

North Dakota Beef Quality Assurance Producer Training and Certification





What is Beef Quality Assurance?

- **Producer driven program**
- **Involves all sectors of the industry**
 - **Cow-calf to consumer**
- **Goal is producing beef that is:**
 - **Healthy**
 - **Wholesome**
 - **Free from defects**



What is Beef Quality Assurance?

- **Use records to document**
 - Husbandry
 - Animal health practices
- **Practices meet regulatory and industry standards**
 - Management
 - Husbandry
 - Animal health



Goals of NDBQA

“North Dakota Beef Quality Assurance is an educational program to enhance the reputation and promotion of North Dakota beef by assuring the production of a consistently wholesome and healthy product.”



What's Required for Producer Participation in NDBQA?

- **3 parts to producer participation:**
 - 1. Attend a training session, or become recertified via the internet**
 - 2. Raise calves according to NDBQA requirements**
 - 3. Market feeder cattle as NDBQA certified (optional)**



Certification Requirements of the North Dakota Beef Quality Assurance Program



Certification Requirements of the NDBQA Program

- **General**
- **Injectable Animal Health Products**
- **Processing**
- **Treatments**
- **Records**
- **Feed Additives and Medications**
- **Feedstuffs**



Recommendations of the NDBQA Program

- **Care and Husbandry Practices**
- **Injectable Animal Health Products**
- **Feedstuffs**
- **Feed Additives and Medications**
- **Processing and Treatment Records**



National Beef Quality Audits



2000 National Fed Beef Quality Audit

Positive Trends

- **More Prime and Choice Carcasses**
- **Fewer “hardbone” and B-maturity carcasses**
- **No major shifts in excess fat production**
- **Substantial decrease in horns**
- **Vast improvement in frequency of injection site lesions**



2000 National Fed Beef Quality Audit

Quality Challenges

- 1. Uniformity and consistency**
- 2. Carcass size and weight**
- 3. Inadequate tenderness**
- 4. Insufficient marbling**
- 5. Reduced quality grade and tenderness**
- 6. Excess external fat**
- 7. Inappropriate USDA quality grade mix**
- 8. Too much hide damage**
- 9. Bruising**
- 10. Liver condemnations**

1999 Market Cow and Bull Audit

(Formerly known as Non-Fed Audit)



1999 Market Cow and Bull Audit

- **Improvement in value losses per head of market cow and bull audited**
 - 1994 value loss=\$69.90
 - 1999 value loss=\$68.82
- **Improvement in many areas**
- **Areas that still need some work**
- **New challenge**



1999 Market Cow and Bull Audit

- **Improvements vs. 1994 Audit**
 - **Decreased condemnations of cattle and carcasses**
 - **Decreased incidence of disabled (downer) cattle**
 - **Decreased loss in hide value because of brands**
 - **Decreased trim due to bruises**
 - **Leaner cattle**
 - **Less light weight cow carcasses**

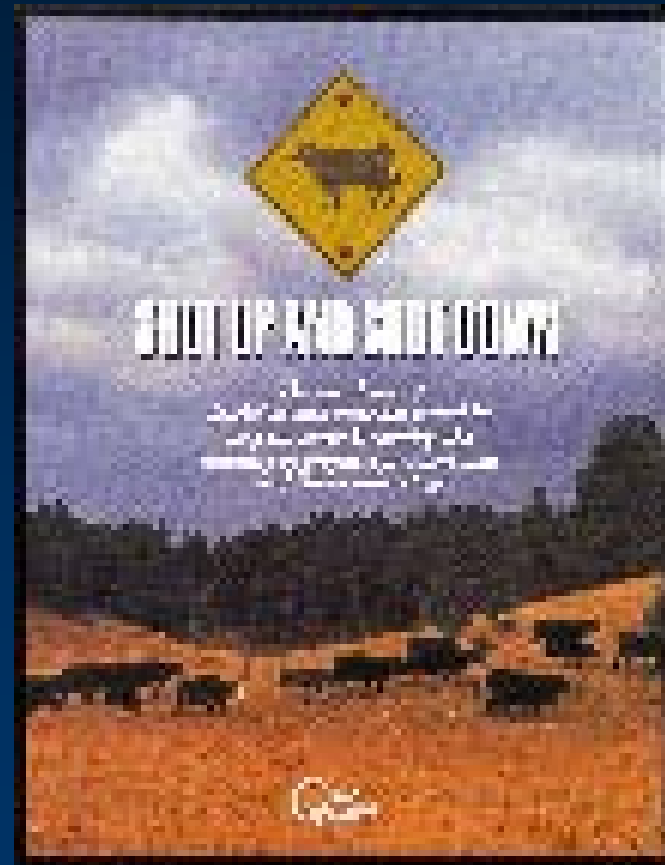


1999 Market Cow and Bull Audit

- **Areas that still need some work**
 - **Hide value losses due to insect damage and latent defects**
 - **Trim loss due to arthritic joints**
 - **Trim loss due to buckshot /birdshot**
 - **Trim loss due to injection site lesions**
 - **Yellow external fat**
 - **Dark cutters**
 - **Inadequate muscling**
 - **Antibiotic residues**

1999 Market Cow and Bull Audit

- **New challenge!!!!**
 - **Birdshot and buckshot in carcasses**
 - **Causes loss of industry integrity**
 - **Distrust of our product-beef**
 - **Decreased carcass value of \$0.52 per head**



Impact and Importance of Market Cows and Bulls

- Sales of bulls and cows for slaughter
 - Account for 15% to 20% of producer revenues
- Cattle Fax reported the average commercial cow-calf producer had a \$36.19/cow profit in 1999.
 - Without the sale of market cows, producers would have lost \$22.35 per cow in 1999.
- 1994 Total domestic non-fed beef production topped 4.5 billion pounds
- Non-fed beef represents 19% to 20% of total U.S. beef production
- Cows generate 70% to 75% of market cow & bull derived beef

Products from Market Cows and Bulls

Not Just Hamburger!

