Seven Lakes High School

FFA Animal Project Guide

If you are a first time participant in showing a market animal and have not had extensive experience with large animals, a good first time project would be broilers or rabbits. If you are interested in a barn project, then a good first time project would be to either show a hog, a goat, or a lamb. This will allow you to acquire useful show ring and management experience with a market animal less inclined to cause physical injury.

Whichever animal you choose, showing an animal can be a rewarding and memorable experience, especially if you have worked hard and are prepared. Thomas Paine said, "What we obtain too cheap, we esteem too lightly: 'Tis dearness only that gives every thing its value." As you show, be considerate to others in the ring. Allow them to have as pleasant of an experience as you hope to have. Above all, have fun, enjoy the experience, and you will learn some valuable life lessons along the way.

The 6 “C”s for Success!

1. CORRECT SELECTION
Select an animal not only with good conformation but with a personality you can work with.

2. CONSISTENCY
There are no shortcuts to success. A consistent program encompassing regular workouts will accomplish more than a last minute flurry of activity two weeks before the show.

3. CALENDAR
Set calendar deadlines with ration changes, halter breaking, clipping and grooming, and practice shows. Maintain a regular daily schedule of feeding, handling, and grooming your animal. Two weeks before the show is not the time to start training your show animal.

4. COMPENSATION
Learn what your animal’s conformational strengths and weaknesses are so as to successfully emphasize the positive and downplay faults. Similarly, if the show animal has a personality flaw that will make showing difficult, plan ahead and compensate for this in the show ring.

5. CONFIDENCE
Show with confidence. Adequate preparation will allow you to show with a smile on your face. Be throughly familiar with rations, average daily gain, current weight, purchase weight, age, and breed of animal so you can answer questions from the judge. It is also important to be able to identify the different parts of the animal and the associated retail and whole sale cuts. You can help “psych” yourself up by rehearsing the show in your mind with good and bad things that could happen and how you would handle them. Performing in a practice show with members of your club or family acting as a judge and announcer and ring steward is helpful.

6. CHARACTER
Demonstrate impeccable ethics in the preparation preceding the show and during the show itself. Be courteous to all other exhibitors, parents and leaders. The livestock show is the culmination of the project year for many livestock participants and the community. Youth livestock exhibitors represent the livestock industry at fairs and shows to the public. A little courtesy (as well as a lot of honesty) goes a long way in relations with the public.

PIGS

Many FFA'ers who have swine projects hope to raise champions. While only one entrant in a show is named champion, all exhibitors can benefit from the project. You will learn about the swine industry and how to produce a safe, wholesome product. You will also learn to assume responsibility and build life-long friendships with people all over Texas. The swine project is the largest livestock project in the state. About 26,000 youth exhibit pigs each year.

Raising and showing a champion pig requires dedication, hard work and a little luck. Selecting a good animal, providing good facilities, developing a sound feeding and health program, learning showmanship and paying attention to details every day are all important. Overlooking any one of these areas can prevent you and your pig from making it to the first pen.

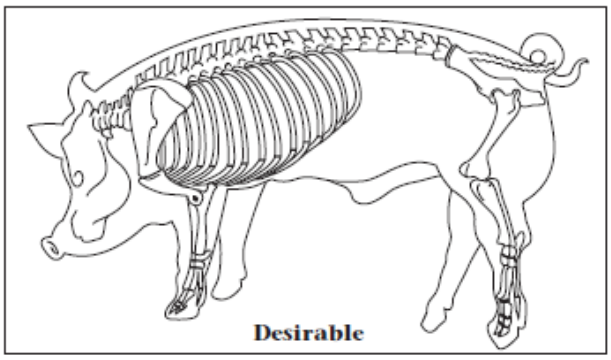
What Do I Need to Start?

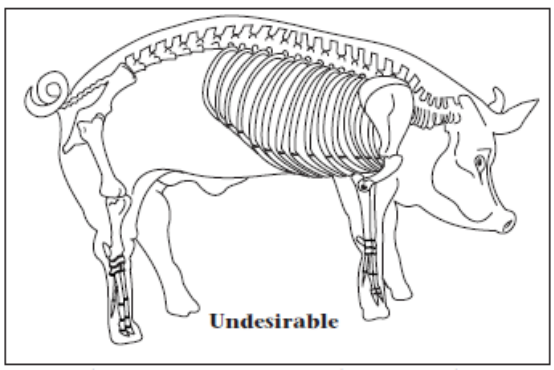
1 – Supply Box	1 – Rubber Feed Bowl or Clip On Feeder
1 – Feed Scoop	1 – Watering tube w/nipple (for progress show and KLSR)
1 – Show Stick or Pipe	1 – Sprayer
1 – Feed Bucket	All of these items can be found at a local feed store
1 – Brush	**Starter kits are also offered by our partner feed store**

- Pay attention to your pig. For the 1st week, just allow it to get used to their new home.

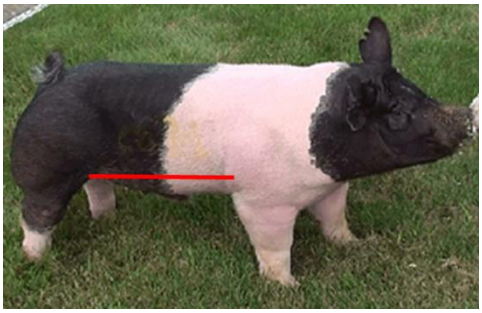
Selecting Your Animal

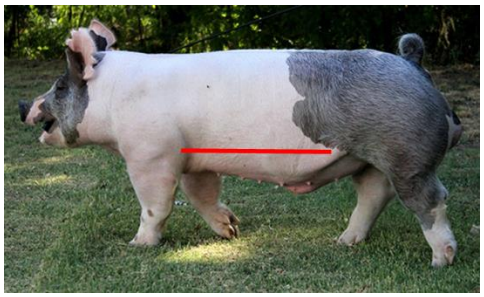
Your animal is a Market Animal, which translates to "we want as much meat on that animal as possible!!" The best hogs are the ones with the most lean muscle! Pay attention to the structure of the animals as you look at them:



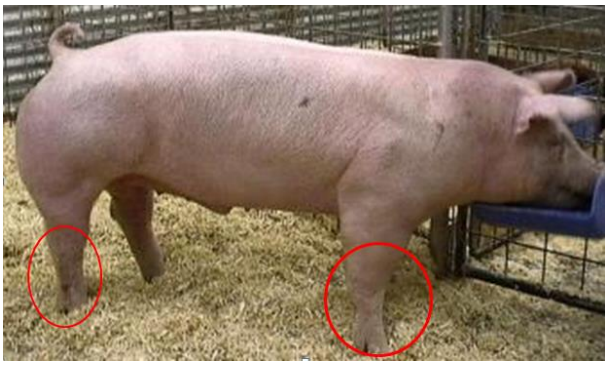


We want a solid frame, with body length short to medium:

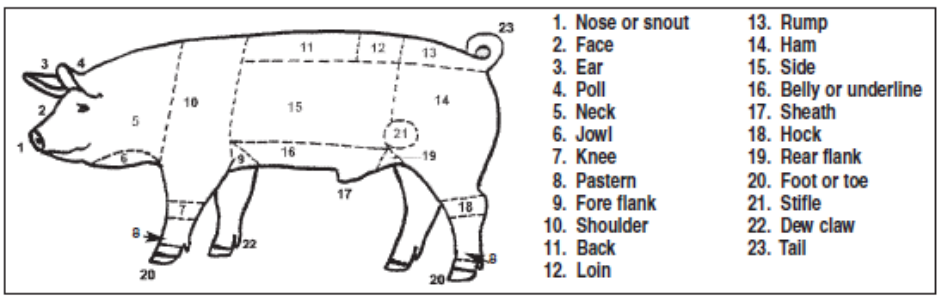




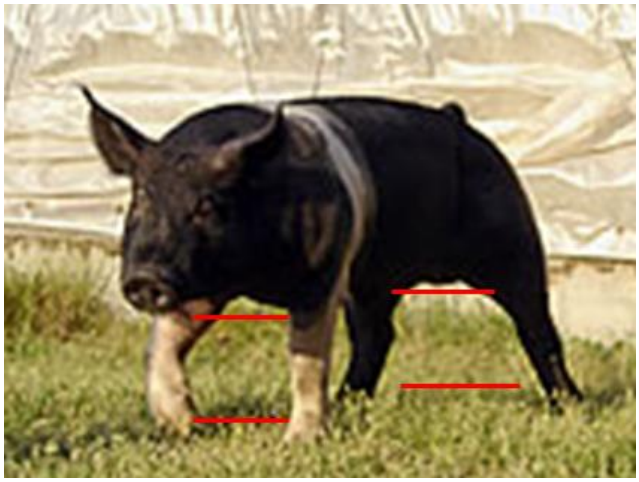
Look for heavy or thick bones:



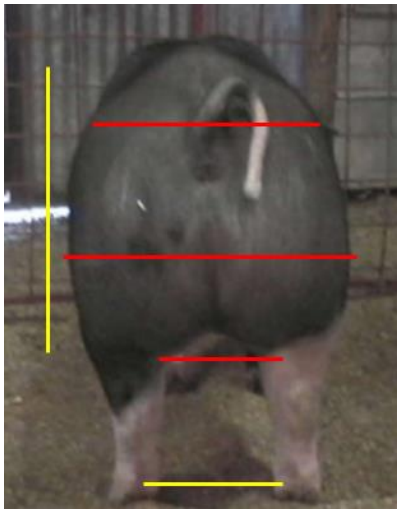
One of the most common mistakes exhibitors make when selecting a pig is not placing enough emphasis on feet and leg soundness. Soundness is an animal's ability to walk smoothly with body weight evenly supported on the feet and legs. Show pigs will become very muscular and large framed, and if they have structural defects of their feet or legs they can become lame. Muscle tendons can attach only to bone, and extreme muscling places stress on the skeleton, causing lameness. To help prevent lameness, select a pig with an adequate width of bone and angulation to the joints. Feet and leg problems in feeder (young) pigs will usually worsen as more weight and stress are added. When you are examining a prospective animal, step back from the pen or pig about 10 to 20 feet and watch the animal walk and move. Pigs should take long strides and appear to be comfortable while walking. Many show pigs "goose step" or swing their feet in front of them before placing them on the ground. This is definitely something to avoid. Any problems that are apparent when a pig weighs 50 pounds will probably get worse by the time the animal reaches 250 to 270 pounds.



Wide body over base and top:



Wide and deep rear end and a muscular back:



As with other animals, pigs don't begin to fatten much until the end of their growing period, so the feeder pigs from which you will select your project animal will not and should not have much noticeable fat. Young animals usually look muscular because they do not have much fat on them. Young pigs should be lean. If an animal is heavily muscled in the top or loin area, it will likely be heavily muscled throughout the rest of the body. Places on the pig's body to look for muscle include the shoulder, the loin or top and the ham.

As a pig ages, it will begin developing fat. Animals fatten from the front to the rear of the body. The first place you may notice your pig laying down fat is in the jowl or chin area. Then fat develops in the shoulder area, down the top loin edges, the lower third of the body (underline area), the seam of the ham, and finally the pones, or around the tailhead. A pig won't drastically change its overall shape during the growing period; it will just change its dimensions and get bigger. For example, if the pig is short-bodied at 50 pounds, it will probably be short-bodied at market weight.

NUTRITION

Water is the most essential of all nutrients. If you use nipple waterers, check them often to make sure the flow rate is right. Nipple waterers for grow-finish pigs (40 pounds to market weight) should provide 1 quart of water per minute. Fresh, clean water should never be withheld from an animal. Lack of water harms an animal's health and also causes muscles to lose shape and expression, because muscle is made up mostly of water.

Carbohydrates give the animal energy and should make up the majority of its diet. Energy is needed for growth. However, over-feeding carbohydrates can cause an animal to store the excess in the form of fat.

Proteins are made up of amino acids that are linked together to form long microscopic chains. There are 10 amino acids that a pig's body does not produce in adequate amounts and that must be added to the diet. Of these, lysine, threonine, tryptophan and methionine are the most important.

Most diets contain grains such as corn and soybean meal, which are low in these amino acids. Most commercial rations are balanced to give an animal what it needs during a certain stage of growth. The diet provides adequate amounts of energy, protein, vitamins and minerals according to the amount the animal will eat in a single day. These are referred to as "complete" feeds. It is better to use a complete feed than to overfeed protein, which is expensive and causes the animal to use the excess protein as added energy or store it as fat.

There are 3 stages of growth: "Start" is when the animal weighs between 25-100 lbs. "Grow" is when they weigh between 100-200 lbs. "Finish" is when they weigh between 200-240+ lbs. Lindner carries a full line of feeds for each stage (www.lindner.com)

Feed pigs at least 1-1/2 to 2 lbs. per feeding once the pig arrives at the barns in October Increase the feed as the pig gains weight.

Finisher feed is utilized when the pig weighs between 210-260 lbs. To determine when to change feed, the Ag Advisor(s) will have to examine your pig.

When a pig reaches about 125 pounds it is time to start monitoring its growth closely. Start by weighing the pigs once a week. The pigs should be weighed at the same time of day and on the same day of the week (for example, Sunday afternoons or Thursday evenings after school), since a pig's weight will change throughout the day, depending on the amount of feed or water it has had. Weighing at the same time of day keeps you from recording large variations in weight that may be due only to water intake.

Pigs should be fed at least twice a day. If a pig needs to gain weight quickly, feed it more often (it will eat more feed if it is fed more often). To determine how much a pig will eat on its own, feed a known amount to the animal at the normal feeding time and return in about an hour. If there is feed still left in the trough or pan, give a slightly

smaller amount at the next feeding until the pig cleans up all of the food within an hour of feeding. This is the approximate amount of feed that the animal would eat until full. Feeding this amount is called limit-feeding. As the pig gets closer to its target weight, adjust the amount of feed you give it to achieve the target weight gain. You should not feed pigs less than 4.5 to 5 pounds of feed each day. Most diets are formulated for animals that are allowed to eat all they want. When limit-feeding, you may need to add vitamins and minerals to the pig's diet to provide necessary nutrients. Diets with a higher percentage of protein are often used when limit-feeding.

Taming the Show Animal

The pig is our smartest farm animal. Pigs are naturally inquisitive and respond well to a regular training program. As with any young animal, the attention span is short, so training sessions should be limited to 15 to 20 minutes per day. Also, be sure to schedule training sessions during the cool part of the day to avoid stressing the pig. Pigs are unable to sweat and can become overheated easily. Never work with the pig when he is hot enough to pant. Death occurs quickly in these instances.

After the pig becomes adjusted to its new surroundings, first training sessions should be to get the pig used to having you close. Next, the pig should be accustomed to the use of the show bat or whip. When the pig is walking straight, gently tap it on the top of the back between the shoulder blades. Eventually the animal will learn that if you tap it on the top of the back you mean for it to walk straight. Teach the pig to turn to the right by gently tapping on the left jowl. Teach him to turn to the left by tapping on the right jowl. Teach him to move ahead by tapping lightly on the jowl or side. Teach him to stop by holding the bat in front of his nose. Don't whack him for not responding rapidly. You want to win his confidence, not make things miserable. Don't hit it on the ham or hip because it will arch its back and look unnatural. Use gentle taps of the bat or cane around the head when getting it to turn. Never hit your pig hard. This can bruise the animal and cause damage. When you learned to tie your shoe, someone had to teach you more than once. Repetition is the mother of memory.

Exercise

Exercise should start about two months before the show. One half mile, three times a week, is sufficient. You can increase this if your pig is getting fat and needs to be trimmed down.

Pigs do not sweat so don't let them get too hot. Be sure to exercise only when it is cool, either in the early morning or late evening. If your pig does get too hot, let it cool down slowly. Do not pour cold water over the pig to cool it off. This can cause your pig to go into shock and die of a cardiac arrest (heart attack).

Health & Wellness

Pigs are hard to kill, but very easy to determine sickness. Some general signs to look for are:

- Not eating
- Diarrhea
- Excessive Coughing
- Eye discharge
- Hernia or abscess on belly or rear
- Prolapse (intestines distended outside of anus)
- Unusually dry skin or irregular spots on skin

If any of these signs are witnessed, please inform the FFA Advisor as soon as possible.

Training and Fitting Tips

Continue to work the show pig with the show bat as described above. Monitor weight gain to make sure the pig will be the correct weight at show time. One month before the show, it is a good idea to weigh the pig on an actual scale to determine what the feeding program needs to be for the final month. Even better, if you can weigh the pig at six weeks and 4 weeks before the show, you can calculate the average daily gain. This will make it easier to decide how to adjust the feed ration. The ideal weight for the pig at the show will be between 240 to 280 lbs. If the pig is gaining weight too rapidly and runs the risk of being too fat at show time, either reduce feed to 2.5% to 3.0% of body weight per day and/or substitute 10 to 15% small alfalfa pellets (as fed to rabbits) for some of the commercial ration. Exercise in the cool of the day can also be increased. If the pig has a tendency to be weak in the shoulders one thing which can be done is to elevate the feed trough up on a short ramp. If pigs are not bathed until the time of the show, they may have a scaly appearance. Pigs should be washed several times before the show, increasing to once a week before show time and again the day before the show. It is also suggested to apply oil (as in mineral oil) after the pig is bathed the first time to loosen the skin scales for the next bath. Whenever pigs are bathed use a gentle soap (dish soap or livestock shampoo) and hold the pig's ears closed with your hand as you rinse. Avoid the use of heavily fragranced or perfumed shampoos and soaps. Clipping is done prior to show time by your Ag advisor.

