Mid-Atlantic Beef Quality Assurance

Pennsylvania • New York • Maryland • Virginia • West Virginia
Maine • New Jersey • Vermont

PENNSYLVANIA BQA
Quality Every Day, Every Time!

Beef Quality Assurance is a national effort which is implemented on the state level. The Pennsylvania BQA Certification Program enables beef producers to enhance their product and maximize marketability.

BQA is funded by Beef Checkoff Dollars

Funded by the Beef Checkoff.

What is Beef Quality Assurance?

- Beef Quality Assurance (BQA) is a program to ensure that beef and dairy cattle are produced in a matter, which will result in a safe and wholesome beef product for the consumer

- The BQA Certification program is based on recommended national guidelines and scientific research

- The purpose of BQA is to protect consumer confidence in beef safety and quality

What is Certification?

- A process by which producers accept responsibility for actions under which cattle in their production unit were produced

- A process allowing the beef industry to maintain its independence from regulatory agencies

What Does "Quality" Stand for In Beef Quality Assurance?

- "Up until a few years ago, 25% or 1 out of every 4 people ordering beef at a restaurant had an unpleasant eating experience."

- Quality means wholesome and safe, but it also means providing a product to the consumer that delivers a desirable eating experience

Beef. It's What's For Dinner.

- All of our cattle will enter the human food chain at some point

- We need to make sure all eating experiences are positive!

- Remember, we are not just *cattle producers*, we are *food producers*!

Alliances and Branded Programs

Approximately 50% of all beef produced today is sold through a branded beef program

PROPER MANAGEMENT

Enhances Beef Quality and Product Value

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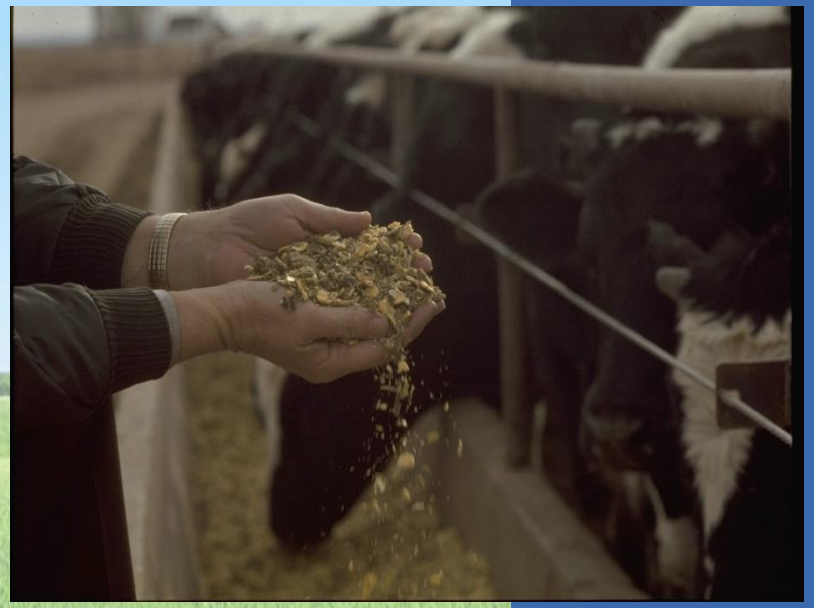
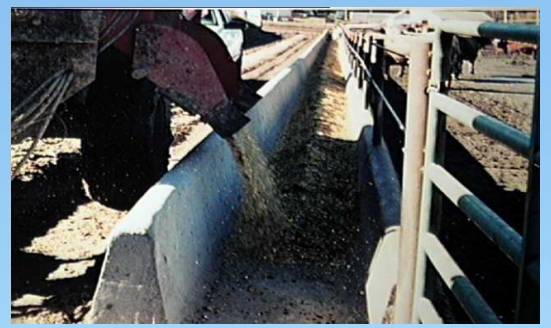
Feedstuffs

- Develop, implement, and document a feed sourcing program which incorporates Good Management Practices
- Maintain all feed records for both purchased and homegrown feeds!
- Monitor and record pesticide/herbicide use on pastures or crops to avoid volatile residues
- Assure quality of incoming feedstuffs
  - Evaluate for moisture, color, odor, texture
  - Check for foreign materials
- Support feeding by-product feeds with sound science!
  - Examples include: distillers grains (DDGS), cottonseed hulls, bakery waste, etc.
- **DO NOT** ever feed ruminant-derived proteins to cattle!
  - Examples include: bone meal



