

MAQA (Meat Animal Quality Assurance)



Animal Handling 2008-2009











Quality Assurance Programming

- Year 1: Care and Management
 - Animal ID, feed, water
- Year 2: Animal Health Products
 - Reading Labels, Medications, Residues, Vet/Client Relationship
- Year 3: Animal Handling
 - Handling, Biosecurity, Carcass, Flight Zones, Space, Animal Well Being

Quality Assurance Programming in Wisconsin

- Meat Animal Quality Assurance (MAQA)
 - Meets the Youth Pork Quality Assurance (PQA Plus) Requirements

10 Good Production Practices

-  Establish and implement an efficient and effective herd health management plan.
-  Use a Veterinarian/Client/Patient Relationship as the basis for medication decision-making.
-  Use Antibiotics responsibly.
-  Identify and track all treated animals.
-  Maintain medication and treatment records.
-  Properly store, label and account for all drug products & medicated feeds.
-  Educate all animal caretakers on proper administration techniques, needle-use procedures, observance of withdrawal times, and methods to avoid marketing adulterated products for human food.
-  Follow appropriate on-farm feed processing and commercial feed processor procedures.
-  Develop, implement, and document an animal caretaker training program.
-  Provide proper animal care to improve animal well-being.

WHAT is Quality Assurance?

- Quality:
 - Safe, healthy and good tasting products
- Assurance:
 - A promise to consumers

What is Quality Assurance

- ✓ Based on HACCP

Hazard

Analysis

Critical

Control

Points

- ✓ Programs: BQA, PQA, other quality programs
- ✓ On Farm and Processing Plants

HACCP (Hazard Analysis Critical Control Points)

- System that protects food system from major food safety hazards
- Is required in all food processing facilities that are federally inspected
- Some food animal operations adopting HACCP

- Identify **hazards** to food safety
 - Ex. A needle was left in an animal.
- Identify **critical** points
 - When you are giving a shot.
- Set limits and **control points**
 - Use proper technique and animal restraint.
- **Monitor**
 - To make sure things don't go wrong
- **Fix** it if needed
 - Try to retrieve the needle, call a vet.
- Keep **records** and **verify** it is working
 - Document which animal has the needle & tell the processor.

How do I fit into HACCP?

- Adult and Youth Producers are treated the same.
- Supply consumers with a safe product

Food Safety

- Regulatory Agencies
 - United State Department of Agriculture (USDA)
 - Food and Drug Administration (FDA)
 - Environmental Protection Agency (EPA)
 - Food Safety and Inspection Service (FSIS)

United State Department of Agriculture (USDA)

- Agency of federal government that enforces regulations related to agriculture
 - Food products and safety
 - Delivery of products to consumer



United States Department of Agriculture

Food and Drug Administration (FDA)

- Responsible for regulating medicated animal feed and most animal health products
 - Approves health products
 - Sets tolerance levels of medications
 - Approves route of administration of product



Food Safety and Inspection Service (FSIS)

- Division of USDA
- Inspects all food products from animals in federally inspected packing plants and food processing facilities
- Examines food processing facility sanitation (HACCP)



United States Department of Agriculture
Food Safety and Inspection Service

Environmental Protection Agency (EPA)

- Responsible for the approval and regulation of pesticides
 - Determines withdrawal time of pesticides for food animals
- Regulations of physical and chemical impact of food animal production on the environment



Improvements ...

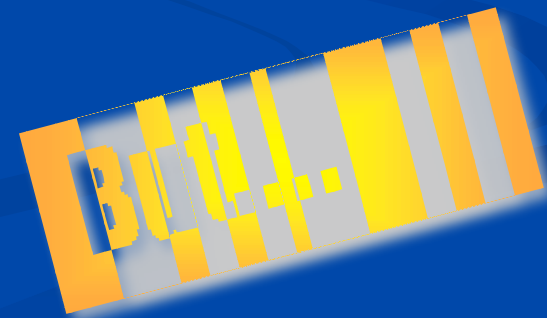
- Injection site lesions -- Beef

- 1990: 20% of sirloin butts
- 2000: Less than 3%

- Drug residues -- Pork

- 1987: 7% incidence rate
- 2000: < .3%

top



“Understanding the behavior of animals helps prevent injuries to both people and animals.”

