Kit Shortage:** The National Veterinary Services Laboratories (NVSL) experienced a Dual Path Platform (DPP) test kit shortage in FY 2025, leading to a sample backlog. The backlog was cleared by June 18, 2025, and the test turnaround time is back to five business days.
- **FY 2025 Results:** Out of 4,110 DPP tests conducted, there were 19 (0.4%) non-negative results for the 10 DPP test and two (0.09%) for the 20 DPP test, with **zero** PCR or culture positive detections.

Mexico Regionalization Update

- **Import Rule:** The APHIS Import TB and Brucellosis Final Rule (9 CFR 93), effective October 19, 2020, established a system for classifying foreign regions into one of five TB status levels (Level I-V). Reviews of Mexican regions are conducted every 2-3 years.
- **FY 2025 Reviews:** APHIS completed routine status reviews for three regions, noting strengths and recommendations for each:
    - **Coahuila** (November 2024): Recommended conducting a new area test and ensuring adequate indemnity funds for depopulation.
    - **Durango** (February 2025): Recommended increasing funding for buffer zone testing and improving slaughter surveillance and traceability.
    - **Tamaulipas** (June 2025): Recommended addressing deficiencies in epidemiological investigations and completing the area test initiated in 2021.
- **FY 2026 Reviews Planned:** Upcoming reviews include Chihuahua (December 2025), the Yucatán Peninsula Region (March 2026), and Sonora (April 2026).

TB Initiative Updates (Projects Overview)

- **BCG Vaccination Project in Baja California, Mexico:** This is a five-year double-blinded study to determine the efficacy of the BCG vaccine in reducing bTB in high-burden commercial dairies. The study is almost four years in, with vaccinations and sample collection ongoing.
- **Modernizing Diagnostics:** Efforts are underway to evaluate and identify modernized tests, especially those that can **Differentiate Infected from Vaccinated Animals (DIVA)**.
- **Wildlife Survey and bTB Surveillance, Moloka'i, HI:** This project is establishing a baseline for risk assessments, focusing on indexing Axis Deer and Feral Swine populations and assessing their contact

with livestock. As of June 2025, over 240 axis deer were sampled, resulting in three positive axis deer detections.

- **TB Lesion Flipbooks (FSIS):** Reference materials and training (flipbooks) are being provided to FSIS inspectors to improve granuloma recognition. As of the update, 1,348 flipbooks have been distributed to 31 states.

TB Source Attribution: Over 28,000 sequences, including more than 700 zoonotic TB sequences from 2018-2022, were submitted by the CDC to NCBI in October 2025. NVSL is in the process of analyzing those sequences and will provide a presentation upon request.

State Updates

Texas
Bud Dinges, Texas Animal Health Commission
Texas TB Investigations

- October 2024: Mexican origin steer identified at harvest in AM region
  - Origin trace, epi investigation, exposure trace/mitigation, and C&D done
- March 2025: adult dairy cow identified at harvest in AM region
  - Traced to a dairy that led to identifying and working with 3 dairy complex in AM region. Status – TB Affected
    - 25,000+ Jersey/Holstein cattle & small beef herd
  - Testing – assessment and 1st, 2nd, & 3rd removal tests done
  - Under herd plan: Test and Remove – testing ongoing; 10 positives identified to date
  - Trace assignments still in process (2 large dairies, multiple markets)
    - Trace start date March 13, 2020
      - ~21,000 individual animals directly from source dairy
      - ~17,000 individual animals directly from epi linked 2nd dairy
    - All first level out of state traces identified and sent out to those states, trace identification/assignment > 80% done
    - Working with trace exposed herds in Texas
  - Diagnostics not linked to previous associated cases – suggest new introduction & most likely of Mexico origin
- June 2025: adult angus cow identified at harvest in AM region
  - Traced to market and then origin in BV region – population of ~200 feral cattle on property with minimal handling > 5 years
  - Many concerns are being managed while planning to gather and relocate (into isolation) entire herd for testing and follow-up
- June 2025: adult dairy cow identified at harvest in SV region
  - Trace transferred to origin state: New Mexico
- (FY26) October 2025: adult dairy cow identified at harvest in AM region

- Trace transferred to origin state: New Mexico

Tuberculosis Out of State to TX Traces

- June 2025: New Mexico TB case – tracing dairy replacement animals to calf raiser in AM region
  - ~800 calves under isolation at calf raiser, all tested (3% deceased)
  - ~50% have returned to origin dairy in NM, rest will be transported soon
- October 2025: New Mexico TB case – tracing terminal chain beef animals sent to TX feeders

Texas Herds under Assurance Testing

Region	QT Release	Herd	FY25 Assurance Testing
AM	2019	Dairy	#5 - Final
AM	2020	Dairy	#4
AM	2020	Dairy	#4
AM	2023	Dairy	#1
AM	2024	Dairy	#1
GS	2020	Beef	Closed
SV	2022	Beef	#3

Colorado

Maggie Baldwin, Colorado Department of Agriculture

An update on Colorado TB affected herds and traces was provided.

Iowa

Katie Rumsey, Iowa Department of Agriculture

Trace 1: TX to IA

- Multiple Sites
  - 2 adjacent dairy sites – considered 1 premises, ~8,500 cows
    - Dairy 1
      - lactating cows, springers, close-up and dry cows, maternity, hospital
      - 50/50 parallel parlor
    - Dairy 2
      - lactating cows
      - 80 rotary parlor
  - Heifer Raiser: ~2500
  - Calf Site: ~500
- Regularly send calves to TX (embryo calves), KS (mix of heifer replacements, bulls, Angus-crosses), and WI (bull calves to studs)
- Quarantine Released 9/10/2025
- Timeline:

5/28/25	TX notifies IA of trace 38 out of 48 imported cows remaining (6 culled, 4 died to rendering)
5/31/25	Written quarantines issued
6/2/25	38/48 remaining cows tested (CFT & Gamma)
6/5/25	All CFT negative results
6/6/2025	All Gamma negative results
6/9/25	Necropsy of 5 dry cows with withdrawal – no significant findings
6/11/25	Histopathology of 5 dry cows – no significant findings
8/13-14/25	On farm logistics meeting to plan whole herd test
8/22/25	8,541 cows CFT tested 17 hours with 3 Accredited Veterinarians, 2 assistants, and 2-3 regulatory vets to assist (IDALS and USDA)
8/25/25	8,541 cows CFT read, 110 responders bled for Interferon Gamma testing 16 hours
8/26/25	Blood hand delivered to NVSL
9/2/25	Gamma results: 110 bled – 3 positives
9/4/25	Necropsied 3 Gamma positives – no significant findings
9/9/25	Histopathology of all 3 cows – no significant findings
9/10/25	Quarantines released

Trace 2: TX to SD to IA

- 11 cows in dry pen
- Agreement made to move back to SD

Trace 3: NM to IA

- Feedlot
- 471 head – 1 died
- Cattle will be fed until Feb/March 2026
- Quarantined to site until slaughter

New Mexico

Samantha Uhrig, New Mexico Livestock Board

TX 25A Trace – Notified of a trace out on 5/28/25. One herd that received two loads of lactating cattle (176 head total) was placed on a Hold Order until the indemnity agreement was signed and cattle were sent to slaughter. No additional TB testing was performed prior to shipping to slaughter because both loads had arrived in February and March of 2025. No lesions were found at slaughter. Hold Order was lifted.

NM 25A Slaughter Trace – Initial notification received from National Veterinary Services Laboratories (NVSL) on 6/13/25 of a 7-yr old cow found at slaughter with multiple lesions that were histo-compatible. Polymerase

chain reaction (PCR) confirmation received 6/17/25. After conversation with the owner and his son (manager), all three of their premises were placed under quarantine on 6/18/25 due to epidemiological links among the three locations. They raise their own replacement heifers, but they have sent them off-site for raising and breeding in the past. Prior to detection: no adult cattle are sold except to slaughter; only beef crosses are marketed when they reach approximately 600-700 pounds received regular shipments of bred heifers from out-of-state. After quarantine: adult cattle allowed to move direct to slaughter on a VS 1-27; beef cross calves allowed to move to approved feed yards in TX on a VS 1-27; still receiving some bred heifers from out-of-state. A whole-herd test was performed on all cattle 2 months of age and older at all three locations during the first week of August. A total of 16,174 cattle injected with a total of 267 CFT responders. Of these CFT responders, a total of 52 were gamma positive. Ultimately had 1 animal confirmed at the index farm (in addition to the index animal), 8 animals confirmed at the second farm, and no animals confirmed at the third farm. Additional animal that was confirmed at the index farm is NOT the same strain as the index animal or the other 8 cows at the second farm. Still waiting to schedule the second whole-herd test.

NM Slaughter Trace (no special ID assigned yet) – Initial notification received from NVSL on 10/8/25 of an adult cow found at slaughter with multiple lesions that were histo-compatible. PCR confirmation was received 10/10/25 and quarantine was placed the same day. Only one premises involved. Initial site visit with producer, veterinarian, and livestock inspector was held 10/13/25. Day-old calves and older beef crosses calves are currently being allowed to move to approved facilities in Texas on a VS 1-27. Prior to quarantine, lactating cattle shipped from this herd to a dairy in TX, but this movement has ceased. Need to schedule a whole-herd test, but we are waiting to get further guidance on the indemnity process.

Ohio

Kristy Shaw, Ohio Department of Agriculture

Ohio was notified in May 2025 about a large tuberculosis trace-out investigation from Texas. Forty-five (45) exposed animals were identified that moved within 60 months prior to confirmed detection from the affected herd in Texas to a Dairy in Ohio.

Of those 45 exposed animals, only 8 were still alive on the farm in June when activities began in Ohio. Those 8 exposed animals were quarantined, CFT tested (all negative), removed from the herd on 6/27/25, and slaughtered at a USDA FSIS-inspected facility. No lesions were found on post-mortem examination of those animals.

The farm in Ohio was actually part of a three premises “system” that included two dairies and a dry cow lot which animals frequently moved between. In conducting a whole herd test during the month of September, all three sites were visited for injection and read of animals at the respective

premises. The ODA worked in coordination with our Ohio USDA colleagues to conduct the whole herd test to make sure the process went as smoothly as possible without interrupting “normal” milking operations of the respective dairies. Across all the premises there were 4122 animals injected, 105 suspects, and 2 gamma positives. Those 2 gamma positives were euthanized and necropsied on 10/1/25 and Ohio is awaiting culture results. Currently, there are no restrictions on the OH dairy.

South Dakota
Mendel Miller, South Dakota Animal Industry Broad

South Dakota has been involved with two bovine TB investigations in the past year. One small beef herd in Eastern South Dakota was found to be affected. In addition, multiple dairies in the state were epidemiologically linked to the TB affected dairy herds in Texas. An update on these investigations was provided.

Michigan
Shannon Cerveny, Michigan Department of Agriculture & Rural Development (MDARD)

An update on Michigan TB affected herds and traces was provided.

Hawaii
Isaac Maeda, Hawaii Department of Agriculture

An update on Hawaii TB affected herds and traces was provided.

Committee Business:

Introduction of Committee on Farmed Cervidae resolution; Travis Lowe, North American Elk Breeders Association (NAEBA).

Introduction of Committee on Sheep, Goat and Camelid resolution; Dr. Roselle Busch, UC-Davis.

USAHA/AAVLD COMMITTEE ON DIAGNOSTIC LABORATORY AND WORKFORCE DEVELOPMENT

Chair: Joe Annelli, MD

Erika Alt, Gary Anderson, Ethan Andress, Joe Annelli, Maggie Baldwin, Randy Berghefer, Deborah Blakey, Tasha Bunting, Kevin Cain, Brian Collins, Kim Conway, Karen Conyngham, Maria Cooper, Beate Crossley, James England, Richard Fredrickson Jr., Karen Fox, Michael Gilsdorf, Gloria Gioia, Gail Golab, Cassandra Guarino, Rod Hall, Karyn Havas, Warren Hess, Ashley Hill, Juan Antonio Montaño Hirose, Noah Hull, Julie Hurley, Marcia Ilha, Tracie Jenkins, Jeffrey Kaisand, Amanda Kravitz, Elizabeth Lautner, Kimberly Lehman, Ailam Lim, Kelli Maddock, Marta Mainenti, Bret Marsh, Grant Maxie, Meghan May, Kristy Pabilonia, Lanny Pace, Elizabeth Parker, Boyd Parr, Amar Patil, Angela Pillatzki, Roman Pogranichniy, Keith Poulsen, Valerie Ragan, Debbie Reed, Willie Reed, Jamie Retallick, Melissa Macias Rioseco, Cassidy Rist, Suelee Robbe-Austerman, E Sabo, Susan Sanchez, John Sanders Jr., Rachel Schambow, Michelle Scheepstra, Kyle Shipman, Kathy Simmons, David Steffen, Dennis Summers, Tyler Thacker, Beth Thompson, Binu Velayudhan, Clint Waddell, Steven Witte, Mark Wood, Shuping Zhang.

The Committee met during the 2025 Annual Meeting in Aurora, Colorado on November 3 at 1:00 p.m. Dr. Annelli called the meeting to order, welcomed participants, and requested that attendees record their attendance using the QR code provided.

Presentations and Reports

Dr. Joe Annelli provided summaries on the following:

USDA Reorganization and Rural Veterinary Action Plan

USDA's proposal to relocate operations from Washington, D.C. to five regional hubs (Raleigh, Kansas City, Indianapolis, Fort Collins, Salt Lake City), reducing D.C. staff by half. The plan streamlines mission areas and maintains veterinary roles as mission-critical, emphasizing recruitment, retention, and One Health integration. The National Association of Federal Veterinarians (NAFV) underscored maintaining surge capacity for emerging diseases, food safety, national security, and trade.

USDA Rural Veterinary Action Plan (RVAP)

The Rural Veterinary Action Plan, jointly announced by Secretary Brooke Rollins and Senator Cindy Hyde-Smith, to address rural veterinary shortages. The plan expands the Veterinary Medicine Loan Repayment Program (VMDRP) and Veterinary Services Grant Program, introduces Rural Veterinary Infrastructure Grants, and tasks USDA's Economic Research Service with analyzing shortages. A special pay category for federal

veterinarians was discussed to close the $40,000 gap between federal and private practice. The plan aims to strengthen food security and veterinary service capacity in rural areas.

Career Pathways in Public Health Laboratory Science
Alexandra Smith, Association of Public Health Laboratories (APHL)

Dr. Smith presented the Centers for Disease Control and Prevention (CDC) APHL cooperative program strengthening laboratory workforce capacity through fellowships and internships. Over 230 fellows and 40 interns are placed in 75 laboratories. Host laboratories include state, local, and veterinary diagnostic laboratories. APHL provides stipends, professional development funds, and project supply reimbursement. Dr. Smith encouraged One Health-focused laboratories to participate.

Professional Liability Coverage for Veterinarians
Eric Impraim, FEDS Protection

Mr. Impraim discussed professional liability insurance coverage for veterinarians in public practice, including civil, disciplinary, and criminal protections. Federal employees can receive 50% reimbursement for premiums, and discounted coverage is available to National Association of Federal Vets (NAFV) members and state veterinarians. He emphasized independent legal representation and answered questions about coverage and claims.

Committee Business:

Dr. Annelli presented a draft resolution supporting USDA's Rural Veterinary Action Plan (RVAP). The resolution recognized Secretary Rollins and Senator Hyde-Smith for leadership in addressing veterinary shortages and affirmed USAHA and AAVLD's collaboration in plan implementation.

Amendments corrected typographical errors and added language emphasizing leadership, collaboration, and public health. The motion to adopt the resolution carried.

Following unanimous adoption of the resolution supporting the USDA RVAP, Dr. Annelli opened the floor for attendee discussion and closing remarks. The exchange focused on coordination, implementation, and sustaining the veterinary workforce across federal, state, and academic sectors.

Attendees discussed how USAHA and AAVLD could assist USDA during RVAP implementation. Dr. Annelli emphasized continued cooperation between federal, state, and industry partners, particularly in identifying shortage areas and sharing workforce data. Members agreed to maintain regular communication with USDA's Office of the Chief Veterinary Officer and suggested that RVAP updates be included on the 2026 USAHA agenda.

Participants broadened discussion to ongoing challenges affecting the veterinary workforce. Several members noted continuing vacancies within FSIS and APHIS as major barriers to food safety and disease response.

Comments highlighted the need for pay parity and special salary authorities for public veterinarians, along with the importance of university partnerships and diagnostic laboratory engagement to expand training programs similar to the APHL Career Pathways model.

State Animal Health Officials (SAHOs) expressed appreciation for the resolution's inclusion of collaboration with state and university partners. Attendees agreed that data-sharing and consistent messaging between state and federal agencies are essential to monitoring veterinary shortages. It was recommended that USAHA encourage state veterinarians to participate in USDA listening sessions as they resume following the government shutdown. Several attendees emphasized the importance of framing workforce development within a One Health and public health preparedness context. Others highlighted the bipartisan collaboration between Secretary Rollins and Senator Hyde-Smith as an encouraging example of sustained leadership support for rural and federal veterinary infrastructure. Discussion also touched on strengthening training linkages between laboratory and field veterinarians through APHL and similar programs.

The meeting adjourned at approximately 4:30 p.m. following expressions of appreciation from participants for the productive and collaborative session.

COMMITTEE ON EQUINE

Chair: Joe Fisch, FL
Vice Chair: Michael Odian, PA

Sarah Bailey, Maggie Baldwin, Samantha Beaty, Carolynn Bissett, Charlie Broaddus, Michael Carter, Duane Chappell, Stephen Crawford, Beate Crossley, Michael Greenlee DVM, DACVP, Heather Damico, Stephanie Dickens, Roger Dudley, Sean Eastman, Dee Ellis, Victoria Fields, Joe Fisch, Rachael Fiske, Katie Flynn, Patricia Foley, Tolani Francisco, Tony Frazier, Margaret Gabour, Garrett Girk, Scarlette Gotwals, Gillian Gwartz, Kristin Haas, Rod Hall, Steve Halstead, Nathan Harvey, Hallie Hasel, Carl Heckendorf, Janemarie Hennebelle, Terry Hensley, Ashley Hill, Siddra Hines, Heather Hirst, Brian Hoefs, Mark Johnson, Dorrie Jordan-Parrott, Jeffrey Kaisand, Margo Kunz, T.R. Lansford III, Molly Lee, Kimberly Lehman, Donald Lein, Jane Lewis, Mary Jane Lis, Sasha Lisowski, Karen Lopez, Scott Marshall, Patrick McDonough, Sara McReynolds, Richard Mock, Tabby Moore, Peter Mundschenk, Gleeson Murphy, Lee Myers, Daniel Myrick, Mike Neault, Cheryl Nelson, Michael Odian, Boyd Parr, Amar Patil, Elisabeth Patton, Angela Pelzel-McCluskey, Allison Phibbs, Jeanne Rankin, Jonathan Roberts, Susan Rollo, E Sabo, Abby Sage, Ryan Scholz, Carry Sexton, Kristy Shaw, Michael Short, Justin Smith, Ben Smith, Sandra Strilec, Tracy Sturgill, Tahnee Szymanski, Jane Teichner, Beth Thompson, Peter Timoney, Josie Traub-Dargatz, Charles Vail, James Watson, Dustin Weaver, Marcus Webster, Nathaniel White, Ryan Wolker, Marty Zaluski.

The committee met during the 2025 Annual Meeting in Aurora, Colorado on Monday, November 3 at 10:15 a.m. There were 29 members and 34 guests present.

Developing a National-Level Equine Population Model for Disease Emergency Planning and Preparedness

Jairo Palomares and *Sangeeta Rao*, Colorado State University

The disease modeling project aims to address a critical gap in the United States' ability to plan for and respond to equine disease emergencies by developing a comprehensive national dataset of equine operation locations and population distributions. Accurate information on locations of equine operations, as well as their size and density, is vital for effective emergency preparedness, disease outbreak response, and disaster planning. However, a complete and detailed national-level dataset does not currently exist. Existing data sources such as, those from the National Agricultural Statistics Service (NASS), the National Animal Health Monitoring System (NAHMS), and the American Horse Council (AHC) are either aggregate, incomplete, targeted or inconsistent, providing limited spatial precision and failing to capture all types of equine operations.

The central goal of the project is to use advanced geospatial and artificial intelligence (AI) tools to develop a national-level equine population model

that can support both state and federal animal health officials. This model will be valuable for managing outbreaks of equine diseases such as African horse sickness (AHS), vesicular stomatitis (VS), equine infectious anemia (EIA), and equine piroplasmosis (EP), as well as for responding to natural disasters like floods, fires, hurricanes, and tornadoes. The team's approach integrates two complementary methodologies: Geo-AI modeling and Statistical probability mapping. Using imagery from the National Agricultural Imagery Program (NAIP), the Geo-AI model employs remote sensing and deep learning techniques to identify potential larger equine operation sites across the country. The predictions of smaller operations will be captured by statistical probability maps that estimate the likelihood of equine operation presence based on environmental, demographic, and infrastructural covariates such as terrain, land use, human population density, and proximity to transportation networks. The model utilizes Esri's ArcGIS Pro software and data from the Living Atlas of the World to create refined probability maps, with deterministic imputation methods used to adjust for missing data from NASS state totals.

The outcome of this integrated approach is a set of national-scale maps showing the probable locations and densities of equine operations. These results provide a valuable resource for understanding disease transmission dynamics, guiding epidemiological modeling, and improving preparedness and resource allocation during disease outbreaks and emergencies. The team concludes that feedback from stakeholders, including industry representatives and animal health agencies, will be essential for refining the model and ensuring that it meets the practical needs of emergency planners and policy makers.

Sick Horse Import Update

Brianna Schur, USDA-APHIS-Veterinary Services (VS)

APHIS presented data on sick horse imports in FY25 to which included information about the numbers of sick imported horses by air, the countries of origin of these horses, a summary of horses referred to an approved clinic for medical care, and the types of diagnosis they received.

Contagious Equine Metritis Response, Equine Infectious Anemia Outbreak and Equine Viral Arteritis UM&R Updates

Angela Pelzel-McCluskey, USDA-APHIS-Veterinary Services (VS)

An overview of recent outbreaks of contagious equine metritis (CEM) and equine infectious anemia (EIA) was presented to the committee. A significant outbreak of CEM in Florida first identified in May 2024 had response activities that continued through most of 2025. The index premises in Orange County, Florida, was a large entertainment-type premises with a total equine population of 96 head including 35 ponies (4 stallions, 13 mares, and 18 geldings), 39 riding horses of various breeds (all geldings), and 22 draft horses (all geldings). The infection with *Taylorella equigenitalis* was first

identified in the pony breeding herd when a pony mare presented with compatible clinical signs of recent infection shortly after being bred to a pony stallion on the premises. Both the pony mare and stallion were found culture positive for *T. equigenitalis*.

Testing of the other equids on the premises confirmed *T. equigenitalis* infection in 1 other pony stallion, 13 pony geldings, 13 riding geldings, and 12 draft geldings (41 infected equids total on the premises). Transmission between the two pony stallions occurred when they shared semen collection equipment one day apart in May 2024 and one stallion transmitted to the pony mare by live cover breeding also in May 2024. Transmission among the geldings and subsequently to one of the stallions was by iatrogenic means during repeated sheath cleanings among all of the male equids which was being performed frequently and with inadequate to absent biosecurity measures.

An additional 12 geldings that had left the index farm between 2017 and 2024 were found *T. equigenitalis*-positive during trace out testing on other premises in Florida (6), Iowa (1), Maine (1), Maryland (1), North Carolina (1), and South Carolina (1). The epidemiological investigation indicates that infection had been present on the index farm in Florida since at least November 2017 with the source likely to have originally been one of the infected geldings, although the definitive source has not yet been identified. The pony stallions and mare from the breeding herd were only recently infected and were each epidemiologically ruled out as the infection source. Genomic sequencing at NVSL shows close correlation among all isolates in the outbreak but doesn't match any previous U.S. outbreaks. All 53 equids confirmed positive in the outbreak have undergone treatment.

In calendar year 2024, there were 147 EIA cases confirmed in the U.S. located in 12 states (Arizona, California, Connecticut, Illinois, Louisiana, Nebraska, New Mexico, North Carolina, South Carolina, Tennessee, Texas, Wyoming). Of the 147 cases, 120 were in Quarter Horse racehorses and 5 were in Thoroughbred racehorses with iatrogenic transmission identified as the cause of spread. There were 10 cases in horses that were either suspected or confirmed to have moved illegally from Mexico where the disease is endemic. Of the remaining 12 cases, 1 was in a horse from an untested/under-tested population, 5 were in horses associated with an outbreak caused by iatrogenic transmission at a veterinary clinic in Texas, and 6 cases were of undetermined source.

There were 2 significant clusters of EIA cases during 2024 and 2025 which were highlighted in both social and mainstream media. In September/October 2024, a multi-state cluster of 25 EIA cases in sanctioned Quarter Horse racehorses under a single trainer was identified in 3 states (California-12, New Mexico-2, Texas-11). Epidemiological investigation found that the infection had been iatrogenically transmitted between the trainer's horses when a bottle of an illicit performance enhancing injectable substance (Robinson's juice) became repeatedly blood-contaminated by double dipping into the bottle with the same needle between horses. Most of the horses

became infected in Ruidoso and Albuquerque during their preparation to race in the All-American Futurity trials and finals races in August/September 2024. In February 2025, the New Mexico Racing Commission announced the finding of illicit carmoterol, a non-FDA approved beta agonist performance enhancing drug, in the September 2nd post-race samples from 5 of the ultimately EIA-positive horses. This finding indicated that carmoterol was likely one of the performance enhancing substances in the illicit Robinson's juice which served as the vehicle of EIA transmission among the affected trainer's horses.

A second EIA cluster with widespread media coverage was identified in early 2025 when horses were found EIA infected in an outbreak associated with iatrogenic transmission at an equine veterinary clinic in Texas. There have been 24 EIA-infected horses found to date in 4 states (California-1, Colorado-1, Oklahoma-4, Texas-18) and all horses became infected while hospitalized at the Texas equine clinic in either May or July/August 2024. Epidemiological investigation has found the horses became infected through repeated blood-contamination of multiple bottles of heparinized saline being used at the clinic to flush intravenous catheters. Two pathways involving routine reuse of syringes by multiple employees at the clinic led to blood-contamination of the heparinized saline bottles. The original source of EIA virus in this outbreak was a Quarter Horse racehorse mare participating in bushtrack racing who had been admitted to the clinic with clinical signs compatible with acute EIA-infection in May 2024, but she was never tested or diagnosed with EIA. She died while under the clinic's care and subsequent testing at her home premises conducted in April 2025 confirmed EIA-infection in 2 other bushtrack Quarter Horse racehorses on the property. Identification and testing of additional exposed horses in this outbreak is ongoing.

The Committee on Equine (COE) requested an update on the status of USDA-APHIS's equine viral arteritis (EVA) Uniform Standards. The 2004 EVA Uniform Methods and Rules has been revised to a Uniform Standards document. There have been multiple rounds of input on the draft document provided by the COE's EVA subcommittee and those comments have been incorporated. The document contains updated EVA diagnostic, surveillance, and response information presented as recommendations to state animal health officials. It is currently going through the clearance process within USDA-APHIS, although an expected timeline for the document's completed review and approval is not yet available.

Update provided of the vesicular stomatitis virus (VSV) confirmation on October 31, 2025, the National Veterinary Services Laboratories (NVSL) in Ames, Iowa, confirmed findings of vesicular stomatitis New Jersey virus (VSNJV) in horses on two separate premises in Cochise County, Arizona. One (1) horse, a 21-year-old grade mare, on the first premises met confirmed VSV index case definition with compatible clinical signs and viral genome sequence data indicative of VSNJV on swabs from oral lesions. There are

an additional 52 horses and 120 cattle on the first premises which are not clinically affected. On a second premises in Cochise County, Arizona, one (1) horse, an 8-year-old Quarter Horse gelding, met confirmed VSV index case definition with compatible clinical signs and viral genome sequence data indicative of VSVNJ on swabs from oral lesions. There are an additional 6 horses and 60 cattle on the second premises which are not clinically affected. Both premises will remain under state quarantine until at least 14 days from the onset of lesions in the last clinically affected animal on the premises. These two premises are the 2025 VSV index cases for the United States.

Point of Care PCR Testing Updates

Eric Mendonsa and *Nick Tran*, Fluxergy

Fluxergy provided update on the development and regulatory compliance journey for Point of Care (POC) polymerase chain reaction (PCR) platform and assays for the equine industry. Specifically, Fluxergy reaffirmed commitment to support USAHA, states, and USDA CVB requirements.

Fluxergy's Journey in Equine Laboratory Testing

- The first rapid on-site PCR analyzer for equine practice laboratories
- 8 years in the equine veterinary R&D
- 130 equine practices installed to date
- 4 assays available including Equine Multiplex Panel (RUO)
- 2 Active USDA Licensing submissions
- Compliance to ISO 13485, FDA 21CFR and USDA 9CFR

Fluxergy's Commitment to USAHA can be illustrated in how Fluxergy supports USAHA's 2024 POCT Resolution #8 ("sale or use of POCT for an equine disease listed on the USDA National List of Reportable Animal Diseases be restricted to licensed and accredited veterinarians"):

- Fluxergy software now includes Sample Details with Veterinarian Name.
- All current equine practices that use Fluxergy RUO POCT have an assigned, accredited veterinarian.

Compliance and Collaboration:

- Continue pursuit of biologics licensure with USDA Center for Veterinary Biologics (CVB) under VSM 800.73:
  - Development studies are near completion (LoD, Analytical Specificity, Ruggedness)
  - Verification studies are being planned (Serial Release, Confirmation of Dating, Diagnostics Sensitivity/Specificity, Interlaboratory Comparison)
- From customer's onboarding through continuous education, Fluxergy emphasizes on meeting compliance requirements with

both USDA and state authorities, especially for equine reportable diseases.
- Fluxergy continues active engagement with CVB and state animal health officials for transparency and alignment.
- Fluxergy is an active member of Association of Veterinary Biologics Companies (AVBC), a true advocate for the veterinary biologics industry.

Fluxergy is open and excited to have a conversation with all stakeholders to help facilitate access to reliable data:
- Reach out to Fluxergy to book a meeting or receive performance data, recent abstracts at AAVLD, or collaborate on education/guidance to your state's practitioners

High Health High Performance Resolution Background
Katie Flynn, United States Equine Federation (USEF)
Industry Seeking Support for Addressing Temporary International Movement of Equids

Equine Athletes compete around the world representing their home countries at international equestrian events. The Federation Equestrian Internationale (FEI) is the international governing body for horse sports, recognized by the International Olympic Committee (IOC) and the International Paralympic Committee (IPC). The FEI sets the rules and regulations for Olympic equestrian sports namly show jumping, dressage, and eventing, as well as non-Olympic disciplines such as endurance, driving, and vaulting. Its core mission is to develop and govern these sports globally, to ensure the health and welfare of horses, to promote integrity, and provide fair and equal opportunities for athletes worldwide.

The United States Equestrian Federation (USEF) is the national governing body for horse sports in the United States. Under the Ted Steven's Act, USEF is responsible for developing and selecting equestrian athletes for national teams for international competitions. As such, the USEF promotes fair and safe competition, sets rules for sports and licenses competitions and officials.

In 2024, the United States hosted 501 of the over 4,500 international events sanctioned by FEI. The top five states for hosting upper-level international FEI events are Florida, California, North Carolina, Michigan, and New York. Over the next three years, in preparation for the 2028 Olympic and Paralympic Games to be held in Los Angeles, California, there will be an increase in the number of upper-level FEI events in the United States. In April 2026, the United States will host the FEI World Cup Equestrian Event in Dallas, Texas.

Equine and human athletes representing the United States travel the world to compete at FEI sanctioned events. In 2024, a total of 424 human athletes and 1,001 equine athletes represented the United States at international competitions in 28 countries with one rider who competed in 10

countries with 9 horses. Many of the U.S. equine athletes are stabled in the United States, but some U.S. riders have a subset of horses stabled overseas due to the barriers posed by USDA's international movement rules and regulations.

The health and well-being of our international equine athletes are protected by the robust science-based FEI veterinary rules. These FEI rules encompass the critical components of the World Organization of Animal Health's requirements for the recognized subpopulation of High Health Performance Horses (HHP). Specifically, horses participating in FEI competitions must meet the requirements for identification, traceability, and biosecurity before, during and post competition. Furthermore, the FEI rules and protocols recognize the importance of health monitoring and routine veterinary care for ensuring the high health status of the elite equine athlete at home and abroad.

Although FEI events can be held in conjunction with a U.S. National Competition sanctioned by a national governing body (namely USEF in the United States), the FEI mandates complete separation of National Horses from those competing in the FEI event. Complete separation includes designated restricted access to dedicated FEI stabling and FEI exercise and competition areas. The FEI stabling is a secure compound which restricts access to credentialed individuals and recognized qualified high health status FEI equids. All human and equine entry and exit are logged as the stabling is monitored by security and licensed officials 24/7.

Horses competing in FEI events must meet strict entry requirements prior to entering stabling area. At the time of arrival and offloading, the FEI official reviews the FEI passport and scans the equid's microchip to verify horse's identity. Meanwhile, the examining veterinarian reviews the electronic horse records contained within the electronic FEI Horse App to ensure the horse's vaccinations are current and to ensure the temperatures logged for the three prior days are below 101.5°F. Once the passport and FEI Horse App are verified and validated, the horse's temperature is taken. Afebrile horses are allowed entry to the stables and are provided with a back number and/or bridle tag number which are required for use while on the grounds. Febrile horses and their cohorts on the trailer will be sent to isolation and if the horse is a febrile on subsequent readings, the horses will be released to the FEI stabling. Horses remaining febrile will be refused entry to the event.

Horses are stabled by country and by region. Biosecurity rules prohibit breeding of horses as well as sharing equipment which further enhances disease mitigation efforts. As part of the required biosecurity plan for FEI sanctioned events, venues must implement fly and rodent control measures as well as stabling and premises cleaning and disinfection protocols, all of which must be verified by FEI officials onsite during the event. Licensed officials continually walk through the stabling area to observe horse health and management practices to ensure compliance with all biosecurity rules.

Horse health is continually monitored at an FEI competition to ensure only healthy horses compete and return to their home premises. FEI official

veterinarians perform a second microchip verification and horse inspection with required jog to determine fitness to compete prior to any horse competing. At some events more than one horse fitness to compete inspection may occur. Additional inspections conducted by FEI licensed officials include bit checks, boot checks and equipment checks to ensure all pieces of equipment are in compliance with horse health and welfare rules.

In the event a horse becomes febrile or displays clinical signs of illness, the horse is required to be moved immediately to isolation. A febrile horse is further required to be tested for Equine Herpesvirus-1 at an FEI approved laboratory. Additional testing may be mandated by an FEI official veterinarian.

Depending on the number of horses and the level of competition, there may be many FEI credentialed veterinarians on the event grounds. Any veterinarian wishing access to the FEI enclosures or access to an FEI horse for treatment must be credentialled by FEI. To become an FEI Official Veterinarian, the individual must have at least 3 years of equine veterinary experience and pass an online Official Veterinarian Course with examination. Upper-level FEI Official Veterinarian credentials require in person training and assessment. Continued online training and assessment are required to maintain FEI veterinarian credentials. Failure to follow any FEI veterinary rules may result in the removal of FEI credentials.

With all the above-mentioned biosecurity measures taken, what risk does this subpopulation of horses entering the United States pose to the US equid herd? Do the risks warrant the current burdensome non-science-based import USDA regulations? Current outdated USDA regulations fail to adequately address the negligible risk associated with the current management practices and the temporary movement patterns of these high health high performance equine athletes. To examples of barriers preventing the upper-level international equine athletes from entering the United States are the 7-day quarantine which restricts exercise to hand walking only and the burdensome costly restriction placed on temporary Contagious Equine Metritis (CEM) waiver horses. A fit competition horse only hand walking in a 7-day quarantine, loses fitness and is unable to compete to its fullest potential. Furthermore, the requirement that an individual must accompany each individual CEM waiver horse outside the stabling area to an exercise or competition arena is labor intensive and costly for the negligible risk of disease spread by the extremely unlikely event of a horse breeding under saddle while on the competition grounds.

Based on the above mentioned challenges and recognized biosecurity measures and practices implemented for the subpopulation of high health high performance horses competing at FEI competitions, the US equine industry is seeking support for the USDA recognition of high health subpopulation of horses as outlined in the WOAH Terrestrial Animal Health Code Chapter 4.17. A subpopulation recognized by many other countries around the world specifically for FEI competition horses. A subpopulation that science shows is a low risk for disease introduction and spread when the

principles of the WOAH Framework for High Health High Performance Horse are implemented. (See: Dominguez M, Münstermann S, de Guindos I, Timoney P. Equine disease events resulting from international horse movements: Systematic review and lessons learned. Equine Vet J. 2016 Sep;48(5):641-53.)

In summary, the equine industry seeks support for the implementation of these World Organization for Animal Health (WOAH) principles through the revision of USDA rules and policies. Specifically, urging the USDA to take the first step, which is to recognize the subpopulation of high health performance horses and the WOAH standards for such a population. This industry is initiative supported by the American Horse Council (AHC), the American Association of Equine Practitioners (AAEP), The Jockey Club, the American Quarter Horse Association (AQHA) and the United States Equestrian Federation (USEF) as well as many other equine and livestock entities.

For more information regarding the international movement of the subpopulation of competition horses, email Dr. Katie Flynn at kflynn@usef.org.

Supplemental References:

1. WOAH High Health Performance Horse Framework: https://bulletin.woah.org/?panorama=03-1-hhp-en
2. WOAH Handbook for the management of High Health High Performance Horses https://www.woah.org/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/Chevaux/A_HHP_Handbook_Oct_2018.pdf

Committee Business:

Three resolutions passed out of committee titled 1) *Contagious Equine Metritis Import PCR Testing for Overgrowth Conditions*, 2) *Addition of Equine Piroplasmosis PCR Test for Imported Equids*, and 3) *High Health High Performance Horse Resolution*.

The committee also approved updates to the Equine Herpesvirus Myeloencephalopathy Incident Response Guidelines for State Animal Health Officials (SAHOs) with revision date November 2025.

COMMITTEE ON FARMED CERVIDAE

Chair: Travis Lowe, KS
Vice Chair: Shelly Chavis, IN

Samantha Allen, Carissa Allen, Erika Alt, Gary Anderson, Paul Anderson, Charlie Bahnson, Dorothy Bailey, Maggie Baldwin, Jenna Bjork, Tom Bragg, Diana Care, Beth Carlson, Michael Carter, Christine Casey, Shelly Chavis, Sarah Coburn, Tim Condict, Maria Cooper, Heather Damico, Andrew Di Salvo, Brandon Dominguez, Roger Dudley, Misty Edmondson, Cheryl Eia, Dee Ellis, John Fischer, Karen Fox, Colin Gillin, Garrett Girk, Alicia Gorczyca-Southerland, Michael Greenlee, Rod Hall, Alex Hamberg, Catherine Harris, Janemarie Hennebelle, Terry Hensley, Warren Hess, Beth Johnson, Anne Justice-Allen, Jeffrey Kaisand, Diane Kitchen, Patrice Klein, Darlene Konkle, Karla Kretschmer, Melanie Kunkel, Scott Larsen, John Lawrence, Molly Lee, Kimberly Lehman, Scott Leibsle, Kaitlynn Levine, Jane Lewis, Ailam Lim, Rick Linscott, Lindsey Long, Karen Lopez, Roxanne Lotts, Aaron Loucks, Travis Lowe, Mark Luedtke, Erin Luley, Jennifer Malmberg, Bret Marsh, James Maxwell, Patrick McDonough, Mendel Miller, Daniel Myrick, Mike Neault, Cheryl Nelson, Tracy Nichols, Dusty Oedekoven, Gary Olson, Mitchell Palmer, Amar Patil, Elisabeth Patton, Taryn Pearson, Bill Pittenger, Amanda Price, Hunter Reed, Sarah Reinkemeyer, Suelee Robbe-Austerman, Jonathan Roberts, Susan Rollo, Mark Ruder, Sherri Russell, E Sabo, Shawn Schafer, David Schmitt, David Schneider, Laurie Seale, Staci Slager, Whitnie Smartt, Justin Smith, Dennis Summers, Diane Sutton, Tahnee Szymanski, Tyler Thacker, Noelle Thompson, Beth Thompson, Scott Wells, Nora Wineland, Steven Witte, Sara Wyckoff, Ken Yancey, Alan Young, Glen Zebarth.

The Committee met during the 2025 USAHA Annual Meeting in Aurora, Colorado. The session was held November 4 from 1:05-3:05 p.m. with 51 members and 29 guests attending. Travis Lowe started the meeting by introducing himself and reminding members to sign in using the QR code. He also reminded the audience that anyone can participate but only members can bring forth resolutions, motions, and vote. Travis introduced his Vice Chair, Dr. Shelly Chavis with the Indiana State Board of Animal Health. Next, he referenced the Committee on Farmed Cervidae Mission Statement which was visible on the room screens.

The purpose of the Committee on Farmed Cervidae is:

- To represent the interests of farmed Cervidae as related to animal health.
- To assist in the development of sound policies and regulations governing farmed Cervidae based on scientifically valid principles and methods.
- To provide information and expertise, so appropriate decisions can be made regarding the health of domestic livestock and wildlife that also consider the needs of farmed Cervidae.

- To provide information and assist in the development of sound policies governing the intrastate, interstate, and international movement of farmed Cervidae, their germ plasm and other biomaterials.
- To assist in the identification, management and educational outreach associated with disease and welfare issues affecting farmed Cervidae.
- To encourage and support research and development to maintain the health and welfare of farmed Cervidae.

Presentations and Reports

USDA-APHIS Cervid Health Update
Rosemary Sifford and *Tracy Nichols*, USDA-APHIS, Veterinary Services (VS)

This presentation provided FY 2025 updates for chronic wasting disease (CWD) and tuberculosis (TB) from USDA-APHIS. Progress on the revised CWD Program Standards was discussed, and a timeline was provided for the next steps.

Elk CWD Ante-Mortem Animal Testing Update
Amanda Price, Utah State Department of Agriculture and Food

This presentation discusses live animal testing efforts for chronic wasting disease (CWD) in captive elk herds in Utah. The Utah Department of Agriculture and Food received funding to conduct live animal testing including rectal biopsies, blood, and deoxyribonucleic acid (DNA) on 72 elk on infected farms. The goals of this project were to identify prevalence on infected facilities, develop management plans for infected facilities, and use live animal testing for surveillance on facilities that did not meet state requirements for testing.

CWD Blood Test Update
Gary Pusateri, Dream Genomics, Inc.

A follow-up to Dream Genomics presentation in 2024 at USAHA and the progress in the use of gene expression technology for the development of a sensitive, early diagnostic for chronic wasting disease (CWD) in blood from live deer. Dream Genomics received cooperative agreement money from USDA for 2025 to further their testing.

New Business:

Resolution #1 - ***Acceptance of the Dual Path Platform (DPP) Test for Tuberculosis in Exported Cervids*** was presented by Mark Luedtke. The resolution states the United States Animal Health Association (USAHA) urges the Canadian Food Inspection Agency (CFIA) and USDA Animal and Plant Health Inspection Service (APHIS) to negotiate and agree on amending Canada's importation protocol to recognize the Dual Path Platform (DPP) tuberculosis test as an approved option for meeting tuberculosis (TB) testing

and herd accreditation requirements for live farmed cervids and frozen cervine semen exported from the United States to Canada.

A motion was made by Paul Anderson to adopt the resolution. Shawn Schafer seconded the motion. The motion carried on voice vote without opposition.

Resolution #2 - ***Use of Antemortem Testing as a Risk Assessment Tool in Cervid CWD Trace-Forward Investigations*** was brought forward by Dr. Amanda Price. The resolution states the United States Animal Health Association (USAHA) urges state animal health officials and state wildlife officials to consider the appropriate, responsible use of antemortem sampling, such as recto-anal mucosa-associated tissue (RAMALT) biopsies, as a herd-level risk assessment tool for captive cervids in trace-forward or trace-back herds identified through CWD epidemiological investigations. Such sampling should be used to support science-based decision making and may help avoid unnecessary herd depopulations and long-term business interruptions while maintaining animal health safeguards.

A motion was made by Shawn Schafer to adopt the resolution. It was seconded by Mark Luedtke. After discussion a vote was taken. The motion carried by a vote of 21-6.

Resolution #3 - ***Collection of Research Samples from Cervids Harvested Under CWD Herd Plans*** was presented by Dr. Amanda Price. The resolution states he United States Animal Health Association (USAHA) requests that the United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) work with CWD researchers and state agencies to develop an accessible electronic database that includes a list of current research projects, sample types needed for those projects, and individuals trained to collect those samples.

Be it further resolved that USAHA requests that USDA-APHIS create a bank to store tissue and environmental samples for future research from farmed Cervidae depopulated or harvested under an official herd plan or USDA funded cooperative agreement. This tissue bank shall be accessible to all researchers conducting legitimate CWD research.

Be it further resolved that USAHA requests that USDA-APHIS provide specific guidance and sampling protocols to state agencies for blood, RAMALT biopsies, lymphoid tissues, DNA, and environmental samples from farmed cervids depopulated or harvested under an official herd plan or USDA cooperative agreement.

Be it further resolved that USAHA urges state agencies to collect research and genetic screening samples from farmed cervids harvested as part of an official herd plan or USDA funded cooperative agreement and coordinate with USDA to provide those samples to researchers or the USDA tissue bank.

USAHA further encourages coordination between USDA, state agencies, research institutions, diagnostic laboratories, cervid industry foundations, and outside stakeholders to ensure any collected samples are utilized to advance

CWD research, surveillance, and disease management tools with possible funding and resource support.

Shawn Schafer made a motion to approve the resolution. The motion was seconded by Laurie Seale.

After discussion, Dr. Maggie Baldwin made a motion to amend the resolution. Dr. Hamberg seconded the motion. After a short discussion, a vote was called and the motion carried to amend the resolution.

A second motion was made to amend the resolution by Dr. Tahnee Szymanski. Dr. Baldwin seconded the motion. After discussion, the motion carried to amend the resolution a second time.

A final vote was called to adopt the resolution, as amended, and the motion carried by a vote of 22-8.

Resolution #4 - ***Interstate Movement of Farmed Cervidae*** was presented by Gary Olson. The resolution states the United States Animal Health Association (USAHA) requests State Animal Health Officials consider a more flexible, scientific, and a risk assessment approach to the interstate movement of farmed cervids to ranches located especially in areas considered endemic, or restricted, from import/export, for CWD. Specifically, USAHA requests state animal health officials change policies and regulations to allow the movement of cervids from certified herds to areas with similar CWD endemic status. USAHA recommends state animal health officials use risk assessments on each importing farm and also consider the genetic resistance of animals asking to be moved into their state.

Mark Luedtke made a motion to adopt the resolution. Paul Anderson seconded the motion. After discussion, a vote was called and the motion failed by a vote of 8-26. The meeting was adjourned at 3:05 p.m.

SUBCOMMITTEE ON TUBERCULOSIS

Chair: Beth Carlson, ND
Vice Chair: Elisabeth Patton, WI

The Tuberculosis (TB) Scientific Advisory Working Group reported on a new lateral flow assay being developed for tuberculosis testing. USDA-APHIS did an update focusing on states affected by TB, especially a Texas dairy. The Dual Path Platform (DPP) testing shortages were mentioned and the fact that comparable assays are being developed that could be useful during shortages of the DPP.

A resolution titled *Acceptance of the Dual Path Platform (DPP) Test for Tuberculosis in Exported Cervids* was mentioned but no action was taken.