Feed Additives and Medications



- Use only FDA approved products
- No “extra label” feed additives allowed

- Observe withdrawal times

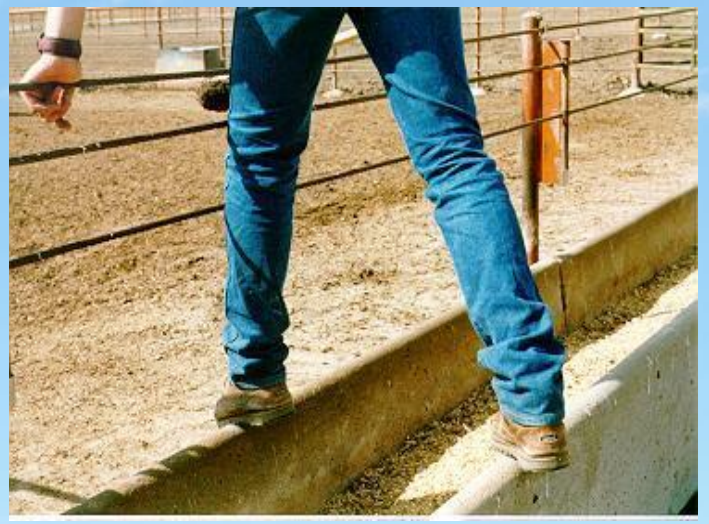
- Keep records for 2 years

Feed Storage, Processing, & Handling

- Control moisture to avoid mold, mycotoxins, and pathogenic bacteria
  - Mycotoxin – a toxic substance produced by a fungus
  - Pathogenic bacteria – bacteria that can cause infection or disease
- Never store chemicals, petroleum products, or other toxins in feed storage, mixing, or processing areas
  - Why?
    - Potential for contamination to occur
- Clean equipment (example: front-end loader, shovels, etc.) used for non-feed purpose prior to using for feeding
  - Why?
    - To prevent contamination from occurring

Biosecurity

- Keep it clean!
- Isolate all incoming livestock
  - Why?
    - To monitor for disease
- Monitor who and what comes onto your property
  - Why?
    - To prevent spread of disease
  - Examples: Veterinarian, Supply Truck Driver, Milk Hauler



Treatment Records

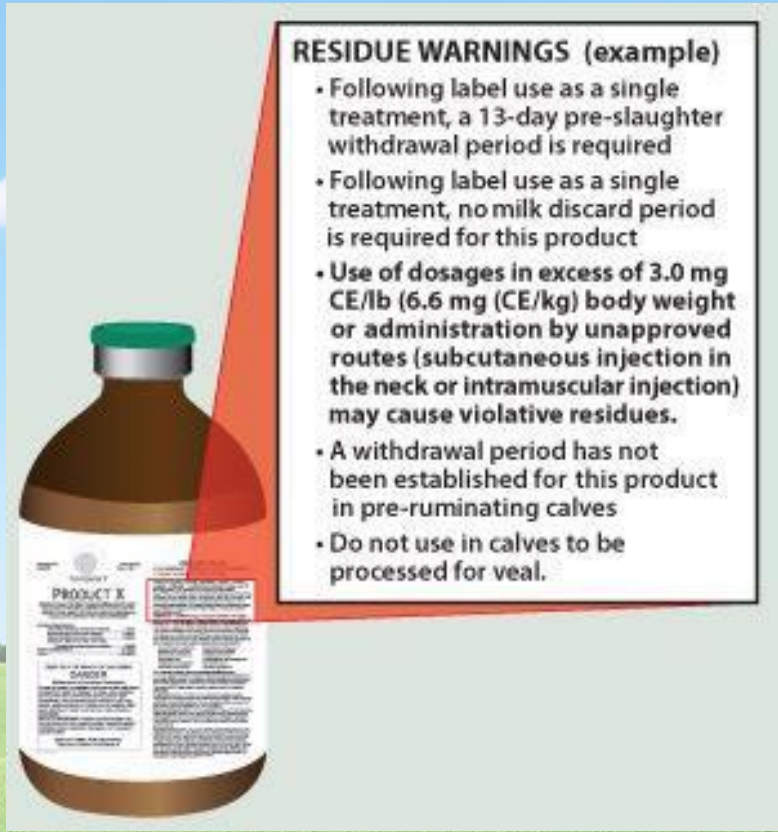
The following items are necessary to record:

1. Individual, group, or lot identification
2. Date treated
3. Product administered and manufacturer's lot/serial #
4. Dosage used
5. Route and location of administration
6. Earliest date animal will have cleared withdrawal period
7. Tentative diagnosis
8. Outcome of treatment
9. Name of person administering treatment/product

Some Things to Know About Chemical & Drug Use

- Withdrawal Time: the number of hours or days after product use that it takes the tissue concentration of the product to reach acceptable government levels

- Illegal Residue: concentration of product in edible tissues (meat and milk) which exceeds government standards for that product



What's on a label?

