Arkansas
Beef Quality Assurance Program
for Youth Producers
Beef Quality Assurance is a producer-driven program involving all sectors of the industry from cow-calf producers all the way to consumers. It is a program designed to help in the production of beef that is healthy, wholesome and a quality product, and one that is free from defects such as injection-site lesions and bruises. Consumers are concerned about the safety of the food they eat. Food safety begins on the farm, and we must do all we can to ensure safety and quality. This program is designed to increase food safety awareness by reminding beef producers where they fit into the food supply chain.

This youth program is sponsored by the Arkansas Beef Council and the University of Arkansas Cooperative Extension Service.

Fall 2005 Edition

Compiled and Edited By:

Dr. Jeremy Powell
Extension Veterinarian

Bryan Kutz
Instructor

Amy Hedges
Administrative Office Supervisor
# Table of Contents

Introduction

- What Is BQA? ................................................................. 1
- History of BQA .............................................................. 1
- Why Beef Quality Assurance? ............................................ 2
- Goals of the Program ...................................................... 2
- How Will BQA Aid the Youth Producer? ............................... 2

Ten Good Production Practices ............................................. 3

Youth Ethics ................................................................... 9

General Recommendations to Ensure Animal Welfare ................ 11

Biosecurity ...................................................................... 11

Safe Animal Handling ........................................................ 14

Carcass Quality Considerations .......................................... 18

Reproducible Forms ......................................................... 20
Arkansas Beef Quality Assurance Program for Youth Producers

What Is BQA?

“BQA” stands for Beef Quality Assurance. This is a program that will aid you in improving your animal care and management practices. The care you give your cattle at your farm, during transport and at the show will affect the products consumers buy. By following good health, nutrition and management procedures advocated in the BQA program, you can make sure your cattle perform at their highest level and are a safe, wholesome beef product for consumers.

History of BQA

What events helped to bring on the implementation of a BQA program?

- During the 1980s, cattlemen became concerned about perceptions of consumers.
- Consumers are easily misled.
- Some production practices could be perceived as not safe or ethical.
- Cattle producers began to search for ways to make sure their practices were safe and would satisfy the consumer.

Consumers want safe food. The perception of a product being safe and wholesome affects the buying and consuming habits of the American public. In 1980, cattlemen became concerned that they would lose the modern production tools, such as antibiotics and dewormers, they had come to rely on to improve the health and well-being of cattle due to these perceptions. Consumers and those who are not familiar with production practices are easily misled by misinformation and the portrayal that some beef cattle production practices are neither safe nor ethical. Because of these concerns, cattle producers began investigating ways to ensure that their production practices were safe and would pass the scrutiny of the consumer.

Between 1982 and 1985, the United States Department of Agriculture-Food Safety Inspection Service (USDA-FSIS) cooperated with three feedlots to evaluate production practices and assess residue risks. What was learned during those three years now serves as the backbone of the National Cattlemen’s Beef Association Beef Quality Assurance Program. BQA programs have been developed in 48 states.
These BQA programs have shown progress. Over the past 10 years, some of the top challenges the beef industry has dealt with included injection site blemishes, hide damage from brands, bruising of muscle (meat) and liver condemnations. Through implementation of BQA programs, these challenges have shown marked improvement.

Why Beef Quality Assurance?

You may be asking yourself, “Why should I go through the Arkansas Youth Beef Quality Assurance Program?” This answer is easy. The BQA program provides many benefits to the youth producer. By following a BQA program, you are improving your animal care and management practices. By following good health, nutrition and management procedures, you can make sure your cattle perform at their highest level and are a safe, wholesome beef product for consumers.

This program focuses on avoiding harmful or illegal drug residues. When you are knowledgeable about drug usage, withdrawal times and administration, you can produce a safer product for consumers.

BQA helps decrease product costs because you may be able to eliminate the use of some animal health products, which are quite expensive.

BQA also increases awareness of food safety. Beef producers are an important part of the food supply chain. The care you give your cattle at your farm, during transport and at the show will affect the products consumers can buy.

Goals of the Program

- To benefit youth producers through a cooperative effort to supply wholesome, safe, consistently high-quality beef.
- To benefit youth producers through a better understanding of how to follow labels for feed additives, drugs and chemicals used.
- To develop proper and safe herd health practices.
- To improve the pride and image of youth beef producers and the reputation of the beef they produce.