“

Dr. Temple Grandin

Animal Handling

- Understanding & respectful of an animal's:
 - Comfort or flight zone
 - Blind spot
 - Point of balance
 - Main instincts are fight or flight!
- Proper handling provides a safe environment for animals AND people.
- Positive human contact

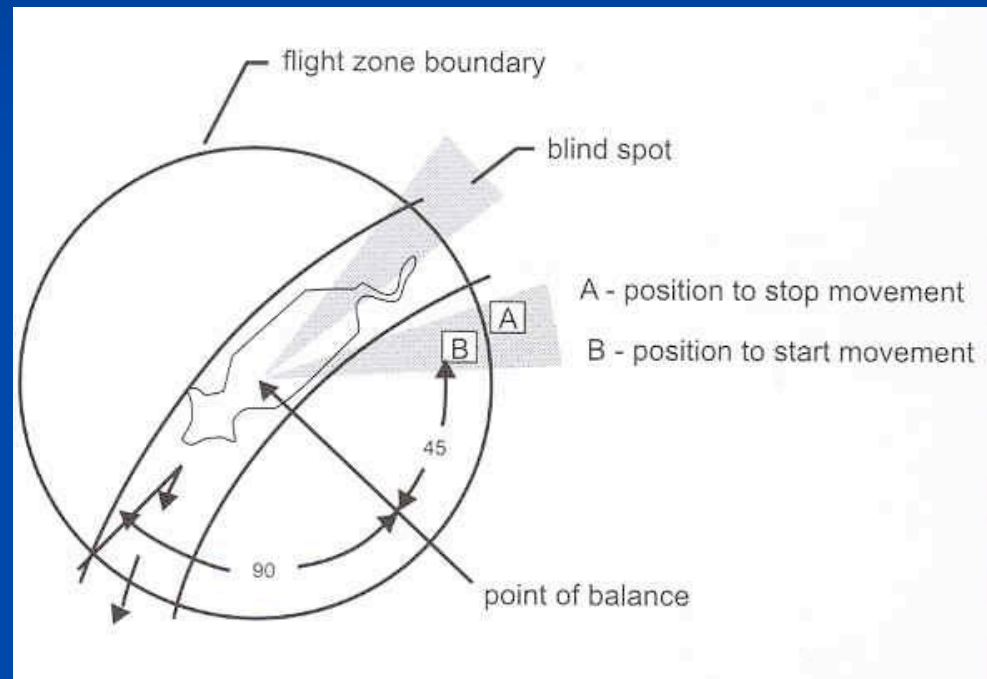
Flight Zones

- Animals have a “comfort zone”
- A person moving into the comfort zone makes the animal: (Fight or Flight)

1. Tense



Move away



Moving Animals

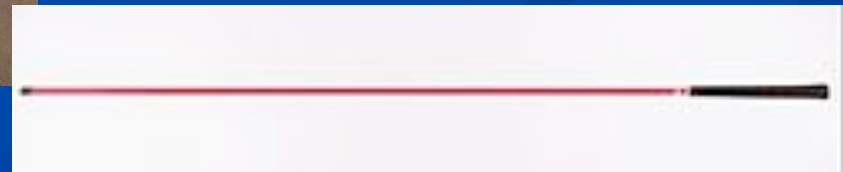
- Move animals where they can see
- Make pathways clear of obstructions and sharp objects
- Don't stand in front of where animals are going
- Use the follow the leader tendency.
- Provide a quiet, calm environment
 - No yelling, hitting, etc. No use of electric prods!!



