Pig Behavior Handling Fitness of Pig
Important Tips and Suggestions

- Do this
- And this
- And this
Important Warnings and Cautions

- Don’t do this
- Or this
- Or this
1. Pig Behavior
Section Objectives

• Apply basic animal handling concepts, including animal behavior, the flight zone, and point of balance.

• Recognize the importance of the animal handler's appropriate behavior as it relates to animal behavior.
Basic Pig Behavior

Instinctive behavior is influenced by

- Age
- Gender
- Health status
- Environment
- Prior experiences

Understanding basic pig behavior can help

- Make animal handling easier
- Reduce stress
- Reduce safety risks to the handler
- Reduce losses - skin injuries, bruises, fatigue, death
Individual Pig Perception and Response

Three basic characteristics to consider:

- Flight Zone
- Point of Balance
- Senses – sight, hearing and smell
Flight Zone

- Safe distance from handlers
  - Varies by pig
  - Varies by situation

- Recognize cues
Point of Balance

- Used to determine which way to move away
  - Varies with conditions
- Avoid common errors
Senses of Hearing, Smell & Sight

❖ Relies on hearing and smell to situate itself, while sight is a complement

• Varies with conditions

❖ Blind spot
Behaviors in Typical Handling Conditions

- The figure shows pig responses to specific set of conditions
- Pig behavior will differ when
  - In groups
  - No chute to prevent turning around
  - Confined spaces require working inside flight zones
  - Multiple handlers are present
Changing Conditions Changes Pig Behaviors

- Can’t rely on flight zones and point of balance alone
- Need to understand how behavior is influenced by
  - Herd behavior
  - The presence of additional people
  - Handlers’ use of pig handling tools
  - Environmental influences
The Importance of Pig Body Language

- Pigs tell us what they are paying attention to with their body language

- Handlers should pay attention to
  - Where pigs are looking
  - How pigs are bending or twisting their bodies
  - How pigs have their heads or ears turned or cocked
  - Whether pigs are listening intently
Releasing Pressure

- Important to monitor body language and adjust the level of pressure you are applying
- Ways to release pressure:
  - Pause and let pigs move away
  - Step back and refrain from making physical contact with them
  - Soften our body language to reduce both our threat and the distance pigs require
  - Let pigs circle past us: our strongest pressure is in the direction we are facing
  - Discontinue making noise
  - Look away from them
  - Reduce group size
Calm Pigs

Body language indications:

- Head and ears low, body relaxed
- Moving at a walk or trot, (or exuberant outbursts if excited but not scared)
- Attention mostly forward
- Any vocalizations are low pitched
Pigs Showing Mild Fear or Defensiveness

Body language indications:

• Heads and ears rising
• Still moving away but with increasing attention towards the handler
• Flight zone is expanding
• Possible brief increase in speed
Pigs Showing Heightened Fear or Defensiveness

Body language indications:

- Full attention is on the handler
- Pig’s efforts to move away aren’t working so it switches to alternative tactics: stop, back up, turn back, try to get past the handler or...
- Shut down and refuse to move – a defensive response different from being too tame or fatigued
- Bunching up and difficult to sort or separate
Pigs Showing Extreme Fear or Defensiveness

Body language indications:

- Panic
- Willing to run under, over, or through handlers and obstacles
- Scrambling, out of control movement
- High pitched vocalization
- Possibly leading to severe stress symptoms including death
- Bunching up and difficult to sort or separate
Herd Behavior and Group Patterns

- Pigs try to stay with other pigs for protection. Anytime we work with groups of pigs we get some form of herd behavior. The manner in which pigs display herd behavior is closely linked to their fear levels, what they are paying attention to, and available space.
Flowing Herd Behavior

When pigs move with a group that is moving. Occurs when:

- There is a calm pig response
- Pigs’ attention is on moving and staying with the herd
- Movement of front animals draws other pigs to join and follow
- Movement of animals coming behind drives front animals to continue moving forward
- Animals are loosely spaced
- The handler is moving with and not forcing the flow
Disrupting Flow

Movement or distractions can catch pigs’ attention and stop flow.

- Excessive handler noise, pressure and crowding from behind
- Something new or unfamiliar in the environment
- Sudden noises or movements
Flow and the Number of Handlers

- Pigs try to keep track of all people
- Only one person should be pressuring pigs at any time or you risk disrupting flow
  - Drawing attention and stopping pigs that have already gone past
  - Blocking pigs that are approaching so they stop moving or stop driving the front pigs forward
  - More forceful handling from an annoyed loader and that in turn leading to more problems and longer load time
- The fewer people present, the simpler it is for pigs to keep moving and the easier it is for handlers
Bunching Herd Behavior

- When the group stops and pigs stay together
  - Is a defensive response
  - Kills movement which may be useful for ear tagging and vaccinating
  - Is encouraged by anything that stops, crowds, traps or confuses pigs
  - Often occurs when pigs are facing away from the handler, closely packed, and listening intently
Handler’s Bubble

