New World Screwworm (NWS) Preparedness, Prevention, and Response

White Paper

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Prepared by the United States Animal Health Association (USAHA) in part with the National Institute for Animal Agriculture (NIAA) and the New World Screwworm Symposium hosted in September 2025.

Executive Summary

The New World screwworm (NWS), *Cochliomyia hominivorax*, is a parasitic fly whose larvae infest living tissue of warm-blooded animals, causing severe myiasis, rapid tissue destruction, and high degrees of morbidity and mortality if untreated. Although eradicated from the United States through coordinated application of the Sterile Insect Technique (SIT), NWS remains endemic in parts of Central and South America and now Mexico and continues to pose a persistent reintroduction risk to the United States. Recent detections near the U.S.–Mexico border reinforce the urgency of preparedness, prevention, and response planning. While NWS is not an infectious disease and does not pose risk to food safety or significantly impact public health, it is a parasite posing a serious threat to animal health and well-being in addition to causing potential significant economic impacts resulting from increased production costs, decreased animal productivity, costs for eradication efforts, and potential trade disruptions and other restrictions.

This white paper synthesizes expert discussion, scientific understanding, regulatory considerations, and operational experience presented during the USAHA–NIAA New World Screwworm Symposium in September 2025 and related technical working sessions. It addresses prevention, treatment, research gaps, animal movement and continuity of business (COB), and carcass management, with an emphasis on integrated pest management, protection of animal health and welfare, food security and safety, trade continuity, and environmental stewardship.

The paper concludes that eradication remains the most appropriate goal and sterile insect technique (SIT) remains the cornerstone strategy, based on the biology of the fly that females only mate once but will oviposit up to eight times while males mate multiple times. Sterile male mating results in infertile eggs that fail to hatch. Current sterile fly production capacity is insufficient to respond to a widespread outbreak or sustain extensive buffer zones. Therefore, complementary tools, including effective preventive management practices, judicious use of systemic and local treatments, environmental controls, surveillance, and clear animal movement policies are essential. Strategic investment in research, regulatory agility, interagency coordination and cooperation, with public–private partnerships are critical to mitigate risk, support continuity of agriculture and commerce, and protect animal and public health.

1. Introduction and Problem Statement

If New World Screwworm (*Cochliomyia hominivorax)* (NWS) were to become endemic again in the United States (U.S.) our livestock industries, particularly the cattle industry, would face prolonged costs, as eradication efforts, with potential implications for national food security, proceeded. Successful eradication would require substantial infrastructure, financial investment, and time. Although NWS is not an infectious disease and does not pose a direct risk to food safety or public health, prolonged changes in production practices may be necessary to ensure effective use of control products and adherence to required withdrawal periods. While essential to prevent violative residues and maintain food safety standards, this would create resulting inefficiencies and production losses for producers.

The United States successfully eradicated NWS through a coordinated, multinational application of the Sterile Insect Technique (SIT) which suppresses fly populations by releasing large numbers of sterilized male flies. This achievement yielded substantial economic benefits and remains one of the most successful pest eradication efforts in history. However, NWS has persisted in parts of the Caribbean, Central and South America and now Mexico, and reintroduction risk remains constant due to animal movements, competent wildlife hosts, companion animals, and human travel, as well as an insufficient number of sterile flies due to a lack of production capacity.

Recent detections of NWS in Mexico near the U.S. border underscore the fragility of eradication gains and the need for sustained vigilance. An incursion into the United States will have profound consequences, including animal welfare impacts, economic losses, disruption of inter- and intrastate and international trade, and will place a strain on veterinary and regulatory resources. Wildlife species, particularly newborns and antlered species during rut, velvet, and antler shedding, are especially vulnerable due to natural wounds, have limited opportunity for treatment, and move freely thus contributing to spread of the pest with minimal intervention opportunities.

Historically, SIT has been the primary control and eradication tool. While highly effective, SIT success depends on continuous, large-scale production and release of sterile flies. Current production capacity is severely limited and will be insufficient should a large-scale or rapidly expanding outbreak occur. Accordingly, the United States must be prepared to deploy additional complementary measures including preventive management, treatments, surveillance, movement controls, and research-driven innovations.

2. Need for Prevention

a. Importance of Daily Animal Monitoring

Daily awareness of susceptible animals and targeted prophylaxis is the single most effective preventive measure against NWS infestation, as it allows for prevention of infestation and/or early treatment of an infestation, both of which are critical to breaking the NWS lifecycle and helping to keep adult fly populations low. Monitoring is labor intensive and requires trained personnel capable of inspecting the entire animal, including dorsal and ventral surfaces, mucous membranes (eyes, nose, ears), and genital areas.

Prevention focuses on eliminating the presence of any "wound" or entry site for the fly to lay her eggs on. Early detection of wounds and prompt intervention can prevent egg deposition and larval establishment, thereby disrupting the NWS lifecycle and keeping the NWS population in the environment lower.

