

The Woodlands College
Park FFA
and
The Woodlands FFA
Beef Cattle Manual

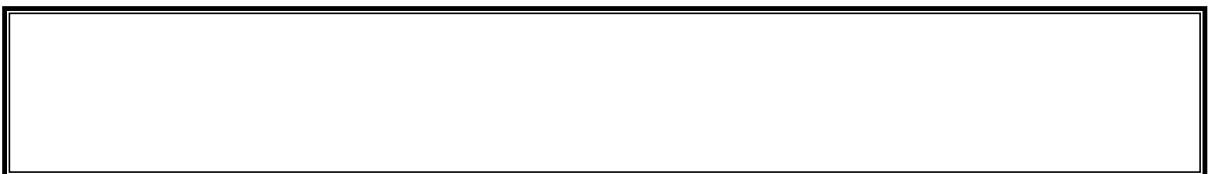


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This manual has been compiled and published as a guideline for raising and showing beef cattle. The Texas Cooperative Extension Service manual, "Managing Beef Cattle for Show," was used as a resource for compiling this publication.

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Introduction

Congratulations, you have taken on the most expensive, most time consuming, and most difficult project the FFA has to offer. This project will test your pocket book, patience and perseverance like no other. Your calf will require the most commitment for the least guaranteed financial reward compared to any animal in the barn. So why do we extend a congratulations? Because your efforts over the next year will teach you more than money can buy (i.e. responsibility, common sense, animal husbandry and patience just for starters).

Don't get us wrong, if you do a good job and do well at the stock show, you stand a chance to not only break even, but also possibly make some to boot. There are also ways to market your calf at the end of the feeding period and we will explore these options later in the year.

The challenge is this: Do everything in your power to produce the best muscled, best finished steer or the best breeding heifer you can in the short amount of time you have. Learn everything you can and ask every question that you have on management, feeding, fitting or showing so that this experience will be valuable.

Remember this, you are part of the College Park FFA / The Woodlands FFAbeef cattle feeding program. We require your full commitment and attention with this project and in return you will receive our full commitment and attention. It is critical that we all do our part to make this effort a success.

This manual is to be a source of information and is intended for your use throughout the feeding period. It will be able to give you knowledge in many of the different aspects of raising and showing beef cattle. Please take the time to read and study it so that you can glean as much as possible from it.

And lastly, here are four concrete philosophies that we want each of you to take to heart when raising and exhibiting your calf:

1. Take good care of your calf and your calf will take good care of you.
2. The harder you work, the luckier you get.
3. You may get beat in a class or in the champion drive, but don't EVER get beat on the show stick.
4. Show WITH your friends, not against them. Without further delay let's get started on the JOURNEY!

Animal Selection

There is a lot you need to know if you are going to raise beef cattle to exhibit at shows. Your first job is to decide what kind of beef project you want to undertake. There are three types of beef projects to consider:

- ◆ Haltered market steers
- ◆ Haltered breeding heifers
- ◆ Commercial steers

Of those, haltered market steers and breeding heifers demand the most time, expense and work and this manual will focus mainly on these projects.

Commercial steer programs are outstanding beef training projects. They teach you about economic strategies to feed and develop animals for market. This project places more emphasis on feed costs, average daily gains, feed conversions, and management strategies such as dehorning, castration, and vaccination. Participants often must keep a detailed record book and undergo an interview to complete the project.

Commercial steers are not trained to lead or show by halter, but are instead maintained in a pen. They are eventually evaluated as a pen rather than as individuals.

More information on commercial steer projects can be obtained from your agriculture science teacher.

After you decide on the type of project, you need to select the project animal. This is not an exact science, but practice, patience and experience will help you select the right steer or heifer. It is a good idea to evaluate several young animals before deciding on one.

Just as important, you should ask someone else to accompany and help you during this process. Usually, this person should be your agriculture science teacher or an experienced exhibitor.

Whether your project is a steer intended for market or a heifer intended for breeding, both projects must meet many of the same criteria. You need to decide in which show or shows you will enter your project. Study the rules of the intended show carefully for specific guidelines. These rules will dictate ownership dates, minimum and maximum weights and ages, and class weight divisions. Base your selection of animals on the criteria of age, weight, and breed or breed types.

Age – Actual age and birth date are very important. Steers and heifers are placed on feed between the ages of 6 to 10 months. Most calves are weaned at about 6 to 7 months old. Steers can

reach the correct weight for slaughter (slaughter point) between 14 to 20 months old. Heifers reach puberty to breed between 14 to 16 months old. Most steers are exhibited at 16 to 20 months. Heifers may be shown to 24 months old, and some breed associations even allow mature cows to be shown. Be sure to check the breed association requirements and show rules and regulations.

Weight – For show, haltered steers and heifers are expected to attain a specific weight range, based on age and frame size. You will need a calendar and some math skills to chart the date of birth and show dates and to compute the beginning weight at weaning (or purchase), days on feed and show weight.

A steer to be exhibited at major show in winter or spring (January to March) is normally placed on feed in March to May the previous year when it weighs about 400 to 600 pounds. This weight should allow the steer to reach 1,100 to 1,300 pounds in January. (This weight allows for reduced weight gain and shrink because of training, fitting, conditioning and hauling.)

Show steers normally are on feed about 270 days and gain between 2.0 and 3.5 pounds a day. This rate of gain and growth can be controlled slightly for faster or slower gain by regulating the feed ration and amount fed.

Begin to look for and buy calves in February, and complete your selection by the end of June. Your date of purchase is your “beginning on feed date,” about 6 to 7 months after birth. Also, most ownership or validation deadlines for major shows occur before July 1. These calves should have been born in August, September, October, and November and possibly as late as December or January to make the major shows held in January, February and March of the next year.

<i>Beginning weight</i>	<i>400 to 600 lbs</i>
<i>Days on feed</i>	<i>About 270 days</i>
<i>Average daily weight gain</i>	<i>2.0 to 3.0 lbs</i>
<i>Total weight gain</i>	<i>550 to 800 lbs</i>
<i>Final show weight (March)</i>	<i>940 to 1,410 lbs</i>

A range of possibilities exists. However, 940 pounds may be too light to make the minimum weight limits at some shows, and many judges may consider 1,410 pounds to be too heavy to be competitive. Some cattle will need to gain faster and others will need to have limited feed intake to reach the desired or competitive minimum or maximum weight goals.

Let's look at an example: A 600-pound calf placed on feed in July gains 2.85 pounds a day for 250 days. This equals 700 pounds of total gain. This calf would have a 1,200- to 1,250-pound final show weight.

Breeds – There are several breeds to consider when selecting a market steer or breeding heifer. Always check the show rules for classification and breed class. In many shows, especially at the county level, there are generally three divisions for breed types: British, Exotic, and American breeds. In most major shows, these divisions are further divided into the most popular breeds:

- ◆ Purebred British Breeds: Angus, Red Angus, Hereford, Polled Hereford and Shorthorn. These breeds are typically more easily fattened or finished; they usually have a more docile disposition; and the average breed size is smaller than the other groups. They are typically smaller, are easier to handle and are recommended for younger and less experienced cattle exhibitors for beginning projects.
- ◆ Crossbred or Purebred Exotic Breeds: Charolais, Chianina, Limousin, Maine-Anjou, Simmental, and All Other Breed (AOB) or crosses. These breeds are referred to as “European” and are larger, fast growing and more muscular, and have less fat. Because of their larger size and fast growth pattern, they are recommended for older, stronger and more experienced exhibitors.
- ◆ Crossbred or Purebred American Breeds (Biological Type): Brahman, Brangus, Santa Gertrudis, Simbrah, and American Breed Crosses (ABC) such as Bralers, Brahmousin, Beefmaster and any other crosses with Brahman breeding. These breeds with Brahman or *Bos indicus* breeding generally perform more efficiently in hot, humid climates.

Evaluate all three criteria thoroughly before selecting your project and animal. Be sure you have a clear understanding of the evaluation criteria the judge will be using to select the “ideal” market show steer or heifer. Then begin your feeding and management program.

Ideal Market Show Steer

Every market steer in the show ring is evaluated for its end product using the grade standards for quality and yield as set by the U.S. Department of Agriculture (USDA). The U.S. commercial beef industry uses two grading systems – one predicts lean quality, the other predicts carcass yield to determine carcass value. These

also are the evaluation criteria that the judge will use at show.

USDA Quality Grades – By far, the most difficult standard to predict accurately in a live animal is the USDA Quality Grade. Quality grade in young cattle (under 30 months old) is basically determined by the total amount of intramuscular fat, or marbling, in the ribeye. Besides marbling, other factors associated with quality grading include predictors of maturity, texture, firmness and color of lean. Although maturity is an important factor, show steers for slaughter are usually less than 2 years old, so maturity is not critically evaluated in the live steer.

Assuming ‘A’ maturity (young cattle), the quality grades in order of the most to least marbling scores are Prime, Choice, Select, and Standard. A realistic goal for you to achieve in your steer is USDA Choice Grade.