- Whole muscle products
 - Roast beef
- Steaks
- Fajita meats
- Ground beef



Injection-Site Lesions in Market Cows and Bulls

- The problem is particularly prevalent in the round, where most injections occur



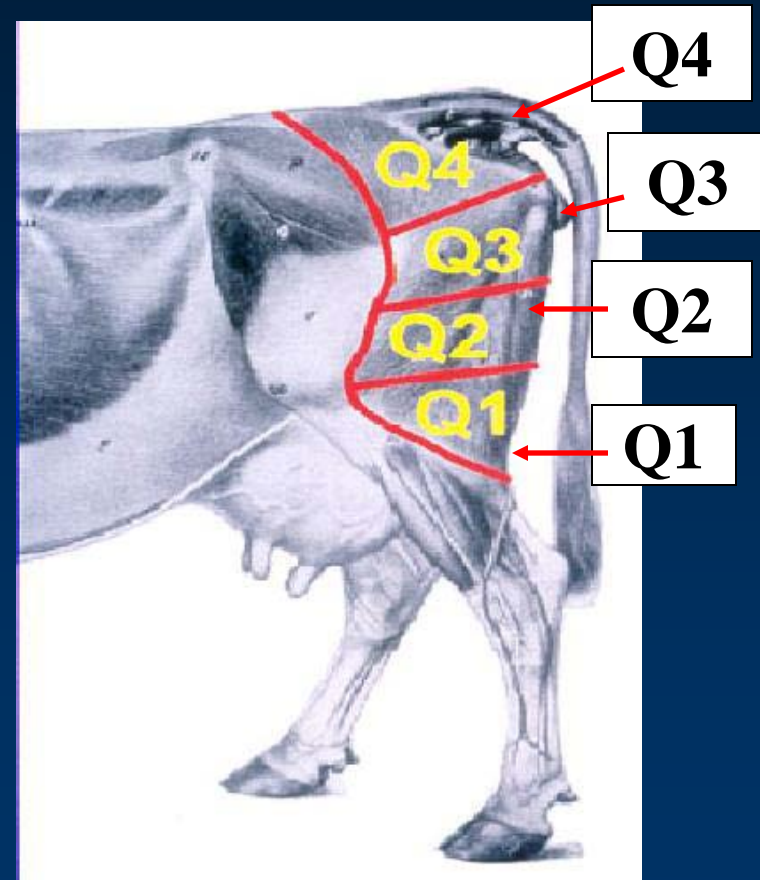


Importance of the “Round”

- **Economic importance**
 - Processed and marketed as whole muscle products, not always as ground beef
 - Deli roast beef, Arby’s
- **Lesions not found in normal fabrication processes**
 - Often discovered by the end user of products
- **Tenderness is affected**

Incidence of Injection Site Lesions in Market Beef Cows

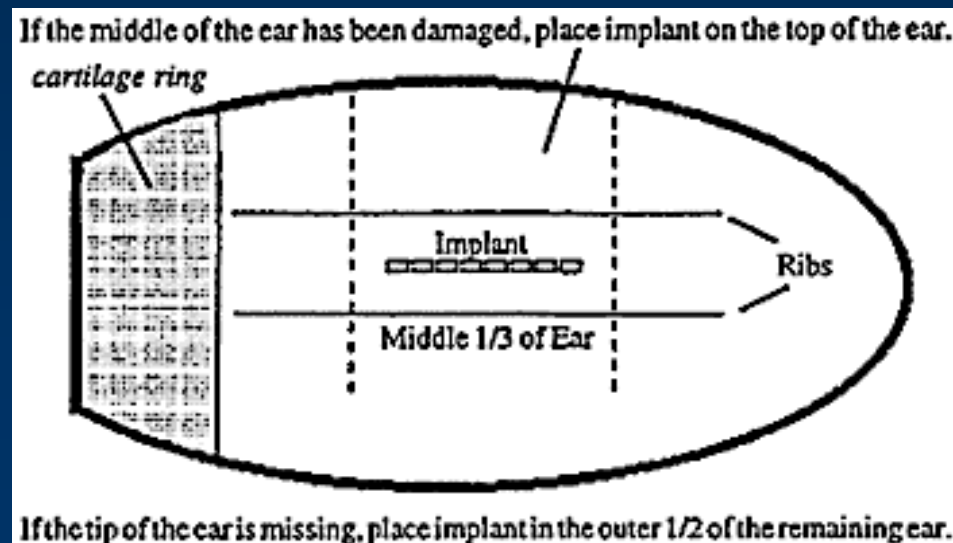
- Total incidence of injection-site lesions
 - 28.7%
- Highest incidence
 - Upper Round - 38%
- Lowest incidence
 - Lower Round, near hock - 6.5%