USAHA/AAVLD COMMITTEE ON FOOD AND FEED SAFETY

Chair: Charles Starkey, VA
Vice Chair: Karyn Bischoff, CA

Chris Ashworth, Jianfa Bai, Joy Bennett, Randy Berghefer, Karyn Bischoff, Richard Breitmeyer, Tasha Bunting, Rosie Busch, Beverly Byrum, Abbey Canon, Lindy Chiaia, Kim Conway, Maria Cooper, Carrie Cremers, Evelyn Crish, Tarrie Crnic, Dubra Diaz-Campos, Leah Dorman, Tracy DuVernoy, Cheryl Eia, Kathy Finnerty, Heather Fowler, Gloria Gioia, Gail Golab, Erin Goodrich, Ramesh Gupta, Rod Hall, Nathan Harvey, Karyn Havas, Susanne Hinkley, Don Hoenig, Jarra Jagne, Ghazala Jawad, Ashley Johnson, Annette Jones, John Sanders Jr., Jeffrey Kaisand, Donna Kelly, T.R. Lansford III, Dale Lauer, Elizabeth Lautner, Molly Lee, Jane Lewis, Gene Lollis, Karen Lopez, Bret Marsh, Patrick McDonough, Kathy McNamara, Peter Mundschenk, Katie Murray, Michael Neafsey, Cheryl Nelson, Elizabeth Parker, Boyd Parr, Amar Patil, Roman Pogranichniy, Amanda Price, John Ragan, M. Gatz Riddell Jr., Jonathan Roberts, Susan Rollo, E Sabo, Orhan Sahin, Joni Scheftel, Anna Schilling, David Schmitt, Adrian Self, Sheryl Shaw, Rick Sibbel, Kathy Simmons, Shri Singh, Harry Snelson, Charles Starkey, Susan Stehman, Beth Thompson, Megan Toms, Alberto Torres, Gregory Tyson, Shauna Voss, Joseph Wang, Dustin Weaver, Kelli Werling, Stephen White, Ross Wilson, Nora Wineland, Valeriia Yustyniuk.

The Committee met during the 2025 Annual Meeting in Aurora, Colorado on November 3 at 10:15 a.m. There were 14 members and guests in attendance.

Presentations and Reports

Rendering and Food Safety

Charles Starkey, National Renderers Association

Rendering is part of the circular bio-economy, through the use of recycled material in animal feeds. We have been using rendered animal products for many things for millennia to make things such as candles, soap, and other materials. We only consume 50% of a meat animal in the U.S., other countries are more efficient. Rendering adds freshwater to the environment. Rendering aligns with U.N. Global Sustainability Goals. The Global Feed LCA Institute (GFLI) database was developed with Food and Agriculture Organization (FAO)/ Livestock Environmental Assessment and Performance (LEAP) to decrease the carbon footprint of animal foods and feeds. Working with WOAH and FAO on the sanitary process and One Health, keeping dead animals out of landfills. Seventy million (70M) tons of materials are rendered per year globally. Rendered commodities are regulated and deemed safe by the WHO and WOAH when proceeded accordingly. Regulations require state and federal inspections to keep the process safe. Rendering involves cooking at over 250 degrees F for half an hour plus extrusion to remove pathogenic bacteria. When pathogens appear,

they're usually associated with secondary contamination. They work with farmers on safely moving deadstock without entering biosecure areas.

Salmonella infections from pet food have reduced dramatically over past years. Less than 5% of rendered products come with fallen animals. Rendering is one of the safest methods of disposal. Putting animals in landfills sometimes leaves them on the surface. Composting of livestock creates greenhouse gases and must be meticulously managed. Burial can lead to environmental contamination with veterinary drugs. Incineration takes a lot of fuel, releases gases, and can have an emotional impact in large-scale culling operations. Pentobarbital is now detectable in ppt concentrations and has been seen in rendered products, and there is zero tolerance. Use as a sedative has been problematic, especially with increasing regulation of xylazine and ketamine because of drug abuse. Pentobarbital and other euthanasia agents may not allow for rendering.

HPAI Update

Jessie Trujillo, Kansas State University

The Standard Milk Ordinance in 1924 is responsible for pasteurization standards. High concentrations of influenza were found in water in Texas due to the dumping of milk, but pasteurization has protected the public. HPAI was also responsible for major marine mammal die-offs in the Americas. Lethality is high in cats, foxes, and sea lions. Over 100 cats have died from highly pathogenic avian influenza (HPAI), and cats have been sentinels on the first affected farms. The virus causes fetal viremia and abortion in dairy cows. It has been impacting fetal bovine serum availability for laboratories and adding expense. It was detected in semen from one bull but could not be experimentally reproduced. Swine can be affected but not spread the current virus, but it can reassort. The virus from 2024 in cats is transmissible and lethal, but the recombined virus for 2025 is less lethal in cats. The work done in Kansas in dairy cows used a dry cow model, because use of milking cows became hard to control. Bulk tank testing has been used, but animals may still be infected when bulk tank HPAI drops after about 14 days. Sampling of milk, pet foods, and meat for testing early in the initial outbreak found 13 to 35% prevalence, but 30 days later, only about 1%. The epithelium in the lung and mammary are similar enough that the virus is able to infect mammary glands, which doesn't have ciliary clearance.

The Kansas State study inoculated udders of dry Jerseys. One animal met the criteria for euthanasia within three days. Cows stopped eating and ran fevers within three days, and milk became abnormal. The milk contained billions of virus particles. Mammary glands had evidence of necrosis, glandular dilation, and often secondary infections. Histologically, there was massive acinar cell necrosis and sloughing, with inflammatory cell infiltrate followed by occlusive ductular fibrosis (ductus obliterans).

Regulatory Landscape for Food and Feeds

Austin Therrell, Association of American Feed Control Officials (AAFCO)

There are two tiers, federal (Food Safety Modernization Act, Good Manufacturing Practice (GMP), Food, Drug, Cosmetic Act) and state. Inspections are often by states, sometimes under contract from Food and Drug Administration (FDA). The FDA has partnered with AAFCO since 1909, when AAFCO was established. The New Jersey Agriculture Association helped provide the basis of interstate regulations. State and Federal regulators meet with AAFCO twice per year. Membership is voluntary, and it is an open forum for regulators and lay people. AAFCO provides guidance, advocacy, dog and cat food standards, proficiency testing, etc. They are working with Kansas State working on improving nutrient profiles in feeds and use of novel ingredients, such as insects, and pet food labelling standards. AAFCO previously had a memorandum of understanding (MOU) with Center for Veterinary Medicine (CVM) to review the safety and efficacy of novel feed ingredients. The MOU ended a year ago, which removed a pathway for novel ingredients to come to the market, but eventually new guidance documents recognized AAFCO. The Scientific Review of Ingredient Submissions is an AAFCO, and Kansas State cooperative process was set up to accept applications for new feed ingredients. There is an up-front cost to review the ingredients, there is a 60-to-90-day review time. This process is still functional during the government shut-down.

Pet food label modernizations has begun. There was a process put in place in 2015 for more transparency in pet food labels. Changes included handling and storage, the nutrition facts box, ingredient statement, and intended use statement. More information is available on the AAFCO website. The labelling requirements standardizes how and where information is presented on the label. The new label is similar to what is seen on food products for people, including more information on calories, carbohydrate, and fiber. There are specific icons for handling instruction.

- The Innovative Feed Act was introduced to Congress again this year. This would establish new ingredient claims of health benefits, etc., and address food safety concerns.
- There is a proposal to take oversight of pet foods from states and put it on FDA.
- There is a proposal to add HPAI and other disease monitoring for raw dog and cat foods.
- The FDA is in the process of a shutdown. CVM is already a very small part of the organization.
- Generally Recognized as Safe (GRAS) program changes to human food products may impact pet foods and animal feeds as many ingredients are currently GRAS approved.

Additional resources and documents are available on the AAFCO website. The next AAFCO meeting will be in New Orleans in January.

There was a request for toxicologists on the GRAS panel.

Committee Business: No new or old business.

COMMITTEE ON FOREIGN AND EMERGING DISEASES

Chair: Marie Culhane, MN

Vice Chair: Anna Forseth, DC

Bobby Acord, Kelli Almes, Gary Anderson, Sarah Bailey, Maggie Baldwin, Lisa Becton, Oriana Beemer, Peter Belinsky, Danelle Bickett-Weddle, Carolynn Bissett, Jenna Bjork, Richard Breitmeyer, Steve Brier, Charlie Broaddus, Charles Brown II, Tasha Bunting, Christine Casey, Natalia Cernicchiaro, Tim Condict, Kim Conway, Maria Cooper, Chelsea Crawford, Stephen Crawford, Carrie Cremers, Evelyn Crish, Beate Crossley, Marie Culhane, Susan Culp, S. Peder Cuneo, Joanna Davis, Amy Delgado, Jill DeSau, Barbara Determan, Andrew Di Salvo, Stephanie Dickens, Zoey Dinkla, Brandon Dominguez, Leah Dorman, Roger Dudley, Tracy DuVernoy, Misty Edmondson, Jamee Eggers, Cheryl Eia, Dee Ellis, François Elvinger, Nikki Enderle, Bonto Faburay, Joe Fisch, Katie Flynn, Patricia Foley, Anna Forseth, Karen Fox, Jane Galyon, Samantha Gibbs, Colin Gillin, Michael Gilsdorf, Douglas Gladue, Gail Golab, Steve Goldsmith, Tony Good, Alicia Gorczyca-Southerland, Tracie Guy, Gillian Gwartz, Rod Hall, Alex Hamberg, Kuki Hansen, Catherine Harris, Nathan Harvey, Karyn Havas, Julie Helm, Janemarie Hennebelle, Julia Herman, Warren Hess, Siddra Hines, Heather Hirst, Brian Hoefs, Don Hoenig, Robin Holland, Nicki Humphrey, Aimee Hunt, Lucy Hunt, Carla Huston, Amber Itle, Jarra Jagne, Beth Johnson, Annette Jones, J.J. Jones, Jamie Jonker, M. Gatz Riddell Jr, John Sanders Jr., Jeffrey Kaisand, Mary Kelpinski, Diane Kitchen, Patrice Klein, Kavishti Kokaram, Darlene Konkle, Berend Koops, Amanda Kravitz, Melanie Kunkel, Margo Kunz, T.R. Lansford III, Elizabeth Lautner, John Lawrence, Molly Lee, Sabrina Lee, Kimberly Lehman, Jane Lewis, Ailam Lim, Rick Linscott, Mary Jane Lis, Sasha Lisowski, Lindsey Long, Aaron Loucks, Gustavo Machado, Rebecca Mansell, Bret Marsh, Scott Marshall, David Marshall, Michael Martin, Miriam Martin, James Maxwell, Meghan May, Kathy McNamara, Sara McReynolds, Scott McVey, Miranda Medrano, Gay Miller, Sarah Mize, Peter Mundschenk, Gleeson Murphy, Mandy Murray, Katie Murray, Lee Myers, Michael Neafsey, Mike Neault, Cheryl Nelson, Megan Niederwerder, Kayla Niel, Kathleen O'Hara, Michael Odian, Dusty Oedekoven, Kristy Pabilonia, Lanny Pace, Elizabeth Parker, Steve Parker, Boyd Parr, Amar Patil, Elisabeth Patton, Brent Pepin, Andres Perez, Olivia Perkins, Meredith Petersen, Allison Phibbs, Bill Pittenger, Barbara Porter-Spalding, Keith Poulsen, Amanda Price, Jeanne Rankin, Hunter Reed, Heather Reider, Sarah Reinkemeyer, Scott Richardson, Melissa Macias Rioseco, Suelee Robbe-Austerman, Susan Rollo, Jim Roth, Marisa Rotolo, Katie Rumsey, Sherri Russell, E Sabo, Mo Salman, Will Sander, Mike Sanderson, Travis Schaal, Julia Schaar, Shawn Schafer, Rachel Schambow, David Schmitt, Ryan Scholz, Kyle Shipman, Michael Short, Kathy Simmons, Shri Singh, Staci Slager, Whitnie Smartt, Julie Smith, Justin Smith, Rebecca Smith, Harry Snelson, Sarah Speth, Gordon Spronk, Susan Stehman, Gary Stone, Sandra Strilec, David Suarez, Dennis Summers, Kasia Szymanska, Tahnee Szymanski, Noelle

Thompson, Beth Thompson, Jesica Thompson, Peter Timoney, Megan Toms, Alberto Torres, Binu Velayudhan, Shauna Voss, Clint Waddell, Sherrilyn Wainwright, James Watson, Dustin Weaver, Patrick Webb, Jennifer Weber, Marcus Webster, Kelli Werling, Stephanie Wetter, Stephen White, Michelle Willette, John Williams, Ross Wilson, Josh Winegarner, Steven Witte, Ryan Wolker, Mark Wood, Sara Wyckoff, Caroline Yancey, Alan Young, Valeriia Yustyniuk.

The Committee met during the 2025 Annual Meeting in Aurora, Colorado on November 4. There were 30 members and 50 guests in attendance per the QR code sign-in to obtain the roster. Culhane brought the meeting to order at 10:15 a.m. The mission statement of the committee was presented and there was no discussion followed. There were no outstanding resolutions from 2022 to review nor were there any resolution responses from 2024 to review. The agenda for the meeting was presented.

Presentations and Reports

Global Swine Disease Surveillance: A Near Real-Time, Event-Driven Approach
Valeriia Yustyniuk, University of Minnesota Center for Animal Health and Food Safety

Valeriia discussed the Center for Animal Health and Food Safety at the University of Minnesota which is a World Organization for Animal Health (WOAH) collaborating center. There were a couple of projects discussed associated with global swine disease surveillance. Information is gathered in real time and then scored based on risk to the U.S. pork industry. This project is funded by the Swine Health Information Center (SHIC). Interested parties can sign up for their newsletter for free online. The Center's work has also allowed for the development of partnerships with countries like the Dominican Republic and an opportunity to understand local perspectives in countries dealing with diseases that the U.S. is not. This group is planning to expand their work to diseases the U.S. does deal with (domestic), starting with viral diseases.

The presentation is available as a PDF titled *Global Swine Disease talk at 2025 USAHA FED CMTE.* Dr. Yustyniuk can be reached by email at yusty002@umn.edu.

EC Update on Foreign and Emerging Diseases: FMD, an unexpected TAD in the EU
Francisco J. Reviriego Gordejo, European Commission (EU)

Francisco discussed recent detection of foot and mouth disease (FMD) in the E.U. Detections in Germany, Hungary and Slovakia were covered. **Germany**- At the beginning of 2025 (January 10), FMD was detected on a farm with 14 water buffalo. The virus was FMD serotype O. In response, a surveillance zone was activated, regionalization measures were put in place and a standstill for all cloven hooved animals was implemented. Though the virus was not detected in any other areas, there were 36 farms in this region

that were impacted by control measures. As part of the surveillance program, they were able to leverage wildlife samples that were being collected for African swine fever (ASF). A few months later, FMD was detected in **Hungary** on a farm with 1,000 dairy cattle. The viral serotype in this case was also O, but it was not the same virus. The closest related sequence to the viral strain found in Hungary/Slovakia was one from Pakistan (2017/2018). There was also more viral spread in this case, including prems across the Danube River, in **Slovakia**. The cases that would subsequently be identified were associated with the strength and direction of the wind/weather in the area at that time. There was also mention of a human component to the spread of the virus.

Regarding the response: suppressive vaccination (vaccination to kill) was used.

- Carcass disposal was difficult because of the proximity of these animals to the Danube River.
- A complete movement standstill was implemented.
- Susceptible animals in Hungary had to be moved indoors.
- 55,000 PCR tests and 200,000 ELISA tests were conducted for surveillance.
- The role of the E.U. commission was communication, transparency.

Germany's FMD status was reinstated before the World Organization for Animal Health (WOAH) general session in 2025. Both Hungary's FMD status and Slovakia's FMD status have been reinstated as well. These countries are still waiting to see if trading partners will acknowledge their status updates.

Lessons learned - regionalization worked well. Access to the vaccine bank was very important. Pre-emptive culling within 3kms is thought to have helped, and passive surveillance was very important!

More information about EC control of high consequence diseases can be found at these links:

PAFF Committees and PPT: https://food.ec.europa.eu/horizontal-topics/committees/paff-committees/animal-health-and-welfare/presentations_en#20250113

SANTE FMD PAGE: https://food.ec.europa.eu/animals/animal-diseases/diseases-and-control-measures/foot-and-mouth-disease_en

ADIS PUBLIC PAGE: https://webgate.ec.europa.eu/tracesnt/adis/public/notification

A Practicing Veterinarian's Perspective of New World Screwworm Encounters in Central America

Angie Varnum, University of Minnesota

The New World Screwworm (NWS) was temporarily eradicated from the U.S., Mexico, and most of Central America in the early 2000s, with only occasional cases reported since 1966. Because the majority of U.S. veterinarians have not personally seen this parasite in practice, the typical presentation, treatment, and control methods are not yet walkaround knowledge for the average U.S. veterinary practitioner. This mirrors the

situation for many Mexican and Central American veterinary professionals who before the current outbreak did not yet have experience with the parasite. This presentation detailed first-hand clinical and community experiences with NWS in Central America. A case study demonstrated the parasite's clinical presentation in a horse, treatment, and reporting considerations. Key practical points for practitioners who may encounter cases abroad, domestically, or in import inspections were highlighted and included:

- Extension services were a valuable way to educate the community.
- Mixed infections are common and, in some cases, up to 15 different larva species may be present. She recommends sampling the larvae located deeper in the tissue.
- Spraying a larvicide before removing larvae helps because the larvae will exteriorize themselves, making it easier to remove.
- COPEG offers treatment recommendations on their website.
- Umbilicus and extremities are the most common locations for infestation (ear, vulva, horn).
- Wound treatment needs to be a priority.
- Don't forget about the dogs.

Acknowledgements were given to the Equitarian Initiative and Dr. Jaqueline Garabito, M.V., for sharing additional field case studies and data which enriched this presentation. Dr. Varnum can be reached by email at gebha048@umn.edu.

Committee Business:

The committee discussed, amended and approved a recommendation titled, *New World Screwworm (NWS) Task Force*. This recommendation's approval came about as follows: Motion to change the proposed resolution to a recommendation to develop a task force was made by Kristin Haas (VT), seconded by Alfonso Torres (AR), all approved (yes) by committee. Then amendments were made to the recommendation. Motion to accept the amendments as written was made by Linda Logan (TX), seconded by Mo Salman (CO), and all approved (yes) by committee. There was no new business.

Warren Hess (UT) submitted a motion to adjourn the meeting and Kristin Haas (VT) seconded. Meeting adjourned at 12:05 p.m. local time. The committee will meet virtually to conduct email nominations and vote for a new Chair of the committee since Marie Culhane is not able to continue as chair after December 31, 2025.

COMMITTEE ON GOBAL ANIMAL HEALTH AND TRADE (GAHT)
Chair: Elizabeth Parker, TX
Vice Chair: Tim Richards, HI

Bobby Acord, Kelli Almes, Gary Anderson, Danelle Bickett-Weddle, Carolynn Bissett, Richard Breitmeyer, Charlie Broaddus, Charles Brown II, Tasha Bunting, Anthony Clayton, Robert Cobb Jr., Karen Conyngham, Maria Cooper, Michael Costin, Chelsea Crawford, Stephen Crawford, Evelyn Crish, Barbara Determan, Stephanie Dickens, Bud Dinges, Brandon Dominguez, Leah Dorman, Tracy DuVernoy, Cheryl Eia, Dee Ellis, Nikki Enderle, James England, William Fales, Kathy Finnerty, John Fischer, Katie Flynn, Anna Forseth, Tony Frazier, Jane Galyon, Samantha Gibbs, Colin Gillin, Garrett Girk, Gail Golab, Steve Goldsmith, Tony Good, Chelsea Good, Alicia Gorczyca-Southerland, Scarlette Gotwals, Bucky Gwartney, Gillian Gwartz, Kristin Haas, Keith Haffer, Rod Hall, Steve Halstead, Alex Hamberg, Kuki Hansen, Nephi Harvey, Charles Hatcher, Karyn Havas, Carl Heckendorf, Julie Helm, Amy Hendrickson, Janemarie Hennebelle, Julia Herman, Bob Hillman, Robert Hilsenroth, Siddra Hines, Heather Hirst, Don Hoenig, Joe Huff, Carla Huston, Amber Itle, Ashley Johnson, Annette Jones, Jamie Jonker, Anne Justice-Allen, Jeffrey Kaisand, Mary Kelpinski, Diane Kitchen, Darlene Konkle, T.R. Lansford III, Scott Larsen, Elizabeth Lautner, Molly Lee, Sabrina Lee, Scott Leibsle, Jane Lewis, Mary Jane Lis, Jim Logan, Gene Lollis, Travis Lowe, Gustavo Machado, Bret Marsh, Michael Martin, Miriam Martin, Sara McReynolds, Miranda Medrano, Mendel Miller, Gay Miller, Sarah Mize, Peter Mundschenk, Katie Murray, Michael Neafsey, Mike Neault, Cheryl Nelson, Megan Niederwerder, Kayla Niel, Susan Noh, Dusty Oedekoven, Elizabeth Parker, Steve Parker, Boyd Parr, Amar Patil, Allison Phibbs, Bill Pittenger, Barbara Porter-Spalding, Keith Poulsen, Amanda Price, Valerie Ragan, John Ragan, Jeanne Rankin, Tim Richards III, Susan Rollo, Jim Roth, Marisa Rotolo, Joan Dean Rowe, Katie Rumsey, Mo Salman, Will Sander, John Sanders Jr., Shawn Schafer, Rachel Schambow, David Schmitt, Laurie Seale, Janine Seetahal, Kyle Shipman, Rick Sibbel, Kathy Simmons, Julie Smith, Justin Smith, Gordon Spronk, Susan Stehman, Steve Strubberg, Tracy Sturgill, Dennis Summers, Diane Sutton, Kasia Szymanska, Tahnee Szymanski, Jane Teichner, Beth Thompson, Peter Timoney, Megan Toms, Alberto Torres, Charles Vail, Clint Waddell, James Watson, Patrick Webb, Jennifer Weber, Stephen White, Ross Wilson, Josh Winegarner, Nora Wineland, David Winters, Steven Witte, Cindy Wolf, Ryan Wolker, Mark Wood, Caroline Yancey, Valeriia Yustyniuk, Marty Zaluski.

The Committee met during the 2025 Annual Meeting in Aurora, Colorado on November 4. There were 109 participants total of which were 37 members and 72 guests in attendance.

There were no resolutions submitted for consideration and no previous resolutions to review. Elizabeth Parker opened the meeting, requesting

participants to use committee QR code to sign in and those not on the committee who had interest in joining to sign in on the blue sheet in back of room.

Presentations and Reports

European Union Update
Francisco (Paco) Reviriego-Gordejo, European Commission

Paco gave an update on the European Union's H5N1 vaccine views/trade considerations, 2025 Lumpy Skin Disease outbreaks in Europe, the EU's vaccination use for controlling transboundary animal diseases and the associated trade considerations. In 2025, the E.U. has had an increased number of animal and zoonotic disease emergencies, among them highly pathogenic avian influenza (HPAI), foot-and-mouth disease, (FMD) lumpy skin disease (LSD), African swine fever, (ASF) sheep and goat pox, *Peste des Petit Ruminant* (PPR) and rabies. The E.U. has a common framework for vaccination use – general conditions as well as specifics per disease – for member countries to use as they consider the use of vaccination as one tool to control prevent or eradicate transboundary animal diseases. The framework includes the criteria that countries must have good quality vaccines and also use risk mitigation messages associated with the use of vaccines. Paco discussed the differences in vaccination strategies and rules based on the specific diseases (e.g. HPAI, LSD). Vaccines are used in addition to stamping out, biosecurity and other disease control response methods along with robust surveillance. France continues HPAI vaccination in ducks (approximately 60 million ducks on 2000 farms) and the Netherlands has begun a pilot for HPAI vaccination in laying hens. In France the duck meat/foie gras is going into the food supply while the Netherlands has chosen to not allow the laying hens in receiving vaccine in their pilot to go into the commercial or other food supply. The E.U. is in the initial phase of discussions of utilizing compartments within the E.U. (not for exports outside of the E.U.).

USDA Updates
Dawn Hunter, USDA-APHIS

- update on regionalization/compartmentalization agreements and progress with trading partners
- H5N1 discussions with trading partners if U.S. were to utilize either dairy or poultry vaccines
- New World screwworm (NWS) regionalization discussions with trading partners in the event of an incursion into the U.S.
- update on trade agreements imports and exports related to regionalization/compartmentalization; APHIS import requirements related to France's use of H5N1 vaccine in ducks
- aquaculture trade issues and agreements; hurdles related to U.S. exports (our process, trading partners requirements, technical, policy

and scientific), any Sanitary and Phytosanitary (SPS) or non-tariff trade challenges based on aquatic health issues.
- update on the 2025 World Organization for Animal Health (WOAH) 92nd General Session's major decisions relevant to U.S.

USDA-APHIS continues to work with trade partners to maintain, expand, and open access to foreign markets for U.S. animal agricultural exports. In FY25 Terrestrial and Aquatic Export Market Access included the retention of numerous export markets for poultry/poultry products as well as beef, dairy, and live cattle during the ongoing highly pathogenic avian influenza (HPAI) outbreak; 40 non-HPAI related markets were also retained. APHIS negotiated the expansion of a combined 40 markets for all species and the opening or reopening of 106 new markets. These accomplishments were advanced by individual country discussion and negotiation as well as Veterinary Services (VS) engagement with the WOAH. APHIS gained increased acceptance of U.S. HPAI compartments for live poultry and regionalization/zoning agreements for foreign animal diseases such as African swine fever, classical swine fever, and foot-and-mouth disease. Evaluation of trade partner HPAI vaccination programs and development of an HPAI vaccination strategy for domestic purposes have also been high priority efforts. Evaluation of Mexico’s NWS surveillance and response efforts while working with domestic stakeholders to develop response activities as outlined in the NWS response playbook highlight key efforts as described in the June 18, 2025, announcement of a five-pronged plan by USDA Secretary Rollins.

Committee Business:

No resolutions were presented or discussed. One suggestion for presentations in the future was to have someone present on zoning, regionalization and compartmentalization concepts as utilized in international trade. The GAHT committee has had presentations on this in the past and the committee agreed that the many new members as well as current members would benefit from a refreshed knowledge of these concepts. The committee will explore conducting a virtual webinar in 2026 for this and extend participation to other relevant USAHA committees.

Another recommendation was to make GAHT committee members aware of the Pet Advisory Network, who are new to USAHA and encouraged members to become familiar with this organization’s work on common areas of concern related to imports into the U.S. of dogs from countries with diseases of mutual concern.

The Committee adjourned at 9:50 a.m.

USAHA/AAVLD COMMITTEE ON THE NATIONAL ANIMAL HEALTH LABORATORY NETWORK (NAHLN)

Co-Chair: Nora Wineland, MI
Co-Chair: François Elvinger, NY

Bruce Akey, Erika Alt, Gary Anderson, Jianfa Bai, Maggie Baldwin, Cat Barr, Tim Baszler, Tracy Baszler, Samantha Beaty, Lisa Becton, Randy Berghefer, Deborah Blakey, Reddy Bommineni, Richard Breitmeyer, Katy Burden, Beverly Byrum, Robert Cobb Jr., Brian Collins, Emily Cooper, Maria Cooper, Michael Costin, Beate Crossley, Marie Culhane, Barbara Determan, François Elvinger, Kristy Farmer, Richard Fredrickson Jr., Larry Forgey, Anna Forseth, Brenda Glidewell, Patricia Godwin, Gail Golab, Steve Goldsmith, Gillian Gwartz, Patrick Halbur, Rod Hall, Steve Halstead, Alex Hamberg, Jane Hennings, Bob Hillman, Heather Hirst, Stephen Hooser, Jeffrey Kaisand, Amanda Kravitz, Elizabeth Lautner, John Lawrence, Sabrina Lee, Ailam Lim, Rick Linscott, Mary Jane Lis, Christina Loiacono, Nubia Macedo, Rodger Main, David Marshall, Eric Mathis, Meghan May, Brian McCluskey, Sara McReynolds, Doris Miller, Richard Mock, Peter Mundschenk, Dusty Oedekoven, Kristy Pabilonia, Lanny Pace, Elizabeth Parker, Boyd Parr, Amar Patil, Angela Pillatzki, Roman Pogranichniy, Robert Poppenga, Keith Poulsen, Debbie Reed, Jamie Retallick, M. Gatz Riddell Jr., Melissa Macias Rioseco, Suelee Robbe-Austerman, Marisa Rotolo, Jerry Saliki, John Sanders Jr., Rachel Schambow, Renee See, Janine Seetahal, Kyle Shipman, Michael Short, Kathy Simmons, Shri Singh, Ben Smith, Harry Snelson, Wendy Stensland, David Suarez, Dennis Summers, Amy Swinford, Deepanker Tewari, Nagaraja Thirumalapura, Beth Thompson, Jerry Torrison, Binu Velayudhan, Shauna Voss, Nora Wineland, Yan Zhang, Qirui Zhang, Shuping Zhang.

The Committee met during the 2025 Annual Meeting in Aurora, Colorado, on November 2 at 8:00 a.m. There were 38 members and 39 guests in attendance.

Presentations and Reports

Panel: NAHLN Laboratory Director – State Animal Health Official (SAHO) Effectiveness, Value, Challenges and Opportunities of the NAHLN

An expert panel of five NAHLN laboratory directors and five SAHOs was established to discuss their experiences regarding NAHLN effectiveness, value, challenges and opportunities in addressing current outbreaks, and provide thoughts on strengthening and preserving the NAHLN to address future emerging and high consequence disease.

Panelists: *Dr. Maggie Baldwin*, State Veterinarian, CO; *Dr. Samantha Beaty*, State Veterinarian, TN; *Dr. Alex Hamberg*, State Veterinarian, PA; *Dr. Ashley Hill*, Director, California Animal Health and Food Safety Laboratory; *Dr. Jeff Kaisand*, State Veterinarian, IA; *Dr. Rodger Main*, Director, Animal Disease

Laboratory, Iowa State University; *Dr. Amanda Murray*, Animal Health Branch Chief, CA; *Dr. Heidi Pecoraro*, Director, North Dakota State University Veterinary Diagnostic Laboratory; *Dr. Keith Poulsen*, Director, Wisconsin Veterinary Diagnostic Laboratory; *Dr. Kevin Snekvik*, Executive Director, Washington Animal Disease Diagnostic Laboratory.

Panelists were invited to present remarks (3-5 minutes) on their experience, prior to answering questions and comments from the audience. Panelists agreed that the NAHLN is functioning extremely well. It is a key piece in the effective response to high consequence disease outbreaks that must be maintained, financially supported and set on the path of continuous improvement.

Communication, collaboration and coordination between and among laboratories, SAHOs and producers are essential in making the NAHLN function. NAHLN is a community with interconnectedness and reliance on each other for surge capacity, technical support and logistics solutions. National Veterinary Services Laboratories (NVSL) and the NAHLN coordinating office are the keystone of the NAHLN Community.

There is a high degree of trust that comes with the standardized, consistent, quality approach to testing by the NAHLN laboratories. Maintaining that trust is critical to the success of the network. Communication challenges when tests seem inconsistent with the clinical picture need careful handling to not decrease this trust. Trust is also related to ability to protect confidentiality of test findings, a track record that must be maintained.

Getting samples to laboratories with reliance on FedEx and UPS is a potential Achilles heel, compounded by distance to laboratories and weather situations. Panelists presented alternative approaches including drop sites to efficiently get samples to the lab so testing could be run most efficiently in batches at laboratories.

Laboratories' non-NAHLN work must be factored in when in an outbreak. This work is laboratories' bread and butter for funding and includes many untold stories in this realm of the key role laboratories play. There are a lot of differences between states and among laboratories in terms of what diseases are important and what species work predominates. Food and Agriculture Defense Initiative (FADI) and NAHLN scope work may not be most efficient and cost-effective work and has impacts on laboratory throughput and cost efficiency.

Some specific challenges that were identified include the following: Designation of purpose of testing is complex, in particular when surveillance and movement tests plus sick call tests are required in outbreaks. Purpose of testing affects billing. Laboratory liaison role, in various forms, was used to help with this on both the SAHO and NAHLN laboratory side. Importance of a laboratory liaison to enhance communication and coordination was emphasized by several panelists.

Consideration of improvements to make the network run more smoothly when multiple laboratories are needed to support an outbreak. Uniformity of

submission protocols for NAHLN scope tests was requested so States sending samples out do not have separate protocols depending on which network laboratory is assisting them; value of online submission portals, use of barcodes, consistency and streamlining of reporting were addressed.

National Animal Health Laboratory Network (NAHLN) Update
Christina Loiacono, NAHLN

Dr. Loiacono, NAHLN Program Coordinator, expressed her appreciation for all contributions and insight provided by panelists, for the thoughtful questions and comments from all attendees, that will inform continuity of NAHLN operations.

Dr. Loiacono reviewed changes in personnel at the NAHLN program office along with updates on the number of NAHLN laboratories which now stands at 66 laboratories. Dr Loiacono also briefly reviewed upcoming changes in requirements for NAHLN laboratories which must be met via their self-assessment starting October 2027. All laboratories must have full accreditation by a third party such as American Association of Veterinary Laboratory Diagnosticians (AAVLD) or ISO17025. They must also have an acceptable laboratory information management system (LIMS) with electronic results messaging vetted successfully. Each laboratory must be approved to cover two NAHLN scope diseases with molecular assays and be able to process a minimum of 400 PCR tests per eight-hour shift. Finally, laboratories will be required to complete an annual exercise scenario unless they are activated, which would give them an exemption for this requirement.

Dr. Loiacono shared that messaging is a strategic priority for the NAHLN. The program office continues to monitor cooperative agreements and is looking forward to launching a dashboard similar to the National Animal Disease Preparedness and Response Program (NADPRP) version many are familiar with so all can view these important activities. The listening sessions on Farm Bill funding will be rescheduled after the federal funding lapse is resolved.

Committee membership resoundingly applauded the NAHLN Program Office's efforts and gave a standing ovation to Dr. Loiacono for her selfless dedication to the continuity and success of the NAHLN.

Legislative Environment for NAHLN Funding
Bruce Akey, Akey Laboratory Consulting LLC

Dr. Akey, co-chair of the AAVLD Government Relations Committee, presented the legislative environment for NAHLN funding. He noted that an agriculture appropriations bill for FY2026 passed in the Senate, but not in the House. If no appropriations bill passes, NAHLN will have to rely on continuing resolution funding at FY2025 levels, which amounts to ~$25 million.

Dr. Akey further explained that a new Farm Bill was not yet passed, that, however, mandatory funding for NAHLN, National Animal Disease Preparedness and Response (NADPRP), and the National Veterinary Accreditation Program (NVVCP) was included in the One, Big, Beautiful Bill

Act (OBBB), with $10M awarded annually for five years to NAHLN, $70M annually for five years to NADPRP, and $153M annually for five years to NVVCP. The bill, unfortunately, did not include clarifying language being sought in Farm Bill, including a 15% indirect cap on all grants, at least 70% of mandatory money used for operational grants, and a raise of the NAHLN funding authorization cap from $30M/yr to $45M/yr. It is uncertain when the full Farm Bill will be addressed, but NAHLN currently enjoys strong support in both House and Senate to address these issues.

Dr. Akey addressed the multiple challenges faced by the NAHLN program office, highlighting staff's dedication and engagement to maintain network functions in an uncertain environment.

Committee Business:

A resolution entitled *Prioritizing Federal Partner Participation at AAVLD/USAHA Annual Meetings and Related Activities* was submitted, debated, moved and passed.

Co-chair Dr. Elvinger is hanging up his spurs. Dr. Keith Poulsen was recommended to serve as the next AAVLD co-chair.

There was no additional business.

The committee adjourned at 9:55 a.m.

COMMITTEE ON NOMINATIONS AND RESOLUTIONS

Chair: Steve Crawford, NH

J Lee Alley, AL; Philip Bradshaw, IL; Richard Breitmeyer, CA; Stephen Crawford, NH; Barbara Determan, IA; Mark Ernst, IL; Kristin Haas, VT; Steve Halstead, MI; Alex Hamberg, PA; Charles Hatcher, TN; Bob Hillman, ID; Donald Hoenig, ME; Bruce King, UT; Maxwell Lea, Jr., LA; Donald Lein, NY; Gene Lollis, FL; Bret Marsh, IN; David Marshall, NC; James Maxwell, WV; Richard McCapes, CA; David Meeker, VA; Lee Myers, GA; John Nilz, AR; Dustin Oedekoven, SD; Boyd Parr, SC; John Ragan, VA; Steve Rommereim, SD; David Schmitt, IA; Max Van Buskirk, PA; Richard Willer, AZ; Larry Williams, NE; Ryan Wolker, AZ; Martin Zaluski, MT.

NOMINATIONS

OFFICERS

PRESIDENT .....Peter Mundschenk, Las Vegas, NV

PRESIDENT-ELECT .....Charles Broaddus, Richmond, VA

FIRST VICE-PRESIDENT ..... Justin Smith, Manhattan, KS

SECOND VICE-PRESIDENT .....Kathryn Simmons, Washington, DC

THIRD VICE-PRESIDENT .....Kaitlynn Levine, Montpelier, VT

TREASURER.....Beth Thompson, Pierre, SD

DISTRICT DELEGATES

NORTHEAST.....Dave McElhaney, PA
Robert Gibson, NH

NORTH CENTRAL ..... Jamee Eggers, IA

SOUTH .....Gene Lollis, FL
Alberto Torres, AR

WEST ..... H. M. Richards, III, HI
Brian McCluskey, CO

RESOLUTIONS

RESOLUTION NUMBER: 1 APPROVED

SOURCE: COMMITTEE ON NAHLN

SUBJECT MATTER: PRIORITIZING FEDERAL PARTNER PARTICIPATION AT THE AMERICAN ASSOCIATION OF VETERINARY LABORATORY DIAGNOSTICIANS/ UNITED STATES ANIMAL HEALTH ASSOCIATION ANNUAL MEETINGS AND RELATED ACTIVITIES

BACKGROUND INFORMATION:

It is critically important for federal veterinarians, animal health scientists, and public health professionals to attend the annual meetings of the United States Animal Health Association (USAHA) and the American Association of Veterinary Laboratory Diagnosticians (AAVLD). The 2026 meeting will mark the 130th annual gathering of the USAHA and the 69th for the AAVLD. These are the only meetings where state and federal regulatory veterinarians, veterinary diagnostic laboratory scientists, researchers, and producers convene to discuss and recommend actions for controlling animal and public health diseases of significance— helping to ensure that the United States (US) maintains an abundant, nutritious, and safe supply of homegrown animal protein.

This in-person event offers the premier opportunity for leaders in animal health from across the nation to debate, discuss, and propose solutions to pressing issues in food animal production, food security, agricultural trade, and public health. The joint Annual Meeting also serves as an excellent platform to foster and develop emerging leaders within the United States Department of Agriculture (USDA) and the United States Department of Health and Human Services (DHHS). The presence of our federal partners at USDA and DHHS is vital to sustaining more than a century of productive collaboration with stakeholders across all sectors of the animal agriculture industry. This collaboration serves the American people well. Former USDA Under Secretary Bill Hawks once stated, “Working together works.” Much of that foundational work is accomplished at the USAHA and AAVLD annual meetings.

While federal appropriations may fluctuate, the threats to animal health, food security, agricultural trade, and public health continue to grow in both scale and severity worldwide. *2025 USAHA Resolution 1/ page 2*

Diseases such as highly pathogenic avian influenza in poultry and dairy cattle, African swine fever, New World screwworm, rabies, and many others demand immediate solutions. The absence of federal partners at the USAHA and AAVLD annual meetings impedes the US animal agriculture industry's

ability to respond effectively to these diseases at the state and national levels—and as global leaders.

Past successes in controlling both high-consequence and common production diseases have largely stemmed from face-to-face discussions and the presentation of new scientific findings, followed by action-oriented resolutions and investigations that advance all disciplines involved in detecting, diagnosing, understanding, and controlling disease processes. For decades, USDA and DHHS have actively sought stakeholder input on critical topics. These meetings provide an efficient and impactful mechanism to help both agencies better support US agriculture, food security, agricultural trade, and public health.

RESOLUTION:

The United States Animal Health Association (USAHA) and the American Association of Veterinary Laboratory Diagnosticians (AAVLD) urge the United States Department of Agriculture and United States Department of Health and Human Services to support and provide appropriate, comprehensive representation from their agencies, aligned with their strategic objectives, to attend and participate in USAHA / AAVLD Joint Annual Meetings and other associated activities.

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RESOLUTION NUMBER: 2 APPROVED

SOURCE: COMMITTEE ON SWINE

SUBJECT MATTER: TASK FORCE – USE OF AGGREGATE SAMPLES IN AFRICAN SWINE FEVER/CLASSICAL SWINE FEVER CONTROL AREA SURVEILLANCE TESTIG ALGORITHMS

BACKGROUND INFORMATION:

The ability to effectively respond to a large-scale (multifocal) outbreak of African swine fever (ASF) or classical swine fever (CSF) in the United States (US) is critically important to the US pork industry stakeholders, dependent communities, and the overall security of the national food supply chain.

Current ASF/CSF Control Area testing algorithms—which require collecting samples from 31 individual animals per barn on a recurring basis—are not realistically implementable in the event of a large-scale (multifocal) outbreak in pig-dense regions of the US.

The practical, operational, and fiscal challenges associated with collecting, preparing, and processing 31 individual animal samples per barn were widely recognized as constraints during the comprehensive “Swine Fever Exercise for Agriculture and Response” conducted in 2019.

The use of aggregate samples for detecting ASF and CSF is well-supported by scientific literature. Aggregate samples—most notably oral fluids and processing fluids—have a long-standing record of success in herd-

level detection of high-consequence endemic viruses within the US pork industry.

US pork producers and swine veterinarians are proficient in collecting and submitting aggregate samples to the United States Department of Agriculture National Animal Health Laboratory Network laboratories for large-scale testing.

Proactively leveraging the expertise of US pork industry participants to help inform alternative Control Area testing algorithm options—beyond the current primary method of 31 individual animal samples per barn—would be a prudent and responsible step forward. Such efforts would contribute meaningfully to the ongoing enhancement of ASF/CSF preparedness and response plans in the United States.

RESOLUTION:

The United States Animal Health Association requests that the United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services, establish a task force composed of industry, state, and federal partners. The specific purpose of this task force is to develop additional options for African swine fever and classical swine fever Control Area surveillance testing algorithms, including the incorporation of aggregate samples.

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RESOLUTION NUMBER: 3 APPROVED

SOURCE: COMMITTEE ON EQUINE

SUBJECT MATTER: CONTAGIOUS EQUINE METRITIS IMPORT POLYMERASE CHAIN REACTION TESTING FOR OVERGROWTH CONDITIONS

BACKGROUND INFORMATION:

Contagious equine metritis (CEM) is classified as a foreign animal disease in the United States. It is a venereal disease of horses caused by the bacterium *Taylorella equigenitalis*, which can affect fertility in both mares and stallions. Upon importation to the United States from CEM-affected countries, mares and stallions are required to undergo testing for CEM.

CEM is a slow-growing organism that requires a week-long culture period. Some cultured samples exhibit non-target bacterial overgrowth on the culture plates, which prevents accurate interpretation. Re-sampling and subsequent repeat cultures often result in similar overgrowth issues.

Historically, a dilute vinegar solution was used to inhibit overgrowth, primarily caused by *Pseudomonas* species. However, a recent study conducted by the National Veterinary Services Laboratory (NVSL) concluded

that dilute vinegar also inhibits *T. equigenitalis* and is therefore not recommended for treating overgrowth conditions.

The current protocol involves continued re-culturing or cleaning and treating the equine, followed by a 21-day waiting period before re-sampling and culturing. These procedures significantly hinder commerce and occupy additional space in approved CEM quarantine facilities, which are already tightly scheduled in some locations.

In May 2024, NVSL confirmed a positive case of *T. equigenitalis* in Florida. Further epidemiological investigation identified 52 additional positive horses on the index farm and associated traces. Testing by culture and polymerase chain reaction (PCR) of these horses has substantially advanced the PCR validation process and supported the domestic response effort.

RESOLUTION:

The United States Animal Health Association requests that the United States Department of Agriculture, Animal and Plant Health Inspection Services, Veterinary Services, National Center for Import and Export revise the Veterinary Guidance 13406.3 document to add a provision to permit the use of polymerase chain reaction testing for situations where bacterial culture overgrowth occurs to determine the management of the imported horse.

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RESOLUTION NUMBER: 4 APPROVED

SOURCE: COMMITTEE ON EQUINE

SUBJECT MATTER: HIGH HEALTH HIGH PERFORMANCE HORSE RESOLUTION

BACKGROUND INFORMATION:

The safe movement of international competition and racehorses is critical to the equine industry. Equine athletes at the highest levels of competition train like human athletes, with health and fitness as top priorities. These horses receive continuous routine veterinary care and are supported by a dedicated team of allied health professionals who focus on their well-being both at home and during competition.

These horses are classified as High Health, High Performance (HHP) horses, based on standards developed by the World Organization for Animal Health (WOAH), in collaboration with the Fédération Equestre Internationale (FEI) and the International Federation of Horseracing Authorities. The HHP framework is outlined in a WOAH publication that defines this subpopulation for international competition.

The HHP concept was specifically designed to address barriers to the international movement of competition horses while safeguarding the equine health status of the receiving country, the competing horses, and their home

country upon return. It is based on WOAH's principles of compartmentalization and applies exclusively to competition horses entering temporarily—not to those used for breeding or permanent residency.

The goal is to provide a rational and scientifically sound basis for national animal health authorities to harmonize entry requirements for the temporary importation of this class of horses. The HHP guidance document outlines the key components of the concept, including requirements for identification, traceability, biosecurity, and health monitoring.

The HHP concept has been successfully implemented by the European Union and the United Kingdom to facilitate the temporary movement of this subpopulation of horses with limited restrictions to and from recognized FEI events.

RESOLUTION:

The United States Animal Health Association (USAHA) urges the United States Department of Agriculture (USDA) to recognize the subpopulation of High Health High Performance horses (HHP) and to utilize the World Organization for Animal Health framework to implement an HHP concept in the United States (US) for qualified competition and racehorses. USAHA further requests USDA provide representatives from the Equine Health Team, Import and Export Policy Team, Port Services and Equine Special Events Team to participate in a working group led by the USAHA Committee on Equine to discuss the identification, traceability, biosecurity and health monitoring parameters of the HHP subpopulation related to the implementation of an HHP concept in the US.

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RESOLUTION NUMBER: 5 APPROVED

SOURCE: COMMITTEE ON EQUINE

SUBJECT MATTER: ADDITION OF EQUINE PIROPLASMOSIS POLYMERASE CHAIN REACTION TEST FOR IMPORTED EQUIDS

BACKGROUND INFORMATION:

Equine piroplasmosis (EP) is classified as a foreign animal disease in the United States. Over the years, import testing requirements have been modified to identify acutely infected animals using the complement fixation test (CFT) and chronically infected animals using the competitive enzyme-linked immunosorbent assay (cELISA). The testing protocol for domestic equids also incorporates a polymerase chain reaction (PCR) test. Any horse that tests positive by PCR is considered a case of piroplasmosis and must be managed under quarantine.

Currently, PCR is conducted in the background on some imported horse samples, but the results are not factored into post-import quarantine release requirements. cELISA tests for equine piroplasmosis are considered positive when the percent inhibition is 40.0 or greater. Recently, there has been an increase in the number of imported equids with repeat cELISA results between 35–39%. These non-negative horses have been released from quarantine, having met the negative CFT and cELISA requirements. However, in several cases, PCR tests were positive indicating that these equids are likely infected with the organism.