How Will BQA Aid the Youth Producer?

The Beef Quality Assurance Program will help you develop a better understanding of how to follow labels for feed additives, drugs and chemicals that may be used.

This program will help you develop proper and safe herd health practices through a close working relationship with your veterinarian.
The reputation of the beef you are producing will be enhanced by participation in this program, thereby increasing the pride and image of youth beef producers.

**Ten Good Production Practices**

**Good Production Practice #1**
Identify and track all animals to which drugs were administered.

Proper identification is a key to good management. If each animal is clearly identified, keeping written records on treatments becomes a lot easier! You can identify animals that you have treated by individual or by pen.

Individual identification is important when keeping records. When you treat an animal, you should write down its ear tag or ID number.

Pen identification is used by some producers. They have a special pen for treated animals. When they give an animal an injection, they move it from its original pen into a new pen called the “sick pen” or “hospital pen.”

**Good Production Practice #2**
Maintain medication and treatment records.

Maintaining good records is a way to keep organized. The record-keeping plan is simple. Each time you treat an animal, write down the following information:

1. Date treated
2. Animal or pen ID (ear tag or other identification)
3. Product used for treatment
4. Amount given
5. Route of administration
6. Who gave the drug (yourself, a parent, teacher, etc.)
7. Withdrawal time
8. Date withdrawal time is complete

Record-keeping sheets are provided in the Reproducible Forms section.

**Withdrawal Time**

It is extremely important to keep good records on drug administration to meet proper withdrawal times, as listed on drug labels. Withdrawal time is the amount of time required for the medication to be metabolized, or broken down, by the animal’s body. These times have been determined and set through research and governmental regulations.
Observing withdrawal times helps eliminate drug residues. When you give an injection, identify treated animals in some way, such as recording their ear tag or separating them in a special pen. By doing this, it will help you remember to follow withdrawal times when administering medications or vaccines.

If you have questions about drug usage, the Food and Drug Administration (FDA) offers a Compliance Policy Guide that explains the rules for producers who use animal health products. This compliance guide can be found on the web at www.fda.gov.

**Tips for Using Needles**

Here are some quick tips when using animal health products that use needles.

1. If you purchase disposable needles, you don’t have to worry about sanitizing them or re-using them. Change needles frequently or if the needle is dropped or damaged. After use, dispose of them properly.

2. If you use reusable needles, make sure you clean them properly. Keep needles sharp to avoid excessive irritation.

3. Always check for burrs on the needles. A “burr” is when the metal on the needle is chipped or raised off the surface of the needle and is not smooth. This can happen if a needle is dropped or used too much. The chipped metal causes more irritation when inserted and also increases the chance of infection. If a burred needle is used, the animal will experience excessive discomfort and injection pain.

**Look at the Labels!**

Reading the labels on drugs is extremely important. If you read the label carefully, you can find all the information about storage and approved use of the drug such as:

- **Active Ingredient**
- **Lot Number**
- **Dosage**
- **Expiration Date**
- **Application Method**
- **Trade Name**
- **Cautions**
- **Precautions**
Good Production Practice #4

Obtain and use veterinary prescription drugs through a licensed veterinarian based on a valid veterinarian/client/patient relationship.

If you have a good relationship with your veterinarian, he or she will be able to advise and guide you with using medications appropriate for your beef project. By establishing this relationship, the veterinarian also gains a working knowledge of your management practices. Therefore, your veterinarian can help you make medical judgments, assist you with withdrawal times and your record-keeping system and provide “extra label” drug use when deemed necessary under special circumstances.

Types of Animal Health Products

The two classes of drugs are over-the-counter (OTC) and prescription (Rx). Over-the-counter drugs can be purchased at places like veterinary clinics and feed stores and from animal health salespersons. Prescription drugs are only available from a veterinarian or pharmacist. Any time you use animal health products, even if it is OTC, it is recommended that you first talk with your veterinarian. The margin of safety for the animal, especially if an accidental overdose should occur, the difficulty in correctly diagnosing the disease and the level of safety for the person administering the drug are all factors that decide whether a drug is available over the counter or by prescription.