Showing Tips

If you practice showing in the actual show ring, it is recommended to exit the pig out of different gates instead of only one gate. Exiting from the same gate each time may result in too much familiarity with the process by the pig, causing it to hover in the corner around the gate during the actual show. When a pig places its nose in the corner of the show ring, an easy way to get it to move out is to place your palm over the pig's eye. It will move away in the opposite direction and turn out.

It is important to be able to control your pig because when you are exhibiting it you will want the animal to keep walking about 10 to 15 feet in front of the judge's viewing area. You'll need many weeks of practice to train the animal well. At a show, it is obvious

which exhibitors have worked with their animals and which have not. Pigs that have never been out of their pens and worked with usually run around in circles and are unruly. If you think ahead, you can avoid getting caught in a traffic jam where the judge can't see your pig. Don't move the pig's feet with your hands, position the feet using your bat. Always keep the pig between you and the judge. It is a cardinal sin to beat on your pig in the show ring. Excessive force with a pig will cause bruising in the carcass the buyer purchases. If two pigs get in a fight, stand away, and wait for someone with a hog board to break it up. As a final note, carry a small brush with you to brush shavings off the pig's back.

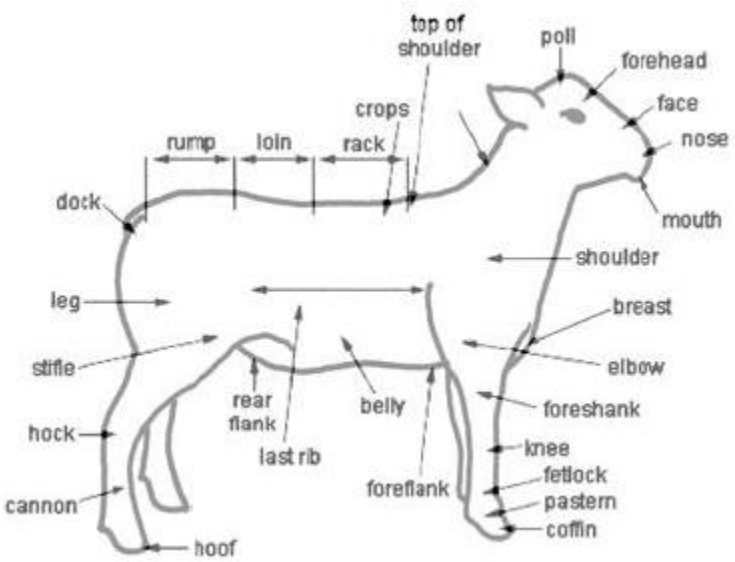
At most shows, announcers tell you when a particular weight range should come to the holding pen. From the holding pen, pigs are released one at a time into the larger show arena. As the pigs come out of the holding pen the judge will have a good look at each one. Sometimes, if the judge really likes the pig, he or she will point to the pig and ask that it be penned. If that happens, you (the exhibitor) should put your hand up in the air so the ring helpers will know your pig is to be penned. It is up to you to walk your pig to the pen, but the ring helpers usually assist. Once the judge pens the pigs he or she likes best, the other pigs will be excused from the show ring and the penned pigs released into the show ring for a more detailed evaluation.

LAMBS

To show a market lamb competitively as your FFA livestock project, learn first how to care for your animal properly. You must devote many hours over several months to the proper care, feeding, and management of a potentially award-winning lamb.

Selection of the lamb for a project is one of the most important decisions you will make. The type of lamb you select will have a major influence on the project's results. When selecting a lamb, be aware of its wool length and fat thickness. If possible, select your lamb after shearing. Young lambs that are in bloom and are fat always look good, whereas young lambs that are thin may not. Learn to look past the fat and recognize muscle, ensuring that you pick a lamb that is genetically superior.

Consider the following factors when you select a lamb:



Muscle

Select a lamb that feels firm or hard muscled. The lamb should have a good expression of muscle from the shoulder to the rump down its top. It should have a long, level, square rump with good width at the pin bones (dock). Other good indicators of muscling are the forearm and leg muscles. The widest part of the leg, when viewed from behind, should be through the middle of the leg or the stifle area. A lamb that walks and stands wide is generally going to be more heavily muscled.

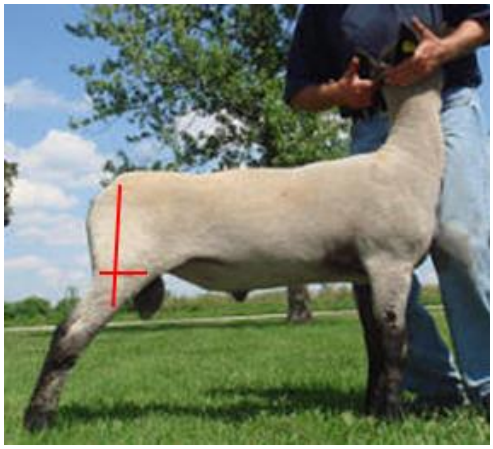
Evaluating Muscle in your Lamb

When evaluating muscle tone and volume of your lamb, you are simply feeling for the amount of muscle that your lamb has, how firm the muscle is and if the animal is market ready. This can be achieved by evaluating three areas.

1) Muscle over the lamb's rack: When evaluating the muscle over the lamb's rack, one should start directly behind the shoulder by softly gripping the lamb's top and gliding your hand towards the rear of the animal. This area of the lamb's top should fill your hand and be firm and bulging with no evidence of the spine.

2) Muscle over the lamb's loin: When evaluating the muscle over the lamb's loin, one should look for two areas of importance. The first area is for freshness of muscle tone and condition across the top of the loin. This can be achieved in one of two ways. First , the top of the loin should feel the same as over the rack, once again firm and bulging with no evidence of the spine. The second area of concern is the depth of muscle in the loin. This can be achieved by taking your fingers on the underneath side of the loin and gripping the loin like a sandwich. Place your thumb on the spine of the animal and roll down in an outward motion. If there is less muscle felt on each side of the spine when doing this procedure, your lamb's loin is "washed out". "Washing out" happens when lambs are overworked and under-fed. The lamb loses muscle volume and freshness in this area first. This indicates that the lamb is not show ready and still needs more feed and condition. It will take a minimum of 20 days with little to no exercise to regain muscle tone and freshness in this area.

3) Muscle on the lamb's leg: The final area to be evaluated for muscle tone is the leg of the lamb. Grip the backside of the leg. This area should be extremely firm and expressive. The leg should bulge with muscle from both the inner and outer muscle areas with evidence of expression in the stifle region.



Structural Correctness

Structural correctness refers to the skeletal system or bone structure of an animal. A lamb should hold its head erect, and the neck should extend out of the top of the shoulder. A lamb should be straight on both its front and rear legs, and the legs should be placed squarely under the body. A lamb should have a strong top and a long, level rump. It should be heavy boned and be strong on its pasterns. Avoid open-shouldered, weak-topped, steep-rumped lambs.

Style and Balance

Style and balance refer to the way all body parts blend together, how the front end matches the rear end, and the "eye appeal" of the lamb. When viewed from the side, a lamb should have a clean front, smooth shoulder, level top, level rump, trim middle, and straight legs. Because all club lambs are shorn smooth, it is absolutely necessary that the lamb have a tight hide, free of wrinkles. A good, smooth, thin-hided lamb has eye appeal and will handle well when properly finished. A lamb that is balanced, smooth, pretty, and holds its head up is usually the first one you notice when you walk into the pen.

Growth Potential

The ability of an animal to grow rapidly is very important. Generally, larger framed lambs, as indicated by a long head, neck, cannon bone, and body, will grow faster, be larger, and be more competitive in the show ring. Under normal circumstances, lambs that are extremely long in the loin and rump (higher percent hind-saddle) will have an advantage over the others.

What Do I Need to Start?

1 – Feed scoop
1 – Rope halter
1 – Water bucket
1 - Brush
1 – Clip on Feeder
1 – Lamb blanket
1 – Goat/Lamb muzzle (closer to show)

Nutrition Management

For the first few days allow the lambs to get used to their new home. Start the feeding routine slowly. Feed some good quality grass, sorghum or alfalfa hay. Don't feed grain for the first few days if they have not previously been fed grain such as creep feed.

Start feeding grain in small amounts and allow the lambs digestive system to get used to the concentrated grain. This should be about 1/4 to ½ pound of grain per day. Allow lambs 15 minutes to finish their grain. If they don't clean up their grain in 15 minutes, remove the uneaten feed and reduce their next feeding by that amount. Increase feed gradually to approximately two pounds of grain and two pounds of hay per day. After two weeks your lamb should be on full feed.

No magic feeds or rations make champions. It is the total program–including the feeding schedule, the exercise program, and the careful observation of the lamb during growing

and finishing stages–that makes a champion lamb. To establish a good feeding program, study the lamb and use all available information to decide when to make feed changes. To develop a successful feeding program for a particular lamb, it helps to know how lambs from similar genetic backgrounds usually develop, and it helps to observe the lamb carefully during the feeding period.

Feeding Program

Under normal conditions, lambs will gain about one-half pound per day. Not all lambs will be fed to the same final weight because of differences in frame size. Large-frame lambs may be correctly finished at 140 pounds, whereas small-frame lambs may be correctly finished at 110 pounds. Learn to look at indicators of frame size–length of head, neck, cannon bone, and body–and estimate the weight at which a lamb will be correctly finished. If you know the approximate weight of a lamb at the time of purchase and the length of time until a show, you can calculate the feed requirements (light, moderate, or heavy) needed to enable the lamb to enter the show at its proper show weight. Monitor your lamb's size closely because correctness of finish will be the most important factor when you show your lamb. Remember, size alone does not make a good lamb: There are good little lambs and good big lambs. Your management program is the key.

You have a choice of feeding a commercially prepared ration, mixing your own, or feeding a ration that has been mixed and sold by the local feed store. If you are feeding one or two lambs, it is not feasible to buy all the ingredients to hand mix a ration. It is difficult to balance the calcium to phosphorus ratio and properly mix the feed. There are complete commercial rations available that do an excellent job. Remember there is no "magic" ration. Find a balanced ration, learn how to feed it, and observe how your lambs respond to it.

At the time of purchase, some young lambs may not be on a concentrated feed. Start these lambs on good, leafy alfalfa hay that is top-dressed with some feed. Slowly, over 2 to 3 days, change these lambs to more concentrate and less hay. Feed hay during the first part of the feeding program, but reduce it in the later stages to prevent lambs from getting a large stomach.

Adding a high-energy ingredient such as barley during the late stages of the feeding program can bolster rations that are not producing enough finish. This additive will reduce the overall protein content of the ration and provide the extra energy needed during cold weather.

Never make abrupt changes in the feeding program. Gradual changes are better and ensure that lambs stay on feed and continue to develop. The feeding program dictates how your lambs develop and mature.

A good feeding program will not make up for a lack of superior genetics, but it will allow your lambs to reach their genetic potential. A poor feeding program will waste a lamb's

great genetic potential. Feeding is a daily responsibility; change the program as needed to maximize results.

Proper weight determination and desired amount of finish will be achieved by weighing your lamb everyday and monitoring their body condition by handling your lamb and feeling for finish and muscle tone. An easy way to evaluate your lamb's condition is to gently feel for finish over mid rib of the lamb using the tips of your fingers in a circular motion.

A good way to describe how condition feels on a market lamb is to take your hand and make a fist. If the condition over the lamb's ribs feels like the back side of your hand, your lamb is over-conditioned. If the lamb's ribs feel like the knuckles on your hand, your lamb is under-conditioned. However, if your lamb's ribs feel similar to the covering on the lower part of the back side of your fingers, you are on the right track.

Feeders

Hang feeders at least 8 inches off the ground. As your lamb grows, hang the trough at the same height as the top of the shoulder of the lamb being fed. If desired, move the trough up, increasing the elevation and encouraging the lamb to reach for feed. This practice helps build the loin, but it can overextend the top if used in excess. Take down movable troughs regularly to clean them. Elevate hay and mineral feeders off the ground.

Taming the Show Animal

When you show the lamb, you will control it with one hand under the chin and one hand on the back of the neck. Initial efforts to control the lamb are best accomplished using a halter. After the lamb is accustomed to its surroundings, get someone to help you catch him and put a halter on him. Rub him gently to get him used to your touch and smell. First attempts to lead the lamb should occur in a small enclosed area. To help the lamb lead off, you may need to put one hand on the dock. When you do this, place the hand holding the lead rope under the chin to aid in control. *Make sure not to wrap the rope around your hand, rather fold it up in the palm of the hand.* When teaching the lamb to lead off with the lead rope, don't apply a constant pressure on the rope. The lamb needs to feel rewarded for doing what you wish and if you apply constant pressure on the rope it never gets relief for moving off. Use gentle tugs to start the lamb moving and reward him by giving him slack when he does. If the lamb braces against you and doesn't want to move off, step diagonally away from the head and un-track the lamb to one side. Sometimes, you may need to move the lamb diagonally from one side to another until he finally learns what you are asking him to do. After the lamb is halter broke, exercise him regularly. A rule of thumb is to walk the lamb for about one mile at least every other day.

Exercise is a key component of the training and conditioning program of lambs. However, remember that there is a fine line between adequate and excessive exercise.

Exercise should be used to help build muscle, not cause the lamb to become excessively thin. A correctly finished lamb will have slight fat cover over the ribs and from .05 to .10 inches of backfat. Continue to work with the lamb in a pen without the halter to get him used to stopping, setting up, and moving forward with minimal pressure. Sometimes a lamb may be difficult to teach to lead when it becomes attached to another lamb in the same location. If this proves to be the case, separate the lambs for several weeks to allow the show lamb to bond to you.

Exercise Program

Exercising a lamb is very important and is beneficial in several ways:

- Development of muscle
- Condition or feel of muscle
- Stimulation of appetite
- Proper finish or fat cover

Feeding and exercise go hand in hand. Exercise is necessary to tone muscles and stimulate appetite. Exercise is an excellent way to condition your lambs and help control fat deposits. You may simply prefer walking the lamb for short periods at a brisk pace.

Tips for exercising lambs:

Start slowly and build up to a full exercise schedule. Never allow a lamb to get too hot when exercising. Early morning or late evening when it's cool is the best time to exercise. Provide hurdles to jump over. These may consist of railroad ties, barrels, or pipes or boards sticking through an alley way. Only allow the lamb to jump over one obstacle at a time. In other words, don't put two sticks in one location. Lambs might get their legs stuck in between them and injure themselves. Jumping lambs over hurdles will assist in leg and loin development. Excessive jumping may build too much muscle in the front shoulders and make your lamb look heavy fronted. Running without hurdles usually firms and hardens finish.

During the last six weeks lambs should get plenty of exercise unless they are light weight. They must have ample finish before this part of the program takes place. Provide a soft surface for exercising lambs such as sand or loose dirt. If your lamb is not very fat and you exercise too much it can cause the carcass to be blue when the animal is slaughtered. This is undesirable**.**

Whatever method you choose, make sure the lamb exercises strenuously over a short period of time, as an athlete would do wind sprints. In an exercise program, your goal is to exercise the lambs only long enough to get adrenalin running through their bodies. This process helps develop hard muscle.

Do not over exercise the lamb, as this can break down muscle. If you exercise the lambs too long, muscle gets torn down rather than developed.

Begin exercise programs 2 to 3 months before the show, depending upon the ration fed and the condition of the lambs. Do not make the mistake of exercising lambs before they are properly conditioned.

Diseases or Conditions

The following information can help you identify potential health problems in your lambs as you observe them. Careful daily observation of your lambs is a good preventive measure. Lambs that do not feel well usually do not eat as quickly and may not eat all of their feed. Routinely check the manure of the lambs in the pen: Lambs with diarrhea generally have had their feed changed too quickly, have consumed too much high-energy feed, or have internal parasites.

Check to see how your lambs walk, and get a good impression of their overall vigor. Lambs that do not feel well usually walk abnormally and stand with their ears hanging down. Daily observations help you detect lambs that are suffering from urinary calculi or water belly. An affected animal stands with its back arched, strains to pass urine, sometimes kicks at its belly, and shows extreme discomfort. It is normal for most lambs to urinate after they stand up and move about for a few minutes. Watch your lambs closely to make sure they are urinating without problems.

