



# Lessons learned from recent surveillance conducted during outbreaks: PRRSV

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USAHA/AAVLD Committee on Animal Health Surveillance and Information Systems– Nov 3<sup>rd</sup>, 2025

# POMP sponsors

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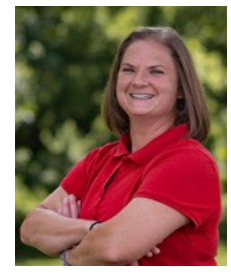
# Key Personnel



**Daniel Linhares**  
*Project Director*



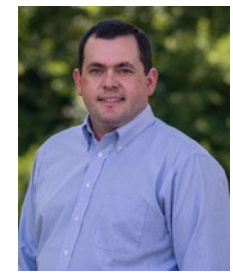
**Ana Paula**  
*Project Coordinator  
& Data Analyst*



**Tina Peterson**  
*Project Manager*



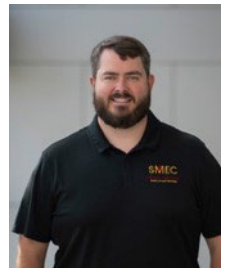
**Chris Rademacher**  
*Extension & Outreach*



**Giovani Trevisan**  
*Molecular Epidemiology*



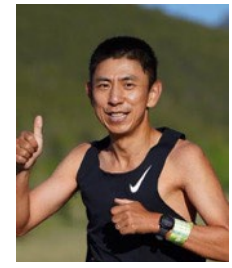
**Gustavo Silva**  
*Epidemiology*



**Justin Brown**  
*Education*



**Zhengyuan Zhu**  
*Survey (CSSM)*



**Chong Wang**  
*Statistics*



**Elisa De Conti**  
*Research Development*



 **Swami Jayaraman**  
*Diagnostic Cyber Infrastructure*



**Kinath Rupasinghe**  
*Software Development*



**Allison Anderson**  
*Survey (CSSM)*



**Jianna Dakin**  
*Survey (CSSM)*



**Mary Mohammed**  
*Research Development*

## What is the POMP?



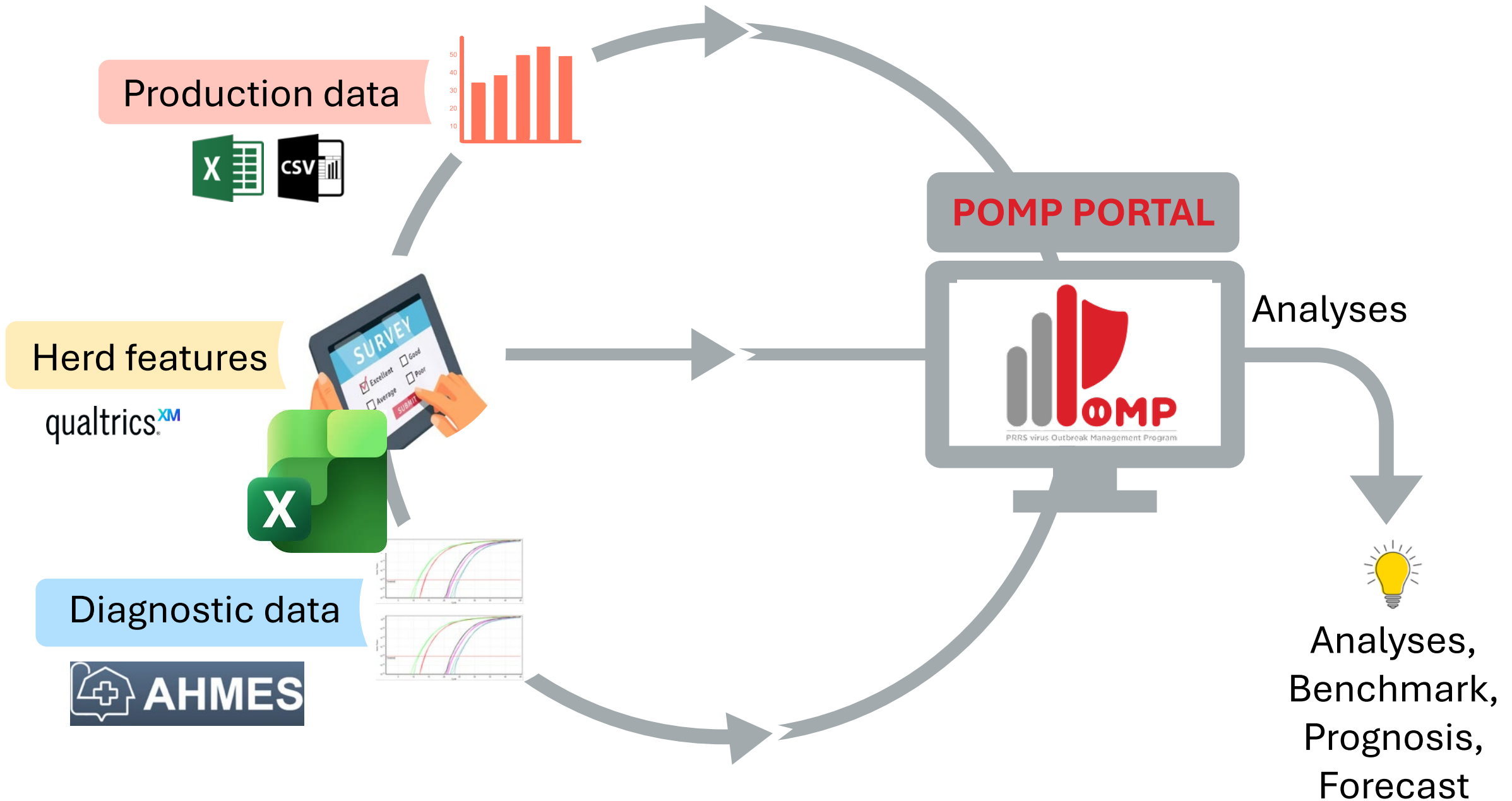
pomp@iastate.edu