Every drug approved for use in cattle has labeled instructions. OTC drug labels will have exact printed instructions on dosage, administration, withdrawal times and handling. Use of prescription drugs is harder to understand, so it is a little trickier. If your veterinarian prescribes a drug for use on your animal, he or she will give you a form describing uses, dosage, administration and withdrawal times for the drug. Only a veterinarian may prescribe an Rx drug to be used on an animal. The label of Rx drugs always says “CAUTION” and “Federal law restricts to use by or on the order of a licensed veterinarian.”

Types of Drug Use

- **Labeled Use**: Using the drug EXACTLY as it is specified on this label. Medicated feed may only be used as directed by the label. Labeled use is legal. It is the type used by most producers.

- **Off Label**: The PRODUCER uses drugs in a manner other than what is stated on the label, without veterinarian guidance. This is ILLEGAL!!

- **Extra Label**: The VETERINARIAN prescribes a drug to be used in a manner other than what’s on the label. This is legal and is used when a good veterinarian-client-patient relationship exists.

There are “right” and “wrong” ways to use OTC and Rx drugs. Label use is when you use the animal health product exactly like it says on the label. This is the acceptable and legal way producers use most drugs. Off label drug use is when producers decide to use a drug in a manner other than what is on the label. This is ILLEGAL. Extra label drug use is when a veterinarian prescribes a drug to be used by a producer in a manner other than the directions on the label. A veterinarian-client-patient relationship MUST exist before extra-label drug use is legal.
Feed medication can only be used as directed by the label. It is illegal for a producer or veterinarian to feed medication other than according to the label.

**Extra Label Drug Use**

Extra label drug use can only be recommended by veterinarians. A producer cannot legally use a drug in a manner other than what is written on its label. If a producer does this without a veterinarian’s involvement, it is called “off label” drug use and is ILLEGAL.

“Extra label” is the term used for drugs that are being used in a manner besides their specific use as given on the label.

A drug may become “extra label” for several reasons.

1. Your veterinarian may tell you to give your calf more medicine than the label states.
2. Your veterinarian may tell you to give your animal medicine more frequently than the label states.
3. Your veterinarian may tell you to stop giving the drug after a certain period of time.
4. Your veterinarian may prescribe a treatment for a disease other than stated on the label.
5. Your veterinarian may prescribe a drug for your calf that is not labeled for use in cattle. (This is only done if it is a logical choice and if label use of an approved drug is not available.)

Extra label basically refers to any use of the drug besides what is printed on its label and, again, can only be prescribed by a veterinarian.

**Extra Label, Off Label...or Okay?**

This exercise will help you understand more about what is extra label drug use, off label drug use and what is okay.

1. The label says to give 10cc of the drug and your veterinarian says give 20cc. This is extra label because the veterinarian has changed the dosage beyond the label instructions.
2. You decide on your own to use a drug for pneumonia to treat your animal’s ringworm. This is off label because a veterinarian did not prescribe this drug to be used. This is also ILLEGAL.
3. You use a drug approved for chickens on your calf. This is extra label because your veterinarian changed the species to which that the drug was originally intended.
4. The label says treat your calf twice a day and you treat it at 8 am and 8 pm. Is this extra label? NO. This is exactly what the drug label instructs you to do, and this is perfectly correct.

**Good Production Practice #5**

Educate all family members about treating animals, proper administration, withdrawal time, selling animals and hauling animals.

Having a beef project takes cooperation from everyone in your family, even your friends. It is important to teach everyone involved with your project about how to handle your calf.

Teach them how to handle cattle, how to give an injection correctly, how to identify the animals that have been treated, which cattle go in which pens and anything else that you think is important for them to
know about your project. This will avoid any confusion and help make sure your calf gets the best treatment possible.

**Proper Administration**

This figure shows the proper administration techniques to use when giving injections to your animal. There are five ways to administer drugs to a calf. The figure shows the two most common ways.

Intramuscular (called IM) is an injection that is given directly into the muscle. IM injections should be given in the neck, as shown by the arrow. You should NEVER inject into the hip, loin or round. These areas include the most valuable cuts of beef, and the meat can be damaged by injections.