Prophylaxis is medication administered in the presence of a wound but with no infestation, such as an approved avermectin administered to a newborn calf to prevent umbilical infestation.

Treatment is medication and/or therapy administered after an infestation has been established. Early identification of new cases is critical to both establishing the presence of the pest/parasite in a herd or a surveillance zone and to facilitate early treatment to enhance a successful outcome and prevent secondary infection.

Traditional monitoring approaches include mounted inspection, known as "ride and treat," in extensive operations. Emerging technologies, such as detection-trained dogs and horses, game cameras, thermal imaging, and drones, may augment human surveillance, particularly in large pastures, wildlife interfaces, or rugged terrain. Regardless of the methods used, daily monitoring is essential once NWS is detected within a region.

Adoption and implementation of enhanced management practices by animal owners will be critical in mitigating the risk and impact of NWS infestation. Livestock handling facilities should be evaluated to eliminate sharp edges, protrusions, or environmental hazards that could cause wounds. Fly, tick, and lice control reduce skin irritation and rubbing behaviors that create entry points for infestation. Common production practices, such as branding, tagging, castrating, dehorning, tail docking, teeth clipping, and ear marking/notching, should be accompanied with prophylactic therapy at the time they are performed to help seal the "wound" and mitigate myiasis. Additionally, as possible in a production system, timing of production practice should be adjusted to times of the year when the NWS fly is less active.

b. Newborn Animals – Intervention at Birth

Newborn animals represent the highest-risk population and account for an estimated 80% of potential NWS cases in livestock. The umbilical cord provides an ideal oviposition site if not properly managed. Mitigation practices include:

- Immediate postnatal examination
- Systemic and/or durational therapeutic prophylaxis
- Umbilical cord treatment with iodine solutions to promote drying and reduce infection
- Monitoring until the cord is fully healed
- Management changes to adjust birthing seasons to the time of year with lower fly activity, based on extreme high and low temperatures

Prophylactic systemic treatment at birth with products such as doramectin or ivermectin is considered critical in high-risk or infested zones. In addition, local dipping or spraying of the umbilicus or navel of newborns and vulva of post-parturient females may serve to prevent or treat early infestations. Inspection of these animals, including behavioral observation, is critical in the days following birthing events.

c. Product Needs and Gaps

i. Systemic vs. Non-Systemic Products

Preventative, prophylactic, and treatment products may act systemically, whereby products enter the bloodstream and circulate throughout the body, or non-systemically (local), which act at the site where the product is applied, such as on the skin surface. Local treatment products are typically applied topically in or around a wound, provide rapid larvicidal action and may include ingredients or agents that promote wound healing. Systemic products circulate in blood or serum and can kill stage 1-3 larvae via contact with wound exudate. Once larvae drop off the animal, they need to be addressed in the environment. Topical products have either local or systemic activity. Non-systemic products act only at the site of application but can have an extended duration of efficacy.

Systemic products generally provide broader and longer-lasting protection but are associated with meat and milk withdrawal periods and residue considerations. Non-systemic products are effective only when present at the wound site unless they have some level of residual efficacy and are limited in their preventive value for naturally occurring wounds. Recognizing product approvals are made with an abundance of caution; there may be a need to review withdrawal periods. Treatment is imperative for an infested animal; a balance of treatment and withdrawal periods needs to be struck for movement of animals to harvest. The ideal products would have short or no withdrawal periods while maintaining efficacy.

ii. Livestock

1. **Role of Non-Systemic Products**
   Certain topical, or locally applied, products may reduce fly pressure and may be effective tools when applied immediately following induced wounds such as castration, dehorning, branding, tagging, tail docking, teeth clipping, and ear marking/notching especially for those products that have residual efficacy. These products are of limited preventive value for spontaneous wounds because they are not present when wounds form. It is recognized that some non-systemic products do have extended duration of activity, which may be of benefit.
2. **Role of Systemic Products**
   Systemic treatments are more effective for prevention, prophylaxis, and treatment, often reducing the need for surgical debridement in early infestations. However, they carry withdrawal times and food safety implications.

iii. Wildlife

In wildlife, prevention relies heavily on surveillance, habitat management, and SIT. Topical products may have limited application in captive wildlife or during handling events. Systemic options are constrained by regulatory, logistical, and ecological considerations.

iv. Product Availability

Federal agencies have oversight of product approval. Each product may be available through one or more of the following:

- Over the counter (OTC)
- Prescription (Rx) via licensed veterinarians
- Accredited veterinarians only
- State-controlled supplies
- USDA-controlled emergency stockpiles

Clear guidance from appropriate regulatory oversight agencies, such as the U.S. Food and Drug Administration (FDA) and the U.S. Environmental Protection Agency (EPA), and other appropriate regulatory agencies, such as the U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services (USDA-APHIS-VS), and state regulatory agencies is needed regarding above access pathways for all treatment modalities during an emergency.