Moving Animals

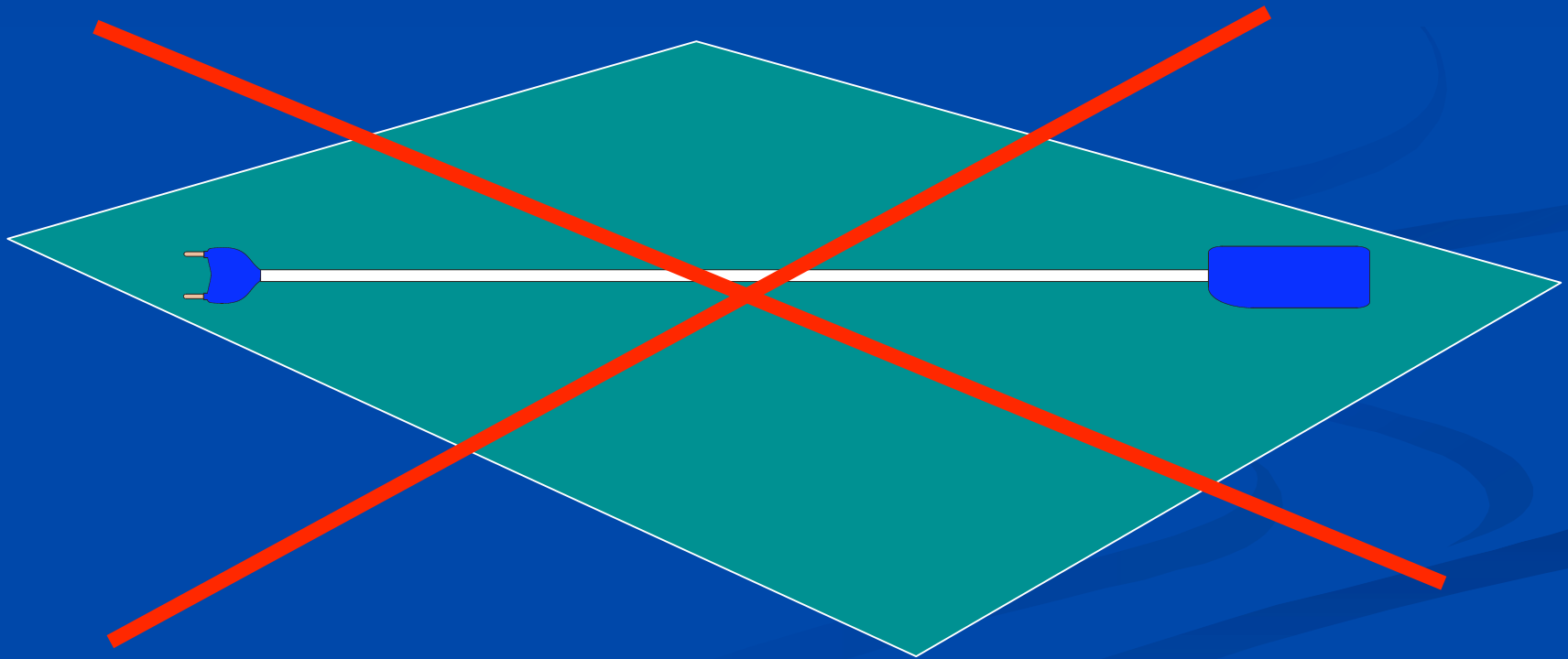
- Change in flooring can cause animals to stop
- Walkways for one animal at a time, funnel down
- Make gradual turns, no corners
- Lighting
- Block distractions, moving by other animals and stopping.
- Use the correct equipment
- Move animals in small groups
- Animal Instinct is to want to be with other animals.
- Apply pressure when animals have a place to go. Pressure from side, not from back if possible.

Moving Equipment



Equipment

- Electric prods – should not be used



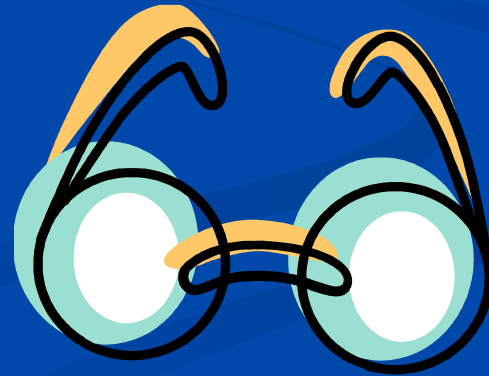
Stress

- Movement of animals is very stressful.
 - Especially in areas they are not familiar with and environments (hot, humid) they aren't used to.
- Indicators of stress are:
 - Rapid breathing
 - Fighting with other animals
 - Lameness
 - Restlessness
 - Self isolation from other animals
 - Lack of appetite
- Show Animal Stress

Blind Spot and Flight Zone Activity

Differences in Sight

- Depth Perception
 - Animals do not have very good depth perception
 - **They can't tell how far away something is**
 - **Shadows, dark spots, light reflection, changing surfaces and unfamiliar places may frighten them**



Differences in Sight

- “Wide angle” vision
 - Animals can see everything except what is directly behind them
 - The area where they can’t see is the “blind spot”

Cattle Behavior

- Higher center of balance
- Flighty – beef vs. dairy
- Tend to kick
- Cautious
- Not all act the same way.



Pig Behavior

- Low center of balance
- Eyesight might not be great
- See movement
- Curious
- Social
- Cautious
- Smart
- Long Memories
- Not all animals act the same.



Sheep Behavior

- Medium center of balance
- Flocking instinct – “follow the leader”
- Not all animals act the same.