Approval or tracking # NDC

Warnings and with-hold or withdrawal

Storage, lot, exp. date

Generic name and concentration

Indication and specifics on formulation

Trade name

Precautionary statements

Clinical indications and dosing information

Manufacturer and address

OTC (sufficiently easy to understand) vs. RX *Federal law restricts this drug to use by or on the order of a licensed veterinarian*

Drug Storage and Handling

- Follow specific storage requirements
  - Keep in clean and safe location
  - Store out of direct sunlight

- Handling precautions
  - Read the label
  - Never use outdated drugs or vaccines
  - Never mix vaccines with other animal health products

Proper Vaccine Storage

- Store vaccines in the refrigerator between 35-45°F
  - Unless the label indicates differently

Avoiding Illegal Residues

- Do not use products “extra label” without a prescription from your veterinarian!
- “Extra label” drug use means, the actual use or intended use of a drug in an animal in a manner that is not in accordance with the approved labeling
- Explain what “extra label” means (picture with bottle w/ prescription)
- Veterinarians are the ONLY ones who can advise drug use in a manner not specified on the label or package insert
- Ex: increased dosages, unlisted treatments, differences in species

Avoiding Illegal Residues

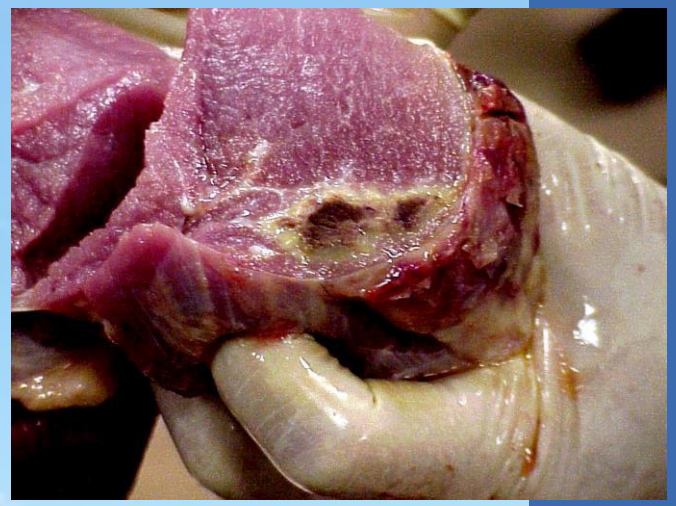
- Maintain a valid "Veterinary Client/Patient Relationship" (VCPR)
  - VCPR is a mutual working relationship between the owner and their veterinarian
  - This is important because it is the best thing for the animal's health
- Identify and separate treated animals
  - Durable identification is a must!
    - Examples include: ear tags, brands, etc.
  - Meet withdrawal times

Avoiding Drug Resistance

- Emphasize disease prevention
  - A disease prevention plan includes working with your veterinarian and using vaccines
- Avoid the “shot gun” approach
  - The “shot gun” approach is the hasty use of a wide range of techniques that are nonselective and haphazard
- Follow exact label dosages
- Use drugs for the shortest time possible
  - Why this is important?
    - Shortest withdrawal, while animal continues to go downhill, most ethical may be culling

Avoiding Injection Site Damage

- Proper restraint and handling facilities
- All injections in front of the shoulders, referred to as the triangle
- Use products labeled for the preferred subcutaneous (SQ) administration
  - Why SQ?
    - Avoid injection site lesions and blemishes in the meat
- Use correct needle gauge and length
  - Does the needle length or gauge make a difference?
    - Yes, the length and gauge of the needle must be selected based on the animal being treated and the viscosity of the medicine

