Instructions for Webinar Participation

Getting Started

The webinar will start soon

Audio is through your computer speakers or headset – ***you may not hear sound until webinar begins***

Audio check - use the Audio Settings options to do a sound check

If you see presenters talking but do not hear audio, use the Question & Answer feature to indicate you are not getting sound

How to Ask Questions

1. Click on icon found at the upper part of your screen
2. A box will open where you can type in questions, comments, indicate sound problems, etc.
3. You can use this throughout this webinar to ask questions

Technical Help

- Do your own sound check using the option.
- Telephone (800) 500-1554 for technical support.

MICHIGAN STATE UNIVERSITY | Extension

MSU EXTENSION 2016 BEGINNING FARMER WEBINAR SERIES

✧✧✧✧

TWENTY THREE EVENING WEBINARS FOR PEOPLE WANTING TO 'GET STARTED' FARMING

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

MSU is an affirmative-action, equal-opportunity employer. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, sex, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status or veteran status.

The Basics of Raising Pigs

Tom Guthrie
Michigan State University
Statewide Extension Educator, Pork and Equine
Jackson, MI
Phone: 517-788-4292
email:guthri19@anr.msu.edu

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

Rank	Country
1	China
2	EU – 27
3	United States
4	Brazil
5	Russia

Source: USDA Foreign Agricultural Service

Industry Quick Facts

- Top U.S. States for Pork Production

Rank	State
1	Iowa
2	North Carolina
3	Minnesota
4	Illinois
5	Indiana
13	Michigan

Source: 2012 USDA Census for Agriculture

Industry Quick Facts

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

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

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 (10th 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

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

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
      - – Uitilized 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

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

Nutrition – Nutrients

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

Protein Source	Considerations
Full Fat Soybeans	Anti-nutritional factors, must be heat treated
Field Peas	Low levels of a few key amino acids, limits use in small pig and sow diets
Canola	Up to 15% in diets for all phases except for gestating and lactating diets up to 10%
Alfalfa	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
Sunflower seeds	Up to 10% for weaned and grow-finish pigs, up to 30% for gestating and 20% for lactating
Fababeans	High in unsaturated fatty acids makes them susceptible to rancidity if stored for more than one week after grinding

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

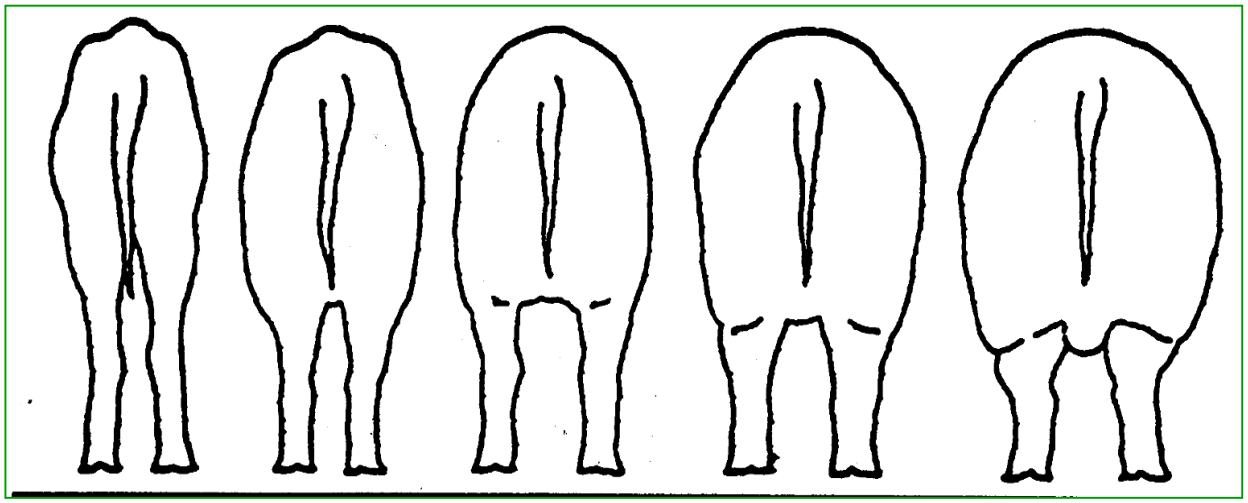
- By-products
  - Hazards - animal health?
  - Idea of nutrient content
    - Shouldn't rely on solely for diet
  - May be diet inclusion limitations
    - Growth inhibiting/anti-nutritional factors
  - Remember – a balanced mixture of nutrients