Implants and Implant Placement

Proper Implant Placement

- **Correct Placement**
 - Back side of the ear
 - Between skin and cartilage
 - In the middle third of the ear
 - Implants located anywhere other than the middle third of the ear constitute extra-label use





Proper Implant Placement

- **Results of improperly placed implants**
 - **Potentially decreases the efficacy of the implant**
 - **Trim loss at the packing plant**
 - **Consumer concerns of beef**
 - **Safety**
 - **Wholesomeness**
 - **Regulatory liability**



Proper Implant Placement

- **Common Implanting Errors**
 - **Crushing**
 - **Active ingredients released too quickly**
 - **Placing the implant in cartilage**
 - **Effectiveness may be decreased**
 - **Severing a blood vessel**
 - **Absorption of active ingredients is too rapid**
 - **Improper location of implantation**
 - **Infected or abscessed sites**
 - **Always read the product label for proper instructions on approved use.**



Proper Implant Placement

Infected or abscessed implants

VS

Normal implants

- **Average Daily Gain**
 - Reduced 8.9%
- **Feed Efficiency**
 - Reduced 8.3%
- **Net return**
 - Reduced \$17.70 per head

Feeds and Feed Additives



Feeds and Feed Additives

- **Feed Additive and Medications**
 - Use only FDA approved products
 - Know and follow withdrawal times
 - Know the ingredients of the product
 - Know the proper method of application of all products used
 - **Extra-label use of feed additives is illegal and strictly prohibited**

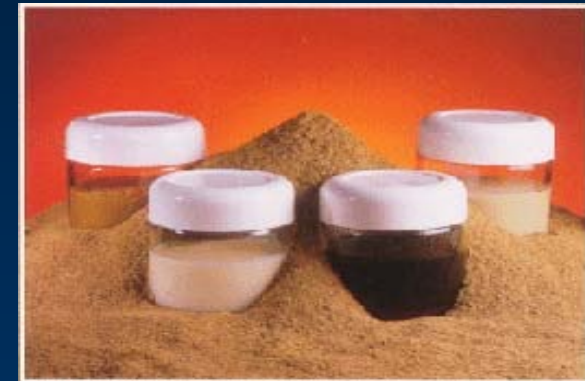


Feeds and Feed Additives

- **Meat and Bone Meal**
 - **Ruminant-derived protein sources can not be fed to cattle**
 - **BSE transmission**
 - **Check with your feed supplier regarding your supplement formulations**

Mammalian Protein Ban

- *No “prohibited” mammalian-derived protein sources can be fed.*
- **Animal proteins cleared for feeding:**
 - Milk products
 - Pure porcine protein products
 - Pure equine protein products
 - Pure fish meal products
 - Gelatin
 - **Always refer to label directions to determine if products are approved for use in cattle.**



Mammalian & Poultry Protein Ban

- What products are prohibited for feeding?
 - Mammalian and Poultry Protein Products (except pure porcine, equine, and fish) including:

- Meat
- Glandular meal
- Meat and bone meal
- Meat by-products
- Meat & bone meal tankage
- Cooked or steamed bone meal

- Hydrolyzed hair
- Bone marrow
- Leather meal
- Plate waste and food casing
- Blood and blood by-products
- Poultry litter
 - *Ingredients banned as of July 2004



Feeding Regulations

- **Producers must maintain copies**
 - **Feed labels and invoices**
 - **One year duration**
 - **Must be made available upon FDA request**
- **Feed mixers can not be used for ruminant MBM and non-ruminant MBM**
 - **Use separate mixers**



Packing Industry Affidavits

- **Several major packers requiring producer affidavits from feedlots**
 - **Swift**
 - **Tyson**
 - **McDonalds**
- **Suggest requiring affidavits from the feed supplier**



Preventing Residues in Forages and Grains

- **Use only pesticides and herbicides approved for crops grown for feed**
- **Follow label directions for withdrawal times and grazing requirements**



Preventing Residues in Forages and Grains

- **Quality control during harvest, storage and handling**
- **Visually inspect all feeds and test when questions arise**
- **Keep Records**



Understanding Drug Labels

- **Required information (OTC labels)**
 - **Name of the drug**
 - **Active ingredients**
 - **Instructions for use**
 - **Withdrawal times**
 - **Quantity of contents**
 - **Name of Distributor**
 - **Lot number**
 - **Expiration date**

Understanding Drug Labels

Required information for prescription drug labels

- **All information included on OTC drug labels**
- **Plus**
 - **Name and address of dispensing veterinarian**
 - **Statement:**
“CAUTION: Federal law restricts this drug to use by on the order of a licensed veterinarian”
 - **Directions for use**
 - **Prescribed withdrawal times, even if zero**
 - **Any other cautionary statement**



Understanding Drug Labels

Information that must be on extra-label drugs:

- Name, address, and phone number of veterinarian who prescribed the drug
- Active ingredients
- Indications
- Directions for use
- Prescribed withdrawal times
- Any cautionary statements
- Exact directions for use



Understanding Drug Labels

- **Instructions to look for on each label:**
 - **Dosage**
 - **Timing**
 - **Route of Administration**
 - **Warnings or indications**
 - **Withdrawal times if any**
 - **Storage**
 - **Disposal**
 - **Shelf life or expiration date**