The other common drug administration route is called subcutaneous (Sub-Q), meaning under the skin. Sub-Q injections should be given into the loose flaps of skin in the neck using the “tenting technique.” Make sure the area you inject is clean and dry to prevent infection.

The other ways to give drugs are in the abdominal cavity (called interperitoneal or IP), in the vein (IV) or through the nasal passages (intranasal). IP and IV should both be given by a veterinarian only.

The “tenting technique” is the proper injection technique for Sub-Q injections. When giving Sub-Q injections, tent the skin to get the product just under the skin and not into the muscle. Pull the skin away from the animal’s body and insert the needle into the fold of skin. When giving multiple injections keep injection sites at least 4 inches apart. Don’t administer more than 10 cc of product into any one site. If a product must be given several times over a period of a few days, vary the injection site.

**Drug residue tests** are becoming cheaper and easier to use. Tests are available that can be used to identify if your beef project has any drug residues. These tests can be used in several situations:

- When cows are culled.
- When a test animal is tested for extra label withdrawal times.
- When feeder cattle are sold for beef.
- Some stock shows or fairs require testing of random animals and champions for illegal drug use.
Good Production Practice #7
Establish an efficient and effective herd health management plan.

Establishing a herd health plan can be in-depth and detailed or relatively simple. When making this plan, you can consult with your veterinarian about your herd on disease problems and review your record-keeping system.

If you notice that you are having a problem with a certain disease, you can find out what is causing your problems and make a plan to prevent this disease.

Maybe your calf is being exposed to diseases or parasites by other cattle. Maybe your soil has parasite eggs present and your calf is becoming infected. Maybe your calf’s pen housed a sick animal and the germs are still present.

By developing an effective herd health management program, you prevent or control any potential disease outbreaks and also learn how to incorporate vaccine use to keep your cattle healthy.

Good Production Practice #8
Provide proper animal care.

When you took on the responsibility of a beef project, you became responsible for another living creature. It is your job is to provide your calf with the best possible care. Always handle the calf humanely. Look at your calf every day to make sure it is doing okay. Never use prods, buzzers or sorting sticks to move your calf. Instead, use safe handling practices. Handling your project improperly will cause bruises on the meat that will lower its value. If you treat your calf badly, it could become stressed, which may affect its meat quality. Loading and hauling can be a problem if you are not careful about how you handle your calf. If it is really hot, try to haul your animal early in the morning to avoid the heat. Bed your calf on wet shavings to help keep it cool. In cold weather, add some hay to the bottom of your trailer to keep the calf warm. Always move in a slow and calm manner to prevent undue stress on your calf.

Here are some basic guidelines to provide the best care for your calf. By following these instructions, your calf will be healthier and happier, which results in more fun for you with your project.

- Provide quality water and feed to your calf.
- Provide good shelter.
- Observe your calf for signs of illness.
- Handle calf calmly.
- Load and transport calf carefully to minimize stress.

Basically, use common sense when caring for your calf. The welfare of your calf directly impacts its health and productivity.

Good Production Practice #9
Follow appropriate on-farm feed and commercial feed processor procedures.

If you use medicated feeds, be careful to follow labeled withdrawal times to prevent illegal or harmful drug residues deposited in meat.

- Good housekeeping! Keep all of your facilities and equipment clean. Good housekeeping helps prevent accidents that could contaminate feeds.
- Clean and safe equipment. Make sure your equipment is clean and safe. Dirty equipment (buckets, feed scoops, troughs) can contaminate your next batch of feed.
• Organize work areas. Keep your work and storage areas organized. If you have a storage room, keep medicated feeds separate from other feeds. This reduces the chance of feeding a medicated feed by mistake. In addition, keep animal health products in a separate area.

• Labeling. Use a good labeling system to identify different feeds, drugs, pesticides or other products. This will help make sure you don’t get products confused with each other.

• Record keeping. Keep good records of when you mix or use feed with any medications, when you get new feed or when anything new comes into your barn or storage area. Keep records for at least one year after the feed is fed.

**Good Production Practice #10**

**Complete the Youth Beef Quality Assurance checklist annually.**

• Keep up to date with new industry practices.

• Evaluate production to ensure Good Production Practices are being met.

