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January 27, 2016   7:00pm eastern
Basics of Raising Pigs
The Basics of Raising Pigs

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Outline

• Industry Quick facts

• Beginning Farmer

• Goals

• Phases

• Housing for Pigs

• Pig Nutrition

• Pig Health

• Pig Handling

• Take Home Message
Industry Quick Facts

• Top Pork Producing Countries – 2013

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>China</td>
</tr>
<tr>
<td>2</td>
<td>EU – 27</td>
</tr>
<tr>
<td>3</td>
<td>United States</td>
</tr>
<tr>
<td>4</td>
<td>Brazil</td>
</tr>
<tr>
<td>5</td>
<td>Russia</td>
</tr>
</tbody>
</table>

Source: USDA Foreign Agricultural Service
Industry Quick Facts

- Top U.S. States for Pork Production

<table>
<thead>
<tr>
<th>Rank</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Iowa</td>
</tr>
<tr>
<td>2</td>
<td>North Carolina</td>
</tr>
<tr>
<td>3</td>
<td>Minnesota</td>
</tr>
<tr>
<td>4</td>
<td>Illinois</td>
</tr>
<tr>
<td>5</td>
<td>Indiana</td>
</tr>
<tr>
<td>13</td>
<td>Michigan</td>
</tr>
</tbody>
</table>

Source: 2012 USDA Census for Agriculture
## Industry Quick Facts

### U.S. Hog Operations by Size (2012)

<table>
<thead>
<tr>
<th>Year 2012</th>
<th>1 to 99</th>
<th>100 to 499</th>
<th>500 -999</th>
<th>1,000-1,999</th>
<th>2,000 – 4,999</th>
<th>5,000+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>47,284</td>
<td>3,584</td>
<td>1,977</td>
<td>2,677</td>
<td>4,718</td>
<td>3,006</td>
<td>63,246</td>
</tr>
<tr>
<td>MI</td>
<td>1,865</td>
<td>108</td>
<td>43</td>
<td>67</td>
<td>68</td>
<td>47</td>
<td>2,198</td>
</tr>
</tbody>
</table>

Source: 2012 USDA Census for Agriculture
Industry Quick Facts

• Typical Market Hog by today’s standard

  • Live weight ....................... 275 lbs.
  • Carcass weight ................. 208 lbs.
  • Backfat (10\textsuperscript{th} rib) ............... 0.7 inches
  • Percent Lean ..................... 54.8%
  • Lean meat ......................... 114 lbs.
Beginning Farmer

- Wide range within the Pork Industry
  - Product identified markets
  - Inherited land base
  - 4-H families/show pigs
  - Contract grower
- Lots of different management styles
Goals for Raising Pigs

• Establish at the beginning
  • Interested in pigs and want to give it a try
  • Develop or enter an existing market for your product
  • Diversify your existing farming operation
Types of Pork Production Systems

- Farrow to Finish
- Breed to Wean
- Feeder to Market
  - Example: 50 lbs. to market weight
- Many farmers start with feeder pigs (less demanding)
Types of Pork Production Systems

• Outdoor vs. Indoor
  • Advantages and disadvantages
  • Combination of both
    • Climate
    • Season
Management - Through the Phases

- Each phase will require a different set of management skills
  - Breeding (gilts, sows and boars)
  - Farrowing (sows and piglets until weaned)
  - Nursery (up to 50 lbs.)
  - Grower – Finisher (50 lbs. to market)

- Pigs are efficient – can reach market weight within 6 months from birth
Pig Breeds

- Common Breeds
  - Yorkshire
  - Landrace
  - Chester White
  - Hampshire
  - Duroc
  - Berkshire
  - Spots

- A few other breeds
  - Pietrain
  - Hereford
  - Poland China
  - Tamworth
  - Mangalitsa
  - American Mulefoot

http://www.ansi.okstate.edu/breeds/swine
http://nationalswine.com/about/ - National Swine Registry
Pig Breeds

• What is the best breed/pork?

  ?