Because the domestic case definition includes PCR-positive horses, the United States Department of Agriculture has required that these animals be quarantined and managed by the state.

RESOLUTION:

The United States Animal Health Association urges the United States Department of Agriculture, Animal and Plant Health Inspection Services, Veterinary Services, National Center for Import and Export to require polymerase chain reaction (PCR) testing for any imported equid that has a non-negative or suspect result on a competitive enzyme-linked immunosorbent assay test or complement fixation test for equine piroplasmosis. Furthermore, any equid that is PCR positive shall be classified as non-negative and remain under import quarantine protocols.

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RESOLUTION NUMBER: 6 APPROVED

SOURCE: COMMITTEE ON ANIMAL HEALTH SURVEILLANCE AND INFORMATION SYSTEMS

SUBJECT MATTER: TRANSITION TO ELECTRONIC INTERSTATE CERTIFICATES OF VETERINARY INSPECTION

BACKGROUND INFORMATION:

There has been increasing national emphasis on improving the speed and accuracy of animal disease traceability. This is evident through actions such as the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service's (APHIS) rule finalized in 2024 on the "Use of Electronic Identification Eartags as Official Identification in Cattle and Bison." Electronic animal identification and digital records—such as vaccination and testing forms—are gaining favor by reducing transcription errors and increasing processing speed. In the event of a trace, accurate information can be located more efficiently. This also applies to Interstate Certificates of Veterinary Inspection (ICVIs), which serve as the primary movement documents between states and play a critical role in traceability.

With multiple foreign animal diseases posing threats to animal health in the United States (US), the United States Animal Health Association (USAHA) supports a transition to electronic health and movement forms that align with USDA traceability efforts and goals.

USAHA recognizes the need for a unified, national strategy to mandate the use of electronic ICVIs (eCVIs). USAHA believes that coordinated messaging and development efforts among private enterprises, state governments, and federal agencies will be most effective in advancing USDA-APHIS traceability goals.

USDA-APHIS actions to support this transition could include further development of the Veterinary Services Process Streamlining (VSPS) eCVI system to encompass all animal species, as it currently only covers livestock. Adding more species and features—such as offline form completion—would improve accessibility to eCVIs for both Category I and II accredited veterinarians. These enhancements would help meet USDA-APHIS's "Overarching Goals to Increase Traceability" by "elevat[ing] the discussion with States and industry to work toward a system where animal health certificates are electronically transmitted from private veterinarians to State animal health officials" (USDA-APHIS Traceability).

Expanding VSPS eCVIs also presents the opportunity for direct integration with the Animal Identification Management System, enabling immediate access to individual animal movement data. This capability would be invaluable during infectious disease outbreaks such as Foot and Mouth Disease or New World Screwworm. Given the looming risks of foreign animal diseases, disease traceability should remain a priority at both the state and national levels. ICVIs are an ideal target for improvement in tracing animal diseases, and transitioning to an all-electronic format is the most direct path to enhancing their effectiveness during trace events.

RESOLUTION:

The United States Animal Health Association (USAHA) urges the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), and the National Assembly of State Animal Health Officials to lead national initiatives to transition all Interstate Certificates of Veterinary Inspection (ICVIs) to an electronic format, with the goal of incorporating this requirement into 9 Code of Federal Regulations § 86.1.

USAHA requests that the 122nd Congress appropriate funds or authorize the use of user fee funds to develop the Veterinary Services Process Streamlining ICVI system—or an equivalent platform—to include all animal species requiring ICVIs for interstate movement. USAHA further recommends consideration of additional features such as offline form completion, alignment with current USAHA electronic ICVI (eICVI) data standards, and integration with the Animal Identification Management System, in order to provide an accessible, no-cost eICVI option for all accredited veterinarians.

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RESOLUTION NUMBER: 7 APPROVED

SOURCE: COMMITTEE ON ONE HEALTH

SUBJECT MATTER: FISCAL YEAR 2027 FUNDING FOR THE NATIONAL RABIES MANAGEMENT PROGRAM, UNITED STATES DEPARTMENT OF AGRICULTURE, ANIMAL AND PLANT HEALTH INSPECTION SERVICE, WILDLIFE SERVICES TO MAINTAIN RABIES SURVEILLANCE, ORAL RABIES VACCINATION PROGRAMS, AND RABIES CASE REPORTING

BACKGROUND INFORMATION:

The National Rabies Management Program (NRMP), administered by the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS), has demonstrated that strategic implementation of cooperative oral rabies vaccination (ORV) programs targeting wildlife reservoir species in the United States (US) is cost-effective in reducing rabies virus transmission. These efforts protect human and animal health and lower the cost of living in geographical areas endemic for wildlife rabies.

ORV programs are designed to immunize targeted wildlife species by increasing the percentage of rabies-immune wild animals within vaccination zones. This results in a reduction of wildlife rabies cases and spillover into domestic species, preventing viral spread (Phase 1 goal of the NRMP) and ultimately leading to the geographical elimination of the raccoon rabies virus variant (Phase 2 goal of the NRMP). Since 1995, this comprehensive raccoon rabies management strategy has been cooperatively developed with federal, state, provincial, and local partners to eliminate the raccoon rabies virus variant from the US and Canada.

In the US, more than 90 percent of annually reported rabies cases occur in wildlife. The USDA-APHIS NRMP works to control and eliminate rabies virus variants in terrestrial carnivore populations to protect human and animal health. The primary raccoon rabies management area includes thirteen eastern states. Management efforts in these states have successfully prevented the further spread of raccoon rabies beyond the eastern seaboard and into Canada by establishing an ORV zone from Maine to Ohio along the Canadian border, and from Ohio to Alabama. The USDA-APHIS National Wildlife Research Center estimates that these actions help avoid more than $58 million in annual raccoon rabies-related costs.

The NRMP also collaborates with the Texas Department of State Health Services to maintain an ORV zone along the Texas-Mexico border to prevent the reemergence of canine rabies, the emergence of the Arizona fox variant, and the entry of the vampire bat variant into the US.

Contingency actions are time-sensitive management responses to outbreaks and are considered essential to reduce the risk of further virus spread. If not addressed promptly, outbreaks could result in significantly more

costly responses. Contingency actions include doubling vaccine bait density (increased to 150/km² versus the standard 75/km²) and distributing baits twice a year (spring and fall) for three consecutive years to restore the integrity of the ORV zone.

USDA-APHIS has supported contingency actions in recent years using appropriated funding. However, rising operating costs, depletion of previously existing bait/vaccine stockpiles, and an increasing number of contingency actions have strained available resources. USDA-APHIS receives approximately $28 million annually through the Wildlife Damage Management line item for these activities. This funding has remained flat for the past eight years (aside from small increases for employee pay), while fixed costs continue to rise.

Commodity Credit Corporation funds totaling approximately $18.8 million in 2024 (to be spent over a 2–3 year period) were recently used to address raccoon rabies outbreaks in multiple states, establish a sufficient stockpile of rabies vaccination baits for current and limited future use, respond to emerging high-risk rabies cases in Texas, and vaccinate raccoons in areas affected by Hurricane Helene in North Carolina, Georgia, and Tennessee. ORV actions were also conducted in high-risk areas in Maine, Vermont, and Alabama. This emergency transfer was critical in preventing further spread of the raccoon rabies virus.

If annual appropriations for rabies prevention in the US are not maintained, USDA-APHIS anticipates an increased likelihood of disease spread and negative impacts on human and animal health and safety. This would jeopardize the USDA-APHIS investment of over $500 million since 1995 in preventing the spread of the raccoon rabies virus variant. As of September 2025, the Centers for Disease Control and Prevention reported tracking 14 potential wildlife rabies outbreaks in 20 states.

The NRMP has been level-funded since 2018. The requested funding of $38 million for USDA-APHIS-WS will ensure that US rabies prevention efforts remain functional and efficient as a critical public safety network for disease prevention and reporting. This funding will support the following actions:

- Continue, refine, and improve the enhanced rabies surveillance program and training of USDA-APHIS personnel
- Enable USDA-APHIS to implement contingency actions in response to rabid animals in sensitive areas and manage high-risk rabies spread corridors, particularly in urban-suburban habitats with high raccoon density
- Enhance bait distribution resources and field operations to prevent further virus spread
- Maintain wildlife rabies surveillance in high-risk areas, such as along the US-Mexico border
- Advance Phase 2 operations to eliminate the raccoon rabies variant from the US

RESOLUTION:

The United States Animal Health Association (USAHA) requests the 122nd Congress to appropriate a minimum of $38 million annually for the United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services, National Rabies Management Program. USAHA urges Congress and other stakeholders to retain the resources at state and national levels to continue rabies surveillance, laboratory testing, and timely reporting of rabies cases in the United States.

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RESOLUTION NUMBER: 8 APPROVED

SOURCE: COMMITTEE ON ONE HEALTH

SUBJECT MATTER: FISCAL YEAR 2027 FUNDING REQUEST TO MAINTAIN NATIONAL RABIES SURVEILLANCE AND RABIES CASE REPORTING IN THE UNITED STATES

BACKGROUND INFORMATION:

Rabies is a high-consequence pathogen and one of the most common infectious zoonotic diseases that state and local health departments confront on an ongoing basis. More than 6 million Americans report animal bites each year, with 1.6 million seeking medical care. Approximately 4,000 animal rabies cases are reported annually—90% of which occur in wildlife—and over 130 laboratories test nearly 100,000 animals for rabies each year. Federally funded rabies control programs save billions of dollars annually and align with the National Biodefense Strategy, the National One Health Framework, and the National Rabies Management Plan (NRMP).

The Centers for Disease Control and Prevention (CDC) Poxvirus and Rabies Branch (PRB) is the core team responsible for rabies surveillance data reporting and risk mitigation in the United States (US). In addition to managing all state rabies data, PRB plays a critical role as the reporting arm of the NRMP, which is managed by the United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS).

PRB oversees the National Rabies Surveillance System and maintains the only globally recognized US reference laboratory for rabies diagnostics. The subject matter expertise provided by PRB to state and local health jurisdictions is vital to food safety and national security. PRB serves as a key resource for state and local health departments, acting as their sole federal agency partner in rabies case surveillance, diagnostic testing, and post-exposure prophylaxis guidelines. PRB tracks outbreaks, identifies emerging rabies threats to humans and livestock, and serves as the primary consultative resource for the medical community. PRB also educates the public on rabies exposure protocols, oversees the importation of dogs into the US from rabies-endemic countries, and provides accurate information about bat exposures.

The recent loss of trained staff due to attrition and internal resource shifts within the CDC has already had a significant negative impact on the quality of rabies disease control in the US.

The duties performed by PRB are critical to protecting US citizens from this deadly disease. Ongoing surveillance and annual reporting of rabies cases are essential to maintaining accurate epidemiological assessments and tracking mitigation costs.

PRB's federal funding is allocated by the Department of Health and Human Services. The CDC supports infectious disease programs through initiatives such as the Epidemiology and Laboratory Capacity Program and the National Center for Emerging and Zoonotic Infectious Diseases.

The recent reduction in workforce and resource allocation at the CDC is of great concern to USAHA members, as these changes place considerable strain on state rabies prevention initiatives—to the severe detriment of human and animal health and safety—and directly conflict with federal and state public health and food security priorities.

RESOLUTION:

The United States Animal Health Association (USAHA) recognizes the crucial role the United States Department of Health and Human Services (HHS), Centers for Disease Control and Prevention (CDC), Poxvirus and Rabies Branch (PRB) plays in protecting food security and national security, at large, through its rabies control programs.

USAHA urges members of the 122nd Congress to appropriate funding for national rabies prevention and control and to recognize the HHS-CDC-PRB as the primary federal resource for rabies prevention and control in the United States. Additionally, in alignment with the HHS-CDC, National Center for Emerging and Zoonotic Infectious Diseases 2025 strategic priorities, the USAHA urges HHS to allocate funding to enable HHS-CDC-PRB services to return to staffing levels and services equivalent to those in fiscal year 2025.

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RESOLUTION NUMBER: 9 APPROVED

SOURCE: COMMITTEE ON AQUACULTURE

SUBJECT MATTER: IMPORT HEALTH REQUIREMENTS FOR DECLARED FREEDOM FROM AQUATIC ANIMAL PATHOGENS

BACKGROUND INFORMATION:

The United States Department of Agriculture, Animal and Plant Health Inspection Service has declared national-level freedom from six aquatic animal pathogens that affect both cultured and wild populations of susceptible species. These pathogens are listed on the Aquatic Animal Health Status

Reviews webpage and include: *Marteilia refringens*, *Marteilioides chungmuensis*, *Perkinsus olseni*, epizootic hematopoietic necrosis virus, salmonid alphavirus, and *Gyrodactylus salaris*.

However, none of these pathogens are currently subject to import controls at the federal or national level. As a result, they may be entering the United States (US) through imports of live susceptible species.

Recently, at least one of these pathogens was detected in imported animals that were confiscated at a port of entry and subsequently rehomed to a public aquarium. The introduction of such pathogens can lead to livestock losses, facility quarantines, export bans, and the need for enhanced surveillance.

Import controls would not aim to restrict trade but rather to ensure that aquatic animals entering the US are healthy and do not pose risks to domestic aquaculture production or natural ecosystems.

RESOLUTION:

The United States Animal Health Association (USAHA) urges the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) to take action to prevent the introduction of foreign aquatic animal pathogens that threaten the health of aquatic livestock and natural resources through untested live animals. Consequently, USAHA requests USDA-APHIS-VS immediately leverage the country's declaration of freedom and implement import controls to exclude host animals susceptible to the six pathogens from which the United States has declared freedom.

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RESOLUTION NUMBER: 10 APPROVED

SOURCE: COMMITTEE ON POULTRY AND OTHER AVIAN SPECIES

SUBJECT MATTER: NEED FOR EPIDEMIOLOGICAL DATA FOR CURRENT H5 INFLUENZA EPIZOOTIC

BACKGROUND INFORMATION:

The current H5 avian influenza epizootic, which began in 2022, has been managed using control strategies developed during the 2014–2015 United States outbreak. However, significant changes in the virus—including increased virulence, broader species adaptation, and frequent spillover events—have rendered previous approaches less effective. Unlike the 2015 outbreak, the ongoing situation is marked by repeated point-source introductions from wild birds into domestic animal populations, underscoring the limitations of depopulation ("stamping out") strategies for both commercial and backyard flocks.

The emergence of H5 influenza infection in dairy cattle since 2024 has further complicated disease prevention efforts, particularly within the poultry industry. Despite the scale and complexity of the current outbreak, there has been a notable lack of coordinated epidemiological investigation into virus transmission dynamics—both since the initial poultry detections in 2022 and following its confirmed spread to cattle. This gap has contributed to the loss of millions of birds, with limited understanding of the factors driving transmission.

Producers face mounting pressure to prevent disease spread, often with limited financial resources to independently enhance biosecurity. Actionable, data-driven recommendations are urgently needed to guide targeted interventions. Such efforts are essential for identifying evolving disease threats and strategically informing and strengthening biosecurity measures necessary for the prevention and early mitigation of this dynamic animal and human health risk. As H5 influenza remains a United States Department of Agriculture-controlled pathogen, producers rely on government agencies for critical information related to controlled challenge studies, viral genomic data, and epidemiological fieldwork. Current response strategies frequently depend on outdated or inconsistent control measures, despite clear evidence of viral evolution.

While the National Poultry Improvement Plan (NPIP) biosecurity principles and auditing processes remain foundational to disease prevention, timely and robust epidemiological data are essential to adapt biosecurity guidance to the realities of a changing and increasingly complex disease landscape.

RESOLUTION:

The United States Animal Health Association (USAHA) strongly urges the Secretary of Agriculture to provide resources to the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS) and Agricultural Research Service to significantly increase investment in comprehensive epidemiological disease investigations for H5 influenza in cattle herds, poultry flocks and additional livestock industries. Furthermore, the findings should be shared in a timely manner with industry for actionable follow-up. USAHA further encourages USDA-APHIS to prioritize collaborative efforts between the National Poultry Improvement Plan, dairy and beef cattle industry stakeholders, additional livestock industries, and state animal health officials to ensure coordinated, data-driven disease control efforts across species and sectors.

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RESOLUTION NUMBER: 11 APPROVED

SOURCE: COMMITTEE ON POULTRY AND OTHER AVIAN SPECIES

SUBJECT MATTER: HIGHLY PATHOGENIC AVIAN INFLUENZA INNOVATION GRAND CHALLENGE UPDATE

BACKGROUND INFORMATION:

In March, the United States Department of Agriculture (USDA) announced the Innovation Grand Challenge, a competitive funding initiative aimed at soliciting methods for the prevention and control of Highly Pathogenic Avian Influenza (HPAI). This includes vaccine and therapeutic development, as well as other science-based approaches to disease mitigation and response.

The USDA indicated that awards would be finalized by fall 2025, with projects eligible to begin no earlier than August 1, 2025. However, the agency has not yet provided updates on the status of these project proposals. Recent disruptions in federal operations, including the government shutdown, may be impeding progress on this initiative.

Continued action is urgently needed to strengthen national capabilities for HPAI prevention, detection, and response—particularly as wild bird migration intensifies, H5 continues to be detected in dairy cattle, and commercial poultry flocks face ongoing depopulation due to virus detection.

RESOLUTION:

The United States Animal Health Association is thankful for the United States Department of Agriculture's Five-Pronged Approach to address Avian Influenza and urges the Secretary of Agriculture to expeditiously announce the Highly Pathogenic Avian Influenza Poultry Innovation Grand Challenge project selections and release funding.

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RESOLUTION NUMBER: 12 APPROVED

SOURCE: COMMITTEE ON POULTRY AND OTHER AVIAN SPECIES

SUBJECT MATTER: HIGHLY PATHOGENIC AVIAN INFLUENZA VACCINATION UPDATE

BACKGROUND INFORMATION:

Following the United States Secretary of Agriculture's announcement of a five-pronged plan to combat highly pathogenic avian influenza (HPAI), the United States Department of Agriculture (USDA) convened a series of working groups to discuss vaccination, surveillance, and other critical components of H5 HPAI control. The industry is grateful for the collaborative spirit and forward momentum the USDA has demonstrated over the past several months in evaluating vaccination as a tool for preventing HPAI infections in commercial poultry.

The continued threat of HPAI presents significant concerns for animal welfare, human health, and mental well-being, especially as wild bird migration is underway, dairy cattle continue to test positive, and commercial poultry flocks face ongoing depopulation due to virus detection. Therefore, the release

of a national vaccination strategy—one that fully considers trade implications—is urgently needed.

RESOLUTION:

The United States Animal Health Association (USAHA) is thankful the United States Department of Agriculture involved stakeholders in discussions around highly pathogenic avian influenza vaccination strategy in commercial poultry. USAHA encourages the Secretary of Agriculture to release to the United States poultry industry any available next steps toward an H5 influenza vaccination strategy (e.g., surveillance plans) in poultry.

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RESOLUTION NUMBER: 13 APPROVED AS AMENDED

SOURCE: COMMITTEE ON POULTRY AND OTHER AVIAN SPECIES

SUBJECT MATTER: NATIONAL POULTRY IMPROVEMENT PLAN STAFFING

BACKGROUND INFORMATION:

The National Poultry Improvement Plan (NPIP) is the backbone of the entire poultry industry in the United States, encompassing program diseases of significant relevance to multiple sectors—including broiler, layer, and breeder operations for chickens, as well as turkeys, waterfowl (ducks, geese, swans), pheasants, quail, peafowl, guineas, chukars, grouse, ostriches, emus, rheas, and cassowaries. All 50 states currently participate in the NPIP, which facilitates both domestic and international commerce of poultry products due to the widespread recognition of its programs. This is especially important in the global arena for diseases such as pullorum/typhoid, *Mycoplasma*, and avian influenza, for which importing countries often waive testing requirements for source flocks in good standing with the corresponding NPIP program.

According to the United States Department of Agriculture (USDA) Economic Research Service (*Poultry & Eggs – Sector at a Glance*), the NPIP National Office supports an industry valued at just over $70 billion in 2024. Its services include frequent updates to NPIP programs, laboratory procedures, testing methodologies, proficiency testing, biosecurity protocols, and reporting. Notably, the NPIP's avian influenza programs form the foundation of national surveillance for this disease—without which our testing schedule would be insufficient.

All of these critical activities are managed by just five staff members, making the NPIP one of the most fiscally efficient programs within the USDA. However, the Plan has been without its Senior Coordinator for an extended period—six months at the time of this submission—without any stated reason. This prolonged absence is unjustified and places an unfair burden on the NPIP

staff, while also exposing the poultry industry to potential risks associated with an understaffed program.

RESOLUTION:

The United States Animal Health Association requests that the United States Department of Agriculture, within 30 days from the lifting of the government shut down, re-establish a permanent Senior Coordinator of the National Poultry Improvement Plan (NPIP).

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RESOLUTION NUMBER: 15 APPROVED

SOURCE: COMMITTEE ON CATTLE AND BISON

SUBJECT MATTER: REVISE THE FEDERAL HIGHLY PATHOGENIC AVIAN INFLUENZA IN LIVESTOCK TESTING ORDER TO RECOGNIZE STATE STAGE 4 "UNAFFECTED" STATUS

BACKGROUND INFORMATION:

On April 24, 2024, the United States Department of Agriculture's (USDA), Animal and Plant Health Inspection Service (APHIS) issued the *Federal Order Requiring Testing for and Reporting of Highly Pathogenic Avian Influenza (HPAI) in Livestock*, effective April 29, 2024. This order established pre-movement testing requirements for lactating dairy cattle at a time when little was known about how H5N1 influenza affected dairy herds or the national prevalence of the disease.

Subsequently, USDA-APHIS issued another order—the *Federal Order Requiring Additional Testing for and Reporting of Highly Pathogenic Avian Influenza (HPAI) in Livestock and Milk*—effective December 6, 2024. This order established the National Milk Testing Strategy, providing a roadmap to achieve H5N1 influenza-free status in the nation's dairy herds.

As of October 2025, 33 states have achieved Stage 4 "Unaffected" status through state-level surveillance programs developed in collaboration with USDA-APHIS. Maintaining Stage 4 status requires ongoing representative sampling of bulk milk from over 75% of a state's dairies. Despite demonstrating the absence of H5N1 influenza, producers in "Unaffected" states are still required to test up to 30 individual cows per load before moving lactating dairy cattle across state lines, as mandated by the April 29, 2024, Federal Order.

To date, no "Unaffected" state has reverted to "Affected" status (Stage 3) due to interstate movement testing of cattle from another "Unaffected" state. These testing requirements impose unnecessary regulatory burdens on producers and increase costs and workloads for National Animal Health Laboratory Network sites. The demonstrated absence of H5N1 influenza—verified through robust state-level surveillance or USDA-APHIS-monitored silo

testing—should eliminate the need for pre-movement testing of individual cows from “Unaffected” states.

RESOLUTION:

The United States Animal Health Association urges the United States Department of Agriculture, Animal and Plant Health Inspection Service to revise the April 29, 2024, Federal Order to allow the interstate movement of lactating dairy cattle without requiring H5N1 influenza pre-movement testing of individual cows from Stage 4 “Unaffected” states or from Voluntary Monitored Unaffected Herds, thereby reducing unnecessary regulatory burden, facilitating interstate commerce, and decreasing strain on National Animal Health Laboratory Network sites.

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RESOLUTION NUMBER: 16 APPROVED AS AMENDED

SOURCE: COMMITTEE ON SHEEP, GOATS, AND CAMELIDS

SUBJECT MATTER: STATE OR REGIONAL BRUCELLOSIS AND TUBERCULOSIS CLASSIFICATION FOR SHEEP AND GOATS

BACKGROUND INFORMATION:

The United States Department of Agriculture (USDA) has established disease classification systems for program diseases to help determine the risk of those diseases within states or regions. This resolution addresses brucellosis, as defined by the Uniform Methods and Rules (UMR) of the USDA, as an infectious disease of animals and humans caused by bacteria of the genus *Brucella* (*B. abortus*, *B. melitensis*, and *B. suis*). It does not pertain to *B. ovis*, the non-zoonotic causative agent of contagious ram epididymitis. The resolution also addresses the causative agent of bovine tuberculosis, *Mycobacterium bovis*, which is defined by the UMR as a zoonotic disease agent capable of infecting multiple mammalian species. Brucellosis classifications currently apply to cattle, bison, and swine; tuberculosis classifications apply to cattle, bison, and captive cervids.

Historically, cases of brucellosis and tuberculosis in sheep and goats in the United States (US) have been extremely rare. The last confirmed detections of *Brucella melitensis* occurred in a south Texas herd of goats and one sheep in 1999. Tuberculosis was last detected in Pygmy goats housed in zoos in 1991 and 1992. The USDA currently lists the US as “free” of *B. melitensis* for diseases reportable to the World Organization for Animal Health (WOAH, formerly OIE).

Despite the absence of evidence for brucellosis or tuberculosis in dairy sheep or goats, the Pasteurized Milk Ordinance (PMO) was modified in 1997 to require annual whole-herd testing for these diseases. A 1998 United States

Animal Health Association (USAHA) resolution, along with objections from the American Association of Small Ruminant Practitioners, led to a compromise resulting in the 2001 addition of the “random statistical herd sampling” option. However, animal health rules from the 2011 PMO exempt cattle and bison from testing if they originate from areas with certified free status. Since tuberculosis and brucellosis classifications do not include sheep and goats, PMO testing requirements for these species remain in effect.

In 2025, the National Conference for Interstate Milk Shipments passed a resolution to revise PMO Section 8, Animal Health, to remove the prescriptive tuberculosis and brucellosis testing requirements for sheep and goats, and to allow broader, risk-based state surveillance programs for these species.

Both the 2013 and 2014 USAHA resolutions on this subject requested that the USDA evaluate the need for such testing and establish appropriate classification systems. In response, USDA, Animal and Plant Health Inspection Service acknowledged the rarity of disease detection but cited insufficient sample size to make a definitive national status determination.

Now, with more than 10 years of additional surveillance data—consistent with WOAH recommendations for establishing disease freedom—there is confirmation that no cases of brucellosis or tuberculosis have been detected in US domestic sheep and goats, despite routine nationwide testing. This provides strong, real-world evidence that these populations are free of both diseases. Continued testing requirements place unnecessary economic and logistical burdens on producers and restrict interstate commerce, without a demonstrable public or animal health benefit.

RESOLUTION:

The United States Animal Health Association (USAHA) urges the United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services to officially declare United States domestic sheep and goats free of *Brucella melitensis*, *B. abortus* and tuberculosis, based on more than two decades without detection of cases, supported by consistent surveillance data.

Further, USAHA requests that states rescind testing requirements for brucellosis and tuberculosis in sheep and goats, where such requirements persist, to reduce unnecessary regulatory burden and facilitate interstate commerce.

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RESOLUTION NUMBER: 17 APPROVED AS AMENDED

SOURCE: COMMITTEE ON SHEEP, GOATS, AND CAMELIDS

SUBJECT MATTER: REQUEST FOR THE UNITED STATES DEPARTMENT OF AGRICULTURE (USDA), ANIMAL AND PLANT HEALTH INSPECTION SERVICE (APHIS), VETERINARY SERVICES

(VS) TO DEFINE WHEN AUTHORIZATION OF RESPONSE ACTIVITIES FOR DEPOPULATION WILL BE APPROVED BY USDA-APHIS-VS DURING A FOREIGN ANIMAL DISEASE OUTBREAK THAT INVOLVES FOOT AND MOUTH DISEASE

BACKGROUND INFORMATION:

Policy development during a foreign animal disease outbreak is challenging. It requires time and input from numerous stakeholders. During a foot-and-mouth disease (FMD) outbreak, rapid detection and response to FMD cases are critical.

Confirmation of cases by the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS), National Veterinary Services Laboratories (NVSL) is essential to prevent false positives and inappropriate responses. It is important for USDA-APHIS-VS to confirm the presence of FMD in each affected state or territory.

However, confirmation by USDA-APHIS-VS-NVSL can delay the authorization of indemnity payments for depopulation.

Diagnostic testing is conducted at one of the National Animal Health Laboratory Network (NAHLN) laboratories approved for FMD testing and is confirmed at the USDA-APHIS-VS-NVSL Foreign Animal Disease Diagnostic Laboratory. Confidence in NAHLN stems from the oversight and testing proficiencies mandated by USDA-APHIS-VS. In addition to laboratory diagnostics, field responders will provide objective assessments of FMD clinical signs observed during investigations at each affected premises during an outbreak.

RESOLUTION:

The United States Animal Health Association (USAHA) requests that the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) adopt the following policy regarding response activities prior to an outbreak:

During a foot and mouth disease (FMD) outbreak, the USDA-APHIS-VS authorization for response to depopulate the first detected case within a state or territory will require confirmation by the USDA-APHIS-VS National Veterinary Services Laboratories (NVSL). The USDA-APHIS-VS authorization for response to depopulate subsequent cases in a state or territory will not need to be confirmed by USDA-APHIS-VS-NVSL but will require:

1) An FMD non-negative or presumptive positive result at an approved National Animal Health Laboratory Network laboratory, and

2) Confirmation of clinical signs compatible with FMD on the affected premises in wildlife or domestic livestock.

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RESOLUTION NUMBER: 18 APPROVED AS AMENDED

SOURCE: COMMITTEE ON SHEEP, GOATS, AND CAMELIDS

SUBJECT MATTER: FOOT AND MOUTH DISEASE HOUR 73: PLANNING OPTIONS FOR RESUMPTION OF MOVEMENT FOLLOWING 72-HOUR NATIONAL MOVEMENT STANDSTILL

BACKGROUND INFORMATION:

On any given day, the United States (US) livestock industry moves millions of animals. If foot and mouth disease (FMD) were introduced into this system, it could spread across the US in a very short period of time. Upon the initial detection of FMD, the current policy is to implement a 72-hour standstill order, designed to achieve the following objectives:

- Halt animal movements to slow the spread of the disease.
- Provide producers and other stakeholders time to assess biosecurity measures and make necessary adjustments before movement resumes.
- Give regulatory officials time to conduct epidemiological tracing on infected premises and determine the appropriate control areas to establish once the standstill expires.

It is also recognized that a standstill order will have additional consequences. The COVID-19 pandemic taught us that while movement can be halted, it must resume as soon as possible to avoid a significant cascade of negative impacts on livestock production sites.

RESOLUTION:

The United States Animal Health Association recommends that the United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services adopt the following policy changes to minimize negative consequences of the 72-hour National Movement Standstill:

1. **Hour 73 Slaughter Establishments in Free Areas:**

- After the 72-hour National Movement Standstill, at hour 73, slaughter establishments in the free area should be removed from any extended national standstill order and be allowed to resume operations.

2. **Hour 73 Scenarios for Production Premises:**

- Continue National Movement Standstill for an additional period beyond hour 73, exempting livestock movement to slaughter establishments in free areas; or
- End the 72-hour National Movement Standstill at hour 73, whereby:
    - Premises in free areas resume intrastate and interstate movement at hour 73 without permits unless movement is into an established control area; and

    - Premises in established control areas need permits for intrastate and interstate movement; or
- Establish a smaller geographical or jurisdictional movement standstill area (such as part of a state, or an entire state, or a region) for intrastate and/or interstate movement at hour 73, whereby:
    - Premises in free areas resume regular intrastate and interstate movement at hour 73 unless movement is into an established control area, and
    - Premises in established control areas need permits for intrastate and interstate movement.

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RESOLUTION NUMBER: 20 APPROVED

SOURCE: COMMITTEE ON SHEEP, GOATS, AND CAMELIDS

SUBJECT MATTER: POLICY REGARDING RESTOCKING REQUIREMENTS AND ELIGIBILITY FOR INDEMNITY OF PREMISES IN A CONTROL AREA DURING A FOOT AND MOUTH DISEASE OUTBREAK

BACKGROUND INFORMATION:

Developing policy during a foreign animal disease outbreak is challenging. It demands significant time and input from numerous stakeholders. It is essential that producers, along with state and federal regulatory officials, collaborate prior to a foot and mouth disease outbreak and engage in as much advance planning as possible.

During the 2022 highly pathogenic avian influenza (HPAI) outbreak, the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) implemented a new policy. This policy required premises located within the buffer zone to submit a biosecurity plan and undergo a virtual audit conducted by either a state or federal regulatory official. Compliance with these requirements was necessary for the premises to be eligible for indemnity if subsequently infected with HPAI. Premises located in the infected zone were not eligible for indemnity from USDA-APHIS-VS if the state permitted restocking.

RESOLUTION:

The United States Animal Health Association requests that the United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services define a foot and mouth disease (FMD) response policy on restocking of premises in control zones, specifically the infected and buffer zones. A policy should also be defined for any control

areas established by the detection of FMD in wildlife and determine prior to an FMD outbreak which policies should be applied.

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RESOLUTION NUMBER: 21 APPROVED AS AMENDED

SOURCE: COMMITTEE ON FARMED CERVIDAE

SUBJECT MATTER: COLLECTION OF RESEARCH SAMPLES FROM CERVIDS HARVESTED UNDER CHRONIC WASTING DISEASE HERD PLANS

BACKGROUND INFORMATION:

As part of ongoing efforts to manage and mitigate Chronic Wasting Disease (CWD) in farmed cervid populations, state animal health or wildlife agencies that oversee these populations may require the depopulation or targeted culling of animals under official herd plans. These harvested animals present critical research opportunities to improve CWD diagnostics, genetic susceptibility profiling, and other disease management strategies.

CWD and genetic samples—including blood, recto-anal mucosa-associated lymphoid tissue biopsies, lymphoid tissues, ear punches, and other biological materials—can support ongoing research initiatives that accelerate science-based policy development and enhance long-term disease control outcomes across both wild and farmed cervid populations.

However, many state agencies lack the personnel and capacity to collect and store samples and may be unaware of research initiatives in need of additional materials. The United States Department of Agriculture (USDA) Cervid Health Program works closely with states and CWD researchers and is often informed of planned depopulations as well as current CWD research projects. Cervid industry foundations, such as the Elk Research Foundation and the Cervid Livestock Foundation, provide funding for research that advances knowledge of CWD diagnostics and genetic susceptibility. These foundations may also be aware of individuals trained in sample collection for such research.

A collaborative effort among the USDA, state agencies, cervid industry foundations, and CWD researchers would facilitate the collection of these samples and significantly advance CWD research.

RESOLUTION:

The United States Animal Health Association (USAHA) requests that the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS) work with chronic wasting disease (CWD) researchers and state agencies to develop an accessible electronic database that includes a list of current research projects, sample types needed for those projects, and individuals trained to collect those samples.

For tissue and environmental samples collected from farmed cervidae depopulated or harvested under an official herd plan or USDA funded cooperative agreement, the USAHA requests that USDA:

- Urge state agencies to collect research and genetic screening samples from farmed cervids harvested and coordinate with USDA to provide those samples to researchers.
- Provide specific guidance and sampling protocols to state agencies for blood, recto-anal mucosa-associated lymphoid tissue biopsies, lymphoid tissues, deoxyribonucleic acid, and environmental samples.

USAHA further encourages coordination between USDA, state agencies, research institutions, diagnostic laboratories, cervid industry foundations, and outside stakeholders to ensure any collected samples are utilized to advance CWD research, surveillance, and disease management tools with possible funding and resource support.

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RESOLUTION NUMBER: 22 APPROVED

SOURCE: COMMITTEE ON FARMED CERVIDAE

SUBJECT MATTER: USE OF ANTEMORTEM TESTING AS A RISK ASSESSMENT TOOL IN CERVID CHRONIC WASTING DISEASE TRACE-FORWARD INVESTIGATIONS

BACKGROUND INFORMATION:

When a chronic wasting disease (CWD)-positive animal is identified in a farmed cervid operation, state officials conduct epidemiological investigations. These investigations often result in extended quarantines, depopulation of trace-out animals, or restrictions on herds implicated in these traces—despite having no confirmed positive animals. Such measures can last for multiple years or lead to the depopulation of animals that are ultimately found to be uninfected.

Antemortem testing offers a practical, science-based alternative to herd depopulation or indefinite movement restrictions. Current methods of antemortem sampling do have limitations, including variable sensitivity, a long incubation period for prion detection, and the risk of disease transmission via sampling equipment. However, when used alongside other herd- and animal-specific data—such as genotype, movement history, and herd status—antemortem sampling, including tissue biopsies, can support targeted, risk-based decision-making.

Recent field use by state animal health officials has demonstrated that biopsies of recto-anal mucosa-associated lymphoid tissue (RAMALT) can be an effective tool for identifying infected herds, assessing risk in trace-out herds without confirmed positives, and guiding depopulation and

management decisions. Similarly, state wildlife officials have used RAMALT biopsies on elk to assess risk prior to interstate movement for relocation projects.

Importantly, the United States Department of Agriculture's CWD Program Standard, Part B – *Guidance on Response to CWD-Affected Herds*, explicitly affirms the authority of state animal health officials to take action based on their own risk assessments. Page 44 states: "Time in quarantine may be lessened for: C. At the discretion of the State representative for a period of time as determined by a risk evaluation based on the findings of the epidemiological investigation."

This language confirms that states have the discretion to apply, modify, or lift restrictions based on a variety of risk assessment tools, including antemortem diagnostic testing such as RAMALT biopsies. The appropriate and responsible use of these tools can enhance the precision of disease response, reduce unnecessary herd or animal depopulations, and minimize long-term business interruptions—while maintaining essential animal health safeguards.

RESOLUTION:

The United States Animal Health Association (USAHA) urges state animal health officials and state wildlife officials to consider the appropriate, responsible use of antemortem sampling, such as recto-anal mucosa-associated lymphoid tissue biopsies, as a herd-level risk assessment tool for captive cervids in trace-forward or trace-back herds identified through chronic wasting disease epidemiological investigations. Such sampling should be used to support science-based decision making and may help avoid unnecessary herd depopulations and long-term business interruptions while maintaining animal health safeguards.

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RESOLUTION NUMBER: 23 APPROVED

SOURCE: COMMITTEE ON FARMED CERVIDAE

SUBJECT MATTER: ACCEPTANCE OF THE DUAL PATH PLATFORM TEST FOR TUBERCULOSIS IN EXPORTED CERVIDS

BACKGROUND INFORMATION:

The Canadian Food Inspection Agency (CFIA) currently requires that farmed cervids exported from the United States undergo two tuberculosis (TB) tests: one between 60 and 100 days prior to movement, and another within 30 days of export. Both tests must use the single mid-cervical tuberculin skin test (MCT). Additionally, the CFIA mandates that the exporting herd be enrolled in a tuberculosis herd certification program, which is also based solely on the MCT. Under CFIA's current protocol, the

Dual Path Platform (DPP) blood test is not accepted for either herd certification or individual animal export clearance.

This approach differs significantly from that of the United States Department of Agriculture, which has approved the DPP test as a supplemental TB test for cervids for over a decade. The DPP blood test offers advantages in cost, animal welfare, and logistical flexibility, and has been widely adopted within the United States (US) cervid industry. Notably, the CFIA now permits the use of the DPP test for tuberculosis screening in Canadian cervid herds within Canada, indicating its recognition of the test's reliability.

Despite this, the CFIA does not allow the DPP test to satisfy import requirements for US cervids, creating an inconsistency that presents a regulatory barrier for American producers. These duplicative and outdated requirements hinder cross-border trade, increase costs, and offer no additional animal health benefit.

RESOLUTION:

The United States Animal Health Association urges the United States Department of Agriculture, Animal and Plant Health Inspection Service to negotiate with the Canadian Food Inspection Agency on amending Canada's importation protocol to recognize the Dual Path Platform tuberculosis (TB) test as an approved option for meeting TB testing and herd accreditation requirements for live farmed cervids and frozen cervine semen exported from the United States to Canada.

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RESOLUTION NUMBER: 24 APPROVED

SOURCE: COMMITTEE ON ANIMAL WELFARE

SUBJECT MATTER: ACCESSIBILITY OF NITROGEN-BASED DEPOPULATION METHODS FOR RESPONSE TO HIGHLY PATHOGENIC AVIAN INFLUENZA

BACKGROUND INFORMATION:

Since the start of the current outbreak of Highly Pathogenic Avian Influenza (HPAI) in the United States (US) in 2022, over 175 million poultry have been affected, with the vast majority being depopulated. Because HPAI has become regionally and seasonally endemic in North America, it is anticipated that the depopulation of tens of millions of poultry annually may persist for the foreseeable future.

Current United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) policy requires that depopulation methods classified by the American Veterinary Medical Association (AVMA) as "preferred" in its 2019 *Guidelines for the*

Depopulation of Animals be used preferentially, as they better protect animal welfare. However, a report by the Center for Epidemiology and Animal Health (CEAH) found that, due to logistical challenges—including carbon dioxide shortages—non-preferred methods, namely ventilation shutdown plus heat (VSD+), have become widely used (source). In fact, over 71% of houses on commercial table egg operations—the sector most highly affected by HPAI in the US—used VSD+ as their primary depopulation method in 2022–2023. The CEAH report notes welfare issues with VSD+, such as incomplete mortality and delays in applying a secondary depopulation method.

A revised edition of the AVMA *Guidelines for the Depopulation of Animals* will be published soon. A new classification system has been proposed, with methods categorized as Tier 1, Tier 2, or Tier 3. Tier 1 methods "are given highest priority and should be utilized preferentially when developing emergency response plans." Commonly used HPAI depopulation methods, such as water-based foam and containerized carbon dioxide gassing, have been reclassified from "preferred" to Tier 2, while new depopulation methods that rely on the use of nitrogen have been added to the guidelines in Tier 1 under the Poultry Chapter.

These nitrogen-based depopulation methods include:

- High-Expansion Nitrogen-Filled Foam (HENF)
- Whole House Inert Gassing, typically using nitrogen (NWHG)

Both nitrogen-based methods work via the same mechanism—induction of anoxia—while lending themselves to use in different types of facilities. NWHG can be used in mechanically ventilated buildings, while HENF can be deployed in large containers, corrals, or in buildings that cannot be sufficiently sealed to permit NWHG. Because nitrogen can be extracted from the atmosphere, these methods are not subject to bottlenecks and shortages, as is the case with carbon dioxide. In addition, when properly deployed, these methods reliably produce 100% mortality and better protect bird welfare, as they cause little or no pain or distress prior to loss of consciousness. This may also reduce negative psychological impacts on those tasked with depopulation.

Both methods have been used in other countries for HPAI-related depopulation, and NWHG has been used in the US and abroad for routine end-of-lay culling. To date, neither method has been deployed for emergency depopulation in the US, though funding from the National Animal Disease Preparedness and Response Program (NADPRP) has enabled progress in this area. With advanced preparation, these methods can achieve depopulation within 24–48 hours of HPAI diagnosis. USDA-APHIS-VS involvement and investment, including through the National Animal Disease Preparedness and Response Program, could hasten access to these methods.

RESOLUTION:

The United States Animal Health Association (USAHA) requests that the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) improve accessibility of nitrogen-based depopulation methods, including high-expansion nitrogen foam

and nitrogen whole house gassing, to enable immediate and effective deployment in response to highly pathogenic avian influenza in poultry. Improving the accessibility of these methods includes the following:

- Prioritize National Animal Disease Preparedness and Response Program funding awards for research to further optimize these methods to enable rapid deployment for emergency depopulation of large barns and for purchasing N_2 systems with states or tribes.

With each update to the American Veterinary Medical Association Guidelines for the Depopulation of Animals, update guidance documents, including the National Animal Health Emergency Management System Guidelines on Mass Depopulation and Euthanasia, to incorporate these methods.

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Willette, Ross Wilson, Nora Wineland, Steven Witte, Ryan Wolker, Sara Wyckoff, Alan Young, Valeriia Yustyniuk, Alex Zingher.

The Committee met during the 2025 Annual Meeting in Aurora, Colorado on November 3 at 1:00 p.m. There were 47 members and 40 guests in attendance.

Dr. Maggie Baldwin gave introductions, reviewed the committee mission statement, and gave an overview of the agenda.

The *B. canis* working group is needing a new chair/lead. Dr. Summers is happy to provide the information and contact list for continuity.

Presentations and Reports

PFAS in Poultry, Evidence, Risk and Response

Kasia Szymanska, Maine Department of Agriculture, Conservation and Forestry

Dr. Szymanska began by reviewing sources of per- and polyfluoroalkyl substances (PFAS) and risk factors for transfer/ bioaccumulation in the environment. Compounds of interest, in addition to PFAS, include perfluorooctanesulfonic acid (PFOS) and 10:2 FTSA. PFAS are linked to a wide range of human health effects, including immunosuppression, effects on reproductive, kidney and liver function, and increased risk of some forms of cancer. PFAS remediation is possible. Research shows that PFAS clearance can occur faster in livestock than in humans. In chickens the ½ life ranges from 3.5 – 160 days, with the majority of measurements at the lower end of the spectrum. Several states have existing or proposed regulations surrounding PFAS compounds; these regulations differ greatly as there is no overarching federal framework.

Dr. Szymanska shared a multi-agency collaborative approach to PFAS management in Maine involving Maine Department of Agriculture, Conservation and Forestry (DACF), Maine Centers for Disease Control and Prevention (CDC), and Harvard University. Maine DACF also works with many other stakeholder groups in PFAS control and response efforts. Since 2016, efforts have centered on detection, reducing contamination and supporting farmers in recovery.

Maine has established screening and action levels for fish, milk, beef and chicken eggs.

For poultry, there are plans to manage flocks with action levels. Maine DACF has established helpful practices to avoid exposure, for example, switching to grain based diets.

Dr. Szymanska also shared some preliminary results of a study funded by The Fund to Address PFAS Contamination. This project will examine how PFAS on two biosolids-contaminated farms in Maine are transferred to poultry and eggs. The study will consider exposures through direct consumption of contaminated soil, insects, earthworms, and airborne dust particles. The study will monitor seasonal changes in eggs and test the effectiveness of different coop setup interventions (location changes, dust

minimization, platforms, soil barriers) for minimizing PFAS exposure. Data will be used to provide advice for farmers for minimizing PFAS contamination in chickens and eggs and to develop soil screening values protective of public health.

More information is available on the Maine DACF website: Per- and Polyfluoroalkyl Substances (PFAS) - Bureau of Agriculture, Food and Rural Resources: Maine DACF

Developing an Ethical Framework for Zoonotic Disease Emergency Management

Raymond Anthony, University of Alaska Anchorage

Dr. Raymond Anthony, a Professor of Philosophy from the University of Alaska, Anchorage shared some on-going analysis regarding his project titled, developing an ethical framework for zoonotic disease emergency management: Supporting U.S. agriculture resilience and enabling a One Health strategy. This project is sponsored by USDA, National Institute of Food and Agriculture (NIFA) – here is a link to the detailed project. This work is being performed in concert with Dr. Kate Millar, from the University of Nottingham, and a team of multidisciplinary collaborators with veterinary and zoonotic disease management expertise. The main goals of the project are to:

1) Identify, map and assess (ethical, social, biosecurity, economic and interspecies) conflicts at the heart of a zoonotic disease outbreak/disease pandemic to provide much-needed decision-making support
2) Develop new support tools and an ethical framework, anchored in One Health, to address key issues and build trust across the health-agriculture-veterinary nexus.

Dr. Anthony shared an emerging frame that conceptualizes One Health Zoonotic Disease Management as a Moral Ecology and discussed examples of Anchoring Values, namely, Trust, Solidarity, Stewardship of Animals, and Vulnerability that have come out from an extensive literature review and a workshop with the multidisciplinary team of collaborators held in Anchorage, AK in August 2025.

Dr. Anthony intends to share further results with the USAHA Committee on One Health at the conclusion of the team's analysis.