<https://fieldepi.org/pomp/>

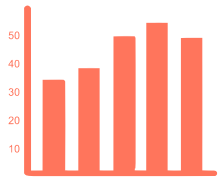
Ongoing field epi platform gathering data to provide insights on **onset**, **response**, and **recovery** from PRRS outbreaks

### Benefits to participants:

- ✓ **\$700** per break for diagnostic tests
- ✓ Ongoing production **performance monitoring** for recovery
- ✓ PRRSV **genotyping** interpretation
- ✓ Within and between systems **benchmarking**
- ✓ ***Knowledge on factors associated with better recovery***



Production data

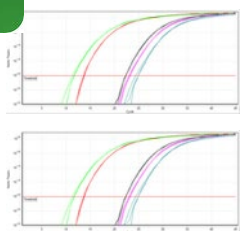


Herd features

qualtrics<sup>XM</sup>



Diagnostic data



POMP PORTAL



Analyses



Analyses,  
Benchmark,  
Prognosis,  
Forecast

## Production data

- **Production data from 2 years prior and after from the outbreak**
  - Sow Inventory
  - Aborts
  - Stillborn and mummies
  - Preweaning mortality
  - Pigs weaned weekly



## Herd Demographics

- Location, genetics, herd size...

## Outbreak information

- Previous and current outbreak dates...
- AASV status, plan to control or eliminate...

## Immunologic solutions

- Virus inoculations, vaccines, dose, route, age groups...

## Gilt flow

- Herd Closure (stop gilt entry), source of gilts (external, internal), gilt ages...