• Debatable
  • Opinions
  • Farmer preference
  • Product identified market
Pork Quality

- Pork Quality
  - Many management factors
    - Genetics, nutrition, pre-slaughter handling, harvest and post harvest handling, food preparation

- Quality (different perspectives)
  - Traditional - measurement of muscle pH, color, firmness, marbling or intramuscular fat (IMF) content, shelf-life, and cooked pork palatability
  - Some define in terms of environmental, ethical and animal welfare aspects
  - Processors – same as all factors above but also include food safety
Management Considerations
Management - **Fencing**

- Important to have a sturdy perimeter fence
  - Check frequently

- Avoid liability issues
  - Damage to neighboring properties
  - Public roads

- At least 40 inches high

- Electrified wire near the bottom
  - Prevents rooting underneath fence
Management - **Fencing**

- Interior fencing for pastures or lots
  - Divider fence
  - Less expensive and easier to install
  - Electric fence
    - Two strand
    - 10 and 18 inches for sows and growing-finishing pigs
    - 6 inches for nursing pigs
Management - Housing

- Choice many times based on farmer preference
  - Doesn’t need to be fancy or expensive

- Sometimes based on available resources such as existing structures, land base, farm layout, etc.

- Outdoor/Indoor combination
  - Indoor concrete floor bedding area
  - Outdoor lot/pasture area

- Regardless – ventilation and air quality extremely important
Management - Housing

• **Shelter**
  - Stationary or portable

• **Summer**
  - Protection against extreme heat
  - Protection against sunburn (especially white breeds)
  - Shade is important (pigs DO NOT sweat)
  - Consider a wallow

• **Winter**
  - Protection against extreme cold
  - Protection against cold rain combined with wind
Management - Housing

• Shelter
  • Space and shade requirements

  Hogs up to 100 lbs. - 4 sq ft/hd

  Hogs over 100 lbs. - 6 sq ft/hd

  Sows and boars - 12 sq ft/hd

  Farrowing sows - individual huts
Housing – Bedding

• Options
  • Low quality grass hay
  • Whole or ground corn cobs (abrasive – avoid with young pigs)
  • Baled cornstalks
  • Baled, shredded newspaper
  • Shavings
  • Straw
  • Other

• Choice of bedding (availability, season of year, etc.)
  • wet, cold, or muddy conditions to help the pigs create a dry, draft-free microenvironment.
## Housing – Pig Comfort Zone

- What is good for one is essentially NOT good for all

<table>
<thead>
<tr>
<th>Class of Pig</th>
<th>Preferred Temperature, Degrees F</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piglets</td>
<td>85 – 90</td>
<td>Supplemental heat</td>
</tr>
<tr>
<td>Sows and Boars</td>
<td>70 or less</td>
<td>Well bedded, dry place to lay in cold temperatures</td>
</tr>
<tr>
<td>Sows – Farrowing</td>
<td>65 – 70</td>
<td></td>
</tr>
<tr>
<td>Nursery Pigs</td>
<td>70 +</td>
<td>Less than 70 if 6 weeks of age or older, if bedding available</td>
</tr>
<tr>
<td>Growing – Finishing</td>
<td>70 – 75</td>
<td>Straw can be used in cold temps to keep pigs warm</td>
</tr>
</tbody>
</table>
Management - Nutrition

- Pigs will eat just about anything

- **Important** consideration
  - **Require** a balanced mixture of nutrients in order to grow and produce
  - Nutrient requirements decrease as the pig grows

- Feed accounts for 60 – 70% of production cost
Nutrition – Nutrients

• Classes of nutrients
  1) Water (MOST Important)
     - Forgotten nutrient
  2) Carbohydrates
     - Energy
  3) Protein
     - Amino Acids (Building blocks)
  4) Lipids
     - Fats and oils
  5) Minerals
     - Major and trace minerals
  6) Vitamins
     - Required as co-enzymes in metabolic reactions
Management – Water

• Water
  • Obviously, make sure clean, fresh water is available at all times
    • Intake has a direct effect on growth, performance

• Drinking devices
  • Nipple drinkers
    – Hooked up to water source

• Portable enclosed tanks
  – Utilized to get water to pig on pasture

• Livestock tanks
  – Pigs may lay in them to cool off
## Nutrition – Nutrients

### Energy Sources

- **Cereal grains major source**
  - High in carbohydrates, palatable and highly digestible