The safe distance pigs try to maintain between themselves and the area around a handler. The bubble:

• Takes up “real” space and contributes to crowding
• Expands and contracts with the handler’s pressure and pigs’ fear levels
• Acts as a “real” barrier that moves with the handler
1. Pig Behavior
Herd Behavior and Group Patterns

Handler’s Bubble & Circling
## Summary of Group Movement Patterns

<table>
<thead>
<tr>
<th>GROUP PATTERN</th>
<th>EMOTIONAL STATE</th>
<th>EFFECT ON MOVEMENT</th>
<th>PRESSURE and/or RELEASE</th>
<th>ATTENTION &amp; RESPONDING TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLOW</td>
<td>Calm</td>
<td>Easiest movement</td>
<td>Being given release</td>
<td>Herd movement</td>
</tr>
<tr>
<td>BUNCH</td>
<td>Fearful or Defensive</td>
<td>Kills movement</td>
<td>Blocked from getting release</td>
<td>Handler</td>
</tr>
<tr>
<td>CIRCLE</td>
<td>Fearful or Defensive</td>
<td>Opposite direction of pressure, Accelerates</td>
<td>Taking release by circling out of handler’s pressure</td>
<td>Handler</td>
</tr>
</tbody>
</table>
Taking Stock

- Calm animals move in a controlled manner.
- Defensive and anxious pigs are more difficult to move.
- Turning back, balking, refusing to move, and trying to get past the handler are fear responses triggered by handlers not giving pigs time and space to respond.
2. Handling
Section Objectives

6. **Apply basic animal handling concepts including the acceptable use of appropriate tools and handling aides.**
   
a. Describe the potential effects that human interactions have on pigs and pig behavior, as well as interactions with other individuals.

b. Explain specific techniques to use when handling and transporting pigs of various sizes/types of pigs including; breeding stock, culls, weaners and grow-finish pigs, and the differences between them. Identify the tools and techniques to use when handling each type of pig.

7. **Describe the influence handling techniques and animal handlers have on the incidence of dead and injured, ill, or fatigued animals.**

8. **Discuss worker safety protocols related to animal handling and transportation. Evaluate potential safety risks and identify any required personal protective equipment (PPE) to be used.**
People: Pig Interactions

- Pigs may not understand a handler’s intentions

- Pigs experiencing positive interactions are typically
  - Less fearful of handlers
  - Easier to handle
Walking the Pens Reduces Flight Behavior of Market Pigs as the Handler Enters the Pen
Proper Handling

- Move pigs at their normal walking pace
- Avoid aggressive handling:
  - Overuse, or improper use, of electric prods
  - Loud noises and yelling
  - Moving pigs too fast
  - Moving too many pigs per group
  - Overcrowding pigs in chutes, ramps and alleyways
  - Rough physical contact
- Willful acts of abuse are unacceptable
- Requirements differ for certain sizes and types of pigs
Breeding Stock

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

Are the most unpredictable
- Boars are especially dangerous because their tusks can cause injury so handlers should use extra caution and never turn their back to a boar
- Sows can be aggressive when they perceive litter is being threatened
Piglets

- May be safety challenge
  - Sharp teeth
  - Active (squirm, wiggle)
- Sows may attempt to bite the handler when reaching for the piglet
- Moved by herding or picking up and moving them by hand or cart
Nursery and Finisher Pigs

Utilize pigs’ natural behaviors

- Moving out of full pens with narrow gates: don’t get behind and chase, use your bubble and encourage to circle toward the gate
- Sorting out of pens: work in pairs with one working the pen and the other sorting; ensure only one handler is moving or applying pressure at a time
Group Sizes

Industry best practice to balance safety and efficiency

Adjust group size based on your facility and conditions to yield calm, consistent movement

<table>
<thead>
<tr>
<th>Pig type/size</th>
<th>Suggested group size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weaned piglets</td>
<td>20</td>
</tr>
<tr>
<td>Nursery pigs</td>
<td>20</td>
</tr>
<tr>
<td>Finished/Market pigs</td>
<td>3-5</td>
</tr>
<tr>
<td>Sows/Gilts</td>
<td>1-5¹</td>
</tr>
<tr>
<td>Boars</td>
<td>1-5¹</td>
</tr>
</tbody>
</table>

¹Depending upon temperament and safety conditions, may require moving individually.
Tools and Equipment

Tools can be used as a/an

- Physical barrier – Sort board
- Visual barrier - Matador’s cape
- Auditory stimulus – Rattle/Shaker paddle
- Visual stimulus – Nylon flag
Tools and Equipment

- Tool of last resort – used only when absolutely necessary under strict guidelines
- Many packing plants do not tolerate their use at all
- Figure out why pigs aren’t moving and prevent the problem from happening
SAFE ANIMAL HANDLING PRACTICES