## Bio-management strategies

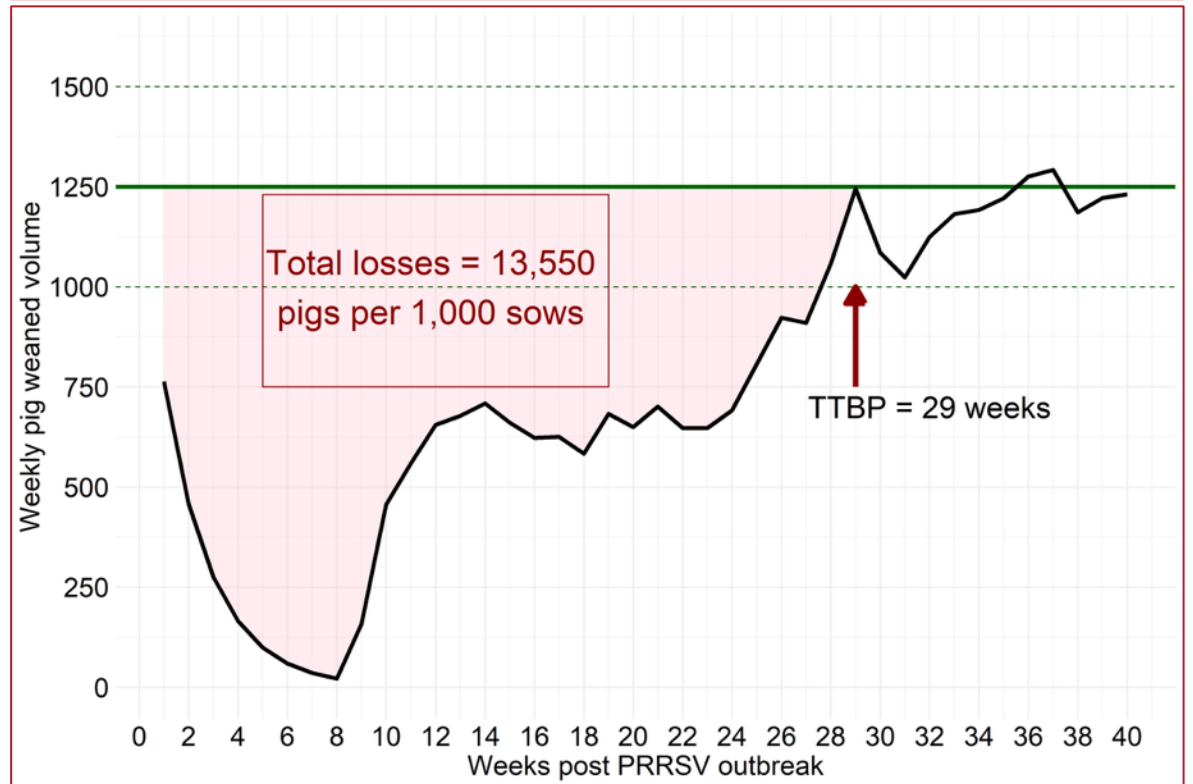
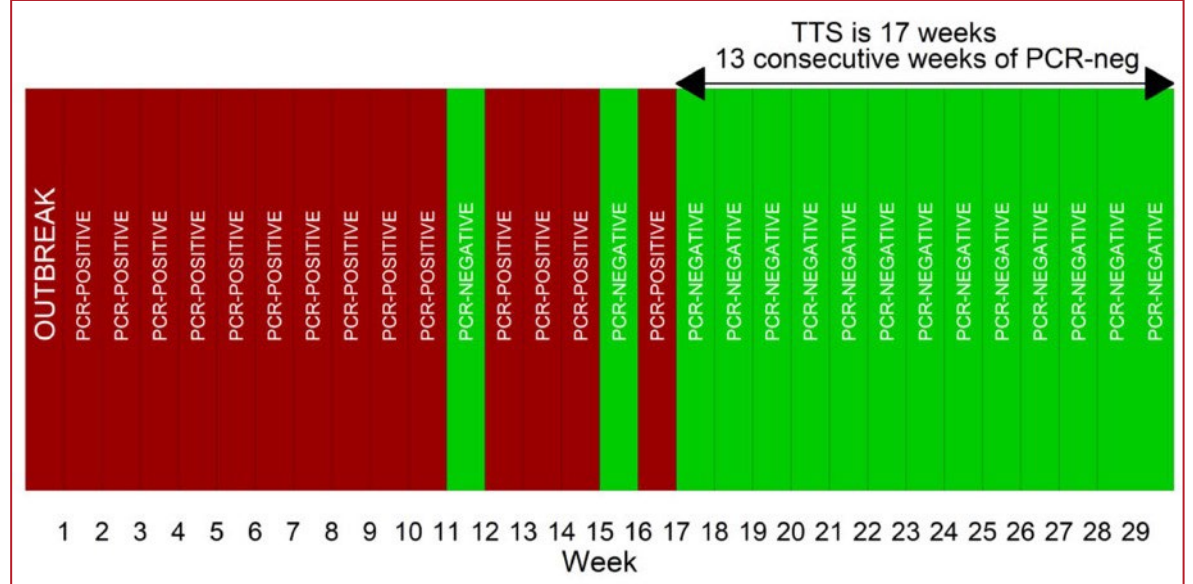