<table>
<thead>
<tr>
<th>Energy Source</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>Highest energy level, economical in Midwest</td>
</tr>
<tr>
<td>Wheat</td>
<td>Equal to corn in feeding value, palatable if not ground to finely, expensive</td>
</tr>
<tr>
<td>Barley</td>
<td>Higher in fiber and protein than corn, 85 -95% feeding value of corn</td>
</tr>
<tr>
<td>Oats</td>
<td>Higher in fiber and protein than corn, 80% feeding value of corn</td>
</tr>
<tr>
<td>Naked oats (hulless)</td>
<td>Good protein value, availability and cost</td>
</tr>
<tr>
<td>Rye</td>
<td>Energy value intermediate to wheat and barley, anti-nutritional factors</td>
</tr>
<tr>
<td>Grain Sorghum</td>
<td>Feeding value similar to corn, some varieties 80 – 90% energy of corn</td>
</tr>
<tr>
<td>Buckwheat</td>
<td>High protein quality, antinutritional factor – fagopyrin, limited inclusion</td>
</tr>
<tr>
<td>Corn and cob meal</td>
<td>Low in energy compared to most other energy sources</td>
</tr>
</tbody>
</table>
Nutrition – Nutrients

- Protein – chains of amino acids
  - Soybean meal common source
  - Amino acid profile matches the pig’s needs reasonably well

<table>
<thead>
<tr>
<th>Protein Source</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Fat Soybeans</td>
<td>Anti-nutritional factors, must be heat treated</td>
</tr>
<tr>
<td>Field Peas</td>
<td>Low levels of a few key amino acids, limits use in small pig and sow diets</td>
</tr>
<tr>
<td>Canola</td>
<td>Up to 15% in diets for all phases except for gestating and lactating diets up to 10%</td>
</tr>
<tr>
<td>Alfalfa</td>
<td>Nutritional quality may vary depending on stage of maturity, harvesting, handling and storage methods. Anti-nutritional factors (saponins and tannins) Not recommended for weanling and young growing pigs</td>
</tr>
<tr>
<td>Sunflower seeds</td>
<td>Up to 10% for weaned and grow-finish pigs, up to 30% for gestating and 20% for lactating</td>
</tr>
<tr>
<td>Fababeanes</td>
<td>High in unsaturated fatty acids makes them susceptible to rancidity if stored for more than one week after grinding</td>
</tr>
</tbody>
</table>
Nutrition – Feeding the Phases

• General guidelines in regard to protein

  • Pigs require amino acids instead of protein
    • Pay attention to Amino acid levels
    • Lysine most important amino acid
    • However, often times decision made based on CP %

  • Nursery (young pigs)
    • 20 % Crude Protein

  • Growing pigs heavier than 30 lbs. up to 150 lbs.
    • 18 % Crude Protein
Nutrition – Feeding the Phases

• General guidelines in regard to CP
  
• Finisher
  • 16% crude protein, lower for late finishing pigs -14%

• Sows
  • Gestation – 12 - 14% crude protein
  • Lactation – 18% crude protein

• Boars – sow gestation feed may be appropriate
Nutrition – Forages

- Forages can lower cost of grain and protein supplementation (difficult to quantify – estimated intakes)

- Forage quality and availability can vary
  - Season of the year

- Pastures must be managed
  - Soil fertility
  - Forage analysis
  - Forage management – rotational grazing
    - Heavy parasite and bacterial contamination
  - Replant
Nutrition – Forages

• Limited use for young pigs and lactating sows
  • High fiber and low energy

• Best utilized in early stages of maturity

• Adaption period
  • 2 months

• Pigs may grow slower, require more feed
  • High fiber intake
  • Outdoor environmental conditions
  • Increased exercise
    • Energy requirement
Nutrition – Forages

- **Permanent**
  - Bluegrass
  - Orchardgrass
  - Alfalfa
  - White clover

- **Annual**
  - Brassicas
  - Rye
  - Oats
  - Wheat
  - Barley
  - Field peas
  - Grasses and legumes

- **Rotational**
  - Alfalfa
  - Clovers
    - Sweetclover
    - Red
    - Ladino
    - Alsike
  - Orchardgrass
  - Bromegrass
  - Timothy
Nutrition – Forages

- **General** stocking rates for pastures
  - Up to 8 sows/acre
  - Pigs less than 100 lbs. = 15 – 30 pigs/acre
  - Pigs more than 100 lbs. = 10 – 20 pigs per acre
Nutrition – Alternative Feed Ingredients