Extra-Label Drug Use

- **What is extra-label drug use?**
 - **Extra-label drug use is using animal health products in a manner not specified on the label**
 - **Examples:**
 - **Using a product at higher doses**
 - **Administering in different species than stated on the label**
 - **A veterinarian's prescription is needed for extra-label drug use**

Biologicals and Pharmaceuticals



Biologicals and Pharmaceuticals

- **Biologicals**
 - Generally made up bacterins and vaccines
 - A bacterin/vaccine is a suspension of killed or weakened microorganisms
 - **Killed Vaccine**
 - Has no self-replicating microorganisms
 - **Modified Live Vaccines**
 - Contain microorganisms that have been weakened through culturing and laboratory procedures
 - **Example: 7-Way**



Biologicals and Pharmaceuticals

- **Pharmaceuticals:**
 - Are medicinal drugs.
 - Contain no live or killed microorganisms
 - Are used to treat a variety of health related conditions
 - Almost every pharmaceutical has a withdrawal period
 - Example: Antibiotics such as LA-200

Biosecurity



Biosecurity

- **A set of management practices that prevent infectious diseases from being carried into a herd.**

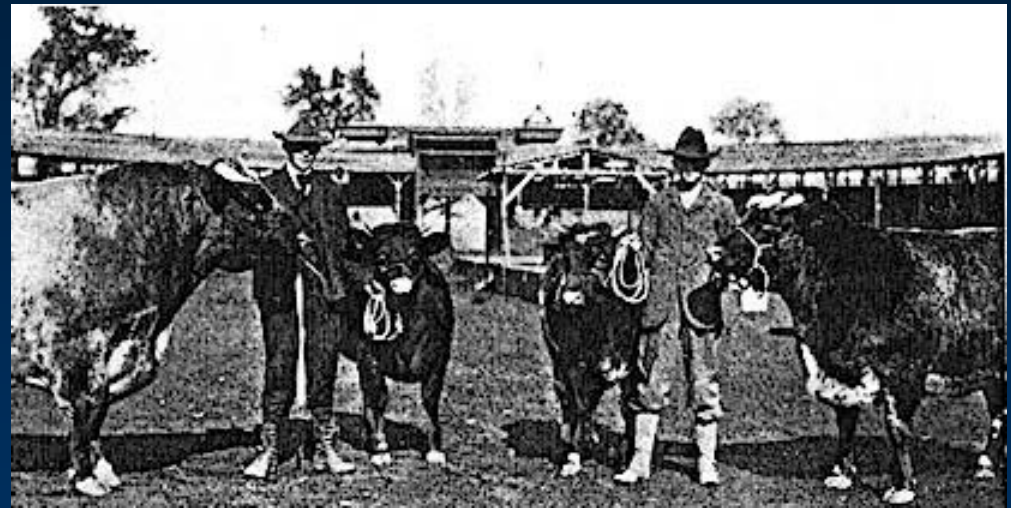


Infectious Diseases

- **New strains of infectious agents**
 - **Type II BVD**
- **New Diseases**
 - **Hairy heel wart**
 - **Neospora sp-abortion**

Infectious Diseases

- **Old Diseases**
 - **Johnes Disease**
 - **Leukosis**
 - **Tuberculosis**





Why Is Biosecurity Important?

- **Decrease disease transmission**
- **Prevent death loss**
- **Prevent production losses:**
 - **Weight gain**
 - **Milk production**
- **Improve cost of production**
- **Prevent premature culling of animals**



Why Is Biosecurity Important?

- **Global trade**
- **Food safety**
- **Antibiotic resistance**



On the Farm/Ranch Biosecurity

- **Consists of:**
 - **Good Sanitation**
 - **Isolation and acclimation of new animals**
 - **Disease testing and monitoring**
 - **Vaccination**
 - **Good record keeping**
- **Goal:**
 - **Breaking the disease transmission cycle!!!**



Good Sanitation

- **Cleaning barns and lots frequently**
- **Cleaning calving barns and lots early in the year**
- **Supply visitors with clean boots and clothing**
- **Make use of the natural disinfectants we have!!!!**
- **Clean manure handling equipment before using for feed handling equipment!**

Good Sanitation

- **Natural disinfectants:**
 - **Sunshine (U.V. light)**
 - **Heat**
 - **Dryness**
 - **Low humidity**
 - **Air**





Isolation and Acclimation

- **Bringing new animals to your operation:**
 - **Isolate for at least 2 weeks**
 - **Will allow for:**
 - **Revaccination**
 - **Observation of other conditions**



Isolation and Acclimation

– Acclimate

- Immunity goes both ways!

– Protect yourself and operation!