Table 3: Quick Reference Disease Guide

Disease	Symptoms	Treatment/Prevention
Acidosis	Bloat, Dehydration, Weak Pulse, Increased Respiration, No rumen movement, Full, watery stomach, Very Weak	Administer mineral oil via stomach tube this will help to breakup the excess gas
Enterotoxemia	Full stomach, Fever, Star gazing, Convulsions and tooth grinding, Sudden death is common	Administer Antitoxin immediately Prevention: Two doses of vaccine
(CAE) Caprine Arthritis Encephalitis Syndrome	Young are weak in rear legs, Progressive weakness until death, Swollen joints in adults	No corrective procedures Prevention through testing and culling positives
Caseous Lymphadenitis (CL)	Large knots and abscesses located on body at lymph nodes, Fever, May start losing body condition	Lance abscesses, Rinse with 7% Iodine, Inject antibiotics
Coccidiosis	Diarrhea (may be bloody), Some loss of appetite, Loss of weight, Possible sudden death	Sulfa drug, Good sanitation, Isolate sick animal
Internal Parasites	Swelling under chin, Increased pulse, Increased respiration, Paleness, Severe weakness	Consult Vet to find the most effective de-wormer All animals should be de-wormed upon purchase and when put on pasture.
Pinkeye	Watering eyes, Redness of whites of eyes, Swelling eyelids, Squinting, Cornea becomes cloudy	Inject Antibiotics Apply eye ointment
Ringworm	Rough circular areas over body	Consult your vet to find a safe treatment
Soremouth	Scabby sores on lips and gums (may occur on udders)	Vaccine for kids, Softening ointments may help existing sores, Use caution around eyes
Urinary Calculi	Unable to pass urine, Restless, Kicking at belly, Stretching while attempting to urinate	2:1 Calcium:phosphorus ratio in feed ration, Ammonium Chloride in ration, Plenty of clean drinking water

Training and Fitting Tips

Monitor the lamb's weight gain with Extension Publication 110065 in a similar fashion as detailed above for pigs. Target show weight should not exceed 110 lbs. for a small breed or 125 lbs. to 135 lbs. (depending on muscling and frame) for a large frame black faced breed. If the lamb is gaining weight too rapidly you can back him down to a grower ration (50% hay : 50% grain) or substitute with a higher fiber, lower energy grain such as oats. Thirty days before the show, you may want to replace hay in the diet with alfalfa pellets to counteract the development of a hay belly.

After the lamb is halter broke, continued daily exercise is important in keeping him firm. If the lamb has a need for increased leg muscling, hill climbing can be used to build up the muscle in the lower leg. After the lamb has had his daily walk, practice leading him without the halter to get him accustomed to the show ring procedure. If you are tall, kneel beside the lamb's shoulder to allow the judge to see. If you are small, stand in front of the lamb's head and neck to keep it from getting away. As the judge approaches the front for a view, smoothly step to the side. Train him to brace and set up for the show ring.

The lamb is set up for the judge by setting the legs wide on all four corners with the back legs extended. Adjust the front legs with your hand. If you are an older youth you will also be able to reach the back legs to adjust them as desired. A smaller youth will need to rock the lamb back and forth to get the hind legs as desired, then adjust them further with the toe of the boot. Another method to set up the back legs is to push the brisket of the lamb until it braces with the back legs. Bracing is when the back and loin are held rigid for a judge's close inspection by pushing against the breast with the knee or by pulling down on the chin with your hands. When you do this, you will be standing in front of the lamb. The object is to bow up the lamb's back and tense the loin and back muscles to make him feel more firm to the judge. Since many lambs will jump and act unruly in the show ring when the judge handles it, it is important to have the animal used to this prior to the show. Get a parent or a large teenager to help you practice handling the lamb while you keep it still and braced. It may take several short training sessions to get the lamb used to this. Feet trimming should be done at least a month before the show to avoid getting the lamb sore. Long toenails can be trimmed with a pair of nippers (consult with your Ag advisor and do not attempt to do this yourself).

As you work with the lamb prior to the show, you should teach it to stand quietly on a sheep stand. *Never leave a lamb unattended on a sheep stand.* This will make grooming easier. All market lambs now are shown slick sheared. Unless specified by the show rules, this does not mean it has to be done at the time of the show.

Two weeks before the show, shearing should be done. This will allow enough time for the wool to grow out to cover the clipper marks. If you will wash the lamb before you clip him the last time, it will enable you to do a nicer job. The day before the show, wash the lamb again. Stains can be removed with bleach or Woolite. Stains can also be disguised with baby powder. After washing, you may want to put a blanket on the lamb to keep it clean. Some people keep a blanket on the lamb the last two weeks preceding

the show. On the day of the show, you can smooth any areas needed with the hand shears. Although the wool will be very short, some use a wool card on the rump and loin area to accentuate thickness. Slightly dampen the wool before carding.

Showing Tips

Maintain adequate space between your animal and those immediately adjacent. If the judge can't see your animal because you are too close to someone else it could influence how you place in the class. Keep at least 3 feet between animals when you are lined up side by side and at least one animal length between animals when lined up in profile. It is rude to crowd someone else's animal as it may be in heat or have a disposition problem which could be disruptive. Also, a polite gesture to the judge is to close up large gaps when animals are moved out of the line. When you are called upon to switch places in a side by side lineup, move through the line and push on the animal's head to turn to the right and come back through the hole you just left. Move to your new slot from the rear of the animals.

You have worked hard to get your lamb ready to show. You have done your best in making the lamb's selection, in caring for its health needs over several months, and in fitting your lamb for show. Your preparation–planning and practice–has taught you many lessons and skills, such as responsibility and goal setting. You can be proud of your animal and of yourself. Good luck as you show your lamb!

GOATS

Because of their small size, goats are often viewed as fun pets. While this is often true, it is important to realize that goats, like any other project, are a full time responsibility. BEFORE beginning your project, make sure that you are committed to caring for your goat at least twice a day, every day (snow, rain or shine). As with any animal, goats not only require feed and water, they also need exercise, sunshine, and companionship. In order to be successful in your project, your goat(s) will require additional time spent training and grooming.

The modern day Boer is a horned breed that originated in South Africa and is most often characterized by short white hair with red markings on the head and neck and long floppy ears. Through genetic selection, this breed has proven to excel in meat production, conformation, fertility and a high growth rate. The Boer goat breed has demonstrated weaning rates equal to and higher than 160% and a kidding rate of 200% is not unusual. Performance records also indicate an average daily gain of 0.3 – 0.4 lbs/day and some outstanding individuals can gain over 0.5 lbs/day. In addition to their advantages in growth, Boers also tend to reach puberty at an earlier age, 6 months for males and 10-12 months for the females. They also have an extended breeding season.

Selection

The selection of a goat for a project is one of the most important decisions you will make. The type of goat you select will have a major influence on the project's results. Remember that a winning goat is a combination of good selection, good nutritional management, proper grooming and outstanding showmanship. When selecting, it is important to be aware of fat thickness. Young goats that are bloomy and fat always look good, while young, thin goats do not look as nice. Learn to look past fat and recognize muscle so that you can pick a genetically superior goat. Consider the following when selecting a goat: structural correctness, muscle, volume and capacity, style and balance, and growth potential.

Structural Correctness

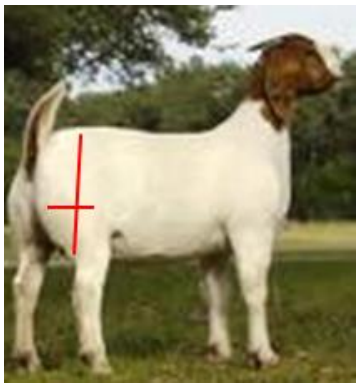
Structural correctness refers to the skeletal system or bone structure of an animal. A goat should hold its head erect and the neck should extend out of the top of the shoulders. Note the goat's movement as he walks away from you and look for the goat that stands and walks out wide off of his front legs and back legs. Pay attention to the rear legs and avoid any goats that might walk with their back hocks pointing in or out.. A goat should travel and stand wide and straight on both front and rear legs, and the legs should be placed squarely under the body. A goat should have a strong level top, and a long rump with a slight slope from hooks to pins. Your goat should be heavy boned and be strong on its pasterns. Open-shouldered, weak-topped, weak-pasterned, steep-rumped goats should be avoided.

Helpful Hints for evaluating structure:

1. Make sure the top and bottom jaws align. Over bites and under bites are NOT desirable.
2. The shoulder should have approximately a 45 degree angle.
3. The top line should be fairly level.
4. The angle from hooks to pins should be gently sloping.
5. The hock should have enough angle to allow for ease of movement.
6. All four pasterns should have about a 45 degree angle.

Muscle

Generally, a goat that walks and stands wide is going to be heavier muscled. The goat should have a deep, heavily muscled leg and rump.



Muscle will always be one of the primary factors for success. The purpose of a market wether is to provide meat for consumption. Consequently, judges will prioritize muscle as a major factor in placing. A goat that is wide based in structure is going to be heavier muscled than a narrow based goat. The goat should have a broad, thick back and loin that is naturally firm and hard handling. A good goat should be wide through its chest floor, with bold shoulders and a prominent forearm muscle. The chest and forearm are the best indicators of muscling in thin goats. Have someone hold the goat in a driving position and handle the top of the goat right behind the shoulder and across the loin. You want as much width as you can get. Analyze the rear leg muscle by watching the goat walk away from you. Look for the width and depth of the leg muscle to compare. Look for a goat that has a large forearm muscle. When viewed from behind, the widest part of the leg should be the stifle area.

Wide Chest

Volume and capacity
This refers to the relationship of body length to body depth and body width. Goats should be long bodied, with adequate depth and spring of rib. Avoid selecting goats that are short bodied, shallow bodied, narrow based and flat ribbed. Goats that are shallow in their body with a tight rib shape are not going to eat, gain and grow as well as a goat that is deeper bodied with more spring of rib. On the reverse side, goats with excessive middle are not desirable because of the waste in dressing percentage when they are processed. “Show goats” have to have enough rib shape and capacity to be productive, but they also have to be shallow enough in their depth of rib to have that “show” look that the judges are looking for.

Long Body/Wide Top

Style and balance
Style and balance refer to the way all body parts blend together, how the neck blends into the shoulder, the shoulder into the rib cage, the rib cage into the loin, the loin into the rump, and how “eye-appealing” a goat is. When viewed from the side, a goat should have a smooth shoulder, level top, trim middle and straight legs. A goat that is balanced, pretty and holds up its head is the first one you notice when you walk in the pen.

You might own a show goat with a lot of muscle and capacity, but if the goat does not have the right “look”, you probably will not win the class. This selection factor takes time to learn. Generally, look for the goat with a long neck that blends smoothly into the shoulders, a smooth and level top and a level hip (few goats have a perfectly level hip/ avoid excessive steepness). The goat should be “smooth” shouldered with a trim middle section. The underline should be level. Balance also refers to the length of body in relationship to the height of the goat. I have found that a goat that is 2-3” longer from the back of his neck to the end of his rump than he is in height from the ground to the top of his shoulder balances very well from the profile view. I also try to avoid excessively long bodied goats as well as short bodied goats. The longer bodied goats will usually break in their top. Short bodied goats do not balance well from the side view.

Growth/Size potential

The ability of an animal to grow rapidly is very important. Generally, a larger framed goat that shows a long head, neck, cannon bone and body, will grow faster, be larger and be more competitive in the show ring.

All goats will mature at different weights depending on genetics. Most shows have many classes broken into weight ranges. Each class has a winner. I never encourage target weights on market goats. I believe that you should feed your goat to his full potential and manage his weight at the end to fit into a desirable weight class.

You will want to consider show weight when you analyze the previous weight breaks from the show you are attending and look at how the show sets up the Divisions. The majority of the shows will show several classes (3-5 usually) and then select a Division Champion from the winners. They may end up with 3 or more Division Champions that will compete for the Grand/ Reserve Grand Champion goat of the show. For example consider this scenario: At my show, the first three classes will compete for the Division I champion. My goat is weighing 78 lbs at home the week prior to the show. I know from last year's weight breaks that class 3 goats weighed 74-77 lbs. If I can weigh my goat into class 3 and win the class, I have a great chance to win the first division and make a run at the Grand for the show. If I weigh in class 4, my chances of winning the second Division will be less likely because I have to compete against heavier goats from classes 5 & 6 to win the second Division.

I fed my goat to his genetic potential at 78 lbs. It will not hurt to pull a few pounds (up to 5% of the goats full bodyweight is a safe bet) to try to maximize my chances for success. Be careful- many goats have been ruined by pulling too much weight off of their full body weight in anticipation of competing in a lighter class. Many factors come into play in pulling weight off of your goat. If you pull to much weight, you will lose muscle and probably hinder your chances for success. Seek advice and understand the probable results of limiting feed and water prior to a show.

What Do I Need to Start?

1 – Feed scoop	1 - Feeder
1 – Water bucket	1 - Muzzle
1 – Brush	1 – Goatl Blanket and/or Sleeve
1 – Chain	1 – Muzzle

The Health Plan

The key to a good health program is prevention. By being observant, one can notice illnesses before they become serious. Fortunately, goats tend to be hardy, so an effective health plan can be fairly basic. By having some knowledge of goats and the diseases common to them most problems can be prevented.

Normal goat physiological data:

Temperature:	104 ± 1°F, 40°C
Heart Rate:	70 to 80 beats per minute, faster for kids
Respiration Rate:	12 to 15 breaths per minute, faster for kids
Rumen Movements:	1 to 1.5 contractions per minute

All animals should be checked at least daily for signs of illness. Obvious signs include: moving slower than other animals, poor appetite, diarrhea, limping, breathing hard or fast, grunting, grinding teeth, or other unusual behavior. If an individual shows any of these signs, it will need further examination. In order to decide how to treat the animal, it will be necessary to identify the symptoms. To help with a complete examination, use a checklist. The following is a list from The Goat Health Handbook; it may also be helpful to check with your veterinarian for common diseases in your area.

1. Look at the undisturbed animal from a distance. Note the general condition and age of the goat. Can it stand? Does it walk normally? Can it see? Is it bumping into objects? Does it exhibit signs of pain? Is it bloated? Are there swollen areas? Count respirations per minute (one count equals a complete in-and-out movement of air).
2. Approach the goat. It should be held by an assistant by the neck and body. Do not run the goat or fight it as this will cause a false temperature, pulse and respiration reading.
3. To take the goat's temperature, insert the thermometer into the goat's rectum, and leave it for 3 minutes.
4. Place your fist, palm, or fingertips on the left flank and feel for stomach movements. Note if the goat reacts as if in pain. If the stomach feels slushy or water-filled, this should also be noted.
5. Place fingertips on both sides of the lower rib cage and feel for the heart rate. Count heartbeats for 1 minute. The pulse may also be taken by feeling the big artery on the inside of the upper rear leg.
6. Roll back the eyelids and lips of the mouth to observe color of mucous membranes. Pink is normal except when dark skin colors extend into the mouth.
7. Feel over the goat's body to locate swellings and/or signs of pain.
8. Check for blindness. Move a hand toward the eye, but do not fan the air because a blind goat will blink if it feels air movement. If the hand is moved straight toward the eye, blinking will occur only when the goat can see.
9. Note any unusual sounds. Wheezing or coughing could indicate general body pain, either in the chest or abdomen.

10. Check all body fluids to see if the goat has diarrhea, excessive salivation, a runny nose (note whether the discharge is clear or cloudy), and crusty or runny eyes.
11. To detect abnormal sounds of the abdomen and chest areas of a goat, a stethoscope should be used. If one is unavailable, place your ear against the goat's chest or abdomen and listen.

As you progress through the checklist, take notes about the animal. By making detailed notes you will have a list of symptoms to help you identify the animal's illness. It will also be easier to monitor the animal's progress if all the information is compiled in an easy to read manner. Design a form for recording this information and keep the forms close to the animals so that they are easy to use.

After determining the symptoms, use the following disease descriptions and chart to determine which disease is affecting the animal and the proper treatment. Remember to consult with your Ag advisor and/or veterinarian before administering treatments. Always follow the label instructions on any drug treatment before using.

Table 3: Quick Reference Disease Guide

Disease	Symptoms	Treatment/Prevention
Acidosis	Bloat, Dehydration, Weak Pulse, Increased Respiration, No rumen movement, Full, watery stomach, Very Weak	Administer mineral oil via stomach tube this will help to breakup the excess gas
Enterotoxemia	Full stomach, Fever, Star gazing, Convulsions and tooth grinding, Sudden death is common	Administer Antitoxin immediately Prevention: Two doses of vaccine
(CAE) Caprine Arthritis Encephalitis Syndrome	Young are weak in rear legs, Progressive weakness until death, Swollen joints in adults	No corrective procedures Prevention through testing and culling positives
Caseous Lymphadenitis (CL)	Large knots and abscesses located on body at lymph nodes, Fever, May start losing body condition	Lance abscesses, Rinse with 7% Iodine, Inject antibiotics
Coccidiosis	Diarrhea (may be bloody), Some loss of appetite, Loss of weight, Possible sudden death	Sulfa drug, Good sanitation, Isolate sick animal
Internal Parasites	Swelling under chin, Increased pulse, Increased respiration, Paleness, Severe weakness	Consult Vet to find the most effective de-wormer All animals should be de-wormed upon purchase and when put on pasture.
Pinkeye	Watering eyes, Redness of whites of eyes, Swelling eyelids, Squinting, Cornea becomes cloudy	Inject Antibiotics Apply eye ointment
Ringworm	Rough circular areas over body	Consult your vet to find a safe treatment
Soremouth	Scabby sores on lips and gums (may occur on udders)	Vaccine for kids, Softening ointments may help existing sores, Use caution around eyes
Urinary Calculi	Unable to pass urine, Restless, Kicking at belly, Stretching while attempting to urinate	2:1 Calcium:phosphorus ratio in feed ration, Ammonium Chloride in ration, Plenty of clean drinking water

Nutrition

Contrary to popular belief, there is no such thing as a “magic” ration that will make your goat a champion. To implement a good feeding program, study the goat and use all available information to make judgments on when feed changes should be made. Since most goats do not deposit external fat as rapidly as other species of livestock, a self-feeding program can be effective. However, some goats will become too fat during the feeding period and should be hand fed twice daily to control the amount of feed consumed.