• By-products
  • Hazards - animal health?
  • Idea of nutrient content
    • Shouldn’t rely on solely for diet
  • May be diet inclusion limitations
    • Growth inhibiting/anti-nutritional factors
  • Remember – a balanced mixture of nutrients

• Extensive list (just to name a few)
  • Distilling by-products: DDGS, baking by-products: bread, cookies, cake, crackers, Vegetable by-products: potato chips, french fries, cull potatoes, beans, Milk by-products: liquid whole milk, dried-skim milk, whey, Others: acorns, apples, watermelon, eggs, beets, salvage candy, and etc. etc. etc.
Feeding Management – Sows

- Sow Body Condition
- Base Feeding Rate
- Through the phases
  - Gestation
  - Lactation
- Monitoring Sow Body Condition
Management – Body Condition
Where do you evaluate condition?

1. Shoulder blades
2. Backbone or spine
3. Tail head
4. Hip bones
Optimal Sow Body Condition

• Maintaining OSBC important for:
  • Sow well-being
  • Consistent reproductive performance
  • Lifetime productivity

• High degree of management over successive parities
  • Gestation
    • Return to ideal condition
    • Treatment of health issues
  • Lactation
    • Nutrition to match production

• **Goal**: large, healthy litters
Over-conditioned “Fat” Sows = Productive and “Happy” Sows
Overfeeding in gestation

• Factors
  • Group vs. individual
  • Constipation - dystocia
  • Fat sow syndrome
    • Laid-ons
    • Stillbirths
    • Decreased longevity
  • Compromised mammary development with potentially reduced milk production (Weldon and coworkers, 1991)
  • Decreased feed intake during lactation (Sinclair et al., 2001 and Weldon et al., 1994)
Feeding management - Critical factor

- Avoid the extremes
Pattern of body condition change

- Gradual increase during gestation
- Small decrease during lactation
Evaluating Body Condition

- Body weight
  - Determines the majority of nutrient requirements
    - Livestock scale

- Flank to Flank measurement
  - Assigns sows into a 75 lb. body weight category 70% of the time
  - KSU matrix

- Ultrasound backfat measurement
Base Feeding Rate

• What is it?
  • Represents the amount of feed which will allow a sow to gain the proper amount of weight and condition during gestation.

• ↑ ↓ or =

• For most, feeding a corn-soybean meal based diet
  • 4.0 to 5.5 pounds per day
Base Feeding Rate

- Animals on different farms will differ and may require ±
  - Genetics
  - Environmental conditions
  - Farm management practices
  - Nutrition program
How much?
Gestating Sow Feed Allowance

- Do these sows need more or less feed?
Gestating Sow Feed Allowance

• Crucial to success

<table>
<thead>
<tr>
<th>Parity</th>
<th>Lbs. of gain during gestation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gilts, 0</td>
<td>120-130</td>
</tr>
<tr>
<td>1</td>
<td>110-120</td>
</tr>
<tr>
<td>2-5</td>
<td>80-90</td>
</tr>
<tr>
<td>6+</td>
<td>65</td>
</tr>
</tbody>
</table>

• Maintenance + Conceptus + Mammary + Growth
**Gestation Feeding**

- **Day 0 to 30**
  - Feed maintenance levels of feed
  - Nutrient levels of developing litter = extremely small

- **Mid Gestation (30 to 75 days)**
  - Generally kept near maintenance levels
    - Modest body weight gain for thin sows
    - Modest body weight reduction for over-conditioned sows

- **75 days +**
  - Fetal growth increases dramatically
  - Feed intake should increase 1.5 to 2.0 lbs.
  - **CAUTION:** large increases in feed intake and negative effects
Gestation Feeding

• What about fiber?
  • Can serve as a laxative
  • May improve sow comfort
  • Can increase voluntary intake during lactation (Danielson et al., 2001)

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beet pulp</td>
<td>5 to 15%</td>
</tr>
<tr>
<td>Wheat bran</td>
<td>5 to 15% max.</td>
</tr>
<tr>
<td>Oats</td>
<td>15% max.</td>
</tr>
<tr>
<td>Alfalfa hay</td>
<td>15%</td>
</tr>
</tbody>
</table>

• Fibrous Feedstuffs investigated in self-feeding programs (Brouns and coworkers 1995)
Gestating Sow Feed Allowance