Transportation

- VERY STRESSFUL TIME!!
- Transport animals during early morning and evening during hot weather
- DO NOT transport during extreme cold or heat
- Avoid long transport times, & traffic times
- Do NOT overcrowd
- Provide proper ventilation
- Provide proper bedding (sawdust/shavings in the summer, straw in the winter)

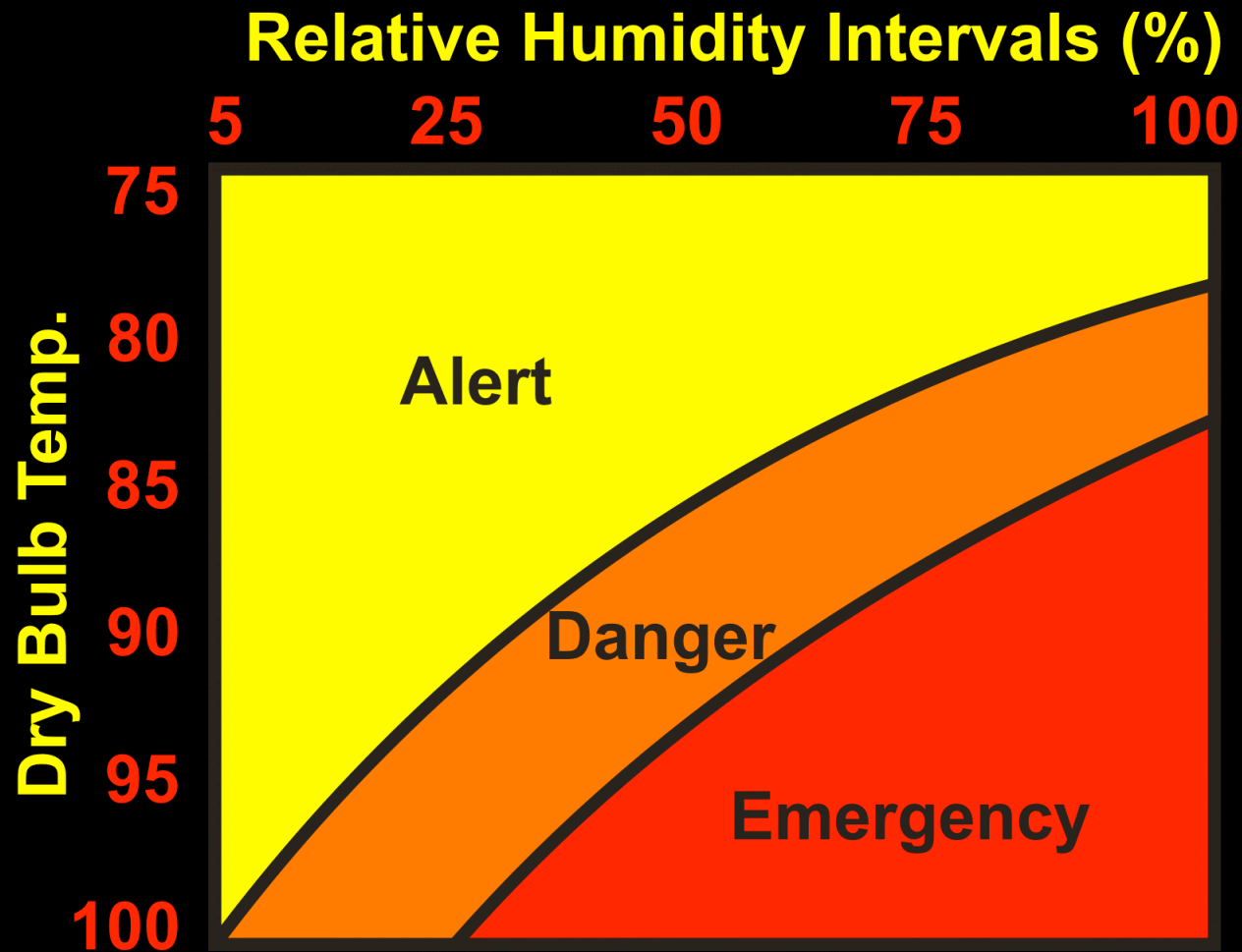


Transportation

- Allow for rest and rehydration before & after loading
- Load straight into the truck
- Leave hurt or slower animals in the back or in a smaller pen with other slow animals
 - Other animals leave them alone
- Be calm, avoid using electric prods, etc..
- Swine are more susceptible to transportation issues.