- Ask for health and vaccination records for:

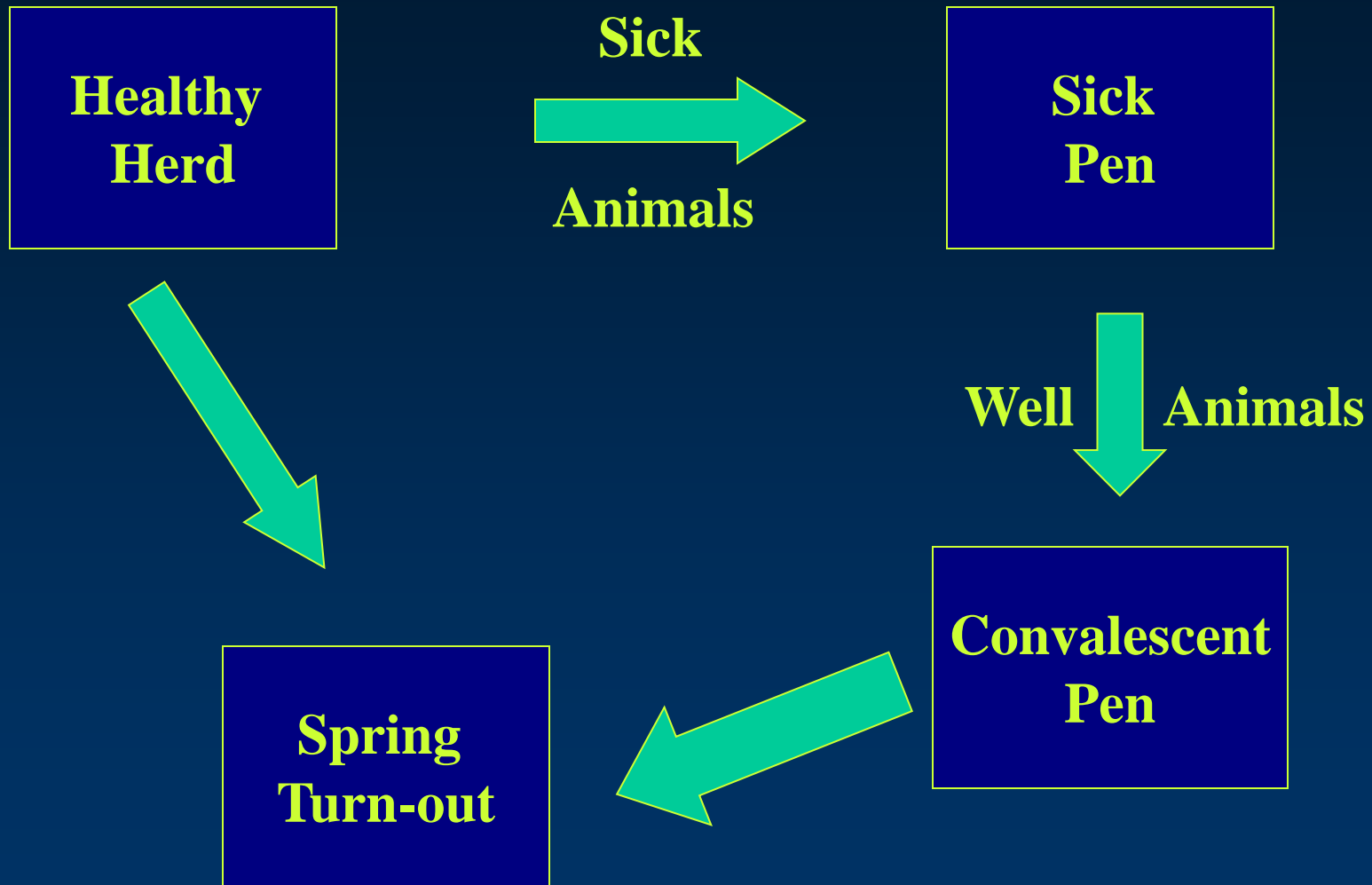
- Purchased animals
- Leased animals
- Borrowed animals

- If new animals don't have health records treat as “naive”

Isolation and Acclimation

- Isolate and separate animals with an infectious agent:
 - Move and separate sick from “Healthy Herd” and into “Sick Pen”
 - When well, move into “Convalescent Pen”
 - NOT INTO HEALTHY HERD!
 - At spring turn out reunite with “Healthy Herd”

Isolation and Acclimation



Disease Testing & Monitoring

- Can be useful in decreasing risk of disease entry into herd
- Evaluate tests used
 - Most tests are not 100% accurate
 - Percentage of false negatives and positives due to sensitivity and specificity of tests
- Use to diagnose the cause of death
 - If you don't look you don't know!
- Consult with your veterinarian





Vaccination

- **Vaccination is a good “protection” tool**
- **With introduction of new animals:**
 - **If they don’t have a health record:**
 - **Treat as “naive” and:**
 - **Preventative vaccinate as you would your current herd**
 - **Including boosting of preventative vaccinations**
- **Consult with your veterinarian about current animal health issues in your area**



Vaccination

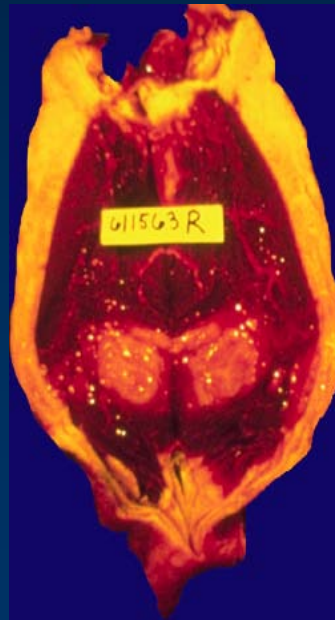
- *** Remember:**
 - Vaccinations are only tools, not 100%, and can be overrun by:
 - Stress
 - Poor nutrition
 - Antigen-antibody overload
 - Overwhelming disease burden by bacteria, viruses, and other agents