A judge can use only visual characteristics of external fat deposits to estimate quality grades. The rule of thumb: A steer possesses a uniform degree of finish, measured at 0.35 to 0.45 inch of fat over its rib cage, grades Choice if breed genetics, frame size, weight and age criteria are correct.

USDA Yield Grades – Yield grades are used to estimate carcass cutability or percent lean yield. Cutability is the percentage of boneless, closely trimmed retail cuts. Basically, less fat and more muscle equals higher cutability. Cutability and numerical yield grades (USDA YG 1, 2, 3, 4 or 5) have an inverse relationship: the higher the cutability, the lower the numerical yield grade. USDA Yield Grade 1 is much leaner than USDA Yield Grade 5. Four measured factors are used to formulate yield grades: fat thickness, ribeye area, carcass weight, and kidney-pelvic-heart fat.

In feeding your show steer to obtain the desirable ideal carcass, remember these points:

- ◆ Select a calf with more than adequate muscle shape to ensure an average or better ribeye area (12 to 15 square inches).
- ◆ Feed to produce a fat cover of 0.35 to 0.45 inch. This should result in USDA Yield Grade 2 and the Choice grade if genetically possible.
- ◆ Aim for a show weight of 1,150 to 1,275 pounds.

If you follow these guidelines, your market steer should be in an excellent position at show for carcass acceptability from both USDA Quality and Yield Grade evaluations.

Feeding and Nutrition

Nutrition makes the difference. Remember that important fact when raising livestock. You may have the perfect steer or heifer and be the world's best showman, but if your feeding program has not been sound, you will not do very well in the show ring or on the profit/loss statement. A successful feeding program requires knowledge and planning. The ration fed to your calf will be used to meet its requirements for maintenance, growth and fattening.

In order to meet your animal's nutrient requirements and attain efficient feed utilization, you must have a basic understanding of nutrition. Cattle are ruminant animals which means they have the ability to utilize fibrous feeds that are indigestible by simple-stomached animals such as the pig.

The stomach of the ruminant is divided into four compartments – the rumen, reticulum, omasum and abomasum. It is in the rumen that the fibrous feeds (e.g. hay, silage, etc.) are fermented and broken down by the rumen micro-organisms. The micro-organisms not only have the ability to breakdown the fibrous portion of feeds, but are able to synthesize nutrients.

The rumen micro-organisms ultimately pass out of the rumen where they are themselves digested. They in fact are a source of nutrients to the ruminant animal. This gives cattle and other ruminants the ability to efficiently utilize a much wider range of feed than pigs or other simple-stomached animals.

The feed that is fed to your calf will be used to meet their daily needs for the four basic classes of nutrients – energy, protein, minerals and vitamins. Primarily carbohydrates and fats provide energy. The most common carbohydrate sources for ruminant animals are starch, sugars and cellulose which is the fibrous portion of the complex carbohydrate found in grass, hay and silage that monogastrics are unable to digest.

Grains are high in starch and molasses is high in sugars and as a result both are excellent energy sources. Fat can be provided from either animal or plant sources, but care must be taken not to feed in excess amounts or digestive upsets will occur.

Energy resulting from the digestion of the feed is used first to maintain the basic functions of the animal's body. Any energy fed in excess of maintenance needs can then be used for productive functions such as growth, reproduction, lactation or fattening.

In determining how much feed to give your calf per day you must keep in mind that the maintenance requirement has to be met before any growth or fattening will take place. If your calf is growing, the energy needs for both maintenance and growth must be met before fattening will occur. More energy is required to produce fattening than to produce muscle and bone growth. Increased rates of gain also require an increase in energy intake.

Some basic determinations must be made before you begin to feed your animal. How much does the animal weigh at the start of the feeding period? Is your project a breeding heifer or a market steer? How many days do you have from the beginning to the end of the feeding period? What is the end weight that is an acceptable market weight for your particular type and age of steer?

Armed with this information you can determine the nutrient needs and average daily gain (ADG) appropriate for your particular calf. A breeding heifer will be fed to produce growth with a minimal amount of fattening, whereas a market steer will be fed to reach the USDA Choice Quality Grade, but without excess external fat cover. As a general rule of thumb, calves should be fed 2-3% of their body weight.

Example: calf that weighs 800 lbs would be fed 24 lbs a day determined on 3% body weight (12 lbs of feed in the morning and 12 lbs of feed at night).

It is important that breeding heifers do not become too fat as this can result in impaired reproductive performance, calving difficulty and reduced milk production later on in her life. This usually means that the ADG should be no more than 2.0 lbs/day to prevent her from becoming too fat. This can be accomplished by feeding a ration whose energy content is not too great.

On the other hand, a market steer should be fed so that he reaches the desired weight and degree of fatness (i.e. "peaks") as close to the date of the show as possible. It is not a recommended practice to try to "hold" a steer once he reaches the desired weight and condition. Worse yet, is to reach show day and find that your steer is not fat enough to grade Choice and end up at the bottom-end of your class. Knowing the number of days in the feeding period and the desired end weight allows you to calculate the average daily gain you will need to achieve. This will also provide you with some insight into the kind of ration you will need to feed. The breed of your calf will also be a consideration here. On the average, the British breeds will mature earlier at lighter weights than the Exotic breeds.

Types of Feeds

Types of feeds used in rations are classified as grains, roughages, protein, minerals, vitamins and additives.

Grains – Feeds high in energy will fatten cattle. Corn is the best fattening grain because it is more consistent in nutrient content and processing properties.

Energy density of the diet is the dominant factor controlling rate of gain and degree of growth and fattening. Lean tissue development is maximized when daily rates of gain are less than 2.25 pounds. Fattening is increased proportionally to rates of gain above 2.25 pounds.

Feed only quality grain. Avoid weevil-eaten, dusty and spoiled feeds. Grain should be processed. Steam flaking, rolled, cracked or coarsely ground grain is preferred. Dusty, powdered feeds reduce intake and result in more digestive disturbances.

Protein Supplements – Feeds such as cottonseed meal, soybean meal and linseed meal increase the protein content of the diet. Small amounts (less than 3 percent) of fish meal, dried blood meal, corn gluten meal, linseed meal and brewers or distillers grains can be used to improve the amino acid balance of the diet and the supply of amino acids to the lower gut because they contain more rumen escape protein.

Young, lightweight cattle need higher concentrations of protein in their diets than older, heavier cattle. Adequate levels of protein are critical for digestion, maintenance of feed intake and lean growth, but the feeding of excess protein is expensive, can cause more heat stress and may result in more digestive problems.

Roughages – Cottonseed hulls are the most satisfactory roughage. Cottonseed hulls have low nutrient value, but cattle like them. This helps keep them on feed. Hulls also help hold the feed mix together, preventing feed separation.

A small amount of dehydrated alfalfa pellets adds the nutritional quality lacking in cottonseed hulls. Although peanut and rice hulls are cheaper roughage, they are not recommended for show cattle.

A small slab (3 inches or less thick) of medium-quality grass hay daily will help keep calves on feed by reducing the chances of digestive upsets. In finishing diets, a small amount of hay is recommended for the physical properties it adds to the diet and not its nutrient contribution; thus, medium-quality hay works better than poor or excellent quality.

Hay is your insurance measure when feeding cattle. At the first sign of any digestive problems, increase hay while reducing feed. Once the problem is corrected, gradually decrease hay while increasing feed, but do not eliminate all hay, because that greatly increases the likelihood of nutritional ailments of acidosis, bloat and possibly founder.

Limiting feed and water the last few weeks before show, not eliminating hay from the diet, can more effectively control a big full middle on a steer. Hay should be free of mold, dust and bad odors. Alfalfa hay is nutritious but increases the odds of bloat.

Minerals – Minerals are required for structure (hooves, bones and teeth) and regulation of physiological processes in the body. High-grain diets are deficient in calcium, salt and certain trace minerals. Rations should be fortified with all needed minerals in order to maintain top-level performance and health. Salt should be available free choice (all they want) at all times.

Vitamins – Vitamins are considered micronutrients essential for the development of normal body processes. Vitamins also provide livestock the ability to fight stress and disease and enable them to maintain good health.

Rations should contain balanced ratios of essential vitamins to ensure proper health, growth, production and reproduction.

Additives – There are more products promoted for show cattle than you can count. Many have catchy names and good-sounding claims. They contain everything from nutrients such as protein, fats, vitamins and minerals to enzymes, yeast, bacteria, mined earth products and unidentified stimulants. Well-fed and well-managed cattle benefit little from these costly additives.

It is wise not to use any of these products until you recognize a need. Remember that the diets formulated by top feed manufacturers are designed by professional nutritionists to be complete. Adding extra mineral, vitamins, fat, etc., can actually unbalance the diet and decrease performance! It is recommended that you first choose a good diet, feed it without any extra commercial show additives, and watch what happens. You will be surprised how many are fed this way.