Heat Stress Chart

Livestock Weather Safety Index

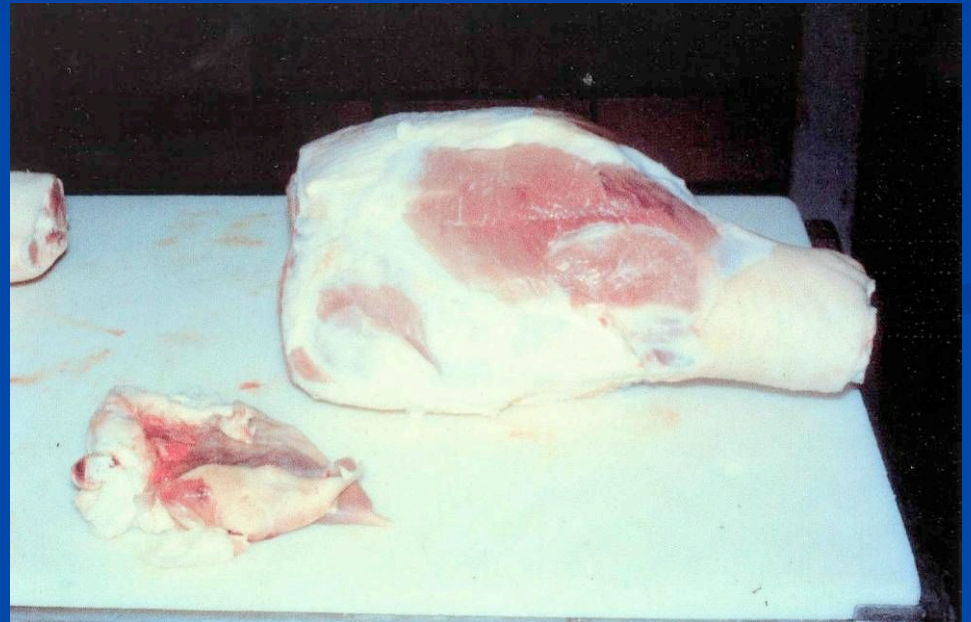


Handling Activity

Bruising

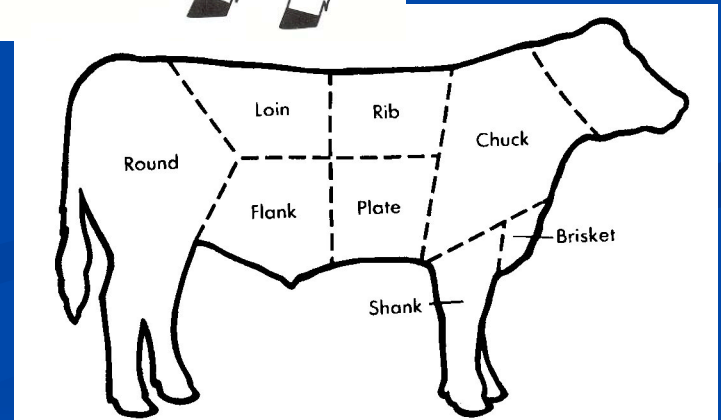
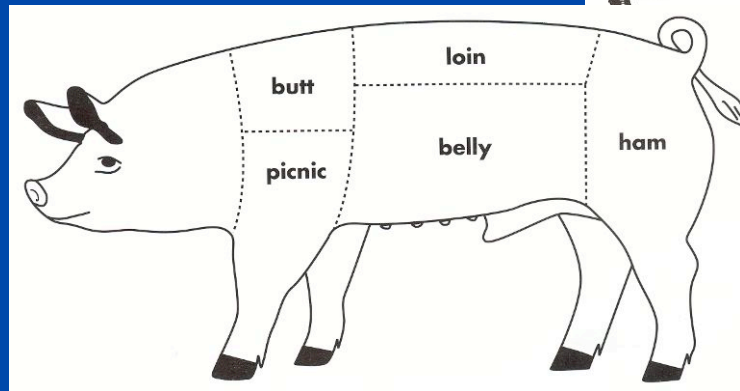
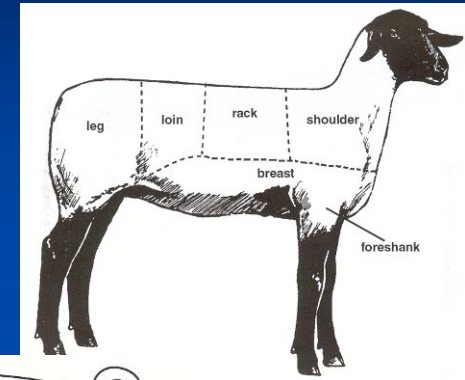
Can affect ...

- **Quality and value** of the carcass
 - Bruises must be cut away and discarded
- Animals' performance
- 60-90 days tissue to heal
- Still major problem, National Beef Quality Audit
 - 47% of beef carcasses have bruises



To avoid bruising ...