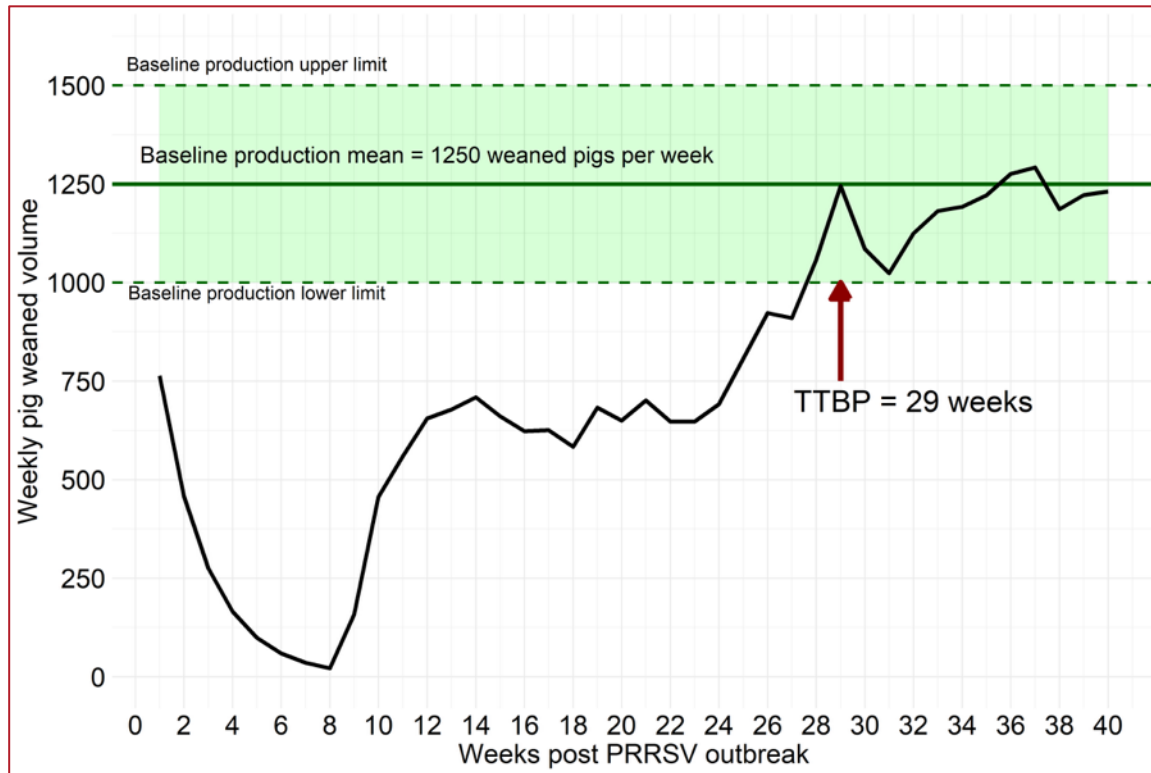
- Cleaning, Sanitation, all-in all-out farrowing room, personnel flow ...