• Be confident that you are producing top-notch beef!

After you are certified in the Arkansas Youth Beef Quality Assurance program, you will evaluate your own project to make sure you are following good management practices. This will make you confident that you are producing the best product that you possibly can.

**Youth Ethics**

The ethical character of the youth producer and the welfare of the animals he/she is managing are of high importance in the BQA program.

What is ethics? Ethics refers to the methods which distinguish right from wrong and good from bad and the behaviors and conduct associated with them.

**What Characteristics and Practices of BQA Youth Producers Promote Development of Ethical Character?**

Many different characteristics may describe the ethical character of the youth producer and ensure the welfare of the animals he/she is managing.

We will look at six basic characteristics which will promote ethics and improve the welfare of animals.

**Characteristic 1 - Trustworthiness**

Trustworthiness is the first characteristic which will describe a BQA youth producer who is endeavoring to promote the welfare of his/her animal and who has good ethical qualities. Trustworthiness would include those traits such as loyalty, honesty and promise keeping.

Practices which would promote those traits are:

• The BQA youth must attend daily to the nutritional and the health concerns of the animals in his/her care.
• The youth producer should always read labels and adhere to the withdrawal times for any drug or dewormer which one would use on his/her animal.

• Only approved drugs, dewormers and chemicals should be used in the production practices used by the BQA youth producer in the care of his/her animals.

**Characteristic 2 - Respect**

Respect includes the treatment of people, things and animals. To personify the characteristic of respect, the BQA youth producer should always handle his/her animals humanely.

A respectful BQA youth producer would always care for the animals properly. The BQA youth producer must understand that the animals under his/her care depend on him/her for their well-being.

**Characteristic 3 - Responsibility**

Responsibility includes perseverance and accountability.

• The responsible BQA youth producer feeds and waters his/her animals on a daily basis.

• Only approved rations should be fed to the animals under the BQA youth producer’s care.

• The responsible BQA youth producer would use only approved drugs, dewormers and chemicals in the care of his/her animals.

**Characteristic 4 - Fairness**

Fairness includes applying appropriate rules and standards when caring for one’s animals.

• One should feed only approved rations to his/her animals.

• The fair-minded BQA youth would use only approved drugs and substances in the care of his/her animals.

• Only approved fitting and grooming practices should be used when preparing for a show.

**Characteristic 5 - Caring**

Caring includes the promotion of the well-being of people and animals.

The BQA youth producer should always attend to the daily nutritional and health concerns of the animals under his/her care.
The BQA youth should always handle his/her animals in a humane and caring way.

**Characteristic 6 - Citizenship**

Citizenship involves making the home, community and country better places.

The BQA youth producer should always follow instructions from elders and fulfill those responsibilities entrusted to him/her. He or she should always model ethical behavior and assist younger producers. In this way, the BQA youth becomes a proper role model for the younger producers.

By adhering to approved practices and using only approved chemicals and rations, the BQA youth producer ensures that his/her home, community and country have a wholesome and safe source of beef.

Make timely observations of livestock. Animals should be inspected daily for any health concerns before they become big problems.

Provide disease prevention practices. The BQA youth should provide disease prevention practices, including access to veterinary care to protect animal health.

Keep updated. One should keep updated on advancements and changes in the industry to ensure management decisions are based on sound production practices and consideration to animals’ well-being.

**General Recommendations to Insure Animal Welfare**

Arkansas Youth Beef Quality Assurance participants should take pride in their responsibilities to properly care for their cattle and see to their welfare daily. The following are general recommendations for BQA youth to consider in raising and handling cattle.

Provide necessary food, water and care. All animals have daily nutritional requirements that must be met to protect the health and well-being of the animal.

A commitment to biosecurity is an important first step forward in the march to quality. Biosecurity is a practice to prevent the spread of infectious disease by reducing the movement of disease-causing organisms into and within your program.
Developing and maintaining biosecurity takes work, but it is the cheapest, most effective means of disease control, and no disease prevention program will work without it.

**How are Infectious Diseases Spread?**

Infectious disease can be spread from outside cattle to your cattle or from one of your cows to the next.