- Handle animals gently and calmly
- Avoid hitting an animal
- Avoid Yelling
- Don't use electric prods
- Tap animals with paddles on lower valued cuts



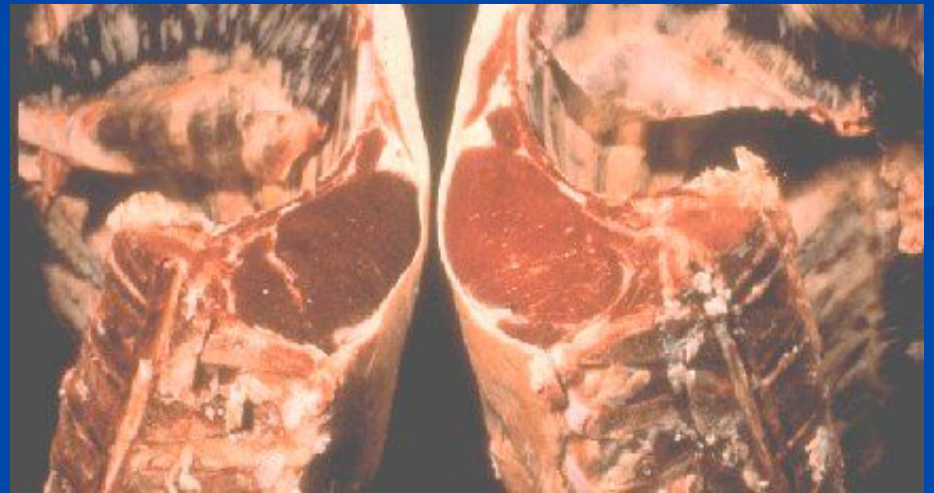
Carcass Quality

- Poor meat quality related to **stressed** animals due to handling
- Sometimes genetically more susceptible.



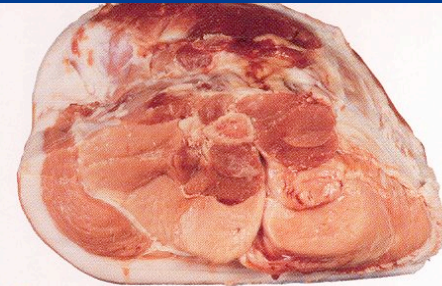
Meat Quality Problems

- Dark Cutters
- *Meat is dark red, almost black. It is acceptable to eat, but most consumers do not like the appearance.*

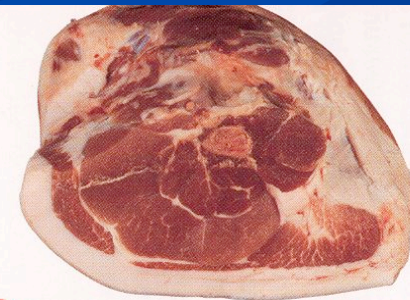


Meat Quality Problems

- DFD (Dark, Firm and Dry)
- PSE (Pale, Soft, and Exudative)



PSE Pale pinkish gray, very Soft and Exudative. Undesirable appearance and shrinks excessively.



DFD Dark purplish red, very Firm and Dry. Firm and sticky surface, high water-holding capacity

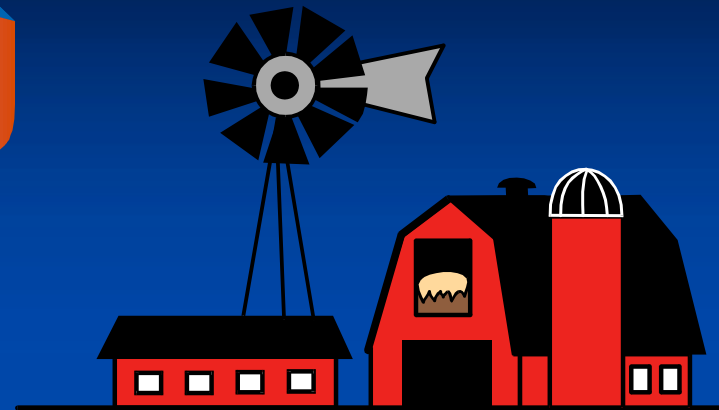
Comfort Zones

- Space
 - Need adequate amount of space to eat, sleep and exercise.
- Temperature
 - Too hot or too cold
 - Adding bedding or providing shade.
- Air Movement
 - Proper Ventilation

Housing

■ Pens

- Don't overcrowd
- Clean, dry bedding
- No nails or sharp objects sticking out
- Clean feed bunks and water