# Key metrics

*time-to-stability (TTS)*

*time-to-baseline production (TTBP), and*

*total piglet losses per 1K sows (TL)*





# Highlights

Currently: ~ 580 herd-outbreaks across 23 swine systems in the POMP database (2010 – 2025)

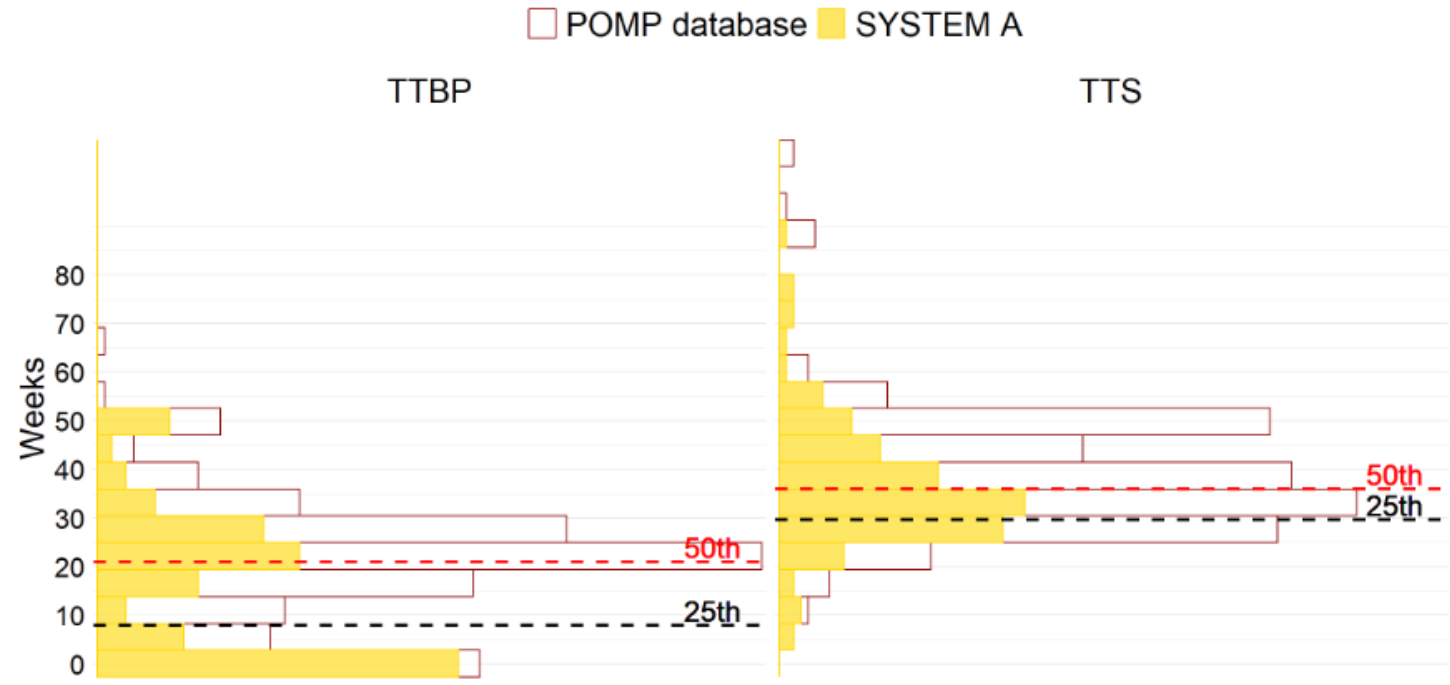
Year	Number of new herds
2025	18
2024	36
2023	42
2022	44
2021	16
2020	46