If you observe problems in an individual – poor appetite, erratic appetite, dull hair, hoof problems, etc. – then select a product that contains what you consider to be lacking and try it. This approach will allow you to fix a problem without creating another.

Types of Rations

Most commercial feed manufacturers and show feeding programs have three basic feed mixes: starter, grower and finisher rations. These mixes are fed at different stages of growth and development as cattle mature physically.

The beginning ration is the starter, receiving or preconditioning mix. A starter mix is low in energy, high in roughage and fiber, and high in protein relative to the energy content. It is commonly medicated with antibiotics or coccidiostats. A high-roughage mix is bulky and fills up the rumen, preventing young calves from overeating grain while the rumen bacteria adjust from forages to grain diets.

Using a starter ration is ideal, but many feeders simply feed a limited amount of grower ration, with hay fed free choice to get calves on feed. Either system allows for rumen bacteria to adjust and prevents acidosis. A starter ration would normally be used only for the first 2 to 4 weeks before being switched to a grower ration.

A grower mix is exactly what the name implies, a diet for cattle that are in a growing stage of 500 to 900 pounds. The mix should have at least 12 percent protein, moderate fiber and moderate energy content. The moderate energy content will properly develop the frame and muscle and help prepare the growing steer for a finishing ration. Most grower diets contain a level of roughage and energy that make the feeds suitable for a variety of uses.

Small-framed, early maturing steers can actually be finished on many grower diets. When limited to 1 to 2 percent of the animal's live weight, grower diets are good for developing show heifers. Heifers, as opposed to finishing steers, should receive additional amounts of forage in the form of hay or pasture.

Large-framed, later maturing steers need to be moved to a finishing diet 100 to 150 days before show, or when they weigh 800 to 1,000 pounds. Some finishing diets may be too high in energy for Brahman-type cattle, and even some British and Exotic cattle, especially when fed for long periods (more than 75 days).

Finishing diets can be diluted with a grower ration or hay. By blending a grower and finisher and watching your cattle's appetite, droppings and freedom from bloat, you can develop a mix that best suits each individual animal.

A finisher ration is the last feeding stage. Finishing diets are high in energy, usually at least 50 percent corn (or related high-energy feedstuffs).

Finishers should be fed carefully, particularly at the beginning. Slowly move good feeders to a full finisher ration by adding this mix to a grower diet in one-fourth portions every 7 to 14 days. Following this recommendation should enable you to change to an all-finisher ration over a 4 to 6 week period.

Later maturing cattle usually need to be on a finisher diet sooner than early maturing cattle. This will ensure they reach the correct amount of finish. Cattle finishing satisfactorily on a grower ration do not need to be switched to a full-feed finisher; most Brahman cattle should not be switched.

Some cattle feeders add steam-flaked corn to grower diets, which in effect produces a finishing ration. Realize that adding much more corn to a finisher is asking for trouble. It's safer to use fat to increase energy intake. Breeding heifers seldom require a finisher unless it is fed on a very limited basis along with plenty of hay.

The goal is to properly finish steers at 0.35 to 0.45 inch of fat to reach their optimum yield and quality grades. Heifers need to have a moderate degree of body condition (less than that of steers). Excessive fattening of heifers at young ages diminishes future milk production potential.

A breeding heifer's condition is referred to as a body condition score (BCS); a score of 5 for a mature heifer is similar to condition of properly finished steer.

Management of Feeding

Feeding Intervals – Cattle should be fed twice daily, ideally 12 hours (6 a.m., 6 p.m.) apart for best gains. Once again, this is a **daily routine** that should not change on the weekends or on holidays. Inconsistent or skipped feeding will only cause digestive stress and force your calf to gain poorly.

If cattle need to consume more feed and are perhaps "slow eaters," three-a-day feedings are recommended. Of course, smaller portions per feeding are advised than in the two-feeding total amounts.

Cattle that eat three times a day (6 a.m., noon, 6 p.m.) usually consume more total feed and have less digestive stress than they would if fed only twice daily at larger portions. For most cattle, feeding two times a day is sufficient for optimum efficient growth and development.

Manure Observation – Each animal differs in its capacity to consume and digest feed. The recommendations for feed intake based on percentage of body weight are simply general ranges. A better way to determine the optimal

amount of feed for each steer/animal is to observe its droppings.

A consistent, firm manure patty that does not splatter when dropped to the ground indicates that the steer is on full feed with the proper amount of concentrate.

A watery stool (scours) usually means that the animal is taking in too much energy, and either the amount of feed or the energy level (corn) portion of the ration should be reduced. If this problem persists, severe acidosis usually results, and the steer goes off feed.

If the droppings are too firm and dry, the steer needs more feed or a higher energy concentration (more corn) in the ration. Inadequate energy intake results in lower gains and decreased finishing.

Animal Health

Every day your calf does not eat, it could be costing you 2 to 5 pounds of weight gain. The most common reason that your calf does not eat is stress. Stress can be caused by many factors. Here is a list of some common stress factors:

- ◆ Improper feeding, inconsistent or skipping a feeding.
- ◆ Inconsistent feed mix or switching feed rations too rapidly.
- ◆ Excessive handling of your calf or neighboring calf.
- ◆ Disease (temperature should average 101.5°F).
- ◆ Change in weather.
- ◆ Contaminated water from dirt to bird feces.

You should ask yourself these questions when working with your calf:

- ◆ Is the calf content?
- ◆ Is the calf alert?
- ◆ Is the calf eating with vigor?
- ◆ Is the calf chewing its cud?
- ◆ Is the calf's coat sleek and pliable?
- ◆ Are the calf's eyes bright with a pink membrane?
- ◆ Is the calf's feces and urine normal?
- ◆ Are there beads of sweat on the calf's muzzle (a wet muzzle means a normal temperature, a dry muzzle means a fever).

Disease Prevention

Cattle health programs should be based on prevention. Project animals under a system of good management and care will seldom encounter severe health problems. Consult your agriculture science teacher or veterinarian for advice about your health management program. It is important for cattle to be vaccinated against clostridial (blackleg) and respiratory (pneumonia) diseases.

Probable vaccinations for your calf include:

Blackleg type vaccine – Clostridial vaccinations should have been completed before weaning. If not, vaccinate with 7-way at the time of purchase followed by a booster 2 to 3 weeks later and another booster 6 to 8 months later.

Tetanus vaccine – Vaccinate with a tetanus toxoid at the time of purchase.

Leptospirosis vaccine – Vaccinate with 3- or 5-way at purchase and give a booster every 6 months. This prevents production losses from bloody urine, loss of condition, kidney problems and decreased gains.

Brucellosis vaccine – This vaccination is for heifers only. Heifers must be vaccinated against brucellosis between 6 and 12 months old. A veterinarian must perform this vaccination.

Metabolic Disorders

Poor nutrition and feeding management can cause health problems referred to as "metabolic disorders." Although these are not diseases, they still can cause severe health problems. Some of the more common feed-related health problems in show cattle are acidosis, bloat, founder, scours and urinary calculi.

Acidosis – The rate of fermentation, or acid production, from a given amount of feed is just as important as the total extent of fermentation of that feed. Factors that influence fermentation rate and acid production include particle size of grains as affected by processing, meal size, rate of eating, and day-to-day consistency of feed intake.

When too much acid is produced, referred to as acidosis, even for short periods, it causes a change in microbes that can then produce lactic acid. Lactic acid is a much stronger acid; when it accumulates, it causes acidosis. This acidosis causes loss of appetite, decreased rumen activity, rumen ulceration, liver abscess, founder and even sudden death.

Mild acidosis is first observed as erratic intake of feed and possibly mild bloat, followed by scouring. Loose, watery feces covered with clear gas bubbles that glisten in the light indicate acidosis.

Acidosis, sometimes referred to as "grain overload," usually results from introducing grain too rapidly into the diet of animals coming from forage diets. The types of microbes that ferment forages are different from those that ferment grains. It normally requires 2 to 3 weeks to allow for the shift in microbial populations of the rumen and a safe transition from forage to grain diets.

Sometimes acidosis results from erratic feed consumption or simply excessive grain intake over a long period after cattle are safely on feed. A good ration should contain feeds that are not all fermented at the same rate, especially not all rapidly.

To prevent acidosis, start grain feeding slowly. Be consistent in the amount of feed fed; weigh each feeding. Make feeding changes gradually. If a feeding time is missed by more than 2 hours, skip it or feed a little hay. Do not give extra feed to make up for the missed meal. That is the worst thing you can do.

Avoid dust and fines (very small particles) and limit feeds such as molasses that are rapidly fermented. Feeding hay will provide some measure of protection. Feed one of the more effective ionophore feed additives. Because of the lost time and condition on cattle, it is important to prevent acidosis.

Treatment involves an oral administration of antacid or buffering compounds such as sodium bicarbonate, together with intravenous administration of electrolyte solutions. This counters the acid effects and prevents further dehydration.

Getting cattle back on feed following severe acidosis is just like starting on feed initially. Give lots of hay and little concentrate.

Bloat – Bloat occurs when gas accumulates and the animal is not able to belch it out. There are many causes of bloat.