One Health Approach: New World Screwworm Response (NWS)

Chris Boomsma, Council for Agricultural Science and Technology (CAST)

The Council for Agricultural Science and Technology (CAST) is a nonprofit organization that brings together scientific experts to communicate non-partisan, unbiased, science-based information on food, agricultural, and environmental issues. CAST principal work involves assembling, interpreting, and disseminating research through peer-reviewed publications, issue papers, webinars, podcast episodes, infographics, and other educational programs.

CAST recently produced a flyer and infographic entitled *New World Screwworm: A Threat to Animals and Humans* in collaboration with the National Cattlemen's Beef Association (NCBA), the National Pork Board (NPB), and the Animal Health Institute (AHI). It is now working with these organizations to widely disseminate this education resource. CAST is also collaborating with the previously mentioned organizations and the American Veterinary Medical Association (AVMA) to develop an initial webinar focusing on NWS from a One Health perspective. Finally, CAST is planning to develop a timely, peer-reviewed paper that will deeply delve into this topic. Co-promotion and dissemination of the project's education materials and recruitment of key experts as contributors are key aspects of the project.

More information is available on the CAST website:
CAST - The Council for Agricultural Science and Technology

Committee Business:

Two resolutions came out of the Subcommittee on Rabies for approval.

First resolution regarding funding to maintain the National Rabies Management Program. The committee passed the amended resolution with minimal discussion.

Second resolution regarding funding to support national rabies prevention and control through maintaining The Centers for Disease Control and Prevention (CDC) Poxvirus & Rabies Branch (PRB) – Rabies Team at full capacity. The committee passed the resolution with moderate discussion and several minor amendments.

The meeting adjourned at 3:10 p.m.

Addendums attached:

Subcommittee Reports

- Pharmaceutical Issues
- Rabies
- Salmonella

SUBCOMMITTEE ON PHARMACEUTICAL ISSUES

Chair: Edie Marshall, CA
Vice Chair: Anna Forseth, DC

Abbey Canon, Lindy Froebel, Michael Costin, Stephen Crawford, Carrie Cremers, Leah Dorman, Mark Drew, Anna Forseth, Heather Fowler, K. Fred Gingrich II, Gail Golab, Steve Goldsmith, Alicia Gorczyca-Southerland, Rod Hall, Kuki Hansen, Don Hoenig, Jeffrey Kaisand, Patrice Klein, Sabrina Lee, Sasha Lisowski, Edie Marshall, Patrick McDonough, Peter Mundschenk, Katie Murray, Mike Neault, Elizabeth Parker, Amar Patil, Brent Pepin, Allison Phibbs, M. Gatz Riddell Jr., Katie Rumsey, Joni Scheftel, Kathy Simmons, Susan Stehman, Beth Thompson, Neil Vezeau, Ross Wilson, Steven Witte, Ryan Wolker.

The Subcommittee met during the 2025 Annual Meeting in Aurora, Colorado on November 2 at 10:00 a.m. There were 10 members and 14 guests present. An announcement was made that there will be a virtual meeting with FDA on Wednesday, November 19 (final time TBA but between 2-5pm EDT / 11-2 PDT) to cover therapeutics for New World Screwworm (NWS) and the Emergency Use Authorization process.

Presentations and Reports

Anti-inflammatory Options for Cattle and Swine

Michael Kleinhenz, Texas A&M - Veterinary Education, Research and Outreach (VERO)

Anti-inflammatory treatment is recommended for a number of conditions in swine and cattle. There are a number of pharmaceuticals labelled for use in these major food animal species. Additionally, there is a body of research that supports anti-inflammatory use in an extra-label drug use manner for the control of pain related to husbandry procedures and/or disease conditions not on label.

Anti-inflammatory drugs act on the arachidonic pathway and block the production of pro-inflammatory molecules, namely prostaglandin. Pharmaceuticals used in cattle and swine are either steroidal anti-inflammatories or non-steroidal anti-inflammatories (NSAIDs). Steroidal anti-inflammatories block the production of arachidonic acid from membrane phospholipids via phospholipase A_2. Non-steroidal anti-inflammatory drugs act further down the arachidonic acid pathway and inhibit prostaglandin production via cyclooxygenase enzymes (COX).

Dexamethasone is the only steroidal anti-inflammatory drug marketed for food-producing animals in the United States. Others have been approved, but are no longer available in the marketplace. Dexamethasone has antipyretic and anti-inflammatory actions. Its use does come with certain precautions and side-effects such as abortion, immunosuppression, and decreased semen quality.

There are several NSAIDs approved and marketed in the United States. Additionally, there are several NSAIDs, not approved by the U.S. Food and Drug Administration (FDA), but have significant research supporting their use and fulfill the requirements of the Animal Medicinal Drug Use Clarification Act of 1996, otherwise known as AMDUCA. Furthermore, there are NSAIDs that have not received FDA approval and do not meet the stipulations set forth by AMDUCA. Aspirin and salicylic acid have been traditionally used in swine and cattle, but a 2025 Dear Veterinarian Letter from the FDA determined their use is prohibited as they do not meet AMDUCA standards.

Flunixin meglumine is a common NSAID with several formulations approved. Formulations available include injectable, transdermal, and injectable combinations with antibiotics. For swine, flunixin is approved as an injectable and for the control of pyrexia associated with swine respiratory disease. Flunixin is approved in cattle for the control of pyrexia associated with respiratory disease and mastitis, inflammation from endotoxemia, and control of pain associated with foot rot. The control of pain associated with foot rot indication is limited to the transdermal product only. This is also the only indication for pain control in food animals. All others would be considered extra-label drug use.

Meloxicam is commonly used NSAID in food animals, but there are no approved formulations for cattle and swine by the FDA. There are human and companion animal formulations approved by FDA and able to meet the requirements of AMDUCA. Thus, meloxicam is used in an extra-label manner for the control of pain and inflammation associated with husbandry procedures (i.e. castration or dehorning) or painful conditions such as lameness not associated with foot rot. There is a vast body of research to support its use and sufficient data to prevent violative residues from entering the food supply.

Ketoprofen is the most recent approved NSAID for cattle. It is available as a standalone injectable or in combination with tulathromycin. Use of ketoprofen has been investigated in swine as well. Injectable ketoprofen has a short duration of action and is currently cost prohibitive for routine use. Combination of ketoprofen with tulathromycin prolongs its duration of action due to “flop-flop” kinetics and reduced excretion.

Firocoxib is one of many NSAIDs studied for use in cattle and swine. It is approved for use in dogs and horses for the control of pain associated with joint disease. It is mentioned in this report as there have been several studies that show it to be a promising anti-inflammatory and analgesic in swine.

Transforming Animal Health for the 21st Century

Michelle Kromm, Food Forward LLC

The Reagan-Udall Foundation for the FDA (the Foundation) is pleased to announce the release of *Transforming Animal Health in the U.S. For The 21st Century*, a report prepared by an Expert Panel tasked with identifying holistic approaches to address opportunities and challenges in animal health and

veterinary medicine. At the request of the Food and Drug Administration's Center for Veterinary Medicine (FDA-CVM), the Foundation convened an Expert Panel to conduct an analysis of the U.S. animal health and veterinary industry. The Expert Panel set out to collect information, analyze the input, and make recommendations to address the most pressing unmet needs. The Expert Panel held numerous conversations with experts and invited written submissions; ultimately finding the current laws and regulatory authorities governing animal health and nutrition in need of updating. Cumbersome requirements, poor communication, and outdated regulatory pathways have made the U.S. less competitive in the global race for new animal drugs, therapeutic treatments, and animal nutritional ingredients. This poses a challenge not just for U.S. competitiveness, but also for our food supply.

While this report is inherently FDA-centric, the interconnectedness of the animal health ecosystem will require multiple government agencies and Congress to improve. Expert Panel Chair Lisa A. Tell (Avian), observed "While chairing this Expert Panel, it was readily apparent to me that advancing animal health into the 21st century is going to be a complicated process that will require dynamic engagement. It is going to require agencies and stakeholders to work collaboratively in order to start making impactful differences. This synergistic approach will be especially important if we want to continue to be global leaders in agriculture, animal health, and animal welfare."

The Expert Panel's findings and recommendations are intended to empower the animal owner and veterinary sector (including government and the private sector) to fill gaps and unmet needs in animal health (therapeutic interventions and food/feed.

AHI Updates

M.J. McNamee, Animal Health Institute (AHI)

Dr. McNamee, Director of Scientific & Regulatory Affairs, provided updates on the Animal Health Institute membership top priorities, with a focus on veterinary pharmaceuticals. Topics include action toward regulatory reform currently underway in collaboration with The Center for Veterinary Medicines. AHI is the trade association that promotes the interests of animal health companies that research, develop and manufacture products that keep animals healthy, including those regulated by U.S. Food and Drug Administration, Center of Veterinary Medicine (FDA-CVM).

Committee Business:

As there were no resolutions, no response to last year's resolution, or other business-related issues before the committee, a formal business meeting was not held. The chair sought feedback on timing and topics for the U.S. Food and Drug Administration (FDA) meeting to be held virtually on Wednesday, November 19. Once finalized, information about the meeting will be sent to the USAHA membership.

SUBCOMMITTEE ON RABIES

Co-Chair: Joanne Maki, GA
Co-Chair: Rachael Fiske, ME

Sarah Bailey, Maggie Baldwin, Peter Belinsky, Scott Bender, Sarah Coburn, Andrew Di Salvo, Leah Dorman, Rachael Fiske, Patricia Foley, Colin Gillin, Gail Golab, Alicia Gorczyca-Southerland, Rod Hall, Tricia Hebdon, Heather Hirst, Don Hoenig, Dorrie Jordan-Parrott, Jeffrey Kaisand, Patrice Klein, Melanie Kunkel, Scott Larsen, Molly Lee, Sabrina Lee, Donald Lein, Jane Lewis, Mary Jane Lis, Sasha Lisowski, Erin Luley, Joanne Maki, Scott Marshall, Patrick McDonough, Gay Miller, Peter Mundschenk, Katie Murray, Michael Neafsey, Mike Neault, Cheryl Nelson, Michael Odian, Boyd Parr, Amar Patil, Allison Phibbs, Hunter Reed, Cassidy Rist, Susan Rollo, Katie Rumsey, Sherri Russell, E Sabo, Will Sander, John Sanders Jr., Michelle Scheepstra, Joni Scheftel, Janine Seetahal, Sheikh Selim, Staci Slager, Dennis Summers, Tahnee Szymanski, Beth Thompson, Alberto Torres, Marcus Webster.

The Subcommittee met during the 2025 Annual Meeting in Aurora, Colorado on November 2 from 10:00-11:55 a.m. There were 15 members and 14 guests present.

As an introduction, Joanne Maki shared information on the number of human rabies cases reported in the U.S. in 2024 and 2025. The number of recently reported human deaths (n = 6) is not considered to be an unusual increase contrary to recent articles published online. An announcement was made that the 2026 Rabies in the Americas (RITA) meeting will be held in Tempe, Arizona. While the 2026 RITA meeting dates are pending, the meeting is usually held mid-October. There was a review of the 2024 Subcommittee on Rabies resolution which was approved.

Presentations and Reports

New York Rabies Review and Update

Don Lein, Cornell University

Dr. Lein presented a summary and described the history of raccoon rabies on Long Island, New York (2006-2017) and reported on recent rabies cases in Suffolk and Nassau Counties. He described the origin and development of the raccoon oral rabies vaccination (ORV) programs there and how earlier parameters of baiting density, distribution methods, and bait stations were adapted to urban and suburban environments. He described the agencies involved and partnerships developed to fund these ORV programs at federal, state and local levels. Raccoon rabies was eliminated from Long Island in 2017. Recent cases in Suffolk and Nassau counties have required reactivation of ORV on Long Island. In 2024, Nassau County had seven rabid raccoons, and one feral cat. Since June of 2024, there have

been 25 total rabies cases. In 2025, Suffolk County reported 11 raccoon cases. Since then, ORV programs were carried out in late spring, early summer and again in the fall in Queens, Brooklyn, Staten Island, and Nassau County. The counties themselves are managing the campaigns and persons with previous experience with ORV in New York are providing assistance.

National Rabies Laboratory Testing Survey
Joanne Maki, Boehringer-Ingelheim Animal Health

In 2024, an on-line survey, developed in partnership between American Association of Veterinary Laboratory Diagnosticians (AAVLD) and USAHA, was sent to AAVLD rabies diagnostic laboratories. The purpose of the survey was to determine if the number of reported rabies cases were declining in recent years due to lower numbers of submissions or for other reasons. The results of the survey were summarized and presented. Thirty-four states participated in the survey. Questions included identification of tests performed, number of tests performed, and challenges facing these laboratories. The number of tests performed in 17 laboratories responding to the survey during 2021-2023 was 33,489. The trend showed an increase in rabies tests over time (2021 = 9,925; 2022 = 10,668; 2023 = 13,096). Pinch points for rabies diagnostic laboratories were assigned to four categories: Reporting Network Integrity, Funding, Supplies, and Training. Suggestions for improvements from participants included streamlining submissions and reporting by developing new electronic platforms, better training of veterinarians for sample submission quality, and finding innovations for better workflow and communication between laboratories and clients. A concern was voiced about a lack of coordinated laboratory proficiency testing and oversight of such testing.

Subcommittee Business:

The subcommittee proposed and voted on two resolutions and made one recommendation for future committee chairperson to replace Rachael Fiske. The recommended person is Dr. Janine Seetahal. The recommendation will be sent to the Executive Committee for Approval.

Resolution 1 - ***Fiscal Year 2027 Funding for the National Rabies Management Program, United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services to Maintain Rabies Surveillance, Oral Rabies Vaccination Programs, and Rabies Case Reporting*** is a request for continuing funding of the North American Rabies Management Plan. The plan has the long-range goals of preventing wildlife rabies outbreaks and geographical elimination of specific wildlife rabies variants. The resolution was discussed and subcommittee members voted to pass the resolution with minor edits accepted.

Resolution 2 - ***Fiscal Year 2027 Funding for the Centers for Disease Control and Prevention to Maintain National Rabies Surveillance and***

Rabies Case Reporting in the United States is a request to address recent resource and personnel reductions at the Centers for Disease Control, Pox and Rabies Branch (CDC-RB). The magnitude of these reductions has already begun to impact the ability for state and local health department to respond and report rabies cases. The subcommittee approved the idea to create the resolution. A discussion was held to determine which agency should be addressed since the CDC-RB reports into the Department of Human Health Services. The subcommittee made the motion to pass the drafted resolution “as is” with the knowledge that major revisions would be made before submission to the One Health Committee.

Other Notes: A revised version of Resolution 2 was provided to the Committee on One Health without the Subcommittee on Rabies review.

SUBCOMMITTEE ON SALMONELLA

Chair: Lindy Froebel, DC
Vice Chair: Chris Ashworth, AR

Chris Ashworth, Charles Brown II, Katy Burden, Abbey Canon, Lindy Froebel, Maria Cooper, Michael Costin, Carrie Cremers, Victoria Fields, Heather Fowler, Alicia Gorczyca-Southerland, Cassandra Guarino, Rod Hall, Kuki Hansen, Julie Helm, Emily Herring, Heather Hirst, Jarra Jagne, Ashley Johnson, Jeffrey Kaisand, Molly Lee, Kimberly Lehman, Jane Lewis, Rick Linscott, Mary Jane Lis, Rebecca Mansell, Edie Marshall, Patrick McDonough, Peter Mundschenk, Katie Murray, Michael Neafsey, Cheryl Nelson, Kayla Niel, Elizabeth Parker, Molly Parker, Amar Patil, Allison Phibbs, Bill Pittenger, Suelee Robbe-Austerman, E Sabo, Yuko Sato, Travis Schaal, Joni Scheftel, Ryan Scholz, Sheryl Shaw, Shri Singh, Susan Stehman, Tahnee Szymanski, Alberto Torres, Hannah Varnell, Jennifer Weber, Ben Wileman, Ross Wilson.

The Subcommittee met during the 2025 Annual Meeting in Aurora, Colorado on November 3 at 8:15 a.m. with 9 members and 19 guests in attendance.

The Subcommittee agenda was built to allow members to receive relevant updates from federal partners and industry. The meeting comprised of subject matter presentations. Due to the lapse in funds appropriated by Congress, multiple invited speakers could not attend the in-person meeting. A follow-up virtual meeting of the Subcommittee will be held once federal funding to the agencies resumes for remaining annual updates.

NCC Food Safety Priorities Update

Ashley Peterson, National Chicken Council (NCC)

Dr. Peterson provided an update on the food safety priorities following the April 2025 announcement that USDA-FSIS had withdrawn the proposed rule and proposed determination the Agency published in the Federal Register titled *Salmonella Framework for Raw Poultry Products* in August of 2024.

NTF Food Safety Priorities Update

Lindy Froebel, National Turkey Federation (NTF)

Dr. Froebel provided an update on the food safety priorities following the April 2025 announcement that USDA-FSIS had withdrawn the proposed rule and proposed determination the Agency published in the Federal Register titled *Salmonella Framework for Raw Poultry Products* in August of 2024.

Salmonella Samples Processed in 2024

Suelee Robbe-Austerman, USDA-APHIS, National Veterinary Services Laboratories (NVSL)

Dr. Suelee Robbe-Austerman provided a presentation regarding the *Salmonella* samples processed in 2024. A summary of the data presented is provided below.

Salmonella Serotypes Isolated from Animals and Related Sources January 1-December 31, 2024

T. Mackie, *E. Palmer, M. Eiben, K. De La Cruz*, National Veterinary Services Laboratories (NVSL)

The Bacterial Typing section within the Diagnostic Bacteriology and Pathology Laboratory of the National Veterinary Services Laboratories (NVSL) routinely performs serotyping of *Salmonella* isolates submitted by private, state, and federal laboratories as well as veterinarians, researchers, and other animal health officials. This report summarizes *Salmonella* serotyping submissions received at the NVSL from January 1 through December 31, 2024.

In 2024, 8,630 submissions were received for *Salmonella* serotyping. There were 229 serotypes identified from 47 states, the District of Columbia, and Puerto Rico. *Salmonella* isolates were divided by clinical isolates (4,059), non-clinical isolates (3,616), and research and other isolates (955). Isolates were identified as clinical samples based on clinical or sub-clinical signs of salmonellosis from primary or secondary infection or as non-clinical samples when derived from herd and flock monitoring programs, environmental sources, food or other testing. Serotyping data from samples submitted for research purposes are not included in this summary.

Isolates were divided into the following animal source categories for analysis based on information provided by the submitter: bovine, chicken, equine, swine, turkey, and all other. Table 1 lists the source of submissions for both clinical and non-clinical isolates for calendar year 2024. The 10 most identified serotypes from clinical and non-clinical isolates from all animal sources are shown in Table 2. These 10 serotypes account for 57% of the total isolates submitted from clinical and 68% of non-clinical sources in 2024. The most common serotypes observed in chicken, turkey, bovine, equine, and swine isolates are listed in Tables 3-7.

Table 1: Sources of submissions to the NVSL for *Salmonella* serotyping in 2024

Source	No. Clinical Submissions	No. Non-Clinical Submissions
Bovine	856	5
Chicken	221	3,277
Equine	730	17
Swine	1,605	15
Turkey	120	14

All others	527	288
Total	**4,059**	**3,616**

Table 2: Most common serotypes in 2024: All sources

Clinical	**Non-Clinical**
Serotype	**Serotype**
I 4,(5),12:i:-	Kentucky
Typhimurium	Senftenberg
Dublin	Worthington
Agona	Typhimurium
Cerro	Enteritidis
Newport	Mbandaka
Montevideo	Kiambu
Anatum	Anatum
Derby	Montevideo
Saintpaul	Braenderup

Table 3: Most common serotypes in 2024: Chicken

Clinical	**Non-Clinical**
Serotype	**Serotype**
Enteritidis	Kentucky
Kentucky	Senftenberg
Typhimurium	Worthington
Hadar	Enteritidis
Schwarzengrund	Typhimurium

Table 4: Most common serotypes in 2024: Turkey

Clinical	**Non-Clinical**
Serotype	**Serotype**
Agona	Typhimurium

Schwarzengrund	Senftenberg
Infantis	Alachua
Senftenberg	Liverpool
Hadar	

Table 5: Most common serotypes in 2024: Bovine

Clinical	**Non-Clinical**
Serotype	**Serotype**
Dublin	Dublin
Cerro	Cerro/ Bredeney/ Uganda
Montevideo	
Typhimurium	
Anatum	

Table 6: Most common serotypes in 2024: Equine

Clinical	**Non-Clinical**
Serotype	**Serotype**
Newport	Indiana
Saintpaul	Alachua/Anatum
Typhimurium	Infantis/Javiana
Anatum	Senftenberg/Thompson
Agona	

Table 7: Most common serotypes in 2024: Swine

Clinical	**Non-Clinical**
Serotype	**Serotype**
I 4,(5),12:i:-	I 4,(5),12:i:-
Cholerasuis var. Kunzendorf	Anatum/Agona/Give/Infantis
Derby	
Typhimurium	
Agona	

Ewing, WH. 1986. Edward and Ewing's Identification of Enterobacteriaceae. 4th edition. Elsevier Science Publishing Co., Inc., New York, U.S.

Grimont, PAD, Weill, FX. 2007. Antigenic Formulae of the *Salmonella* Serovars. 9th edition. WHO Collaborating Centre for Reference and Research on *Salmonella*. Paris, France.

Committee Business:

No new business was brought before the Subcommittee.

The meeting adjourned at approximately 9:30 a.m.

COMMITTEE ON PARASITIC AND VECTOR BORNE DISEASES
Chair: Hallie Hasel, WY
Vice Chair: TR Lansford, TX

Samantha Allen, Gary Anderson, Sarah Bailey, Oriana Beemer, Jenna Bjork, Richard Breitmeyer, Charlie Broaddus, Charles Brown II, Abbey Canon, Christine Casey, Natalia Cernicchiaro, Robert Cobb Jr., Sarah Coburn, Kim Conway, Karen Conyngham, Chelsea Crawford, Susan Culp, Joanna Davis, Barbara Determan, Andrew Di Salvo, Brandon Dominguez, Roger Dudley, Misty Edmondson, Dee Ellis, James Evermann, Joe Fisch, Rachael Fiske, Katie Flynn, Karen Fox, Tony Frazier, Margaret Gabour, Colin Gillin, Gail Golab, Alicia Gorczyca-Southerland, Thomas Hairgrove, Rod Hall, Kuki Hansen, Nathan Harvey, Hallie Hasel, Carl Heckendorf, Janemarie Hennebelle, Terry Hensley, Bob Hillman, Siddra Hines, Nicki Humphrey, Anne Justice-Allen, Jeffrey Kaisand, Diane Kitchen, Patrice Klein, Karla Kretschmer, Melanie Kunkel, T.R. Lansford III, John Lawrence, Molly Lee, Sabrina Lee, Sasha Lisowski, Coleman Locke, Travis Lowe, Mark Luedtke, Miriam Martin, Chuck Massengill, James Maxwell, Meghan May, Kathy McNamara, Sara McReynolds, Scott McVey, Peter Mundschenk, Gleeson Murphy, Mandy Murray, Katie Murray, Michael Neafsey, Mike Neault, Cheryl Nelson, Susan Noh, Dusty Oedekoven, Gary Olson, Elizabeth Parker, Steve Parker, Boyd Parr, Amar Patil, Angela Pelzel-McCluskey, Allison Phibbs, Bill Pittenger, Barbara Porter-Spalding, Hunter Reed, Cassidy Rist, Jonathan Roberts, Susan Rollo, Mark Ruder, Katie Rumsey, E Sabo, Shawn Schafer, Patty Scharko, David Schmitt, Laurie Seale, Michael Short, Kathy Simmons, Whitnie Smartt, Ben Smith, Sarah Speth, Susan Stehman, Sandra Strilec, Steve Strubberg, Tracy Sturgill, Deepanker Tewari, Beth Thompson, Jesica Thompson, Megan Toms, James Watson, Jennifer Weber, Marcus Webster, Ross Wilson, Josh Winegarner, Nora Wineland, David Winters, Ryan Wolker, Sara Wyckoff, Valeriia Yustyniuk.

The Committee met during the 2025 Annual Meeting in Aurora, Colorado on November 4 from 3:15-5:15 p.m. There were 42 members and 44 guests present. The meeting began with a review of the mission statement and then the presentations summarized below. The committee had one resolution response to review from 2024, one 2025 resolution, and one 2026 recommendation.

Presentations and Reports

Southeastern Cooperative Wildlife Disease Study (SCWDS) Update on 2025 Epizootic Hemorrhagic Disease Virus (EHDV) and Bluetongue Virus (BTV) Detections
Mark Ruder, SCWDS

Co-Authors include: Mark Ruder, Lyndon Sullivan-Brugger, David Stallknecht, Nicole Nemeth, Paul Oesterle, Elizabeth Kurimo-Beechuk,

Victoria Andreasen, Juliet Woodward, and Rebecca Poulson, Southeastern Cooperative Wildlife Disease Study (SCWDS), University of Georgia, Athens, GA

Annually, SCWDS receives wild ruminant tissue samples submitted by state wildlife agency personnel from throughout much of the United States. The samples are collected in the field from animals suspected to have died from orbiviral hemorrhagic disease. Submissions are initially tested for epizootic hemorrhagic disease virus (EHDV) and bluetongue virus (BTV) by real-time reverse transcription PCR (rRT-PCR). For samples that test positive by rRT-PCR, virus isolation is attempted and isolates are identified to serotype. Bluetongue virus isolates and samples with ct values ≤30 are shared with partners at National Veterinary Services Laboratories (NVSL) for further characterization. This work is supported through long-term financial support of SCWDS member wildlife agencies and we thank NVSL for their ongoing support to characterize BTV detections.

Final results for the 2024 EHDV and BTV transmission season were completed since the last USAHA meeting. During 2024, state wildlife agencies submitted tissue samples from 440 wild ruminants from 24 states. Overall, EHDV was detected by rRT-PCR in 190 white-tailed deer from 21 states and the following serotypes were detected: EHDV-2 (Arkansas, Florida, Georgia, Indiana, Kansas, Kentucky, Louisiana, Maryland, Michigan, Missouri, Montana, Nebraska, New York, North Carolina, North Dakota, Pennsylvania, Tennessee, Virginia, West Virginia, and Wisconsin); EHDV-6 (Indiana, Kansas, Kentucky, Louisiana, Michigan, Mississippi, Missouri, West Virginia, and Wisconsin); EHDV-1 (Tennessee). There were 32 BTV detections by rRT-PCR, including 30 white-tailed deer from Florida, Georgia, Kansas, Missouri, Nebraska, Pennsylvania, and Tennessee, as well as a mule deer and bighorn sheep from Nebraska. In collaboration with NVSL, genetic sequencing identified BTV-6 (Tennessee), BTV-11 (Kansas), BTV-13 (Kansas, Pennsylvania), and BTV-17 (Kansas).

From July 1 through October 17, 2025, SCWDS has received tissue samples from 419 wild ruminants from 21 states. Thus far, testing has resulted in EHDV and/or BTV detections in 259 animals from 21 states. The following viruses have been detected in white-tailed deer: EHDV-1 (Kentucky, Pennsylvania); EHDV-2 (Alabama, Arkansas, Florida, Georgia, Indiana, Kentucky, Maryland, Michigan, Missouri, Mississippi, Montana, North Dakota, Oklahoma, Pennsylvania, Tennessee, and West Virginia); EHDV-6 (Arkansas, Georgia, Indiana, Kentucky, Maryland, Michigan, North Carolina, New York, Pennsylvania, Tennessee, Virginia, and West Virginia). Additional detections of EHDV are pending virus isolation and serotype determination: Georgia, Indiana, Kentucky, Louisiana, Missouri, Montana, North Carolina, North Dakota, Pennsylvania, Tennessee, and West Virginia. Further, BTV detections from Missouri, Montana, Nebraska, and Tennessee are pending further characterization at NVSL. Testing will continue on samples received through November.

CFTEP Summary

Renee Oleck, USDA-APHIS, Veterinary Services (VS)

USDA-APHIS-VS continues to operate the Cattle Fever Tick Eradication Program (CFTEP) as in past years. Changes this year include naming Don Herriott as the acting CFTEP Director after the departure of John Picanso, and increased activities for tick riders in response to the northward movement of New World screwworm (NWS) from Central America. In March of this year, tick riders began inspecting apprehended stray cattle and horses for NWS and providing preventative treatments prior to release. In addition, tick riders are monitoring fly traps along the border with Mexico for incursion of New World screwworm. Cattle Fever Tick (CFT) infestations have steadily decreased since 2017, although there was a slight increase in infested premises in the systematic area this year compared to last year. Pending resource availability, the program would like to tackle a few new geospatial projects in 2026 or beyond including mapping of white-tailed deer and nilgai movements to predict new CFT infestations. Projects will be heavily dependent on New World screwworm activities.

Equine Regulatory Diseases Update

Angela Pelzel-McCluskey, USDA-APHIS, Veterinary Services (VS)

Highlights of recent cases and outbreaks of equine regulatory parasitic and vector-borne diseases were presented to the committee including updates on Eastern equine encephalitis (EEE), West Nile virus (WNV), equine piroplasmosis (EP), and equine infectious anemia (EIA). During calendar year 2024, there were 129 cases of EEE and 240 cases of WNV diagnostically confirmed and reported in equids in the U.S. These case counts were compiled from CDC's ArboNET database and were further validated and posted to USDA-APHIS's online Equine Arbovirus Dashboard (https://www.aphis.usda.gov/livestock-poultry-disease/equine/arbovirus-dashboard). So far in 2025, 61 cases of EEE and 186 cases of WNV in equids have been posted to the Equine Arbovirus Dashboard, although the current case counts posted are known to lag slightly behind actual reporting by a few weeks due to slower data transfer through CDC's ArboNET this year. Cases of EEE and WNV in equids typically occur in unvaccinated or under-vaccinated animals and are known to be historically underreported due to inherent costs necessarily incurred for diagnostic testing to confirm cases.

In calendar year 2024, there were 20,105 domestic horses tested for equine piroplasmosis in the U.S., which was about the same amount of surveillance testing conducted the previous year. In 2024, there were 12 cases of *Theileria equi* confirmed in seven states (Arizona, Georgia, Indiana, Nebraska, North Carolina, Texas, and Wyoming). Five (5) of these cases were in Quarter Horse racehorses with iatrogenic transmission identified as the cause of spread, five (5) cases were in horses either suspected or confirmed to have been illegally moved from Mexico where the disease is endemic, and two (2) cases were in foals born to EP-positive mares in which

in utero transmission likely occurred. Of the total 12 cases confirmed, three (3) cases were found to be dually infected with EIA virus.

In calendar year 2024, there were 147 EIA cases confirmed in the U.S. located in 12 states (Arizona, California, Connecticut, Illinois, Louisiana, Nebraska, New Mexico, North Carolina, South Carolina, Tennessee, Texas, Wyoming). Of the 147 cases, 120 were in Quarter Horse racehorses and five (5) were in Thoroughbred racehorses with iatrogenic transmission identified as the cause of spread. There were ten (10) cases in horses that were either suspected or confirmed to have moved illegally from Mexico where the disease is endemic. Of the remaining 12 cases, one (1) was in a horse from an untested/under-tested population, five (5) were in horses associated with an outbreak caused by iatrogenic transmission at a veterinary clinic in Texas, and six (6) cases were of undetermined source.

There were two (2) significant clusters of EIA cases during 2024 and 2025 which were highlighted in both social and mainstream media. In September/October 2024, a multi-state cluster of 25 EIA cases in sanctioned Quarter Horse racehorses under a single trainer was identified in three states (California-12, New Mexico-2, Texas-11). Epidemiological investigation found that the infection had been iatrogenically transmitted between the trainer's horses when a bottle of an illicit performance enhancing injectable substance (Robinson's juice) became repeatedly blood-contaminated by double dipping into the bottle with the same needle between horses. Most of the horses became infected in Ruidoso and Albuquerque during their preparation to race in the All-American Futurity trials and finals races in August/September 2024. In February 2025, the New Mexico Racing Commission announced the finding of illicit carmoterol, a non-FDA approved beta agonist performance enhancing drug, in the September 2 post-race samples from five of the ultimately EIA-positive horses. This finding indicated that carmoterol was likely one of the performance enhancing substances in the illicit Robinson's juice which served as the vehicle of EIA transmission among the affected trainer's horses.

A second EIA cluster with widespread media coverage was identified in early 2025 when horses were found EIA infected in an outbreak associated with iatrogenic transmission at an equine veterinary clinic in Texas. There have been 24 EIA-infected horses found to date in 4 states (California-1, Colorado-1, Oklahoma-4, Texas-18) and all horses became infected while hospitalized at the Texas equine clinic in either May or July/August 2024. Epidemiological investigation has found the horses became infected through repeated blood-contamination of multiple bottles of heparinized saline being used at the clinic to flush intravenous catheters. Two pathways involving routine reuse of syringes by multiple employees at the clinic led to blood-contamination of the heparinized saline bottles. The original source of EIA virus in this outbreak was a Quarter Horse racehorse mare participating in bushtrack racing who had been admitted to the clinic with clinical signs compatible with acute EIA-infection in May 2024, but she was never tested or

diagnosed with EIA. She died while under the clinic's care and subsequent testing at her home premises conducted in April 2025 confirmed EIA-infection in two other bushtrack Quarter Horse racehorses on the property. Identification and testing of additional exposed horses in this outbreak is ongoing.

Committee Business:

The committee reviewed the final response from USDA-APHIS for the 2024 New World Screwworm (NWS) resolution.

The committee reviewed, considered, and adopted a resolution on a new world screwworm decision matrix. The committee revised a proposed resolution into a recommendation, requesting USAHA members aid in development of and participate in a New World Screwworm task force.

Old Business:

Response to 2024 Resolution. Motion to accept option "A - Response is sufficient for the purposes of the resolution, no further action. Considered completed" and close resolution made by Peter Mundschenk, second by Dusty Oedekoven.

New Business:

Recommendation - The Committee on Foreign and Emerging Diseases recommends that the United States Animal Health Association (USAHA) establish a task force that includes USDA and interested stakeholders, to assess options to reduce the risk of NWS introduction into the United States and to explore measures to mitigate its impact should re-entry occur;

Be it further recommended that this task force, in collaboration with APHIS technical staff and ARS researchers, shall strive to engage livestock industries, veterinary and entomological experts, wildlife professionals, land managers, and public health authorities to develop technically sound and practical procedures for prevention and response;

Be it further recommended, that membership of the task force be comprised of qualified individuals committed to this national animal and public health concern. Furthermore, the task force members shall be, wherever feasible:

A) Active USAHA members whose time on the task force shall be voluntary and unpaid, and
B) Active APHIS and ARS experts whose time on the task force is part of the person's roles and responsibilities within APHIS and ARS

Be it finally recommended, that the task force shall deliver its first technical report by February 15, 2026, to the USAHA membership, APHIS, ARS, and interested stakeholders with said report including, but not limited to, scientific data, historical evidence, and information that addresses the following concerns:

1. **Critical risk factors** – What are the primary factors that could increase the likelihood of the New World Screwworm (NWS) being introduced into U.S. soils?

2. **Preventive options and limitations** – What measures are available to reduce the risk of such introductions, and what are their limitations?
3. **Technological applications** – To what extent can advanced technologies enhance the effectiveness of current sterilization programs in preventing NWS spread (e.g., managing variability in field strains, improving male-to-female production ratios)?
4. **Early detection and surveillance** – How can emerging methods improve the early detection of infestations (e.g., mobile reporting apps, integration of relevant surveillance data)?
5. **Recommendations for State and Federal Regulatory Agencies** – What practical recommendations can be made to guide regulatory agencies in developing both short- and long-term action plans to address this potential animal health crisis?

Background Information - Whereas, the expansion of global movement and the northward ecological shift of New World Screwworm (NWS) has increased the risk of reintroduction into the United States; the re-establishment of NWS in the United States would pose substantial threats to livestock production, wildlife, and public health; and effective preparedness requires a scientific assessment of (1) the current NWS situation in Mexico and Central America, (2) the historical record of eradication programs and lessons learned, and (3) potential preventive and response measures, including the production and use of sterile male flies.

Motion to co-sponsor recommendation made by Diane Kitchen, seconded by Mike Short. Motion to amend to include biological and pharmaceutical industry partners made by Allan Young, seconded by Thach Winslow. Motion carried and amendment adopted. Vote to adopt amended recommendation. Motion carried and cosponsoring of recommendation passed.

Resolution by Dr. Diane Kitchen - *Disease Specific Movement and Treatment Decision Matrix: A Web-based Tool for Veterinarians and Producers.* Motion to approve resolution made by Diane Kitchen, seconded by Steve Strubberg. Motion to accept amendments made by Katie Flynn, seconded by Thach Winslow. Motion carried and amendments passed. Vote to approve. Motion carried to adopt resolution

TR Lansford was invited to participate in the Food and Agriculture Organization of the UN (FAO), the Center for Strategic and International Studies (CSIS) Global Food and Water Security Program (GFWS) roundtable discussion on the response to New World screwworm (NWS) featuring stakeholders across the public and private sectors as well as academia. The discussion will focus on the response needed to control the spread and impact of the new world screwworm, including efforts towards more robust surveillance, private sector partnerships, and investments in biosecurity measures.

Motion to adjourn 5:05 p.m. made by Linda Logan, seconded by Mike Short.

COMMITTEE ON POULTRY AND OTHER AVIAN SPECIES

Chair: Kayla Niel, PA
Vice Chair: Andrew Smith, IA

Kelli Almes, Erika Alt, Sarah Bailey, Oriana Beemer, Joy Bennett, Carolynn Bissett, Richard Breitmeyer, Troy Brick, Charlie Broaddus, Katy Burden, Michael Carter, Steven Clark, John Clifford, Robert Cobb Jr., Sarah Coburn, Michael Costin, Stephen Crawford, Carrie Cremers, Tarrie Crnic, Beate Crossley, Marie Culhane, Amy Delgado, Andrew Di Salvo, Roger Dudley, Maria Cooper DVM, Misty Edmondson, Joseph Essler, Victoria Fields, Larry Forgey, Karen Fox, Nancy Frank, Tony Frazier, Lindy Froebel, Jane Galyon, Samantha Gibbs, Michael Gilsdorf, Eric Gingerich, Eric Gonder, Jenna Gregorich, Bucky Gwartney, Dan Hadacek, Rod Hall, Steve Halstead, Alex Hamberg, Charles Hatcher, Kate Hayes, Joshua Hayes, Denise Heard, Julie Helm, Janemarie Hennebelle, Ashley Hill, Heather Hirst, Don Hoenig, Daniel Hougentogler, Mark Jackwood, Jarra Jagne, Annette Jones, Rebecca Joniskan, Dorrie Jordan-Parrott, Jeffrey Kaisand, Donna Kelly, Patrice Klein, Darlene Konkle, Margo Kunz, Dale Lauer, Elizabeth Lautner, John Lawrence, Molly Lee, Sabrina Lee, Jane Lewis, Rick Linscott, Mary Jane Lis, Sasha Lisowski, Karen Lopez, Rebecca Mansell, David Marshall, Michael Martin, Miriam Martin, James Maxwell, Meghan May, Patrick McDonough, Kathy McNamara, Sara McReynolds, Gay Miller, Pravin Mishra, Sarah Mize, Peter Mundschenk, Mandy Murray, Katie Murray, Mike Neault, Cheryl Nelson, Kayla Niel, Kristy Pabilonia, Molly Parker, Boyd Parr, Amar Patil, Elisabeth Patton, Allison Phibbs, Bill Pittenger, Barbara Porter-Spalding, Amanda Price, Willie Reed, Heather Reider, Gwendy Reyes-Illg, Scott Richardson, Jonathan Roberts, Susan Rollo, Jim Roth, E Sabo, Mo Saif, John Sanders Jr., Yuko Sato, Travis Schaal, Joni Scheftel, David Schmitt, Ryan Scholz, Carry Sexton, Sheryl Shaw, Kyle Shipman, Shri Singh, Staci Slager, Whitnie Smartt, Andrew Smith, David Suarez, Dennis Summers, Tahnee Szymanski, Todd Tedrow, Beth Thompson, Alberto Torres, Shauna Voss, Clint Waddell, James Watson, Dustin Weaver, Jennifer Weber, Marcus Webster, Rodney White, Stephen White, Ben Wileman, Ryan Wolker.

The Committee met virtually on October 20, 2025, from 10:00 a.m. to 2:00 p.m. and in-person at the 2025 Annual Meeting on November 3 from 1:00-5:06 p.m. There were 36 members and 53 guests present.

Chair Kayla Niel presided, assisted by Vice Chair Andrew Smith. Niel welcomed the Committee on Poultry and Other Avian Species (CPAS) members, summarized the 2024 meeting and provided final responses from USDA-APHIS-VS to the 2024 resolutions:

Resolution 11 – *Avian metapneumovirus (aMPV) live vaccine for poultry*

The United States Animal Health Association strongly urges the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Services (APHIS), Veterinary Services (VS) Center for Veterinary Biologics (CVB) to expedite the approval of the importation of modified-live,

commercially available vaccines for avian metapneumovirus subtypes A and B for chickens and turkeys which meet USDA-APHIS-VS-CVB's requirements for purity.

USDA-APHIS-VS-CVB Response: The United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) recognizes the concerns of the United States Animal Health Association (USAHA) and appreciates the opportunity to respond.

Due to the impacts of this outbreak, APHIS' Center for Veterinary Biologics has conducted risk assessments of foreign-manufactured avian metapneumovirus modified live virus (MLV) and inactivated products for importation. In general, the importation of live products carries a greater risk of introducing contaminants or poultry diseases not in the United States. APHIS has conducted limited purity and safety testing for these foreign-manufactured aMPV MLV vaccine candidates for use in U.S. poultry as part of the risk assessment. APHIS has issued import permits for five internationally registered aMPV MLV products since December 2024 and all five are being shipped to the field as of July 2025. As of July 2025, APHIS is working with a manufacturer to have samples submitted to test a sixth aMPV MLV product.

In July 2025, following consultation with industry groups and the National Assembly of State Animal Health Officials, CVB provided guidance to manufacturers to decrease the regulatory burden of shipping product to the field. Manufacturers and producers are still required to collect and maintain the same information in case of an incident but will no longer have to provide information to the CVB proactively except for test reports of MLV products. This should streamline product availability for outbreak response efforts.

Resolution 12 – *H5N1 influenza vaccine in cattle*

The United States Animal Health Association strongly urges the United States Department of Agriculture, Animal and Plant Health Inspection Services to lead the coordination of all livestock sectors, state animal health officials, and public health officials to develop and implement a consistent and comprehensive strategy for H5 influenza management. The strategy should include these elements:

- Risk-based regional surveillance to efficiently generate the data needed to understand risks and to mitigate them with consistent control strategies.
- Adherence to science-based principles of disease control to reduce further spread of H5 influenza.
- Epidemiologic studies and tools to understand connections among susceptible populations.
- Resolution of concerns, such as trade, that impede the utilization of vaccine needed to control the spread of H5 influenza.
- Additional resource allocation to minimize the long-term impacts of H5 influenza on human health, food security, and economic sustainability.

USDA-APHIS-VS Response:

The United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) recognizes the concerns of the United States Animal Health Association (USAHA) and appreciates the opportunity to respond.

APHIS, state responders, and allied industry partners have documented additional "spillover" events of HPAI H5 clade 2.3.4.4b virus (heretofore HPAI) from wild birds into dairy cattle, which is not unexpected in the context of the ongoing global epizootic situation of the virus disseminated from wild birds to poultry and other mammals. APHIS continues coordinating poultry and dairy livestock responses with states and allied industries.

The United States continues to implement a "stamping out" response to poultry HPAI detections and movement restrictions in other impacted species, to limit disease spread and ultimately eliminate circulating virus in domestic species. National Animal Health Laboratory Network (NAHLN) laboratories and APHIS continue to offer testing for all species (including wild birds and mammals) to quickly detect the virus and better understand its transmission.

APHIS has published two Federal Orders to increase surveillance for HPAI virus in the national dairy herd and decrease interstate spread of the virus. The National Milk Testing Strategy (NMTS) implemented following the December Federal Order facilitates comprehensive surveillance of the nation's milk supply and dairy herds to mitigate the spread of the virus without disruptions to the production, processing, and sale of pasteurized milk and milk products. Additionally, there is the voluntary Dairy Herd Status Program to help ease the burden of testing for herds that move interstate frequently. Financial support mechanisms for dairy producers are also available and information can be found at https://www.aphis.usda.gov/livestock-poultry-disease/avian/avian-influenza/hpai-detections/livestock/financial-assistance.

The NMTS includes a combination of dairy processing plant silo monitoring and state-specific surveillance, and ongoing testing for case investigation and response. Testing and surveillance activities are based on each state's dairy industry and HPAI status. States use the NMTS to demonstrate Unaffected State status. The benefits of the NMTS are evident by the detection of two independent spillovers of the D1.1 genotype in dairy herds in New Mexico and Arizona and additional detections of the B3.13 genotype in Idaho. This also provides a justification to continue the NMTS at a monthly basis for unaffected states especially through the upcoming fall waterfowl migration. The NMTS state statuses can be found here.

In addition to conducting expert epidemiological and phylogenetic analysis to better understand the virus, and sharing that information globally, APHIS continually encourages and evaluates innovative disease response or prevention strategies that might bolster our work in protecting poultry and livestock health through science-based measures. This year, USDA APHIS invested $100 million d to explore prevention, therapeutics, research, and potential vaccine candidates to identify and foster innovative solutions to fight HPAI.

Resolution 14 – *Audit of the United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services Import and Export staffing*

The United States Animal Health Association (USAHA) urges the Administrator of the United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services to conduct an audit to determine the staffing needs for all import and export activities as well as needs for negotiating zoning, regionalization and compartments for all transboundary diseases. USAHA also requests that state animal health officials and industry representatives be included in the audit process and results are shared with USAHA in 2025.

USDA-APHIS-VS Response:

The United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) recognizes the concerns of the United States Animal Health Association (USAHA) and appreciates the opportunity to respond.

APHIS-adjusted user fee rates are collected to cover the costs of providing certain goods and services, including veterinary diagnostic goods and services and veterinary services for imports and exports of live animals and animal products. APHIS' animal health import and export user fees cover significant activities across the country, including at border locations and quarantine facilities. These fees support personnel, facilities, and information technology systems. They also recover the costs of inspection and certification services for imports and exports of live animals, animal products, and animal byproducts and provide for veterinary diagnostic goods and services. In January 2025, APHIS updated its User Fee rates; the changes ensure the fees it charges align with the costs of providing these services. APHIS anticipates that these changes will allow the agency to improve customer service by hiring and training personnel and ensuring the availability of information technology needed to facilitate trade processes, such as issuing export health certificates.

The Live Animal Import/Export Unit underwent a Workforce Review from 2022-2023 and the review results are informing hiring decisions/priorities, onboarding approaches, training, and data management. APHIS appreciates USAHA's feedback and concerns surrounding staffing levels for the broader VS import and export activities and is supportive of the resolution pending resource availability.

Presentations and Reports

Virtual Meeting (10-20-2025)

AVBP Report Current Diseases of Concern was given by Dr. Andy Bishop, President of the Association of Veterinarians in Broiler Production (AVBP). A summary of the report is included in these proceedings.

Table Egg Layer Industry Report was given by Dr. Linnea Tracy, President of the Association of Veterinarians in Egg Production (AVEP). A summary of the report is included in these proceedings.

Turkey Industry Report was given by Dr. Carrie Cremers, President of the Association of Veterinarians in Turkey Production (AVTP). A summary of the report is included in these proceedings.