Regulatory pathways for product approval include:

- FDA pathways include New Animal Drug Applications (NADA), Conditional Approval, and Emergency Use Authorization
- EPA pathways include Section 3 Registration, Section 18 Registration and Section 2(ee)
- See Addendums 2 and 3 for further details

v. Environmental Treatment and Prevention

Education regarding frequent and thorough cleaning of facilities is paramount. Close attention needs to be paid to treatment and/or disposal of infested or potentially infested manure and bedding material. Environmental management includes reporting suspect cases, facility sanitation, manure and bedding management, and use of appropriate products as they are identified to reduce larval and adult fly survival.

Mature L3 larvae will stop feeding, drop off the animal, and burrow into the soil or other organic material. Commonly used insect growth regulators (IGRs) that rely on the larvae to consume them while in the environment, not on the animal, will not be effective, as larvae that leave the host no longer feed. After the L3 stage, there is a rapid transition to the pupal stage, during which time they are refractory to insecticides that kill younger larvae. Research related to known compounds applied in the environment impacting late larval and pupal stages of the NWS is needed. This could be advantageous as part of an overall integrated pest management program and may provide some efficacy.

Survivability of the larvae in a confinement production environment, such as those used for commercial swine production, is not well understood. While flies are not uncommon to confinement operations, it is unclear how the life cycle of the NWS fly is impacted by modern confinement facilities utilizing liquid manure pits, air filtration systems, and/or intensive integrated pest management practices.

d. Sterile Insect Technique (SIT)

SIT remains the cornerstone of NWS prevention and eradication. Key needs include:

- Expansion (quantity) and modernization (efficiency) of sterile fly production facilities
- Development of cleaner and more efficient sterilization processes (e-beam, X-ray)
- Implementation of genetically modified all-male strains to double effective output
  - Current production is both male and female
  - The males are the only sex of utility in the eradication process
  - Having the ability to produce only males could effectively double the impact of SIT
- Effective and timely dispersal to maximize impact of the sterile flies

e. Environmental Considerations

Environmental stewardship must guide preventive strategies, balancing efficacy with protection of non-target species, water resources, and ecosystems.

3. Identified Treatment Needs:

a. Product Needs and Gaps

Note: This information is changing and will need to be constantly updated in the Addendum to this white paper which will be available for public viewing on the USAHA website. The addendums include approved products and common pathways for product approval through FDA and EPA.

i. Livestock

Treatment needs vary by species:

As discussed previously, treatment types can be broken into systemic and non-systemic. Both treatment types will be most effective when animals are appropriately handled and restrained, in accordance with best practices such as beef or pork quality assurance standards, for correct product dosing and administration. Ideally, treatment products will possess effective larvicidal properties, prolonged duration of efficacy, and minimal withdrawal periods.

The primary role of locally applied, non-systemic treatments will be in infested wound management with a smaller role in the prevention of infestation during wound resolution. Advantages of local products include rapid larvicidal activity and potentially wider availability as OTC products. Examples of local products may include insecticides such as pyrethroids, including permethrin, organophosphates, spinosad, and insect growth regulators.

Systemic products will have application in both treating and preventing infestation and reinfestation due to their typically longer duration of efficacy as compared to non-systemic products. The primary advantage of systemic products is their longer duration of efficacy and presence in the tissues being consumed during an infestation. As such, systemic treatments will play a greater role in "treatments prior to movement" than local products. The primary drawback of some systemic products is the time needed to establish adequate tissue levels to be effective, which may be several days before a therapeutic level is achieved. Withdrawal times for these products will require additional management considerations, especially as related to animal movement out of infested zones. Additionally, most systemic products will require a producer to have a veterinary-client patient relationship (VCPR) as the products may require a veterinary prescription for use. Examples of systemic products include macrocyclic lactones, isoxazolines, organophosphates, and phenylpyrazoles.

Regardless of treatment modality, correct, appropriate, and judicious use of both systemic and non-systemic treatments will be paramount in mitigating the risk of resistance development, for NWS and other internal and external parasites, and in preventing food safety/residue issues.

1. **Cattle**
    a. Beef cattle need therapeutic treatment options that fit their various production phases. For example, finished and cull animals need treatment options with shorter withdrawal periods than weaned calves and stockers or mature cattle that will remain on the landscape for an extended period of time.

b. Dairy cattle, especially lactating cows, need treatment options that take into consideration withdrawal and milk discard issues.

2. **Small ruminant** (sheep, goats, and camelids) therapeutic options will most likely fall under extra-label and "minor use, minor species" (MUMS) restrictions for FDA-approved products, excluding conditionally approved and feed additive products. There are very few non-systemic topical insecticides or systemic parasiticides currently labeled for small ruminants. Like cattle, therapeutic options need to be developed appropriate to the production phase of the animal. As with other species, the development of internal parasite resistance to macrocyclic lactones may occur if used extensively and the impact that will have on already limited parasiticide therapeutic options.