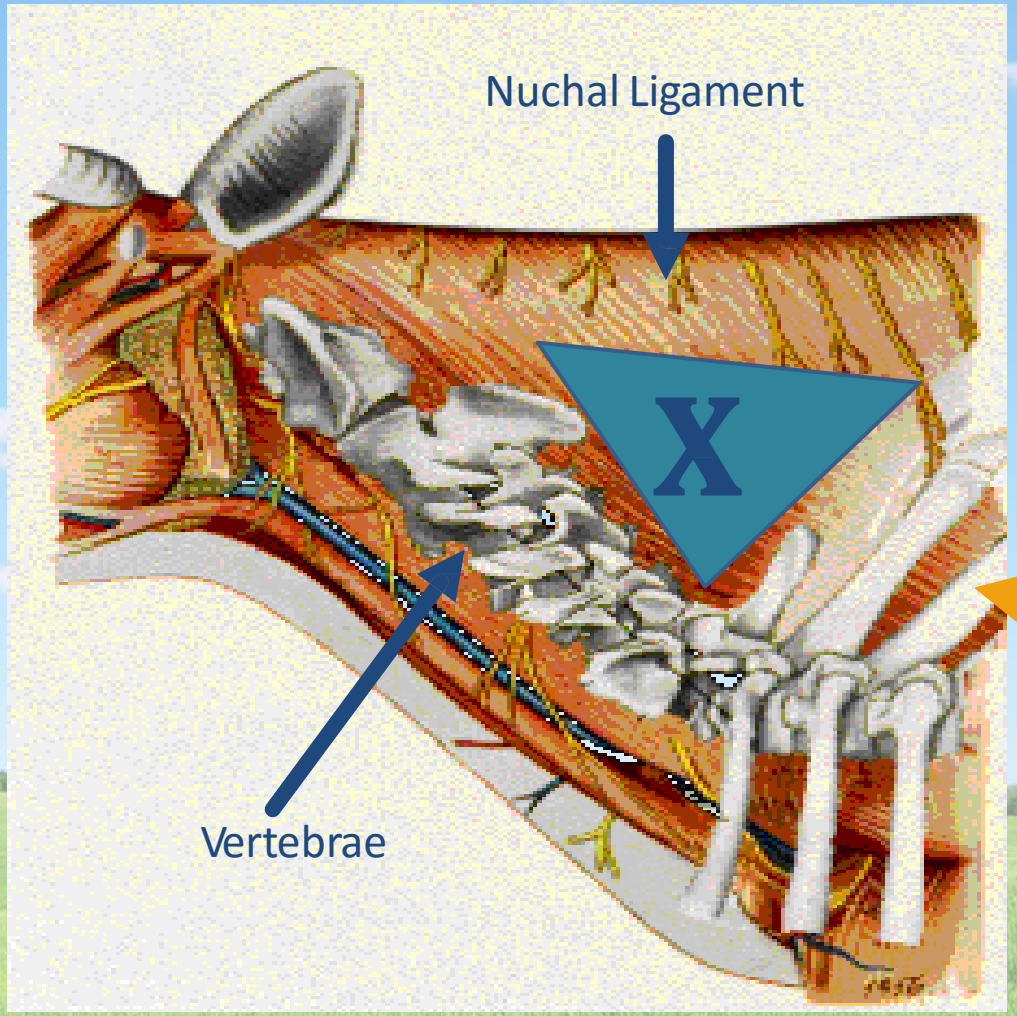


Avoiding Injection Site Damage

- 10 cc/site (less for calves)
- Give at least four inches apart
- Use sharp needles
- Use disposable needles only once
- Make sure injection area is clean

Proper Injection Site Location

- BQA guidelines require all injections be given in the neck as indicated here
- The appropriate location for injections in the neck will not damage bones or connective tissues



Avoiding Injection Site Damage

- Proper Needle Selection:

Injectable Viscosity	Route of Administration								
	SQ (1/2 to 3/4 inch needle)			IV (1 1/2 inch needle)			IM (1 to 1 1/2 inch needle)		
	Cattle Weight			Cattle Weight			Cattle Weight		
	<300	300-700	>700	<300	300-700	>700	<300	300-700	>700
Thin Example: Saline	18 gauge	18-16 gauge	16 gauge	18-16 gauge	16 gauge	16-14 gauge	20-18 gauge	18-16 gauge	18-16 gauge
Thick Example: Oxytetracycline	18-16 gauge	18-16 gauge	16 gauge	16 gauge	16-14 gauge	16-14 gauge	18 gauge	16 gauge	16 gauge

SELECT THE NEEDLE TO FIT THE CATTLE SIZE (THE SMALLEST PRACTICAL SIZE WITHOUT BENDING)

Bruising and Cattle Handling

Methods to decrease bruising:

- Dehorning
- Eliminate possible sources in loading chutes and trucks
  - Low hanging bars
  - Slick floors
  - Damaged decks
  - End gates
- Prudent use of prods, sticks, and whips