# Benchmarking

**Compare practices and herd-level metrics among producers undergoing outbreaks:**

- Herd characteristics
- Response plan
- Recovery metrics
- PRRSV strains

- System A TTS median is 3 weeks **FASTER** than POMP database
- System A TTBP median is 1 week **FASTER** than POMP database



- System A TL median is 300 piglets **LOWER** than POMP database



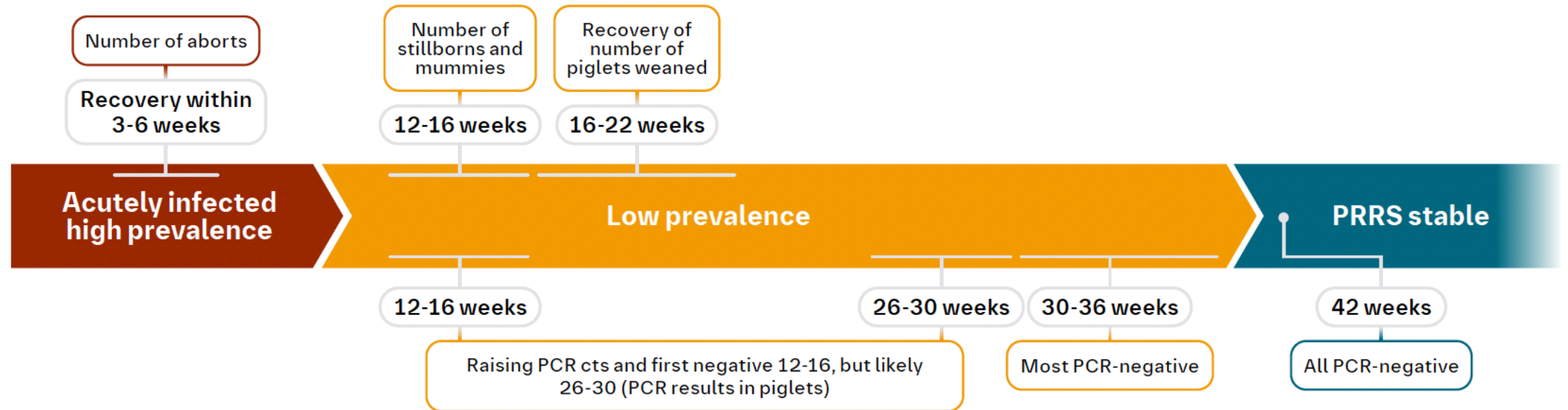


# Tracking outbreak recovery KPIs



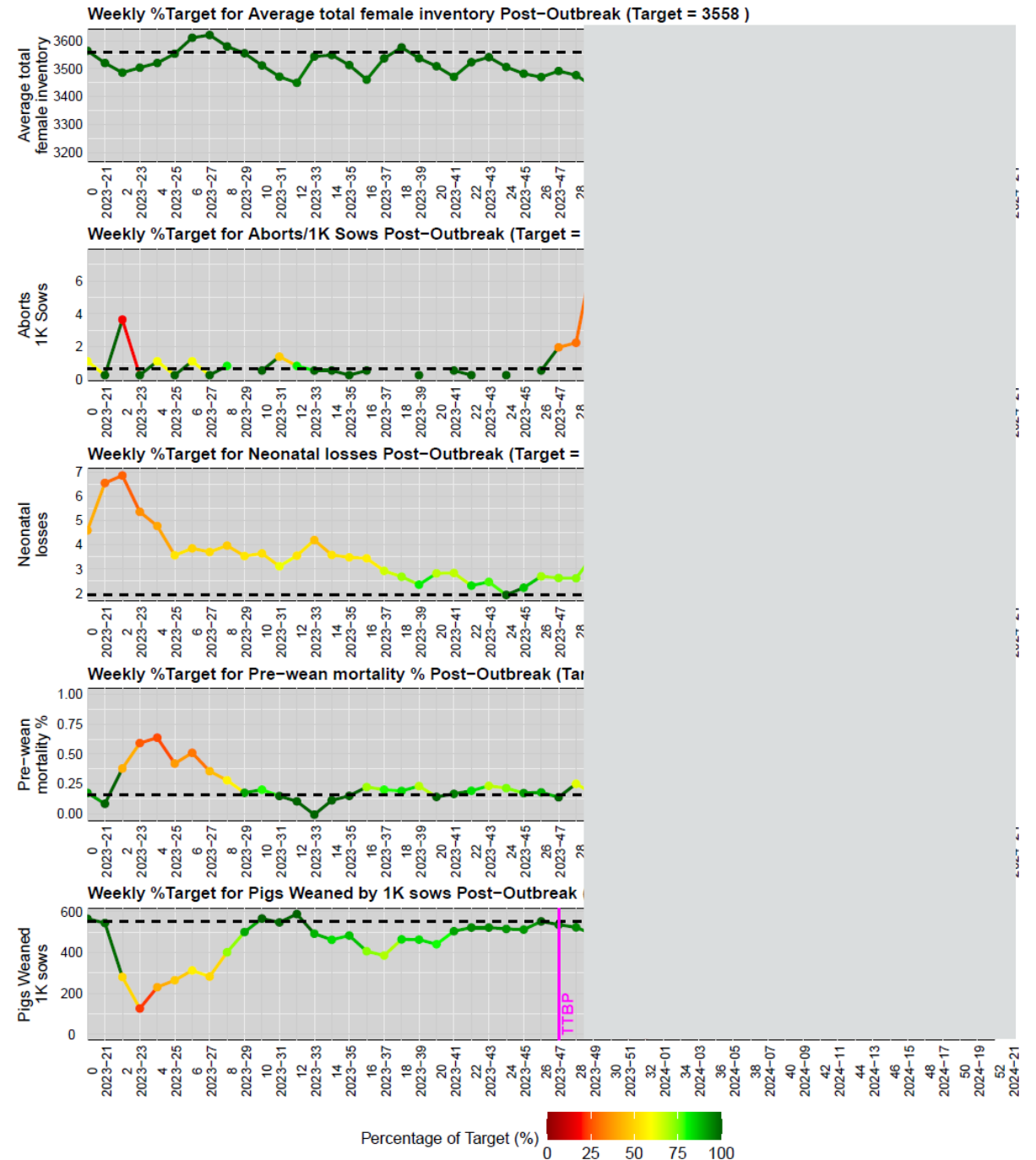
## Am I on the right track?

Check the recovery timelines after PRRS outbreak to verify that your control program is effective.