3. **Swine** therapeutics, like cattle and small ruminants, will need to be appropriate to the production phase. Similar to small ruminant options, there are currently limited non-systemic topical insecticides and systemic parasiticides available. Industry input to USDA, FDA, and manufacturers is paramount to obtaining product approvals. Guidance is also needed relative to withdrawal times, etc.

4. **Equine,** while not food animals, present a huge treatment challenge due to very limited current options of insecticides and parasiticides. Of greatest concern to the equine industry is the development of internal parasite resistance to macrocyclic lactones if used extensively and the impact that will have on already limited parasiticide therapeutic options.

5. **Poultry** do not pose a high risk for infestation with or spread of NWS. Prevention and treatment products exist (i.e., fluralaner) that could be effective tools in higher risk flocks, such as non-commercial or backyard poultry.

ii. Wildlife

1. Captive wildlife may be managed similarly to livestock under veterinary supervision.
2. Native wildlife management emphasizes surveillance, SIT, and targeted intervention.

iii. Companion animals (Dogs/cats)

1. Preventative therapeutics are available for high-risk areas, including border states and those areas with high feral/stray populations.
2. Additional efforts for surveillance, prophylactics, and treatment for feral and stray animals should be managed by local authorities.

iv. Environmental Treatments

1. **Facilities & Conveyances**
   Environmental treatment products may be of value in certain aspects of agriculture, including facilities and conveyances. Facilities include livestock auction markets, abattoirs, holding facilities, exhibitions and events, and working facilities. Conveyances such as livestock trailers and other transport vehicles may also need consideration for treatment. Significant research in the area of non-insecticide products is needed.
2. **Additional Environmental Considerations**
   Current environmental insecticides do not kill NWS larvae after they leave the host and are ineffective against pupae. This underscores the importance of sanitation, physical removal and disposal of potentially infested materials as well as research into effective insecticide and non-insecticide compounds.

v. General Security and Public Health

1. Biosecurity procedures and protocols are imperative for workers and personal vehicles in infested areas. Precautions must be taken by all personnel working with an infested animal or in an infested zone to decontaminate so that no eggs or larvae are transported on clothing, bodies, equipment, or vehicles and that none remain viable in working facilities. If any personnel have open wounds on exposed body parts, such as a cut or scratch, the wound must be examined for eggs or larvae. If there are live NWS flies in the area, care needs to be taken by workers to protect themselves, and ensure any wound is treated and completely covered. Physicians should notify the CDC of the infestation.
2. NWS is a parasite, not an infectious disease, and cannot be transmitted from person to person, human to animal, animal to human, or animal to animal.
3. The risk of human infestation is low, unless an individual has a wound/injury to attract flies.
4. NWS does not present a risk to food safety due to longstanding implementation of regulatory inspection requirements mandating individual ante and postmortem inspection of all animals presented for slaughter accompanied with veterinary disposition of any animal with an abnormality.
5. Resistance to therapeutic products needs to be continually considered and monitored, especially as new products and compounds are proposed or approved. Resistance develops as a result of high selection pressure on a parasite population through repeated frequent exposure to chemical classes and is accelerated when rotation of chemical classes is not practiced or when products are used in combination therapy with products from multiple classes in a single application. Utilizing integrated pest management best practices can slow resistance expression by encouraging the judicious use of pesticides and when used following incorporation of multiple chemical classes in an insecticide rotation strategy, rather than as a mixture. Resistance frequently emerges to pests not intended for exposure, such as to internal helminths when systemic products are used regularly against external parasites over extended periods of time.

4. Research Gaps

a. Access to Flies for Research

Domestic access to NWS is limited, constraining research on treatments, resistance, and surveillance tools.

Scientific expertise with modern research capabilities needs to be integrated with a domestic production facility and is critical to advancing our understanding of NWS behavior, ecology, surveillance, and treatment products.

b. Sterile Insect Technique Efficiency and Safety

Research priorities include:

- Alternative radiation technologies
- Reduced water use and waste management in production facilities
- Utilization of by-products from the rearing system
- Development and approval of all-male strains

c. Preventatives, Prophylactics and Treatments

- Lack of research and data to refine dosage and withdrawal intervals
- Limited understanding of residue dynamics
- Evaluation of feed-additive products
- Potential host vaccine for early larval stages
- Research into effective insecticide and non-insecticide compounds for environmental use

d. Role of Artificial Intelligence (AI)

AI may enhance surveillance, modeling, risk prediction, and operational decision-making. Developing AI to become accurate and deployable will take time and resources.