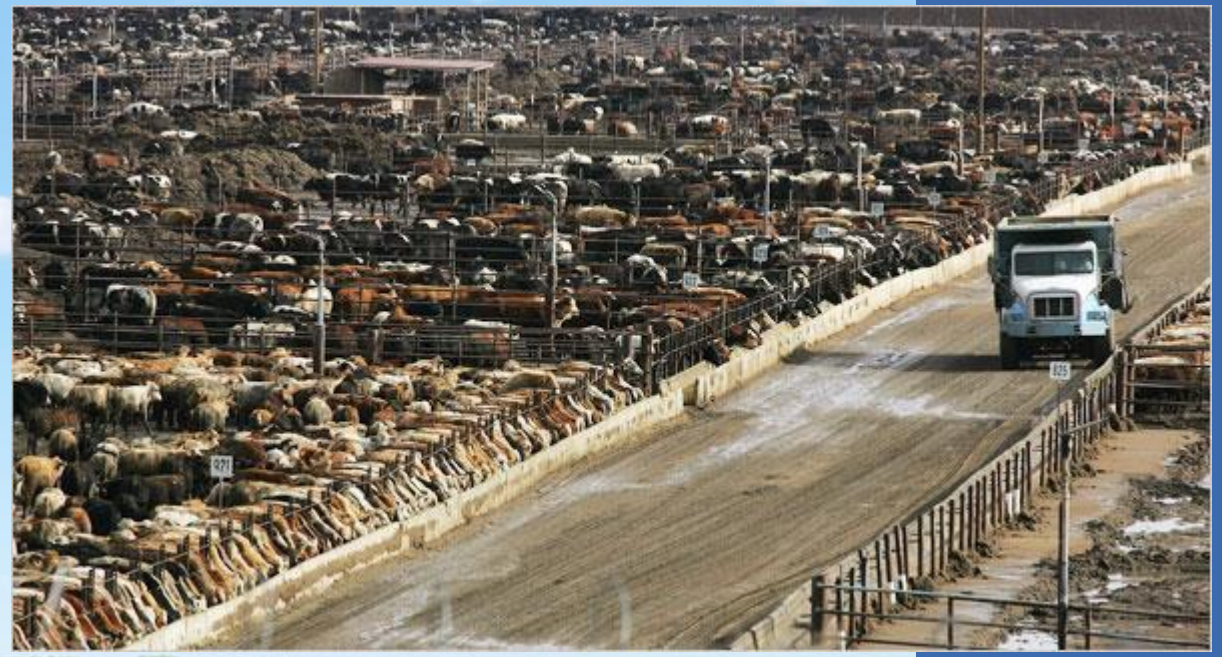
Dark Cutters

- Results from pre- harvest stress on the animal, depleting muscle glycogen stores
- Meat is dark, firm, dry, and unacceptable to consumers

Dark cutter (left); Normal muscle (right)

Why Do We See Dark Cutters?

- Improper handling
- Mixing groups of cattle just prior to harvest
- Disposition
- Genetics
- Extreme weather conditions
- Aggressive implants late in the feeding period



RESPONSIBLE CULLING

Improves Herd Productivity and Efficiency

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Culling to Enhance Quality

- Reduce unsoundness
  - Feed and legs
  - Udders and teats
- Eliminate bad actors! (disposition is a threat to someone working at the facility)
- Utilize pregnancy checking
  - Monitor disease
  - Make plans for marketing
  - Group animals accordingly

Where Do Your Cattle Fit?

Products from market cows and bulls equate to:

- 25% of overall beef consumed
- 16% of producer income
- 100% plants sell ribeyes and tenderloins as steak
- 89% of rounds are sold as steak
- 71% of sirloins are sold as steak

Market cows and bulls are no longer just fast food burgers. They're roasts, steaks, fajitas, and an endless array of value added products.

Culling Management Can Impact Public Perception

Cancer Eye

Lumpy Jaw

Downers

Lameness

Un-Treated Illness

Market animals in a timely manner!