• “General guidelines” for adjusting gestation feeding level based on BCS

<table>
<thead>
<tr>
<th>Condition Score</th>
<th>Feeding Level in Pounds/Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Base feeding level + 2.0</td>
</tr>
<tr>
<td>2</td>
<td>Base feeding level + 1.0</td>
</tr>
<tr>
<td>3</td>
<td>Base feeding level</td>
</tr>
<tr>
<td>4</td>
<td>Base feeding level – 0.5</td>
</tr>
<tr>
<td>5</td>
<td>Base feeding level – 1.0</td>
</tr>
</tbody>
</table>
Transition to Lactation

• Preference – start sows in lactation with a BCS of 3 – 4

• Lactation impacts body condition at weaning
Lactation Feeding

- **Goal** - to maximize feed intake and minimize body tissue loss
  - Highly productive and prolific sows utilize nutrients from body tissue reserves and feed to support lactation
  - Minimize negative nutrient balance
    - Increasing feed intake
    - Increasing nutrient content in diet
# Frequency of Condition Scoring

<table>
<thead>
<tr>
<th>Time</th>
<th>Body Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mating</td>
<td><img src="Mating" alt="Diagram" /></td>
</tr>
<tr>
<td>Day 30</td>
<td><img src="Day30" alt="Diagram" /></td>
</tr>
<tr>
<td>Day 60</td>
<td><img src="Day60" alt="Diagram" /></td>
</tr>
</tbody>
</table>
Feed Management – Sows

• Considerations

  • Nutrition program
    • Feed management – Critical to Sow Body Condition
    • Overfeeding in gestation = Expensive
    • What is available and practical (size of operation)
    • Age of sows (First parity vs multiparous)
    • Group vs individual feeding

• Recordkeeping
  • Who has fed what and when?
  • Documentation
Management – Feeders

• Feeder Adjustments
  • Limiting feed waste can help control feed costs

• Self-feeders
  • Most self-feeders are adjustable
  • Ideally, bottom of the feed tray should be only half covered with feed
  • If too much feed is available at the bottom of the pan, pigs will waste a lot of it
  • Even 5% feed waste can cost a lot of money
Pig Health

- **Important** – if buying pigs, buy healthy pigs from a single source
  - Attempt to get as much information about the pigs as you can

- Animal Health Management Plan

- Establish a relationship with a veterinarian (VCPR)

- Observation is a powerful tool
Pig Health – Observation

• Sound
  • There should ALWAYS be sound in the barn
  • High pitched vocalization = stress

• Behavior
  • Understand basic pig behavior

• Smell
  • Odor

• Touch
  • Rough raised coat
  • Ease of movement of joints
BEST Method

• Way to complete a thorough evaluation of each pig
• Look at each pig in a clockwise direction, starting at snout moving over back and around tail
• Helps stockperson see all aspects of individual pig

**Information and photos taken from M. Benjamin & S. Kramer**
Body
Ears, Eyes & Nose
Skin, Hair
Temperament
A. Hair – smooth flat
B. Back – level
C. Body condition score – at least 3/5
D. Ears – alert, pointed at you
E. Eyes – open, bright, interested
F. Joints – no swelling, easy movement
G. Feet – no swellings, marks or ulcers
H. Nose – raised, sniffing
I. Tail – mood (alert, upright), no skin damage
J. Anus – no diarrhoea
   Vulva – no discharge
K. Neck – no fighting marks or injection site abscesses
L. Mouth – no discharge
M. Breathing – regular, shallow
N. Belly – full, no swellings
Pig Health – **Internal parasites**

- Compete directly with the pig for nutrients consumed by interfering with digestion
  - Decreased feed conversion
  - Decreased weight gain
  - Overall, more expensive
- **Key sign** – pigs on dirt lots with uneven growth
Pig Health – Internal parasites

- Most common
  - Large Roundworm
    - Damage liver and lungs
    - Bacterial and viral pneumonia
    - Diarrhea
    - Block intestine

Figure 1. Roundworm (Ascaris suum). The large one is the female; the small one with curled tail is the male.
**Pig Health – Internal parasites**