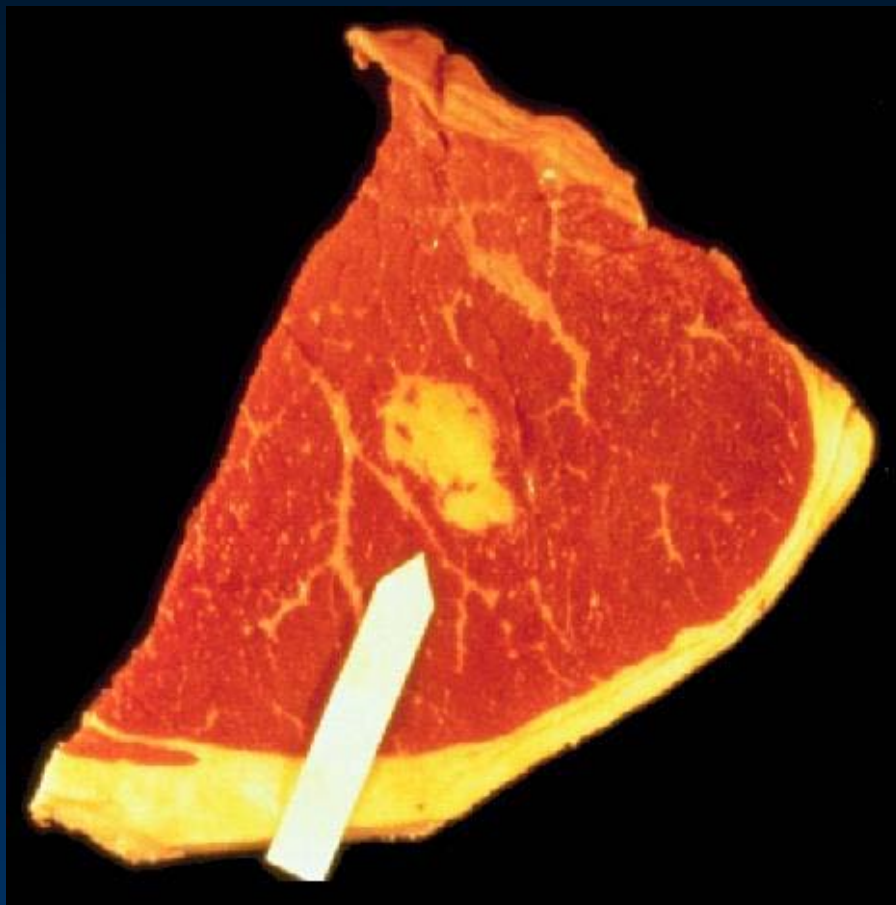


Good Records

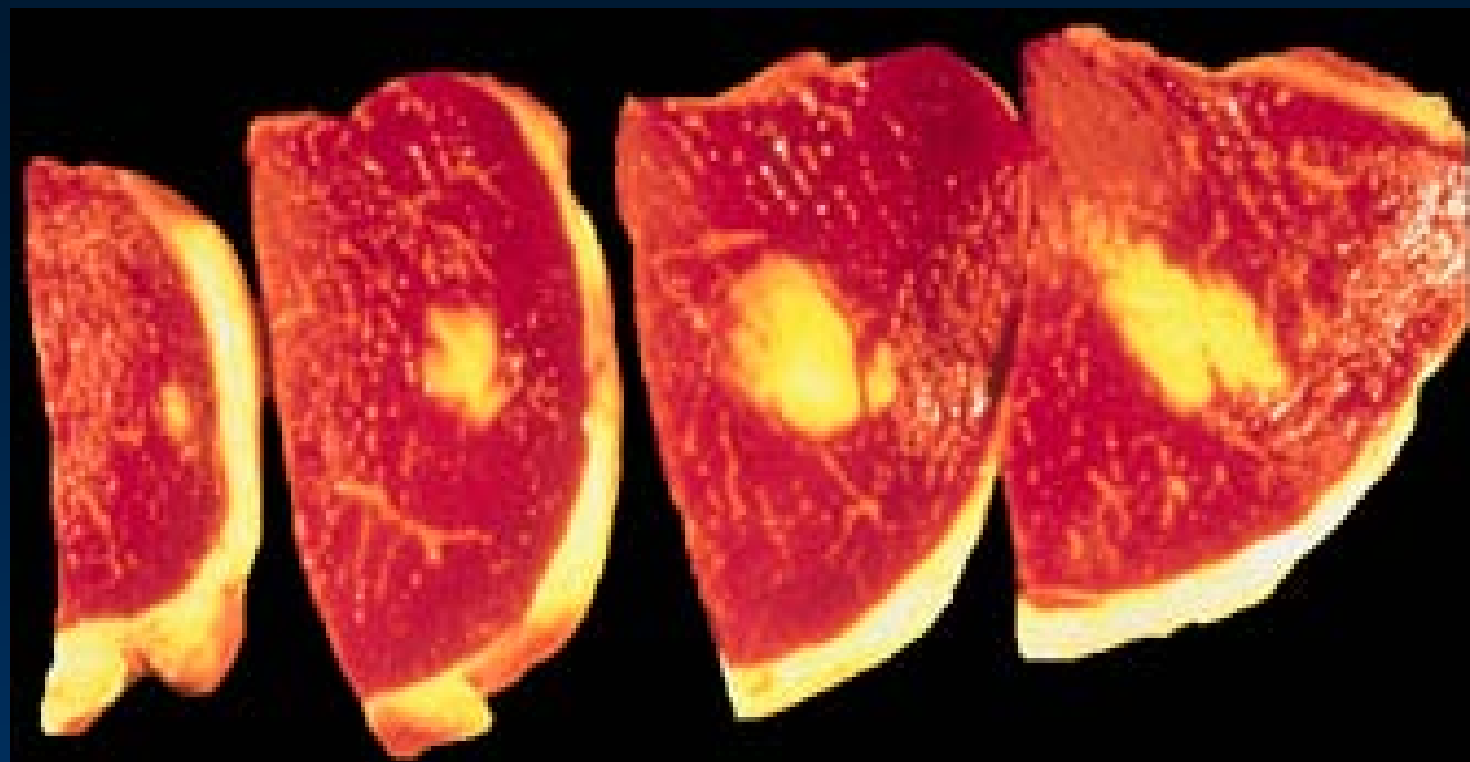
- **Good records should document:**
 - **Vaccination history**
 - **Herd health records**
 - **Herd inventory**
 - **Purchase and sale records**
- **All animals should be individually identified**