TARGETED BREEDING

Equals Customer Satisfaction

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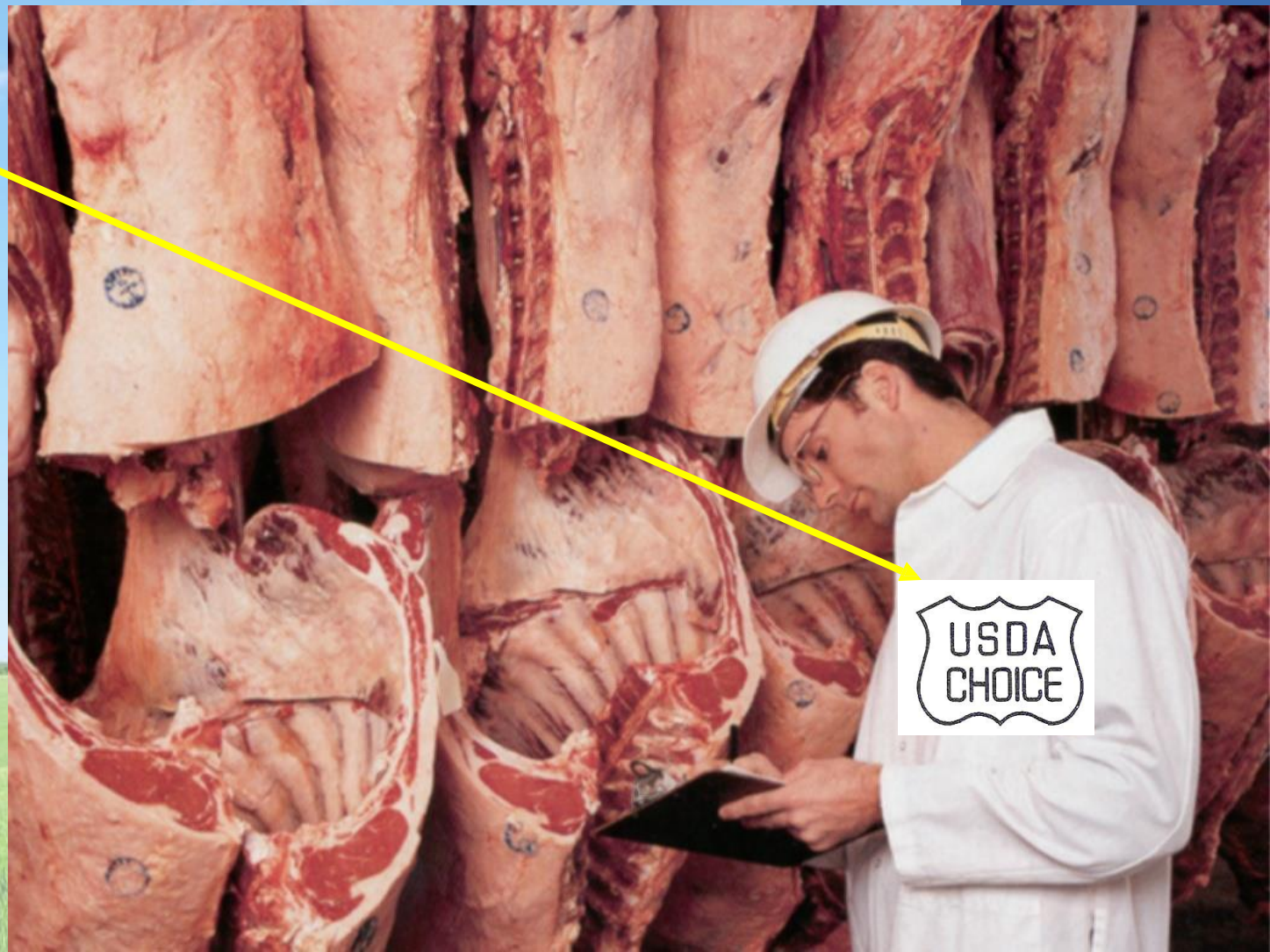
Customer Satisfaction

USDA Quality Grade

- Marbling
- Maturity (physiological age)
- Color and Texture



USDA Quality Grade

Degrees of Marbling	Maturity[2]				
	A[3]	B	C	D	E
Slightly Abundant	PRIME				
Moderate			COMMERCIAL		
Modest	CHOICE				
Small					
Slight	SELECT		UTILITY		
Traces					
Practically Devoid	STANDARD			CUTTER	

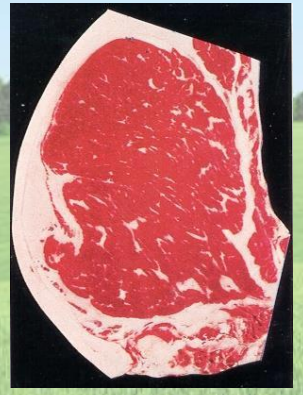
USDA Quality Grade

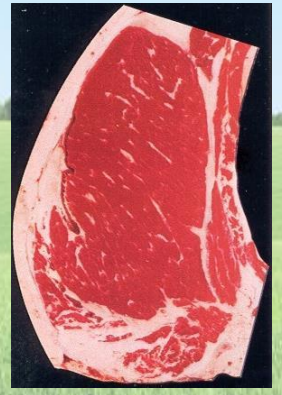
- **Marbling (intramuscular fat)** – the intermingling or dispersion of fat within the lean
  - Degree of marbling is the primary determination of quality grade
- **Maturity** – refers to the physiological age of the animal
  - The chronological age is virtually unknown, therefore physiological maturity is used
  - Indicators include:
    - Bone characteristics
    - Ossification of cartilage (Cartilage becomes bone)
    - Color and texture of ribeye muscle (lean color darkens and texture becomes coarser with increasing age)