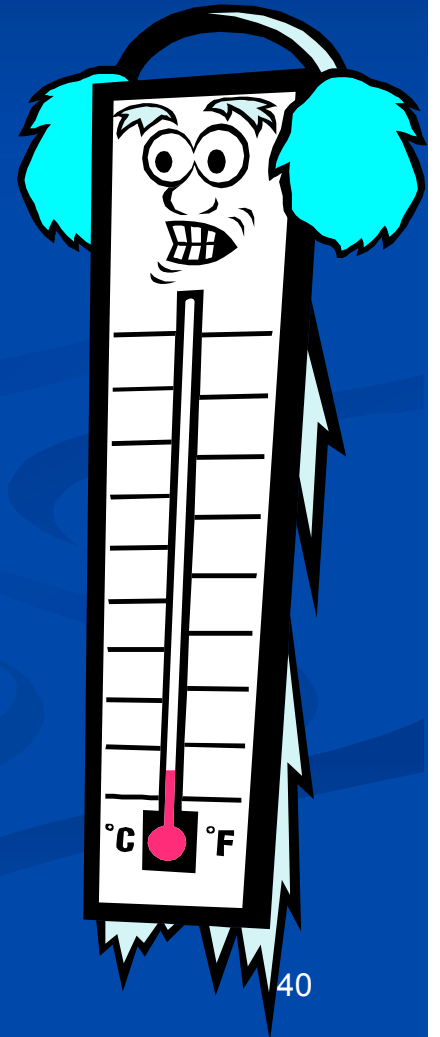
Housing

- Weather conditions....

Protect from extremes

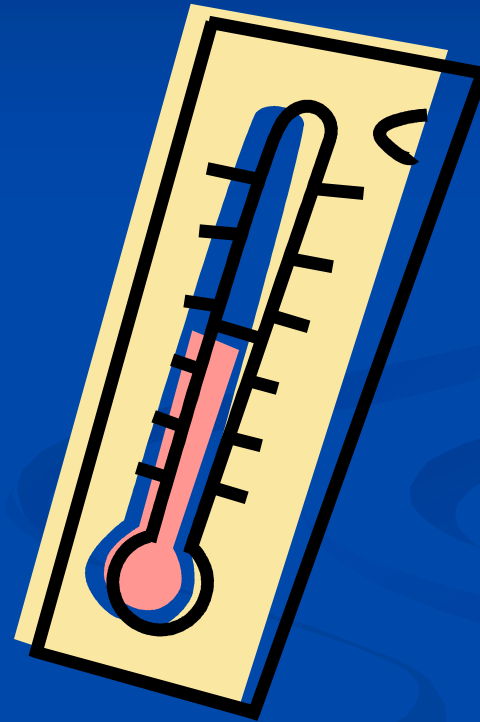


- Shade, fans, misters
- Added shelter



Space & temperatures

- Breed
- Pregnancy stage
- Coat length
- Size of animal
- Number of times fed
- Feed quality



Ventilation

- Temperature
 - Facility temperature should be appropriate for stage of production
 - ie. Nursery pigs should be in a warm environment
 - Animal Behavior is a good indicator of thermal environment.
- Air Quality
 - This can be controlled through ventilation



Space Activity

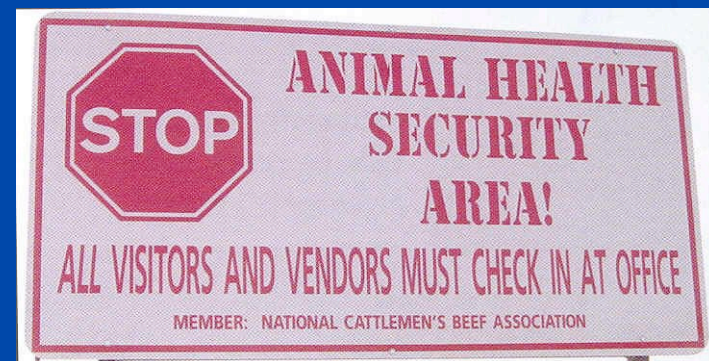
Establish a Herd Health Plan

- Develop a herd health plan with your veterinarian
 - Regular animal evaluation/veterinarian visits
 - Biosecurity
 - Rodent/pest control
 - Cleaning and disinfecting



Bio-security Plans

- Part of an effective health plan
- Uses management practices to reduce risk of infectious diseases
- Maximize animal health and performance
- Minimize foodborne contamination



Bio-Security

- Disease in livestock movement
 - Between animals
 - different species (market chicken to steer)
 - same species
 - Between farms
 - Anything that moves and comes in contact with animals

How can a disease be transmitted from one farm to another?