- Human injuries happen more often when people are handling animals than during any other activity performed in pork production;

- Common injuries:
  - Contact injuries, slipping and falling, head cuts, or bumps and bruises when on the trailer

- Remain aware of the environment to avoid injury to self
Personal Protective Equipment (PPE)

- Conduct hazard assessment
  - Review tasks
  - List potential injuries
  - List PPE

- Typical minimum PPE
  - Safety-toed boots
  - Sorting board
  - In a truck/trailer
    - Knee pads and/or shin guards
    - Bump helmet

- Additional PPE
  - Dust mask
  - Eye and hearing protection
  - Gloves
Summary

How you choose to communicate with the pigs you move effects their behavior and meat quality:

- Walk pens on a daily basis
- When moving pigs, act calmly and avoid sudden movement, loud noises, and other actions that may frighten or excite pigs
- Move pigs at their normal walking pace

As handlers:

- Understand basic handling protocols for certain sizes and types of pigs
- Move the correct group size for the type of pigs being handled
- Understand handling equipment and when to use these tools so they are effective
- Minimize or eliminate electric prod use when loading pigs
- Understand personal protective equipment for loading, transport and unloading
5. Fitness of the Pig
5. Fitness of Pig

Section Objectives

17. Evaluate the fitness of a pig and its readiness for transportation in each phase of production.
   a) Identify which animals are, and which are not, appropriate to transport and why.
   b) Describe how to resolve potential conflicts regarding fitness of the pig during the loading/unloading process.

18. Compare the roles and relationships of proper animal handling, weight and phenotype.
Fitness of the Pig

- It is the position of the National Pork Board that any pig unable to walk, is ill or significantly injured, should not be transported to market channels.
  - Where likelihood of recovery is low, even with treatment, pig should be humanely euthanized
  - Any pig that becomes fatigued should be moved to a resting area in an appropriate manner
  - A fatigued pig is defined as having temporarily lost the ability to walk but has a reasonable expectation to recover full locomotion with rest
  - Resting area helps enable recovery by minimizing competition for feed and water and provides the opportunity for monitoring
Fitness of the Pig

Evaluate pigs before loading

Examples of pigs unfit for transport

• Sick, injured, weak, disabled, or fatigued
• Unable to stand unaided and bear weight on each leg
• Blind in both eyes
• Cannot be moved without causing them additional suffering
• Body condition would result in poor welfare because of the expected climatic conditions
• Newborn with an unhealed navel
• Pregnant animals which would be in the final 10% of their gestational period at the planned time of unloading unless special conditions provided
• Females traveling without young which have given birth within the previous 48 hours
Fitness Concerns

- Common causes of transport losses:
  - Heat stress
  - Increased heart rate/failure
  - Porcine Stress Syndrome (PSS)
  - Fatigue
Fatigued Pigs

Definition

- Temporarily lose the ability or the desire to walk
- Are reasonably expected to recover with rest

Have acid-base imbalance known as metabolic acidosis

- Can cause pork quality defects
Identify and treat pigs showing signs of stress:

- Open-mouth breathing (panting)
- Vocalization (squealing)
- Blotchy skin
- Stiffness
- Muscle tremors
- Reluctance to move
- Increased heart rate
- Elevated temperature

Physiological differences between pigs handled gently and aggressively:

<table>
<thead>
<tr>
<th></th>
<th>Gently Handled</th>
<th>Aggressively Handled</th>
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<tbody>
<tr>
<td>Skin Blotchiness (%)</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Rectal Temperature (°F)</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Heart Rate (Beats/Min)</td>
<td></td>
<td>*</td>
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</tbody>
</table>

* Significantly Different (P<0.01)
Prevention & Preparation

Key Considerations:

- Handle ill, injured or fatigued pigs humanely
- Development of handling and movement protocol
- Producers should seek prevention through good production and handling practices
- Designate a resting area
- Pigs with a history of problems should be handled with extra care
Moving Ill, Injured, or Fatigued Pigs

Key points to consider

- It is strictly prohibited to move pigs overtop of non-ambulatory pigs.
- It is also strictly prohibited for handlers to drag live animals or force them to move.
- Should include equipment appropriate for the size, age and condition of the animal.
- Efforts should be taken to not exacerbate and/or cause an injury to the animal.
- Recommended that at least two people are involved.

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Tools for Moving

Tools for moving an ill, injured, or fatigued pig

- Stretcher
- Sled
- Hand cart
- Mechanized equipment – loader

Basic Techniques

- Use two handlers
- Gently roll pigs, hold/push at flank and under forelegs
Summary

- Evaluate for fitness prior to transport
- There are three primary issues that can lead to increased transport losses:
  - Fatigue,
  - Heat Stress
  - Porcine Stress Syndrome (PSS)
- Animals that become ill or injured or fatigued during transport should always be handled humanely with the appropriate tools