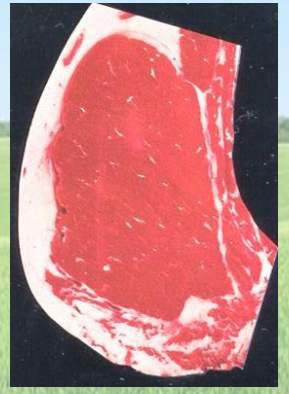
USDA Quality Grade

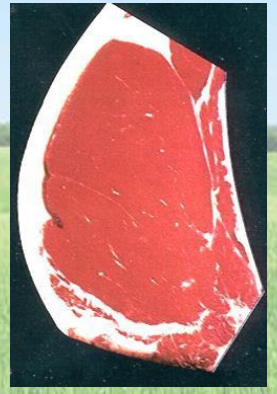
Factors Affecting Marbling:

- Age
- Days on Feed
- Genetics









Defining Maturity

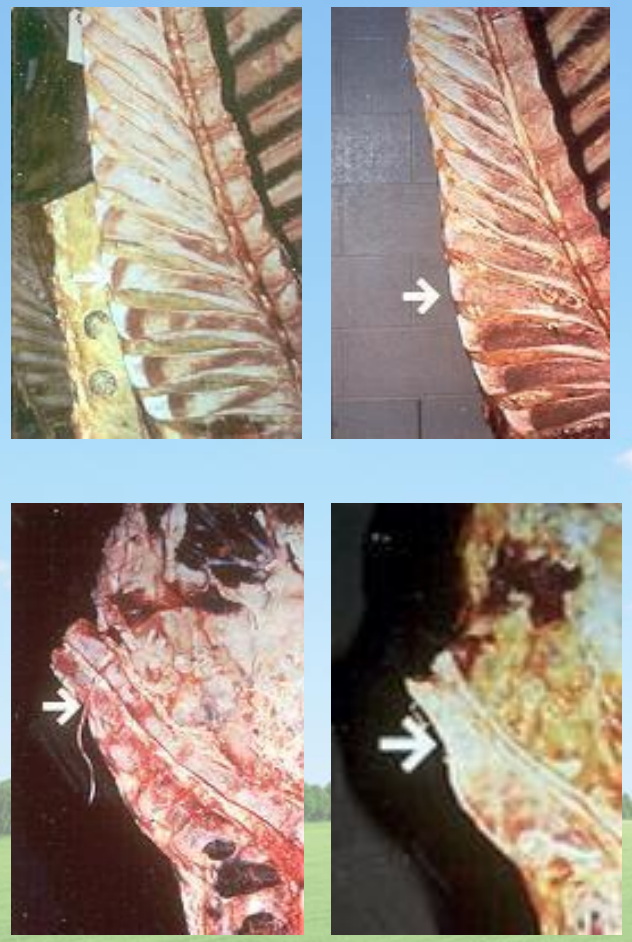
- The cartilage associated with the vertebrae of the backbone (excluding the neck)
  - The cartilage is between and on the edges of individual vertebrae, as well as on thoracic vertebrae (buttons)
- These buttons are the most prominent, softest, and least ossified in younger carcasses
- As maturity increases, more and more ossification becomes evident
- Ribs are quite round and red in A maturity carcasses, whereas E maturity carcasses have wide and flat ribs

- **Ossification** – the hardening of cartilage to bone

- Vertebrae buttons begin to ossify at 30 months of age

- Important to remember that we never really know the physical age of the animal, therefore these methods of aging must be used
  - "Cattle don't come with birth certificates"

