Swine Reproduction Series:

Breeding Stock Care - Housing

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For pigs- housing is absolutely necessary

- Changing weather
For pigs—housing is absolutely necessary

- Changing weather
- Changing seasons
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• Lack of physiological resistance
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- Lack of physiological resistance
  - No Sweat Glands
  - Sunburn
For pigs - housing is absolutely necessary

- Change of climate
- **Extremes are not a pig’s friend**
Identify the ‘ideal’ then adjust

• Thermal neutral zone.
  o Environmental temperature range that allows the pig to prioritize feed nutrients for building meat or reproductive tissues
  o Notably narrow in pigs
  o Variation across breeds and lineage - true across breeds in meat (tissue) production
  o Most mature pigs are comfortable between 50-75°F
In the cold, heat is high maintenance

- Mature pigs can handle cold temps
  - Always trade offs
  - Remember – stock(wo)men want animals to THRIVE not just SURVIVE
- Temps below ~40-50°F
- Tissue production (meat, offspring)
- Heat production (maintaining body temp)
- How does this impact pigs during cold temperatures?
  - Small pigs struggle quickly, risk death
  - Holding heat produced
  - Increasing digestive processes
When is a pig cold?

- Hair grows/stands up
- Huddle together
- Burrow into straw
- Don’t want to leave housing
- Thin, yet…
  - Eat more
  - Drink more
Housing should hold heat in winter, lower pig maintenance

- House sows together whenever possible
  - Keep fighting down, share body heat
  - Exception for farrowing
- Keep boars separate
  - Energy spent fighting or mating
- Body condition scoring
  - Muscle condition
  - Fat Cover
In the heat, cooling critical

• Once temperatures exceed 80°F, pigs over 100 lbs. can very quickly move into life-threatening levels of heat stress

• Primary physiological goal maintaining body temp
  o Pigs don’t sweat
  o Dense animals, low surface area/weigh ratio

• Tissue production gives off a lot of heat – so it slows or stops
  o Muscle breaks down
  o Intestinal tissue can die (literally)
When temperature and humidity rise together, the chance of heat stress on grow-finish pigs increases (adapted from Livestock Industry Facilities and Environment: Heat Stress Indices for Livestock, Iowa State University, 2002).
When is a pig hot? (in heat stress?)

- Activity increases at night (when cool)
- Seek and ‘waste’ water
- Panting, sitting, lethargy
- Eating will be low priority
- Vomiting
Reproductively speaking

• Prolonged cold, inducing weight loss, offspring loss
• Heat
  o Sperm death, 30-60 days of poor-quality sperm
  o Oocyte breakdown
    • Low litter sizes
    • Reduced farrowing rates
  o Inhibited estrus expression
    • Prolonged anestrus
Ideal housing
Ventilation Matters

• Air movement

Air Exchange

- Moisture
- Gases

Air Distribution

- Dust
- Pathogens
- Heat

Fresh Air In

Stale Air Out

Mixing
Housing specs

• Roofing
• Access
• Air flow *(did I say that enough yet?)*
• Insulation
• Drainage
• Flexibility
• Meets your needs!
  - https://www.ag.ndsu.edu/extension-aben/buildingplans/swine
Pastures and Wallows

• Pastures are **not** housing
  o Doesn’t make them always inappropriate
  o Doesn’t make them always appropriate

• Wallows
  o If you use them, *manage* them
    • Damage to ground
    • Water wastage
    • *Pathogen hub*
      o Brucellosis
      o Leptospirosis
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Reproductively – biggest concern
Regardless of temp…

- Keep it dry
- Keep it insulated
- Let air flow
  - Even in the winter
- Build sturdy
  - Less big-bad-wolf
  - More bored-destructive-pig
  - Extreme weather
Questions?