5. Animal Movements and Continuity of Business

Prior to eradication, unrestricted movement of livestock allowed widespread movement of NWS across the Great Plains, a mistake that should not be permitted with this outbreak. An effective response requires balancing pest control with continuity of agriculture and commerce. In general, the basic tenets of mitigating risk associated with expansion of NWS infestations once a U.S. infestation is confirmed will be the establishment of infested zone(s) and the implementation of animal movement controls. Allowing movement of animals within and out of an infested zone is critical to the continuity of business. Mitigating the risk of moving infested animals out of an infested area will require inspection, appropriate treatment, animal identification, and documentation (a permit) to ensure all movement requirements are met prior to animal movement.

a. Zoning

Boundaries and timing of zoning for affected areas should be science-based, flexible, and determined through coordination between states and the USDA. Maps must be updated regularly, and communications regarding zoning must be clear and concise.

b. Movement Restrictions

Movement restrictions will be a critical component in mitigating the risk of spreading NWS and allowing continuity of business in non-infested areas of a state. Clear authority by state and/or federal responsible agency is required for determining movement in and out of zones, states, and regions. The federal government will define minimum zones; States will enforce movement restrictions that facilitate continuity of business while protecting against spread within each state's borders.

c. Permits

Permits are issued through the state regulatory agency or the federal government, depending on authority. Generally, both the state and federal government(s) have the ability to accept paper-based permits, at the same time development and utilization of electronic permitting systems will greatly enhance continuity of business by allowing for regulatory activities to occur closer to the "speed of commerce." It is incumbent on veterinarians and their clients to know and understand the permits needed, while the state and federal agencies must supply easily accessible and understandable permitting information.

d. Identification Requirements

Individual animal identification is paramount to animal disease traceability. Official, permanent identification must be applied to animals in accordance with state and federal rules. Official identification methods must be employed to ensure efficient and effective tracing of animals moved from infested zones and should be considered for animal movements from adjacent animal surveillance zones.

Specific opportunities exist here to maintain the speed of commerce by utilizing technologies such as existing Ultra High Frequency ear tags and backtags as well as through the development of a universal (Dual Frequency) tag that can be read seamlessly in all existing infrastructures without modifications or limitations.

e. Data Collection and Management

Policy decisions are needed regarding the scope and implementation of data collection. According to the playbook, all detections of infested livestock and wildlife and adult flies are data points for determination of zones. The USDA federal database and official system of record for outbreak response is the Emergency Management Response System (EMRS).

f. Inspections

Uniform guidance outlining accepted inspection procedures specific to each species of livestock, captive and captured wildlife, and companion animals should be developed by USDA-APHIS-VS in conjunction with states and appropriate subject matter experts. Establishing standardized inspection procedures will help ensure all inspections meet a minimum standard and further enhance efforts to prevent spread of NWS through animal movements.

g. Direct-to-Slaughter Movements

Key considerations for animals moving directly to slaughter include pretreatment requirements and associated product withdrawal times, the role and use of sealed conveyances, clean-out, and cleaning and disinfection (C&D).

h. Markets, Treatment, and Return-to-Origin

Uniform guidance is essential to ensure compliance, reduce risk, and maintain producer trust, all while trying to balance the speed of commerce and the risk of spreading the flies. While the federal government has supplied a compilation of response activities, the key stakeholders, livestock industries, the states, and the federal government need to continue to hone each part of the response, as needed.

i. Cleaning and Disinfestation

1. Conveyances: Uniform guidance on cleaning and/or disinfestation (C&D) of conveyances is needed to clarify in what circumstances a conveyance requires C&D. Further, guidance should provide direction on insecticides or other alternative treatments that will serve as effective larvicides or adulticides effective on emerging flies.
2. Facilities: Similar to conveyances, uniform guidance clarifying situations when facilities require cleaning and disinfestation and how to accomplish the task with insecticides or other alternative treatments is needed.

6. Carcass Treatment and Disposal

Proper carcass management is critical to prevent further propagation of NWS. Upon death, larvae exit the carcass and may pupate in soil or facility substrates. Recommended practices include:

- Prompt carcass disposal, preferably by burning where permitted, and prevention of access by scavengers
- Treatment of surrounding soil and facilities as directed by animal health or wildlife/natural resource authorities with appropriate product(s) as identified

Conclusion

New World screwworm remains a persistent and serious threat to U.S. animal agriculture, wildlife, companion animals, and public health. While SIT remains indispensable, it is not sufficient alone and under current production constraints, it is merely a stopgap to slow the movement of the fly and is currently most affected only against localized infestations. An integrated approach—combining vigilant surveillance, targeted mitigation, effective treatment, clear movement policy, robust research investment, and coordinated interagency response—is essential.

Proactive planning, regulatory flexibility, and sustained public-private collaboration will determine the nation's ability to rapidly contain and ultimately eradicate any future incursion, while safeguarding animal welfare, food security and safety, and continuity of business.