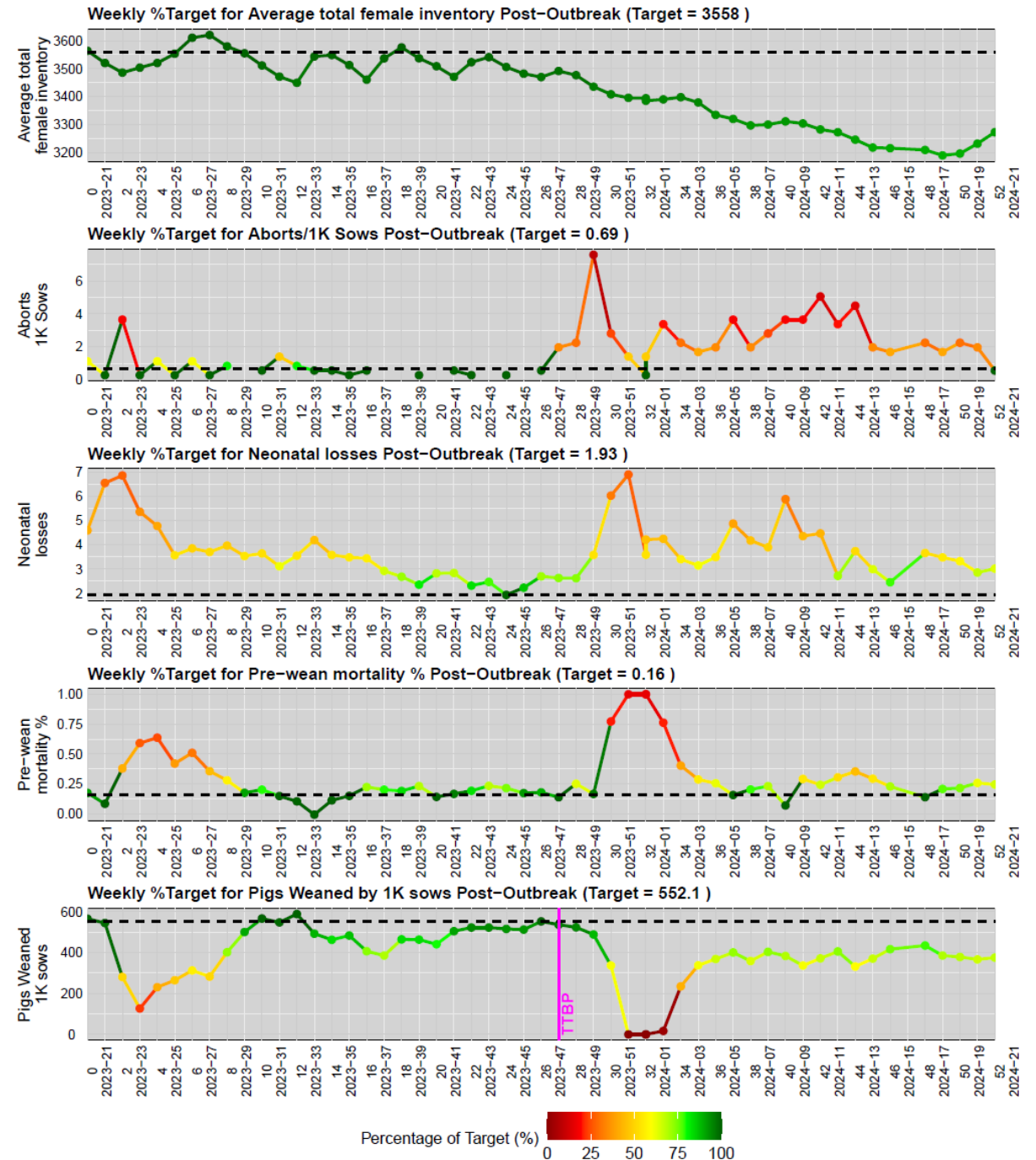
# Within-farm Track & benchmarking tool

- Producer-specific automated tool to prospectively track recovery from PRRS outbreaks
- Monitored KPIs: Sow and Gilt inventory, Abortions, Neonatal losses (average total born minus average born alive), Pre-wean mortality, pigs weaned per week
- A weekly target (dashed black line) is defined based on the 21 weeks prior the outbreak for each KPI
- With this tool, we can see onset, impact, duration, and recovery of outbreaks (TTBP pink line)