Signs of bloat are swelling high on the upper left side behind the ribs and in front of the hip bone. Cattle on full feed may show a big, full rounded middle on the left side, and even the right side to a lesser extent. A popping-out away from the general contour of the body, which looks like a basketball high on the left side, is a definite sign of serious bloat.

Many cattle may show a mild degree of bloat without any serious problems, but watch them

closely, because minor bloat can advance to a much more serious bloat.

To treat minor bloat, keep calves on their feet and walking, uphill if possible with head up. Administer a probiotic paste as a first defense to relieve the bloat. If the bloat persists, drench the calf with a half pint of mineral oil.

With acute bloat, calves also can froth at the mouth, fight for breath and go down in convulsions. A severely bloated animal may die a few minutes after it falls.

As soon as you see acute bloat symptoms, call a veterinarian and administer the following treatments. Keep the animal walking, preferably uphill, with the head held up. While waiting for the veterinarian, place a stick about a foot long crossways in the calf's mouth like a bit on a horse. This encourages chewing and tongue movements to help release gas by belching.

A large stomach tube or ½-inch-diameter water hose can be passed through the esophagus (be careful not to enter the trachea). This helps with ordinary bloat but is of little value in foamy or "frothy bloat."

As the last resort (with acute bloat only), puncture the animal's distended rumen. A veterinarian should perform this if at all possible. The wound is hard to heal because of infection from the rumen contents.

The best preventive measure is to avoid feeds and management practices that encourage bloat. These include too many fines and dust, too much molasses, too much very high protein forage such as alfalfa or excellent grass hay and lack of any long-stemmed forage in the diet.

A little dry hay that encourages cattle to salivate helps prevent bloat. Rumensin® mixed in rations is more effective in preventing minor bloat than other forms of ionophores.

Scours – Scouring (watery stool) from any cause leads to dehydration of the animal; electrolyte therapy could be needed. Causes, prevention and treatment for scours resulting from acidosis have been discussed previously.

Bloody scours may be caused by a severe case of internal parasites, bacterial infections or coccidiosis and should be treated with appropriate medication. It is important to keep pens, feeders and water troughs clean in an effort to prevent infections.

Founder – Eating too much grain, which would be expected to cause severe acidosis, frequently causes a condition known as founder. The animal's hooves grow rapidly and there is an increased blood flow to the hooves that causes them to

become tender. This cripples the animal and severely reduces feeding performance.

Urinary calculi – Kidney stones, water belly or urinary calculi can sometimes affect steers but they usually are not a problem in heifers. The condition is caused by mineral imbalances and/or diets that are too alkaline. It is common in animals on pasture or consuming feeds high in silica and in feedlot situations.

The problem is often observed in animals fed diets high in phosphorus within adequate calcium supplementation. Diets should contain 1.5 to 3.0 times as much calcium as phosphorus. Salty water seems to increase the incidence of urinary calculi. However, higher levels of salt (1 to 3 percent) in feed causes the cattle to consume more fresh water, which helps counteract the problem by increasing urine volume. Excessive and/or extended use of sodium bicarbonate can cause problems.

Ammonium chloride (1 to 1.5 ounces per head per day) in the feed acidifies urine and can be used as a preventive measure for fattening cattle in areas where problems are common. To spot a developing problem, check the hair around the urinary opening frequently for signs of mineral deposits.

Other Health Problems

Other health problems you may encounter with your project animal include warts, ringworm, foot rot, parasites, grubs, flies, lice, and coccidiosis.

Warts – Warts are caused by a virus. To treat:

- ◆ Keep the warts covered with oil (such as tea tree or mineral oil) to starve the virus of oxygen.
- ◆ Recommended vaccines may work.
- ◆ Tie off warts with dental floss or fishing line.
- ◆ Cut off the warts, dice them up and place in the animal's feed to be ingested. This will create self-immunity. The warts can also be taken to a veterinarian to develop a vaccine.

Ringworm – Ringworm is caused by a fungus infection of the skin. It can be spread from animal to animal or by brushes, combs or contaminated surroundings. It also can be transmitted to humans. To treat:

- ◆ Scrap the ringworm and repeatedly apply a strong tincture of iodine or tea tree oil.
- ◆ Sanitize the facilities with Nolvasan® or similar disinfectant. Brushes, combs and other equipment should also be disinfected.

Foot Rot – Foot rot is an infection caused by bacteria that enter through a break in the skin of the hoof. It is associated with swelling between the toes that progresses to total swelling of the lower leg and causes lameness.

To treat: Administer long-acting sulfa boluses (pills) and/or thoroughly cleanse the area and apply an antibacterial ointment or Kopertox®. Cattle may also be treated with Volar® (vaccine) to prevent foot rot.

Internal Parasites – Internal parasites, including intestinal parasites, lungworms and liver flukes, can be a major cause of nutritional deficiencies in livestock. To deworm show cattle, administer the first treatment upon arrival. In exactly 21 days, treat again and continue this treatment every 100 days.

It is recommended to alternate types of dewormers for best results. Also, maintain care and sanitation practices in the confined areas to reduce parasite populations.

There are different methods of administering dewormers to livestock. These methods include orally, injectable, pour-on, and through feed additives. Safeguard® dewormer can be administered orally through a drench or paste and also comes in the form of crumbles that can be added to a calf's feed. Ivomec® dewormer is available in an injectable or pour-on form. If using the injectable type of dewormer, use 2 cc more than the required dose and administer it in the mouth (this reduces the risk of abscess or lesion from an injection site). Care should be taken with pour-on dewormers because certain brands will irritate and burn the skin. Cydectin® Pour-on has had good results with not irritating or burning the skin.

Grubs – Grubs are the larval stage of heel flies. To treat for grubs, apply pour-on treatments for show cattle at the end of May and again at the first of July (June 15 – July 15), preferably in the late afternoon to prevent blistering.

Flies – Flies can be controlled with proper sanitation and by cleaning or removing fly breeding areas, especially manure. Also, apply fly spray with a hand sprayer on the animals and in the stalls.

Lice – Lice are most abundant during winter and summer months. Apply insecticide in late winter and early spring months and a second application 14 days later to kill newly hatched lice. Read the label for application.

For systemic parasite control, use ivermectin or similar product to control lice, flies, grubs, worms and ringworm.

Coccidiosis – Treat coccidiosis (bloody scours) with a specific coccidiostat in drench or

water trough. Feed an ionophore (Rumensin®) throughout the feeding period to help prevent this condition. Clean facilities, feeding and watering areas can also aid in prevention. Also, keeping bird populations away from the livestock pens is helpful in prevention because birds are natural carriers of coccidiosis.

Halter Breaking

Equipment you'll need: A soft-bristled broom, nylon rope halter, a brush or scotch comb and a show stick.

Before you begin: Allow your calf to get adjusted to its new surroundings, by making sure it is eating well and in good health before you begin your halter breaking program.

Halter breaking is the first experience you and your calf will share. (This is a nice way of saying you're stuck with each other until your calf gets used to you or you get used to it.) *Although some cattle are obviously better in terms of disposition than others, whether halter breaking is a good or bad experience depends mostly on you.* You must try to be calm and patient when working with your calf.

- 1) Bring your calf in the barn and allow it to get used to being locked in its pen at least thirty minutes a day. (You may do this when you bring it in to eat.) A 10' X 10' area is an adequate size to work in.
- 2) Using a soft-bristled broom, place the broom on top of the calf's back and hold it in place until the calf stands still.
- 3) While the calf is standing still, vigorously broom the calf along its sides, legs, underline, and neck. If the calf moves, place the broom on top of the calf's back until it stands still. Repeat the vigorous brooming while the calf is still. This will need to be done repetitively for several days.
- 4) Continue with the vigorous brooming until you are able to broom the calf all over without the calf getting excited. The next step is to introduce the show stick. While placing the broom on the calf's back, gently begin stroking the calf's underline with the show stick.
- 5) The objective now is to train the calf to stand still by using the show stick alone. Repeat this

procedure as many times as necessary for the calf to become comfortable with the use of the show stick.

- 6) Next, introduce the use of a brush or scotch comb while using the show stick to keep the calf calm. The brush or comb will replace the use of the vigorous brooming that was done early on. You should be able to brush or comb on all sides and on the legs of the animal before proceeding further.
- 7) Now that the calf is gentle and you have a trusting relationship with it, you may put a nylon rope halter on it. Make certain that the rope halter fits properly and pressure can be released when the lead is not being pulled.
- 8) Next, tie the calf to a sturdy post. Do not tie the calf to a board or fence rail that allows it to move back and forth along the fence. At first, leave the calf tied for only about 10 minutes. Gradually increase the time it is tied to about ½ hour per day by the end of the first week. (There is a purpose for the short tie periods. A calf will usually pull and jerk, and if you allow it to pull on its halter for long periods of time, it may develop swelling under its jaw or injure itself.) ALWAYS supervise a calf during the *entire* time it is tied for at least the first week.

