Optimizing Herd Health in Niche Production

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My goals

- Encourage a relationship with a veterinarian
- Teach you one thing
  - Confirm that you are doing it right!
- Leave you with tools.
Your goals

• Healthy pigs

• Prevention
  • *Keep ‘em healthy*
Healthy pigs

• Healthy pigs are the key to a successful operation
  • Grow faster
  • More efficient feed conversion
  • Fewer culls / dead pigs = More money

• In alternative system, we are relying on low-stress, high-health environment
  • Antibiotics are not available for “rescue”
  • Have to use other tools in order to keep pigs healthy
Healthy pigs

- Ethical obligation to “rescue” seriously sick animals with antibiotics or other drugs
An ounce of prevention is worth a pound of cure.
Keys to Prevention

- Preventing diseases saves money
  - Treatments less costly
  - Recovery faster
  - Minimizes disease spread
- Observations are critical
- Normal versus Abnormal
## Healthy versus sick

<table>
<thead>
<tr>
<th>Healthy Pigs</th>
<th>Sick Pigs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>Listless</td>
</tr>
<tr>
<td>Curious</td>
<td>Uninterested</td>
</tr>
<tr>
<td>Hungry</td>
<td>Off-feed</td>
</tr>
<tr>
<td>Clean and dry</td>
<td>Rough hair, dirty rear ends</td>
</tr>
</tbody>
</table>
Keys to Prevention

- Establish a relationship with your veterinarian
  - Use your vet as a consultant not just as a rescue when disease strikes
  - Establish regular veterinary visits

- Contact our Swine Group if you are in an area lacking swine expertise
  - We can help you or put you in touch with someone in your area
Keys to Prevention

• Develop a Herd Health Plan
  • Create it, review it, update it
  • A living document
    • Review it

➤ A veterinarian can be a valuable resource in helping guide this process.
Herd Health Plan Template

- Farm Details
  - Location, layout
  - Important phone numbers
    - Veterinarian
    - Emergency contacts

- General overview
  - Type of unit
  - Current disease status
  - Herd size
  - Pasture rotation/management
  - Disease prevention strategies
Herd Health Plan Template

- Stocking Plan
  - Barns or buildings
  - Number of pens
  - Number of animals per pen
  - Bedding management
  - Manure management

- Replacement Plan
- Rations
  - Description of diets
  - Feed budgets
Herd Health Plan Template

- Animal Health
  - Biosecurity plan
  - Pig flow
  - Routine procedures
  - Parasite control protocols
  - Vaccination protocol
  - Treatment protocols
Herd Health Plan Template

- Records
  - Animal management
  - Entry and exit
  - Breeding herd
  - Breeding
  - Farrowing
  - Weaning
Herd Health Plan Template

- Records
  - Treatment
    - Animal, dose, route, purpose, withdrawal
  - Vaccination
    - Animal, product, dose, route
    - Mortality
Keys to Prevention

- Understand the basics of disease
  - Interaction between animal-pathogen-environment
Keys to Prevention

Disease

Animal

Environment

Pathogen
Three Principles of Health

• Control pathogens
• Control animals
• Control environment
• Finding strategies that work based on these three principles
  • One size fits all?
  • Mix and match
Control Pathogens

• Biosecurity
  • Control the world outside the farm
    • Visitors
    • New stock – animals and semen
    • Other risks

• Pig flow
  • Control the world inside the farm
Biosecurity

- Visitors
  - Fences
  - Log book
  - Wash hands
  - Youngest first, culls last
Biosecurity

- New stock
  - Isolation / quarantine
    - 30 days + allows for testing and acclimation
  - Buy clean, tested stock
  - Buy tested semen
    - Know disease status of boars
Biosecurity

• Other risks
  • Shared equipment
  • Transportation
  • Deliveries
  • Rendering truck
  • Compost pile
Pig Flow

- Segregate age groups
  - Separate pens at minimum
  - Seasonal segregation for small operations

- AIAO production is goal
  - At minimum avoid mixing new/younger animals with older market animals
  - Downtime between groups
    - Wash down, dry out before refilling
    - Rotate pastures
  - Isolate sick or injured pigs
Control Animals

• Planned exposure
  • Like vaccination but shouldn’t be an alternative to it if an effective vaccine exists

• Management of neonates

• Probiotics

• Herd age

• Vaccination
  • Commercially available
  • Autogenous
    • Farm specific
  • Alternative and conventional systems same
  • Farm-specific
  • Good “insurance” especially in alternative system

• De-worm and De-mange
Planned Exposure

• Feedback
  • Great for GI pathogens, not effective for respiratory or systemic diseases: use autogenous vaccines instead
  ➢ Consultation with your veterinarian is recommended

• Acclimatization
  • After isolation/quarantine period
  • Nose-to-nose contact with cull sows
Probiotics

• Live microbial cultures can control enteric disease
  • Out-compete intestinal pathogens
  • Lactic acid bacteria outcompete coliform bacteria
  ➢ Veterinarian can help here

• Many are commercially available
  • Tend to be farm specific
  • Trial and error
Manage Neonates

• Make sure every newborn pig gets colostrum
  • 1st 6 hours are critical
  • Split suckling
Herd Age

