Evaluating Regional Projects & Opportunities for PRRS Elimination

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&
USDA PRRS CAP
Outline

• National Incidence Project
• Regional projects
• Working groups
“PRRS is sure _______ this year”

NO DATA
National PRRS Incidence Project

• 5 cooperating systems, all anonymous
  – 192 sow farms with 584,200 sows as of July 1, 2011

• Vets report change in status on weekly basis
  – dx criteria vary across systems

• Positive unstable (infected) herds are not considered “at risk”
Limitations

• Data are not representative of US industry.

• Monitoring of herds varies among the 5 systems and PRRS status might be a “best guess”.

• Calculation methods are evolving.
Aggregate prevalence of sow herd status since July 1, 2011
Aggregate incidence / week & cumulative since July 1. Data represent 192 sow herds with approximately 600,000 sows.
2011/12 PRRS Epidemic (aggregate incidence data)
Progress Regionally:

• High density - Farms in high density are being bombarded with virus.
  – Filtering will significantly decrease incidence of infection and can be wise investment.
  – There is little room for error.
Cumulative incidence since 7/1/2011 by beginning sow herd status

- 1: 6%
- 2v: 6%
- 2: 59%
- 3: 67%
- 4: 91%
Where are we going?

• National incidence / prevalence project
  – Location based risk assessment
  – Sharing status, location … & sequence
<table>
<thead>
<tr>
<th>Year</th>
<th>Aggregate</th>
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<tbody>
<tr>
<td>2009/10</td>
<td>43%</td>
</tr>
<tr>
<td>2010/11</td>
<td>39%</td>
</tr>
<tr>
<td>2011/12</td>
<td>50%</td>
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<tr>
<td>2012/13</td>
<td>40%</td>
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<tr>
<td>2017/18</td>
<td>25%</td>
</tr>
<tr>
<td>2022/23</td>
<td>10%</td>
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</table>

Note: The table shows the aggregate percentage of sows affected by PRRS since July 1. Data covers approximately 600,000 sows.
Where are we?
N212MN Project

- IACUC:
  - 0711A21864

- Disclosure:
  - RBM - 2 sow farms in Stevens Cy

- N212MN funding
  - ’04 – ’06 - none
  - ’07 – ’09 - USDA
  - ‘10 – ’12 – PRRS CAP & UMN SDEC

- Rice
  - MPB
  - BI PRRS Initiative
  - AASV
Reduced infected farms from 31 in 2004 to none known in 2012 (5.7% of sites unknown)
Voluntary, Producer-led

• All within the region will benefit,
  but

• Not all will participate.

“Producer-led”:
- Acceptance
- Patience
- Subtle persistence
Identified sites in the region

• 251 negative sites
• 46 positive sites
• 409 unknown sites
• 706 sites identified

• 315 have signed the participation agreement
Welcome to PRRS.org!
Welcome to PRRS.org, the official site for the PRRS Coordinated Agricultural Project (CAP).

Supported Actions
* Meritorious, Multi-Investigator Research
  * Extension Activities
  * International PRRS Symposium
  * Educational Workshops
  * Partnerships with External Stakeholder Groups

Goals
The goal of the PRRS CAP is to develop tools and deliverable knowledge that will reduce both animal suffering and economic losses to producers and society through the control and/or elimination of the PRRS virus.

Objectives
* Development of Tools and Knowledge
  * Investigation of Vaccines - Immunity, Epidemiology - Ecology and Host Genetics
* Extension Focused on Projects

PRRS Coordinated Agricultural Project
The control and elimination of porcine reproductive and respiratory syndrome (PRRS) will alleviate a major source of economic loss and animal suffering. The impact of PRRS is approximately $600 million in losses each year to U.S. producers.

For this reason, USDA funded the PRRS CAP that enabled the collective talents of scientists, veterinarians, producers, and allied industry researchers to develop innovative strategies for the control and eventual elimination of PRRS in the U.S.

The recent appearance of highly pathogenic PRRS in Asia and its potential threat to U.S. swine herds brings a new sense of urgency to this project. The activities supported by the CAP are the result of extensive stakeholder input and, when integrated into a logic model, identify well-focused outcomes and impacts as well as a detailed road map for the control and elimination of PRRS.

Funding and Support
- Funding for this four-year project was awarded by the United States Department of Agriculture in 2008
- Significant infrastructure support is provided by the National Pork Board
- Actively managed by a stakeholder board in coordination with a project director, co-project directors and a diverse group of PRRSV research scientists and stakeholders
### Current Elimination Projects

Select a Region/Project name link to view project files including the original proposals, progress reports/updates, and presentations:

<table>
<thead>
<tr>
<th>Region/Project</th>
<th>Principal Investigator</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>
MI Sow herd status

- **Negative**
- **Negative provisional**
- **Positive stable**
- **Positive**
- **Positive stable**
- **Positive stable**
- **Unknown**

### MI Sow herd status by Quarter:

- **2010 Q2**
- **2010 Q4**
- **2011 Q2**
- **2011 Q4**

### MI Sow herd status:

- **Region:** West Michigan
- **Date:** Feb 11, 2012
- **Density sows:** 24000 total, 1/7 sq mile
- **Density pigs:** 245000 total, 176/ sq mi

#### Sow herd size:

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<tr>
<th></th>
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<th>601-1500</th>
<th>1501-3000</th>
<th>&gt;3000</th>
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<td>0</td>
<td>4</td>
<td>2</td>
<td>8</td>
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<tr>
<td><strong>Farrow to feeder</strong></td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td></td>
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<tr>
<td><strong>Farrow to finish</strong></td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td></td>
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<tr>
<td><strong>Show</strong></td>
<td>Unknown</td>
<td></td>
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</tbody>
</table>

#### MI Sow herd status:

- **Unknown**
- **Positive**
- **Positive stable**
- **Negative provisional**
- **Negative**
Current Issues & Workgroups:

• 7 working groups

• Failure of some closure programs

• Risk factors for spread in hog dense regions
Seven working groups:

1. Standard Of Practice for sow herd management & sampling
2. Certifying regions based on PRRS surveillance and results
3. Risk based sampling
4. Incorporating oral fluids into sampling-testing guidelines
5. Managing the risk of disclosure
6. Farrow to finish herds
7. Guidelines for implementing common reports, including mapping legends
“Voluntary, producer-led, coordinated, regional disease control programs”