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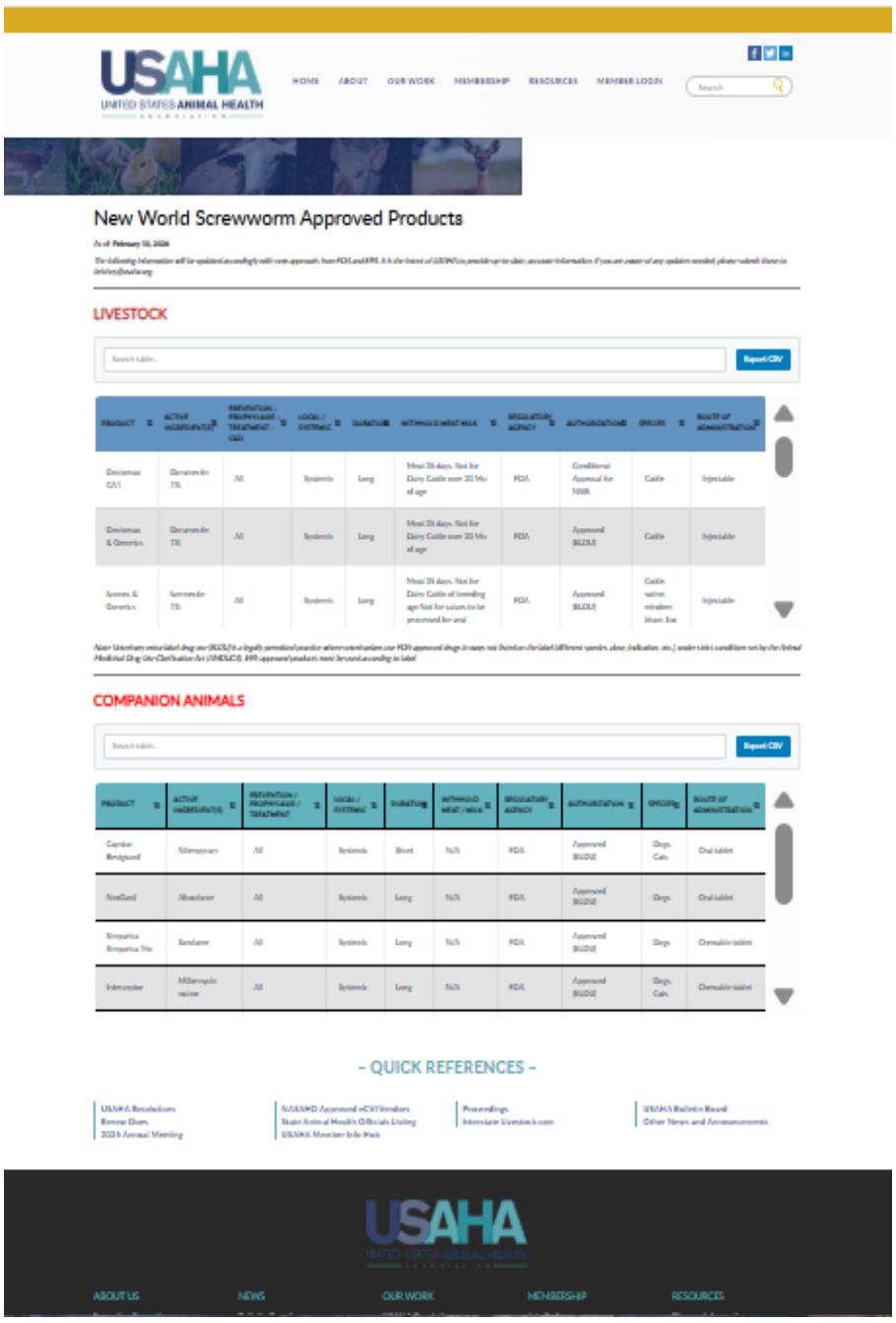
Addenda

1. Preventive, prophylactic, and treatment products available in the US.
   Available online at: https://usaha.org/new-world-screwworm/nwsproducts/
   This is a living document that will be kept current as new tools are available, including both EPA and FDA products.
   - Inclusion of clarification for off-label use and limitations for EPA products and FDA products with conditional or emergency use authorizations.
2. Regulatory Pathways for US Product Use
3. FIFRA 2(ee) Process Considerations & General Guidance for States
4. NWS Therapeutics Overview
5. USAHA-NIAA Symposium Information: Agenda, Presenters, Planning Committee, Sponsors & Attendee demographics.
   - Presentations
6. Other NWS Resources –
   - USDA-APHIS: www.screwworm.gov
   - CDC: https://www.cdc.gov/new-world-screwworm/about/index.html
   - FDA-CVM: https://www.fda.gov/animal-veterinary/safety-health/new-world-screwworm-information-veterinarians
   - California Department of Agriculture: https://www.cdfa.ca.gov/ahfss/Animal_Health/screwworm/
   - Florida Dept. of Agriculture & Consumer Services: https://www.fdacs.gov/Agriculture-Industry/Pests-and-Diseases/Animal-Pests-and-Diseases/New-World-Screwworm
   - Texas Animal Health Commission: https://www.tahc.texas.gov/emergency/nws.html
   - Texas A&M AgriLife Extension: https://agrilifeextension.tamu.edu/new-world-screwworm
   - AVMA: https://www.avma.org/resources-tools/one-health/veterinarians-and-public-health/new-world-screwworm
   - NCBA: https://www.ncba.org/education-resources/industry-updates-resources/new-world-screwworm-resources
   - Swine Health Information Center: https://www.swinehealth.org/wp-content/uploads/2026/01/SHIC-Fact-Sheet-NWS-Considerations-for-Swine-1-2026.pdf

Addendum 1

Available online at: https://usaha.org/new-world-screwworm/nwsproducts/
This is a living document that will be kept current as new tools are available, including both EPA and FDA products.



