PRRS solutions in the field

Successful implementation of a new tools from the toolbox.
Step 4: Develop solution options

The farmer and veterinarian should work together to develop solution options.

It is important to consider:
- Goals of the farm
- PRRS status of the herd
- Constraints of the operation

Solution options may include:
- Pig flow management
- Vaccination
- Biosecurity measures
- Area Regional Control (ARC)
Build your PRRS Control Strategy
A simple Dedicated Whole herd Solution
A simple Dedicated Whole herd Solution

• For full PRRSV protection
• Safe/predictable production
Biosecurity and pig flow + Vaccination of both sows and piglets + Programme tailored to the needs of the farm
Prevent infection

Reduce PRRS Transmission:
Taking internal and external factors into consideration
Maximise immunity
Maximise immunity in all stages of production

Gilt source  Gilt development  Sow herd
Minimise exposure & Maximise immunity

Farrowing/rearing  Wean/to finish
Minimise exposure & Maximise immunity

Horizontal transmission  Vertical transmission

Reprocyc® PRRS EU
Minimises reproductive impact of PRRS across all stages of the breeding herd
Reducing Vertical transmission

Output Market

Global PRRS Solutions
Boehringer Ingelheim
Safe and efficacious at all stages of gestation

The ONLY vaccine approved for breeding herd mass vaccination

Reduced virus circulation in your breeding herd

More live births and heavier, healthier piglets at weaning
What is the goal?

- Reduce the outbreaks
- Improve the reproductive performance.
- Improve the nursery and finishing performance.
Sow planner data, German field study

- 550 sows
- Danish genetics
- 3 week rhythm
- Before, Porcilia PRRs mass vaccination program
- After, Reproeye PRRS EU mass vaccination program

10% reduction

0.6 pig/litter increase

8% reduction

In courtesy of Marius Kunze and Rolf Steens
Take decent care of your gilt source

Gilt source
Gilt development
Minimise exposure & Maximise immunity
Sow herd
Minimise exposure & Maximise immunity
Farrowing/reearing
Minimise exposure & Maximise immunity
Wean/to finish
Minimise exposure & Maximise immunity
Output Market
Reprocyc® PRRS EU to reduce the vertical transmission of PRRS

Viraemia in both gilts and progeny is reduced with Reprocyc® PRRS EU
Reprocyc® PRRS EU evaluated for efficacy by 26 – 32 days before breeding, challenged day 90 gestation.

The vaccine significantly reduced:

- Percentage of gilts with abnormal clinical findings
- Gilt viral load post challenge (Day 125, DOF, and DOF + 13
- Percentage of piglets per gilt that were positive for viremia;
- Percentage of piglets per gilt with clinical disease
- Piglet viral load on DOF

Initial vaccination and revaccination with Type I PRRS 94881 MLV reduces viral load and infection with porcine reproductive and respiratory syndrome virus.

<table>
<thead>
<tr>
<th></th>
<th>Single vaccination</th>
<th>8 weeks</th>
<th>5 weeks</th>
<th>Challenge</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-vaccination</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Challenge</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Re-vaccination Study 2011234
Re-vaccination of gilts quantitatively reduce viral load after challenge
Area under the curve, day 91-112

Log 10 genomic equivalent (GE)/ml

- Challenge control
- Re-vaccination
- Single vaccination

P < 0,0001 for group 1 versus group 2 or 3
P= 0,0029 value for group 2 versus group 3
Re-vaccination of gilts quantitatively reduces number of viremic animals after challenge
Both single vaccination and revaccination with Reprocyc® PRRS EU reduces viral load and infection with PRRSV post challenge.

Both single vaccination and revaccination schedules provide protection against PRRSV.

Increased benefit are seen after revaccination.
Reduces:

- Negative reproductive disorders
- Proportion of viremic gilts/sows
- Viral load and duration of viremia
- Transplacental virus transmission
- Negative impact of infection in piglets
- Born from vaccinated sows, in term of mortality, clinical signs and weight gain
Growing pigs replicate more virus for a longer time
167,000,000
Unprotected piglets
Reduction:

- Lung lesions and respiratory clinical signs
- Viraemia in pigs exposed to the virus
- Virus load in lung tissues
- Negative effects of infection on daily weight gain
Ingelvac PRRSFLEX® EU maximises performance in the NURSERY

Average Daily Weight Gain (0-10 days after challenge)

- Control challenge: 115 g more
- Ingelvac PRRSFLEX® EU: 178 g more

Clinical signs are reduced

- Control challenge: 54% reduction
- Ingelvac PRRSFLEX® EU: 33% reduction
- 84% reduction

Proportion of piglets (%)

Time of challenge after vaccination

- 2 weeks
- 3 weeks
- 4 weeks

Boehringer Ingelheim
Avg-Vac: Vaccinated pigs at 2 weeks / challenged 4 weeks later.

Avg-Con: Non vaccinated pigs at 2 weeks / challenged 4 weeks later.
Ingelvac
PRRSFLEX® EU
maximises
performance
until SLAUGHTER

- Reduction of Lung lesions:
  - Histological Lung lesions
  - % lung lesions
  - 47% reduction
  - 65% reduction
  - 67% reduction
  - p < 0.01
  - p < 0.0001
  - p < 0.0001

- Average Daily Weight Gain:
  - (10 days after challenge)
  - 585 g more
  - 669 g more
  - 177 g more
  - p < 0.01
  - p < 0.001
  - p = 0.104

- Viraemia is reduced with Ingelvac PRRSFLEX® EU:
  - Viraemic animals
  - 10 days post challenge
  - Proportion of animals (%)
  - 100% reduction
  - No viraemic pig
  - No viraemic pig
  - p < 0.001
  - p < 0.001
  - p = 0.001

- Time of challenge after vaccination:
  - 20 weeks
  - 24 weeks
  - 26 weeks

There were no viraemic piglets in the groups challenged 24 or 26 weeks after vaccination.
Growing pigs represent the majority of infected animals.
Growing pigs represent the biggest threat to other herds/barns/animals.
Vaccination reduces viremic load and shedding.
Reduces:

- Respiratory clinical signs
- Virus loads in blood and lungs
- Lung lesions
- Negative impact in daily weight gain

**Protection that lasts until slaughter**
Effects of a health intervention

**Direct benefits:**
- Performance improvement
- ▼ % mortality
- ▼ % culled
- ▼ aborts
- ▲ farrowing rate
- ▲ weaned pigs / litter
- ▲ ADG
- ▼ feed/gain ratio

**Indirect benefits:**
- Virus exposure risk reduction
- Reduction of wild-type virus load
  (shedding)