Full feed for goats is estimated at 3.5% of their body weight daily. Simply multiply the goats weight by .035 to determine the amount. 2% of the body weight is considered a maintenance ration- this would be used to “hold” the goat and prevent excessive weight gain.

All livestock require five basic nutrients: water, protein, fats and carbohydrates (or energy), minerals and vitamins. Common sense feeding recommendations involves purchasing a commercially manufactured goat feed. All major feed distributors will have a goat ration that was developed through research to supply all of the feed nutrients needed by the goat. Add a clean water source to complete the ration.

Protein will range from 15%-18%- protein supplies the essential amino acids for muscle growth and development.

Fat will range from 2.5%- 4%- fats and carbohydrates provide energy. Increased fat may be needed for extra condition when you get closer to showing.

Fiber will range from 15-19%- fiber is very important in the diet for rumen function. Minerals- calcium, phosphorus, salt and copper should be listed. These will all be included in appropriate levels for optimal use in the goat’s diet.

Vitamins- Selenium and Vitamins A,D and E are normally included.

The feed tag will also include a list of ingredients and feeding directions.

Goat rations also commonly include a coccidiostat for the prevention of coccidiosis. Common drugs added include decoquinate and monensin.

Feed Additives

There are a variety of feed additives available in the show goat market. Some are practical and economical and some are ridiculously priced. I recommend following these **common sense** solutions when considering feed additives.

- If you are feeding a manufactured show feed by a reputable company, the ration is supplying all of the nutritional needs of the show goat.

 If your goat is thin (lacking fat cover), you can add a fat source to increase the fat content in the feed and quicken the fattening process.

 If your goat is fat, you can add a protein source to burn fat and increase muscle.
 If your are considering using any other type of feed additive, contact the manufacturer and ask for solid research results that indicate the product provides the results you seek.

 Do not feed any type of feed additive that is not labeled for use for market goats. Products like ractopamine hydrochloride are **illegal** to use in feeding goats.

 Do not try a new feed product for the first time at the stock show. If you are going to feed any additional product when you get to the show, try it at home a month or so in advance to make sure that you get the results that you are looking for and that it does not affect your goat adversely.

It is important to establish a feeding routine for your goat. By feeding your animals at the same time(s) everyday, there is less risk of upsetting the rumen. If changes need to be made in the amount or type of feed, make them slowly and gradually.

At the time of purchase, many young goats will not know how to eat pelleted feed from a trough. These goats should be started on good, leafy alfalfa hay that is top dressed with a preconditioning pellet. After 3 or 4 days, the selected ration may be introduced slowly. Hay can be fed during the first part of the feeding program, but should be eliminated at the later stages to prevent goats from developing large stomachs.

Most goats can be self fed for the entire feeding period. However, some goats will become fat and need to be hand fed. Fat deposition must be monitored throughout the feeding program. The feeding schedule can be adjusted to modify gain and body composition, but the goats must be continually monitored so changes can be made. Rations not producing enough finish can be bolstered by the addition of a high energy feed, such as corn, during the late stages of the feeding program. Remember, never make abrupt changes in your feeding program. Make gradual changes so your goat will stay on feed and continue to develop.

The feeding program will dictate how your goat develops and matures. A good program cannot make up for a lack of superior genetics, but it will allow your goat to reach its genetic potential. Feeding is a daily responsibility and the program should be changed as needed to maximize your results. To best monitor your results, weigh your goat on a regular basis. Know whether your goat is gaining or losing weight and know how much weight. Exercise can be very beneficial to your goat and to your success in the show ring. Goats are very active animals and, if given enough room, they will exercise

themselves. Have objects like big rocks or wooden spools in your pen for climbing and jumping. This will provide your goat with an excellent opportunity to exercise itself. A goat that exercises will handle harder and firmer, and will give you an advantage in the show ring.

Under normal conditions, goats will gain approximately 2 to 3 pounds per week. Not all goats can be fed to the same final weight because there are differences in frame size. Large frame goats may be correctly finished at 120 pounds, while small frame goats may be correctly finished at 80 pounds. You must learn to look at indicators of frame size and growth (length of head, neck, cannon bone and body) and determine at what weight a goat will be correctly finished. If you know the approximate weight of a goat at the time of purchase and the length of time until a show, you can calculate feed requirements (light, moderate or heavy) needed to enable that goat to enter the show at its correct weight.

Remember that size does not make a good goat. There are good small goats and good big goats. Your management program is the key.

Fitting and Grooming

As with training, fitting and grooming begins months before the show. Fitting your goat, is making sure the goat is healthy, properly cared for and in desired condition.
Good condition means that the goat has good muscle tone and is not too thin or too fat. Through practice you will learn to evaluate the different degrees of fat cover and muscle tone. Fat feels soft and loose. Muscle feels shapely and firm. Both fat cover and muscle can be monitored and changed through diet and exercise. As discussed earlier, a balanced ration is important. However, as each goat is different it may be necessary to adjust the amount of feed the goat receives. Exercise may be a more effective and healthier method of keeping your goat in good shape.

Preshow preparation

How you present your goat will determine your success while at a show. Therefore, the preparation for a show is very important. Preparation begins the day you start your project! After deciding which animal(s) you are going to show, they must be taught how to act properly. The animals will need to be easy to handle and be comfortable around people. In order to ensure that your goat is well trained, you will need to spend considerable time with it **before** going to the show. You will find each goat will react differently to the steps that you take. Some may be more stubborn than others and some may be gentler than others. However, if you are persistent, most goats can be trained.

Walking your goats

Halter Breaking/ Chain Breaking/ Leading

I like to start by halter breaking the goats. I will halter the goat and tie them to a fence or drop (a chain suspended from the roof with a rubber strap attached). It is very important that you stay with the goats during this procedure. They will usually fight pretty hard which may include jumping and falling. Make sure that there are no objects close by that they can run into and injure themselves. In the beginning- keep it short. After the goat stops fighting the rope and stands still, let them go and repeat the next day. After a few days, the goats will stand tied to the halter without fighting. They are now "halter broke".

After your goat begins to gentle, you can start teaching it to lead.. This can be very frustrating. It usually does not work well to pull on the halter. The goat has a natural reaction to pull back when you pull on his head. It works better to stand beside or behind the goat and let the goat walk forward, controlling him with the end of the halter. It will take several attempts to teach the goat to walk with the halter. Use the collar, chain or halter to keep the goat's head up while you teach it to lead. Have someone assist you by pushing the goat from behind whenever it stops. Teach the goat to lead with its front shoulder even with your leg. The goat's head should be in front of your body.

The final step is to "chain break" the goat and teach the goat to lead with a chain. The chain is placed around the goats neck- loose enough so that you can grab the chain and have room to work the chain, but tight enough so that the goat does not easily pull out of the chain. You can purchase a show chain at your local feed dealer.

Driving the goat

"Driving or bracing" is an accepted practice in showing goats to maximize their muscle expression. After the goat has learned to walk, you should start working with the goat to drive (brace). This involves moving to the front of the goat, placing the inside part of your left leg into the front shoulder of the goat and pushing into the goat. The goat "drives" when he learns to push back into you.

The proper procedure includes:

- stop walking your goat with all four feet square.

- step in front of the goat and control his neck and head holding his head upright and forward while you set his front two feet square and then place his rear legs square. Set the front and hind legs squarely under the body, keeping the body and neck straight and the head in a high, proud position by using the chain or collar. You should remain standing at all times. Do not squat or kneel.

· step into the goat with your left leg braced into the right shoulder of the goat with the goats neck stretched up your leg and his head held level and looking forward in a comfortable position.

· slightly push into the front of the goat to make him drive back into your leg. The harder you push, the harder the goat should drive.

· there should be minimal pressure on the goats head and his neck should be straight and in-line with his body.

It works to take the goat away from the pens/barn when you start teaching him to drive and be headed back to the barn. They usually will drive more effectively because they are headed back to where they want to go.

After the training is complete, you may wish to practice showing. Set up your goat and show it while someone else handles it. You must make sure the goat looks good at all times. If the goat responds properly, return it to the pen and do not overwork it. Remember, in a major show, you may have only 5 seconds to actually show your goat. If the goat does not show properly when the judge handles it, you may get overlooked.

Practice, practice, practice. Set up a weekly schedule that includes walking and showing your goats several days a week. Make sure you train your goat to stand and drive for long periods of time so that he does not stop showing on you during the competition. Plan ahead and make sure that your parents know when you want to practice so that they can assist.

Exercise

The purpose of these goats is to produce meat, meat is muscle, and therefore a goat has to build muscle tone. Just like humans, goats build muscle through exercise. The amount of exercise needed will vary on each animal. I like to start the exercise program about 45 days prior to the show. You need to have some condition on the goats when you start the exercise program because they are going to burn fat with the increased exercise.

Don't confuse the exercise program with walking the goats. The goats need to be walked throughout the feeding program for training purposes. The exercise program is designed to trim excess fat and tone muscle. Several methods can be effective:

· **Exercise track and dog**- many feeders use a trained track dog to run the goats in an enclosed track. This method is very effective. You will need to consider the cost of the exercise track and the cost of owning and maintaining an exercise dog. The number of days to run and amount of time to run will all vary depending on each individual goat.

· **Chariot**- you can build or purchase a chariot that pulls behind a lawnmower. I like to use a chariot that has a reversible hitch. When we are training the goats to walk, we use

the chariot in the traditional way where the goat's feet are on the chariot base and the goat walks with his rear legs only. When we are using the chariot for exercise, I like to reverse the hitch and have all four feet on the ground. A chariot works great because the goat is secured to a head piece which makes him keep his head at the correct height for showing. You can also control the speed so that it matches the same speed that you will walk in the show ring. You can also add a harness with weights to increase the amount of the workout. A chariot with four headpieces allows you to work four goats at one time.

· **Hand exercise**- no track, no chariot- you can still exercise by devising a harness to put around the goats body (dog harness) and have the goat pull weights as you walk the goat. I recommend starting at 5 lbs and increasing up to as much as 20 lbs.

There is no fool proof plan for an exercise program. It is important to develop a program that fits your situation. The main requirement for an exercise program is safety. It is most effective to exercise the goat intensely for a short amount of time. Therefore, whatever setup you choose to use, make sure that the obstacles are free of harmful edges and wires. It is helpful to make rounded corners in any tracks and to make the sides solid so the animals can only see forward. This will help keep them from trying to jump out and possibly hurting themselves.

Show ring

Your planning, selection, feeding, fitting, training and grooming have brought you and your goat this far — to the show ring. Now, your skill in exhibiting your goat — showmanship — cannot be emphasized too strongly! It is often the difference between winning and losing.

Showmanship is the true test of a show person's knowledge of his or her project. Some believe that this is a competition that is limited just to the showmanship class. However, showmanship skills are something that should be used throughout the show. Good showmanship can either make or break an animal in a competition. The purpose of showmanship is not to showcase the exhibitor. It is to help showcase the animal to its best ability. A good showman can evaluate his/her animal to determine its weaknesses.

Once the weaknesses and strengths are determined, the showman can decide the best way to deal with each. For example, if your goat has too much slope to its hip, it may be helpful to set his rear legs further back in order to raise the hook bones.

In order to present your animal during its class at the show, you must know some basic guidelines. You should be mentally and physically ready to enter the show ring for competition. By completing the preshow activities, you should have confidence that you can do an effective job showing your goat.

Before the show begins, become familiar with the show ring. When the judging begins, watch the judge if possible and see how he works the goats. You will feel more comfortable and confident if you know what the judge will want you to do.

When the appropriate class is called, take your goat to the show ring. If the ring stewards do not line up the goats, find a place where your goat will look its best.

- Be on time. I believe it is an advantage to enter the ring first for two reasons. First, we all know that goats follow easy, but sometimes do not like to lead the way. If your goat walks perfect, as he should, you will set the example for the class, and, undoubtedly get a very good look from the judge. Secondly, since you are in the front of the line, you will not have to move up and reset your goat continually if the judge uses a bottom end pulling method of judging (as most do).

- If you are lined up in between goats to enter the ring, pause prior to entering and give yourself a little room behind the goat in front of you. Goats have a tendency to stop and go. You want to avoid having to do so yourself. It is to your advantage to keep your goat walking.

- Set your goat up as quickly as possible. You never want the judge to see your goat out of show position. Whether you initially set up on a rear view or profile, give yourself enough room to present your goat without getting hid by the goats on either side of you. Make sure that your goat is trained to stand still when the judge handles your animal.

- If your goat is not pulled the first time, keep trying. Continue to keep it set up, remain alert and watch the judge. If your goat is pulled, circle it out of the line and follow the directions of the ring steward while continuing to keep an eye on the judge. Move your goat with style and at a steady, moderate pace.

- Never get stuck in a corner. If you do, move your goat to another position. On the other hand, if the judge has already handled your goat, it is not advisable to move out of your position in line. Work effectively to get your goat in a position to be easily seen.

- A good showman must be alert and always know where the judge is at all times. Remember to keep your eye on the judge! Remain calm and concentrate on showing.

- Be careful not to cover your goat with your body and block the judge's view. Always keep your goat between you and the judge. At all times, keep your movements at the front of the animal. When the judge switches sides, the showman should move around the front of the animal to the correct position.

- Keep your movement slow and controlled. Your animal can sense your tension and stress. Therefore, if you are upset the animal will react in the same manner. This causes a lot of frustration which can be avoided by remaining calm.

- Relax when the judge is on the other end of the ring. Keep your goat set correctly, but avoid continually driving the goat at all times so that the goat does not wear out on you. In large classes, it may take 20 minutes before the judge handles your goat. Be patient and let your goat relax.

- Show confidence- attitude is important. Know that you are going to win the class.

- Be sure to keep the goat's head up and body, neck and head in a straight line. Keep one eye on the judge and one eye on your goat. It is your responsibility to watch the judge and not miss a decision.

- Acknowledge the judge with eye contact and a smile. Answer questions in complete sentences.

- Never stop showing, because a class is not over until the ribbons are distributed. Be courteous to fellow exhibitors Even when the class placing has been established and especially if you won the class. You never want the judge to see your goat when he does not look his very best.

- If applicable, thank the judge and shake his hand.

- Always exhibit friendly showmanship skills- Remain standing at all times and always display a pleasant facial expression. Be a good sport, a graceful loser and a humble winner. Do not over react to any situation.

- Most importantly, SMILE AND HAVE FUN!

STEERS

What's needed to have a steer project? First of all you have to get the steer! Breeding determines what your steer can do, feeding and management determine what your steer will do.

Considerations for Selecting a Steer

The most important thing to consider when selecting a market steer is the date of your show. The average steer will be finished between 14 and 18 months of age. Other considerations include confirmation and breed of the animal. When considering confirmation it is important to think about structural correctness, muscle shape and definition, depth of body, frame size and overall balance.

Ideal finished weight depends on the breed of structure of the steer.

A. Angus Steers 1,050-1,100

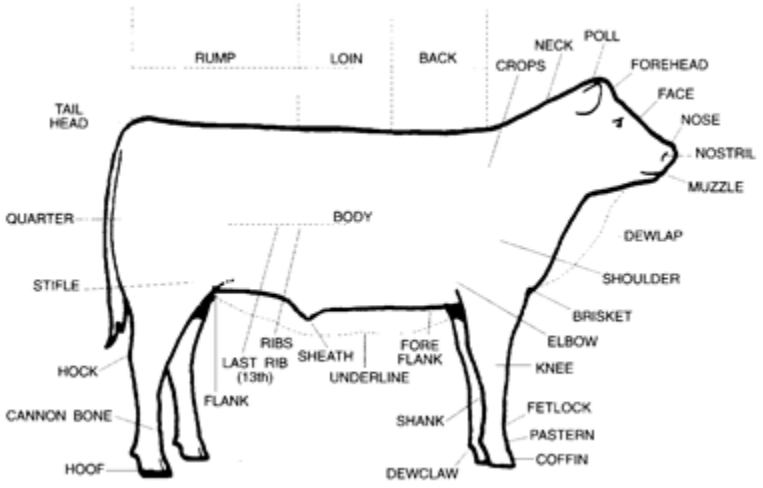
B. Hereford Steers 1,100-1,150

C. Simmental-Angus 1,100-1,150

D. Charolais-Angus 1,125-1,200

E. Simmental-Hereford 1,150-1,200

F. Straight Exotics 1,200-1,350



In any project, goals and guidelines are helpful. A good steer should have these statistics:

1. Weigh more than 500 pounds at 7 months of age.
2. Average more than2.5 pounds daily gain from weaning to slaughter.
3. Weigh more than 900 pounds at 12 months.
4. Grade USDA Choice between 1,000 and 1,25O pounds.
5. Have a USDA Yield Grade less than 3.0, preferably 2.5 to 2.0 at show time and slaughter.

To meet these guidelines, select calves from herds that emphasize growth rate and use fast-gaining, performance-tested bulls. Finding a top prospect is easier said than done. However, there are basic criteria to look for in selecting the club steer that will help you predict how the finished steer will look.

Weight

An important factor to consider when selecting a steer is weight. "Weight per day of age" is a good indicator of the future growth potential of the steer. The heaviest calf for his age may not always be the best. Study the calf and decide the composition of his extra pounds. If the weanling steer is heavier because of excessive fat, he will be fat as a yearling and will probably become too fat too soon. Also, if the prospect is extremely big and large-framed, he may not be correctly finished by show time. Try to select a calf whose finished weight will be between 1,000 and 1,250 pounds at show time.