- Rodents, wildlife, birds, pets
- Vehicles
- New animals
- Humans
- Clothes, shoes
- Air



New Animals

- Should be isolated for at least 30 days
 - Consult veterinarian for each situation
 - Isolate animal(s) after an exhibition
- Same health status as current animals
 - Vaccination

Visitors

- Production areas – limited access
- Change clothes before entering
 - Footbath, shower-in
- Should not have contact with other animals for 24 hours prior (especially for same species)



Emergency Plans

- Written emergency action plan
 - Covers various emergencies – fire, weather, power outage, etc.
 - Telephone numbers for owner, veterinarian, fire and police
- Emergency detection system
 - Used on many commercial operations
 - Alarms for power failure, drastic temperature changes
 - Facility location may allow for visual detection
- Emergency backup system
 - Manual or automatic interventions in the event of a mechanical ventilation failure

GloGerm Activity

Animal Caretaker Program

- Training increases:
 - Productivity
 - Efficiency
 - Appreciation for project goals
 - Knowledge of changing technology
- Caretakers can be: paid employees, neighbors, friends, siblings, etc..
- PETA examples: Hormel

Record Keeping

- QA Certification
- Veterinarian-Client-Patient Relationship (VCPR)
- Daily Observation Record
- Medication and Treatment Record
- Euthanasia Plan
- Care Taker Program

Euthanasia

- Definition: intentional causing of a painless and easy death suffering from an incurable or painful disease.
- Difficult to decide to end an animal's life.
- Consult with a veterinarian!
- Approved methods or suggested methods for meat animals.
 - Captive bolt is most commonly used.
 - Swine blunt force trauma can be used with smaller animals.

Euthanasia

- Written euthanasia plan that considers:
 - Human safety
 - Pig well-being
 - Practicality and technical skills
 - Cost
 - Aesthetics
 - Limitations
- Timely euthanasia
 - Minimizes animal pain or distress
 - Functional equipment available

Responsibility of Exhibitors and Parents

- Look at animals daily
- Give animals enough food and water daily
- Provide food with enough nutrients
- Provide a comfortable environment
- Provide enough space for animals
- No tolerance for abuse
- Know your veterinarian
- Provide medical care to sick animals

Summary

- Animal Handling and Carcass Quality are closely related
 - Stress, flight zones, sight
 - Bruises
 - Space/Housing
- Herd Management Plans
 - Biosecurity
 - Caretaker, record keeping
 - Euthanasia plan

For your information

- Youth printed certifications are available in 2 forms.
 - 1. decorative certificate
 - 2. printed certification information from the database after the advisor has entered your information.
- If certificate information is needed, notify the county office or trainer.

Youth Livestock Exhibitors

- Most public arena of the food animal industry
- Actions of 4-H & FFA members impact:
 - Public perception of food animal industry
 - Food quality and safety
- Remember: you are representing your organization, club, county, state, family & yourself.



Purpose of Livestock Projects

- Personal growth and development
- Responsibility
- Character
- Life Skills



What skills can youth learn
in meat animal projects?

Skill Development

- Problem solving
- Knowledge of food animal industry
- Self-confidence
- Teamwork
- Self-motivation
- Self-discipline
- Organizational skills
- Character
- Social skills
- Competition
- Critical thinking



Six Pillars of Character

1. Trustworthiness
2. Respect
3. Responsibility
4. Fairness
5. Caring
6. Citizenship



Ethics Activity

Other Topics



- USDA rule, effective Sept. 30, 2008
- Affects Beef, Lamb, Pork and Goat
- Provides consumers of where their food originated (United States or Foreign)
- Confirms that the animal was born in the United States
- Suggested to have the seller sign an affidavit if you purchase your project animals. If you raised your animal you will need to sign an affidavit.
- An affidavit will be required if animals are sold to large processing plants (Tyson, etc..) & local buying stations such as Equity.

Example Affidavit

Country of Origin Affidavit/Declaration

As an affidavit is deemed by USDA as an official record of Country of Origin, I attest through first-hand knowledge, normal business records, or producer affidavit(s) that all livestock referenced by this document or other communications specific to the transaction and transferred are of U.S. origin (born and raised in the U.S.).

Exhibitor Name (if applicable)

Signature_____

Date_____

Parent/Guardian Signature_____ Date _____

Print Exhibitor Name_____

Address_____

Phone Number_____

Number of Animals_____

Species_____

Breed_____

Sex_____

Ear Tag (s) _____

Paylean Reminders



- Is only approved for use in Swine.
- Label indicates it is NOT to be fed to breeding animals.
 - Showing market gilts fed Paylean, should not be kept as replacements
- Research states Paylean fed swine can be more excitable and stressed when in new environments.
- Feeding more IS NOT Better!!! Follow the label.
 - Body accepts so much of the product, too much provides no added benefit.

Paylean Demonstration

Pork Information Gateway

- <http://pork.porkgateway.com/>
- Register to receive access to all information.
- Informational Website through the Pork Center of Excellence
 - Factsheets
 - Get questions answered
 - Read questions
 - Pictures
 - Events
 - Careers