Give the calf only about 18" to 24" of rope. (You would be surprised at the tricks it can perform with any more rope than that.) This is for safety reasons. Tie a handful of hay in the knot to encourage the calf not to set back and to relieve the pressure on the lead by moving forward.

Continue to use the show stick and brush or comb while the calf stands tied.

- 9) Next you will begin to lead your calf. Sometime toward the end of your first halter breaking week, untie the calf and lead it in your small tie pen before turning it loose for the day. Once you've started this, continue leading it each day before you finish. (At least 10 minutes – the longer the better.)

After you've done this for a few days, and feel fairly comfortable with your progress, begin leading the calf outside its pen. A narrow lot or large pen would be a good place to start. Have someone there to help you to tap your calf when he slows down. If you have trouble

slowing your calf down, hold the show stick in front of the calf's face if it speeds up. You may tap the calf on the nose with the stick, but don't beat the calf with it.

- 10) Next, teach your calf to stop while leading and use the show stick to place its feet squarely under itself.
- 11) Continue leading and setting up your calf each day. It is necessary for it to be cooperative if you are to continue with the next steps in your fitting program.
- 12) As you progress, your calf should come to set up almost by itself, and stand as another person walks around it, as the judge would in the show ring.

Showmanship

The purpose of showmanship is to present a calf in a manner that will develop the most favorable impression on the judge. Showing beef cattle properly is an important part of your project and an extremely rewarding experience. Beef cattle showmanship not only generates enthusiasm and competition within the show ring, but also teaches other valuable lessons that can be applied to everyday life. These lessons include accepting responsibility, winning graciously, losing with dignity, and learning the amount of work and determination it takes to become a winner.

Where to start – Success in showmanship begins at home. Good showmanship isn't difficult, but it does take patience and effort. It takes time to halter break your calf so that it is responsive to your hand movements on the show halter, or, to a show stick. Your calf should be trained to walk, stop and be set up easily and quickly when commanded. Make sure your calf is well-accustomed to being handled with both a show halter and a show stick prior to entering the ring. In addition, your calf should also be accustomed to handling by another person. The judge will then be able to perform a close inspection without interruption or fear of injury. In preparing for a show, practice often with your calf in several short periods rather than just a few long, drawn-out practice sessions.

Using the halter – Once your calf has been halter broken, it should be taught to stop and lead with its head up in a natural and attentive position. Rope halters may be used until approximately two

weeks before a show. At that time a show halter should be substituted frequently.

When leading, hold the halter strap in your right hand, 6 to 12 inches away from the calf's head (usually at the junction of the chain and leather portion of the show strap). Most calves will not lead well or behave if the halter is held closer. Since a calf normally moves its head before any other portion of the body, a firm hold on the halter will give you better control and often prevent any wayward foot movement.

When leading, any extra lead strap may be held in the left hand. This method is preferred because you can better control a spooked calf when you have two hands on the strap. Do not, however, invite injury by wrapping the halter strap around your fingers or hand. Many exhibitors shorten the leather strap so it needs no folding and hangs free.

Using the show stick – The show stick is used to: 1) assist in placing the feet, 2) keep the topline straight, 3) calm the calf, and 4) control the calf.

When setting up, switch the lead strap to your left hand, and the show stick to your right. If a hind foot is to be moved backward, push backward on the halter and simultaneously apply pressure with your show stick to the soft tissue where the hoof is split but avoid jabbing this tender spot. When the hind foot is to be moved forward, pull forward on the halter and apply pressure with the show stick under the dew claw. When the hind feet are too close together, apply pressure with the show stick to the inside of the leg just above the hoof.

Front feet may be repositioned using either the show stick or your foot. Younger, inexperienced showmen will be safer using the show stick. While pulling or pushing on the halter, simultaneously apply pressure to the dew claw to move the hoof forward or to the split of the hoof to move it backward or sideways. Through practice, you will become very proficient at setting up your calf quickly, quietly, and safely.

The show stick will also help keep the calf's topline straight. Simply apply pressure to the underline or place the hook of the stick inside the rear flank and apply slight pressure. If the calf's loin needs leveling, you can use the hook of the show stick to apply slight pressure to the calf's loin to level the topline in that manner.

When training your calf, tie its head to a high rail or post. Practice setting up by using your show stick and occasionally stroking the calf's underline as you place the hooves. This calms your calf and gains acceptance of your show stick.

Finally, the show stick will help to keep your calf from moving too rapidly while being led. When leading, hold the show stick with the left hand about

one-third of the way down from the end. This will permit good control of the show stick and allows you to use the butt end of the show stick for tapping the nose, when needed.

Daily Activity

After the initial halter breaking, you should tie up your heifer or steer for a few hours each day. Every day, the animal should be blown and rinsed off to remove dirt and encourage healthy skin and hair coat. Then, brush and blow dry the calf's coat to condition and train the hair.

After this daily routine is completed, you should walk the calf to develop familiarization and confidence between yourself and the calf.

When this exercise is complete, practice showing the calf with someone acting as the judge. Walk the calf in a circle to simulate a show.

When the total routine is complete, feed the calf. While it is eating, you can clean and freshen the pens with bedding for use the next day. For best exercise and relaxation, the calf should be turned into a large lot for the night.

The next morning, bring the calf into the smaller lot, feeding pen, or tie it up in the shelter. Then feed it and make it comfortable in the clean, shaded shelter that has good air circulation in the summer (use fans if needed) and/or windbreak and roof in the winter for protection.

Keep the calf here until evening when you are ready to repeat the daily routine. The more you work with your calf, the more effectively it will respond to feed, training and showing while developing the healthy skin and hair coat that proper grooming encourages.

Daily management for summer months – Like people, show cattle become accustomed to daily routines. After the calf becomes comfortable with its new environment and learns the mannerisms of its owner, it is time to set up a daily routine. Summer is the time for you to seriously train and work with each calf.

Calves should be fed twice daily, exercised, cleaned, brushed, and practice being shown. Clean the pen thoroughly, and keep the stalls fresh and raked, allowing each calf to be comfortable during the hot summer days.

It is best to begin feeding early in the morning before the day becomes uncomfortably warm. In Texas, a good feeding time is around 6 to 7 a.m. Feed each calf in an individual stall.

Next, prepare the stall. This includes raking, picking up manure and lightly spraying the stall with

water to slightly dampen it and keep down dust. Also, make sure manure is dumped far away from the stall to keep flies and other insect populations from building up around the calf.

After the calf finishes eating, it is time to exercise and sharpen the showmanship skills of the calf and yourself. It takes about 15 minutes to lead, stop, set up and scratch it with a show stick.

Next, blow the calf out and rinse with water. After rinsing thoroughly, train the hair with a rice root brush (see Daily Hair Care section). The summer is not the time to grow hair, but is the time to teach and train hair. Even if the animal is to be shown slick shorn, it still should be kept clean. Beef cattle that are placed in a clean and sanitary environment will be more efficient performers.

After rinsing, brushing, and blow drying, move the calf to its clean stall. It is a good idea to tie the calf for a few hours to build stamina and endurance. After tying, the calf can be allowed to rest.

The calf should rest until late afternoon. At this time, the stall should be cleaned again and the calf rinsed and brushed.

End the day with the evening feeding. Again, feed as the temperature begins to cool. After feeding individually, turn the calf out to exercise in a large pen. Clean the surrounding areas and prepare for the next day.

Daily Hair Care

Equipment and supplies you'll need: Scotch comb, rice root brush, massage brush, blow dryer, Mane & Tail® conditioner, show sheen, liniment hair stimulator, white vinegar, rag oil, and Dawn® or Joy® dishwashing soap.

Before you begin: Your calf should be broke to tie.

A good hair coat is your best tool to use in covering many of a calf's minor faults. No matter what type of hair a calf has to begin with, you can make it look better through daily brushings. For best results, begin your hair training program as soon as your calf is broke to tie.

Washing cattle – Cattle should be washed with soap a minimum of once a week using Dawn® or Joy® dishwashing soap. These soaps do a great job of removing dirt and grime from the hair coat. Use the following steps when washing cattle:

1. Use a blow dryer to remove dirt and shavings from the hair before washing. This will prevent the dirt from being washed down into the hair coat when water is applied.

2. Apply soap to the calf and use a massage brush to get the soap to the skin of the calf.
3. Before rinsing soap, brush all of the hair down with the massage brush so that the soap will rinse completely out.
4. Rinse the soap from the calf.
5. Apply a vinegar or Mane & Tail® rinse if needed (see following section for directions on using these rinses).
6. Use a rice root brush to remove dead hair and skin. The rice root brush will also train the hair in the direction it should lay. Brush the hair down, then forward, and then up towards the head at a 45° angle. Brush the lower legs and the poll of the head forward.
7. Spray a coat of show sheen / hair stimulator mixture on the hair (use no more than 4 oz of hair stimulator in the sheen). Use the scotch comb to work the mixture into the hair. In cooler months, a mixture of show sheen and rag oil is recommended to condition the hair and skin.
8. Blow dry or allow the hair to air dry (blow the hair straight ahead and blow lower legs forward).