Use Table 1 to insure selection of a steer that has the opportunity to reach the desired weight at the show. The table is developed on the assumption that the steer will gain two pounds per day from the time selected or purchased until the show date. This will account for the time it takes to get the steer on full feed and include the growing and finishing phase.

Table 1
Expected Show Weights in Relation to Time of Selection and Initial Weight

Begin Weight	Begin Date	May 1 Weight	July 1 Weight
400	Sept. 1	800	1000
450	Sept. 1	890	1050
500	Sept. 1	980	1100
550	Sept. 1	1030	1150
450	Oct. 1	870	990
500	Oct. 1	920	1040
550	Oct. 1	970	1190
600	Oct. 1	1020	1140
650	Oct. 1	1070	1190
600	Nov. 1	960	1080
650	Nov. 1	1010	1130
700	Nov. 1	1060	1180

1. First, determine the number of days between the time the steer is purchased and the date of the show.

2. Multiplying the number of days between those dates (selection date and show date) by two pounds per day will give you an estimate of how much total gain will be made by show time.

3. Adding the total gain expected to the steer's weight at selection time will provide an estimate of the steer's show weight. This can save a lot of disappointment of working with a steer for 5-6 months prior to the show only to find out that the calf is not eligible to show because it did not make the minimum weight.

The average of two pounds per day may be too conservative for some steers but is a good rule of thumb to use. It is much easier to hold a steer's weight back the last 30 days than it is to try to put on an additional 200 pounds in the same time period. Also keep in mind the minimum weight a steer must meet in order to show. Check with your Ag advisor and be sure your steer will exceed the weight requirement by at least 10 percent.

Hip Height Measurement

A possible tool to assist in selecting a club calf is the use of hip height and projected slaughter weight (Table 2). Hip height measurement is taken directly over the point of the hip with the calf standing on level ground. Be sure to take an accurate measurement. By knowing the age of the calf and the hip height in inches, it is then easy to determine frame size and expected slaughter weight. For example, consider a calf born in early November of the previous year which measures 46 inches on October

1. Table 2 shows an 11-month-old calf, 46 inches tall, as a frame score 4. The calf should weigh between 1,050 and 1,150 pounds to grade low choice.

Having some idea of the expected slaughter weight of your calf will also give you a good idea of how much he needs to gain between selection and show day. For example, if the calf in the previous example needs to weigh1,100 pounds at show time and weighs 650 pounds October 1, then:

1,100 pounds projected slaughter weight
- 650 pounds present weight
450 pounds gain / 180 days to show
= 2.5 pound average daily gain.

This calf would need to gain approximately 2.5 pounds per day - to reach the projected slaughter weight.

Table 2
Relationship Between Weight and Hip Height Inches of Steers At Various Ages and Frame Size and Expected Weight At Which Steers Reach Desired Slaughter Grade.

Frame Size		1	2	3	4	5	6	7
Expected Weight Choice Grade		750 850	851 959	951 1050	1051 1150	1151 1250	1251 1350	1350+ pounds
Age of Steer in Months	7	36.0	38.0	40.0	42.0	44.0	46.0	48.0
	8	37.0	49.0	42.0	43.0	45.0	47.0	49.0
	9	38.0	40.0	42.0	44.0	46.0	48.0	50.0
	10	39.0	41.0	43.0	45.0	47.0	49.0	51.0
	11	40.0	42.0	44.0	46.0	48.0	50.0	52.0
	12	41.0	43.0	45.0	47.0	49.0	51.0	53.0
	13	41.5	43.5	45.5	47.5	49.5	51.0	53.5
	14	42.0	44.0	46.0	48.0	40.0	52.0	54.0
	15	42.5	44.5	46.5	48.5	50.5	52.5	54.5
	16	43.0	45.0	47.0	49.0	51.0	53.0	55.0
	17	43.5	45.5	47.4	49.5	51.5	53.5	55.5
	18	44.0	46.0	48.0	50.0	52.0	54.0	56.0

Other Selection Criteria

You should consider several other factors when you select your calf; frame, size, muscling, structural correctness, style, disposition and balance should be evaluated in selecting a steer. Keep in mind a picture of a moderately large-framed, heavy-muscled, correctly finished, stylish steer as a result.

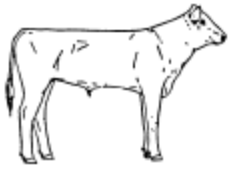
The calf chosen to become this finished steer should be tall, long-bodied, clean and free of excess "leather" through the throat and brisket. He should be straight-topped, long, level in his rump, and correctly set on his feet and legs (image 1).

1. *1-Select straight-lined, stylish, meaty, moderately large-framed calves*

The correct type and amount of muscling can be difficult to determine in a young calf. Round, bunchy-muscled calves will generally be short-rumped and show seams and creases in their rear quarters (image 2). These steers may appear to be heavier-muscled, but they are undesirable in the muscle structure and do not develop into desirable show steers.

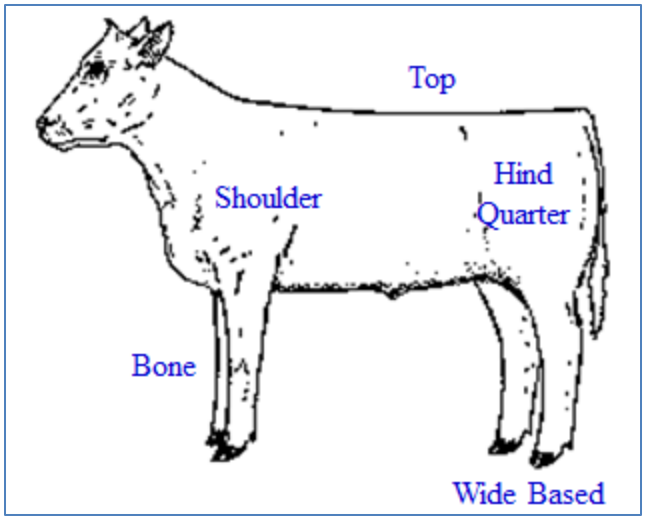
2. *2-Round and bunchy-muscled steer*

Also, beware of narrow, flat-quartered steers who lack muscle expression (image 3). Select a well-balanced, stylish calf that is upheaded and alert. These factors will be an asset in the show ring. It will be nearly impossible to find a steer that perfectly fits all these descriptions. However, select a calf that possesses a desirable combination of traits, go the "extra mile" when taking care of him and success will be related. A good steer and a good youngster are hard to beat!

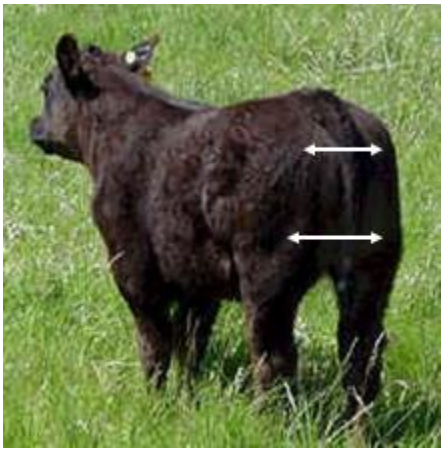


3. *3- A narrow, light-muscled steer*

Five Indicators of Muscle



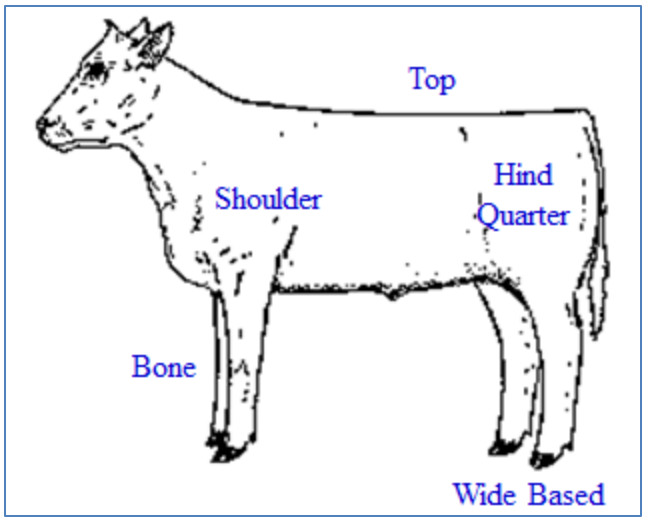
Hind Quarter – width between pin bones, stifle



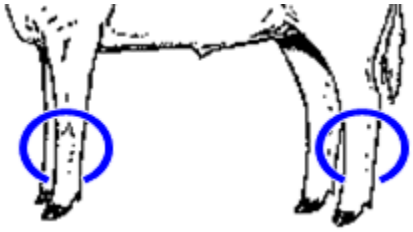
Shoulder – bold and rugged; thick forearm; smooth

Top – long, level, and straight; wide topped

Wide based

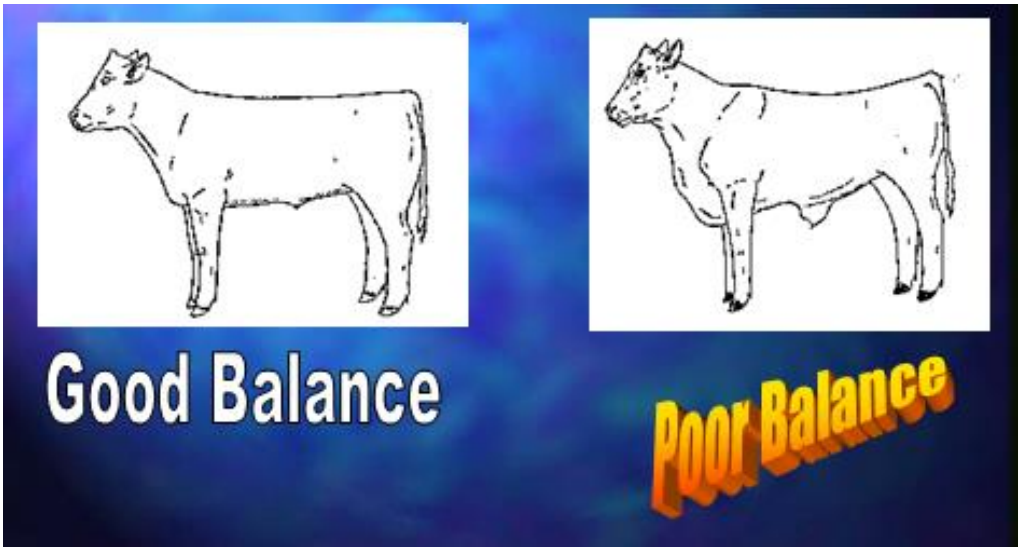


Bone – large circumference of bone

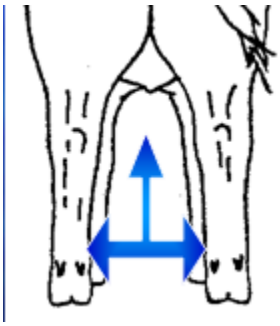


Balance – your calf should be balanced on both ends. Select a calf with style, a deep bodied calf that is full in the flank, uniform in capacity and ruggedness, and smooth

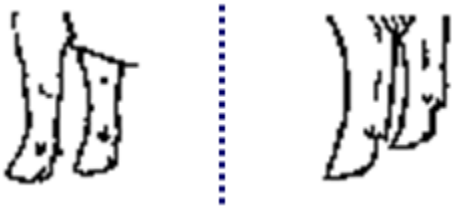
Examples of balance:



Structural Correctness – legs and feet; set to hock; flex at pastern; take long strides. Legs should hit the ground straight and point straight ahead



Feet should be big and rugged, with a slope to pasterns



Disposition:

- Notice how the seller handles the calves.
- Can you move easily around the cattle without them getting nervous?
- Does your calf have a pleasing gentle eye?
- Ask about the cow and bull.
    - bloodlines or pedigree etc..

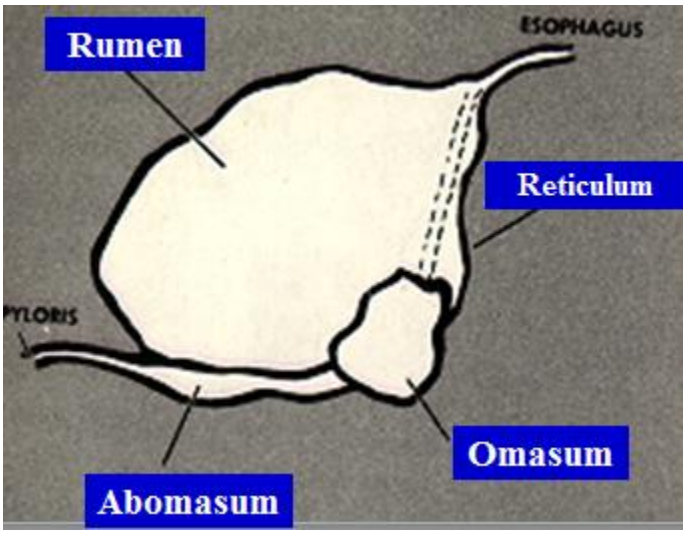
What Do I Need to Start?

- 1 – Scotch comb
- 1 – Brush
- 1 – Rope halter
- 1 – Show stick

Stomach Biology

Steers have a four stomach system:

- Rumen – First and largest stomach.
  - Food is broken down by bacteria and microorganisms.
- Reticulum – Second and Safety net stomach.
  - Catches foreign objects that may case harm.
- Omasum – Third Stomach.
  - Takes water out of the food stuffs before entering the next stomach.
- Abomasum – The true stomach, gastric juice aids in digestion of proteins.



How to Feed a Market Steer

Successful market steer projects are based on the availability of the steer's nutritional requirements. You will need to feed your steer both roughages (hay) and concentrates (grains). There are two feeding phases for market steers, the growing phase and the finishing phase. It is important to know what the phases are and when to move your steer from a growing phase to a finishing phase.

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

Phase 1: Growing Phase

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.

Glossary Terms

Starter: A mix low in energy, high in roughage and fiber, and high in protein reative to the energy content

Grower: A diet for cattle in a growing stage. It typically consists of 12 percent protein, moderate fiber and moderate energy content

Finisher: Last stage of feeding. It is very high in energy (at least 50% corn).

Full feed: A term used when an animal is able to consume the amount of feed that meets all the requirements for maintenance, growth and finishing without developing any digestive disturbances, or simply is able to eat all it can without having any problems such as scours or acidosis

Coccidiostat: A compound used to combat coccidiosis, a common parasite of the gut

The growing phase is a time when roughages are utilized to allow for frame growth. A growing phase diet typically consists of grass hay or pasture and minimal concentrates. During this time steers will typically gain 1.75 lb to 2.50 lbs per day depending on the diet consumed. Typically when a steer reaches approximately 800-850 lbs it is time to move the steer to the finishing phase; however you will need to make sure you take into account the date of your show and your show's weight limits on steers before starting a finishing ration.

Transitioning from Phase 1 to Phase 2

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. This will help ensure a smooth transition into the finishing phase that avoids over consumption of concentrates and a sick steer.

Below is a chart to show what the average daily feed intake is based on the size of the steer. Remember to divide the average daily feed intake by two to account for a morning and an evening feeding.

Steer Weight (lbs)	Average Daily Gain (lbs)	Average Daily Feed Intake (lbs)
400	2.0	10.5-11.5
600	2.5	12-15
800	3.0	19-22
1000	1.5	23-26

The transition period will take approximately 21-28 days. Each step should last for a 3-7 days. If your steer goes off feed it may be necessary to go back a step before continuing on. The following is a suggested four week series of "step-up" diets.

	% Concentrate	% Roughage
Week 1	20%	Free Choice
Week 2	40%	30%
Week 3	60%	20%
Week 4	80%	20%

Phase 2: Finishing Phase

Steers should be on a finishing diet (70% to 80% grain) for around 140 days in order to finish properly. Feeding a high grain diet requires that special precautions be taken to avoid problems such as bloat, acidosis, and founder. Step up rations are used to bring the steer up to full feed and increases in total feed consumption for greater steer size should not exceed 2 or 3 lbs. per day. The amount of grain in a ration should not be increased by more than 10% a week when changing over from grower (50% hay : 50% grain) to finishing rations. When steers are on a finishing ration, a free choice molasses block with Rumensin® should be provided or Rumensin or Bovatec® should be added to the feed to help prevent acidosis and bloat.

Weight of steers should be determined at 200, 140, 100, 60, 45, 30, and 15 days before the show using either a scale. If the steer is not gaining enough weight to reach the target finish weight (1100 to 1250 lbs. for medium frame steers or 1250 to 1400 lbs. for large frame steers), then the energy content of the feed ration will need to be increased.

Steers on a finishing ration should be consuming approximately 2.5% of body weight in total feed per day and the ration should be around 70% grain. If the steer is not gaining weight rapidly enough to meet the target show weight, then a higher energy grain can be fed. The highest energy farm grain is corn and the lowest energy grain is oats, with rolled barley being intermediate.

Most commercial show rations are comparable to oats for energy content. Slowly substituting whole shelled corn for part of the commercial ration will increase the energy content of the ration. Do this over several days and be sure to mix the ration well. If substitution of a higher energy grain still does not bring about the desired weight gain, then you may try increasing the amount of feed or increasing the ration to 80% grain.

If you do this, it is critical that extra protection be taken to prevent grain bloat by providing access to Rumensin or Bovatec. Also, when feeding a high grain ration, do not allow fine particles to be present in the grain ration. It is also essential that fine particles not be allowed to accumulate in the feed box. Often as a feed bag is emptied, there will be fine particles in the bottom of the bag. Finely ground feed particles predispose a steer to developing digestive problems such as acidosis and bloat.