Cattle being around diseased cattle is the easiest way to spread disease. Disease-causing pathogens are passed from animal to animal. Anyone who has been around other cattle and then comes onto your farm is a potential carrier of infectious disease. Disease-causing agents can be transported to your farm in this way from their vehicles, shoes or equipment. Disease can be spread by contact with equipment and objects that are contaminated with disease-causing organisms. The introduction of healthy cows that are incubating disease or who have recovered from disease but are now carriers can spread disease. Carcasses of dead cattle that have not been disposed of properly can spread disease. Disease is easily spread by contaminated feed, through manure, impure water and by non-livestock animals such as cats, deer, skunks and other wildlife.

**Isolation**

The first area of consideration in a successful biosecurity plan is isolation. You should strive to keep the commingling and movement of animals to a minimum. Be sure to isolate newly acquired animals for at least three weeks before introducing them to your herd. Isolate sick cattle and separate your cattle by age and/or production groups. Clean and disinfect facilities between groups. You should visit with your veterinarian to establish a specific isolation management practice for your particular program.

**Traffic Control**

Traffic control is another important area of concern in a biosecurity program. Traffic includes vehicles, visitors and all animals including dogs, cats, birds, wildlife and rodents. Without good traffic control, disease can sneak in on anything from coveralls to paws of little animals. Limit visitors’ access to barns and lots.

**Sanitation**

Sanitation is the third component of a biosecurity plan. Avoid using common syringes and needles. Be aware when working sick animals and move only from healthy to sick animals during the day.
and not vice-versa. Dispose of carcasses properly. Reduce the access of rodents and wildlife. Clean up, mow, seal openings in buildings and bait to hold down their population. Deer fences may be necessary in certain situations.

Management Practices

To develop a good biosecurity program, prevent manure contamination between healthy and sick or dead cattle. Use different equipment to feed and clean pens. This includes the precaution that no one ever step in the feed bunk. Routinely clean and disinfect feeding equipment. Clean and disinfect cattle-handling equipment between groups.

Routinely clean and disinfect manure-handling equipment. You should establish a vaccination plan that is timely and includes all required and suggested immunizations (see Reproducible Forms) and read and follow all labels. When working the cattle, handle young calves first, then older and then sick last. Do not let any abortion go uninvestigated.

Don’t Spread Disease

Carefully inspect animals that you purchase and animals you sell. If something doesn’t look right, call a vet before moving the animals. Follow the laws established for movement of livestock – if they need health papers, get some.

Assure the safety and quality of your feed. Disease-causing agents arrive at the farm in purchased feed and from upstream contaminated water. Know your sources. Store feed in a secure location.

Know who is on your farm. Keep your eye out for people who don’t belong. Post signs to restrict access to your livestock. Insist that visitors wear clean clothes.

Check your livestock frequently. Look for unusual signs of disease. Call your vet if you have higher than ordinary rates of death. Watch for blisters or sores around the mouth, udder or feet. Report your concerns; don’t wait to see if things will look better in a day or two.
Safe Animal Handling

Proper shelter and transportation are essential for assuring quality and safety of beef production. We can reduce the amount of meat quality problems through improved handling facilities, better preparation and working our best food source (beef) with patience.

As you move into the flight zone of an animal it will move away from you. If a handler moves too deeply into the animal's flight zone, it will either bolt and run away or turn back and run past the person. Working in proper position will minimize hazards and injury to the handler.

Isolated animals will often panic and become very difficult to control. If an animal gets isolated from the group and is out of control, move some quiet animals in with it and give it some time to settle down.

Handlers will often shock or prod the animal in the back of the crowding alley and wonder why the animal in the front does not move forward. When facilities are well designed and handling techniques are based on an understanding of animal behavior, it is not necessary to stress or bruise the animals as they move through the working facilities.

The technique of using a flag to sort cattle is very effective and safer than other practices.

Livestock are herd animals. Understanding the importance of lead animals can help cattle flow in crowding alleys more efficient.

Many handlers make the mistake of packing too many animals in a crowding pen at a time. As a result, the animals are not able to turn to line up and move forward.
Work the animals in smaller groups of 6 to 8 to allow for more room. This will also help alleviate stress during processing.