- **Other internal parasites**

<table>
<thead>
<tr>
<th>Parasite</th>
<th>Age commonly found</th>
<th>Specific signs or damage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threadworm</td>
<td>10 - 20 day old pigs Breeding stock</td>
<td>Bloody diarrhea in young pigs</td>
</tr>
<tr>
<td>Whipworm</td>
<td>Growing pigs</td>
<td>Ulcerate the cecum and large intestine bloody diarrhea</td>
</tr>
<tr>
<td>Nodular worm</td>
<td>All ages</td>
<td>Decreased digestive efficiency</td>
</tr>
<tr>
<td>Stomach worm</td>
<td>All ages</td>
<td>Irritates lining of stomach</td>
</tr>
<tr>
<td>Lungworm</td>
<td>Feeder pigs and older</td>
<td>Irritates air passage, ruptures tissues, bleeding</td>
</tr>
<tr>
<td>Kidney worm</td>
<td>Older hogs &amp; breeding stock</td>
<td>Damages liver and kidneys</td>
</tr>
</tbody>
</table>
Pig Health – **External parasites**

- **Mange Mites**
  - Burrow into the skin
  - Infestation begins on the inner side of the ear and spreads over the head, along the neck and across the body

- **Symptoms**
  - Affected skin has small raised areas with brownish scabs
  - Intense itching
Pig Health – **External parasites**

- **Hog Lice**
  - Bloodsucking parasites
  - Cling to the hair on the neck, behind the ears, up to 2-3 days in warm bedding

- **Symptoms**
  - Irritation to and in the folds of the skin
  - Can survive he skin, leads to itching
  - Hog gets restless
    - ↓ Feed intake and growth rate
Pig Health – Diseases

• Swine Influenza (SIV)
  • Virus that acts like a common cold
  • Zoonotic – can be transferred from animals to humans
  • Mostly likely to occur during low immunity or stressful events
    • Transport
    • Commingling of pigs

• Signs
  • Off – feed events
  • Fever
  • Dry (Bark) Coughing
Pig Health – Diseases

• Porcine Epidemic Diarrhea Virus (PEDv)
  • Identified in U.S. on May 17, 2013

• Not a new virus
  • First recognized in England in 1971
  • Several other European countries
  • More recently in China, Korea and Japan

• Causes disease of the gut and located in the gut (NOT respiratory)
  • Transmits through oral/fecal method
  • contaminated manure; anything in contact with manure can be a potential source of infection
What does PEDv do to pigs?

- Cause increased vomiting and diarrhea in pigs
- Death is caused by dehydration
- Piglets
  - Mortality in piglets is high (up to 80%) due to dehydration
- Sows
  - Mortality in sows is lower, diarrhea present
- Growing pigs
  - Clinical signs of fever, vomiting and diarrhea
  - Increased mortality
Pig Health – Diseases

- Senecavirus A – Seneca Valley Virus (SVV)
  - Vesicular disease
    - Lesions on the snout, coronary band/hoof lesions
  - If you see any signs of vesicular disease, Immediately contact your State Veterinarian and/or the USDA APHIS Assistant District Director responsible for your state or region
  - They will decide if a Foreign Animal Disease (FAD) investigation is warranted and how to proceed as well as what samples to collect.
    - SVV looks similar to Foot and Mouth Disease
  - Temporarily halt any movements from the farm until directed by State and Federal Authorities
Pig Health – Diseases

- **Porcine Reproductive and Respiratory Syndrome (PRRS)**
  - Was found in the 1980s and originally called Mystery Swine Disease
  - Also called blue ear pig disease
  - Officially named in 1991
  - Affects the macrophages – “disease fighters”
    - Pigs get sick easier
  - Many different PRRS strain identified
What does PRRS do?

• **Piglets**
  - diarrhea
  - Less viable piglets
  - Increase in respiratory infections

• **Growing pigs**
  - Go off feed
  - Mild coughing
  - Hairy wasting pigs
  - In some herds there are no symptoms

• **Sows**
  - Go off feed
  - A reluctance to drink.
  - No milk and mastitis - significant symptoms.
  - High rate of abortions.
  - Farrowings are often 2-3 days early.
  - Respiratory/breathing issues.
  - Mummified piglets. 10-15% may die in the last 3-4 weeks of pregnancy.
  - Stillbirth levels increase up to 30%.
  - Very weak piglets at birth.
Pig Health – Diseases

• Toxoplasmosis
  • Cats are primary hosts

• Pigs may become infected by:
  • ingesting feed or water contaminated with cat feces
  • cannibalism of other infected dead pigs
  • by ear and tail biting
  • by eating infected rodents or other uncooked meat.