If the steer is gaining weight too rapidly or getting fat, then reduce the energy content of the diet by substituting oats for some of the grain and increase the daily exercise from 1 mile to 1 ½ miles. If this does not work, then reduce the grain content of the ration from 70% to 65 or 60%. As a last result, reduce the total daily feed to 2% or 2.25% of body weight.

The finishing diet should consist of approximately 80% concentrates and 20% roughages. Crude Protein levels in a finishing diet should be 12%.

Remember that it is much easier to maintain a steer's weight than it is to try and make him gain 200 lbs over a two to four week period. Take the time to evaluate how much your steer will need to gain from the time of purchase until your show date to be sure you start feeding a finishing diet at the right time for your steer.

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 Continental 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.

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 a properly finished steer.

Water and Minerals

Always provide clean water and trace mineral salt with selenium. Feed your steer on a regular schedule and weigh his feed at least once a week so that you know how much he is eating. From 900 pounds on, steers drink 10-15 gallons of water per day.

Outside temperature and animal size will determine how much water a steer will drink each day. A l000-pound animal will drink about nine gallons of water per day when the outside temperature is 50 F. However, the same animal will drink approximately 18 gallons of water per day when the outside temperature is 90 F.

It's also important to remember that your steer will need clean, dry bedding. Straw, sawdust and sand are good bedding materials. Changing the bedding frequently not only provides the steer a clean, dry place to lie down, but helps to reduce fly problems, to keep the barn cooler because manure and urine generate heat and prevents stains on the steer's hair coat caused by manure and urine.

Types of Feeds

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

Think of it this way:

- **Protein** makes them grow.
- **Carbohydrates or Fats** makes them finish and put on fat.
- **Roughages** Aide in rumen health and gives them that full deep bodied look.
- **Additives** can help them have a good hair coat.

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, but in any diet it may be replaced pound-for-pound by sorghum grain.

Barley may replace up to 50 percent of the corn or sorghum grain in a ration. Some feeders use barley products because they think it produces finish on the steer that is more appealing in its handling properties. Handling qualities are defined by the smoothness of finish a market steer possesses over its rib cage. However, water consumption, which affects the moisture content of tissues, has a much greater effect on handling qualities. Also, calves experience less bloat on corn diets than on high barley diets. High percentages of grain, up to 65 percent, will be included in finishing rations. Wheat is a good high-energy feed, but is not recommended in show diets because of its rapid digestion and tendency to cause acidosis (see the section on health).

Oats are excellent for growth and development of steers or heifers. A mixture similar in nutrient content to oats can be formulated with a high-energy source such as corn, a roughage source such as *cottonseed hulls*, and a high protein source such as cottonseed meal. A mix of 70 to 75 percent corn, 15 to 20 percent cottonseed hulls, and

10 to 15 percent cottonseed meal is about equal to the nutrient content of oats. Such a mix normally is less expensive to feed and just as effective in growing steers or heifers.

Energy density of the diet, not the type of feed (corn vs. oats), 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. Whole shelled corn is preferred to powdered corn. Sorghum grains must be processed. Calves weighing up to 450 pounds can digest whole kernel grains satisfactorily. For cattle above this weight, all grains should be processed, except for whole shelled corn, which is discussed later in the section on commercial steer feeding programs.

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. Overuse of this latter group can result in a lack of adequate rumen degradable protein, and the animal proteins are not palatable, which limits their use.

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.

Urea can substitute for natural protein in high corn diets for heavy cattle (greater than 800 pounds); commercial steer feeders will want to take advantage of this cost-cutting substitution. However, show steer feeders prefer the extra bloom that comes with natural proteins. Light-weight cattle (less than 600 pounds) must have natural protein because they cannot use *urea* to meet their total protein supplement needs.

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” 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, 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 concentrate. Once the problem is corrected, gradually decrease hay while increasing concentrate, but do not try to eliminate all hay, because this greatly increases the likelihood of nutritional ailments of *acidosis*, *bloat* and possibly *founder*.

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

Other feeds

Molasses helps prevent feed separation and settles dust in the mixed ration. Because molasses is mostly sugar and is rapidly digested, using more than 3 to 4 percent can increase the chances of acidosis and bloat.

Wheat bran adds variety to the ration and is somewhat laxative, thus making a good conditioner, if needed. Fats and oils also settle dust and increase the energy content of diets. Fat sources include whole cottonseed, beef tallow, corn oil, soybean oil and commercially manufactured protected fats.

Buffers

If feeding high levels of grain causes acidosis, it would seem that a buffer such as *sodium bicarbonate* would be useful as an additive to the diet. A buffer can be useful during the transition period from forage to grain diets or following a bout of acidosis and off-feed. However, cattle produce enough of their own natural buffers once they become adjusted to a diet. Feeding a buffer all the time may decrease feed intake (because it is not palatable) and can increase the incidence of *urinary calculi*. Levels of 1 to 3 ounces per head per day of sodium bicarbonate for cattle weighing from 500 to 1,200 pounds, respectively, are normal.

Commercial show 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. Again, 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 minerals, 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 (first consider acidosis and management), 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.

Management of feeding

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. The droppings are an excellent indicator of the steer's well-being.

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. Droppings should never be hard, but should be thick enough to "pile-up" and look oily.

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.

Cattle should be fed twice daily, 12 hours (6 a.m., 6 p.m.) apart for best gains. 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 and 6 p.m.) usually consume more total feed and have less digestive stress than they would if fed only twice daily. For most cattle, feeding two times a day is sufficient for optimum efficient growth and development

Feeding management

Cleanliness is necessary to keep steers healthy and gaining. Clean feed, clean water troughs and clean feed troughs are essential. If the feed trough becomes dirty and caked with moist, spoiled feed, steers may refuse to eat or may become sick. To keep fresh feed available, moist leftover feed should be removed from the feed box at least once a day.

Quality and freshness of feeds is very important. Do not use feed that is musty or moldy. Do not grind feeds too fine. Finely ground feeds are too dusty and are not palatable.

Make sure the calf cleans up the feed in 30 minutes to one hour after feeding. Remove feed left in the trough, because it may spoil and contaminate the fresh feed. When feed is not cleaned up, "back off" a small amount, then start slowly increasing grain again.

Don't stand over the calf while he is eating. Neryous calves may either leave the feed trough or not eat when people are around. After the steer has finished eating his concentrate, give him a flake (2-3 pounds) of good quality grass or grass-legume hay. While legume hay can be satisfactory, it has a laxative effect, and over-consumption can cause bloat. However, two to three pounds per day should not create problems.

Changes in the ration are necessary as the animal grows and fattens; however, make changes in the ratio gradually to keep the steer eating and gaining weight. Weight gain should be checked every 30 to 60 days with scales to determine how the ration should be adjusted. If your calf is not finishing rapidly enough, increase the percentage of corn in the ration. Corn furnishes the energy necessary for the marbling and finish required for that animal to grade Choice.

Reduce the amount of corn if your calf is getting too fat at a lighter market weight than desired; however, do not deliberately withhold feed from your calf to make him look "modern". That is not an economically sound practice because: (1) his average daily gain will be less; (2) more pounds of feed will be required to put on a pound of gain; and (3) the carcass may not be as desirable if it lacks the marbling required to grade choice. Above all, use feeds that are available locally at reasonable prices. Then, feed a ration according to the weight of the steer, environmental conditions and desired goal for your project.

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 indicates 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 1 hour, 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*/not *infusion* 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 much more serious bloat.

To treat minor bloat, keep calves on their feet and walking, uphill if possible with head up. *Drench* with 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 1/2-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. This should be performed by a veterinarian 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 (sorghum is worse than corn), too much molasses, too much very high protein forage such as alfalfa or excellent grass hay and lack of any longstemmed 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.

Handling the calf

Animal selection, feeding and nutrition and general health maintenance are only part of an FFA beef project. You also must handle, train and exhibit your animal. It takes proper skills, patience and practice to correctly train a calf for show.

The first month is the time when the animal will develop a trust and sense of security with its owner. It is imperative to work slowly and calmly during the early part of the training stage.

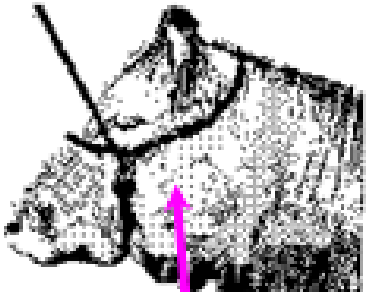
After you receive your calf, allow 7 to10 days for the calf to learn the new environment and surroundings. Then begin working with the calf. Remember: Never work alone when first breaking cattle to lead. Always have a helper in case the calf becomes unruly.

Start slowly. Try rubbing and scratching the animal while moving quietly. This should allow the calf to become familiar with your mannerisms. Begin scratching around the top (back) or tail head of the animal, not the head or face.

Halter Breaking

The calf should be halter broken as early as possible to keep everyone and the calf from getting hurt. The most preferred halter to break calves is one with a padded nose band. This type of halter helps prevent serious injury and does not scratch the calf's nose.

For proper fit, the nose piece should be up over the nose, just under the eyes. The halter should be moderately loose. Tightness can cause sores behind the ears. should be up over the nose, just under the eyes. The halter should be moderately loose. Tightness can cause sores behind the ears.



After haltering the animal, apply tension to it a couple of times before releasing. Get your hands on the calf. Begin scratching around the tail head and down the back. Keep your hands away from the steer's head! This irritates the calf and may result in butting. Nothing you can do will help

calm a steer more than scratching and brushing. Allow time for the steer to get used to and respect the halter.

Always remove the halter each evening. The calf could receive blisters on the head, face and feet from rope burns if the halter remains on all day and night.

After the calf is broken to halter, do not leave the halter on unless the calf is tied or held. The calf must learn that it will be restrained whenever haltered.

Training to Stand

The entire purpose in tying up a calf is to teach him to give to the pressure on the rope. If he can teach himself to do so, he will respect the rope and it will make it easier when you start teaching him to lead. What you want to avoid is to allow the animal to jerk loose from you. If he does this a few times, it will quickly become a habit.

Once your steer adjusts to experiencing resistance on the rope, secure an inner tube to a post. Tie the calf to the inner tube. As the calf pulls back, the inner tube will stretch and as the calf comes forward, the inner tube will relax. The calf learns to stop the pressure on its head by stepping forward. Never leave the calf unattended when tying the first several times! It is also a good idea to place feed, hay and water in front of the calf to reward it for doing a good job.

When the calf is tied up the first time, don't pester him by trying to pet him. Allow him to concentrate completely on giving in to the pressure of the lead rope. After the calf has been tied up for an hour or two, take the halter off him and herd him back to the pen (if different from the one you tied him in). He should be standing quietly and not pulling back on the lead rope when you release him. *Some cattlemen recommend leaving the halter on and letting the calf drag the lead rope for two or three days. However, there is a danger in the calf getting hung up by the lead rope or in the case of a range calf, being spooked and jumping a fence.*

Continue tying your steer up every day for 30 minutes at a time until he is comfortable standing there. While your steer is standing start brushing him, rubbing him and talking to him.

Training to Lead

To teach your steer to lead, use the pull, release and reward method. Start by putting pressure on the halter, if the steer moves towards you favorably slightly reduce the pressure. Continue moving forward rewarding your steer by reducing the pressure on the halter with each favorable step. Do not apply continuous pressure. Always pull and then release the pressure as the calf responds. When the animal learns that the rope loosens when it walks, it will lead. Do not try to lead a calf that is not halter broken because this can encourage *breakaways*. If he doesn't want to move – repeatedly tug firmly on the lead rope without giving him any slack. Remember to be patient but

persistent. Remain calm but firm. Repeat this method every day for a week and your steer should start to lead with ease.

- ✦ Do not hit the calf with any object!
- ✦ Do not pull on the rope with hard jerks!

Do not let him take his nose away from you or put his head down low and do not wrap the rope around your hand. If he tries to take his nose away, you can anchor the elbow of your right arm in his neck to provide leverage to pull his head back. If he is pulling badly, you can also bring the rope in front of your hip and anchor your left hand behind on your left seat bone and pull the calf's head with your hips and shoulders. If he does not want to move out, un-track him as described above for lambs. The assistant can also help urge the animal forward from behind. If he runs, you and your assistant should try to stay diagonal to his head at a 90 degree angle to obtain additional leverage on the long rope and pull his nose to you. However, if you don't let him take his nose away from you or get his head down, he most likely will not run.

Steers should be walked daily after they are halter broke. This will keep them firm and help ensure a good appetite.

Setting Up

You should begin "teaching" your steer to "set up" several months before the show. "Setting up" is the proper positioning of its feet. Every calf must be taught to stand correctly in the show ring. You cannot expect a steer to do well if you haven't worked with the animal. Patience is the most important factor in teaching your calf. Some calves learn more quickly than others and some require much more time and training.

You may begin training your calf with a work halter; however, you will need a good show stick. You don't need to have a fancy, expensive show stick. A wooden stick will do fine if it's not too heavy and is fitted with a sturdy hook on the end. The hook is used to position the feet. It should be sharp enough to get response but not sharp enough to cut. The stick should be long enough to reach your steer's back feet.

The rear feet should be set square to best show off the animal's rear quarter.

When you first introduce your calf to the stick, hold his head up high and very slowly rub under his belly with the point or hook away from the belly. The steer might want to kick at it and move about, but keep working with him until he decides he likes the scratching and will stand still.

The front feet should be set to line up with the shoulders.

When the calf will stand still, use the toe of your boot or the stick to place his front feet. Move the foot back by pressing on the flesh just above the front of the hoof. If the foot needs to move forward, pull up on the dew claw with the toe of your boot or the hook on the stick. Position the back feet the same way, but always use your show stick on them. You will want your calf to stand with a leg at each corner of his body. It will take practice for you to learn the correct position for the feet. Do not let him get his feet too far under him or too far behind him.

Here are a few important hints in teaching the calf to set up:

* Be patient.

* Never lose your temper and hit the calf. The steer will become angry and frightened of the stick.

* Scratch his belly. When you stop the calf, scratch his belly to settle him and then place a foot; scratch his belly again and then place another foot.

* Use the hook in the stick to keep his top line straight.

* Do not overdo. If your calf is working well, set him up a few times, then leave him alone.

Slight backward or forward pressure on the halter lead also is useful in positioning feet. The feet should be set squarely under the calf. One leg should be under each corner of the body. The calf should appear natural in its stance.

After much training and practice, the calf will soon understand what is expected and will begin to set up itself. Teach the calf to stand in one place for 10 to 15 minutes to help it build stamina for the show ring.

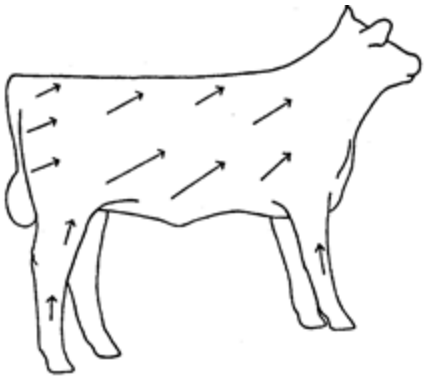
When a calf is standing correctly, use the show stick to rub under the belly. The calf will associate standing still with getting its belly rubbed.

Washing

Good grooming requires frequent washing. You should wash your steer once a month until about two months before the show, then start washing once a week.

1. Brushing down with rice root brush to remove dust and dirt.
2. Wet calf all over.
3. Scrub with mild soap, using a scrub brush, using plenty of elbow grease.
4. Rinse well with cold water. Be sure to do an extra good job of rinsing, because soap left on the steer is the main cause of dandruff.
5. Scrape excess water from hair with back of scotch.
6. Brush hair up with rice root brush.
7. Comb hair up with a scotch comb.

Often a repeat washing and rinsing is needed to get the steer completely clean. A final rinsing of one capful of milk oil dip (coal tar) in a bucket of water will make the hair work better and help control flies.



Hair Care

Brushing, especially in summer helps promote hair growth. Wash weekly with a mild soap and rinse thoroughly. Rinsing often, daily if possible promotes new hair growth and helps train the hair. Begin by blowing all the dirt and debris out with a blower. After washing or rinsing, brush all of the hair downward removing all curls. Make a part down the top from shoulder to tail head, then brush in the angles shown in the illustration. Blow the animals hair in the same direction th at the animal was brushed, keeping all the hair laying in the same direction will make your animal look smoother and is the key. If you do make a line or curl with the blower, simply brush the area down and then forward and blow again. When the animal is dry, mist with show sheen and comb and blow in. Use an oil product, pink oil or Revive, once a week to keep the hair from drying out. If the hair is blown consistently it will begin to train and will become easier to manage.

Remember:

- Hair is genetic.
- You can help to keep the hair that your calf has by brushing and combing.
- Keeping him clean.
- Good air circulation is important.
- Keep him out of the sun.
- Give bath or rinse as often as possible.
- Comb the hair down first.
- Then forward.
- Then up.

One of the biggest challenges we face in hot temperatures with show steers is keeping the hair long in order to have something to work with when the steer is blocked for the show. Some things which can be done to help keep hair longer are: 1) keep the calf in the shade during the daytime; 2) use an electric fan or misting system in front of the calf's stall; 3) rinse the steer (water only) during the cool of the evening and comb the hair upward and forward with a Scotch comb; and 4) allow the steer to be in an outside lot during the evening.