- Increase age of the herd
  - Herd immunity increases with herd age
  - The goal is to keep older productive sows
    - Older sows produce more antibodies than young sows
Vaccination

• Correct vaccine management
  • Keep cool, not frozen
  • Adhere to label instructions and expiration dates
  • If buying larger dose bottles, transfer to more manageable bottles
  • Usage and timing
  • Vaccinate sows/gilts to improve piglet health
Vaccination

- **Proper injection technique**
  - Sites
    - Subcutaneous
      - Loose skin at flank or elbow
    - Intramuscular
      - Neck muscles behind the ear
Vaccination

- **Proper injection technique**
  - Sites
    - Subcutaneous
    - Loose skin at flank or elbow
    - Intramuscular
    - Neck muscles behind the ear
## Vaccination

- **Needle size considerations**

<table>
<thead>
<tr>
<th>Intramuscular</th>
<th>Gauge</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baby Pigs</td>
<td>18 or 20</td>
<td>½”</td>
</tr>
<tr>
<td>Nursery</td>
<td>16 or 18</td>
<td>¾”</td>
</tr>
<tr>
<td>Finisher</td>
<td>16</td>
<td>1”</td>
</tr>
<tr>
<td>Breeding stock</td>
<td>14 or 16</td>
<td>1” to 1½”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subcutaneous</th>
<th>Gauge</th>
<th>Length</th>
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Vaccination

- Other considerations
  - Change needles by litter
  - NEVER reuse a bent needle
  - Dispose of sharps properly
Sample Vaccination Program

- Young stock
  - Neonates
    - @ 1 day
      - Iron
    - @ 3 weeks
      - Ivomec .27%
      - Ileitis (oral)
Sample Vaccination Program

- **Young stock**
  - Feeder pigs
    - @ 4 and 6 weeks
      - *M. hyopneumoniae*
      - PCV-2
      - Swine influenza
      - Erysipelas
      - Ileitis
  
- **@ 6 and 8 weeks**
  - *M. hyorhinitis/hyosynoviae*
  - *S. suis*
  - *H. parasuis*
Sample Vaccination Program

• Breeding Herd
  • PRRS/Flu/Circo
    • Sows and gilts
      • Quarterly
  • Parvo/Lepto/Ery
    • Gilts
      • Twice 2 weeks apart 2 weeks pre-breeding
    • Sows
      • 2 weeks pre-breeding
  • E.coli/Pasturella/Bordetella/Ery
    • Sows and gilts
      • 5 weeks and 2 weeks pre-farrow
Sample Vaccination Program

- Additional Vaccines
  - Autogenous Vaccines
  - Farm specific pathogens

  - Consultation with veterinarian recommended
De-worm

• Worms are a continuous threat
  • De-worm as needed
  • Recognize symptoms
  • Will vary by season
  • Feed additives or injectibles

• Clinical symptoms
  • Coughing
  • Wasting
  • Blood in urine/feces
  • Anemia

• Track whether your de-worming program is working
  • Fecal egg counts
  • Slaughter house information

• Rotate products to reduce risk of resistance

• Treat every animal
De-mange

- Maintain a mange free herd
  - Buy in mange free stock
- Control the parasite on the farm
  - Sprays, oils, injectibles, feed additives
- Eradicate it from the farm
  - Control
  - Prevention

< Chronic

Acute >
Sample Deworming Program

• In young stock
  • Ivomec .27%
  • @ 3 weeks

• In breeding stock
  • Ivomec 1%
  • Gilts
    • Pre-breed
  • Sows & gilts
    • 5-10 days pre-farrow
Effective Products

- Common products for roundworms
  - Ivermectin (Ivomec®)
  - Fenbendazol (Panacur®, Safe-Guard®)

- Common products for mange
  - Ivermectin (Ivomec®)
  - Doramectin (Dectomax®)
  - Permethrin (Ectiban®)
  - Amitraz (Taktik®)

➢ Check with your marketing program to see if they are allowed.
Control Environment

• Sanitation
• Wildlife, rodents, other animals
• Clean and dry
• Reduce stress
Sanitation

• Keep manure spread or stockpiled in one area

• Clean up spilled feed or grain

• Contain junk piles

• Dispose of dead pigs properly and promptly
  • Compost
  • Render
Rodents, Cats, and Wildlife

- Continuous rodent control
  - NOT Cats!

- Keep wild animals and birds away from pigs
  - Secure fencing
  - Locate outdoor grazing areas away from areas used by waterfowl and migratory birds
Wildlife

• Feral swine
  • Known to have PRV and Brucellosis
    • Important diseases
    • “Eradicated”

• Transitional herds play a critical role in limiting these diseases to feral populations

• Consider double-fencing perimeter if you are in an area where feral pig populations are known to live
Clean and Dry

• Use plenty of clean, dry bedding
  • Pathogens need moisture to live

• Sunlight and time are your two best weapons!
Reduce Stress

- Good environment
  - Ventilation
  - Avoid drafts
  - Monitor air quality
  - Stocking density
  - Help the pig thermoregulate
    - In summer: wallows, shade, water
    - In winter: protect from wind, precipitation, cold
  - Provide plenty of clean, fresh water
The Swine Group

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Questions?