- 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

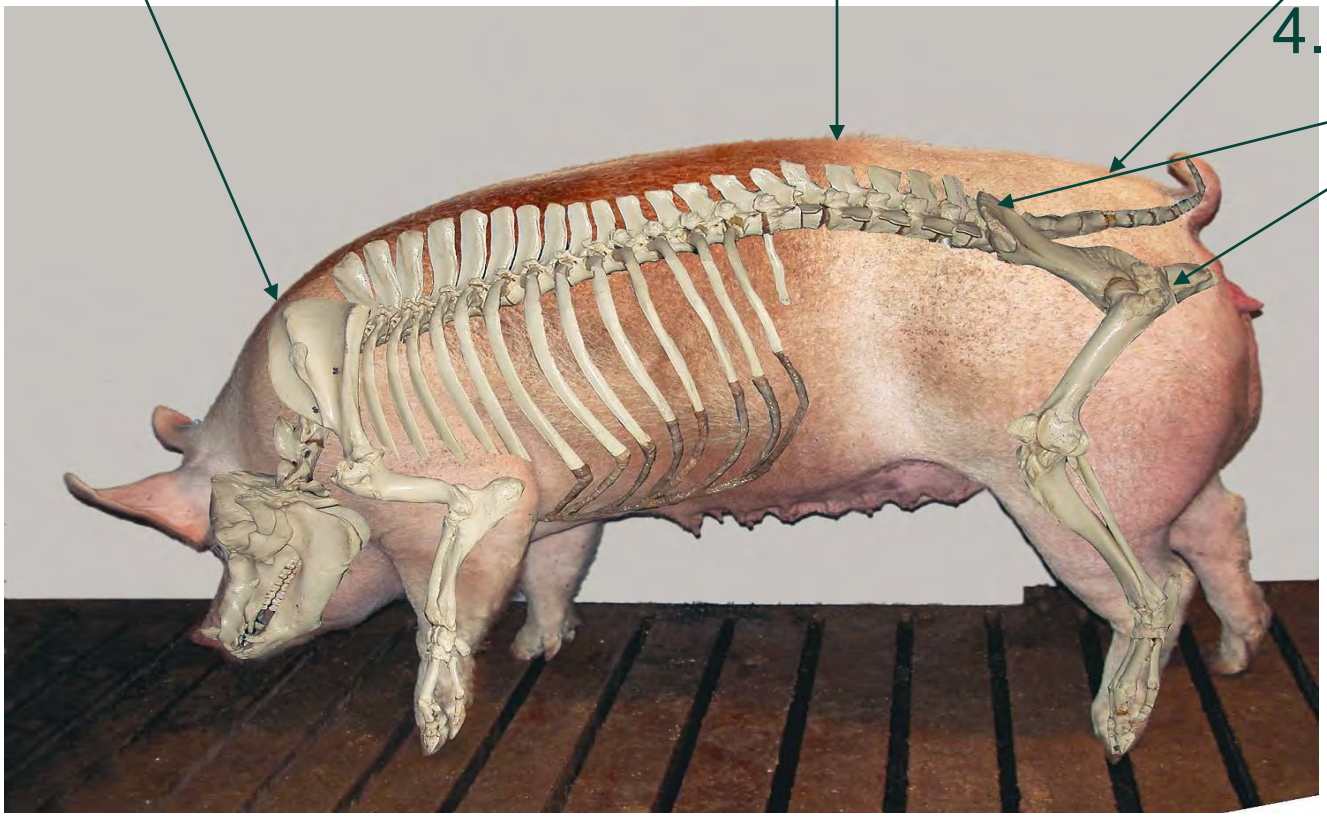
Management – Body Condition



1 2 3 4 5

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