Routine is Important

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. While the calf is eating, you should have few problems placing the halter on the calf and tying it to a fence.

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, lead the calf to a wash rack and rinse it with a water hose and nozzle. After rinsing thoroughly, train the hair by brushing everything forward with a *rice-root brush*. The summer is not the time to grow hair, but is the time to teach and train. 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 and brushing, move the calf to its clean stall. It is a good idea to keep the calf tied up until it is completely dry. This will build stamina to more effectively prepare it for show. After a couple of hours, the steer can be tied down and allowed to rest. The calf should rest until late afternoon. At this time, the owner should clean the stall and rinse and brush the animal again if possible.

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 stalls and surrounding areas, and prepare for the next day.

Practicing 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.

As with grooming, the more you practice showing the animal at the barns, the better the animal will act in the show ring. The animal should be trained to stand in a rear view as well as profile view and practice leading and turning circles that they will have to do in the show ring. Both you and the steer will most likely be frustrated the first few times of practice, but start with small expectations and progress with more work.

It is sometimes helpful to use a show halter and do not practice right before feeding time so they will not be as anxious. Practice walking the animal into the profile position which is most natural for the calf.

Here are some 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.

When presenting the steer to a judge on a profile, place the far side foot one foot's length in front of the foot closest to the judge. This will create the perception of depth and thickness. It is also helpful to have an assistant observe the best foot placement for visual evaluation of the steer. Another purpose of the show stick is to correct a sagging back. By rubbing the belly with the hook on the show stick, you can encourage the steer to raise his back. You can also use the show stick to level out the topline by gently rubbing along the spine.

Steers should be taught to travel with the head up with your right hand 6 to 12 inches away from the head. Excess rope or strap on the lead is neatly coiled in the right hand. 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. Using a show stick with a blunt point on the end, teach the calf the use of a show stick by stroking its underside while it is tied. Stroke the animal, then place the foot in the correct place. After the calf moves its feet properly when tied, it is ready to be led and have its feet placed while you hold its halter lead. 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.

The show stick is carried with the handle up in the left hand. Never let a steer turn his nose away from you as you are leading him as this allows him to use the weight advantage he has in his shoulders to pull you around. Teach the steer to lead forward

with pressure and release so you are not having to tug on him all the way around the ring.

When training a calf or working and brushing hair, tie the calf to a high rail rather than placing it in a blocking chute. Working cattle in this manner tends to make them easier to handle and makes them more accustomed to strange movements at the show.

Two weeks before the first show of the season, start handling the calves just as you will at the show. A good practice is to make some type of “tie outs” at home along a fence and tie the calves as you will at the show. The bedding should be the same type you will use at the show. Calves should be tied in the barn all day and exercised each afternoon. Another method is to tie the calves during the day and turn them loose in the lot or small trap at night.

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. Some handlers add small amounts of molasses to the water to get the steers accustomed to drinking sweet water. The molasses will hide the taste of chlorine in city water.

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.

Grooming for the Show Ring

Before you enter the show ring you must "groom" or "dress" your steer. You can do many final touches to have him look his absolute best.

The day before the show, the steer is washed well with a mild dish soap like Ivory® or a livestock shampoo like Orvus®. Have your steer clean and thoroughly dry. Use a blower to remove the dust. Begin by "boning" (pulling hair up) his legs. Glycerin saddle soap (bars) or spray adhesive may be used to hold the hair up. Rub the soap downward on both front and rear legs. Be sure to cover any area of the legs where the hair does not want to stand up by itself. Do not apply the soap any higher than the forearms in the front and the stifle region in the rear. Pull the hair up with a Scotch comb.

If the hair won't hold, apply more soap. If you use a spray adhesive, spray only a small portion at a time and immediately comb the hair up. Soap added before adhesive will allow the comb to go through, whereas adhesive alone will not allow the hair to be combed. When the leg hair is completely combed up, spray the legs and feet with clear lacquer. The lacquer will help hold the hair and will cover the chalky look of the soap.

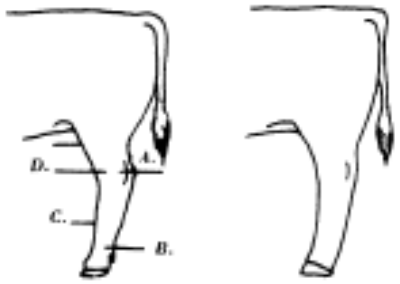
Next apply saddle soap or adhesive to the tail head and use your comb to pull the hair up. Use scissors or clippers to clip the tail head down as nearly square as possible. There are many livestock products to use on the body hair to help hold it, such as foam or setting solutions. However, if you have done a good job of rinsing and breaking the hair, you will not need to use much of these products.

To give the rear quarters more flare and thickness, block the portion of the leg below the quarter close. Pull the hair out on the stifle and quarter area. Clip this area smooth, but leave the hair relatively long. If the hair on the legs is pulled up, it can be trimmed to give an appearance of proper set and to add dimension to the leg. Because the hair must be up, you may want to wait until the steer is dressed for show to clip the legs.

Correcting the Sickle Hock

Most incorrect legs are the result of too much set to the leg, or sickle hocks. To make the crooked leg appear straighter, pull the hair up and into the crook above the hock. Clip all the hair off inside the hock and taper down the back of the leg. On the front of the leg, opposite the hock, pull the hair up and forward and leave long. From this point upwards to the flank, clip the hair relatively short.

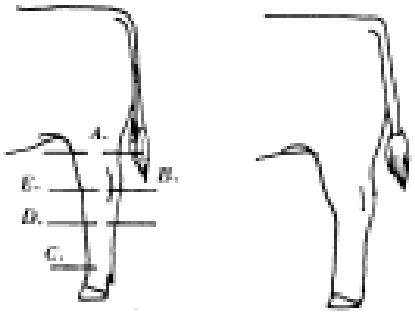
A. Comb hair into the crook above the hock.
B. Taper hair on back side of leg. Clip hair off inside of hock.
C. Comb hair up and forward and leave long.
D. Clip hair short in this area.



Correcting Post-Legs

Legs which are too straight, or "post-legged," are corrected the opposite way from crooked legs. Clip close above the hock and pull the hair back on the hock. Pull the hair up and forward on the lower front side of the cannon. Clip the front area opposite the hock close, and from there upwards pull the hair up and leave long.

A. Clip hair close to give effect of an indentation.
B. Pull hair back on hock.
C. Comb hair up and forward and leave hair longer.
D. Clip hair short to generate a slight angle.
E. Taper longer hair from flank to shorter hair at hock



Tying Tails

The tail should be ratted and tied up to make the steer appear taller.

1. Comb all the knots out of the tail.
2. With a teasing comb, begin ratting a few strands at the top and move downward.
3. Then the tail is teased into a ball, gather up a few hairs and twist into two strands.
4. Use the strands to pull the ball up, and tie them tightly around the tail. Use spray adhesive or hair spray to help secure the hold. Plastic tail ties may be used but must always be removed.

Decide at what height the steer's tail looks best. If it is too high, he will look off balance. If it is too low, no improvement has been made. Trim the long hairs off to make it neat. A good starting point is directly in the twist.

The final step in dressing is to apply a light oil to the hair coat. The oil should be applied very evenly through spray or with a rag. The steer should look bloomy and fresh prior to entering the show ring. Avoid a gummed up, messy appearance caused by overuse of grooming products.

Putting up a Tail

1. Comb out the tail. Then rat a small part of the hair near the base of the tail and spray with glue.
2. Put a tail tie through the knot of glued hair.
3. Turn the tail up toward you and to the tail shaft itself. Pull the tail tie tight around the tail shaft at the proper height. Trim excess tie. Strands of twisted hair can be used to tie tail up.
4. Rat the tail hair completely and form it into a symmetrical ball, using glue as needed. The hair can be pulled to one side or up around the sail bone. Spray the entire switch with glue. Streaks N' tips (no paint) and cover with a plastic bag.
5. The completed tail should be in a position to add balance to the animal. A tail too high will make the animal look heavy-fronted.

At the Show

You are now ready to go to the show. Plan to get to the show location at least a day ahead of the actual show. On arrival at the show, locate where your steer is to be tied. Generally, your steer will be tied with those from your school. Once your tie assignment has been located, bed down the steer and make it as comfortable as possible. Provide a little hay and water, but let the steer rest and cool before feeding grain.

After the steer has rested overnight, it is time to wash and get ready for the show. Carry out the appropriate procedures outlined in the preceding section under show preparation. You should only have to do a minimum amount of work at this time.

It's Show Time

Following are some suggestions that should be considered before entering the show ring and showing the steer.

1. Know when the class is scheduled in which your steer will be exhibited Check the show schedule the night before. Locate your steer's numbers and your name and class number.

2. Get to the "line up" area on time. The class that your steer is in will be "called" or announced 15 to 20 minutes before the actual class will be shown.

3. Before you leave for the "line up" area, be sure that the steer's halter is properly adjusted The "nose" strap should be adjusted relatively high across the nose.

4. You should have your show stick and a brush or comb with you.

5. As you prepare to enter the show ring, remember that your job is to present the steer at its best advantage at all times. Draw the judge's attention to your steer rather than to yourself.

6. Walk into the ring on the left side of the steer with lead strap neatly in your right hand. Lead strap should be shortened to allow you to control the steer. An excessive lead strap can cause problems.

7. When leading the steer, always carry the show stick in a vertical position in your left hand. Give the steer about 2 feet of the lead strap. If the steer is held closer, the steer will fight and if given more than the two feet, he will be hard to manage.

8. Pull your calf in line and keep a minimum of 3 feet of space between your steer and the next one. This space will allow you to show your steer and the judge to see your steer.

9. When setting up your calf, change the lead strap to your left hand and use the show stick with your right. Set up the calf as quickly and quietly as possible. Set the animal up with one leg squarely under each corner of his body. Keep the steer's back level and straight and his head up.

10. Always know where the judge and the ring men are in the ring. Be alert. Move promptly when told.

11. In moving your steer out the line and moving into another position, there are three general situations you are likely to encounter:

> (a) The first is when you are pulled in very close to the rail. In this situation, the only thing you can do is back your steer out of the line and lead him to the new position.

(b) The second is when you are near the center of the line and have plenty of room between your steer's head and the rail. When told to move, pull your steer forward toward the rail, turn to the right and move back through the space the steer just vacated. When you have moved to the center of the ring, you may move into the position the judge and/or ring assistant have indicated.

(c) The third situation is when you are standing near one end of the line and have adequate room between your steer's head and the rail. When instructed to move, simply pull your steer forward, circle the end of the line and pull your steer back into the position the judge has instructed.

12. Watch the steer in front and behind you. Do not walk too closely to the steer in front of you. If the steer in front of you stops, tap him gently on the rear with your show stick until he moves forward.

13. When the judge signals the line of steers to move, circle the show ring in a clockwise direction.

14. When the judge walks up to check your steer, rub the show stick slightly under his stomach. This will tend to quiet the steer when the judge moves to the front of your animal, switch your show stick to your left hand and the lead strap to your right hand and step back on the left side of your steer so the judge can view the animal. If you think your steer is underfinished, turn your steer's head towards the judge as he or she handles your steer. If you think the steer is overfinished or too fat, turn your steer's head away from the judge to firm up the steer. Carry a Scotch curry comb in your pocket to smooth the steer's hair back up after the judge handles him.

15 When in the show ring, be courteous and quiet and deliberate in your movements. Do not become excited when you show because the steer can sense this and it tends to excite him.

16 Be a good sport. Be careful to not over show. The basic purpose of showing is to exhibit your steer for the best appearance. A show by the exhibitor will draw attention away from the steer.

17 Keep your mind on your work. Do not let your steer stand.

18 Remember, never stop showing until the judge has made his final decision on the class.

19. You may be requested by the judge or ring assistants to move your steer to another location in the line. If in this situation, pull your steer forward toward the rail, turn to the right and move back through the space the steer just left. When you have moved the steer out toward the center of the ring, you may move to any position the judge or ring assistants have indicated.

20. A polite gesture to the judge is to close up large gaps when animals are moved out of the line. When you are called upon to switch places in a side by side lineup, move through the line and push on the animal's head to turn to the right and come back through the hole you just left. Move to your new slot from the rear of the animals.

BROILERS

Before raising broilers for competition, you should ask yourself one question: “Am I up to the challenge of caring for broilers for several weeks?”

Birds require regular care and feeding throughout their lives. It is virtually impossible to have birds “catch up” once they have fallen behind on weight or fleshing. Raising birds requires an extra commitment of time, patience, dedication and concern for the animals involved. Persons who cannot put forth the effort required should probably not begin the process.

Raising winning broilers involves four general steps:

- Providing the birds with an environment conducive for growth and development,
- Feeding a diet which adequately supplies all of the bird’s nutritional needs,
- Choosing the birds with the best potential to win and
- Keeping adequate records.

Planning and preparing adequate facilities before the arrival of the birds allows birds to adapt to their new home free of stress. Facilities should provide birds with ample space, plenty of ventilation, proper temperature and adequate protection from the elements and predators. Be prepared for the chicks two days in advance. Put at least 4 inches of litter on the floor of the cleaned, disinfected house. Wood shavings, cane fiber, coarse dry sawdust, peanut hulls or rice hulls make good litter. Hay makes very poor litter. Keep all sticks, boards and sharp objects away from the broiler house. Construct a cardboard brooder guard (brooder circle) to keep chicks near heat, water and feed. The brooder guard should be 18 inches high and must be a minimum of 5 feet in diameter for 50 chicks. When chicks are seven days old, remove the guard and allow them full freedom of the pen.

While good facilities and feed which meets the nutritional needs of the bird are crucial for rapid growth, poor management or bird care can undermine all the previous efforts. Checking the birds, particularly at times of the day when the temperature is changing, and making appropriate adjustments are the only ways a proper environment can be maintained.

The good flock manager will become familiar with the birds by watching and listening before disturbing the birds. Contented young birds are often active and chirp softly, while uncomfortable or sick birds vocalize loudly, huddle together or act listless.

A good manager will not tire new chicks or young poults since excessive handling and stirring will cause birds to be more susceptible to stress-related disorders. Young birds require more frequent and longer rest periods than older birds. A good rule of thumb is to allow new chicks (0 to 6 days of age) a minimum of two consecutive hours of

undisturbed time four times a day followed by eight to ten hours of undisturbed nighttime rest.

Modern strains of broilers are almost a biological phenomena because of their ability to achieve rapid growth with excellent feed conversion. However, genetic selection, particularly for broilers, has sacrificed normal early feather development and hardiness for rapid meat development. This means that birds remain more vulnerable to temperature extremes for a longer period of time. In addition, these rapidly growing birds have very high nutritional requirements, and there is little flexibility to overcome poor diets or extremes in temperature and ventilation even for short periods. Thus, it is essential that birds have everything they need in the way of environment and nutrients so that maximum performance can be achieved.

Birds, like other animals, have a sense of whether the temperature in their environment is hot, cold or just right. When the birds sense that the temperature is just right, they are said to be in the middle of their "thermoneutral zone." In this thermoneutral zone, birds expend a minimal amount of energy keeping warm or cooling off. If the temperature is higher than their thermoneutral zone, birds expend energy keeping cool and can be heat stressed. If the temperature is lower than the thermoneutral zone, birds expend energy maintaining their body temperature. Research shows that birds, particularly broilers, perform best when kept at a temperature that is on the low end of their thermoneutral zone.

Electric heat lamps (infrared bulbs) are good heat sources for brooding chicks. Two 125-watt bulbs per 50 chicks are recommended. Make certain lamps are secured so they cannot fall to the litter and create a fire hazard. The lamps should hang so that the bottoms are 18 to 24 inches from the litter. Lamps can be raised or lowered depending on temperature conditions. Place waterers a good distance from the lamps to prevent splashing water from cracking the hot bulbs.

When chicks are comfortable, they will bed down in a semicircle around the perimeter of the heat zone. If cold, chicks will crowd under the heat source. If too warm, they will move to the outer limits of the brooder guard. Providing birds with an environment in their temperature comfort zone means that the energy they might have used adjusting their body temperature will now be used for growth and development.

Chilling can stunt chicks. In cold weather the heat source should be turned on 48 hours before chicks arrive to adequately heat the litter. Table 1 provides estimates for desirable temperatures during the development process.

Table 1. Temperature Guideline for Broilers and Turkeys

Age (Days)	Broilers (F°)		Turkeys (F°)	
	Day	Night	Day	Night
0-4	88	90	90	92
4-8	86	88	90	92
8-14	84	86	88	90
14-21	82	84	86	88
21-30	80	82	84	86
30-35	78	78	82	84
35 on	76	78	80	82
Over ten weeks	--	--	76 or cooler	78 or cooler

These temperatures are targets. When possible give birds access to additional space which is up to ten degrees lower in temperature. This gives birds a chance to pick their own optimum environment.

As birds age they develop the ability to regulate their internal temperature and, therefore, require less and less supplemental heat. Since supplemental heat is necessary for at least the first week for broilers, placing feed pans or the water source near but **not** directly under the heat source is important. Both water and feed can become too hot for the birds to eat. If feed or water is warm when touched with the wrist, then it is too warm for the birds to eat.