**Avoid Stress**

Stress is a big factor contributing to beef product merit and many diseases that affect cattle. The stress related to extreme weather conditions most often can't be avoided. However, the process in which we handle cattle, either when processing, vaccinating or even clipping cattle in preparation for show can cause undue stress which can lead to illness and decreased meat quality.

When everyone does their job efficiently in a calm controlled manner, the task will be completed in a satisfactory time frame.

Working with a good attitude positively affects other workers and can be transferred to the cattle being processed.

Don't get in a hurry – it's not a race.

Avoid working cattle in stressful weather. On hot days, early morning hours are best. Cattle can also be stressed by cold spells, particularly when they have a wet hair coat.

Cattle and co-workers sense “Bad Attitudes.”

Working cattle in dusty conditions is an invitation to respiratory illness.

Working cattle in dusty conditions is an invitation to respiratory illness.

Sudden changes in the ration or keeping cattle off of feed for extended periods while they are being worked or transported can cause acidosis.
Weaning is a very stressful period. Work calves several weeks prior to weaning to help avoid weaned stress.

**Facility Design**

A good facility has been described as being horse high, bull strong, and hog tight. You need to keep this in mind as you begin plans and material preparation for constructing new working facilities. Proper cattle handling starts with well-designed facilities.

Maintain the facility; make sure hinges, latches, and other mechanisms are in good repair and properly lubricated.

**Horse High**

**Hog Tight**

**Bull Strong**

Keep in mind that a facility needs to be designed so that cattle can be easily driven into it.

Design alleys and working pens so animals can be sorted easily before and after they are processed.

The corral should make easy the movement of cattle from a large area into smaller pens and working alleys and into the crowding alley. Avoid corners where cattle will balk, and pay attention to the placement of gates.

The installation of solid sides on the crowding pen and crowding alley will keep the animal from being distracted or startled by people and objects on the outside.

Blinders on squeeze chutes and solid sides on artificial insemination chutes will help keep the animals calm.

In a curved crowding alley, the animals won’t balk from seeing a dead end. Animals will follow the leader in a natural circular path around the handler.

**Facility Hazards**

Reduce noise in the area. Muffle the sound of banging gates and crashing chutes with rubber or plastic stoppers.

Barking dogs or loud talking will excite animals and simply needs to be controlled.

Floors in the working area should not have a slippery surface to help prevent feet and leg injury.
Eliminate hazards in the facilities that will cause injury to the animals. Projections and sharp edges on gates and fences can cut and bruise animals. Eliminate openings where animals might entrap a foot or their head.

**Shelter**

Beef cattle are produced in a variety of production settings, from pasture and range, to dry lot and confinement facilities. Cattle are adaptable to a wide range of natural conditions and artificial environments.

When behavioral and physiological characteristics of cattle are matched to local conditions, beef cattle thrive in virtually any environment without artificial shelter. However, during extreme conditions, cattle should have access to well-drained resting areas and/or to natural or constructed shelter.

**Transportation**

Proper handling and transportation are important for the safety and welfare of the animals being moved. Cattle should be loaded and unloaded as quietly and patiently as possible to prevent stress or injury.

Cattle should be separated by size or gender prior to shipping, and, if possible loaded into separate trailers or compartments in a trailer.

Drivers should avoid sudden starts/stops and sharp turns while in transit. Flooring should be clean and slip resistant.

Sanitizing the trailer after each load helps promote good health.

**Carcass Quality Considerations**

**Competitive End Product**

Your goal is to provide a beef product that consumers prefer over other meats. This task can be quite challenging because your product flows through many hands with each contributing to product quality and each needing to make a profit.
The cow-calf producer must have animals that function in the ranch’s environment. The stocker-feeder wants animals that gain weight on the smallest amount of feed. The packer wants pounds of red meat without waste.

All these factors make it difficult to decide what type of animal will produce consistent quality for the entire beef industry.

Quality Eating Product
Consistency and Uniformity

The environments in which cattle are produced provide for a variable range of animals with different sizes and carcass qualities.

The beef industry has not set an ideal mature size for all producers. This may not be necessary, because if you will set an individual target and remove variability within your own herd, the consistency will follow.

Eliminate extreme cattle relative to their size (frame score and weight), carcass finish, marbling (sire selection) and muscle pattern. This will help focus on producing a uniform product.