Addendum 2

Regulatory Pathways for US Product Use

*Veterinary extra-label drug use (ELDU) is a legally permitted practice where veterinarians use FDA-approved drugs in ways not listed on the label (different species, dose, indication, etc.) under strict conditions set by the Animal Medicinal Drug Use Clarification Act (AMDUCA).

FDA Regulated

NADA

- This is the standard pathway for drug products in the US.
- It can take decades to develop the data and move through review depending on the drug's properties and proposed use.
- ELDU applies.*

Conditional Approval – FDA

- This pathway allows "conditional" approval of a product while efficacy data are still being generated, allowing earlier entry of the product into the market.
- ELDU is not permitted.*

Emergency Use Authorization (EUA)

- EUAs are used in cases of emergency and are similar to Section 18 registrations.
- Supportive data are required for efficacy, safety, and withhold requirements.
- ELDU is not permitted.*

EPA Regulated

Section 3 registration

- This is the standard pathway for pesticide products in the US.
- It can take decades to develop the data and move through review depending on the pesticide's properties and proposed use.

Section 18 registration

- This type of registration is used for emergency purposes such as entry of a new pest into the US creating a significant threat to agricultural crops or, animals where appropriate management products have not been established (such as NWS).
- Supportive data are required for efficacy, safety, and withholding requirements.

Section 2(ee)

- This is an option available to the states which allows addition of only a new pest vs. use, site, application, dose, etc. States work directly with product registrants to request desired bulletins.
- Evidence of efficacy is required on the part of the manufacturer.

> EPA products must only be used according to label.

USAHA
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New World Screwworm (NWS)
Preparedness, Prevention, and Response

Learn more at usaha.org

Addendum 3

FIFRA 2(ee) Process Considerations & General Guidance for States

FIFRA 2(ee) is a process that allows the addition of another pest to an existing EPA approved product with NO OTHER CHANGES TO THE LABEL. As with any EPA product, extra label use of any kind violates federal law. This means that even with the NWS addition to the label, the product can only be applied per label instructions including dose, timing, frequency, location, age, species, and method of delivery (mist, spray, wet-down, fog, pour-on, backrub, spot application, etc.) with the exception that the user CAN decrease dose, increase withdrawal interval, and/or increase duration between applications.

It is the responsibility of the proper authority in the individual state to make such 2(ee) requests to the registrant (marketer of the product) for an authorization. While any data provided by the requesting state may expedite the process, it is the responsibility of the sponsor to provide compelling evidence that the active ingredient(s) in the product is efficacious for all stages of the species being added and the appropriate descriptive wording to be included in the 2(ee).

Responsible parties by state: Control Officials – Association of American Pesticide Control Officials.

Stakeholders contributing to the list of products for which 2(ee) bulletins are requested may include the state and federal animal health official(s), epidemiologists, entomologists, state pesticide regulators, academia, extension, industry, product sponsors, and other subject matter experts.

SAHOs from other states that have completed this process will be invaluable resources for initiating requests in your state.

A copy of the 2(ee) is required in hand by the applicator for use under this authorization.

Addendum 4

New World Screwworm Therepeutics 101

USAHA
UNITED STATES ANIMAL HEALTH ASSOCIATION

Management Practices: When to do What

With no Mitigation - Case Rates Will likely be Below 20% of Total Population Of Susceptible Animals – **80% of Cases Will Be Newborn Animals**

- Practices should be focused on minimizing "wounds" or potential entry sites for the larvae
- Calves
  - Birth – Naval cord, vulva of heifer calves, eartag, ear notch (season)
  - Branding (turn out) - Brand site, castration, implant, dehorn, eartag, notch, rope burn
  - Grazing – Fly & tick control, pasture injuries (briars, dogs, wildlife), eyes on the herd $$$
- Cows
  - Calving – potential vulvar tears
  - Chute / handling injuries, working dog bites
  - Processing "wounds" - brands, tags, etc.

Definitions

Prevention

- Treatment when there is a suspected recent or anticipated future increased risk.
  - Cattle being moved from an affected zone to an unaffected zone.
  - Cattle in an affected zone with increased risk of wounds, injuries, or bites.
  - Long acting, easy to administer systemic products are optimal.

Prophylaxis

Treatment of animals with pre-existing "open wounds" (see definition below) in an affected area.

- Examples are newborns, castration, dehorning, tagging, recent injuries, etc.
- Fast-acting systemic and topical non-systemic long-acting products are optimal.