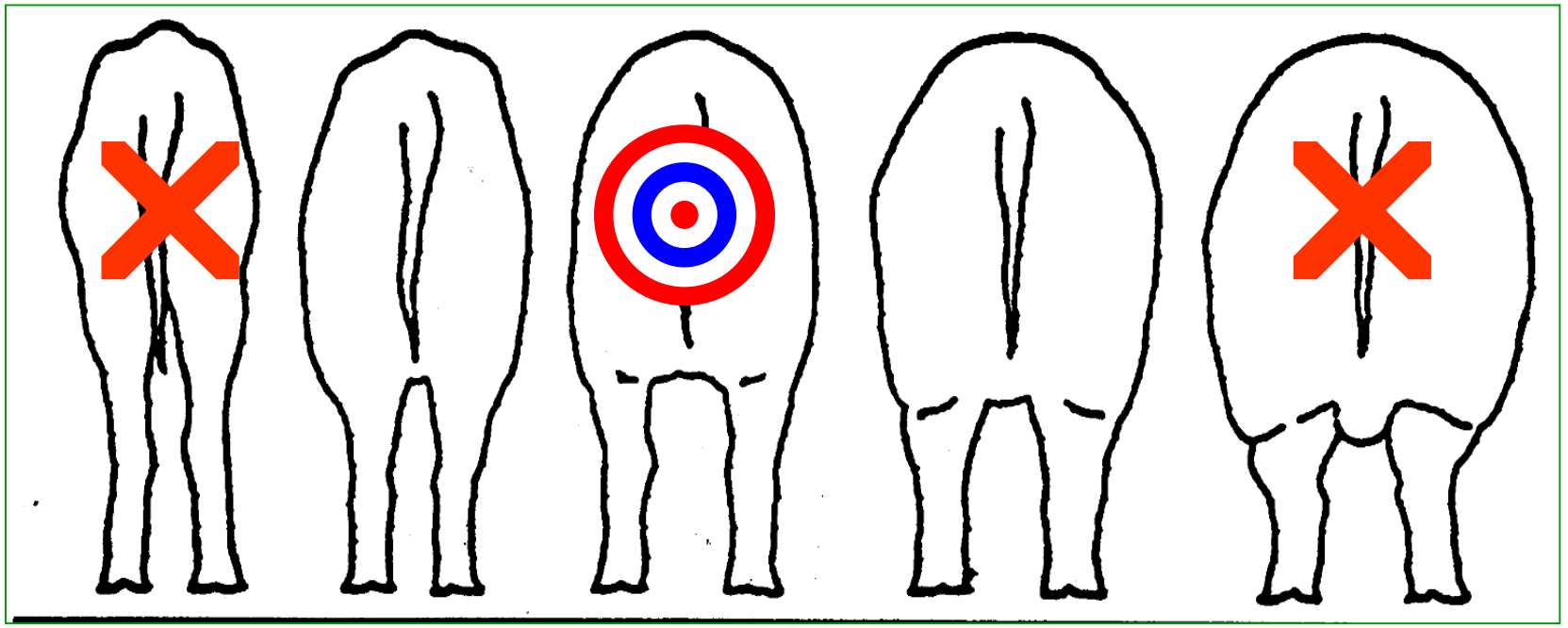

Over-conditioned “Fat” Sows
=
Productive
and
“Happy” Sows

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)