Rinsing cattle – To promote hair growth in warm weather, try to keep your calf cool, and increase the number of times per day you wet down and brush the calf. Generally, the coolest times of the day (during early mornings and late evenings) is the best time to work and train hair. A good rule of thumb is to spend thirty minutes per day per head on hair training. Always blow cattle out with a blow dryer to remove loose dirt and shavings before rinsing.

There are two types of rinses that may be used to condition hair and prevent dry skin. Always prepare these rinses before washing or rinsing cattle.

1. Mane & Tail® rinse – This rinse is used to condition the hair. Apply this rinse in the evening by mixing a silver dollar size of Mane & Tail® in 5 gallons of water and pour over the calf.
2. White vinegar rinse – This rinse is used to prevent dry skin and dandruff. Apply this rinse in the morning by mixing 4 oz of white vinegar in 5 gallons of water and pour over the calf.

Clipping

Equipment you'll need: Clippers (cattle heads, sheep heads, and two speed clippers), scotch comb, rice root brush, blow dryer, and trim chute.

Before you begin: The calf should be clean and absolutely dry.

Clipping can be done several times on a calf before a show. Many people clip young calves just after they complete the first stages of halter breaking, eliminating extra hair that just seems to get in the way during the hair training process. Whether you choose to clip your calf soon after it arrives, or wait until later, you should definitely plan to clip the calf 2 to 7 days prior to a show, and do touch up work closer to show time.

You must begin with your calf clean and the hair worked using a brush and comb. Put your calf in a trim chute to prevent much movement during clipping.

Begin clipping with the basics: head, neck, underline, and tail. The order you choose to clip the following is not important. For these areas you will need to use the clippers with the cattle heads.

After clipping these areas, move on to the body hair. For this hair, you should use the two speed clippers to work the topline. The sheep heads can be used to do the body and leg hair.

Your goal is to make the calf look smooth, straight, and well balanced. Every steer and heifer is different, so picture what you want the end product to look like, and strive to make your calf look its best. Clipping is a skill that is developed with practice. Keep one thing in mind, though; a pair of clippers is a grooming tool, not a magic wand. Learning to fit cattle is not something that's accomplished in a few months. Be patient, and your efforts will be rewarded.

Preparing for the Show

Many people work with calves all year and then take them to the show to find out the calves are in the wrong weight class, will not eat, will not drink and will not show. Proper conditioning of show cattle can make the difference between a champion and just another calf at a show. Every calf is a different individual and must be programmed to demonstrate its strong traits.

The importance of the condition of a show steer can be compared to that of a superior athlete who becomes an Olympic champion. Show cattle must

be trained and fed with a definite purpose in mind in order to obtain a championship banner.

Here are some more tips for developing future champions in the show ring:

- ◆ Cattle are creatures of habit and have good memories. Develop a routine and follow it each day. A daily routine makes chores much easier. For example, exercise the calf, show it by setting it up and make it stand properly; then brush and feed it last.
- ◆ Weigh the calf periodically to monitor its gain. Decide which weight class you will show your calf in, and shoot for that weight. Class breakdowns from previous shows are very helpful in determining desired weights.
- ◆ To be a good showman, you need a well-trained calf. Teach the calf to stop and lead with its head up. A good daily practice is to pull the animal's head up to a stop so both front feet are placed squarely under the front end. Teach the calf to keep its top level and to lead and walk freely. Work often for several minutes at a time, rather than a few long, drawn-out periods. It is also good practice to use a show halter on your calf prior to a show so that the calf can become accustomed to the new halter.
- ◆ When training a calf or working and brushing hair, tie the calf to a high rail rather than placing it in a trim chute. Working cattle in this manner tends to make them easier to handle and makes them more accustomed to strange movements at the show.
- ◆ Hoof trimming is a practice needed for improving most calves. Although individual calves vary, if yours is over ten months old, chances are it will need its hooves trimmed before show time. Two very important points to keep in mind from hoof trimming are: 1) Have it done at least two weeks, but not more than 2 months, prior to a show, and 2) Always have a reputable hoof trimmer do the job. Hoof trimming is important not only for a professional fitting job, but for the structural soundness of your calf, as well. Properly done, hoof trimming will help your calf stand as squarely and correctly as possible.
- ◆ Two weeks before the first show of the season, start handling the calves just as you will at the show. Feed and water the calves just as you would at the show – twice a day out of the same feed and water buckets you will use at the show.

Show Day

Your show day schedule depends on the time your show begins and the number of head you have to fit. Allow yourself time for the following:

1. Exercise cattle.
2. Weigh cattle.
3. Wash and dry cattle.
4. Feed and water.
5. Work hair.
6. Fitting time.

Fitting – The basic fitting routine begins by putting your calf in the trim chute and blowing out any dirt, hay, or shavings in the hair. Next, work through the following steps.

1. Pulling up legs with adhesive and clipping the legs.
2. Apply Zoom Bloom or styling mousse to the body hair to give volume and set to the hair.
3. Final touches
 - a. Tail head.
 - b. Head (spray lightly with oil and put on show halter).
 - c. Hooves (spray with oil or paint).
 - d. Touch up clipping.
 - e. Apply light oil to body.
4. Put on show harness or number clip with entry number, put a scotch comb in your pocket, and grab your show stick and head for the show ring.
5. On your way to the ring, avoid letting your calf step in anything that will mess up its leg hair or brush against anything (especially another calf) that will mess up your calf's sides.
6. Once at ringside, observe the class being shown to see how it is being worked. Identify whom the judge and ring steward are. The ring steward will give you instructions once you enter the ring, and the judge is the person to whom you will direct most of your attention.

Entering the show ring and setting up –

When it's time to enter the ring, remember the three keys: the judge, your calf, and the ring steward. Note that you are not one of the three keys. You're calf should be the center of attention.

Once in the ring, remember you are to always lead your calf in a clockwise direction. Your calf should always be between you and the judge. When turning, whether you are leading out, making a turn to bring your calf in line properly, or leading around the ring, you should always move to your right, walking clockwise around your calf. Never

turn to the left, or counter-clockwise unless specifically instructed to do so.

Lead your calf into line and set it up as quickly as possible. Generally, cattle will be lined up side by side to start a class. When pulling into line or stopping, try to leave three to four feet on both sides of your calf. This will allow enough room to set your calf up and others will have room for movement. Avoid setting up in a low spot or with the front feet in a hole; try to put the front feet on higher ground. Also, leave at least six feet between your calf's head and the rail of the ring. This will allow room for the judge to move in front of your calf. Keep yourself in a position to watch both your calf and the judge. Winning beef showmen always keep their calf's legs placed correctly, the head up, and the back level.

When lining up head to tail, allow four to six feet between calves. If the calf in front is reluctant to move, tap it gently on the rump with your show stick or twist the tail to help get it started. Let your calf walk freely. Tap your calf on the nose with your show stick if it is walking too fast.

Train your calf to stop by lifting its head. Normally, the result will be placement of the calf's front feet squarely under each corner of the body. Position the front feet first, if needed; then proceed with the hind feet. Due to the manner in which cattle walk, one hind foot is likely to be placed incorrectly and in need of re-positioning.

Set the hind legs making sure that each leg is placed squarely under each corner of the body. Keep the calf's back level and its head up. Slowly stroke the calf's underline with the hook of the show stick to calm it and keep the top level. Do not "saw" the calf by pushing the show stick back and forth rapidly. If the calf is high in the loin apply pressure to the loin with the hook of the show stick to level out the top. When leading off, switch the lead strap back to the right hand and the show stick to the left hand.

Use patience when your calf is being difficult to set up. Many times, especially when being viewed from the side, it is best to pull out of line, make a clockwise turn, and start over.

Do not look only at the judge. The old saying, "keep one eye on the judge and one eye on the calf," is very appropriate. Most important, see that your calf is always set up correctly and presented to show its advantages.

Close inspection – When the judge is viewing your calf, keep its head up, its top level, and feet correctly placed. Stand erect but in a comfortable position so that you can check leg placement and move about freely. When the judge is not viewing your calf, let it relax but not go to sleep. As the

judge moves around your calf, move a half step to allow the view the judge seeks. Never step out in front of your calf. When a judge handles your calf, comb the hair back into place after the judge stops viewing your calf.

Pay attention to the judge as they pull calves into the lineup. Many times a judge will pull a top cut out of the class, or even place the class from bottom to top, in an effort to give the top cattle a closer look. The point of this information is to encourage you never to give up, no matter where you are pulled out. Continue to show your calf until you've left the show ring.

Show ring courtesy – When calves are lined up head to tail, or side by side, the judge is comparing your calf to the rest of the class. If your calf is out of line and covering the view of another calf, the judge cannot make a fair comparison and you are not practicing show ring courtesy. Avoid bumping, crowding, or striking another exhibitor's calf. Also, do your part to keep the line straight and allow ample space between calves. Again, help your fellow exhibitor if their calf is reluctant to move. If your calf becomes nervous in the show ring, work quietly and patiently with it and remain calm. Do not get discouraged or lose your temper.