# Within-farm Track & benchmarking tool

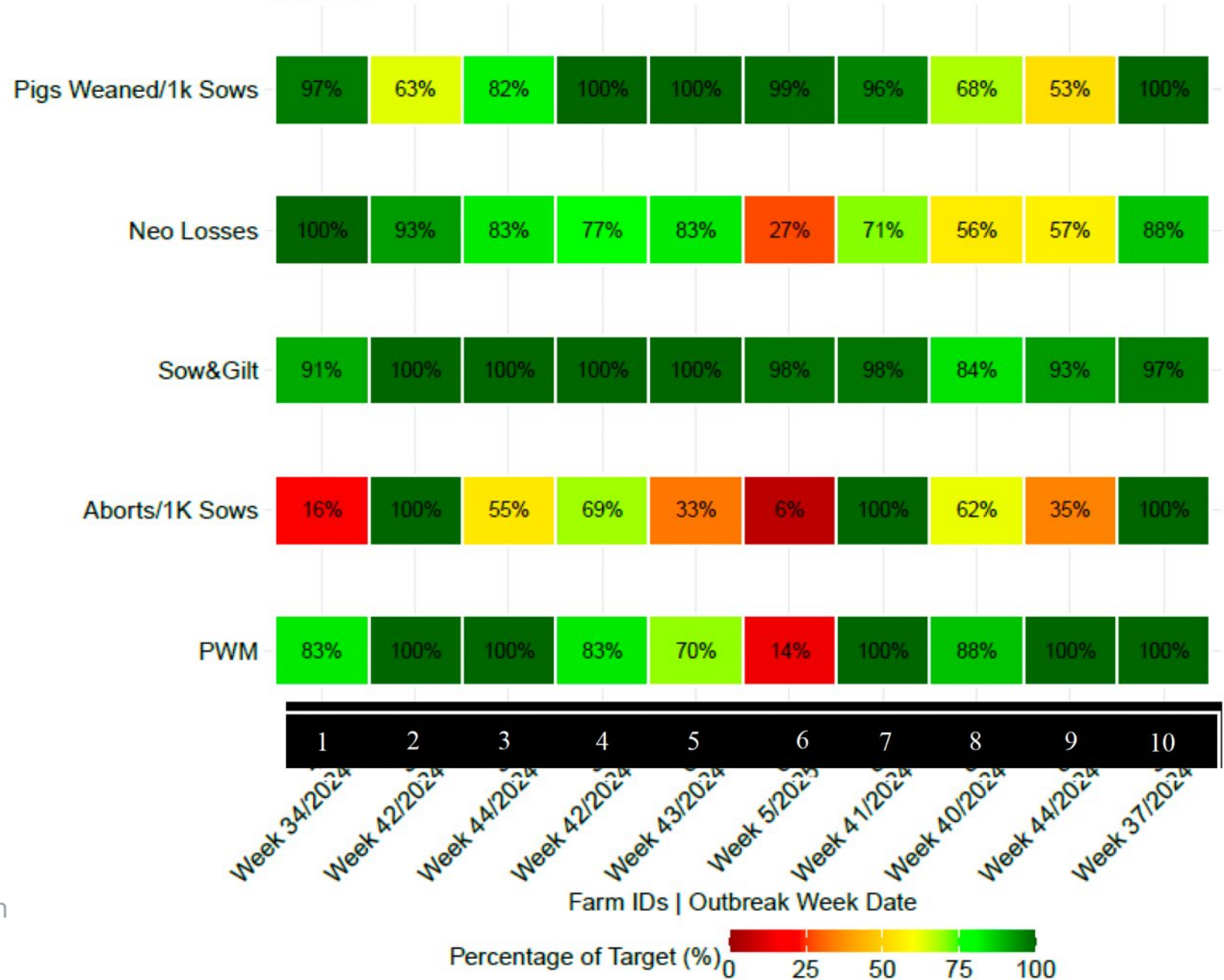
- Monitor for signs of outbreaks
- Early detection = rapid intervention!!
  - PRRSV?
  - Other pathogen(s)?



*Within-farm  
Track &  
benchmarking  
tool: system  
snapshot*

Consolidated Report: % of Target Aggregated Over the Last 3 Weeks

W4 to W6 2025



# Extension activities: ongoing as planned



- ✓ Producer support & communications team assembled
- ✓ Advisory board meeting
- ✓ Workshop targeting practicing veterinarians
- ✓ Benchmarking results
- ✓ Capturing questions and concerns regarding outbreak preparedness, response, and recovery



# POMP Scenarios

POMP Data  
531 outbreaks (2009 – 2025)

*PRRSV status  
at break*

**Negative**  
189 (36%)  
breaks

**Stable II/VX**  
221 (42%)  
breaks

**Stage 1B:**  
Low Prevalence  
90 (17%)  
breaks

**Stage 1A:**  
High Prevalence  
26 (5%)  
breaks

*Response  
plan*

Elim. 65%  
Stability 30%  
Control 0%  
Depop 5%

Elim. 15%  
Stability 66%  
Control 14%  
Depop. 5%

Elim. 20%  
Stability 18%  
Control 62%  
Depop. 0%

Elim. 24%  
Stability 4%  
Control 68%  
Depop. 4%

# Summary

## Over time

- Peak impact ~ 2021-2023

## Outbreak Response Plan

- Growing # herds not eliminating

## Immunologic Solutions

- MLV: < piglet losses and > time-to-stability compared to LVI

## Wild-type diversity

- More severe impact

## Lineage

- Very significant changes over time
- L1C's more virulent



**THANK YOU!**



**ENROLL TODAY**

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**[fieldepi.org/pomp](http://fieldepi.org/pomp)**