Live Bird Markets (LBMs) Avian Influenza (AI) Program FY 2024 Working Group Report was given by Dr. Fidelis Hegngi, USDA-APHIS, Veterinary Services (VS). A summary of the report is included in these proceedings.

NVSL Bacteriology Diagnostics was given by Dr. Kim Lehman, USDA-APHIS, Veterinary Services (VS), National Veterinary Services Laboratories (NVSL). A summary of the report is included in these proceedings.

NPIP Update was given by Drs. Savannah Busby and Katy Burden, USDA-APHIS, Veterinary Services (VS), Aquaculture, Swine, Equine, and Poultry (ASEP), National Poultry Improvement Plan (NPIP). The presentation given is included in these proceedings.

Subcommittee on Avian Influenza (AI) / New Castle Disease Virus (NDV) Report was given by Dr. David Suarez, USDA, Agricultural Research Service (ARS), Southeast Poultry Research Laboratory (SEPRL). A summary of the report is included in these proceedings

SEPRL Updates were given by Dr. David Suarez, USDA, Agricultural Research Service (ARS), Southeast Poultry Research Laboratory (SEPRL). A recording of the presentation was provided to committee members.

NVSL HPAI Diagnostics was given by Dr. Mia Kim Torchetti, USDA-APHIS, Veterinary Services (VS), National Veterinary Services Laboratories (NVSL). A recording of the presentation was provided to committee members.

Wildlife Biosecurity Assessments was given by Dr. Amber Headen, USDA-APHIS, Wildlife Services (WS). The presentation given is included in these proceedings.

In-person Meeting (11-3-2025)

Federal Highly Pathogenic Avian Influenza (HPAI) Update was given by Dr. Oriana Beemer, USDA-APHIS, Veterinary Services (VS). A summary of the report is included in these proceedings.

California State Highly Pathogenic Avian Influenza (HPAI) Update was given by Dr. Alexi Haack, California Department of Food and Agriculture.

Industry Update (AAAP HPAI Task Force) was given virtually by Dr. Michelle Kromm, representative of the American Association of Avian Pathologists (AAAP).

High Expansion Nitrogen Foam Projects was given by Dr. Alex Hamberg, Pennsylvania Department of Agriculture, and Mr. Dan Hougentogler, Agricultural Emergency Services Inc. The presentation given is included in these proceedings.

***Salmonella* Updates Post-Framework** was given by Dr. Lindy Froebel, National Turkey Federation (NTF). A summary of the report is included in these proceedings.

Economic Impact of Avian Metapneumovirus was given virtually by Ms. Gretta Irwin, Iowa Turkey Federation. Links to previously published reports on this topic were shared with the committee members via email and are included in these proceedings.

Committee Business:

Subcommittee Report: The Avian Influenza/Newcastle Disease Subcommittee Report as presented by Dr. David Suarez was motioned to approve by Julie Helm, seconded by JC Essler, and approved by the Committee on Poultry and Other Avian Species.

Old Committee Business:

2024 Resolutions: The committee determined that the final responses from USDA-APHIS on the 2024 resolutions were sufficient and no additional action is required at this time.

New Committee Business:

Committee Resolutions: There were four resolutions that were brought before the Committee, all of which were approved unanimously following discussion and minor amendments by the Committee:

- **Resolution 1 –** *National Poultry Improvement Plan (NPIP) Staffing*
- **Resolution 2 –** *HPAI Vaccination*
- **Resolution 3 –** *Innovation Grand Challenge Updates*
- **Resolution 4 –** *Need for Epidemiological Data for Current H5 Epizootic*

Committee chairs: Dr. Niel has served as Vice Chair or Chair for a total of 4 years to date. Dr. Smith has served as Vice Chair for 2 years. The committee was asked to start thinking about the future leadership of the committee and nominate potential candidates for future years. Dr. Niel plans to rotate off after next year, with Dr. Smith taking over as Chair. A new Vice Chair will be needed for the 2027 meeting.

A motion to adjourn the meeting was initiated by Michael Martin and seconded by Alex Hamberg. There being no further business, the Committee adjourned at 5:06 p.m.

American Board of Veterinary Practitioners (AVBP) Report Current Diseases of Concern

Andy Bishop, Association of Veterinarians in Broiler Production

Broiler Production[1]: The U.S. broiler industry placed 9.89 billion chicks in 2024, a 1.28% increase from 2023. As a result, the number of birds processed increased by 92.9 million head (+1.01%) to 9.33 billion total for 2024. Average broiler weight for 2024 was 6.55 pounds per bird, a 0.46% increase from 2023. This led to an overall increase of 846 million live pounds processed (+1.40%), to a total of 61.07 billion live pounds for 2024. Ready-

to-cook (RTC) pounds increased by 607 million (+1.31%), to a total of 46.99 billion pounds of chicken meat in 2024.

Livability[1, 2]: Average total broiler livability for 2024 decreased to 94.29%, a decrease of 0.25% from 2023.1 Average first-week mortality for companies participating in Agristats increased by 0.13% to 1.80% for 20242. Since a large portion of the industry does not participate in Agristats, this may or may not be representative of the broiler industry as a whole. This continues a trend of worsening first-week mortality over the past several years. Broiler veterinarians report increasing challenges with undersized "non-starter" chicks, as well as increased incidence of septicemia among the causes of this worsening first-week mortality.

Condemnations[3]: Combined ante-mortem and post-mortem condemnations were relatively similar year-over-year. Combined pounds condemned totaled 0.65% of live weight in 2024, down slightly from 0.66% in 2023.

Issues of Concern Survey demographics: A survey of the Association of Veterinarians in Broiler Production (AVBP) membership was conducted in October, 2025. 16 responses were collected, representing veterinary oversight of 143 million birds per week (79.7% of total industry production). These individuals practice in 24 states: AL, AR, CA, DE, FL, GA, IA, IL, KY, MD, MS, NE, LA, MO, NC, OH, OK, PA, SC, TN, TX, VA, WA, WV.

Key Broiler Disease Issues: Avian Metapneumovirus (aMPV) ranked first among diseases of concern, in only its second year of appearing on this survey. In the absence of a live vaccine, the winter of 2024/2025 saw widespread incidence of aMPV Types A and B in both broilers and broiler breeders. Live vaccines were made available by USDA under conditional approval in 2025, so veterinarians are hopeful that this issue will lessen in coming years.

Avian Influenza, including infections in Dairy Cattle, ranked second. Like other sectors of poultry, the broiler industry has seen Avian Influenza outbreaks continue to occur in a largely unpredictable pattern and incidence rate. Efforts are ongoing to improve biosecurity and wild-bird mitigation on farms.

Third highest in concern this year was Infectious Laryngotracheitis Virus (ILTV). ILTV has consistently ranked high in concern for the broiler industry. New vaccination techniques such as hatchery application of live vaccines are being utilized by some producers. Many producers are pursuing more frequent genotyping of field isolates to better understand the epidemiology of the disease.

Bacterial Osteomyelitis and "Kinky Back" (bacterial spondylitis) garnered much more responses than previous years and placed number four. Some respondents broadly described issues with Bacterial Chondronecrosis and Osteomyelitis (BCO), while others specifically mentioned spondylitis caused by Enterococcus cecorum (colloquially known as Kinky Back).

Number five was Gangrenous Dermatitis, falling from number three last year. Gangrenous Dermatitis has been another constant top concern for the industry.

For the first time in many years, Coccidiosis was not in the top five diseases listed. This likely reflects the current rise in prevalence and importance of other diseases, rather than decreased concern around Coccidiosis. Due to its ubiquitous nature and potential subclinical impacts, Coccidiosis requires constant preventative control measures in broiler and broiler breeder production.

Key Non-Disease Broiler Issues: Hatchability / Fertility remained the number one non-disease issue in its second year appearing on this survey, holding its place from the previous year. While it varies based on time of year and egg supply, industry-wide hatchability has been significantly decreasing over the past 3-5 years. Most producers report that these hatchability losses are due to a decrease in egg fertility.

Salmonella / Food Safety Regulations also held its previous placement at number two. USDA FSIS has been working towards a new framework for Salmonella monitoring for the past few years, causing numerous concerns in the industry on the feasibility of the potential new framework, as well as how best to meet new requirements once they are implemented.

Issues with Staffing Well-Trained Personnel garnered a large increase in responses this year, coming in at number three. Some respondents mentioned high turnover. Others mentioned a shortage of motivated recruits. A shortage of training programs for poultry industry employees, leading to less well-trained new employees, was also mentioned.

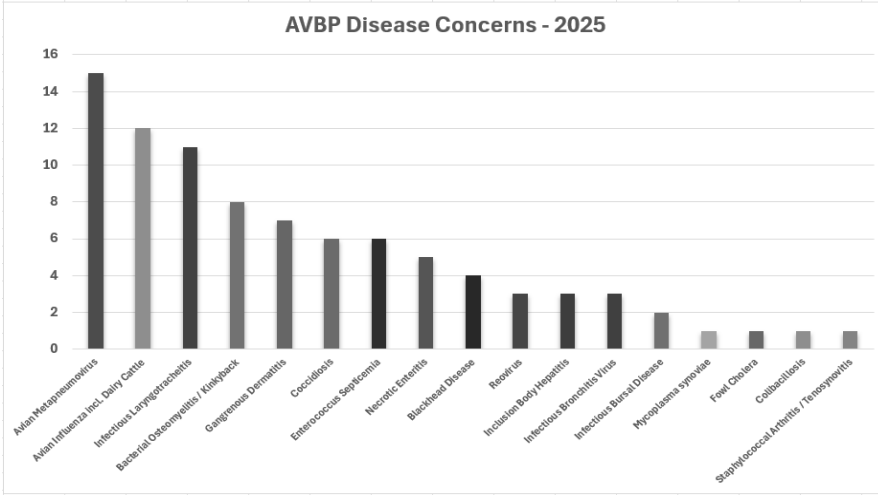
Vaccine Availability / Supply Disruptions came in at number four. Some respondents mentioned supply disruptions or shortages of commonly-used vaccines, while others broadly referenced “vaccine availability.”

Pullet/Cockerel Livability and Quality (Non-Disease) round out the top five concerns. This category included several individual responses, many of which broadly described “pullet quality issues” or “cockerel livability and quality,” and a few specific answers such as piling.

References

1. 0https://esmis.nal.usda.gov/sites/default/release-files/gm80hv35d/4b29d2852/8336jw37d/brls0125.pdf1/02/2025 (Accessed 15 Oct 2025)
2. Agristats, Inc. 6.6c
3. https://esmis.nal.usda.gov/sites/default/release-files/3197xm04j/5h73rr28c/q237kn68n/psla0125.pdf (Accessed 15 Oct 2025)

Major Disease Categories	2025 Ranking	2025 Responses
Avian Metapneumovirus	1	15
Avian Influenza incL Dairy Cattle	2	12
Infectious Laryngotracheitis	3	11
Bacterial Osteomyelitis / Kinkyback	4	8
Gangrenous Dermatitis	5	7
Coccidiosis	6	6
Enterococcus Septicemia	6	6
Necrotic Enteritis	8	5
Blackhead Disease	9	4
Reovirus	10	3
Inclusion Body Hepatitis	10	3
Infectious Bronchitis Virus	10	3
Infectious Bursal Disease	13	2
Mycoplasma synoviae	14	1
Fowl Cholera	14	1
Colibacillosis	14	1
Staphylococcal Arthritis / Tenosynovitis	14	1



Non-Disease Concerns	2025 Rank	2025 Responses
Hatchability / Fertility	1	10
Salmonella / Food Safety Regulations	2	7
Shortage of Well-Trained Personnel	3	6
Vaccine Availability / Supply Disruptions	4	5
Pullet/Cockerel Livability and Quality (Non-Disease)	4	5
Biosecurity	6	4
Non-Food-Safety Regulatory Concerns	6	4
Chick Quality / 7 Day mortality	6	4
Bed Bugs	6	4
Housing Shortage / Out Times / Density	10	3
Lack of Efficacious Therapeutics/Alternatives/Dewormers	10	3
Primary Breeder Chick Quality	12	2
Meat Quality	12	2
HPAI Impact on Trade	12	2
Litter Mgmt	15	1
Litter Availability	15	1
Rodent Control	15	1
Egg Production	15	1
Size Uniformity	15	1
Environmental	15	1
Basic Husbandry	15	1
Fuel Cost/Mgmt	15	1
ABF Markets	15	1
Lack of Focus from Vendors	15	1

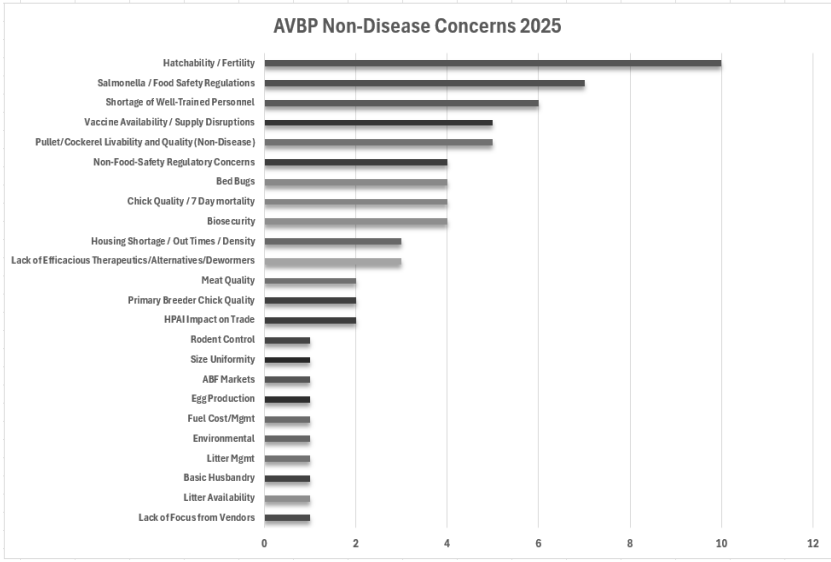


Table Egg Layer Industry Report

Linnea Tracy, Association of Veterinarians in Egg Production (AVEP)

A poll of members of the Association of Veterinarians in Egg Production (AVEP) based in the United States with a Veterinary-Client-Patient Relationship (VCPR) with layer pullet, breeder, and/or commercial layer flocks in the past calendar year was conducted in October 2025. Respondents answered questions applicable only to the types of birds under their supervision (pullet or mature layer) as well as the type of production systems those flocks were housed within (conventional, cage-free/aviary/floor, organic categories for pullets, and for layers the previously noted categories as well as free-range/pastured). For each type of flock and production style of said flock in their care, respondents were asked to list the top 5 clinical conditions of importance in that category and numerically rank each by importance from 1 (least important) to 5 (very important). This question was presented in an open-ended style to avoid biasing potential responses. Responses were sorted and conditions listed were ranked by first analyzing the number of responses then the weighted importance of each condition (sum of each numerical importance response divided by total number of responses listing that condition).

In addition to the ranked clinical condition questions, additional questions relevant to conditions of ongoing importance to the poultry industry were added to this year's survey. These included a question about the impact and level of concern of Avian Metapneumovirus (AMPV) infection in supervised flocks, as well as an open-ended question to list the specific impacts and sequalae of concern, and which specific production styles have been most impacted in the respondents' experience. Highly pathogenic avian influenza (HPAI) was addressed by asking "Which additional, if any, tools or information would you like to use in order to better prevent and control the spread of highly pathogenic avian influenza (HPAI)?" This question was asked as an open-ended short answer style. Finally, the last question asked, "On a scale of 1 to 5 with 1 being least and 5 being most, how interested are you in vaccination as a tool for HPAI prevention and control?"

Eighty-three percent (83%) of polled veterinarians responded to the survey (25/30).

The results of the disease survey are shown below by category in ranked order of importance as described above. The top 5 conditions in each category are bolded. The weighted importance score as well as the number of respondents listing each condition is included in each table. Note: "Chick Quality Concerns" encompasses yolk infection, non-starter, and similar concerns. "Management Concerns" encompasses non-infectious management concerns such as pullet training, lighting programs, etc.

Conventional Pullets – 20 responding veterinarians

Rank	Condition	Weighted Importance	Responses
1	**Coccidiosis**	**3.1**	**13**
2	**Infectious Coryza**	**4.5**	**10**
3	**AMPV**	**3.6**	**7**
4	**E.coli**	**3.3**	**7**
5	**Chick Quality Concerns**	**3**	**6**
6	Necrotic Enteritis	3.2	5
7	Body Condition Concerns	3.75	4
8	IBV	2.7	3
9 (tie)	Cannibalism/Pecking	2	3
9 (tie)	Bursal Disease	2	3
10	HPAI	4.5	2
11	Newcastle Disease	3.5	2
12	Salmonella	3	2
13	Management Concerns	1.5	2
14	Vaccine Reactions	1	2
15	False Layer Syndrome	5	1
16	Infectious laryngotracheitis	3	1
17	Histomoniasis	2	1

Cage-free/Aviary/Floor Pullets – 24 responding veterinarians

Rank	Condition	Weighted Importance	Responses
1	**Coccidiosis**	**2.8**	**19**
2	**Piling**	**3.1**	**11**
3	**E.coli**	**2.9**	**9**
4	**AMPV**	**2.8**	**9**
5	**Body Condition Concerns**	**3.33**	**6**
6	Infectious Coryza	3.8	5
7	Necrotic Enteritis	3.6	5
8	IBV	1.4	5
9	Cannibalism/pecking	4.3	3
10 (tie)	Mechanical damage/trauma	4	3
10 (tie)	Chick Quality Concerns	4	3
11	Management Concerns	3	3
12	Other bacterial diseases	4	2
13	Histomoniasis	3	2
14 (tie)	Newcastle Disease	2.5	2
14 (tie)	Vaccine Reactions	2.5	2
15	Beak Conditioning Concerns	5	1
16	HPAI	4	1

17 (tie)	Fatty Liver Syndrome	3	1
17 (tie)	Mycotoxins	3	1
18	Bursal Disease	2	1

Organic Pullets – 12 responding veterinarians

Rank	Condition	Weighted Importance	Responses
1	**Coccidiosis**	**3.1**	**9**
2	**Histomoniasis**	**3.4**	**5**
3	**E.coli**	**4**	**3**
4	**Chick quality concerns**	**3.3**	**3**
5	**Piling**	**3**	**3**
6	Necrotic Enteritis	2.7	3
7	AMPV	3.5	2
8	IBV	1	2
9	Infectious Coryza	5	1
10	Pecking	5	1
11	Other bacterial diseases	4	1
12 (tie)	Management concerns	3	1
12 (tie)	Infectious laryngotracheitis	3	1
12 (tie)	Vaccination reaction	3	1
13	Mechanical damage/trauma	2	1
14 (tie)	Ascarid infestation	1	1
14 (tie)	Bursal disease	1	1

All surveyed veterinarians had VCPR oversight of cage-free/aviary/floor pullets and the majority also had oversight of conventional pullets. Coccidiosis ranked as the top concern in all categories, with Necrotic Enteritis (whose causation is often associated with coccidiosis) ranking just behind the top 5 in all categories. *E.coli* appeared as a top 5 concern in all pullet categories, and AMPV in 2/3 of pullet categories.

Conventional Layers – 21 responding veterinarians

Rank	Condition	Weighted Importance	Responses

1	**E.coli**	**3.5**	**11**
2	**AMPV**	**3.4**	**7**
3	**IBV**	**1.85**	**7**
4	**Infectious coryza**	**3.8**	**6**
5	**Necrotic enteritis**	**3.6**	**5**
6	HPAI	4.5	4
7	Cannibalism/pecking	4	3
8	Mycoplasmosis	3.7	3
9	Heat stress	2	3
10 (tie)	Body Condition Concerns	3.5	2
10 (tie)	Mycotoxins	3.5	2
11	Infectious laryngotracheitis	2.5	2
12 (tie)	Cloacal prolapse	4	1
12 (tie)	Erysipelas	4	1
13 (tie)	False layer syndrome	3	1
13 (tie)	Hepatitis E	3	1
13 (tie)	Marek's Disease	3	1
14 (tie)	Feather loss	2	1
14 (tie)	Management concerns	2	1
14 (tie)	Trauma	2	1
14 (tie)	Gout	2	1

Cage-free/Aviary/Floor Layers – 24 responding veterinarians

Rank	Condition	Weighted Importance	Responses
1	**E.coli**	**3.7**	**15**
2	**AMPV**	**3.5**	**10**
3	**Piling**	**3.33**	**9**
4	**Other bacterial diseases**	**3.14**	**7**
5	**Necrotic enteritis**	**3.1**	**7**
6	Cannibalism/Pecking	3.6	6
7	Ascarid infestation	2.2	6
8	HPAI	5	4

9	Body Condition Concerns	3.5	4
10	Infectious coryza	3.25	4
11 (tie)	Coccidiosis	2	4
11 (tie)	IBV	2	4
12	Mycoplasmosis	2.6	3
13	Salmonella	2	2
14	Trauma	5	1
15 (tie)	Cloacal Prolapse	4	1
15 (tie)	Mycotoxins	4	1
16 (tie)	Focal ulcerative dermatitis	2	1
16 (tie)	Red Mites	2	1

Organic Layers – 15 responding veterinarians

Rank	Condition	Weighted Importance	Responses
1	**E.coli**	**3.85**	**7**
2	**AMPV**	**3.3**	**6**
3	**Erysipelas**	**2.75**	**4**
4	**GI Parasitism**	**2.5**	**4**
5 (tie)	**Cannibalism/ pecking**	**4**	**3**
5 (tie)	**Pasteurellosis**	**4**	**3**
6	Spotty Liver Disease	2.7	3
7	HPAI	5	2
8	Red mites	4.5	2
9	Egg Drop Syndrome	4	2
10	Ascarid infestation	3	2
11	Salmonella	2	2
12	Fatty Liver Syndrome	5	1
13 (tie)	Body condition concerns	3	1

13 (tie)	Necrotic enteritis	3	1
13 (tie)	Focal Ulcerative Dermatitis	3	1
14 (tie)	IBV	1	1
14 (tie)	Mycoplasmosis	1	1

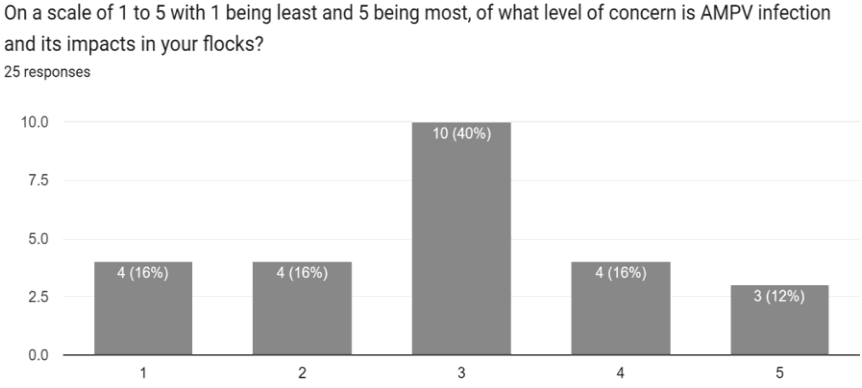
Free-range/Pastured Layers – 11 responding veterinarians

Rank	Condition	Weighted Importance	Responses
1	**E.coli**	**4**	**7**
2	**Spotty Liver Disease**	**3.8**	**6**
3	**Pasteurellosis**	**3.3**	**6**
4	**AMPV**	**3.8**	**5**
5	**Cannibalism/ pecking**	**3.3**	**3**
6	Red Mites	4.5	2
7 (tie)	Predation	3	2
7 (tie)	Erysipelas	3	2
8	Fatty Liver Syndrome	5	1
9 (tie)	GI Parasitism	3	1
9 (tie)	Focal Ulcerative Dermatitis	3	1

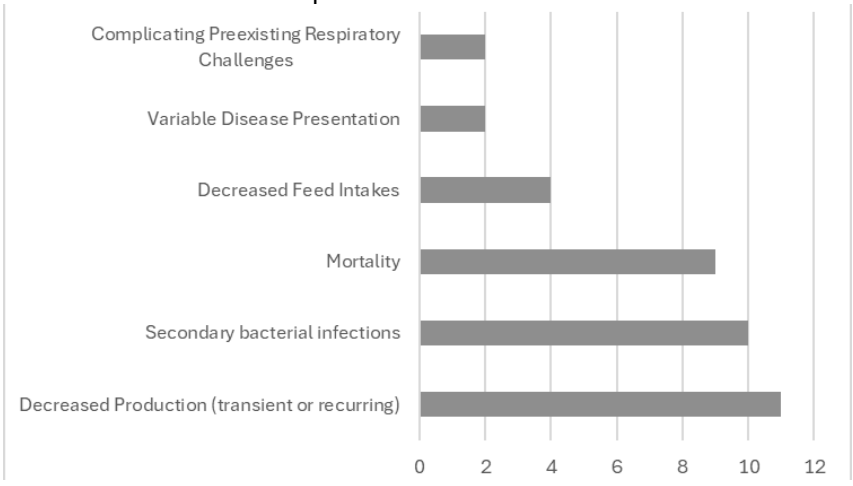
All surveyed veterinarians had VCPR oversight of cage-free/aviary/floor layers and the majority also had VCPR oversight of conventional layers. *E. coli* appeared as the top concern in all categories, and AMPV appeared in the top 5 in all categories. Cannibalism/pecking behavior was a top concern in all non-conventional categories. Pasteurellosis, erysipelas, and other bacterial conditions ranked highly in all non-conventional categories, notably taking the top 3 slots in free-range/pastured layers. As in previous years, weighted importance scores in free-range/pastured flocks are higher, potentially reflecting higher clinical severity observations. Red mites are notable additions to organic and free-range/pastured categories, although Northern Fowl Mites were present on the top 10 list for cage-free (indoor only) layers in the 2024 survey.

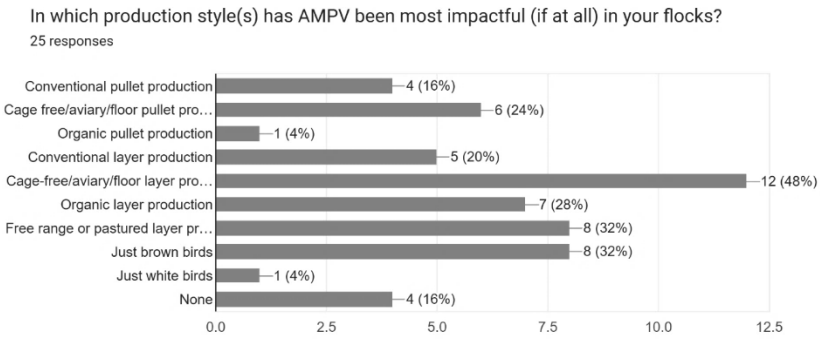
The results of AMPV questions are shown below in graphical format indicating number of responses for each response category. Responding veterinarians indicated that most had a moderate to high level of concern for

the impacts of AMPV in their flocks, with responses nearly normally distributed in a bell curve. Veterinarians are most concerned with decreased production (transient or recurring), secondary bacterial infections, and mortality in affected flocks. Respondents indicated that cage-free/aviary/floor flocks were most affected by AMPV, and cumulatively cage-free/aviary/floor, organic, and free-range/pastured flocks were most affected. These categories are disproportionately populated with brown layers, which respondents also indicated were highly impacted (32% response).



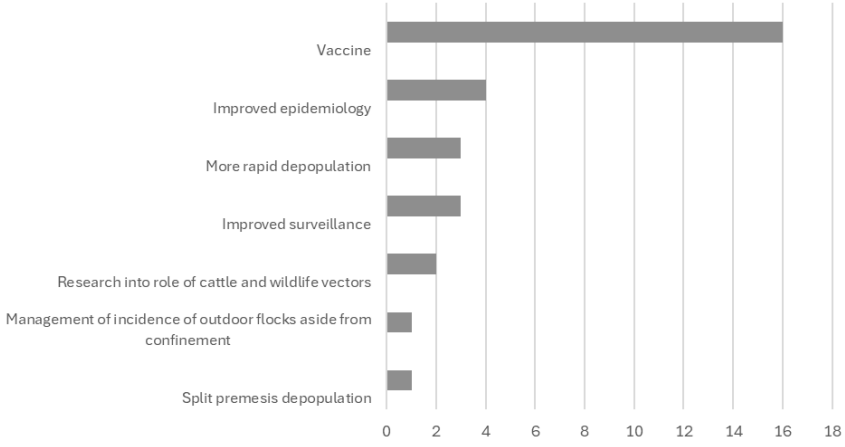
Specific complications or sequalae of most concern to responding veterinarians who have experienced AMPV in their flocks:

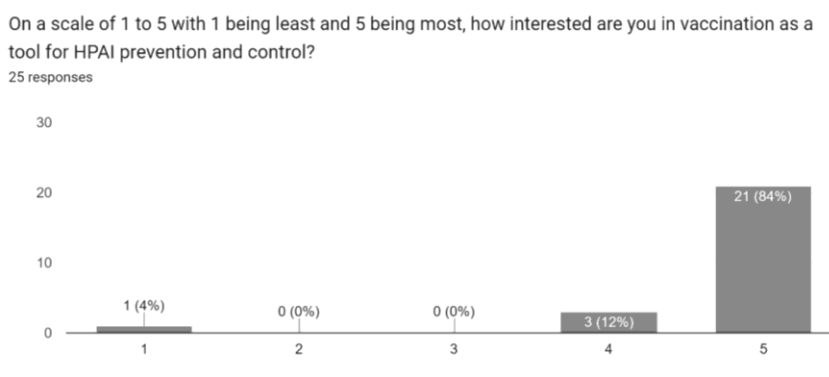




The results of HPAI questions are shown below in graphical format indicating number of responses for each response category. Questions were asked in the order they are presented in order to avoid biasing respondent answers. A majority of respondents (16/24) indicated they would like to have access to vaccination against HPAI. This response was more than doubly popular than any other answer provided when asked an open-ended question about tools or information to control HPAI spread. When then specifically queried as to their level of interest in vaccination against HPAI, 84% of respondents answered that they were very interested in using vaccination.

"Which additional, if any, tools or information would you like to use in order to better prevent and control the spread of HPAI?"





Turkey Industry Report

Carrie Cremers, Association of Veterinarians in Turkey Production (AVTP)
Steven R. Clark, Huvepharma, Inc.
Lindy Froebel, National Turkey Federation (NTF)

For the 2025 annual report, a survey of U.S. turkey industry veterinarians and production professionals (n = 21) was conducted to assess the health status of turkeys produced from August 2024 through August 2025. Surveys were collected by a third party, blinded, and provided to the Subcommittee Chair, Dr. Clark, for analysis. The 2025 survey represented 201.4 million head[1] - equivalent to 101% of the 200.0 million turkeys reported[2] raised by USDA. Table 1 summarizes the leading disease and management issues identified (n=39 issues). The top three challenges remained unchanged from 2024, led by Avian Metapneumovirus (aMPV) (#1), lack of efficacious drugs (#2), and Highly Pathogenic Avian Influenza (HPAI) (#3). Clostridial Dermatitis (Cellulitis) and Colibacillosis exchanged positions at #4 and #5, respectively. Enteric diseases ranked in the lower half (16 and below; Figure 1A), while five respiratory diseases appeared among the top ten overall (Figure 2B).

Reovirus continues as a notable issue in the 2025 survey, TR-DFTR (Turkey Reovirus Digital Flexor Tendon Rupture) and THRV (Turkey Hepatitis Reovirus), ranked #9 and #11 respectively, from #6 and #10 the prior year. Reovirus infections may be associated with “Leg Problems” (#8) and “Bleeders” (aortic, hepatic ruptures), moved from #18 to #25. In addition, *Ornithobacterium rhinotracheale* (ORT) (7, stayed same) and *Bordetella avium* (11 to #15) and Blackhead (13 to #16) moved down in ranking. This year respiratory diseases make up five of the top 10 rankings, Table 1B. *Mycoplasma synoviae* (MS) jumped up to #10 (159 cases reported, Table 2) from #19 (161 cases).

Avian Metapneumovirus (aMPV) rose from years at the bottom (38 in 2023) of the ranking to #1 of the 2024 survey and reported 2,355 cases. The

[1]Due to the blinded nature of this study, it was not possible to verify the unique identity of each respondent. The reported **headcount** should therefore be interpreted with the understanding that some duplication of responses may be present.
[2]USDA, ERS, Livestock & Meat Domestic Data, Turkey Sector: Background & Statistics: https://www.ers.usda.gov/newsroom/trending-topics/turkey-sector-background-statistics

2025 Survey again ranks aMPV #1 and reported 5,964 cases. aMPV is closely associated with secondary issues including, lack of drugs, colibacillosis, ORT and *Bordetella*. The introduction of Avian metapneumovirus (aMPV) into the United States was suspected in late 2023, with subtype A detected in California and subtype B in North Carolina. By January 2024, the rapid dissemination of aMPV was confirmed in both states, and within four months, it had spread to most poultry-producing regions nationwide (Figure 1).

aMPV is affecting all categories of poultry, including turkeys, broiler chickens, egg layers, and breeder poultry. Among these, turkeys are the most significantly impacted. Turkey breeders are experiencing egg production declines ranging from 20% to 100%, lasting 2 to 4 weeks. This decrease in egg production is leading to disruptions in the poult supply chain. In commercial turkey flocks, mortality rates can be severe, approaching 100%, with clinical disease persisting for up to three weeks. Secondary infections, including *Escherichia coli*, cholera (*Pasteurella multocida*), ORT (*Ornithobacterium rhinotracheale*), and MG (*Mycoplasma gallisepticum*), complicate the clinical disease in all poultry species.

On December 20, 2024, the USDA issued the first-ever permit for the importation of a modified live virus vaccine produced outside the United States, an Avian Metapneumovirus vaccine (Figure 2). Since the issue of the first importation of a modified live vaccine USDA's Center for Veterinary Biologics (CVB) has issued import permits for five commercial modified-live aMPV vaccinations and two commercial killed aMPV vaccinations. This landmark decision by APHIS marks a pivotal step in controlling aMPV in the U.S. NTF has continued communication with CVB as aMPV vaccines became available in the field and has encouraged extensions of the one-year import permits to continue addressing the disease until USDA approved domestically produced vaccines become available.

In year four of the current **highly pathogenic avian influenza** (HPAI) outbreak in commercial poultry, NTF remains actively engaged in the response to the virus. Since the start of the outbreak more than 179.8 million birds have been lost, over 20.2 million of which have been commercial turkeys. As of October 17, there have been 110 commercial turkey cases in 2025 resulting in a loss of more than 2.9 million birds. HPAI continues to be a key focus of the full NTF team. Over the last year, there have been several key events, including USDA Secretary Brooke Rollins releasing her 5-point plan to address HPAI and lower egg prices. At NTF's direction, Senators Klobuchar (D-MN), Grassley (R-IA), Rounds (R-SD) and Slotkin (D-MI) sent a letter urging Secretary Rollins to broaden USDA's strategy for managing HPAI to include measures for turkeys. USDA has since expanded the strategy to include all poultry species, and NTF has assisted members with the cost sharing opportunity for enhancing biosecurity measures identified through biosecurity audits.

Currently, biosecurity remains the only tool to prevent HPAI introductions into turkey flocks. At NTF's Annual Convention in February, NTF's Board of Directors passed the following policy statement related the HPAI vaccination.

The National Turkey Federation (NTF) supports research on finding an effective vaccine for Highly Pathogenic Avian Influenza (HPAI), improving vaccine and diagnostic technology while creating a vaccination plan for commercial poultry. As vaccine technology advances, there is growing interest in using a HPAI vaccine to prevent disease spread and reduce losses as part of a "stamping out" approach. As a parallel path, NTF strongly encourages USDA to renegotiate with key trading partners to minimize the implication of vaccine deployment.

NTF continues to prioritize efforts that align with the Federation's policy resolution on vaccination and remains engaged with policy makers at the White House, USDA and on Capitol Hill. NTF is a member of the USDA HPAI Poultry Response Strategies Working Group that provided feedback as USDA developed a HPAI vaccination strategy to be presented to Secretary Rollins. NTF continues to engage on the HPAI vaccination and looks forward to reviewing a potential strategy.

The **lack of approved, efficacious drugs** ranks for the second year in a row at #2 and is likely a contributor to all turkey health challenges and disease issues that follow it on the ranking list. In 2024 to present, veterinarians have prescribed antibiotics to manage secondary bacterial infections associated with the widespread aMPV outbreak. NTF's Turkey Health Task Force continues to engage with industry and regulatory agencies to advance efforts to bring new animal health products to market for the turkey industry. NTF participated in a poultry health roundtable to discuss animal health and welfare challenges and additional solutions needed by the industry to further highlight the need for new animal health products for the turkey industry in 2024. Following, The Reagan-Udall Foundation for FDA published the report *Transforming Animal Health in the U.S. for the 21st Century* in June with recommendations for reforming FDA's regulatory framework to be reflective of current technology and more appropriately address industry needs.

In April 2025 the U.S. Department of Commerce launched the Section 232 investigation into pharmaceuticals to assess whether pharmaceuticals and pharmaceutical ingredients and their derivative products, "are being imported into the United States in such quantities or under such circumstances as to threaten to impair the national security." NTF joined comments prepared by the Animal Health Institute (AHI) to discuss the importance of animal health products that could potentially fall under Section 232. NTF will continue to engage with others in the industry and voice the importance of importing necessary pharmaceuticals and pharmaceutical ingredients for animal health ingredients.

Reported cases of *Mycoplasma synoviae* (MS) and *M. gallisepticum* (MG) were 159 and 75 respectively, from 161 and 43 prior year. Cases of Turkey

Reovirus Digital Flexor Tendon Rupture ranked #9 in 2025 reported 273 cases (#6 and 368 prior year). THRV (Turkey Hepatitis Reovirus) ranked #11 (#9 prior year). Added to the survey as an emerging disease in 2021, *Streptococcus gallolyticus* (aka, *S. bovis*) dropped to #29 from #23.

Turkey Arthritis Reovirus (TARV) also called, Turkey Reovirus Digital Flexor Tendon Rupture (TR-DFTR), was recognized as a newly emerging disease in 2011. A unique reovirus has been isolated and identified as the cause of tenosynovitis and digital flexor tendon rupture in commercial turkeys. Clinical signs in young flocks are reportedly mild to nonexistent but can develop into lameness and/or abnormal gait in older flocks, starting at about 12 weeks of age. Affected flocks may also report an increased incidence if aortic ruptures and poor flock performance (weight gain, uniformity). Research continues into pathogenesis, virus characterization, diagnostics and epidemiology. Research indicates that the turkey arthritis reovirus is distinct from the recently identified novel reovirus causing arthritis in chickens, and most like the turkey enteric reovirus. A 2019 NTF industry survey documented the severity of impact on the industry could be as high as $33.7 million with highly pathogenic strains of TARV.

Industry lacks commercial diagnostic and vaccine options for Turkey Reovirus. In 2024, the NTF Foundation publicly announced a Reovirus Project that has the purpose to provide a reward for the development and successful marketing of diagnostic tool and/or vaccine that aids in reducing the impact of reovirus on the turkey industry. The project details can be found on NTF's website eatturkey.org. In 2025, NTF hosted a virtual reovirus symposium for NTF members and researchers to discuss ongoing reovirus research, industry challenges and opportunities to address the disease challenge moving forward.

Turkey Hepatitis Reovirus (THRV) is a disease issue added to this survey in 2020. THRV affected flocks ranged in age ranged from 7 to 46 days with a median age of 15.5 days. Mortality peaks and subsides in a week and the cumulative mortality is 3-8%. Dr. M. Lighty (2019, personal communication) describes THRV as "… increased incidence of viral hepatitis in poults caused by reovirus. This appears to be an emerging disease caused by a previously recognized pathogen. Gross lesions range from subtle mottling to multifocal white/gray/tan foci in the livers; mild hepatomegaly has also been noted in some cases. Histopathology on these livers shows severe multifocal hepatocellular necrosis with infiltration by macrophages, lymphocytes, plasma cells, and/or heterophils. Necrotic hepatocytes may fuse to form multinucleated syncytial cells and there is often marked fibrin accumulation in necrotic areas. Morbidity and mortality due to reoviral hepatitis can be highly variable. Risk factors for development of the disease and the economic significance of this disease on the turkey industry are not fully understood at this time." There are indications from the field that flocks developing hepatitis as poults can go on to develop turkey reoviral arthritis during grow out.

ORT (*Ornithobacterium rhinotracheale*) which remained unchanged at #7 and scored 3.0 in 2025, compared to #7 (3.7) prior year, is a highly contagious respiratory disease in poultry caused by a gram-negative pleomorphic rod-shaped bacterium. It has been isolated from chickens, ducks, partridges, and guinea fowl. It was originally recognized in Europe and South Africa. ORT was first confirmed in the US turkeys in 1993. Horizontal transmission (such as bird-to-bird, contaminated people and equipment) by direct and indirect contact is the primary route of spread. However, vertical transmission is suspected (Hafez, 2000). In the fall of 1995, it was a major cause of respiratory disease in midwestern states and since it has become endemic across most of the USA. Management systems, such as brood-and-move have increased the exposure of ORT-naive birds to ORT in the finisher barns, resulting in respiratory disease and mortality in some operations. Biosecurity procedures must be taken. Proper water sanitation can minimize severity and spread. Vaccination is limited and results are varied (toxoids, bacterins). Bacterins are used in breeders. No commercial vaccine is approved. Limited application of controlled exposure efforts on individual flocks have shown value. ORT in turkeys is an identified critical research need.

Bordetella avium continues as a significant respiratory disease challenge; bordetellosis ranked #15 (scored 2.2) from prior year at #11 (scored 2.5). Bordetellosis, otherwise known as Turkey Coryza, is a highly infectious, acute upper respiratory tract disease of turkeys characterized by high morbidity and usually low mortality. *Bordetella avium* (BA) is a small, Gram-negative, non-fermentative, motile, strictly aerobic bacillus. Other birds and older turkeys can be carriers but may not show clinical signs. Commercial vaccines are available. Water sanitation and biosecurity are emphasized to control *Bordetella*.

Turkey Coronavirus (TCV) ranked #27 from #31 (prior year), as cases remained low to 54 from 31 cases in 2024 and 411 in 2023, as the TCV outbreak in one geographic area ended. TCV is also known as Coronaviral Enteritis of Turkeys, Bluecomb, Mud Fever, or Transmissible Enteritis.

Coccidiosis dropped scoring 1.8 (2.2) and its rank moved from #24 to #13. Concerns with coccidiosis control are likely reflecting the industry's Raised Without Antibiotics (RWA), Antibiotic Free (ABF) and No Antibiotics Ever (NAE) market. RWA and NAE programs do not permit the use of ionophore anticoccidials and some programs prohibit FDA approved chemical anticoccidials, limiting anticoccidial programs to vaccination. An effective coccidiosis control program in turkeys involves the use of anticoccidial medications, and/or phytonutrients, and/or live vaccines and the subsequent development of immunity. Table 4[3] summarizes the US turkey production coccidia control programs. New in 2024, USDA granted conditional approval to a three-strain commercial turkey coccidiosis live vaccine (Huvepharma, Inc.) in addition to the previously licensed two strain product (Ceva). Nutritional dietary

[3]Due to the blinded nature of this study, it was not possible to verify the unique identity of each respondent. The reported **coccidia control programs** should therefore be interpreted with the understanding that some duplication of responses may be present.

supplementation with phytonutrients is either via in-feed application or drinking water administration. Phytonutrients include organic acids, yeast, phytonutrients from plant extracts (saponin, yucca, etc.) and essential oils (oregano, carvacrol, thymol, cinnamaldehyde, capsicum oleoresin, turmeric oleoresin). Essential oils may be natural extracts or synthetic nature-identical compounds.

The industry was surveyed (only 20 of 21 reported) to classify their antibiotic programs (Table 3[4]) defined by how anticoccidials and antimicrobials are allowed; ranking allowed mostly unchanged. Twenty percent (20%) of the industry turkeys in 2025 were reared NAE/ABF category, not significantly different from 19% prior year, similarly Conventional Use programs moved to 60% from 56% (2024). Conventional/Full Use program permits the proper use of any FDA approved antibiotics, administered in the feed or drinking water, including ionophores, bacitracin, bambermycins, and /or those deemed medically important to humans by FDA. The third category titled “No Growth Promotants, CRAU/CRAU-like” (Certified Responsible Antibiotic Use), only permits the therapeutic uses under the prescription and supervision of a veterinarian. Thirty percent (30%) of those turkeys reported were CRAU programs. No Antibiotics Ever (NAE) /Antibiotic Free (ABF, RWA), does not permit either in-feed or in-water antibiotics. FDA has stated that ionophore anticoccidials are antibiotics. New to the survey in 2025, tally the percentage of turkeys raised with “no hatchery injection of antibiotics” totaling 18%.

Salmonella ranked #6 this year. In April, the USDA Food Safety and Inspection Service (FSIS) announced the withdrawal of the proposed *Salmonella* Framework for Raw Poultry Products to further evaluate its approach based on public feedback. Although this specific proposed rule is not moving forward — a positive outcome given the significant concerns raised — FSIS has made it clear this action was not purely a deregulatory effort and that it plans to move forward with a change to continue addressing *Salmonella* in poultry products. NTF remains committed to working closely with the NTF membership to ensure any future policy is grounded in science, practical in application and aligned with current technologies and risk-based approaches and has advocated for the agency to update its *Salmonella* policy based on advances in technology and a better understanding of *Salmonella*.

USDA’s Center for Veterinary Biologics published Notice No. 24-15, Salmonella Vaccines and USDA Food Safety and Inspection Service’s Framework to Reduce Salmonella Illnesses Attributable to Poultry, to inform veterinary biologics manufacturers of FSIS’ interest in Salmonella vaccines for poultry. FSIS had indicated interest in learning about and engaging in discussions with veterinary biologics manufacturers on vaccination technologies, especially modified-live vaccines targeting FSIS’ proposed serotypes of public health concern or their associated serogroups. NTF views

[4]Due to the blinded nature of this study, it was not possible to verify the unique identity of each respondent. The reported **antibiotic programs** should therefore be interpreted with the understanding that some duplication of responses may be present.

this as a promising opportunity to highlight the need for additional tools for the industry.

In July, congress passed the budget reconciliation package, The One Big Beautiful Bill Act (OBBB), which included several Farm Bill provisions related to animal health, nutrition and commodity payments. A top priority for NTF was the inclusion of the “three-legged stool” that provides additional funding for the National Animal Disease Preparedness and Response Program (NADPRP), the National Animal Health Laboratory Network (NAHLN) and the National Animal Vaccine and Veterinary Countermeasures Bank (NAVVCB). The House and Senate Agriculture Committees have turned their attention to drafting a Farm Bill that addresses the remaining sections not included in the July package. While committee leadership was optimistic that work could be done early in the fall, it is more likely a Farm Bill will not be completed this year. NTF will continue to advocate for the inclusion of provisions that are important to the turkey industry.

In 2024, turkey production decreased from 6,845,984 in 2023 to 6,442,185 1,000-pounds (live weight)[5] and decreased to 200,000,000 turkeys raised (218,000,000 prior year)[6] with an average live weight of 32.54 pounds (31.70 prior year)[7]. Per capita consumption for turkey products decreased to 13.8 pounds in 2024 from 14.7 pounds in 2023[8].

Table 1. Turkey health survey (August 2024 - 2025) of professionals in U.S. turkey production (n = 21, head reporting = >201.4 million) ranking current disease issues (1= no issue to 5 = severe problem). Data on file.