USDA Quality Grade



Maturity = Physiological age

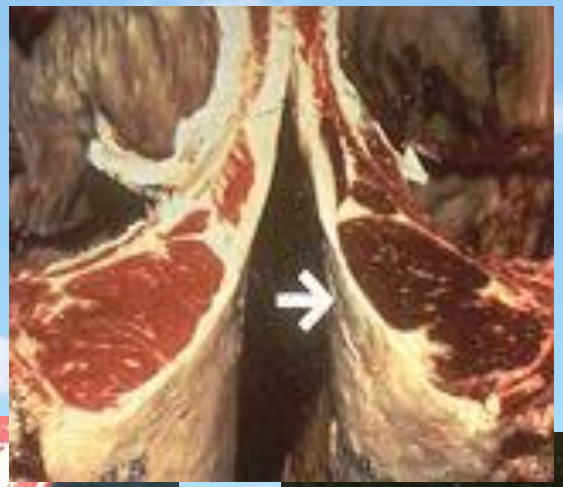
Maturity	Calendar Age
A.	9 - 30 months
B.	30 - 40 months
C.	42 - 72 months
D.	72 - 96 months
E.	Over 96 months

Visual from cartilage ossification

USDA Quality Grade

Color and Texture:

- Bright red - ideal
- Dark Cutter – not ideal
- Coarse Texture – not ideal



Customer Satisfaction

USDA Yield Grade

- Carcass Weight
- Rib Eye Area
- Adjusted Fat Thickness
- % Kidney, Pelvic, and Heart Fat

USDA Yield Grade

- **Yield Grade** – estimates the amount of boneless, closely trimmed retail cuts from the high-value parts of the carcass – the round, loin, rib, and chuck
  - Yield Grades are rated numerically from 1-5
    - A YG 1 carcass is expected to have the highest percentage of lean cuts
    - A YG 5 carcass is expected to have the lowest percentage of lean cuts
- Yield Grade is assigned to a carcass by evaluating
  - The amount of external fat (measured at the 12th rib)
  - The hot carcass weight
  - The amount of kidney, pelvic, and heart fat
  - The area of the ribeye muscle

Specifying Eating Quality

- Portion Size
- Tenderness
- Palatability
- Excessive Fat
- Consistency and Uniformity

BQA is important because…

- **Producer benefits:** proper animal care, handling, and management practices are reinforced
- **Consumer benefits:** increases confidence that beef is a safe product
- **Animal benefits:** properly handled, vaccinated, healthy, less stressed
- **Win, Win, Win!**

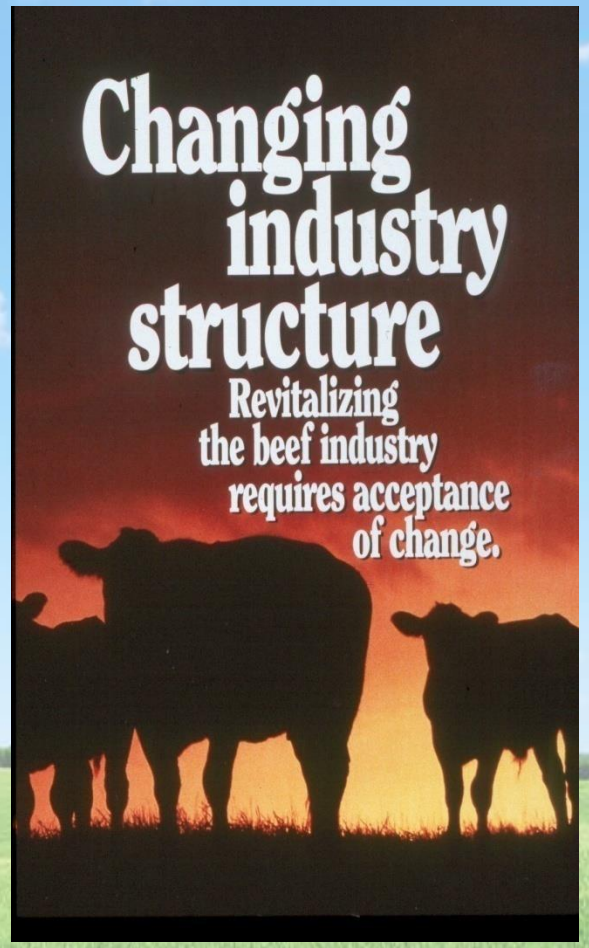
Remember the BQA Basics

- Check feed and water for quality
- Read and follow feed labels
- Give all injections in front of the shoulders
- Read and follow medication labels
- Adhere to withdrawal times
- Keep Records!
- Handle all cattle gently

BQA is Part of a Changing Philosophy

Participating In a BQA program can *save* you $$$ rather than cost you $$$

It's not just good business sense, it's common sense!



Contact Information

- For further questions or information please contact:
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