Intramuscular (IM) Injection-Site Lesions





2 mls 7-Way at Branding Time
(50 Days of Age)



5 mls 7-Way at Branding Time
(50 Days of Age)

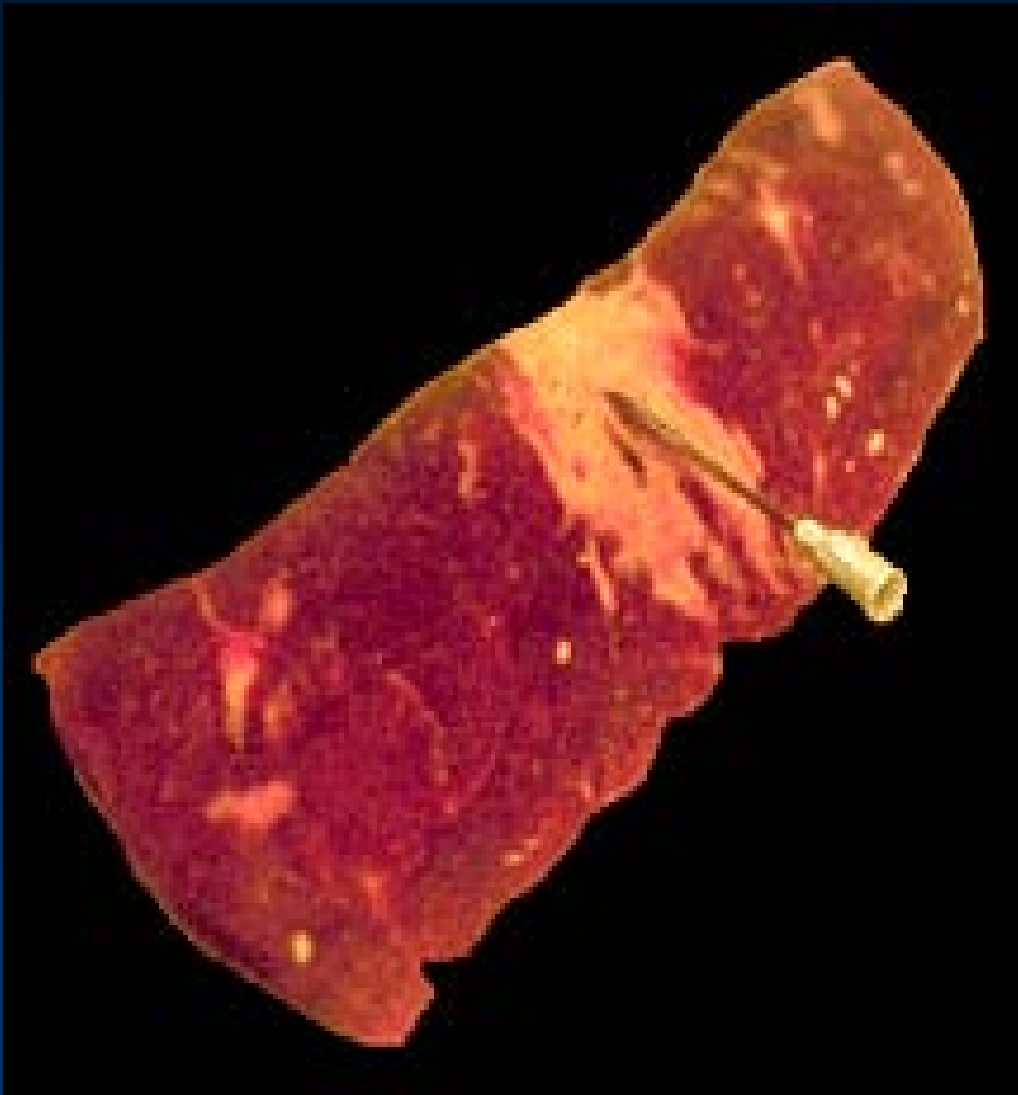


Injection - Site

~ Lesions & Scars ~

★ Effects Muscle Tenderness

- Muscle tenderness is significantly decreased in an area 3 inches from the site of injection**



Required Injection - Location

- **NDBQA Requires all injections be given in the neck**





**The “*NOT MY PROBLEM*”
Syndrome
will not fix the Injection-Site Lesion
Problem**

**Every Cattleman & Veterinarian
has a Responsibility**

Proper Injection Administration

(Giving Shots Right!!!)