Treatment

Treatment of existing infestations with larvae present in the wound.

- Treat infested animals with thorough cleaning, aggressive debridement, combined with systemic and long-acting topical non-systemic products.
- Multiple treatments may be necessary.
- The sooner cases are identified:
  - Less expansive the treatment(s);
  - Less treatments needed;
  - Quicker the recovery;
  - Higher success rate; and
  - Less permanent damage.

Management Practices: What to use When

Over 90% mortality of untreated infested newborn calves

Therapeutic Intervention: Practices should be focused on choosing products based on desired "attributes."

Prevention

Non-affected healthy animal with speculated past or present risk event / exposure.

- Example: Treat every animal coming from an affected zone with approved products.

Prophylaxis

"Open wound" (includes naval, compromised tissue, and unintended or management-induced wounds).

- Example: Treat every newborn calf with doramectin / ivermectin / permectrin spray naval + vulva.
- Example: Treat every animal at branding, castration, dehorning, tagging, etc. with approved products.

Treatment

Animals with active myiases.

- Example: Treat infested animals with thorough cleaning, aggressive debridement and approved products.

Addendum 5

USAHA-NIAA Symposium Overview:

Agenda, Presenters, Planning Committee, Sponsors & Attendee demographics.

In the summer of 2025, USAHA identified a need to address the preparedness for New World Screwworm in the United States. The intent was to coalesce discussions on NWS from federal and state authorities with industry groups regarding prevention, treatment, research gaps, animal movement, and continuity of business (COB) for animal agriculture.

USAHA partnered with the National Institute for Animal Agriculture to convene a day-and-a-half symposium on September 24-25, 2025, in Kansas City. The event brought together technical experts, regulatory officials, animal industry leaders, and private industry stakeholders. The program was led by the USAHA Committee on Parasitic and Vector Borne Diseases, and its chairs Drs. Hallie Hasel and T.R. Lansford. The event agenda was as follows:

Tuesday, September 23		
6:00 – 7:30 pm	Welcome reception	
6:00 pm	Overview and charge for the meeting	Dr. Peter Mundschenk Dr. Michael Short
Wednesday, September 24 – Kauffman Foundation Conference Center		
7:00 am	Doors Open	
7:30 am	Breakfast	
8:15 – 9:00	NWS situation update	Dr. Adis Dijab, USDA-APHIS-VS Dr. Megan Schmid, USDA-APHIS-VS Dr. Sarah Speth, USDA-APHIS-VS
9:00 – 10:00	Current progress/challenges and technologies/tactics	Dr. Denise Bonilla, USDA-APHIS-VS Dr. Kim Lohmeyer, USDA-ARS
10:00 – 10:30	Public Health Perspectives on NWS	Dr. Anne Straily, CDC
10:30 – 10:45	Break	
10:45 – 12:00	Preparedness in the US	Dr. Lindsey Holmstrom, USDA-APHIS-VS Dr. Megan Schmid, USDA-APHIS-VS
12:00 – 1:00	Lunch	
1:00 – 2:30	Review of approved products and approval processes for additional products	Dr. Ellen Hart, FDA Dr. Tristan Colonius, FDA Ms. Jennifer Gaines, EPA
2:30 – 2:45	Break	
2:45 – 4:30	Review of myiasis treatments and preventatives in use in other countries	Dr. Diane Kitchen, FDACS Dr. Edwin Burgess, U of F Dr. Phillip Kaufman, TAMU
4:30 – 5:00	Review and recap	Dr. Dee Ellis

Thursday, September 25		
7:30 am	Breakfast	
8:00 – 8:15	Opening remarks	Dr. Peter Mundschenk, Pres., USAHA
8:15 – 9:15	NASAHO Working Group update	Dr. Michael Short, FDACS Dr. Nicki Humphrey, CDFA
9:15 – 10:15	Moderated discussion for white paper development - Treatments - Preventatives	Dr. Dee Ellis, TAMU
10:15 – 10:30	Break	
10:30 – 12:00	Moderated discussion for white paper development - Quarantine areas - Movement controls	Dr. Dee Ellis, TAMU

Attendee Demographics

103 Attendees from across the U.S. attended the event, as well as several presenters participating remotely. Representatives included:

Private Industry	24
State Government	31
Animal Industry Organizations	33
Federal Government	8
University	7

The event was sponsored by Elanco Animal Health, Merck Animal Health, and the American Veterinary Medical Foundation.

Select Presentations from the Symposium are available at: https://usaha.org/new-world-screwworm/2025-new-world-screwworm-symposium/

The Planning Committee included:

- Dr. Hallie Hasel, USAHA Committee Chair
- Dr. T.R. Lansford, USAHA Committee Vice Chair
- Dr. Peter Mundschenk, USAHA President
- Dr. Beth Thompson, National Assembly President
- Dr. Thach Winslow, Committee Member at Large
- USAHA Staff
- NIAA Staff