When the judge has announced the final placings, given reasons, and the awards are distributed, leave the ring in an orderly manner thanking the judge as you leave.

Sportsmanship – Congratulate the winners and accept congratulations graciously. Do not become disappointed if you do not win or rank as high as you think you deserved. But remember, there are others in the same class that feel they earned and deserved the honor. Apply what you've learned and be better prepared for your next show.

Final Words

Not everyone can have the best, most complete beef project. However, you can gain an advantage in the show ring if you work at home correctly. You have selected the best possible animal, you have studied its nutritional needs and fed it properly, and you have maintained its general health. You also have worked tirelessly in handling and training your animal. Remember to practice your showmanship skills, because practice makes perfect. A great showperson always leaves a favorable impression on the judge.

Management and Show Calendar

February thru APRIL

- ◆ Buy a show prospect.
- ◆ Place on a starter or grower ration.
- ◆ Administer health vaccinations.
- ◆ Administer a parasiticide to control internal parasites.
- ◆ Halter break and begin training.
- ◆ Record the calf's weight.

MAY

- ◆ Have dehorning done if necessary
- ◆ Move to a grower ration.
- ◆ Begin daily routine of working and training hair.
- ◆ Trim hooves.
- ◆ Treat for external flies (stable, horn, face flies).
- ◆ Administer needed booster vaccines.
- ◆ Record the calf's weight.

JUNE

- ◆ State steer validation for entry to major shows. Each county will set an individual date sometime within the month.
- ◆ Continue training and working hair. The summer is the time for you and the animal to gain trust in one another.
- ◆ Administer a parasiticide.
- ◆ Treat for external flies.
- ◆ Practice clipping the calf.
- ◆ Record the calf's weight.

JULY

- ◆ Trim hooves.
- ◆ Find local prospect shows to participate in.
- ◆ Treat for external flies.
- ◆ Record the calf's weight.

AUGUST

- ◆ Treat for external flies.
- ◆ Administer a parasiticide.
- ◆ Find local prospect shows to participate in.
- ◆ Record calf's weight.

SEPTEMBER

- ◆ Treat for external flies.
- ◆ Trim hooves.
- ◆ Find local prospect shows to participate in.
- ◆ Move to a finisher ration.
- ◆ Record calf's weight.

OCTOBER

- ◆ Administer a parasiticide.
- ◆ Find local prospect shows to participate in.
- ◆ Enter the county livestock show.
- ◆ Record calf's weight.

NOVEMBER

- ◆ Trim hooves.
- ◆ Find local prospect shows to participate in.
- ◆ Implant with growth promoter if needed.
- ◆ Enter the major livestock shows.
- ◆ Record calf's weight.

DECEMBER

- ◆ Administer a parasiticide.
- ◆ Prepare calf for county and major livestock shows.
- ◆ Record calf's weight.

JANUARY - APRIL

- ◆ Trim hooves (if needed).
- ◆ Show at county and major livestock shows.

Hoof Trimming \$25 cash approximately every 7 weeks, Worm steer \$7-\$10 every other hoof trimming

Show Cattle Supplies and Equipment

The following is a list of supplies and equipment that will be needed during the feeding, management, and showing phases of your livestock project. These supplies can be obtained at some of the local feed stores and at show supply trailers at local prospect and livestock shows. Many of the products listed are Sullivan's brand and are recommended for use (www.sullivansupply.com).

Grooming Adhesives:

- Prime Time Adhesive
- Tail Adhesive

Show Day Hair Preparations:

- White Styling Mousse
- Liniment Hair Stimulator
- Zoom Bloom
- Final Bloom
- Luster's Pink Oil Spray (Wal-Mart or HEB)
- White & Black Touch-up Paint (for use on white or black cattle)

Adhesive Remover:

- Hocus Pocus or Unfit
- WD-40 (for use on combs)

Daily Hair Care:

- Ultra Sheen or Kleen Sheen
- Rag Oil
- Mane & Tail Conditioner (HEB)
- White Vinegar (HEB)
- Heavy Duty Sprayer & Bottle

Brushes / Combs:

- Rice Root Brush
- Massage Brush
- Horse Hair Brush
- Scotch Comb (Sullivan's brand)
- Fluffer Scotch Comb

Shampoo:

- Dawn® or Joy® Dishwashing Soap
- Gold Nugget Shampoo (for whitening)

Probiotics and Electrolytes:

- Appetite Express Paste
- Electro-Charge Paste

Show Equipment:

- Show Stick (no taller than the showman's chin)
- Leather Show Halter (typically medium size – brown or black)
- Exhibitor's Number Harness
- Comb Holder (optional if showing without pants pockets)

Other Supplies and Equipment:

- Melatonin Supplement (Wal-Mart or HEB – used to calm calves for show)
- Mineral Oil (used for bloat)
- Nylon Rope Halter
- Nylon Neck Tie

Feed Supplements:

Products will only be needed to address deficiencies in the feeding program.

Vitamins & Minerals:

- Show Bloom
- Winner's Edge

Fat Deposition:

- Golden Flo

Fill:

- Beet Pulp

Parts of a Steer

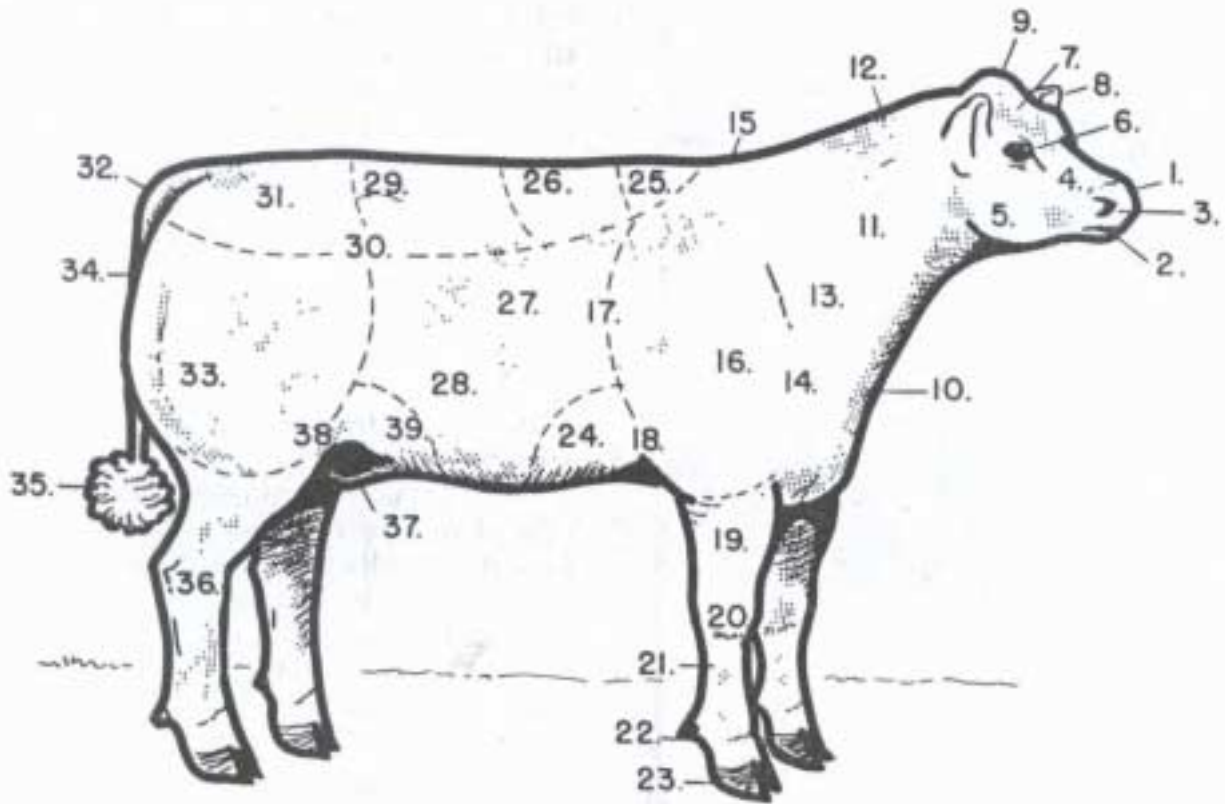
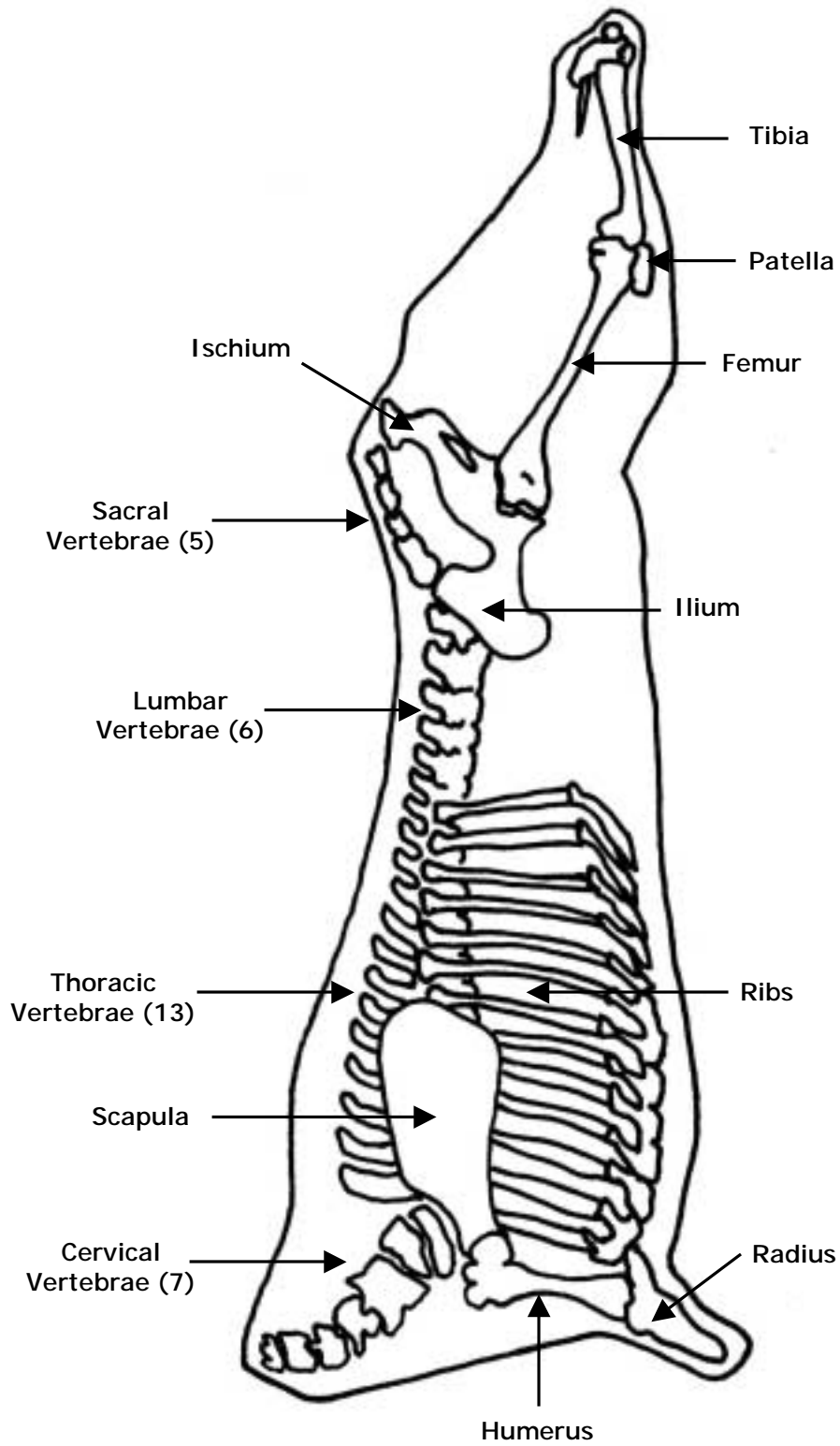