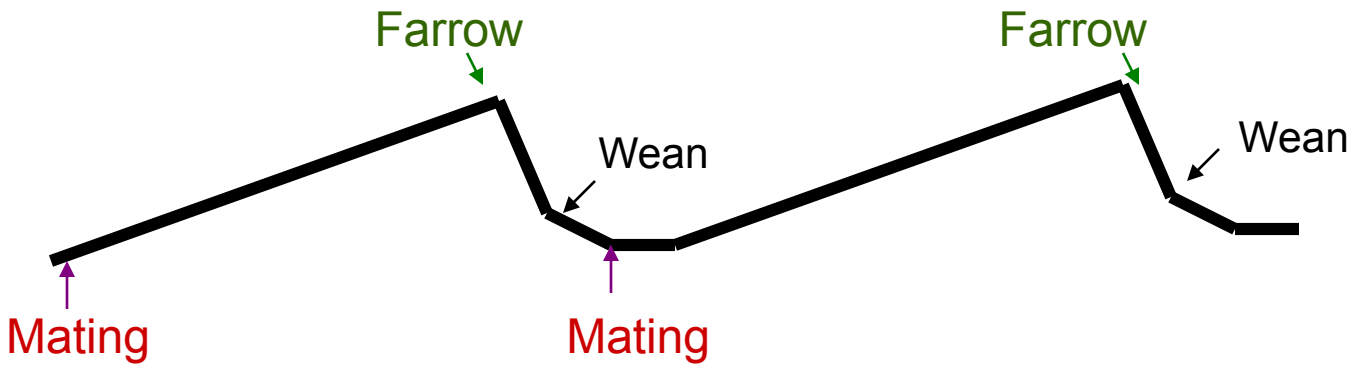
Feeding management - Critical factor

- Avoid the extremes



Pattern of body condition change

- Gradual increase during gestation
- Small decrease during lactation



Slide courtesy of Rozeboom (2009), MSUE Lactating Sow Management program

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

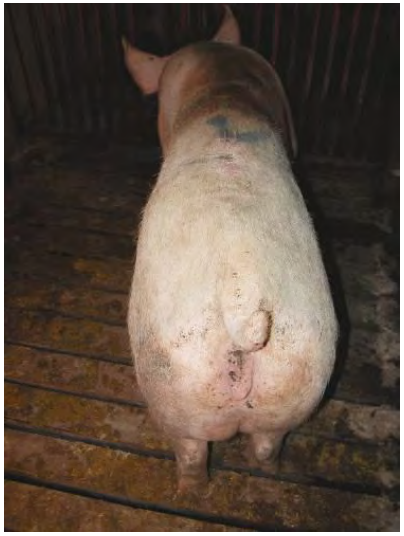
Base Feeding Rate

- 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

Parity	lbs. of gain during gestation
Gilts, 0	120-130
1	110-120
2-5	80-90
6+	65

- 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)

Ingredient	Amount
Beet pulp	5 to 15%
Wheat bran	5 to 15% max.
Oats	15% max.
Alfalfa hay	15%

- 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

Condition Score	Feeding Level in Pounds/Day
1	Base feeding level + 2.0
2	Base feeding level + 1.0
3	Base feeding level
4	Base feeding level – 0.5
5	Base feeding level – 1.0