Portion Size

Consumers desire cuts that are adequate in serving size, but not extreme. Carcasses that are too large or too small make it difficult for restaurateurs and retailer to give consumers cuts which meet their expectations.

Moderation in frame size, adequate fat and increased muscle are traits of importance when raising terminal progeny to put in the food chain.

If you place too much selection pressure on increased musculature, live and carcass weights will become even heavier.

Palatability

Traditionally we have used quality grades to monitor eating acceptance (palatability). Prime is associated with the highest eating quality followed by choice, select and standard.

Tenderness

Product toughness costs the beef industry millions of dollars annually. Stress, injection site lesions and muscle composition are some factors that contribute to meat toughness.

Excess Fat

Fat costs more to put on the live animal than muscle. The higher cost associated with excess fat due to additional feed and extra carcass handling and trimming continues to be a major factor.
affecting how competitive beef is when compared to competing protein sources.

Carcass Targets Leading to a Quality Eating Product

<table>
<thead>
<tr>
<th>Carcass Weight</th>
<th>600 to 850 pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backfat Thickness</td>
<td>0.35 to 0.50 inches</td>
</tr>
<tr>
<td>Ribeye Area</td>
<td>11.0 to 14.0 square inches</td>
</tr>
<tr>
<td>Yield Grade</td>
<td>2.5 or less</td>
</tr>
<tr>
<td>Quality Grade</td>
<td>High Select or better</td>
</tr>
</tbody>
</table>

To reach a carcass weight between 600-850 pounds, cattle should weigh 1,050 to 1,400 pounds at harvest. These cattle should also have adequate backfat thickness to give them the chance to grade high select or better. Cattle with heavy or average amounts of muscling are desirable. Their carcasses will produce ribeye areas of 12.5 to 14.0 square inches. This is large enough to satisfy a large appetite but still be affordable to the general income. Typically, as frame size changes, so does mature weight.

Frame Size Targets Leading to a Quality Eating Product

<table>
<thead>
<tr>
<th>Mature Size</th>
<th>Mature Weight (pounds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>750 to 1,000</td>
</tr>
<tr>
<td>Medium</td>
<td>1,050 to 1,350</td>
</tr>
<tr>
<td>Large</td>
<td>1,400 plus</td>
</tr>
</tbody>
</table>
## Calf Health Record

**Owner:** ________________________________

**Date:** ________________________________

**Location:** ______________________________

### Sex: Steers  Bulls  Heifers  Identification Number(s):

Use procedure number to identify injection site in circles on animal above.

<table>
<thead>
<tr>
<th>Date</th>
<th>Treatment/Vaccine</th>
<th>Product</th>
<th>Company</th>
<th>Lot #</th>
<th>Expiration</th>
<th>Dose</th>
<th>Route of Admin</th>
<th>Booster Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Clostridial (blackleg +)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Tetanus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Brucella (Bangs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>4</td>
<td>Coccidiostat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>5</td>
<td>Pasteurella</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>IBR/PI3/BVD/BRVS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Mycoplasma bovis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td><em>H. somnis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Internal parasites</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>10</td>
<td>External parasites</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>11</td>
<td>Implant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Antibiotics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Medicated feed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Castration Method:

**Date:** ________________________________  **Description/Comments:** ________________________________

### Brand:

**Date:** ________________________________

### Dehorn:

**Date:** ________________________________

### Veterinarian:

______________________________  **Phone:** ________________________________

### Signed:

______________________________  **Date:** ________________________________
<table>
<thead>
<tr>
<th>Expiration Date</th>
<th>Supplier/Distributor</th>
<th>Product Name</th>
<th>Quantity</th>
<th>Cost</th>
<th>Serial No.</th>
<th>Lot #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Received</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expiration Date</td>
<td>Serial No.</td>
<td>Lot #</td>
<td>Cost</td>
<td>Quantity</td>
<td>Product Name</td>
<td>Supplier/Distributor</td>
</tr>
<tr>
<td>----------------</td>
<td>------------</td>
<td>------</td>
<td>------</td>
<td>----------</td>
<td>--------------</td>
<td>----------------------</td>
</tr>
</tbody>
</table>