• Control
  • Keep cats out
  • Keep cats out of feed and grain storage
  • Control rodents
Pig Health – Diseases

• Erysipelas
  • Bacterial disease
    • Found in tonsils and passed in feces
  • More frequently found in pigs raised outdoors
    • Soil becomes contaminated by feces
  • Can cause
    • Sudden death, fever, diamond shaped skin lesions and abortion
  • Signs
    • Red skin blotches
    • Purplish tails and ears
    • Reluctance to get up and move
    • Depression
Pig Health – Diseases

• Leptospirosis
  • Usually gestating sows
    • Abortions
    • Weak pigs
    • Decreased litter size
  • Spread by contact with urine of sick or carrier animals
  • Eliminate standing water and wet areas in housing areas
  • Many species (domestic and wild) can be carriers
    • Rats recognized threat
Pig Health – Diseases

• Trichenella (muscle worms)
  • *Trichinella spiralis* is a parasitic nematode (roundworm) which is found in many warm-blooded carnivores and omnivores, including pigs.
  • Little effect on pig but is important in regard to public health
  • Feeding of any raw or undercooked meat scraps, including table waste could pose a risk
  • Greater significance is exposure of pigs to rodents and wildlife
  • Rodents, and rats in particular, serve as both a reservoir host and as a bystander host for trichinae infection

• https://www.aphis.usda.gov/vs/trichinae/docs/fact_sheet.htm
Pig Health – Diseases

• A few others:
  • Pseudorabies
  • Atrophic rhinitis
  • Salmonellosis
  • Brucellosis

• Many more
  • http://www.thepigsite.com/diseaseinfo/
Pig Handling

• Proper handling helps keep handlers and pigs safe

• Avoid injuries
  • Pigs and people

• Handlers should understand
  • Basic pig behavior
    • Pigs establish a pecking order
    • Will fight with one another to establish order
  • Proper handling practices
  • Handling tools
Pig Handling – **Fight or Flight**

- Pigs attempt escape when a threat is perceived
  - Can and will bite
  - Will run around, through and/or over you

- Advantage if a handler understands
  - Flight Zone
  - Point of Balance
  - Blind Spot

- Disadvantage if used improperly, or not used
  - Injuries
  - Balking
Approaching – Flight Zone
Pig Handling – Following/Herding

• Pigs like to
  • Stay in visual/physical contact
  • Follow each other

• An advantage when moving pigs
  • Up or down ramp/chute
  • Through hallway/alleyway
  • Into or out of a pen or room
Pig Handling – Environment

• Pigs react to changes of
  • Floor surface
  • Footing/traction
  • Temperature
  • Lighting
• Other distractions
  • People
  • Drafts/wind
  • Shadows
  • Noises
  • Doorway
  • Other
Handling – People:Pig Interactions

• Pigs may not understand a handler’s intentions

• Pigs experiencing positive interactions are typically
  • Easier to handle
Pig Handling – Breeding Stock

• Large, powerful pigs
  • Sows, gilts, boars
  • Use appropriate handling tools, not handler’s body

• Can be unpredictable, aggressive
  • Example: Boars may use tusks as a form of defense
  • Example: Sows protecting a litter

• Utilize known pig behavior
Handling – Piglets

• May be safety challenge
  • Sharp teeth
  • Active (squirm, wiggle)

• Pick up piglets
  • Under rib cage
  • By a rear leg above the hock
Pig Handling – Tools

- Sorting Board
  - Most effective
Take Home Message

• Establish your goals
• Lots of different management styles
• Provide pigs an environment to thrive
• Best of Luck with your endeavors!
Resources

• Michigan State University Extension – Pork
  • http://msue.anr.msu.edu/topic/info/pork
  • http://msue.anr.msu.edu/news/small_farm_business_and_marketing_presentations_for_beginning_farmers

• Swine Management - Pork Information Gateway (PIG)
  http://porkgateway.org/resources/type/factsheets/

• Swine Breeds
  • http://www.ansi.okstate.edu/breeds/swine

• Swine Health
  • http://www.thepigsite.com/diseaseinfo/

• Swine Nutrition - National Swine Nutrition Guide
  • www.usporkcenter.org
Thanks for Your Time!

Questions?