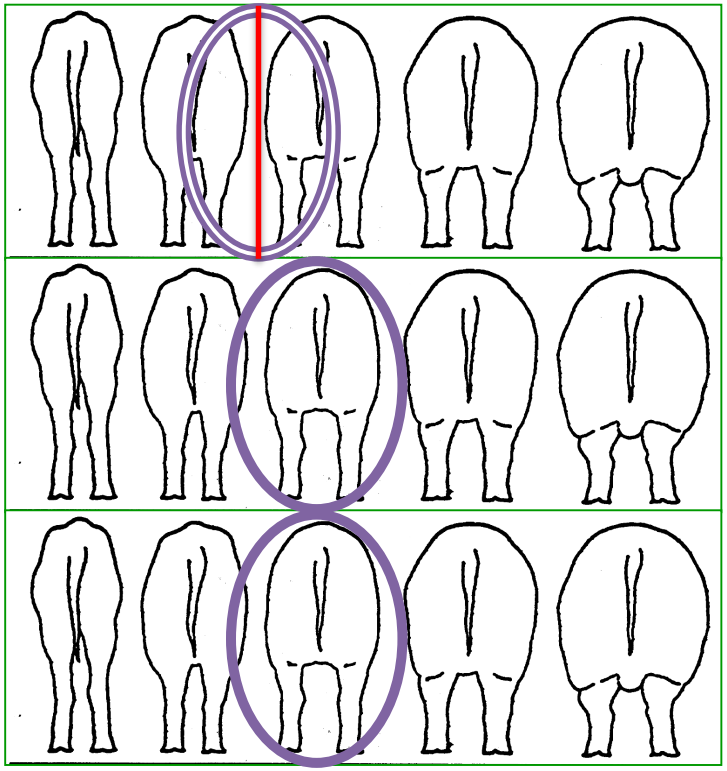
Transition to Lactation

- 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

Time	Body Condition
Mating	
Day 30	
Day 60	

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

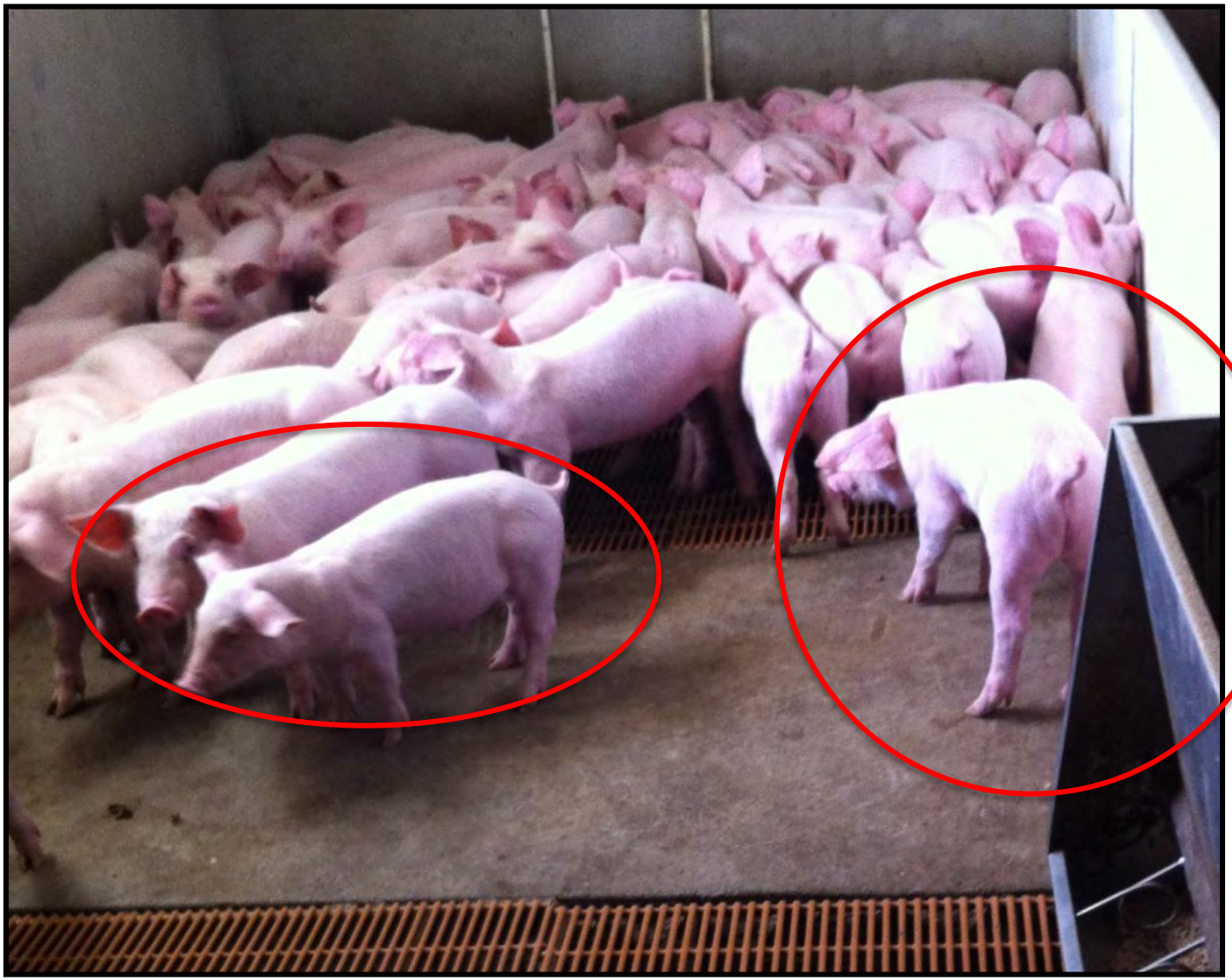
- Self-feeders
  - Most self-feeders are adjustable
  - Ideally, bottom of the feed tray should be only half covered with feed
  - If too much feed is available at the bottom of the pan, pigs will waste a lot of it
  - Even 5% feed waste can cost a lot of money