Issue	Score Average (1-5)
Avian Metapneumovirus (AMPV)	4.7
Lack of approved, efficacious drugs	4.4
Avian Influenza, High Path (HPAI)	4.1
Clostridial Dermatitis (Cellulitis)	3.5
Colibacillosis	3.4
Salmonella	3.2
Ornithobacterium rhinotracheale (ORT)	3.0
Leg Problems	2.8

[5]Poultry Slaughter 2024 Summary (February 2025). USDA, National Agricultural Statistics Service. Pg 5. www.nass.usda.gov/Publications/Todays_Reports/reports/pslaan25.pdf
[6]Poultry - Production and Value 2024 Summary (April 2025). USDA, National Agricultural Statistics Service. Pg 8-9. https://esmis.nal.usda.gov/sites/default/release-files/m039k491c/ws85cd48j/q524mm00n/plva0425.pdf
[7]Poultry Slaughter 2024 Summary (February 2025). USDA, National Agricultural Statistics Service. Pg 5.
[8]USDA, ERS, Livestock & Meat Domestic Data, Turkey Sector: Background & Statistics: https://www.ers.usda.gov/newsroom/trending-topics/turkey-sector-background-statistics

TR-DFTR (Turkey Reovirus Digital Flexor Tendon Rupture)	2.8
Mycoplasma synoviae (MS)	2.6
THRV (Turkey Hepatitis Reovirus)	2.6
Heat Stress/Mortality	2.5
Late Mortality	2.4
Cholera	2.3
Bordetella avium	2.2
Blackhead (Histomoniasis)	2.2
Tibial Dyschondroplasia (TDC, Osteochondrosis)	2.2
Protozoal Enteritis (Flagellated)	2.2
Mycoplasma gallisepticum (MG)	2.1
Poult Enteritis of unknown etiologies	2.1
Cannibalism	2.1
Round Worms (*Ascaridia dissimilis*)	1.9
Breast Blisters and Breast Buttons	1.9
Coccidiosis	1.8
Bleeders (aortic, hepatic ruptures)	1.8
Osteomyelitis (OM)	1.8
Turkey Coronavirus	1.8
Avian Influenza, Low Path (LPAI)	1.7
Streptococcus gallolyticus (aka, *S. bovis*)	1.6
Newcastle Disease Virus (NDV)	1.5
PEMS (Poult Enteritis Mortality Syndrome)	1.5
H3N2 (H1N1) Swine Influenza	1.5
Shaky Leg Syndrome	1.5
Necrotic enteritis	1.4
Erysipelas	1.3
Fractures	1.3
Mycoplasma meleagridis (MM)	1.0
Mycoplasma iowae (MI)	1.0
Spondylolisthesis (Kinky-Back)	1.0

Table 1A. Turkey health survey (August 2024 - 2025) of professionals in U.S. turkey production (n = 21, head reporting >201.4 million): Enteric Diseases Ranking for 2025.

Issue	Score Average (1-5)	Overall Rank (1-39)
Blackhead (Histomoniasis)	2.2	16

Protozoal Enteritis (Flagellated)	2.2	18
Poult Enteritis of unknown etiologies	2.1	20
Round Worms (*Ascaridia dissimilis*)	1.9	22
Coccidiosis	1.8	24
Turkey Coronavirus	1.8	27
PEMS (Poult Enteritis Mortality Syndrome)	1.5	31
Necrotic enteritis	1.4	34

Table 1B. Turkey health survey (August 2024 - 2025) of professionals in U.S. turkey production (n = 21, head reporting >201.4 million): Respiratory Diseases Ranking for 2025.

Issue	Score Average (1-5)	Overall Rank (1-39)
Avian Metapneumovirus (AMPV)	4.7	1
Avian Influenza, High Path (HPAI)	4.1	3
Colibacillosis	3.4	5
Ornithobacterium rhinotracheale (ORT)	3.0	7
Mycoplasma synoviae (MS)	2.6	10
Cholera	2.3	14
Bordetella avium	2.2	15
Mycoplasma gallisepticum (MG)	2.1	19
Avian Influenza, Low Path (LPAI)	1.7	28
Newcastle Disease Virus (NDV)	1.5	30
H3N2 (H1N1) Swine Influenza	1.5	32

Table 2. Turkey health survey (August 2024 - 2025) of professionals in U.S. turkey production (n = 20, head reporting = 201.4 million): reporting cases of diseases. Data on file.

Cases (##) of	2025	2024	2023	2022	2021	2020
Blackhead (Histomoniasis)	60	51	61	103	130	82
Mycoplasma synoviae (MS)	159	161	20	14	34	21
Turkey Coronavirus (TCV)	54	31	411	459	117	27
Turkey Reovirus Digital Flexor Tendon Rupture	273	368	487	170	239	548

Mycoplasma gallisepticum (MG)	75	43	12	8	78	31
Avian Metapneumovirus (AMPV)	5,964	2,355	-	-	-	-

Table 3. Turkey health survey (August 2024 - 2025) of professionals in U.S. turkey production (n = 20, head reporting = 201.4 million) by **antibiotic program**. Data on file.

	2025	**2024**
Conventional/Full Use[1]	60%	56%
No Growth Promotants, CRAU/CRAU-like[2]	30%	25%
NAE /ABF, RWA[3]	20%	19%
No Hatchery Injection of Antibiotics[4]	18%	-

[1]Conventional/Full Use (any antibiotics, including ionophores, bacitracin, bambermycins, and /or those deemed medically important to humans by FDA), allows in-feed and in-water administration of antibiotics.

[2]No Growth Promotants, CRAU/CRAU-like (Certified Responsible Antibiotic Use), permits only therapeutic uses.

[3]No Antibiotics Ever (NAE) /Antibiotic Free (ABF), Raised Without Antibiotics (RWA), does not use neither in-feed nor in-water antibiotics. No hatchery injection of antibiotics.

[4]No Hatchery Injection of Antibiotics means that antibiotics were not administered to the turkeys in the egg (in ovo) or as day-old hatchling poults.

Table 4. Turkey survey (August 2024 - 2025) of professionals in U.S. turkey production (n = 20, head reporting = 201.4 million) **coccidia control programs**. Does not total 100%. Alternatives (phytonutrients) and vaccines may be used to supplement the current ionophore or chemical anticoccidial program, or as the sole program for coccidia control. Data on file. In 2025, due to the blinded nature of this study, it was not possible to verify the unique identity of each respondent. The reported coccidia control programs should therefore be interpreted with the understanding that some duplication of responses may be present.

Program	**2025**	**2024**
Ionophore	29%	56%
Chemical	27%	41%
Alternative (Phytonutrients)	20%	11%
Vaccine	34%	26%

Figure 1: Map of aMPV cases in poultry. (Clark, aMPV Working Group)

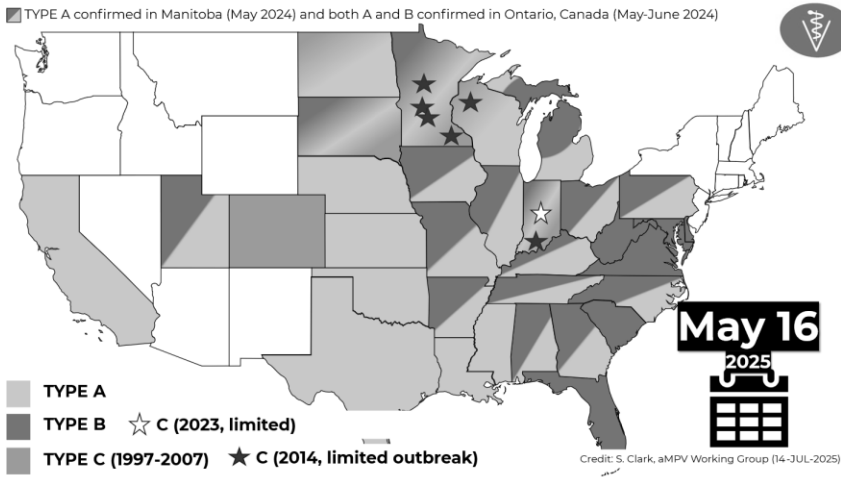


Figure 2. Vaccines Approved by USDA.

USDA Approvals: Import of aMPV Vaccines

Mod Live - Imported	Inactivated/Killed - Imported	Experimental Autogenous
Vaccinol®SHS **Vaxxinnova, Italy** Live attenuatted surbtype B *For the active immuniization of chickens against Swollen Head Syndrome* For use in US Turkeys and Chic	**TUR-3** **Boehringer Ingelheim, France** Killed/Inactivated vaccine Trivalent vaccine (AMPV/ PMX3/ NDV) For use in US Turkeys and Chickens	**MSD/Merck Cambridge, USA** US origin subtype B For use in US Turkeys and Chickens
Poulvac® TRT **Zoetis, Spain** Mod live subtype A For use in US Turkeys and Chickens	HIPRAVIAR® TRT Hipra, Spain Killed/inactivated ... aMPV Type B chicken origin strain with prover cross-protection against Type A ... *ndicated for use in both chickens and turkeys. For use in US Turkeys and Chickens	**Ceva, USA** US origin subtype B For use in US Turkeys and Chickens
AVIFRA® TRT **Boehringer Ingelheim, France** Mod live subtype B cross protection For use in US Turkeys and Chickens		**Ceva, USA** US origin subtype B vaccine US origin, turkeys For use in US Turkeys and Chickens
NEMOVAC* **Boehringer Ingelheim, France** Mod live subtype B cross protection For use in US Chickens		**Vaccinova, USA** Inactivated subtype A vaccine US origin, turkeys For use in US Turkeys and Chickens
RESPIVAC®aMPV **Hipra, Spain (marketed by Elanco)** Modified live subtype B, strain 1022 Oclumasal (by coarse spray) or drinking water For use in US Chickens		May as use in US poultry - for use. in chickens or turkeys. * 10 USDA PERMITTED VACCINES* as of March 14, 2025. * USDA PERMITTED VACCINE, which were valid for 1 year.

Credit: S. Clark: aMPV Working Group (14-JUL-2025b)

HVP.PO.102025.3

LBMS AI Program FY 2024 Working Group Report

Fidelis Hegngi, USDA-APHIS, Veterinary Services (VS)

The United States domestic low pathogenicity avian influenza (LPAI) program provides surveillance for H5 and H7 LPAI prevention and control in the Live Bird Marketing System (LBMS). Beginning in 1994, LPAI H7N2 proved to be endemic in live bird markets (LBMs) in the northeastern United States. In 1999, the United States Department of Agriculture (USDA) established a LBMS working group to support States wanting to eliminate LPAI H7N2 that was persistent in the LBMs. On October 20, 2004, USDA-APHIS-VS published uniform standards for H5 and H7 LPAI prevention and control in the LBMS to establish a more consistent approach by participating States in controlling LPAI in the LBMS. USDA-VS revised the LBMS uniform standards in 2008, 2012, 2016, 2020, and 2024.

State participation is voluntary; participating States will enact regulations necessary for compliance with their LBMs, including producers, and distributors. All LBMs, producers, and distributors that supply the markets must be registered or licensed with the State and must allow Federal and State inspectors access to their facilities, birds, and records. These facilities must also have written biosecurity protocols in place. VS coordinates and administers the program and provides personnel and resources to assist States with implementation and compliance with program requirements.

In FY 2025 the LBMS Working Group held its annual business meeting in San Antonio, Texas. The meeting was attended by approximately 81 program participants including 28 VS field, district, and headquarters staff; 1 LBMS/poultry industry stakeholder; 5 State animal health diagnostic laboratory representatives; 5 university representatives; and 42 State Department of Agriculture participants representing 25 States. The meeting provides opportunities for continued program development, implementation, and advancement.

The working group also discussed:

1. 2024 LBMS Uniform Standards –Changes and Additions to the 2024 Uniform Standards.
2. LBMS Status and FY2025 Budget Update.
3. An update on Initial State Response and Containment Plan (ISRCP).
4. An update on Cooperative Agreements, Indemnity, and Compensation procedures.
5. Current HPAI Situation & Response in the United States.
6. Texas LBMS.
7. States Response to H5N1 HPAI in their LBMS - Challenges and Lessons Learned (California, Florida, New Jersey, New York, and Pennsylvania).
8. Investigation of Illegally Imported Hatching Eggs into Texas.
9. California HPAI H5N1 in Livestock and Poultry Challenges and Lessons Learned.
10. HPAI Biosecurity Compliance Audit Program (BCAP).

11. Response to Non-Poultry Animal Species on Positive HPAI Premises.
12. Rural Live Bird Market Discussion and Regulation.
13. HPAI – Role of Wild Birds & Update-Wild Bird AI Surveillance Projected for 2025 and Beyond.
14. National Veterinary Services Laboratories - Update on Surveillance Testing - Current Nationwide Findings and Status of Current Diagnostics for AI and Newcastle Disease.
15. Southeast Poultry Research Laboratory Update on HPAI Research and Vaccine.
16. An Update on the National Poultry Improvement Plan (NPIP).
17. An Update on the NPIP Authorized Laboratories System and Compartmentalization.
18. Discussion on Outreach and Education Projects: Defend the Flock (DTF) – Combined Campaign Update: Bird Awareness Week; Flock Defender; Youth Outreach; and Calendar Replacement.
19. 2024 LBMS Continuing Education Training Course at the School of Veterinary Medicine, University of California, Davis, CA.

In FY2025, USDA leveraged the Defend the Flock social channels and USDA-APHIS LinkedIn account to share timely updates on the HPAI outbreak and reinforce the importance of biosecurity. A paid media campaign was deployed across Facebook, X, and LinkedIn channels, along with Search Engine Marketing and Google Display Network ads, alerting commercial and backyard bird owners to the threat of HPAI. Additional Defend the Flock paid media and outreach efforts targeting the small farm and backyard audiences included: Print and online ads distributed in partnership with Backyard Poultry Magazine; Paid programmatic audio placements disseminated campaign messaging relevant to all target audiences; and YouTube advertising ran to further connect with the young future farmer audience.

During Bird Health Awareness Week, February 16-22, 2025, APHIS distributed an audio news release (ANR) featuring Dr. Katy Burden on the importance of multi-species biosecurity, it aired across 360 stations in 108 markets. APHIS shared an awareness post on the Defend the Flock Facebook channel.

APHIS held the annual Defend the Flock webinar on April 17, 2025. Dr. Melissa Yates from Veterinary Services shared critical information about protecting poultry on a multi-species farm. Eight hundred seventy-seven people attended.

APHIS conducted a radio media tour (RMT) on August 27, 2025, with Dr. Chrislyn Wood-Nicholson to spread Defend the Flock campaign messages and educate listeners on biosecurity best practices. Dr. Wood interviewed 18 radio stations across 14 states and four national outlets.

APHIS distributed a custom matte article titled, *What You Need to Know About Avian Influenza*, to media outlets nationwide from March through July 2025. The article ran 1,086 times.

APHIS shared the Fall 2024 and Spring 2025 Biosecurity News Bulletins on the Defend the Flock website. We ran paid ads across the Defend the Flock social channels alerting audiences of the new resources. We also sent GovDelivery eblasts to alert USDA stakeholders. The Fall 2025 Biosecurity Bulletin will be available soon on the Defend the Flock website.
The 2026 Defend the Flock calendar, refreshed to align with current campaign branding and utilizing engaging imagery, will be available this fall.

APHIS refreshed the "Healthy Harry" video series to align with current video standards and campaign branding. The updated videos will be uploaded to YouTube this fall and promoted to key audiences to encourage views.

In FY 2025, avian influenza surveillance in the LBMS remained a high priority. Approximately 65,871 tests have been conducted for LPAI surveillance in the LBMS, for the first three quarters. Tests included agar gel immunodiffusion (AGID), real-time reverse-transcriptase polymerase chain reaction (rRT-PCR), antigen capture immunoassay (ACIA), and virus isolation (VI). For VI and rRT-PCR, each sample may represent 5 or 11 individual swabs pooled for a composite single test. There were 4 backyard producers (WOAH- Poultry) H5N2 LPAI detections in Pennsylvania {Berks County-2, Mifflin County-1, and Lebanon County-1); 1 Auction Market / Live Bird Sales (non-slaughter) H5N2 LPAI detections in Lancaster County, Pennsylvania; 1 Backyard (WOAH- Poultry) H5N2 LPAI detection in Orleans County, New York; and 9 LBMs with H6N2 LPAI detection (NY-3, NJ-3, PA-1, and TX-2. During the FY 2025 HPAI outbreak, 32 LBMs, 2 LBMS production flocks and 2 Live Bird Sales (non-slaughter were found positive for H5N1 HPAI Clade 2.3.4.4b.

NVSL Bacteriology Diagnostics

Kim Lehman, USDA-APHIS, Veterinary Services (VS), National Veterinary Services Laboratories (NVSL)

***Salmonella* serotyping**

The Bacterial Identification section within the Diagnostic Bacteriology and Pathology Laboratory of the NVSL routinely performs serotyping of *Salmonella* isolates submitted by private, state, and federal laboratories as well as veterinarians, researchers, and other animal health officials. This report summarizes *Salmonella* serotyping submissions to the NVSL from January 1 through December 31, 2024, originating from poultry.

Salmonella isolates are identified as clinical (clinical signs of salmonellosis from primary or secondary infection) or non-clinical (flock monitoring programs, environmental sources, feed). Serotyping data from isolates submitted for research purposes are not included in the summary.

From January 1 to December 31, 2024, the NVSL received 8,630 isolates for *Salmonella* serotyping. Of those, 3,947 isolates were from

chicken sources, and 139 isolates were from turkey sources. The most isolated serotypes from chicken and turkey are listed in Tables 1 and 2, respectively.

***Salmonella* Enteritidis**

From January 1 to December 31, 2024, 3,947 *Salmonella* isolates were received from chickens and their environment for identification of serotype. This was a 5% increase in chicken submissions from 2023. *Salmonella* Enteritidis was isolated in 7% of these isolates and remains in the top five serotypes observed in both clinical and non-clinical submissions.

***Salmonella* Pullorum and Gallinarum**

The NVSL received 225 samples for *Salmonella* Pullorum and Gallinarum serological testing in 2024, a slight increase from 2023. No isolates of *Salmonella* Pullorum or Gallinarum were identified or confirmed at the laboratory in 2024. The NVSL provided 3,315 mL of *S*. Pullorum tube antigen; 1,650 mL of *S*. Pullorum stained microtiter antigen; and 454 mL of control antisera to testing laboratories between January 1 and December 31, 2024.

Pasteurella

The NVSL received 198 isolates for *Pasteurella multocida* Gel-Diffusion Precipitin testing. Thirty-seven isolates were identified as type 3 in 2024. Summary of somatic types of *Pasteurella multocida* is listed in Table 3. Additionally, 82 isolates were received for *P. multocida* DNA fingerprinting. The NVSL supplied 5 mL of *P. multocida* typing sera and 4 cultures to testing laboratories.

Mycoplasma

The NVSL received 46 samples for avian *Mycoplasma* hemagglutination inhibition testing in 2024. In addition, 324 mL of *Mycoplasma* control antisera and 106 mL of *Mycoplasma* hemagglutination antigen were supplied to testing laboratories. Information on *Mycoplasma* reagents provided is shown in Table 4.

Table 1: Most common serotypes in 2024: Chicken

Clinical Cases	Non-Clinical Cases
Serotype	**Serotype**
Enteritidis	Kentucky
Kentucky	Senftenberg
Typhimurium	Worthington
Hadar	Enteritidis
Schwarzengrund	Typhimurium

Table 2: Most common serotypes in 2024: Turkeys

Clinical Cases	Non-Clinical Cases
Serotype	**Serotype**
Agona	Typhimurium
Schwarzengrund	Senftenberg
Infantis	Alachua
Senftenberg	Liverpool
Hadar	

Table 3: Somatic types of *Pasteurella multocida* observed at the NVSL

	2024
Type 1	66
Type 3	37
Type 3,4	15
All other	80
TOTAL	**198**

Table 4: *Mycoplasma* antisera (mL) and antigen (mL) provided by NVSL

Mycoplasma	Antisera	Antigen
M. gallisepticum	114	44
M. meleagridis	27	9
M. synoviae	100	53
Negative	83	
Total	324	106

Ewing, WH. 1986. Edward and Ewing's Identification of Enterobacteriaceae. 4th edition. Elsevier Science Publishing Co., Inc., New York, U.S.

Grimont, PAD, Weill, FX. 2007. Antigenic Formulae of the *Salmonella* Serovars. 9th edition. WHO Collaborating Centre for Reference and Research on *Salmonella*. Paris, France.

NPIP Update

Savannah Busby and *Katy Burden*, USDA-APHIS, Veterinary Services (VS), Agricultural Conservation Easement Program (ASEP), National Poultry Improvement Plan (NPIP)

Virtual Meeting (October 20, 2025)

NPIP Overview

- 51 Official Agencies
  - 50 States and 1 Territory
- 99 Authorized Laboratories
- Provisions in 4 Sections of Title 9 CFR and in the Program Standards
  - 145, 146, 147, 56
- General Conference Committee – 7 members – 4 Alternates
- Facilitating both domestic and international trade by monitoring the health status of flocks through breeding programs for key disease areas:
  - Salmonella
  - Mycoplasma
  - Low Path Avian Influenza (LPAI)

NPIS Reporting Reminders

- Numbers we report are for qualifying tests only
- AI Testing in the USA

    - LBMS testing (NOT NPIP testing)
    - Wildlife testing (NOT NPIP testing)
    - Outbreak Surveillance
        - IP testing (NOT NPIP testing)
        - Control area testing for permitting or SSP testing (NOT NPIP testing)
    - Passive Surveillance (NPIP testing, 145.15)
        - Clinical or diagnostic cases
    - Active Surveillance (NPIP testing, 145 and 146)
        - NPIP programs AI Clean, H5/H7 AI Clean, H5/H7 AI Monitored

NPIP Proficiency Tests

- **2024 AI Serology Panel Proficiency Test for AGID/ELISA**
    - Results were due in the APHIS/NAHLN portal by November 27, 2024.
- **2025 Avian Influenza Serological PT (NVSL/NPIP)**
    - Tests were shipped the week of 09/16/2025.
    - Results will be due in the APHIS portal on 10/10/2025.
- **2024 Salmonella Group D Proficiency Test was not offered**
- **2025 NVSL/NPIP Salmonella Group D Culture Proficiency Test**
    - Closed for registration on October 9, 2025.
    - Panels will be shipped the week of October 21, 2025.
    - Results will be due in the APHIS portal on November 14, 2025.
- **2025 Mycoplasma Proficiency Test**
    - Results were due – July 11, 2025

NPIP Compartmentalization Update

- Full or Conditional International Acceptance for Day Old Chicks and Hatching Eggs
    - Colombia
    - Egypt
    - Hong Kong (transits only)
    - Indonesia
    - Mozambique
    - Namibia
    - Nigeria
    - Saudi Arabia
    - Senegal
    - Tanzania
    - United Kingdom
    - Uruguay

SEPRL Updates

David Suarez, USDA, Agricultural Research Service (ARS), Southeast Poultry Research Laboratory (SEPRL)

Dr. Suarez presented current and ongoing projects at the Southeast Poultry Research Laboratory and recent changes to facilities and staffing. A recording was provided to committee members.

NVSL HPAI Diagnostics
Mia Kim Torchetti, USDA-APHIS, Veterinary Services (VS), National Veterinary Services Laboratories (NVSL)

Dr. Torchetti presented updates on highly pathogenic avian influenza (HPAI) diagnostics and recent developments in circulating virus genotypes. A recording was provided to committee members.

Wildlife Biosecurity Assessments
Amber Headen, USDA-APHIS, Wildlife Services (WS)

Dr. Headen provided a presentation on helping producers prevent highly pathogenic avian influenza (HPAI) through wildlife focused biosecurity improvements. This presentation can be viewed at https://usaha.org/committees/.

Federal Highly Pathogenic Avian Influenza (HPAI) Update
Oriana Beemer, USDA-APHIS, Veterinary Services (VS)

APHIS provided an update on the current highly pathogenic avian influenza situation in the United States, including the livestock and poultry disease situations. Main topics covered included situational updates on outbreak status, the importance of biosecurity as a key to mitigate the risk of disease spread and ways USDA is promoting best practices, the importance of surveillance testing to quickly respond and eliminate circulating virus from the nation's livestock and poultry, and the additional work addressing the ongoing outbreak.

California State Highly Pathogenic Avian Influenza (HPAI) Update
Alexi Haack, California Department of Food and Agriculture (CDFA)

Dr. Haack summarized the ongoing highly pathogenic avian influenza (HPAI) outbreak in California poultry flocks and dairy herds and the various challenges they have faced. She also addressed possible future directions and control strategies.

Industry Update (AAAP HPAI Task Force)
Michelle Kromm, American Association of Avian Pathologists (AAAP)

Dr. Kromm summarized the AAAP position statements on H5 influenza and vaccination for H5N1 2.3.4.4b as can be found on the AAAP website. She also discussed barriers to highly pathogenic avian influenza (HPAI) vaccination in the U.S. as the poultry industry sees them and possible next steps.

High Expansion Nitrogen Foam Projects

Alex Hamberg, Pennsylvania Department of Agriculture
Dan Hougentogler, Hougentougler Enterprises, LLC/Agricultural Emergency Services Inc.

Overview

- Overview of current technologies available
- Features and drawbacks of Nitrogen Foam for poultry
- Considerations for use
- What the equipment looks like
- Validation Trials 2025
- Planned improvements
- Future work

Overview of current technologies

- VSD+
    - New guidelines pending
    - Layer facilities
    - Facility design dependent
- CO_2
    - Limited availability
    - House limitations
- Medium expansion, air-based foam
    - Limited to floor birds
        - Solid floors
        - Unlimited foam height
- Liquid Nitrogen Whole House Gassing
    - Still in development
    - Promising for a variety of house types
- Manual (Cervical Dislocation/MAC/containerized CO_2)
    - Limited to smaller flocks (usually)
    - High level of exposure for workers

Nitrogen Foam

- High Expansion Nitrogen Foam
    - Welfare/humane considerations
    - Less water
    - More complex equipment
    - Wide variety of house types?
    - Livestock
    - Less live animal handling

Considerations for Use- HENF

- Time
    - 24 hours?
        - May need other options for first house
        - Retrieval of NF generators
- Resources
    - Less water needed
    - Pumper truck

        - Low pressure high flow vaporizer?
- Personnel
    - Less exposure to virus
- House design
    - Can penetrate cages and climb at least 30 feet
    - Manure pits/slatted floors
    - Barn layout and equipment (brooder boxes, cages, etc.)
- Time to respond
    - Farm density
    - First house option?
- Equipment
    - Pumper truck
    - Water
    - Reduced disinfection needs

Validation Studies

- Funded through NADPRP
    - PA01.22- A Study of Logistic Requirements and Best Management Practices for Utilizing Nitrogen Foam Euthanasia in Pennsylvania Swine and Poultry Operations
- Trial 1 – May 2024, PDA/PSU
    - Initial applications and testing of NFDS on slatted floors and mock elevated systems
- Trial 2 – June 2025, PDA/Industry
    - Broiler Breeder Replicate Trial
    - First NFDS replicate trials in U.S. for poultry operations
- Trial 3 – September 2025, PDA/Industry
    - Elevated deep pit layer pullet facility

Presentation can be viewed at https://usaha.org/committees/.

Salmonella Updates Post-Framework

Lindy Froebel, National Turkey Federation (NTF)

Dr. Froebel presented a *Salmonella* policy update. Following USDA, Food Safety and Inspection (FSIS) announcing a proposed regulatory framework to reduce *Salmonella* illnesses attributable to poultry in October 2022, the Agency published a proposed rule and proposed determination in the Federal Register titled *Salmonella Framework for Raw Poultry Products'* in August of 2024. In April 2025, USDA announced the withdrawal of the proposed rule and proposed determination, noting while FSIS continues to support the goal of reducing *Salmonella* illnesses associated with poultry products, the Agency believes that the comments have raised several important issues that warrant further consideration.

An overview of the "5 prong food safety plan" from USDA Secretary Brooke Rollins was provided. Dr. Froebel also expanded on the National Turkey Federation (NTF) position that a new *Salmonella* regulatory

framework should be explored, but noted any new policy must be founded in science and all regulatory decisions be data-driven.

Economic Impact of Avian Metapneumovirus

Gretta Irwin, Iowa Turkey Federation

Ms. Irwin provided the following links to previously published reports on the economic impact of avian metapneumovirus.

- The Economic Impact of aMPV on the Minnesota Turkey Industry
- Possible Economic Impacts from aMPV and HPAI in the Iowa Turkey Industry

SUBCOMMITTEE ON AVIAN INFLUENZA (AI) AND NEWCASTLE DISEASE (NDV)

Chair: David Suarez, GA

The standing subcommittee report provides a review of notable outbreaks of avian influenza (AI) and Newcastle disease (NDV) that occurred outside the United States in the last year (October 2024 to September 2025). A variety of public sources were used to compile these results including the World Organization for Animal Health (WOAH), The United Nations Food and Agriculture Organization (FAO), the European Centre for Disease Prevention and Control, published manuscripts, news reports and personal observations. Despite the variety of sources, many outbreaks lack detail about the virus and the impact on poultry or wild bird populations.

Newcastle Disease Virus (NDV)

Newcastle disease virus had several notable outbreaks in Canada and Europe. In May of 2025, Canada reported an outbreak of virulent Newcastle disease on two commercial squab farms in the Fraser Valley affecting over 22,000 pigeons. Because the squab farms were related to meat production, the outbreaks were reportable as poultry to the WOAH. Sequence analysis showed the viruses to be class II genotype V 1. This lineage is more commonly referred to as pigeon paramyxovirus lineage, because it is primarily found in pigeons. This lineage is found worldwide and causes disease outbreaks in wild pigeons and farm raised pigeons on squab farms. The Canadian farms were not vaccinated, although killed vaccines are available and are used in the U.S to protect birds from clinical disease. This lineage of virus is virulent to chickens in the intracerebral pathogenicity index (ICPI) test, but this lineage of virus appears to be highly pigeon adapted and does not cause disease in chickens when given by a natural route of inoculation.[1]

In the European Union, outbreaks in six different countries were reported to WOAH, but with one major exception were contained to just one or two farms in each country including Malta, North Macedonia, Sweden, Bulgaria, and Slovenia. A large and continuing outbreak is occurring in Poland. The outbreak appears to be continuing from outbreaks from 2023 and has affected over five million birds since September 2024. Sequence supports the virus as a Class II genotype VII 1.1 lineage. This lineage is widely found in Europe, Asia, and Africa. The outbreaks are occurring in both backyard and commercial poultry spread throughout the country. Vaccination is being used to try and control the outbreak, but with limited success. It should be remembered that although Newcastle diseases virus is considered a single serotype, numerous studies support that the matching of the vaccine to the field strain can improve protection.[2] Unfortunately, the primary vaccines commercially available are the genotype I and II, which provide limited protection.

Avian Influenza

North America

The situation continues to be chaotic with both low pathogenic avian influenza (LPAI) and highly pathogenic avian influenza (HPAI) being found worldwide. In North America, the H5N1 goose/Guangdong lineage of HPAI continues to be the major threat because of the endemic nature of the virus in wild birds. Following the characteristic seasonality of the virus that appears tied to migratory bird movements, outbreaks seem to increase in the fall and early winter and then drop to low levels in the summer months with decreased wild bird and poultry detections. In Canada a total of 94 outbreaks in commercial flocks and 11 back yard flocks were reported from October 2024 to mid-September 2025. No outbreaks were detected in poultry from June-August 2025, but new outbreaks were reported in Alberta in September 2025. In Mexico no outbreaks of LPAI or HPAI H5 were reported to WOAH, but a lack of transparency on reporting is likely. In April of 2025 a fatal case in humans was reported in a 3-year-old child with clinical signs consistent with infection. The child had no known contact with poultry but the virus was sequenced and was clade 2.3.4.4b genotype D1.1, which is a genotype commonly found in wild birds and poultry.[3] Continued outbreaks of highly pathogenic H7N3 avian influenza occurred in Mexico with 16 farms being reported with infected birds. The outbreaks were in Neuvo Leon state, which borders Texas, and involved over 2 million birds. Vaccines for H7N3 are available, but it was not reported on whether vaccines were used in this region and the sequence of the outbreak viruses are not currently publicly available. Mexico also remains likely endemic for H5N2 LPAIV despite widespread vaccination.

South America

Several noteworthy outbreaks of goose/Guangdong 2.3.4.4b lineage H5N1 HPAI were reported in South America. The first reported outbreak of H5N1 HPAI in commercial poultry in Brazil was reported in May 2025 in Rio Grande do Sul, and was preceded by detections in backyard poultry two weeks earlier. The outbreaks were reported as controlled. A similar situation in Argentina was reported with commercial outbreaks in August 2025 with previous detections in wildlife. Additional reports of wild bird detections were reported from Panama and Peru. Limited information is available about use of vaccination and wild bird detections because of limited surveillance, but outbreaks in the region continue.

Europe

Europe continues to have ongoing outbreaks of goose/Guangdong 2.3.4.4b lineage outbreaks in commercial poultry and wild birds. The European Food Safety Authority publishes comprehensive quarterly reports on outbreaks in poultry, wild birds, and other species including zoonotic

infections in humans.[3,4] A summary of these reports include that there are a large number of detections, but they are lower levels than earlier peaks from 2021-2023. Seasonality is observed with few detections in the summer months. The epidemiologic curves show considerable overlap between the wild bird and poultry detections, which is strong supporting evidence of wild birds being the source of virus to poultry. A high percentage of virus detections are the H5N1 subtype, but about 3% of viruses are identified as H5N5 viruses, which are primarily coming from gull samples. In domestic poultry in the last two years, domestic ducks lead in the number of detections with 254 detections (28%), chickens 22%, turkeys at 16%, and geese at 11%. In wild birds, waterfowl lead detections with 1,150 detections (56%), colony-breeding seabirds at 18%, and raptors at 12%.

France continues their vaccination program in ducks with a government supported program that vaccinates only duck flocks of 250 birds or larger. The government's financial support is supposed to be reduced each year with the duck industry picking up the costs for vaccination and enhanced surveillance. Two different vaccines, including a baculovirus protein vaccine and a mRNA vaccine were selected for use in France. In the last year five vaccinated flocks were identified as being infected. Clinical disease was not observed in the flocks, and the virus was identified by active surveillance. Additional poultry outbreaks with clinical disease were identified in chickens, guinea fowl, and turkeys in the country. A study on the likely benefit of the vaccination was published that showed the value of vaccination.[5] There is increased acceptance of foreign governments for the vaccination and surveillance program instituted in France. In January of 2025 both the United States and Canada loosened import restrictions on unvaccinated poultry products, but vaccinated duck or eggs from vaccinated ducks are still prohibited. The United Kingdom in May 2025 has moved further and will allow the importation of vaccinated duck meat into the country. This international acceptance, although only partial is a major advancement for the acceptance of vaccination in poultry without ending all trade.

Africa

Outbreaks reported to WOAH are primarily in West African countries and South Africa with goose/Guangdong lineage virus. Other countries that are endemic for the virus, like Egypt, did not report to WOAH. The Food and Agriculture Organization has updates on outbreaks in sub-Saharan Africa (https://www.fao.org/animal-health/situation-updates/sub-saharan-africa-hpai/en) that can be accessed. The outbreak of H7N6 HPAI that had a major impact on the South African poultry industry was contained. This outbreak resulted in outbreaks on 116 farms with over 12 million birds affected, primarily layers and broiler breeders.[6] A study in Egypt that conducted surveillance in wild birds and poultry in live bird markets was conducted that showed a high prevalence of avian influenza in both groups of birds with 42% of poultry and 34% of wild birds with detections. The H9N2 subtype was the

primary subtype detected but H5N1 and H5N8 HPAI were also detected. The study conducted over two years in 2021 and 2023 did not show a seasonal pattern of detection, and highlights the high viral pressure in Egypt despite the use of vaccination.[7]

Asia

Several lineages of goose/Guangdong H5 are endemic in many countries in both poultry and wild birds. One notable change in the region is the approval of a baculovirus H5 vaccine for use in the Philippines. Several published studies from China compared live poultry markets and fresh frozen poultry in Poyang Lake area (mid-Eastern China) that showed a high prevalence of virus by RT-PCR with 59% and 45% positive rate respectively. Further subtyping showed H9N2 was the predominant virus detected, but H5 influenza, presumably HPAI, was also routinely detected.[8] In a separate study in Huzhou, China (coastal China) in live poultry markets, a similar high prevalence of detection was found in studies from 2019-2023 with some seasonality in detection. This study also found that H9N2 was most common with more than half of the detections. The H5 subtype, presumably HPAI, and H3 and H6 were also commonly found and only a low level of detection of H7N9 were observed.[9] China still vaccinates for H5 and H7 using vaccine updated and supplied by the government. Vaccines for H9N2 are available, but farmers pay the full cost. Based on available data it is unclear if either H7N9 LPAI or HPAI is continuing to circulate in China. The two recent studies mentioned had an extremely low or negative detection rate for H7.

Australia

Australia and New Zealand are one of the few countries that have not detected the goose/Guangdong lineage of virus despite detections of virus in Asia and now Antarctica. However, Australia has continued to have sporadic outbreaks of H7 HPAI in the country. A new outbreak of H7N8 HPAI was reported in the state of Victoria in four commercial egg layer farms in February of 2025. This is on the heels of three unique H7 HPAI outbreaks in 2024. It appears that a lineage of H7 LPAI is circulating in wild birds that easily mutates to HPAI after introduction into poultry. This classic pattern of introduction of HPAI continues to be problematic in Australia, although the outbreaks are controlled quickly.

Antarctica

A brief summary of H5 HPAI in Antarctica is being added because of the impact the virus is having on wild birds and marine mammals in the continent. Despite the relatively small amount of surveillance that is being conducted in the region, wild bird and mammal outbreaks are being detected of the goose/Guangdong lineage 2.3.4.4b of virus. The outbreaks are often causing high mortality and because of the concentration and relatively small numbers of some of the species, the virus may be contributing to the

extinction of some species. A more detailed report is provided by the Scientific Committee on Antarctic Research (https://scar.org/~documents/route%3A/download/6304).

Zoonotic Avian Influenza

Sporadic cases of zoonotic avian influenza continue to occur in many different countries world-wide. Fortunately, little evidence of human-to-human transmission is occurring. The H5N1 HPAI dairy/poultry outbreaks in the United States was the source for many human cases, but in most of these detections the patients have only mild disease. Sporadic H5N1 outbreaks were also reported in Vietnam, Mexico, and Australia (imported case). Other avian influenza subtypes with human cases include H3N8, H5N6, H10N5, H10N3, H5N2, and H9N2. The H9N2 subtype continues to be a commonly reported subtype of human infection, but fortunately it is primarily associated with mild clinical disease. However, serologic evidence in humans suggest infection is occurring much more commonly.[10] The H9N2 subtype comprises multiple distinct poultry adapted lineages, and for some countries, like China and Egypt is widespread in the poultry industry.[11]

Conclusions

The H5N1 2.3.4.4b goose/Guangdong lineage of virus remains the largest threat to both poultry, wild birds, and marine mammals of all the avian influenza viruses, but many other threats remain including other goose/Guangdong lineage viruses. The H5N2 LPAI is still endemic in Mexico and likely other countries, H9N2 is widespread in Asia, the Middle East, and Africa, and classical outbreaks of H5 and H7 HPAI that recently mutated from LPAI will continue to occur. There is an increasing interest in the use of vaccination for control of the disease, but negative trade implications remain the major impediment to wider use. International organizations like WOAH (https://www.woah.org/app/uploads/2025/02/web-gf-tads-hpai-strategy-woah.pdf), FAO, and International Association on Biological Standardization (IABS) (https://events.iabs.org/hpai-conference-2024) continue to provide forums for the consideration of vaccination as an alternative control tool.

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COMMITTEE ON SHEEP, GOATS AND CAMELIDS

Chair: Maggie Highland, WI
Vice Chair: Roselle Busch, CA

Samantha Allen, Gary Anderson, Dorothy Bailey, Signe Balch, Maggie Baldwin, Oriana Beemer, Randy Berrier, Danelle Bickett-Weddle, Carolynn Bissett, Rosie Busch, Beth Carlson, Michael Carter, Sarah Coburn, Heather Damico, Rose Digianantonio, Brandon Dominguez, Mark Drew, Roger Dudley, Misty Edmondson, Dee Ellis, James Evermann, Victoria Fields, Larry Forgey, Karen Fox, Margaret Gabour, Michael Gilsdorf, K. Fred Gingrich II, Garrett Girk, Chelsea Good, Tracie Guy, Thomas Hairgrove, Rod Hall, Alex Hamberg, Nathan Harvey, Hallie Hasel, Carl Heckendorf, Julie Helm, Amy Hendrickson, Janemarie Hennebelle, Maggie Highland, Ashley Hill, Siddra Hines, Heather Hirst, Joe Huff, Julie Hurley, Anne Justice-Allen, Jeffrey Kaisand, Diane Kitchen, Patrice Klein, Kavishti Kokaram, Amanda Kravitz, T.R. Lansford III, John Lawrence, Molly Lee, Kimberly Lehman, Jane Lewis, Rick Linscott, Mary Jane Lis, Sasha Lisowski, Jim Logan, Karen Lopez, Erin Luley, Joanne Maki, Miriam Martin, Chuck Massengill, Meghan May, Dave McElhaney, Cheryl Miller, Peter Mundschenk, Mandy Murray, Katie Murray, Mike Neault, Cheryl Nelson, Gary Olson, Amar Patil, Elisabeth Patton, Taryn Pearson, Bill Pittenger, Amanda Price, Scott Richardson, Suelee Robbe-Austerman, Susan Rollo, Joan Dean Rowe, E Sabo, Mo Salman, Shawn Schafer, Patty Scharko, David Schmitt, David Schneider, Ryan Scholz, Carry Sexton, Whitnie Smartt, Justin Smith, Ben Smith, Susan Stehman, Gary Stone, Dennis Summers, Diane Sutton, Tahnee Szymanski, Todd Tedrow, Tyler Thacker, Beth Thompson, Hannah Varnell, Dustin Weaver, Marcus Webster, Scott Wells, Nora Wineland, David Winters, Steven Witte, Cindy Wolf, Ryan Wolker, Alan Young.

The Committee met during the 2025 Annual Meeting in Aurora, Colorado on November 4 from 1:00-3:00 p.m. There were 33 members and 41 guests in attendance. Previous resolutions were reviewed by the chair and vice-chair and as no responses were received, they were not presented to the committee.

Presentations and Reports

Foot and Mouth Disease (FMD) Response Plan: The Red Book Foreign Animal Disease Preparedness and Response (FAD PReP) Updates
Sara McReynolds, Kansas State Department of Agriculture

The Committee of Animal Emergency Management (CAEM) reached out to the USAHA Executive Team to request a USAHA Workgroup be established to collaborate with the USDA-APHIS, Veterinary Services (VS) National Preparedness and Incident Coordination (NPIC) Center in updating the Foot and Mouth Disease (FMD) Response Plan: The Red Book. CAEM received the request to stand up a workgroup to update the FMD Red Book,

similar to how the African Swine Fever (ASF) Red Book has been updated through the Swine Committee workgroup. The Chairs for the Committee on Foreign and Emerging Disease and the Committee on Cattle and Bison were also interested in working together on this large project. The request was then made at the 2024 USAHA Governmental Relations meeting to Dr. Sifford, and she was supportive of moving this forward.

Dr. Jon Zack, the Director of National Preparedness and Incident Coordination (NPIC), requested beef, dairy, swine, and small ruminant industries have a representative on the USAHA workgroup in addition to state animal health officials (SAHOs), but the core workgroup remains small to keep this project moving and allow input from the different groups. The core workgroup would meet every two weeks, and the representatives would be required to report back to their committees and industry. It was also decided each committee can decide exactly how their feedback will be gathered.

The workgroup kicked off in January of 2025 with the goal of meeting twice a month. With Dr. Zack's retirement, there have been delays, but there were four proposed resolutions submitted to the Committee on Foreign and Emerging Disease at this USAHA annual meeting from the Working Group in regard to FMD response planning.

Small Ruminant Genetic Research Updates:
"An ovine pangenome to characterize genetic diversity in sheep breeds"

Brenda Murdoch, University of Idaho

Co-Authors include: Brenda M. Murdoch, Temitayo A. Olagunju, Shangqian Xie, Emily Clark, Alan Archibald, Michelle Mousel, Stephanie D. McKay, Darren Hagen, Andrew Hess, Theodore S. Kalbfleisch, Michael P. Heaton, Brad Freking, Tom Murphy, Derek Bickhart, Shannon Clarke, Rudiger Brauning, Tracy Hadfield, Noelle Cockett, Timothy P.L. Smith and Benjamin D. Rosen

Recent genomic studies have shown that single reference genomes are insufficient to capture and represent the genetic diversity within a species. The reference bias problem wherein true genetic variants are missed owing to their absence in the single reference genome undermines efforts to develop improved breeding strategies. However, pangenomes have been demonstrated to overcome the reference bias problem by using graph data structures to capture the genetic diversity in the genomes of multiple individuals or breeds within a species.

The ovine pangenome was constructed from 20 different Ovis aries breeds and one Ovis canadensis breed, that were carefully selected for the divergent phenotypic traits they possess and the specific environment in which they breed. High quality genome assemblies were produced from haplotype-resolved fully phased genome assemblies of the F1 individuals of the inter-breed sire and dam crosses using HiFi and ultra-long sequencing data for scaffolding, and short reads parental data for haplotype phasing,

when available. Pangenome graph induction was done using Minigraph-cactus which requires specifying a reference genome assembly and pangenome graph builder (PGGB) which is a reference-agnostic technique. The regions corresponding to the structural variants between the breeds were extracted from the pangenome graph for association with phenotypic traits.

The ovine pangenome will be an important genetic resource for understanding how genetic variation between sheep breeds relates to phenotypes, and ultimately in designing specific breeding strategies to develop economically important and environmentally sustainable biological traits.

National Animal Health Monitoring System (NAHMS) Sheep Study Update
Brianna Schur, USDA-APHIS

In January 2024, NAHMS and National Agricultural Statistics Service (NASS) collaborated on the Sheep 2024 study, which occurred in the 30 top producing sheep states. Operations with one or more ewes were included in phase I and operations with 20 or more ewes were included in phase II. Regions included the West, Central, Northeast and Southeast. The study included two questionnaires and biologic sample collection of feces, blood, and interdigital swabs. Over 300 operations participated in biological collection to test for gastrointestinal (GI) parasites, enteric microbes, scrapie genotype testing, and footrot pathogens. The first descriptive report is currently undergoing number checking and will be reviewed both internally and externally prior to publication. The second and third descriptive reports will follow. Continued collaborations with universities that completed biologic testing will result in multiple manuscripts covering GI parasites, liver flukes, enteric microbes including Campylobacter, scrapie genotype prevalence, and prevalence of footroot pathogens.

New World Screwworm (NWS) Update
Brianna Schur, USDA-APHIS

Cochliomyia hominovorax myiasis could cause $1.8 billion in losses to animal agriculture. Life cycle as fast as 21 days, females only mates once in a lifetime. L1-L3 visible within day three of infestation, can drop off in 5-7 days. Only go after living tissue with an active blood supply. Fatal within 7-14 days if not treated. Nearly 100% of neonatal loss due to umbilical infestation.

USDA preparation including federal veterinarians in Panama at Commission for the Eradication and Prevention of Screwworm (COPEG) for training. Sterile insect technique is the number one tool. Limitation is the production capacity. Additional regulatory controls (quarantine/surveillance) necessary to respond with sterile fly dispersal. Working to establish additional production facilities in Mexico and U.S. and dispersal facility at a U.S. air force base in Texas.

Southern border ports are closed to live cattle, horse, and bison by land (horses still allowable by air). Dogs allowable with certificates of veterinary

inspection (CVI) and inspection within five days (this has not changed from previous importation rules with dogs coming from endemic countries).