Administering Injections Properly

- **Steps in Administering Injections Properly**
 1. **Select the right product for your need**
 2. **Read the label and determine:**
 - **Dosage to be given**
 - **Timing of administration**
 - **Route of administration**
 3. **Don't combine vaccines**
 4. **Use transfer needles if a product needs to be reconstituted**
 5. **Don't mix too much of a product at once**





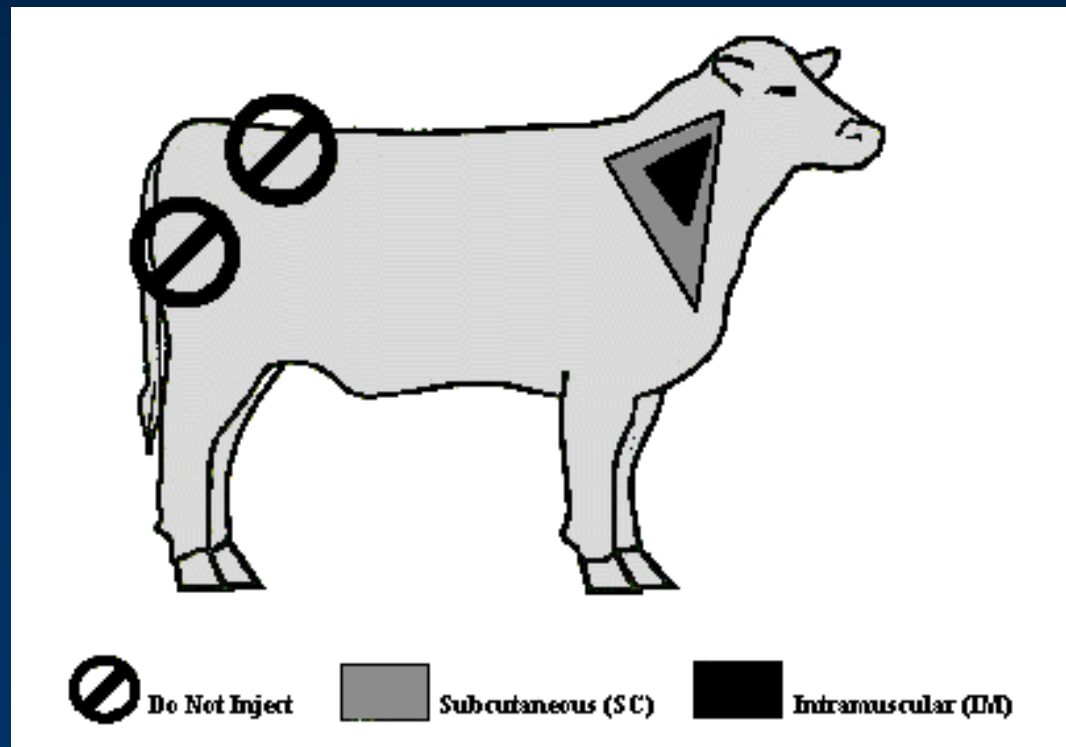
Administering Injections Properly

6. Keep shaking
7. Mark and separate syringes
8. Don't use disinfectants with Modified Live Vaccines
9. Get air out of syringes
10. Restrain animals properly
11. Select best route of administration
 - If product is labeled for both IM and SC administration, SC use is preferable

Administering Injections Properly

12. Choose best site of administration

- Give all injections in the neck region



Administering Injections Properly

13. Choose the right needle

| | Subcutaneous 1/2 to 3/4 inch needle | | | Intramuscular 1 to 1 1/2 inch needle | | |
|--|--|-------------|------|---|-------------|-------|
| Injectable Viscosity | Cattle Weight (lbs) | | | Cattle Weight (lbs) | | |
| | <300 | 300- 700 | >700 | <300 | 300- 700 | >700 |
| Thin (needle gauge) Ex: Saline | 18 | 18-16 | 16 | 20-18 | 18-16 | 18-16 |
| Thick (needle gauge) Ex: Oxytetracycline | 18-16 | 18-16 | 16 | 18 | 16 | 16 |

Administering Injections Properly

14. Use proper injection technique

- Tenting for Sub-Cutaneous
- Don't administer more than 10 cc into any one site



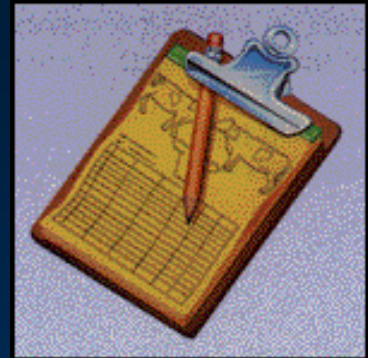
15. Sanitation is essential

- Reduces risk of spreading infection
- Reduces injection site reactions
- Don't use disinfectant with Modified Live Vaccines

Administering Injections Properly

16. Keep Accurate Records

- Individual animal or pen ID
- Date treated
- Product administered
 - Including name, company, product lot and serial number
- Dosage
- Route of administrated
- Withdrawal time and earliest date withdrawal period will be cleared
- Processor name and/or initials



Contact Information for NDBQA

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North Dakota's

**Beef Quality
Assurance
Program**

It's Every Cattleman's Business