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

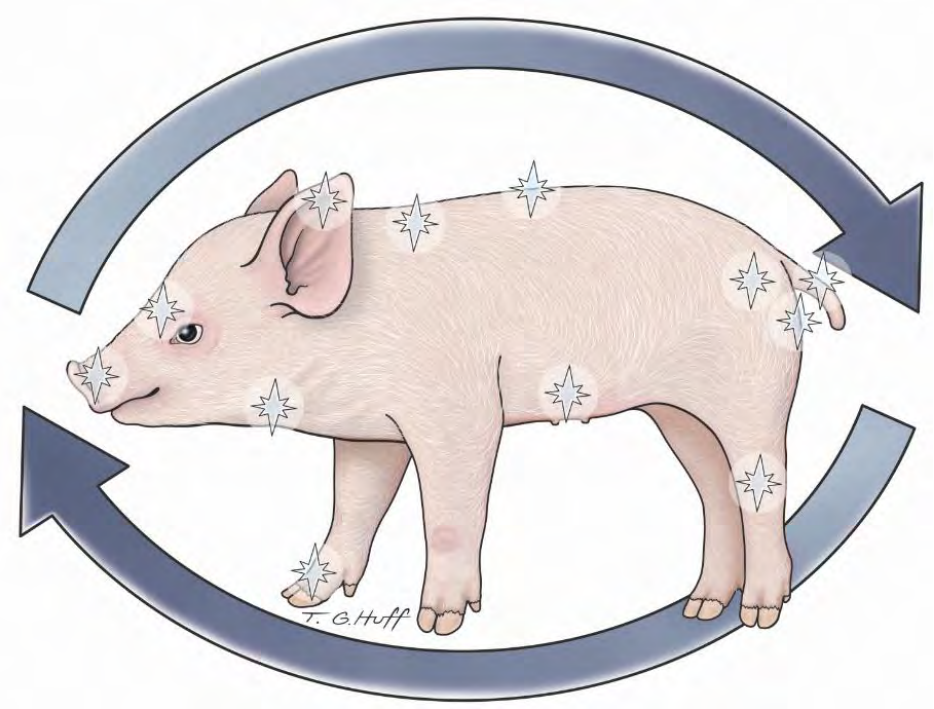
Pig Health – Observation

- 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

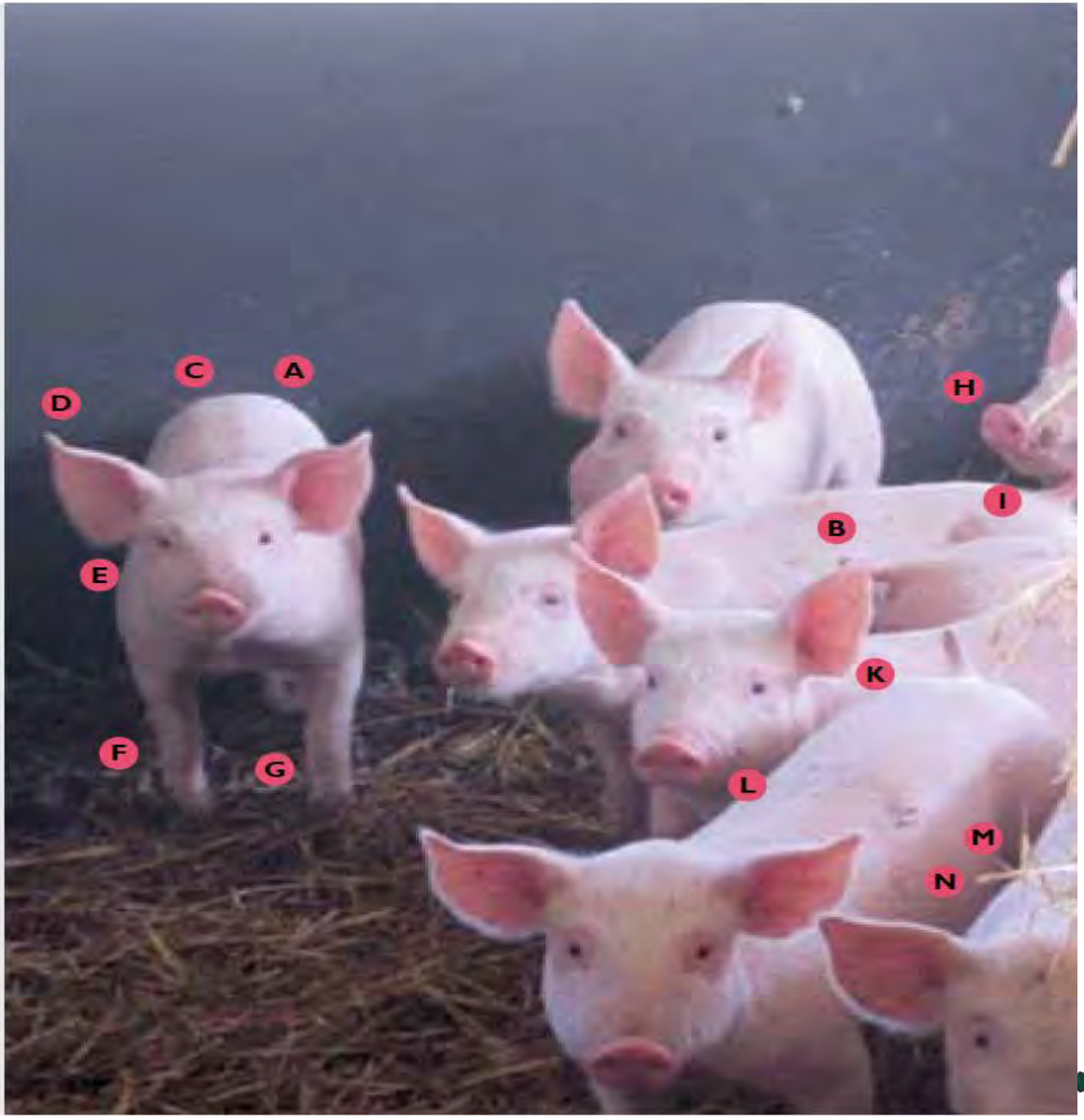
Body

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

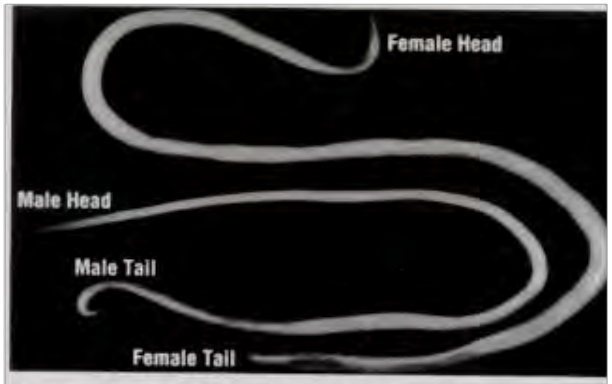


Figure 1. Roundworm (*Ascaris suum*). The large one is the female; the small one with curled tail is the male.