Handle livestock with care and treat umbilical cords, check for flies in your truck, postpone or avoid procedures during fly season.

Submit eggs, larvae, pupae, or flies in ethanol with 5-38 form (photos are encouraged). In primary packaging: No more than 30mL per package, no formalin, label vials with permanent ink and each animal must have their own vial. Secondary packing: sealable bag containing paper towel. Outer package: with two sides at least four inches long, no envelopes, no FedEx boxes, and withstands nine ft stackability and six t drop test.5-38 form: Include FAD number in block 31. Before shipping, email: nvsl.parasitology@usda.gov with subject line “suspected screwworm” and ship to: National Veterinary Services Laboratory, 1920 Dayton Avenue, Ames, IA 50010. Ship via overnight or Priority One white glove service (FAD).

Outreach and updates available on the screwworm landing page https://www.aphis.usda.gov/livestock-poultry-disease/cattle/ticks/screworm. Risk mitigations in Mexico include monthly site visits which began August 2025 between government agricultural agencies in Mexico and the USDA Secretary of Agriculture.

Developing the response policy: Greenbook published in June 2025 then the Playbook in October 2025.

A brief question and answer session reveal the following discussion:

Q: What has been the success with baiting for fly control?

A: Unable to answer about failures of traps to control the fly.

Q: How did migration slip in that past few years?

A: Current speaker is unsure, but agrees it is a good question to ask.

Q: For the development of new tools and counter measures to the NSW response, are there funds and how will they be dispersed?

A: $100M for research and innovation is being led by the “directorate” to lead responses and this innovation challenge. In mid-September they are funding projects directly and funding at competitive proposals.

Comment: Drugs that are being approved by FDA are specific to cattle and we know that sheep and goats have different bioavailability and we need sheep and goat specific applications. Can USDA please work with FDA to consider this request?

Committee Business:

The Subcommittee on Scrapie and Identification Report was presented by Dr. Cindy Wolf, Subcommittee Chair. The subcommittee report is attached in the addendum. Jim Logan made a motion to approve the report as presented. The motion was seconded by Patty Sharko. There was no discussion and a vote to approve was unanimous.

The committee presented five resolutions that had been discussed in the previous months regarding the foot-and-mouth disease (FMD) Red Book Updates and the status of Tuberculosis and Brucellosis testing of sheep and goats in the U.S. Amy Hendrickson moved to approve all five resolutions into

a consent agenda and seconded by Cindy Wolf. There was no discussion and the votes were unanimous to approve the motion on the floor.

A request was made by Rosie Busch to encourage participation in the development of a working group within the committee to develop guidelines to pathways for approval of animal health products for small ruminants that are currently unavailable in the U.S.

A request was made by Alan Young (Medgene) for industry action to encourage USDA Center for Veterinary Biologics (CVB) to approve conditionally licensed vaccines with the 60-day withdrawal instead of requiring species specific adjuvant withdrawal studies (which are not required for autogenous vaccine approval).

Members thanked Maggie Highland for her years of service.

Cindy Wolf made a motion to adjourn the meeting which was seconded by Patty Scharko.

SUBCOMMITTEE ON SCRAPIE AND IDENTIFICATION

Chair: Cindy Wolf, MN
Vice Chair: Vacant

Signe Balch, Carolynn Bissett, Heather Damico, Rose Digianantonio, Larry Forgey, Karen Fox, Garrett Girk, Chelsea Good, Gillian Gwartz, Dan Hadacek, Britney Hagood, Rod Hall, Alex Hamberg, Amy Hendrickson, Janemarie Hennebelle, Heather Hirst, Julie Hurley, Beth Johnson, Jeffrey Kaisand, Diane Kitchen, Kimberly Lehman, Scott Leibsle, Kaitlynn Levine, Rick Linscott, Mary Jane Lis, Jim Logan, Erin Luley, Dave McElhaney, Cheryl Miller, Mike Neault, Cheryl Nelson, Amar Patil, Elisabeth Patton, Olivia Perkins, Joan Dean Rowe, E Sabo, Patty Scharko, David Schneider, Ryan Scholz, Ben Smith, Gary Stone, Dennis Summers, Diane Sutton, Tyler Thacker, Beth Thompson, Hannah Varnell, Marcus Webster, Cindy Wolf, Ryan Wolker.

The Committee met during the 2025 Annual Meeting in Aurora, Colorado on November 2 from 8:00-9:55 a.m. There were 16 members and 19 guests in attendance.

Presentations and Reports

Progress on Scrapie Eradication in the U.S.
Linda Detwiler and *Diane Sutton*, USDA-APHIS

The sheep and goat industries through their cooperation with USDA-APHIS and state veterinarians' staff have nearly eradicated scrapie form the U.S. sheep and goat populations by using a mandatory identification program combined with surveillance and traceability. If no new cases are identified in the next two years, then the U.S. will be free of Scrapie in the end of January 2028. Eradication success is attributable to specific tools; an example being research findings that discovered and proved the value of genetic selection for resistance. The sheep industry used genetic selection to assist with eradication. Flock resistance will continue to be particularly important moving forward as the scrapie prion recently has been shown to remain infective in contaminated environments for years. Data of the eradication program's surveillance, at slaughter and on farm was presented and the importance surveillance and effective case trace back because of identification as necessary and vital tools for successful eradication was emphasized.

Working with Industry to Achieve Scrapie Eradication and Planning for the Future
Amy Hendrickson, American Sheep Industry Association (ASI)

A summary was provided on the first of several forums looking at and planning for post-scrapie freedom. This particular forum was held in April of 2025 and included federal, state and industry professionals. The program

reviewed the history of the disease and program advancements including research, surveillance, traceability and genetic advancements.

Representatives from the swine and dairy industries shared their experiences with disease eradication programs and emerging disease situations. A panel of industry representatives discussed their thoughts on the value scrapie freedom will have for the industry and what may be needed to ensure the nation remains scrapie-free. A video that summarizes the key points of this forum was shared and is available at: https://www.youtube.com/watch?v=7eOdNoB0yt4

Electronic Identification and Data Capture in Sheep and Goats: Effective Implementation at an Oregon Auction Market

Cindy Wolf, American Sheep Industry Association (ASI)

A report on the successful implementation of tagging sheep and goats with electronic eartags at an auction market and capturing and using the data in the auction market software to track animal movements was provided.

Subcommittee Business:

No committee business.

Audience members discussed how to continue with standardized identification and traceability, auction market economics, and software needs.

A discussion ensued regarding the continuation of a sheep identification program beyond the scrapie eradication effort: Consensus appeared to be that a sheep traceability program should not be abandoned but must be simplified over current scrapie program requirements.

COMMITTEE ON SWINE

Chair: Jeff Kaisand, IA
Vice Chair: Jamee Eggers, IA

Bobby Acord, Gary Anderson, Sarah Bailey, Maggie Baldwin, Lisa Becton, Oriana Beemer, Joy Bennett, Carolynn Bissett, Steve Brier, Abbey Canon, Michael Carter, Robert Cobb Jr., Maria Cooper, Michael Costin, Marie Culhane, Susan Culp, Jill DeSau, Barbara Determan, Stephanie Dickens, Roger Dudley, Tracy DuVernoy, Sean Eastman, Jamee Eggers, Cheryl Eia, Dee Ellis, Joe Fisch, Anna Forseth, Heather Fowler, Margaret Gabour, Jane Galyon, Michael Gilsdorf, Garrett Girk, Douglas Gladue, Steve Goldsmith, Alicia Gorczyca-Southerland, Tracie Guy, Gillian Gwartz, Britney Hagood, Thomas Hairgrove, Patrick Halbur, Rod Hall, Steve Halstead, Alex Hamberg, Catherine Harris, Nathan Harvey, Karyn Havas, Joshua Hayes, Julie Helm, Janemarie Hennebelle, Heather Hirst, Brian Hoefs, Don Hoenig, Noah Hull, Nicki Humphrey, Ashley Johnson, Beth Johnson, Jeffrey Kaisand, Mary Kelpinski, James Kober, Kavishti Kokaram, Darlene Konkle, Berend Koops, Margo Kunz, T.R. Lansford III, Elizabeth Lautner, John Lawrence, Molly Lee, Sabrina Lee, Donald Lein, Jane Lewis, Rick Linscott, Mary Jane Lis, Sasha Lisowski, Christina Loiacono, Gustavo Machado, Bret Marsh, David Marshall, Michael Martin, Miriam Martin, Chuck Massengill, Meghan May, Dave McElhaney, Sara McReynolds, Miranda Medrano, Gay Miller, Richard Mock, Peter Mundschenk, Katie Murray, Michael Neafsey, Mike Neault, Cheryl Nelson, Megan Niederwerder, Kathleen O'Hara, Dusty Oedekoven, Elizabeth Parker, Boyd Parr, Amar Patil, Brent Pepin, Meredith Petersen, Allison Phibbs, Bill Pittenger, Barbara Porter-Spalding, Amanda Price, M. Gatz Riddell Jr., Suelee Robbe-Austerman, Susan Rollo, Steve Rommereim, Jim Roth, Marisa Rotolo, E Sabo, Mo Salman, Rachel Schambow, Joni Scheftel, David Schmitt, Ryan Scholz, Kristy Shaw, Kyle Shipman, Rick Sibbel, Staci Slager, Justin Smith, Harry Snelson, Gordon Spronk, Gary Stone, Dennis Summers, Tahnee Szymanski, Todd Tedrow, Beth Thompson, Hannah Varnell, Dustin Weaver, Patrick Webb, Marcus Webster, Kelli Werling, Stephanie Wetter, John Williams, Nora Wineland, Steven Witte, Ryan Wolker, Marty Zaluski.

The Committee met during the 2025 Annual Meeting in Aurora, Colorado on November 3 from 8:00-10:00 a.m. There were 47 members and 39 guests in attendance.

The committee had several presentations and updates, conducted old business regarding previous resolution and response review and new business including one resolution.

Presentations and Reports

H5N1 Swine Response Plan Update

Anna Forseth, National Pork Producers Council (NPPC)

Anna provided an update on the industry partnerships that created a draft response plan with recommendations for state and federal animal health officials if an H5N1 influenza virus was diagnosed in Swine.

H5N1 Swine Research Update
Lisa Becton, Swine Health Information Center (SHIC)

Dr. Becton provided an update on the $4 million research efforts centered on research priorities with H5N1 in swine.

USDA Swine RFID Program Update
Brent Pepin, National Pork Board (NPB)

Brent shared an update on the cooperative agreement funding to provide Radio-frequency identification (RFID) tags and readers free of charge to exhibition swine organizers and sow farms.

Swine Subgroup Update
Jeff Kaisand, Iowa Department of Agriculture and Land Stewardship

Dr. Kaisand provided a brief update on the 2025 activities of the swine sub-group and the priority activities for 2026.

Committee Business:

Old Business: 2021 Resolution Review Update – The votes on the progress and status of the 2021 resolutions have been submitted to USAHA for updating on the website.

2022 Resolution Review – The resolutions and responses will be sent to the committee for review and voting to determine the status. The status votes will be submitted to USAHA for updating the website.

2024 Interim and Final Responses – The interim and final responses from USDA-APHIS were briefly reviewed for general comments. They will be sent to the committee for voting on the status.

New Business: The committee moved (Steve Briar) and seconded (Steve Rommerein) to introduce the following resolution: *Task force - Use of aggregate samples in ASF/CSF Control Area surveillance testing algorithms.* The motion passed unanimously.

COMMITTEE ON WILDLIFE
Chair: Mark G. Ruder, GA
Vice Chair: Hunter Reed, TX

Samantha Allen, Erika Alt, Gary Anderson, Paul Anderson, Ethan Andress, Charlie Bahnson, Peter Belinsky, Tom Bragg, Beth Carlson, Christine Casey, Shelly Chavis, Sarah Coburn, Tim Condict, Maria Cooper, Susan Culp, Barbara Determan, Andrew Di Salvo, Brandon Dominguez, Mark Drew, Roger Dudley, Dee Ellis, James Evermann, John Fischer, Karen Fox, Samantha Gibbs, Colin Gillin, Alicia Gorczyca-Southerland, Michael Greenlee, Rod Hall, Nathan Harvey, Tricia Hebdon, Julie Helm, Janemarie Hennebelle, Terry Hensley, Warren Hess, Maggie Highland, Robert Hilsenroth, Don Hoenig, Noah Hull, Anne Justice-Allen, Jeffrey Kaisand, Diane Kitchen, Patrice Klein, Kavishti Kokaram, Darlene Konkle, Karla Kretschmer, Melanie Kunkel, T.R. Lansford III, Scott Larsen, John Lawrence, Molly Lee, Kimberly Lehman, Rick Linscott, Sasha Lisowski, Jim Logan, Lindsey Long, Karen Lopez, Roxanne Lotts, Aaron Loucks, Travis Lowe, Mark Luedtke, Jennifer Malmberg, Bret Marsh, Scott Marshall, Chuck Massengill, James Maxwell, Meghan May, Patrick McDonough, Mendel Miller, Lisa Murphy, Katie Murray, Michael Neafsey, Mike Neault, Cheryl Nelson, Tracy Nichols, Steve Olsen, Gary Olson, Mitchell Palmer, Steve Parker, Amar Patil, Meredith Petersen, Bill Pittenger, Jennifer Ramsey, Hunter Reed, Sarah Reinkemeyer, Suelee Robbe-Austerman, Jonathan Roberts, Susan Rollo, Mark Ruder, Sherri Russell, E Sabo, Will Sander, Shawn Schafer, David Schneider, Laurie Seale, Janine Seetahal, Kyle Shipman, Sandra Strilec, Steve Strubberg, Dennis Summers, Diane Sutton, Tyler Thacker, Noelle Thompson, Beth Thompson, Neil Vezeau, Shauna Voss, Clint Waddell, James Watson, Jennifer Weber, Michelle Willette, John Williams, Nora Wineland, David Winters, Cindy Wolf, Ryan Wolker, Sara Wyckoff, Ken Yancey, Alan Young.

The Committee met during the 2025 Annual Meeting in Aurora, Colorado on November 4 at 8:00 a.m. There were 40 members and 39 guests in attendance.

Presentations and Reports

Vector and Pathology Ecology of Wild Pig Wallows in Georgia and South Carolina
Taylor A. Fisher, Southeastern Cooperative Wildlife Disease Study, University of Georgia
Bob Dittmar Student Travel Award Recipient
Co-authors: Christopher Cleveland, Ellen Haynes, Michael Yabsley, Kevin Koswick, Erin Lipp, Annie Beadle, Mary Beard, Sydney Brewer, James Beasley, Travis Stoakley**,** Lilyanne Callaham, Marin Brewer, Michelle Momany, and Justina Stanislaw, University of Georgia

Invasive wild pigs (*Sus scrofa*), are found throughout much of the U.S. and through their wallowing behavior, may create environmental conditions for vector species, and water and soil borne pathogens, facilitating transmission pathways to wildlife that visit wallows. To investigate this relationship, we evaluated wild pigs and wallows for *Leptospira*, *Cryptosporidium*, *Giardia*, *Salmonella, E. coli* as well as *Aspergillus fumigatus* and azole-resistant isolates from wallows. Additionally, we evaluated presence of *Culicoides* and mosquito vector species colonizing wallows. Preliminary results reveal *Salmonella* (12/36 positive), *A. fumigatus* (17/26 positive), and fecal coliforms (60/82 positive) within wallows and vector species of mosquitoes (e.g. *Anopheles quadrimaculatus*, *Culex quinquefasciatus*) and *Culicoides* (e.g. *C. variipennis*, *C. venustus*, *C. stellifer*). We have not detected *Leptospira* molecularly from wild pigs or the environment thus far, but microscopic agglutination testing revealed low titers (1:100 and 1:200) serologically in 29.7% of wild pigs (19/64). Further analysis is needed to understand animal interactions and potential roles in pathogen transmission, but this study demonstrates that vectors and pathogens are detected from wild pig wallows.

The Surveillance Optimization Project for Chronic Wasting Disease (CWD)
Krysten Schuler, Southeastern Cooperative Wildlife Disease Study, Cornell University

The Surveillance Optimization Project for Chronic Wasting Disease (SOP4CWD) is a collaborative effort to improve the efficiency and effectiveness of CWD surveillance across North America. Launched in 2022, the CWD Data Warehouse is a free, custom platform for wildlife agencies to manage CWD and ancillary data, run models as decision-support tools, and visualize testing across participating jurisdictions. The goal is to meet wildlife agencies at all stages of disease and promote opportunities to share data across jurisdictions. The website for the project is https://sop4cwd.org. We currently have 22 state agencies, 2 provincial, and 1 tribal agency participating with over 260 registered users. The data repository contains over 1 million sample records from 5 different species and data on meat processors, taxidermists, captive cervid, demographics, agency expenses, and geospatial layers. The system contains a data pipeline from the field, through the diagnostic testing laboratory, and back to the Warehouse for reporting. We have a suite of user-friendly models within the Warehouse that are designed to answer questions biologists commonly ask. Data security and privacy are paramount so there is no public access or individual person identifiers. The data use agreement stipulates there is no distribution of data without the owner agency's approval. There is a formal process for researchers to request data. Funding for the project has been provided by a number of state wildlife agencies, a Multistate Conservation Grant, and U.S. Department of Agriculture.

Ways Deer Die: Stories from a CWD Endemic Area of Arkansas
Mark G. Ruder, Southeastern Cooperative Wildlife Disease Study, University of Georgia
Co-Authors: Marcelo Jorge, Heather Gaya, Lisa Bertin, Gino D'Angelo, Richard Chandler, Nicole Nemeth, Michael Chamberlain (University of Georgia); Nathaniel Denkers, Amy Nalls, Candace Mathiason (University of Georgia)

Chronic wasting disease (CWD) is a transmissible spongiform encephalopathy affecting white-tailed deer and some other cervid species. In some areas where CWD has been endemic for decades, studies show that CWD may cause population declines in free-ranging deer. Accordingly, CWD represents one of the most significant conservation challenges faced by wildlife management agencies tasked with maintaining sustainable populations of white-tailed deer. CWD was first confirmed in Arkansas in a free-ranging elk harvested in Newton County during 2015. Subsequent surveillance by Arkansas Game and Fish Commission revealed CWD was likely well-established in the area surrounding the initial detection. Thus, a collaborative and multi-year research project was initiated to quantify impacts on adult and fawn survival, vigilance behavior, and population trends. From 2021–2025, adult deer were captured in Northwestern Arkansas across three sites in Newton and Searcy counties. All adults (≥1.5 years) received GPS collars, ear tags, and CWD testing. At each site, we deployed an 81-camera array (500 m spacing) operating year-round. All mortalities were investigated with a thorough investigation of the death scene, gross and microscopic postmortem examination, and ancillary diagnostic testing to determine cause of death. When tissues were available, all deer were tested for CWD by immunohistochemistry (retropharyngeal lymph node, obex, and tonsil). Causes of death were categorized (i.e., harvest, predation, other trauma, CWD, other disease, undetermined). Major population-level findings included a high overall prevalence of CWD (>50%) among sampled deer and a lower annual adult survival among CWD-positive deer. Shorter lifespans in adult female deer resulted in fewer fawns (net reproductive rate below replacement in CWD-positive females). Deer densities in the study area were low (range: 1.2-5.0 deer/mi^2, varied with site) and the population in this area is in a decline. The top three causes of mortality in the population were predation, harvest, and CWD. Other, less common causes of mortality included other trauma, hemorrhagic disease, and bacterial disease. The most common comorbidities included CWD, malnutrition, bacterial disease and other trauma.

Potential Interaction Between Texas Wildlife and New World Screwworm
John B. Welch, Retired

Dr. Welch provided a presentation on the natural history of New World screwworm (NWS), previous eradication efforts, and contemporary challenges related to the current threat of NWS. The Screwworm Eradication

Program has proven its efficacy in achieving its initial goal. Wildlife will be lost to the current situation with screwworm, but this has happened before and screwworm eradication from a large portion of its endemic range. Sound, science-based technical decisions will again lead to reaching the goal of eradicating screwworm. A strong cooperative program with all agencies and the public will result in eradicating this devastating pest.

Presentation of the Tom Thorne and Beth Williams Memorial Award
Peregrine Wolff, Wildlife Disease Association (WDA); *Laurie Batten* and *Samantha Allen*, American Association of Wildlife Veterinarians (AAWV)

The 2025 Tom Thorne and Beth Williams Memorial Award (Wildlife Disease Association and American Association of Wildlife Veterinarians) was presented to Dr. Hank Edwards. Hank was a longtime member of the WDA, USAHA and a retired Laboratory Manager for the Wildlife Health Laboratory within the Wyoming Game and Fish Department. He is a respected member of the wildlife disease community, and this award recognizes his commitment to wildlife disease, policy and management, especially in the face of chronic wasting disease in free-ranging cervids and brucellosis in free-ranging elk and bison.

Tom Thorne and Beth Williams were highly influential and revered members of the wildlife disease and conservation community and their dedication to wildlife health and conservation are commemorated through this memorial award. It is presented to an individual or group in acknowledgement of either an exemplary contribution or achievement combining wildlife disease research with wildlife management policy implementation or elucidating particularly significant problems in wildlife health.

Committee Business:

The Committee briefly revisited Committee resolutions from previous years, including 2019 (Resolution 24), 2022 (Resolution 30), and 2024 (Resolution 21). The responses and/or updated responses to these resolutions were highlighted. The committee plans to revisit these topics during the 2026 meeting.

No resolutions were presented to the committee this year. Dr. Wolff also presented information on the William R. Lance Award, which will target early career professionals performing research to investigate and develop safe and effective capture agents for use in captive and free-ranging wildlife. The objective is to establish an endowment for the award.

II. F. Other Reports

A. Safety and Health Management Planning for Veterinarians (AAEV)

SAFETY AND HEALTH MANAGEMENT PLANNING FOR VETERINARIANS

K. A. Rood[1], J. Salter[2], and M. Pate[2]
[1]Utah State University College of Veterinary Medicine, Logan, UT;
[2]Wasatch Animal Clinic, Heber City, UT;
[3]Utah State University S.J. and Jessie E. Quinney College of Agriculture and Natural Resources, Logan, UT

Occupational injury rates in veterinary medicine remain troubling: 12% of veterinary service professionals experienced a work-related injury in 2016 and the profession averages three fatalities each year. Evidence from a 2019 peer-reviewed survey of Utah clinical veterinarians showed that 67% of practitioners who routinely performed rectal palpations reported musculoskeletal injuries, and 22% had recently contracted a zoonotic infection despite low PPE use, underscoring persistent risk gaps. Animal-handling sectors also rank among America's most hazardous industries, with 20 fatalities per 100 000 agricultural workers recorded in 2021. Building on the previously AAEV reported initiative that empowered veterinarians to model "Safety-First" leadership in rural practice, we developed and institutionally approved Safety and Health Management Planning for Veterinarians curriculum – a seven-unit, evidence-based curriculum designed to embed occupational safety into everyday clinical decision-making. Core units address: (1) establishing a safety culture; (2) transformational versus transactional safety leadership; (3) systematic hazard identification; (4) qualitative and quantitative risk assessment; (5) prevention and control strategies using the Hierarchy of Controls and Haddon Matrix; (6) employee engagement through tailgate and pre-task training; and (7) program evaluation and continuous improvement. Four applied appendices (hazard-identification worksheet, job-safety-analysis template, risk-ranking matrix, and Haddon Matrix guide) facilitate immediate field adoption. To expand reach, the curriculum is now available as a self-paced online extension course that confers 3 hours of continuing-education credit approved by the Utah Veterinary Medical Association (https://extensioncourses.usu.edu/product/safety-and-health-management-planning-for-veterinarians/). Preliminary participant feedback highlights high relevance and intention to implement new safety protocols. By equipping veterinarians with leadership, risk-assessment, and employee-engagement competencies, this program seeks to reduce injury incidence and foster a sustainable culture of safety in veterinary practice.

III. Organizational Matters

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III. A. BYLAWS OF THE UNITED STATES ANIMAL HEALTH ASSOCIATION

APPROVED 2020

ARTICLE I – NAME

The name of this Association shall be "The United States Animal Health Association."

ARTICLE II – PURPOSE

The United States Animal Health Association is a forum for communication and coordination among state and federal governments, universities, industry, and other concerned groups for consideration of issues of animal health and disease control, animal welfare, food safety and public health. It is a clearinghouse for new information and methods, which may be incorporated into laws, regulations, policy, and programs. It develops solutions of animal health-related issues based on science, new information and methods, public policy, risk/benefit analysis and the ability to develop a consensus for changing laws, regulations, policies, and programs.

ARTICLE III – MEMBERS

3.1. Classes of Members. The classes of members are: Official Agency Members; Allied Organization Members; Individual Members; Student Members; Elected Regional Delegate Members; International Members; Life Members; and Honorary Members.

a. Official Agency Member. The animal health department or agency of each state, U. S. territory or commonwealth, and the District of Columbia; the animal health department of the United States of America; and such other governmental departments or agencies as the Board of Directors may, by a two-thirds majority vote, approve.

b. Allied Organization Member. Any national non-profit organization that is actively and directly concerned with and supportive of the interests and objectives of the Association as outlined in Article II may become a member upon approval of the Board of Directors by a two-thirds majority vote.

c. Individual Member. Any person engaged in work related to animal production, animal health, food safety, public health, veterinary medicine or animal research and who supports the interests and objectives of the

Association as outlined in Article II may become a member upon approval of the Executive Committee by a majority vote.

d. Elected Regional Delegate Member. Such elected regional delegates as provided for in Article VI shall by virtue of such election automatically become members of the Association and shall serve from the close of the Annual Meeting following their election to the close of the following Annual Meeting and shall pay dues as the Board of Directors may determine.

e. Student Member. Any person enrolled in an AVMA-accredited or an AVMA-listed veterinary college or engaged in the formal study of a discipline outlined in Article II, and who supports the interests and objectives of the Association as outlined in Article II, is eligible to become a member of the Association. Student applicants may be asked to provide proof of student status, including a letter from the registrar or transcript. Student members shall not hold voting privileges as provided in 3.2.

f. International Member. The chief official agency member from any foreign federal animal health, food safety, public health or animal health research agency or department, and any foreign national animal industry organization or person who supports the interests and objectives of the Association as outlined in Article II, or said person's designee, is eligible to become a member of the Association upon approval of the Board of Directors by a two-thirds majority. International Members shall not hold voting privileges as provided in 3.2. However, the Association recognizes that Australia, Canada, Mexico and New Zealand are voting members and shall maintain that status unless membership or voting privileges are revoked by a two-thirds vote of the Board of Directors. Failure to pay dues results in an automatic loss of voting privileges. New International Members shall obtain voting rights only by amendment of the bylaws.

g. Life Member. Any Individual Member who has maintained membership in the Association for 35 years, or if such member is at the point of retirement, for 25 years, is eligible to be a Life Member. Past-Presidents of the Association are deemed to be Life Members. Life Members shall have all the privileges of regular membership and shall be exempted from payment of all Individual Member dues. Election to Life Membership of Individual Members shall be by a majority vote of the Board of Directors. Life Members shall be exempt from the payment of one-half of Annual Meeting registration fees; provided that retired past-presidents who receive no remuneration for expenses incurred while in attendance are fully exempt from the payment of Annual Meeting registration fees.

h. Honorary Member. Any person not otherwise a member of the Association who has contributed materially to the advancement of animal science, food safety, public health, veterinary medicine, animal research, or

the purposes of the Association, may be nominated by the Executive Committee for Honorary Membership. Honorary Membership shall be conferred by a majority vote of the Board of Directors. Honorary Members shall be exempt from the payment of all dues and shall not have voting privileges as provided in 3.2.

3.2. Voting. Each member shall have one vote, unless otherwise provided in these bylaws.

a. By State and Federal Official Agency Members and Allied Organization Members. The director or chief executive officer of each Official Agency Member and Allied Organization Member shall appoint and certify in writing to the Executive Director of the Association a person to represent, vote, and act for each of these member classifications in all the affairs of the USAHA, until further notification.

3.3. Dues. The Board of Directors at any Annual Meeting shall have the power to determine the amount of dues.

a. Non-payment of Dues. Subject to any policy the Board of Directors may establish for reinstatement, failure to pay dues within 90 days of notice of delinquency may result in automatic termination of membership.

b. Voluntary Withdrawal of Membership. A member may voluntarily terminate membership effective upon submission of written notice of withdrawal to the Association but shall not be entitled to a refund of any dues paid.

3.4. Effective Date of Membership. Membership shall become effective upon submission of written application in the form required, satisfaction of eligibility requirements, election to membership by an appropriate vote as described in Article III, and payment of annual dues.

3.5. Suspension or Expulsion. Any member may be suspended or terminated for cause, and upon reasonable notice. Sufficient cause for such suspension or termination of membership shall be violation of these bylaws or any lawful rule or practice duly adopted by this Association, or any other conduct prejudicial to its interests. Suspension or expulsion shall be by two-thirds vote of the entire membership of the Board of Directors.

ARTICLE IV – MEETINGS

4.1. Annual. There shall be an Annual Meeting between September 15 and November 15 for receiving annual reports and the transaction of official business of the Association.

a. Notice Requirements. Written notice setting forth the agenda and location of the Annual Meeting shall be made publicly available or noticed electronically to all members at least 60 days prior to the first day of the meeting.

b. Annual Meeting Location. The location of the Annual Meeting shall be selected by the regional districts on the following rotational basis: North Central, Northeast, Western, and Southern; and with the concurrence of the state animal health official of the state in which the meeting is to be held. The location and site shall be finally selected in accordance with guidelines proposed by the Executive Director and approved by the Executive Committee. The Board of Directors shall be advised of the selected meeting location at least three years in advance of the meeting. If any Annual Meeting location becomes unavailable and/or unacceptable the Executive Committee is authorized to select an alternate location.

c. Closure. The Annual Meeting shall be considered officially closed upon the completion of the Board of Directors' meeting held on the last day.

4.2. Special Meetings. Special meetings may be called by the President, in consultation with the Executive Committee, or by a majority of the Board of Directors. The membership shall be electronically notified of any special meeting at least 30 days in advance. Notification shall include the time, location and subject(s) to be considered. Emergency meetings shall be noticed by the Executive Director with the approval of the Executive Committee with as much notice to the Board of Directors as may be practical under the circumstances.

4.3. Committee and General Membership Meetings. Unless otherwise specifically set forth in these bylaws, all committee and general membership actions require a majority vote provided a quorum of the voting membership is present.

4.4. Quorum. A quorum of the Executive Committee shall consist of two-thirds of its membership. A quorum of the Board of Directors shall consist of thirty (30) or more members, providing that Official Agency Members comprise a majority of those in attendance. A quorum of all other committees shall be ten (10) voting members or thirty percent (30%) of the committee membership, whichever is less. A quorum of the general membership shall consist of thirty (30) or more members.

4.5. Proxy Voting. Proxy voting (the power of attorney given by one person to another to vote in his or her stead) is not permitted in any meeting.

ARTICLE V – OFFICERS AND EMPLOYEES

5.1. Elected Officers. The elected officers of the Association are: President; President-Elect; First Vice-President; Second Vice-President; Third Vice-President; and Treasurer. They shall be voting members in good standing of the Association.

a. President. The President is the chief officer of the Association and shall preside at the Annual Meeting and all meetings of the Executive Committee and perform other duties as customarily belong to that office or which the Board of Directors or Executive Committee may assign. The President is an ex-officio member of all committees and may designate a qualified member to attend committee meetings in his or her place.

b. President-Elect. The President-Elect shall act in place of the President in the event of his/her absence, death, or inability to act. When so acting, the President-Elect shall have all the powers of and be subject to all restrictions upon the President. The President-Elect shall chair all meetings of the Board of Directors. The President-Elect shall perform other duties as the President, Board of Directors or Executive Committee may assign. The President-Elect shall automatically become President upon election at the close of the Annual Meeting.

c. First Vice-President. The First Vice-President shall act in place of the President-Elect in the event of his/her absence, death or inability to act and shall perform other duties as the President, Board of Directors or Executive Committee may assign.

d. Second Vice-President. The Second Vice-President shall act in place of the First Vice-President in the event of his/her absence, death or inability to act and shall perform other duties as the President, Board of Directors or Executive Committee may assign.

e. Third Vice-President. The Third Vice-President shall act in place of the Second Vice-President in the event of his/her absence, death, or inability to act and shall perform duties as the President, Board of Directors or Executive Committee may assign.

f. Treasurer. The Treasurer shall be the chief financial officer of the Association, shall be chairperson of the Audit Committee and shall perform those duties that are delegated to the office by the Board of Directors and the Executive Committee. The Treasurer shall not be responsible for the day-to-

day financial transactions of the Association, which will be assumed by the Executive Director.

g. Election.

1) The Committee on Nominations and Resolutions shall annually report its recommendations for the offices of President, President-Elect, First Vice-President, Second Vice-President, Third Vice-President, Treasurer and Regional Delegates to the Association membership at the first business session of the Annual Meeting and again during the second business session at a time certain specified in the program for "Report of Action of the Committee on Nominations and Resolutions." The report shall be read at a time that minimizes conflict with other proceedings, with adjustments as needed at the President's discretion.

2) The District from which the President originated shall submit a nominee for the office of Third Vice- President.

3) Should vacancy(ies) coincide with the Annual Meeting, the District(s) from which the officer(s) vacated shall submit a nominee for the office of Second Vice-President (if two vacancies occur a First Vice-President will also need to be nominated).

4) Nominees for Regional Delegates from the Districts shall be selected by the individual districts and supplied in a timely fashion to the Committee on Nominations and Resolutions for inclusion in its report.

5) The report or amendments approved by a majority vote of the membership is forwarded to the Board of Directors. The acceptance of the report by a majority vote of the Board of Directors shall constitute election of the nominees to office.

h. Resignation. An elected officer may resign his or her position before term maturation by submitting notice in writing to the Executive Director of the Association.

i. Succession.

1) If vacancy(ies) occur between Annual Meetings, the District(s) from which the officer(s) vacated shall submit nominee(s) in writing and within a reasonable time frame to the Executive Director for those office(s).

2) At the discretion of the Executive Committee, the nominee(s) may serve as interim-elected officer(s) until the next Annual Meeting. While serving in an interim capacity, the nominee(s) may fulfill all responsibilities, including voting, and complete all tasks normally associated with the office(s) or which the Board of Directors or Executive Committee may assign.

3) The interim-elected officer(s) may fulfill the District's nomination to be elected as described in section 5.1.g of this Article during the Annual Meeting that immediately follows the vacancy announcement(s).

j. Term. The officers shall serve for one year or until their successors are elected and qualify. The Treasurer may serve for up to six years. The Treasurer's term may be extended by the Committee on Nominations.

5.2. Executive Director. The Executive Director shall be employed by and serve at the pleasure of the Executive Committee, manage the Association's day-to-day affairs and perform other duties as customarily belong to that office or as the Board of Directors or Executive Committee may assign. The Executive Committee shall prepare and negotiate a contract with the Executive Director for a period of not more than five (5) years which shall be subject to approval by a majority of the Board of Directors. If the Association does not have an Executive Director, the Board of Directors shall elect a Secretary.

ARTICLE VI – BOARD OF DIRECTORS

6.1. Board of Directors. The Board of Directors shall have authority over all matters of the Association within the limits of the bylaws.

6.2. Composition. The Board of Directors shall be composed of the following:

- **a.** The Official Agency Members or their designees
- **b.** One representative selected by each of the Allied Organization Members
- **c.** Two delegates-at-large from each of the four regional districts
- **d.** Past-Presidents of the Association
- **e.** The International Member who is the chief animal health executive officer representing the principal federal animal health departments of Canada, Mexico, Australia and New Zealand, or said person's designee.
- **f.** Members of the Executive Committee

6.3. Meetings. The Board of Directors shall have a regular meeting at the time and place of the Annual Meeting, and shall meet at such other times and places selected by the President or by request of a majority of the directors, in which latter event, the President shall promptly set the time and place of the meeting. Notice of all meetings of the Board of Directors shall be made publicly available and/or transmitted electronically to the membership at least thirty days in advance of such meetings. The President, on such reasonable notice as may be practicable under the circumstances, may call emergency meetings of the Board of Directors. At any meeting of

the Board of Directors, the President-Elect (Chairman of the Board of Directors), with a majority vote of the Board of Directors, may call for an Executive Session limiting attendance.

6.4. Duties. The Board of Directors shall receive all committee reports and accept or reject all or part of them; review and approve or disapprove with comment the actions of the Executive Committee; and perform other functions set forth in the bylaws of the Association.

ARTICLE VII – EXECUTIVE COMMITTEE

7.1. Executive Committee. The Association shall have an Executive Committee composed of the elected officers and the immediate Past-President of the Association. The Executive Director shall serve as an ex officio, non-voting member of the Executive Committee and shall not be counted for the purpose of determining a quorum.

7.2. Duties. The Executive Committee shall manage the financial, administrative and internal affairs of the Association when the Board of Directors is not in session. To exercise the authority of the Board of Directors, the Executive Committee must act as a whole and must submit its action for approval at the next meeting of the Board of Directors.

7.3. Meetings. The Executive Committee shall meet at least four times each fiscal year at time(s) and place(s) determined by the President. The Executive Committee is authorized to take action upon the concurring votes of a majority of its total membership, provided that a quorum is present.

7.4. Emergency Meetings. Should the President determine that an emergency situation exists, he or she may convene a telephone or other type of electronic conference meeting of the Executive Committee, which may then act provided a quorum participates. The Executive Committee may also conduct voting electronically if circumstances require and convening is not reasonable.

ARTICLE VIII – ORGANIZATIONAL DISTRICTS

8.1. Districts. The Association is composed of five districts including the Northeast Regional District, the North Central Regional District, the Southern Regional District, the Western Regional District and the District-At-Large.

a. The Northeast Regional District consists of Association members of the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and the District of Columbia.

b. The North Central Regional District consists of Association members of the states of Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.

c. The Southern Regional District consists of Association members of the states of Alabama, Arkansas, Georgia, Florida, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia; and the Virgin Islands and Puerto Rico.

d. The Western Regional District consists of Association members of the states of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

e. The District-At-Large comprises the Allied Organization Members, Elected Regional Delegate Members and Past-Presidents of the Association.

ARTICLE IX – STANDING AND SPECIAL COMMITTEES

9.1. General. The President shall annually appoint from the members of the Association standing or special committees or subcommittees and their chairpersons as required by the bylaws or as he or she finds necessary. Each committee shall meet during the Annual Meeting and at other times deemed necessary by the President of the Association and committee chairperson to accomplish the work of the committee. Only members of the Association permitted by these bylaws are permitted to vote on the work of the committee.

9.2. Program Committee. A Program Committee comprising the chairpersons of all standing committees and subcommittees and the elected officers of the Association shall be appointed by the President to develop the programs for the annual and any special meetings of the Association with the goal of furthering the purposes of the Association. The Program Committee shall be chaired by the President-Elect and co-chaired by the First Vice-President.

9.3. Committee on Nominations and Resolutions. The Committee on Nominations and Resolutions comprises the past-presidents of the Association, the presidents of the Northeast, North Central, Southern and Western Regional Districts, and the president of the District-At-Large.

a. Chairperson. The immediate Past-President of the Association shall chair this committee.

b. Nomination of Elected Officers. This Committee shall receive, consider and recommend to the Association's membership at the Annual Meeting nominations for the elected officers specified in 5.1 and delegates from each district as specified in 6.2.c. The recommendation of elected officers and delegates from each district shall be submitted at least one month prior to the first membership meeting convened at the Annual Meeting.

c. Resolutions. This committee shall review all resolutions of the standing and special committees (the Executive Committee and Board of Directors are standing Committees) for ambiguities and redundancy but shall not alter their intent. After this review, this committee shall present the resolutions to the general membership for approval, which shall require a majority vote.

9.4. Audit Committee. The Audit Committee shall receive the annual audit report and confirm that all financial affairs of the Association are in order and make recommendations to the Board of Directors necessary to ensure the proper management of the finances of the Association.

9.5. Special Committees. The President with the advice of the Executive Committee shall appoint the chairperson(s) and members of such other committees as are necessary to accomplish the purposes of the Association.

ARTICLE X – MISCELLANEOUS

10.1. Amendments.

a. Proposed amendment(s) to these bylaws may be submitted in writing to the Executive Committee by Association members in good standing. The Executive Committee shall provide its recommendations on the proposed amendment(s) to the Board of Directors for deliberation and action. If approved by majority vote of the Board of Directors, the proposed amendment(s) shall be communicated to the general membership by electronic transmission and by posting on the Association website. The proposed amendment(s) shall then be presented to the Association membership at the next Annual Meeting.

b. Amendments to bylaws shall be presented section-by-section at a meeting of the members and shall be approved only upon an affirmative vote of two-thirds of the voting members, provided a quorum is present.

c. In the event the proposed amendment(s) are not approved by the Board of Directors as set forth in 10.1.a, they may be considered by the general membership as described in 10.1.a as prompted by a petition signed by at least thirty members.

10.2. Fiscal Year. The Executive Committee shall establish the Association's fiscal year.

10.3. Parliamentary Procedure. All questions of order not specially provided for in applicable federal or state statute or rule, or Association articles of incorporation, bylaws or policies shall be decided by the usual parliamentary rules, Roberts' Rules of Order Newly Revised being taken as the guide and standard.

10.4. Confidential Information. Information of the Association, including personal information of members, shall be maintained in confidence and not used for any other than Association purposes nor disclosed to others, except as permitted or required by law, these bylaws or written consent of the Association, by Association members, directors, officers, employees and agents.

10.5. Liability of Officers and Directors. The officers and directors of the Association shall not be personally liable for the debts or actions of the Association.

10.6. Annual Audit. The Association shall cause an independent certified public accountant, selected by the Executive Committee, to make an annual examination of its financial accounts and shall submit the report of examination to Audit Committee.

10.7. Compensation/Reimbursement. No member of the Board of Directors, committee member or elected officer of the Association shall receive any compensation for his or her services as such. The Association shall develop policies providing for reimbursement of expenses reasonably incurred in attending meetings and performing special assignments of the Association by the elected officers.

10.8. Dissolution. In the event of dissolution, the Association shall distribute its assets as required by the laws and statutes of the State of Delaware; and distribute its remaining net assets in a manner permitted an

entity to maintain its status as exempt from taxation under Section 501 (c) (5) of the Internal Revenue Code of 1986, as amended, or any successor provision.

10.9. Electronic Communication. Any action to be taken or notice delivered under these bylaws may be taken or transmitted by electronic mail or other electronic means, and any action or approval required to be written or in writing may be transmitted or received by electronic mail or other electronic means.

III. B. USAHA ADMINISTRATIVE POLICIES

ESTABLISHMENT AND OPERATION OF STANDING COMMITTEES

2012

1. All members of standing committees must be official members of USAHA in good standing in accordance with Section 3.4 of the bylaws.
2. The Chair, Vice Chair, and all members of USAHA Committees shall be appointed by the President. It is expected that member appointments will be made in consultation with Committee Chair.
3. Efforts should be made to keep committee size to a manageable number of members, and to maintain a geographical balance, as well as an appropriate balance of State, federal, industry and technical members.
4. Committee Chairs shall be appointed for term of not more than five years, and should not be reappointed Chair for at least one year.
5. All USAHA members present at committee meetings may enter into discussions. Only committee members may introduce resolutions or vote on items of business.
6. Committees shall submit reports only to the Board of Directors and Resolutions only to the Committee on Nominations and Resolution. Committee reports are not considered official actions until approved by the Board of Directors. Committee resolutions are not considered official actions of USAHA until approved by the general membership.
7. Committee Chairs may appoint subcommittees as necessary. Subcommittee members must be members of the parent committee. Subcommittees shall deliberate only the subject matter(s) delegated to them by the parent committee and shall report only to the parent committee.
8. Committee rosters for the current year should be finalized no later than 30 days prior to the start of the Annual Meeting.

COMMITTEE LEADERSHIP CONFLICT OF INTEREST

2018

Individuals interested in, nominated for or currently serving in committee leadership positions (Chair, Vice Chair, Subcommittees, Working Groups) will disclose any possible conflict of interest prior to appointment, or during service whereas a change in circumstance presents a possible conflict. A conflict of interest exists if there is any matter of jurisdiction for the committee's purpose that the individual knows would inure to his or her special private gain or loss. Special private gain or loss' means an economic benefit or harm that would inure to the individual, his or her relative, business

associate, employer, or principal, unless the measure affects a class that includes the officer, his or her relative, business associate, or principal."
If a conflict is present, the individual shall not be appointed to such a position under given circumstances, and similarly if a conflict arises during a term of service, the individual will be relieved of the leadership position. Further, if the individual fails to disclose with the intent of special private gain or loss, the Executive Committee will review and determine necessary recourse.

PARTICIPATION IN USAHA OF FEDERAL AGENCIES AND FEDERAL EMPLOYEES

2009

Federal agencies and personnel have long been an integral and valuable part of USAHA. Agencies have taken part in the organization through official membership and representation on the Board of Directors. This provides the opportunity for presenting agency positions and concerns to the Association. Individual membership and participation of numerous animal health, food safety, and research professionals from a variety of federal agencies is critical to the committees' success.

A major function of USAHA is development of policies and procedures of national disease control and eradication programs. This means that many committee findings and resolutions constitute recommendations to the appropriate federal agency which is responsible for the area of concern. Some of these recommendations are contrary to agency policy or position. For this reason, federal employees should actively share their expertise and opinions as committee members, but should not serve as chairs where they would be making recommendations to their employer.

A number of committees have used federal employees as assistant chairs to good advantage. Also, committees which do not deal with federal agency policy may be chaired by federally-employed USAHA members where appropriate.

The Executive Committee is responsible for the daily activities of the Association, and represents the Association on a year-round basis. To avoid conflict of interest, federal employees should not serve in elected officer positions of the Association. Individuals that serve as an officer that become employed by the federal government should resign their officer position, and a replacement should be sought in accordance with the bylaws.

FINANCIAL AND INVESTMENT POLICY

Rev. 2017

The following policy outlines the administrative principles of the United States Animal Health Association reserve funds.

Goals

1. Build and maintain two year's operation expenses in reserves.
2. Maintain adequate liquidity in the instance funds must be called for use.

3. Earn reasonable interest on reserves to maintain principle and exceed economic inflation rates.

Delegation of Authority

Both Treasurer and Executive Director should be designated as signors on any USAHA accounts.

Responsibilities

- Treasurer: Primary authority for investment decisions, acting within parameters of investment policy. Responsible for monthly review of financials and chairing audit committee.
- Executive Director: Manager of investments, to act under direction of Treasurer. Provide research, recommendations to Treasurer for decisions. Responsibility for day-to-day bookkeeping and reporting (to Treasurer/Executive Committee) of financial information. Compile and distribute quarterly investment reports to EC.
- Executive Committee: Provide regular review of investments from quarterly reports. Provide oversight of Treasurer and Executive Director decisions.
- Board of Directors: Provide approval and/or amendments to investment policy for execution.

Investment Constraints

At all times the account will have at a minimum of $900,000 in marketable CD's. Investments that require Committee approval before being placed in the portfolio include individual derivatives, such as options and futures, collectibles, currencies, tangible real estate, mineral exploration and non-covered options, unless part of a commingled fund. No securities shall be purchased on margin. Additional guidelines are as follows:

Equity

— *Single security concentrations:* No single security (excluding pooled funds) shall represent more than 10% of the equity portfolio unless approved by the Committee.

— *Liquidity:* No stock security shall exceed 5% of the outstanding voting shares of a company. Investments in illiquid private equity must be approved by the Committee.