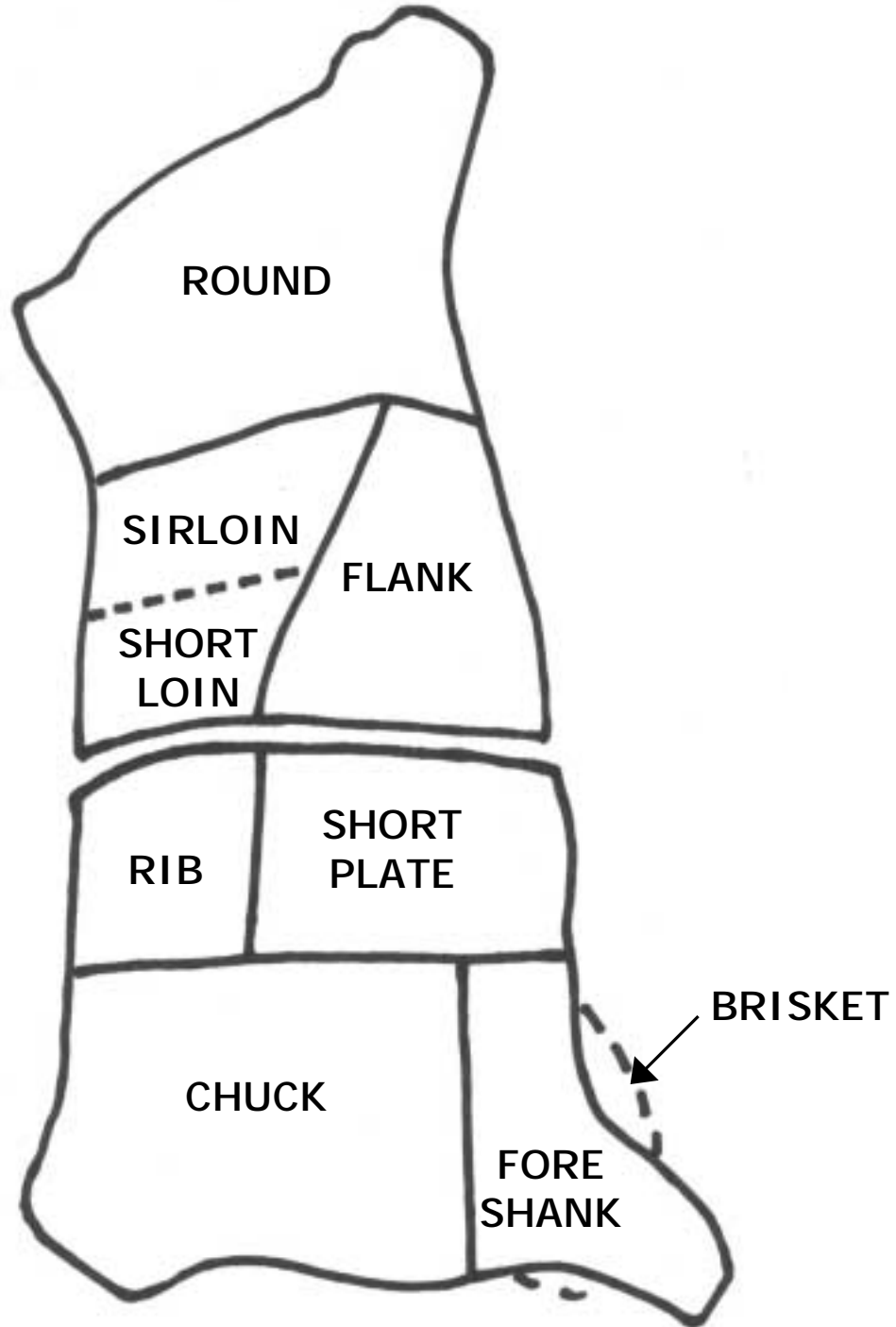
Fig. 13-6. Parts of a steer. The first step in preparation for judging beef cattle consists in mastering the language that describes and locates the different parts of the animal. (Drawing by Prof. R. F. Johnson)

- | | | | |
|-------------|-----------------------------|----------------|-----------------|
| 1. Muzzle | 11. Neck | 20. Knee | 30. Hip or hook |
| 2. Mouth | 12. Crest | 21. Shank | 31. Rump |
| 3. Nostril | 13. Shoulder vein | 22. Dew claw | 32. Tailhead |
| 4. Face | 14. Point of shoulder | 23. Foot | 33. Round |
| 5. Jaw | 15. Top of shoulder | 24. Fore flank | 34. Tail |
| 6. Eye | 16. Shoulders | 25. Crops | 35. Switch |
| 7. Forehead | 17. Foreribs or heart girth | 26. Back | 36. Hock |
| 8. Ear | 18. Elbow | 27. Ribs | 37. Cod |
| 9. Poll | 19. Arm | 28. Belly | 38. Stifle |
| 10. Dewlap | | 29. Loin | 39. Rear flank |

Beef Skeleton



Beef Wholesale Cuts



Record of Expenses

Adequate records should be maintained for all expenses incurred during the period of your beef cattle project. Examples of expenses can be, but are not limited to, the following: feed, supplements, tack, medications, health services, hoof trimming, entry fees, facility usage, etc. You should also keep all receipts for merchandise and services that you received. This record of expenses can be transferred into an official FFA record book at a later time.

Date	Expense Item	Quantity and Unit	Price per Unit	Total Cost

Record of Income

Adequate records should be maintained for all income during the period of your beef cattle project. Examples of income can be, but is not limited to, the following: show premiums, auction receipts, sale of animal, sale of processed carcass, etc. This record of income can be transferred into an official FFA record book at a later time.

Date	Income Item	Quantity and Unit	Price per Unit	Total Income

Notes