Pig Health – Internal parasites

- Other internal parasites

Parasite	Age commonly found	Specific signs or damage
Threadworm	10 -20 day old pigs Breeding stock	Bloody diarrhea in young pigs
Whipworm	Growing pigs	Ulcerate the cecum and large intestine bloody diarrhea
Nodular worm	All ages	Decreased digestive efficiency
Stomach worm	All ages	Irritates lining of stomach
Lungworm	Feeder pigs and older	Irritates air passage, ruptures tissues, bleeding
Kidney worm	Older hogs & breeding stock	Damages liver and kidneys

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 restltess
    - ↓ 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/

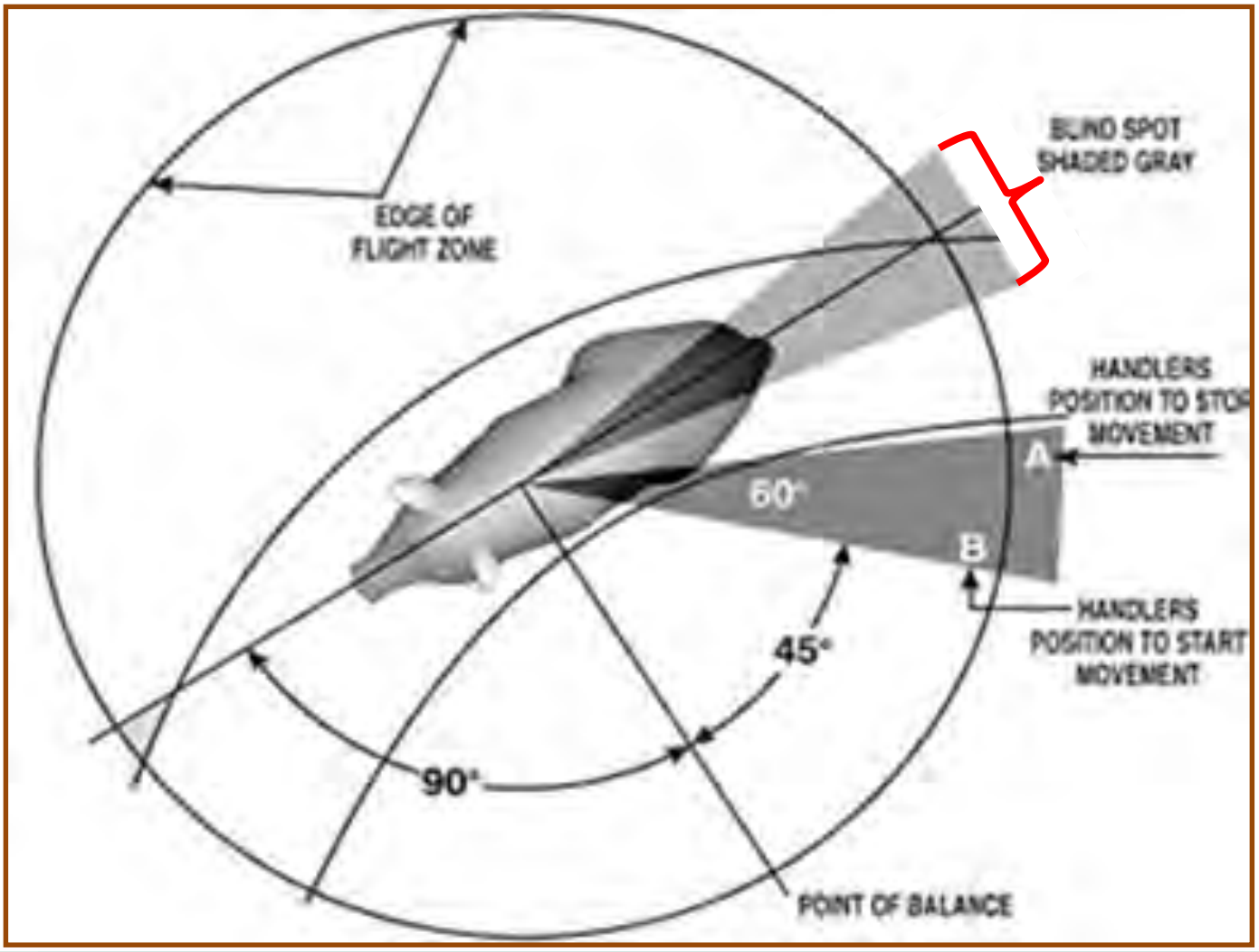
Pig Handling

- 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?