Fixed Income

— *Quality:* Unless specifically designated for a high-yield portfolio, the average weighted credit rating of individual bonds shall be no lower than "A" (or comparable rating) as measured by Moody's, Standard & Poor's. High-yield securities are permissible as long as overall quality standards are maintained.

— *Duration:* Unless approved otherwise by the Committee, duration of individual CD's shall be no longer than 36 months with a maximum of $50,000 in each CD.

— *Issuer Concentration:* No issuer (except for the U.S. government)

shall exceed 10% of the fixed income portfolio. At all times the account will have at a minimum of $900,000 in marketable CD's.

Alternative Investments

— *Concentrations:* Aggregated hedge funds should be diversified, whether by asset class, strategy, manager, geography, sector, or other factors. Likewise, aggregated real estate investments should represent a broad array of properties or securities. Commodities in aggregate should represent a broad basket of commodities.

— *Liquidity:* Investments with liquidity and pricing that are less frequent than daily shall be approved by the Committee. Investments involving private placements shall be approved by the Committee.

YEAR-ROUND ACTIVITIES

2008

USAHA is a year-round organization, and is often asked to comment on specific issues related to its mission. USAHA should first refer to its resolutions to address a given issue.

USAHA staff will act upon all resolutions as directed by the membership and Board of Directors, involving necessary correspondence. For issues that arise, that pertain to resolutions, can have direct action taken as deemed necessary. No additional voting is necessary, though the input of the executive committee is encouraged.

Should an issue be presented that no resolution has been approved, the Executive Director/Secretary will coordinate with President and First Vice President (Chair of Government Relations) to determine if USAHA should address the specific issue, with consensus from the Executive Committee.

SPECIAL FUNDS POLICY

2009

USAHA will manage special funds for Committees and closely related organizations to house finances and bookkeeping services. Special funds will be held separate of the general USAHA fund, and USAHA will record transactions accordingly. USAHA will enter into a written agreement for each account with the primary representative of the group or Committee and a designated treasurer for that account. The designated account treasurer holds authority for all transactions. Special fund oversight is held by the USAHA Treasurer with support of the Secretary/Executive Director.

JOB POSTINGS FOR NEWS ALERTS AND WEB SITE

2010

USAHA has available opportunities for distributing position announcements through its daily News Alert Summaries, currently on a weekly basis. The following policy sets forth guidelines for use of this service.

USAHA Job Postings are available to any member of the association at no fee. The association will post positions to its web site in addition to the distribution among members.

Non-member groups may also submit positions, however, are subject to review and approval for distribution. The following criteria will be considered:

1) Animal health or animal agriculture related
2) Fields of veterinary medicine, research, diagnostics, regulatory, technical services, non-profit, and/or other related supporting disciplines
3) Align with the mission of USAHA

USAHA reserves the right to refuse posting of any position.

OFFICIAL AGENCY, ALLIED ORGANIZATION MEMBER SUBSTITUTIONS

2011

Official Agency and Allied Organization Members have a designated representative to serve on the board of directors and receive the member benefits for that organization. Occasionally, the designated representative is unable to attend all or some of the annual meeting. In these instances, the representative can designate a substitution to fulfill their obligations on behalf of their agency/organization. This includes:

- Board of Directors Meetings
- Membership Meetings
- Committee Meetings (of which the original representative is an appointed member)

While the USAHA Bylaws state that proxy voting is not allowed, the substitution is treated differently as a transfer of the representative duties.

STUDENT MEMBERSHIP POLICY

2012

Students must be a full-time student in an accredited college or university, in a field of study outlined in the bylaws, part 3.1, E in order to be eligible as a student member and to receive student meeting registration rates.

TREASURER LIFE MEMBERSHIP

2016

The organization's Treasurer shall become eligible for Life Membership upon completion of at least a six-year term in the office. This aligns with other executive committee officers' commitment through the chain of officers. Organizational dues, however, are not waived if the individual continues to represent an official agency or allied organization member, as is true with any past president.

POLICIES REGARDING USAHA ANNUAL MEETING

ANNUAL MEETING SPEAKER REGISTRATION/COMPLIMENTARY REGISTRATION

Revised 2011

USAHA will not provide complimentary registration to any member or regular attendee of USAHA annual meetings that is speaking on a committee agenda.

USAHA will provide a complimentary registration to non-member, invited speakers by request for committees for the purpose of presenting to a committee or general session. Requests must be submitted to the USAHA office.

USAHA will consider providing for travel expenses for general session and committee speakers on a limited basis. Requests must be submitted to the Executive Committee in advance, with consideration being given to a proposed speaker's expertise, timeliness of subject matter, likelihood of attending the meeting otherwise, and budgetary capabilities.

VIDEO AND AUDIO RECORDING OF COMMITTEE PROCEEDINGS

2008

USAHA prohibits third-party video and audio recording of committee meetings at the Annual Meeting.

THIRD PARTY MEETINGS

2008

USAHA will permit related organizations, with missions consistent with those of USAHA, to partner in its Annual Meeting to provide a venue for their gatherings. Agreements are arranged on a case-by-case basis, with input from the Program Chair and approval by the Executive Committee. In general, these organizations are expected to cover related expenses to USAHA for their event. Attendees are also expected to pay registration fees for the Annual Meeting.

AAVLD PARTNERSHIP

2008

USAHA will maintain a Memorandum of Understanding with AAVLD regarding all issues surrounding the Annual Meeting execution. The MOU will serve as a basis for coordination between the two organizations, and be reviewed annually.

ANNUAL MEETING HOST STATE BENEFITS POLICY

2010

As the State hosting the Annual Meeting is often requested to provide support to the organization in terms of staff, supplies and time commitments, USAHA will provide reciprocal in-kind benefits to the hosting State to help offset those costs. USAHA will provide one complimentary registration for every three (3) paid registrations for host state employees. The state animal

health official is responsible for communicating the complimentary registration designees to USAHA by the pre-registration deadline. Exceptions to this guideline are subject to review and approval by the Executive Committee.

DIRECTOR, OFFICER AND STAFF RELATED POLICIES

REIMBURSEMENT AND EXPENSES

2008

In accordance with the Bylaws, Section 10.7, USAHA may provide reimbursement or stipend to its officers, board of directors or committee leadership for reasonable expenses incurred while performing specific assignments of the Association. Requests must be submitted to the Executive Committee for approval in advance of the assignment. The Executive Committee will remain judicious in granting requests and mindful of budgetary limitations when considering requests.

USAHA will reimburse staff for all reasonable expenses incurred while performing duties of the Association. Each individual will furnish full documentation of expenses for audit purposes, subject to review of the Treasurer.

Mileage will be reimbursed at the federal Internal Revenue Service rate.

CONFLICT OF INTEREST POLICY

2008

Due to increased scrutiny of non-profit organizations, by the IRS and requirements for increased transparency, USAHA should have in place a conflict of interest policy for its Board of Directors, Officers and Employees. Policy:

Any member or employee involved in a business transaction of the United States Animal Health Association in which a conflict of interest may be present, shall notify the Executive Committee promptly. Said individual shall refrain from voting on such transactions, and exclude themselves from deliberations. The individual will refrain from any personal influence on the transaction. A transaction that involves a conflict of interest should be reviewed against relative competitive bids or proposals. Decisions to pursue a transaction with a potential conflict of interest should first uphold the best interests of USAHA, and include terms that are reasonable to USAHA within the given marketplace.

Approvals will be made by the Executive Committee. A written disclosure summarizing any possible conflict of interest shall be kept on file at the USAHA office. Discussion and resolution shall be indicated in the minutes of the USAHA Executive Committee session.

Conflict of interest should be disclosed if: a transaction of USAHA involves any close relative of a Director or Employee as the direct vendor/provider, or the Director/Employee stands material gain through a transaction. A Director or Employee holds financial interest if holdings are of

5% or greater of the potential vendor, or holds position of influence with an organization that seeks to do business with USAHA.

A close relative is defined as any parent, spouse, sibling, child, grandchild, or spouse of the aforementioned. Also to be included would be any individual residing in the same household that would resemble a parental or marital relationship.

WHISTLEBLOWER POLICY

2008

Employees and members of USAHA should report illegal or unethical activities, directly relating to the business of USAHA, to the President. The President, in consultation with the Executive Committee, will then determine appropriate actions for investigation, reporting to proper authorities, and reconciliation as necessary.

Employees and members will be provided full confidentiality for reporting such activities, and the President and Executive Committee will ensure due diligence in protecting against retaliation by the organization, its members or other employees and supervisors.

DOCUMENT RETENTION AND DESTRUCTION POLICY

2008

USAHA will maintain all financial records for seven years. They will then be disposed of by either cross-shredding or incineration.

Meeting registrations and membership renewals will be kept for three years.

USAHA PROFESSIONAL DEVELOPMENT SUPPORT

2011

USAHA sees the importance of continuing education for its employees. USAHA may support the opportunities sought by its employees to enhance his/her skill sets. The following is an outline of benefit for employees. USAHA may provide support as follows:

General

Support for professional development must be pre-approved by the employee's supervisor prior to commitment in order to receive benefits. Any opportunity should be directly beneficial to current job functions or can be justified as direct future benefit to the Association.

Flexible Scheduling

USAHA may work with employee to accommodate scheduling of work hours to allow for professional development. This can include:

- University/College courses during normal work hours
- Conferences/seminars for professional development
- Other events with pre-approval of supervisor

Employees should strive to maintain a full work week (40 hours) by making up any lost time at hours mutually agreed upon by employee and supervisor.

Academic Courses

USAHA may support tuition for courses directly beneficial to the employee's job duties, up to $1000 per fiscal year. Tuition will be reimbursed upon completion of the course by the employee, with a minimum of a C grade or relative "passing" status when grading is not applicable. Courses will be considered regardless of degree/non-degree track.
(*Reimbursements are a taxable benefit.)

Conference/Seminar Registration

USAHA may support registration costs for conferences, seminars or other related courses (self-directed, web-based, etc.) Such programs should enhance the employee's ability to do current job functions, or expand skill sets to take on additional duties. USAHA may support up to three conferences per year to a maximum of $1000, unless employee is taking academic courses.

Travel

Travel, lodging and meals are reimbursable at federal per diem rates for development opportunities outside of local meetings, such as the St. Joseph or Kansas City areas.

III. C. Previous Meetings of the United States Animal Health Association

No.	Date	Place of Meeting	President	Secretary/Executive
1	Sept. 27-28, 1897 †	Fort Worth, TX	*Mr. C.P. Johnston, Springfield, IL	*Mr. D. O. Lively, Fort Worth, TX
2	Oct. 11-12, 1898	Omaha, NE	*Mr. C.P. Johnston, Springfield, IL	*Mr. Taylor Riddie, KS
3	Oct. 11-12, 1899 ††	Chicago, IL	*Mr. C.P. Johnston, Springfield, IL	*Mr. Mortimer Levering, Lafayette, IN
4	Oct. 2-3, 1900	Louisville, KY	*Mr. C.P. Johnston, Springfield, IL	*Dr. E.T. Eisenman, Louisville, KY
5	Oct. 8-9, 1901	Buffalo, NY	* Dr. E.P., Niles, VA	*Dr. E.T. Eisenman, Louisville, KY
6	Sept. 23-24, 1902	Wichita, KS	*Mr. W.H., Dunn, TN	*Mr. Wm. P. Smith, Monticello, IL
7	Sept. 22-23, 1903	Denver, CO	*Mr. E. Bolton, Woodward, OK	*Mr. Wm. P. Smith, Monticello, IL
8	Aug. 23-24, 1904	St. Louis, MO	*Dr. J.C., Norton, AZ	*Mr. Wm. P. Smith, Monticello, IL
9	Aug. 15-16, 1905	Guthrie, OK	*Mr. Wm. P. Smith, Monticello, IL	*Dr. S. H. Ward, St. Paul, MN
10	Aug. 15-16, 1906	Springfield, IL	*Mr. M. M. Hankins, Quanah, TX	*Dr. S. H. Ward, St. Paul, MN
11	Sept. 16-17, 1907	Richmond, VA	*Dr. D. F. Luckey, Columbia, MD	*Dr. S. H. Ward, St. Paul, MN
12	Sept. 14-16, 1908	Washington, DC	*Dr. Charles G., Lamb, CO	*Dr. S. H. Ward, St. Paul, MN
13	Sept. 13-15, 1909 ‡	Chicago, IL	*Dr. W. H. Dalrymple, Baton Rouge, LA	*Dr. S. H. Ward, St. Paul, MN
14	Dec. 5-7, 1910	Chicago, IL	*Dr. C. E. Cotton, St. Paul, MN	*Mr. J. J. Ferguson, Chicago, IL
15	Dec. 5-6, 1911	Chicago, IL	*Dr. John F. Devine, Goshen, NY	*Mr. J. J. Ferguson, Chicago, IL
16	Dec. 3-5, 1912	Chicago, IL	*Dr. Macyck P. Ravener, Madison, WI	*Mr. J. J. Ferguson, Chicago, IL
17	Dec. 2-4, 1913	Chicago, IL	*Dr. Peter F. Bahnsen, Atlanta, GA	*Mr. J. J. Ferguson, Chicago, IL
18	Feb. 16-18, 1914	Chicago, IL	*Dr. S.H. Ward, St. Paul, MN	*Mr. J. J. Ferguson, Chicago, IL
19	Dec. 2-3, 1915	Chicago, IL	*Dr. J. L. Gibson, Des Moines, IA	*Mr. J. J. Ferguson, Chicago, IL
20	Dec. 5-7, 1916	Chicago, IL	*Dr. O. E. Dyson, Springfield, IL	*Mr. J. J. Ferguson, Chicago, IL
21	Dec. 3-5, 1917	Chicago, IL	*Dr. J. G. Wills, Albany NY	*Dr. S. H. Ward, St. Paul, MN
22	Dec. 2-4, 1918	Chicago, IL	*Dr. M. Jacob, Knoxville, TX	*Dr. S. H. Ward, St. Paul, MN
23	Dec. 1-3, 1919	Chicago, IL	*Dr. G. W. Dumphy, Lansing, MI	*Dr. D. M. Campbell, Chicago, IL
24	Nov. 29-Dec. 1, 1920	Chicago, IL	*Dr. S. F. Musselman, Frankfort, KY	*Dr. D. M. Campbell, Chicago, IL

No.	Date	Place of Meeting	President	Secretary/Executive
25	Nov. 28-30, 1921	Chicago, IL	*Dr. W. F. Crewe, Bismarck, MD	*Dr. Theo. Burnett, Columbus, OH
26	Dec. 6-8, 1922	Chicago, IL	*Dr. T. E. M. Munce, Harrisburg, PA	*Dr. Theo. Burnett, Columbus, OH
27	Dec. 5-7, 1923	Chicago, IL	*Dr. W.J. Butler, Helena, MT	*Dr. O.E. Dyson, Kansas City, MO
28	Dec. 3-5, 1924	Chicago, IL	*Dr. J. G. Ferneyhough, Richmond, VA	*Dr. O.E. Dyson, Kansas City, MO
29	Dec. 2-4, 1925	Chicago, IL	*Dr. J. H. McNeil, Trenton, NJ	*Dr. O.E. Dyson, Kansas City, MO
30	Dec. 1-3, 1926	Chicago, IL	*Dr. John R. Mohler, Washington, DC	*Dr. O.E. Dyson, Kansas City, MO
31	Nov. 30-Dec. 2, 1927	Chicago, IL	*Dr. L. Van Es, Lincoln, NE	*Dr. O.E. Dyson, Kansas City, MO
32	Dec. 5-7, 1928	Chicago, IL	*Dr. C. A. Cary, Auburn, AL	*Dr. O.E. Dyson, Kansas City, MO
33	Dec. 4-6, 1929	Chicago, IL	*Dr. Chas. O. Lamb, Denver, CO	*Dr. O.E. Dyson, Kansas City, MO
34	Dec. 3-5, 1930	Chicago, IL	*Dr. A. E. Wright, Washington, DC	*Dr. O.E. Dyson, Kansas City, MO
35	Dec. 2-4, 1931	Chicago, IL	*Dr. J. W. Connaway, Columbia, MD	*Dr. O.E. Dyson, Kansas City, MO
36	Nov. 30-Dec. 2, 1932	Chicago, IL	*Dr. Peter Malcolm, Des Moines, IA	*Dr. O.E. Dyson, Kansas City, MO
37	Dec. 6-8, 1933	Chicago, IL	*E. T. Faulder, Albany, NY	*Dr. O.E. Dyson, Kansas City, MO
38	Dec. 5-7, 1934	Chicago, IL	*Dr. T. E. Robinson, Providence, RI	*Dr. O.E. Dyson, Kansas City, MO
39	Dec. 4-6, 1935	Chicago, IL	*Dr. Edward Records, Reno, NV	*Dr. O.E. Dyson, Kansas City, MO
40	Dec. 2-4, 1936	Chicago, IL	*Dr. Walter Wisnicky, Madison, WI	*Dr. O.E. Dyson, Kansas City, MO
41	Dec. 1-3, 1937	Chicago, IL	*Dr. R. W. Smith, Concord, NH	*Dr. O.E. Dyson, Kansas City, MO
42	Nov. 30-Dec. 2, 1938	Chicago, IL	*Dr. D. E. Westmoreland, Frankfort, KY	*Dr. O.E. Dyson, Kansas City, MO
43	Dec. 6-8, 1939	Chicago, IL	*Dr. J. L. Axby, Indianapolis, IN	*Dr. O.E. Dyson, Kansas City, MO
44	Dec. 4-6, 1940	Chicago, IL	*Dr. H. D. Port, Cheyenne, WY	*Dr. Mark Welsh, College Park, MD
45	Dec. 3-5, 1941	Chicago, IL	*Dr. E. A. Crossman, Boston, MA	*Dr. Mark Welsh, College Park, MD
46	Dec. 2-4, 1942	Chicago, IL	*Dr. I. S. McAdory, Auburn, AL	*Dr. Mark Welsh, College Park, MD
47	Dec. 1-3, 1943	Chicago, IL	*Dr. W. H. Hendricks, Salt Lake City, UT	*Dr. R. A. Hendershott, Trenton, NJ
48	Dec. 6-8, 1944	Chicago, IL	*Dr. J. M. Sutton, Atlanta, GA	*Dr. R. A. Hendershott, Trenton, NJ

No.	Date	Place of Meeting	President	Secretary/Executive
49	Dec. 5-7, 1945	Chicago, IL	*Dr. C. U. Duckwork, Sacramento, CA	*Dr. R. A. Hendershott, Trenton, NJ
50	Dec. 4-6, 1946	Chicago, IL	*Dr. William Moore, Raleigh, NC	*Dr. R. A. Hendershott, Trenton, NJ
51	Dec. 3-5, 1947	Chicago, IL	*Dr. Will J. Miller, Topeka, KS	*Dr. R. A. Hendershott, Trenton, NJ
52	Oct. 13-15, 1948	Denver, CO	*Dr. Jean V. Knapp, Tallahassee, FL	*Dr. R. A. Hendershott, Trenton, NJ
53	Oct. 12-14, 1949	Columbus, OH	*Dr. T. O. Brandenburg, Bismarck, ND	*Dr. R. A. Hendershott, Trenton, NJ
54	Nov. 1-3, 1950	Phoenix, AZ	*Dr. C. P. Bishop, Harrisburg, PA	*Dr. R. A. Hendershott, Trenton, NJ
55	Nov. 14-16, 1951	Kansas City, KS	*Mr. F. E. Mollin, Denver, CO	*Dr. R. A. Hendershott, Trenton, NJ
56	Oct. 29-31, 1952	Louisville, KY	*Dr. Ralph L. West, St. Paul, MN	*Dr. R. A. Hendershott, Trenton, NJ
57	Sept. 23-25, 1953	Atlantic City, NJ	*Dr. T. Childs, Ottawa, Canada	*Dr. R. A. Hendershott, Trenton, NJ
58	Nov. 10-12, 1954	Omaha, NE	*Dr. T. C. Green, Charleston, WV	*Dr. R. A. Hendershott, Trenton, NJ
59	Nov. 16-18, 1955	New Orleans, LA	*Dr. H. E. Wilkins, Helena, MT	*Dr. R. A. Hendershott, Trenton, NJ
60	Nov. 28-30, 1956	Chicago, IL	*Dr. A. L. Brueckner, Baltimore, MD	*Dr. R. A. Hendershott, Trenton, NJ
61	Nov. 13-15, 1957	St. Louis, MO	*Dr. G. H. Good, Cheyenne, WY	*Dr. R. A. Hendershott, Trenton, NJ
62	Nov. 4-6, 1958	Miami Beach, FL	*Dr. John G. Milligan, Montgomery, AL	*Dr. R. A. Hendershott, Trenton, NJ
63	Nov. 15-18, 1959	San Francisco, CA	*Mr. F. G. Buzzell, Augusta, ME	*Dr. R. A. Hendershott, Trenton, NJ
64	Oct. 17-21, 1960	Charleston, WV	*Dr. J. R. Hay, Chicago, IL	*Dr. R. A. Hendershott, Trenton, NJ
65	Oct. 30-Nov. 3, 1961	Minneapolis, MN	*Dr. A. P. Schneider, Boise, ID	*Dr. R. A. Hendershott, Trenton, NJ
66	Oct. 30-Nov. 2, 1962	Washington, DC	*Dr. W. L. Bendix, Richmond, VA	*Dr. R. A. Hendershott, Trenton, NJ
67	Oct. 15-18, 1963	Albuquerque, NM	*Dr. T. J. Grennan, Jr. Providence, RI	*Dr. R. A. Hendershott, Trenton, NJ
68	Oct. 19-23, 1964	Memphis, TN	*Dr. L. A. Rosner, Jefferson City, MO	*Dr. R. A. Hendershott, Trenton, NJ
69	Oct. 25-29, 1965	Lansing, MI	*Dr. J. W. Safford, Helena, MT	*Dr. R. A. Hendershott, Trenton, NJ
70	Oct. 10-14, 1966	Buffalo, NY	*Dr. C. L. Campbell, Tallahassee, FL	*Dr. R. A. Hendershott, Trenton, NJ
71	Oct. 16-20, 1967	Phoenix, AZ	*Dr. Grant S. Kaley, Albany, NY	*Dr. R. A. Hendershott, Trenton, NJ
72	Oct. 6-11, 1968	New Orleans, IA	*Dr. John F. Quinn, Lansing, MI	*Dr. W.L. Bendix, Richmond, VA

No.	Date	Place of Meeting	President	Secretary/Executive
73	Oct. 12-19, 1969	Milwaukee, WI	*Dr. John L. Oharra, Reno, NV	*Dr. W.L. Bendix, Richmond, VA
74	Oct. 18-23, 1970	Philadelphia, PA	*Dr. Frank B. Wheeler, Baton Rouge, LA	*Dr. W.L. Bendix, Richmond, VA
75	Oct. 24-29, 1971	Oklahoma City, OK	*Dr. M.D. Mitchell, Pierre, SD	*Dr. W.L. Bendix, Richmond, VA
76	Nov. 5-10, 1972	Miami Beach, FL	*Dr. J. C. Shook, Mechanicsburg, PA	*Dr. W.L. Bendix, Richmond, VA
77	Oct. 14-19, 1973	St. Louis, MO	*Dr. W. C. Tobin, Denver, CO	*Dr. W.L. Bendix, Richmond, VA
78	Oct. 13-18, 1974	Roanoke, VA	*Mr. O. H. Timm, Dixon, CA	*Dr. W.L. Bendix, Richmond, VA
79	Nov. 2-7, 1975	Portland, OR	*Dr. J. E. Andrews, Atlanta, GA	*Dr. W.L. Bendix, Richmond, VA
80	Nov. 7-12, 1976	Miami Beach, FL	*Dr. H. E. Goldstein, Columbus, OH	*Dr. W.L. Bendix, Richmond, VA
81	Oct. 16-21, 1977	Minneapolis, MN	*Dr. A. E. Janawicz, Montpelier, VT	*Dr. W.L. Bendix, Richmond, VA
82	Oct. 21-Nov. 3, 1978	Buffalo, NY	**Dr. L. E. Bartell, Sacramento, CA	*Dr. W.L. Bendix, Richmond, VA
83	Oct. 28-Nov. 2, 1979	San Diego, CA	*Dr. T. F. Zweigart, Raleigh, NC	*Dr. J. C. Shook, Hyattsville, MD
84	Nov. 2-7, 1980	Louisville, KY	*Mr. B. W. Hawkins, Ontario, OR	*Dr. J. C. Shook, Hyattsville, MD
85	Oct. 11-16, 1981	St. Louis, MO	*Dr. L. W. Hinchman, Indianapolis, IN	*Dr. J. C. Shook, Hyattsville, MD
86	Nov. 7-12, 1982	Nashville, TN	*Dr. G. B. Rea Salem, OR	*Dr. J. C. Shook, Hyattsville, MD
87	Oct. 15-21, 1983	Las Vegas, NV	Dr. J. R. Ragan, Nashville, TN	*Dr. J. C. Shook, Annapolis, MD
88	Oct. 21-26, 1984	Fort Worth, TX	*Mr. J. O. Pearce, Jr. Okeechobee, FL	*Dr. J. C. Shook, Annapolis, MD
89	Oct. 27-Nov. 1, 1985	Milwaukee, WI	*Dr. David U. Walker, Montpelier, VT	*Dr. J. C. Shook, Annapolis, MD
90	Oct. 14-19, 1986	Louisville, KY	*Dr. N. W. Kruse, Lincoln, NE	*Dr. J. C. Shook, Mechanicsburg, PA
91	Oct. 25-30, 1987	Salt Lake City, UT	*Dr. J. F. Hudelson, Denver, Co	*Dr. J. C. Shook, Mechanicsburg, PA
92	Oct. 16-21, 1988	Little Rock, AR	*Dr. J. A. Cobb, Atlanta, GA	*Dr. J. C. Shook, Mechanicsburg, PA
93	Oct. 28-Nov. 3, 1989	Las Vegas, NV	Mr. P. E. Bradshaw, Griggsville, IL	*Dr. J. C. Shook, Mechanicsburg, PA
94	Oct. 6-12, 1990	Denver, CO	Dr. M. A. Van Buskirk, Harrisburg, PA	*Dr. J. C. Shook, Mechanicsburg, PA
95	Oct. 26-Nov. 1, 1991	San Diego, CA	*Dr. P. L. Smith, Sacramento, CA	*Dr. J. C. Shook, Mechanicsburg, PA
96	Oct. 31-Nov. 6, 1992	Louisville, KY	Dr. J. Lee Alley, Montgomery, AL	*Dr. J. C. Shook, Mechanicsburg, PA

No.	Date	Place of Meeting	President	Secretary/Executive
97	Oct. 23-29, 1993	Las Vegas, NV	Dr. T. J. Hagerty, St. Paul, MN	*Dr. J. C. Shook, Mechanicsburg, PA
98	Oct. 29-Nov. 4, 1994	Grand Rapids, MI	*Mr. J. B. Finley, Jr., Encinal, TX	*Dr. J. C. Shook, Mechanicsburg, PA
99	Oct. 28-Nov. 3, 1995	Reno, NV	Dr. H. Wesley Towers, Dover, DE	*Dr. J. C. Shook, Mechanicsburg, PA
100	Oct. 12-18, 1996	Little Rock, AR	Dr. M. R. Marshall, Salt Lake City, UT	*Dr. J. C. Shook, Mechanicsburg, PA
101	Oct. 17-24, 1997	Louisville, KY	Dr. Larry L. Williams, Lincoln NE	*Dr. J. C. Shook, Mechanicsburg, PA
102	Oct. 3-9, 1998	Minneapolis, MN	Dr. Jones W. Bryan, Columbia, SC	*Dr. J. C. Shook, Mechanicsburg, PA
103	Oct. 7-14, 1999	San Diego, CA	Dr. Richard H. McCapes, Davis, CA	*Dr. J. C. Shook, Mechanicsburg, PA
104	Oct. 19-26, 2000	Birmingham, AL	Dr. Ernest W. Zirkle, Trenton, NJ	Dr. J Lee Alley, Montgomery, AL
105	Nov. 1-8, 2001	Hershey, PA	Dr. Bob R. Hillman, Boise, ID	Dr. J Lee Alley, Montgomery, AL
106	Oct. 17-24, 2002	St. Louis, MO	Dr. Maxwell Lea, Jr., Baton Rouge, LA	Dr. J Lee Alley, Montgomery, AL
107	Oct. 9-16, 2003	San Diego, CA	*Mr. Bob Frost, Lincoln, CA	Dr. J Lee Alley, Montgomery, AL
108	Oct. 21-27, 2004	Greensboro, NC	Dr. Donald Lein, Ithaca, NY	Dr. J Lee Alley, Montgomery, AL
109	Nov. 3-9, 2005	Hershey, PA	Dr. Richard D. Willer, Phoenix, AZ	Dr. J Lee Alley, Montgomery, AL
110	Oct. 12-18, 2006	Minneapolis, MN	Dr. Bret D. Marsh, Indianapolis, IN	Dr. J Lee Alley, Montgomery, AL
111	Oct. 18-24, 2007	Reno, NV	Dr. Lee M. Myers, Atlanta, GA	§Dr. J Lee Alley, Montgomery, AL / Mr. Benjamin Richey, St. Joseph, MO
112	Oct. 23-29, 2008	Greensboro, NC	Mr. James W. Leafstedt, Alcester, SD	Mr. Benjamin Richey, St. Joseph, MO
113	Oct. 8-14, 2009	San Diego, CA	Dr. Donald E. Hoenig, Belfast, ME	Mr. Benjamin Richey, St. Joseph, MO
114	Nov. 11-17, 2010	Minneapolis, MN	Dr. Richard E. Breitmeyer, Sacramento, CA	Mr. Benjamin Richey, St. Joseph, MO
115	Sept. 29-Oct. 5, 2011	Buffalo, NY	Dr. Steven L. Halstead, East Lansing, MI	Mr. Benjamin Richey, St. Joseph, MO
116	Oct. 18-24, 2012	Greensboro, NC	Dr. David T. Marshall, Raleigh, NC	Mr. Benjamin Richey, St. Joseph, MO
117	Oct. 17-23, 2013	San Diego, CA	Dr. David L. Meeker, Alexandria, VA	Mr. Benjamin Richey, St. Joseph, MO
118	Oct. 16-22, 2014	Kansas City, MO	Dr. Stephen K. Crawford, Concord, NH	Mr. Benjamin Richey, St. Joseph, MO
119	Oct. 22-28, 2015	Providence, RI	Dr. Bruce L. King, Axtell, UT	Mr. Benjamin Richey, St. Joseph, MO

No.	Date	Place of Meeting	President	Secretary/Executive
120	Oct. 13-19, 2016	Greensboro, NC	Dr. David D. Schmitt, Ankeny, IA	Mr. Benjamin Richey, St. Joseph, MO
121	Oct. 12-18, 2017	San Diego, CA	Dr. Boyd H. Parr, Columbia, SC	Mr. Benjamin Richey, St. Joseph, MO
122	Oct. 18-24, 2018	Kansas City, MO	Ms. Barbara C. Determan, Early, IA	Mr. Benjamin Richey, St. Joseph, MO
123	Oct. 24-30, 2019	Providence, RI	Dr. Kristin M. Haas, Montpelier, VT	Mr. Benjamin Richey, St. Joseph, MO
124	Oct. 15-21, 2020	Nashville, TN[1]	Dr. Marty Zaluski, Helena, MT	Mr. Benjamin Richey, St. Joseph, MO
125	Oct. 21-27, 2021	Denver, CO[2]	Dr. Charles Hatcher, Nashville, TN	Mr. Benjamin Richey, St. Joseph, MO
126	Oct. 6-12, 2022	Minneapolis, MN[2]	Dr. Dustin Oedekoven, Pierre, SD	Mr. Benjamin Richey, St. Joseph, MO
127	Oct. 12-18, 2023	National Harbor, MD	Mr. Steve Rommereim, Alcester, SD	Mr. Benjamin Richey, St. Joseph, MO
128	Oct. 10-16, 2024	Nashville, TN	Dr. Stephen K. Crawford, Concord, NH	Mr. Benjamin Richey, St. Joseph, MO
129	Oct. 20-Nov. 5, 2025	Aurora, CO	Dr. Peter Mundschenk, Chapin, SC	Mr. Benjamin Richey, St. Joseph, MO

Key

* Deceased

‡ Last meeting of the Interstate Association of Livestock Sanitary Boards

** Resigned Dec. 12, 1977

§ USAHA hired an Executive Director, in lieu of the Secretary, effective 2006-2007

† Reprinted in 54th Annual Proceedings †† Reprinted in 66th Annual Proceedings

[1] 2020 was held exclusively virtual due to the Covid-19 pandemic

[2] Hybrid Meeting

III. D. USAHA Award Recipients

USAHA MEDAL OF DISTINCTION RECIPIENTS

110th Annual Meeting, Minneapolis, Minnesota – 2006
Dr. Clarence L. Campbell, Tallahassee, Florida
Dr. Richard H. McCapes, Davis, California

111th Annual Meeting, Reno, Nevada – 2007
Dr. J. Lee Alley, Montgomery, Alabama
Mrs. Linda B. Ragland, Richmond, Virginia

112th Annual Meeting, Greensboro, North Carolina – 2008
Dr. John C. Shook, Mechanicsburg, Pennsylvania

113th Annual Meeting, San Diego, California – 2009
Dr. Bret E. Marsh, Indianapolis, Indiana

114th Annual Meeting, Minneapolis, Minnesota – 2010
Mr. Neal F. Black, Eagan, Minnesota
Dr. Thomas J. Hagerty, St. Michael, Minnesota

115th Annual Meeting, Buffalo, New York– 2011
Dr. Bob E. Hillman, Boise, Idaho

116th Annual Meeting, Greensboro, North Carolina – 2012
Dr. John E. Ragan, Bowie, Maryland

117th Annual Meeting, San Diego, California – 2013
Dr. Don H. Lein, Ithaca, New York

118th Annual Meeting, Kansas City, Missouri – 2014
Mr. William T. Hawks, Washington, District of Columbia

119th Annual Meeting, Providence, Rhode Island – 2015
Dr. Richard E. Breitmeyer, Davis, California

120th Annual Meeting, Greensboro, North Carolina – 2016
Mr. Jim W. Leafstedt, Alcester, South Dakota

121st Annual Meeting, San Diego, California – 2017
Mr. Bobby R. Acord, Rocky Point, North Carolina

122nd Annual Meeting, Kansas City, Missouri – 2018
Dr. Donald E. Hoenig, Belfast, Maine

123rd Annual Meeting, Providence, Rhode Island – 2019
Dr. Belinda Thompson, Ithaca, New York

124th Annual Meeting, Virtual – 2020
Dr. John R. Clifford, Stone Mountain, Georgia

125th Annual Meeting, Denver, Colorado (Hybrid) – 2021
Mr. Kevin Shea, Washington, D.C.

126th Annual Meeting, Minneapolis, Minnesota (Hybrid) – 2022
Dr. Annette B. Jones, Sacramento, California
Dr. Boyd H. Parr, Newberry, South Carolina

127th Annual Meeting, National Harbor, Maryland – 2023
Ms. Kimberly Sprout, Newark, Delaware

128th Annual Meeting, Nashville, Tennessee – 2024
Ms. Barbara Determan, Early, Iowa

129th Annual Meeting, Aurora, Colorado – 2025
Dr. Valerie Ragan, Blacksburg, Virginia

USAHA FEDERAL PARTNERSHIP AWARD RECIPIENTS

115th Annual Meeting, Buffalo, New York – 2011
Dr. Jack A. Shere, Raleigh, North Carolina
Dr. William G. Smith, Sutton, Massachusetts

116th Annual Meeting, Greensboro, North Carolina – 2012
Dr. Donald J. Otto, Knoxville, Iowa

117th Annual Meeting, San Diego, California – 2013
Dr. Donald E. Evans, Topeka, Kansas

118th Annual Meeting, Kansas City, Missouri – 2014
Dr. Sarah M. Tomlinson, Fort Collins, Colorado

119th Annual Meeting, Providence, Rhode Island – 2015
Dr. Kevin L. Petersburg, Des Moines, Iowa

120th Annual Meeting, Greensboro, North Carolina – 2016
Dr. Angela M. Pelzel-McCluskey, Fort Collins, Colorado

121st Annual Meeting, San Diego, California – 2017
Dr. Jonathan T. Zack, Riverdale, Maryland

122nd Annual Meeting, Kansas City, Missouri – 2018
Dr. Jack C. Rhyan, Fort Collins, Colorado

123rd Annual Meeting, Providence, Rhode Island – 2019
Dr. Barb Porter-Spalding, Raleigh, North Carolina

124th Annual Meeting, Virtual – 2020
Dr. Darrel K. Styles, Riverdale, Maryland

125th Annual Meeting, Denver, Colorado (Hybrid) – 2021
Dr. Mitch Palmer, Ames, Iowa

126th Annual Meeting, Minneapolis, Minnesota (Hybrid) – 2022
Dr. Mia “Kim” Torchetti, Ames, Iowa

127th Annual Meeting, National Harbor, Maryland – 2023
Dr. David L. Suarez, Athens, Georgia

128th Annual Meeting, Nashville, Tennessee – 2024
Dr. Steve C. Olsen, Ames, Iowa

129th Annual Meeting, Aurora, Colorado – 2025
Dr. Brenda Morningstar-Shaw, Ames, IA

OTHER AWARDS

Year	APHIS Administrator's Award	National Assembly Award
2025	Dr. Kevin Snekvik	Dr. Nora Wineland
2024	Dr. Brian Hoefs	Dr. Annette Jones
2023	Dr. Lanny Pace	Dr. Brigid Elchos; Dr. Ralph Zimmerman
2022	Mr. Paul Zajicek	Dr. Valerie Koenig
2021	Dr. Richard Frederickson	Mr. Ross Wilson
2020	Dr. Michael Neault	Dr. Michael Neault
2019	Dr. Beate Crossley	Dr. Susan Keller
2018	Dr. Andy Schwartz	Dr. David Schmitt
2017	Dr. Bruce Akey	Dr. Kent Fowler
2016	Dr. Annette Jones	Mr. Paul Rodgers
2015	Dr. Dustin Oedekoven	Dr. Bob Meyer
2014	Dr. Donald Ritter	Dr. Tom Holt
2013	Dr. James Roth	Dr. Bill Hartmann
2012	Dr. Donald Hoenig	Dr. Jim Logan
2011	Dr. Don Lein	Dr. Taylor Woods
2010	Dr. Alex Ardans; Dr. Alfonso Torres	Mr. George Teagarden
2009	Mr. James Leafstedt	Mr. John Adams
2008	Dr. Claude Barton	Dr. Bret D. Marsh
2007	Dr. Francois Elvinger	Dr. Bob Hillman
2006	Dr. Terry McElwain; Dr. Willie Reed	Dr. Sam Holland
2005	Dr. Bob Hillman	Dr. Richard D. Willer
2004	Dr. Joan Arnoldi	Dr. Steven England
2003	Ms. Martha Roberts	Dr. John Huntley
2002	Mr. Gus Douglas	Dr. Ernest W. Zirkle
2001	Dr. Richard E. Breitmeyer	Dr. Richard E. Breitmeyer

Year	APHIS Administrator's Award	National Assembly Award
2000	Dr. Mo Salman	Dr. H. Wesley Towers, Jr.
1999	Dr. Terry Beals	Dr. Ralph Knowles
1998	Dr. Marvin Beeman	Dr. Larry L. Williams
1997	Dr. Elizabeth A. Lautner	Dr. Terry L. Beals
1996	Dr. Paul B. Doby	Dr. J. Lee Alley
1995	Mr. Philip E. Bradshaw	Dr. Lewis P. Thomas
1994	Mr. Neal Black	Dr. J. C. Shook
1993	Mrs. Ella Blanton	Dr. Calvin W. S. Lum
1992	Dr. Pat Smith	Dr. Patton L. Smith
1991	Dr. C. L. Campbell	Dr. Paul B. Doby
1990	Dr. David T. Berman	Dr. Clarence L. Campbell
1989	Mr. John B. Armstrong	Ms. Mabel Owen
1988	Dr. Frank A. Hayes	
1987	Dr. Robert P. Hanson	
1986	Dr. Benjamin S. Pomeroy	
1985	Dr. J. G. Flint	
1984	Dr. William C. Tobin	
1983	Dr. Harold E. Nadler	
1982	Dr. John L. O'Harra	
1981	Dr. J. D. Lamont	
1980	Dr. John F. Quinn	
1979	Dr. A. G. Boyd	
1978	Mr. Francis Buzzell	
1977	Dr. Jay Arthur Myers	

IV. APPENDIX
A. Glossary of Commonly Used Acronyms

AAAP	American Association of Avian Pathologists
AAFCO	Association of American Feed Control Officials
AAFV	American Association of Fish Veterinarians
AASV	American Association of Swine Veterinarians
AAVLD	American Association of Veterinary Laboratory Diagnosticians
AAWV	American Association of Wildlife Veterinarians
ABVP	American Board of Veterinary Practitioners
ACIA	Antigen capture immunoassay
ADT	Animal Disease Traceability
AES	Animal Emergency Services
AHB	Animal Health Branch
AHC	American Horse Council
AHI	Animal Health Institute
AHMES	Animal Health Monitoring and Evaluation System
AHRMS	Animal Health Regulatory Message Schema
AHS	African Horse Sickness
AIMS	Animal Identification Number Management System
AMDUCA	Animal Medicinal Drug Use Clarification Act of 1996
aMPV	Avian Metapneumovirus
ANR	Audio news release
APHL	Association of Public Health Laboratories
ARS	Agricultural Research Service
ASEP	Agricultural Conservation Easement Program
ASF	African swine fever
ASI	American Sheep Industry Association
AVEP	Association of Veterinarians in Egg Production
AVMA	American Veterinary Medical Association
AVTP	Association of Veterinarians in Turkey Production
BAPA	Brucella Acidified Plate Agglutination
BCAP	Biosecurity Compliance Audit Program
BCG	Bacillus Calmette–Guérin
BCO	Bacterial Chondronecrosis and Osteomyelitis
BDM	Biologics Development Module
BTV	Bluetongue Virus
BVD	Bovine Viral Diarrhea
CAHPS	Comprehensive Aquaculture Health Program Standards
CAST	Council for Agricultural Science and Technology
CDC	Centers for Disease Control and Prevention
CDC-RB	Centers for Disease Control, Pox and Rabies Branch

CDFA	California Department of Food and Agriculture
CEM	Contagious Equine Metritis
CFIA	Canadian Food Inspection Agency
CFT	Cattle Fever Tick
CFTEP	Cattle Fever Tick Eradication Program
CO2	Carbon Dioxide
COPEG	Commission for the Eradication and Prevention of Screwworm
COX	Cyclooxygenase enzymes
CSIA	Common Swine Industry Audit
CSIS	Center for Strategic and International Studies
CVB	Center for Veterinary Biologics
CVI	Certificates of Veterinary Inspection
CWD	Chronic Wasting Disease
DACF	Department of Agriculture, Conservation and Forestry
DIS	Data Integration Services
DNA	Deoxyribonucleic Acid
DPP	Dual Path Platform
DSA	Designated Surveillance Area
eCVI	Electronic Certificate of Veterinary Inspection
EDCC	Equine Disease Communication Center
EECVI	Extended Equine Certificate of Veterinary Inspection
EHDV	Epizootic Hemorrhagic Disease Virus
EIA	Equine infectious anemia
EID	Electronic identification ear tags
ELISA	Enzyme-Linked Immunosorbent Assay
EMRS	Emergency Management Response System
EP	Equine Piroplasmosis
ET	Emerging Threats
EVA	Equine Viral Arteritis
FAD	Foreign Animal Disease
FADI	Food and Agriculture Defense Initiative
FAO	Food and Agriculture Organization
FDA	Food and Drug Administration
FEI	Federation Equestrian Internationale
FMD	Foot- and-mouth disease
FPA	Fluorescence Polarization Assay
FSIS	Food Safety and Inspection
GFLI	Global Feed LCA Institute
GFWS	Global Food and Water Security Program

GI	Gastrointestinal
GMP	Good Manufacturing Practice
GRAS	Generally Recognized as Safe
HPAI	Highly pathogenic avian influenza
IBR	Infectious Bovine Rhinotracheitis
ICPI	Intracerebral pathogenicity index
ICVI	Interstate Certificate of Veterinary Inspection
IGID	Agar gel immunodiffusion
ILTV	Infectious Laryngotracheitis Virus
IOC	International Olympic Committee
IPC	International Paralympic Committee
ISRCP	Initial State Response and Containment Plan
LBMS	Live Bird Marketing System
LEAP	Livestock Environmental Assessment and Performance
LFA	Lateral Flow Assay
LIMS	Information Management System
LIN	Liquid Nitrogen
LPAI	Low pathogenicity avian influenza
LSD	Lumpy skin disease
M bovis	*Mycoplasma bovis*
MLV	Modified-live virus
MOU	Memorandum of Understanding
NADPRP	National Animal Disease Preparedness and Response Program
NAFV	National Association of Federal Vets
NAHLN	National Animal Health Laboratory Network
NAHMS	National Animal Health Monitoring System
NAHRS	National Animal Health Reporting System
NAIP	National Agricultural Imagery Program
NASAAEP	National Alliance of State Animal and Agricultural Emergency Programs
NASAHO	National Assembly of State Animal Health Officials
NASS	National Agricultural Statistics Service
NBAF	National Bio and Agro-Defense Facility
NCBA	National Cattlemen’s Beef Association
NGOs	Non-governmental organizations
NIFA	National Institute of Food and Agriculture
NMPF	National Milk Producers Federation
NMTS	National Milk Testing Strategy
NPB	National Pork Board
NPIC	National Preparedness and Incident Coordination

NPIP	National Poultry Improvement Plan
NPPC	National Pork Producers Council
NSAIDs	Non-steroidal anti-inflammatories
NTF	National Turkey Federation
NVAP	National Veterinary Accreditation Program
NVSL	National Veterinary Services Laboratories
OBBB	One, Big, Beautiful Bill Act
ORT	*Ornithobacterium rhinotracheale*
ORV	Oral rabies vaccination
PCR	Polymerase chain reaction
PFAS	Per- and polyfluoroalkyl substances
PFOS	Perfluorooctanesulfonic acid
PGGB	Pangenome Graph Builder
POC	Point of Care
POMP	Porcine Outbreak Management Program
PPR	*Peste des Petit Ruminant*
PQA Plus®	Pork Quality Assurance® Plus
PRB	Poxvirus & Rabies Branch
PReP	Preparedness and Response
RAMALT	Recto-anal mucosa-associated tissue
RITA	Rabies in the Americas
rRT-PCR	Real-time reverse-transcriptase polymerase chain reaction
RVAP	Rural Veterinary Action Plan
SAHOs	State Animal Health Officials
SCWDS	Southeastern Cooperative Wildlife Disease Study
SEPRL	Southeast Poultry Research Laboratory
SHIC	Swine Health Information Center
SMS	Secure Milk Supply
SPS	Sanitary and Phytosanitary
TARV	Turkey Arthritis Reovirus
TB	Tuberculosis
TCV	Turkey Coronavirus
THRV	Turkey Hepatitis Reovirus
TPL	Total piglet losses
TQA®	Transport Quality Assurance®
TR-DFTR	Turkey Reovirus Digital Flexor Tendon Rupture
TTBP	Time-to-baseline production
TTS	Time-to-stability
USEF	United States Equine Federation

VCPR	Veterinary-Client-Patient Relationship
VERO	Veterinary Education, Research and Outreach
VI	Virus isolation
VICH	Veterinary International Conference of Harmonization
VS	Veterinary Services
WDA	Wildlife Disease Association
WGS	Whole Genome Sequencing
WOAH	World Organization for Animal Health