The rapid growth rate of the modern bird means that oxygen requirements are relatively high. Modern birds are very intolerant of stuffy, stale environments. **Good ventilation to provide fresh air is critical.** While day-old chicks should be protected from drafty environments, it is still important to provide birds with a source of fresh, clean air.

Floor space and type can have an impact on bird performance. Raising birds on wire will not produce winning birds. Plan to provide a minimum of two square feet per broiler after four weeks of age. The quality and type of bedding material utilized in the grow area can have a tremendous impact on performance. A good bedding material should stay dry, provide a cushion for the feet and breast of the birds and not encourage the birds to consume it. Bedding material should also not be a source of disease. Bedding material that is wet, moldy or dusty can lead to respiratory problems and even death. Once birds become sick because of moldy bedding material, they cannot be cured. Kiln-dried pine shavings are the best material. Rice hulls work very well for broilers.

Good moisture levels for bedding are 20 to 35 percent. A good rule of thumb to determine when litter is becoming too wet is to squeeze a handful of litter material and, if the material sticks together, it is too wet. Good air movement across the bedding material can help minimize the moisture content. Do not place extra equipment or materials in bird pens. Birds do not require perches. Birds perform best if given as many hours of light as possible with at least one hour of darkness. The one hour of darkness is more of a safety factor. If the lights ever fail, the birds are used to a darkness and will not panic and pile on each other. Consistent lighting (natural and artificial) improves feathering and increases weight. Hang a 40-watt bulb at least 6 feet above broilers after removing heat lamps.

Feed

Raising poultry for competition involves providing the most appropriate feed so that the best bird can maximize its potential. Understanding which nutrients are critical for muscle, skeletal and immune system development helps in choosing the most appropriate feeding program.

Optimum performance of broilers is dependent on proper nutrition. The feed dealer should be informed of the type of feed required at least two weeks before chicks arrive so that fresh feed can be ordered. It is absolutely essential that broilers receive a quality feed containing at least 20 percent protein. Lower protein feeds will not do the job.

If broilers are to be shown in a show without a maximum weight limit, chicks can be started on a high protein (26 to 30 percent) turkey or game bird starter to stimulate additional growth. Feed the higher protein feed for two to four weeks. Switch to a broiler feed for the remaining feeding period.

Feed should supply balanced and adequate levels of protein, energy, calcium, phosphorous, vitamins, trace minerals and salt. Protein is required to build muscle tissue and to maintain the immune system. Energy is required for birds to eat, move and breathe as well as build and maintain muscle. Calcium and phosphorous are needed for proper skeletal development. Vitamins, minerals and salt are required for the birds to function and grow normally. As the bird ages, the growth rate begins to slow; therefore, protein needs begin to drop while energy needs increase, because now the bird must not only grow but must also take care of the tissue it has already made. Since growth often occurs in rapid spurts throughout the growth cycle, a continuous supply of clean and fresh feed and water is essential so that when growth occurs, the fuel is available.

A big key to successful show bird rearing is frequently stimulating the birds to eat. Birds that are rarely stimulated to eat will typically gorge, filling their crops to the maximum when feed is available. Yet maximum growth occurs when birds are trained to eat a series of small "meals." Training birds to be "meal eaters" should start at day one and be consistent throughout the life of the birds. Training can be as simple as shaking the feed or pouring a scoop of feed into the feed trough. Since poultry are creatures of habit, frequently stirring the birds in a calm quiet manner can also train the birds to eat several times a day. At first birds may be frightened, but if training is continued in a calm and consistent manner, birds quickly learn that the activity means fresh food.

Table 3. Weight and Feed Consumption Estimates for Female Broilers

Age (Days)	Weight (lb)	Cumulative Feed Consumed (lb)
7	.35	.25
14	.89	.92
21	1.71	2.15
28	2.78	3.87
35	3.95	6.04
42	5.03	8.50
49	5.96	11.10

Since eating and digesting feed can cause heat within your birds, avoid stimulating birds to consume feed when environmental temperatures become excessive or when birds show signs of heat stress. Research shows that what birds do eat during heat stress periods is poorly utilized for growth and development. During extreme heat, encourage birds to eat in the evening or early morning hours.

Excellent high protein game bird/turkey starter feeds are available and recommended for both broilers and turkeys for the entire grow-out period. For broilers, slowly add corn chops up to one-third of the ration for the last 10 to 14 days before the show. While commercial broiler feeds are ideal for industry production, they are designed to produce the most meat in an economical manner. Since the goal of raising birds for competition is to maximize the performance of the very best birds and not the entire flock, commercial diets may not be the best choice.

A feed containing a coccidiostat (medication for the control and prevention of coccidiosis) is recommended, particularly if birds are grown on litter. A growth enhancer, such as probiotics and antibiotics, in the feed also helps birds reach their best performance by optimizing nutrient absorption and preventing the development of disease-causing microbes in the digestive tract. The use of steroids is prohibited in modern broilers and turkeys. Table 3 shows the average weight by week for turkey hens fed the diets in a feeding trial conducted at the University of Arkansas.

An adequate level of vitamins in the diet is required to prevent leg weakness. Adequate vitamin intake can be ensured and leg problems minimized by adding water soluble poultry vitamins and electrolytes to drinking water at the manufacturer's recommended level for the first seven days. Do not add vitamins and electrolytes past this period. Continued high levels can create health problems.

All broilers should be able to eat at once. One pie or cookie pan for feed and one chick waterer per 25 chicks are needed the first seven days. From one through four weeks, one tube-type feeder per 25 broilers is required. After four weeks, one tube-type feeder is needed for every 15 broilers.

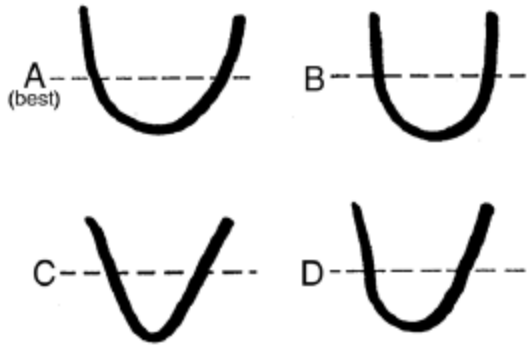
Broilers must have access to clean fresh water at all times. One 2-gallon waterer per 50 chicks is required from one through four weeks. One 2-gallon waterer per pen is required after broilers are culled at the end of the fourth week. Waterers should be rinsed daily and scrubbed twice weekly. Using enclosed water systems, such as nipple drinkers, has saved labor and prevented the spread of numerous water-borne diseases within the poultry industry. However, nipple waterers are not recommended for competition birds because they may force the birds to work harder to get a drink. Under normal conditions, birds drink 2 pounds of water for every pound of feed eaten, so limiting water intake will likely decrease feed intake which will, in turn, decrease growth.

While exercise programs help firm muscle in beef and lambs, there is little evidence that exercise for broilers enhances muscle growth particularly in the breast. Genetic selection is the factor responsible for increasing the breast meat size. Forcing birds to walk up ramps or raising the waterers and feeders above back height will not increase the size of the breast. Feeding the best birds so that all of their nutritional needs are met, encouraging the birds to eat often and providing the birds with an environment conducive for growth enhance bird growth more than exercise. Feeders and waterers should be raised as the birds grow. Just below back height is a good target for both.

Selection

The largest, heaviest birds with the most breast meat are generally judged best in competition. Defects, such as crooked legs, wounds or broken bones, disqualify birds. Keel bones, which are generally examined early in the judging process, should be straight and long.

Figure 1.



Breast shape should be as close to a rectangle as possible along the entire length of the keel bone. To determine the breast width and depth, place your palm on the breast bone, thumb on one side of the breast, fingers on the other, then slide your hand up and down, grasping the breast to determine the amount of total meat. The more the breast resembles a “U” the better. (See Figure 1.) The biggest, fastest growing birds at the beginning of the grow cycle may turn out to be males, so always have more than seven or eight potential show birds. Do not wash birds during grow-out or prior to show to minimize risk of injury.

Examine broilers carefully for physical defects that would cause them to be sifted or downgraded. These include:

A. General Defects

- Cuts and tears
- Broken and disjointed bones
- Skin or flesh bruises anywhere other than on the wing tip
- Breast blisters
- Insect bites
- External parasites (lice, mites or fleas)
- Extremely dirty birds
- Discoloration (Poultry with black and green shanks sometimes have extensions of these pigments into the skin of the drumsticks and abdominal membranes. These birds should not be shown if better quality broilers are available.)

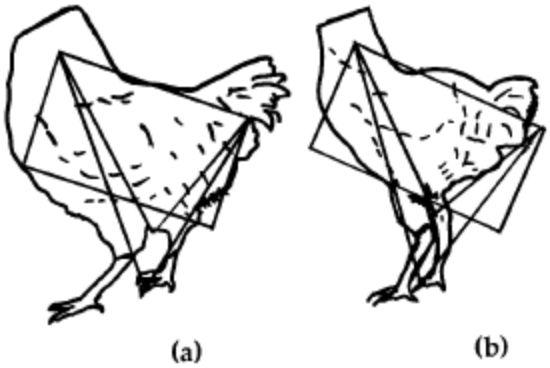
B. Feather Defects

- An abundance of pin feathers, particularly those just coming through the skin
- Areas of skin which may be discolored because of broken quills or sunburn resulting from inadequate feathers—"barebacks"
- A lack of feather covering over the keel area of well-fleshed birds is not a defect and must not be considered as such.

C. Carcass Defects

- Breasts which have dented, crooked or knobby breastbones, or are abnormally shaped
- Backs which are narrow, crooked, humped or hunched
- Lack of body depth
- Legs and wings that are deformed
- Defects such as crooked toes or beak are not important and should be disregarded

The following facts must be carefully considered when selecting the exhibition pen.



A bird of normal development (a) will more nearly fill a rectangle than will a bird of low vitality or (b) one whose body more closely approaches the shape of a triangle.

A. Conformation *(describes the skeletal system or shape of the bird)-25 percent*
This term is often mistakenly used to describe the amount and distribution of flesh on the broiler. The ideal shape of a meat bird is rectangular.

Length-the breastbone should be long, straight, free from defects such as dents or knobs and carry well forward and back between the legs. The breastbone should be parallel to the backbone.

Width-the back should be long and wide with a broad spring of ribs.

Depth-the body should be full and deep. Body depth must be consistent with breast width. Length, width and depth should be well balanced.

B. Fleshing *(the amount and distribution of muscle or flesh on the broiler)-30 percent*
The breast , thighs and drumsticks carry the bulk of the meat and should be examined closely. The breast meat is the most valued part of the broiler and should be given maximum consideration. The breast muscle should be wide throughout the length of the keel bone. The muscle should carry well up to the crest of the bone. A dimpled breast is desirable. The thighs and drumsticks should be heavily muscled.

C. Uniformity-*30 percent*
Each bird in the entry should be as near a carbon copy of its pen mates as possible in size, shape, fleshing and finish. If one bird has a defect, it will affect the rating of the entire pen.

D. Finish *(amount of fat in and immediately under the skin)-10 percent*
Without an adequate finish, a well-fleshed broiler will lose a great deal of eye appeal. The fat deposition between feather tracts on the side of the breast is the best indication of finish. Do not confuse finish and pigmentation (skin color).

E. Skin Pigmentation-*5 percent*
Skin pigmentation results from the deposition of yellow or yellow-orange pigments in the outer skin layer. It is not an indication of finish. Only minor emphasis should be placed on pigmentation.

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Closely associated with final selection of show birds is culling birds during the grow-out procedure. Birds that become ill or develop leg deformities will never be show quality.

The best policy is to remove the birds from the flock to prevent them from jeopardizing the health of the entire flock. They can become a source of disease for the remaining birds and may jeopardize the health of the entire flock. Removing a few sick birds is more humane than allowing all the birds to become ill.

Transporting to Show

When the final selection for the show has been made, the last step is choosing a safe container for transporting the birds to the show. Pet crates or large cardboard boxes with new bedding material are ideal. Also, choose a container that will allow birds to remain cool.

Record Keeping

While record keeping may seem, at times, like so much busy work, the records you keep provide a basis on which to make decisions regarding your birds. Better records mean better decisions. In addition, documenting management procedures this year can mean that you improve the management of your birds next year.

Each participant should keep a daily diary about their poultry production experience. This diary should include documentation of facility particulars, high and low pen temperatures, humidity, feed consumption, weight gains, bird contact hours and a record of bird health.

High and Low Pen Temperatures

Thermometers are available for recording the highest and lowest temperatures occurring in the pen. Collecting and writing down this information daily provides information about the environment birds are subjected to when left unattended. Early detection and correction of “cool” nights or “hot stuffy afternoons” prevents heat or cold stress in birds which leads to poor performance.

Humidity

A wet bulb thermometer or hygrometer can be made or purchased at a local poultry supply store. To make a wet bulb thermometer, snip the end off a cotton shoe string and slide it over the end of a regular thermometer. Next dip the end of the wick in a pan of water that is room temperature. Water should wick up the string and cover the bulb. Take a reading after water has covered the bulb for 15 minutes. A comparison of wet bulb and dry bulb (regular thermometer) temperatures using a psychometric chart gives the relative humidity (RH) or the amount of moisture in the air.

Weekly Feed Consumption

Monitoring weekly feed consumption gives information on how much feed is required to produce show birds, and it allows the measurement of feed conversion. A comparison to standard feed conversion information also sheds light on how well birds are using the

feed consumed and if feed wastage is excessive. Be careful when handling birds to minimize damage to birds.

Weekly Weight Gains

Measuring weight gain on a weekly basis provides accurate information on bird progress. By comparing weight gains to documented growth data, poor performance can be quickly detected and corrected. Growth monitoring should also include a cull plan so birds that begin to fall behind in performance are removed. This will reduce the competition for food among the remaining birds, and it may also remove a potential disease threat. The average weights and feed tool consumption estimates in Table 3 can be used to predict performance

Record of Bird Contact Hours

A daily log of time of visits and the duration of the visit or chores can provide an accurate measurement of the amount of work involved in caring for the birds. Generally, the more time spent with the birds, the greater the understanding of the performance of the birds.

Record of Bird Health

Observations should be made daily to monitor bird health. Any symptoms or lesions such as lack of appetite, eye or nasal discharges, abnormal respiratory sounds (repeated coughing or sneezing), huddling, diarrhea, etc., should be recorded and veterinary advice obtained. In addition, the environmental conditions at the time of observing the symptoms should be recorded. This information helps alert you to potential problems in future flocks and is useful for the diagnosis and treatment of disease problems in the current flock.

Document the use of water soluble vitamins and/or other medications. This record helps you keep track of the treatments applied to your birds.

Conclusion

Raising broilers for show can be a rewarding and learning experience. By planning and preparing a proper environment, selecting a good diet and then following through with consistent care and documentation, you will be on the right track for producing a grand champion bird.

RABBITS

Raising rabbits is fun. At the same time, an FFA Rabbit Project can provide an important life skill learning experience. Rabbits require no fancy or expensive equipment: They can be confined to hutches, and can be raised in urban as well as rural areas. They also can help you learn animal husbandry, or the proper care and management of animals. Those who work with rabbits find that something different is always happening.

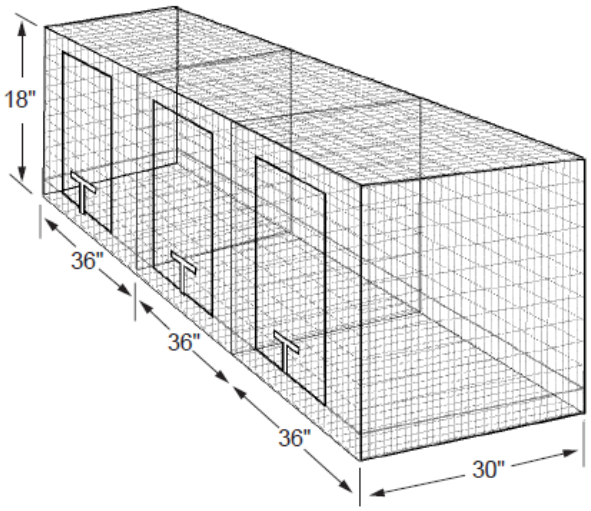
You will find that handling rabbits, and their response and dependence on you, are rewarding. Caring for and managing your rabbits provides new experiences each day. Possibly the greatest thrill is when you share your experiences with friends and neighbors.

Before you launch into a rabbit project, take some time to decide if it is right for you. Decide if dogs, cats, and other animals in the area would be harmful to your rabbits. If conditions are right for a rabbit project, you can look for a suitable place to keep your rabbits and arrange for proper hutches and equipment.

The **Californian** breed is another American creation. After experimentation and crossbreeding, this rabbit was produced in 1923. It was bred as a meat rabbit to have broad shoulders, meaty back and hips and a good dressing percentage (percentage of edible meat). This rabbit is white except for ears, nose, feet and tail, which are a dark gray or black.

Equipment needed

Proper housing and good equipment are important for successful rabbit raising. In making plans, consider first the rabbits' comfort and your ease of handling. You don't need a lot of equipment, but feeding, watering and nesting equipment must be adequate and sanitary.



A modern wire hutch is made from welded wire.

Rabbit pens, called hutches, should be convenient and sanitary, allowing plenty of fresh air and some sunlight. Each hutch should protect the rabbits from bad weather, dogs and other animals, and provide enough room for growth and exercise. The most important point in a hutch is sanitation. An open-air, self-cleaning hutch is recommended. Modern rabbit hutch construction uses

welded wire. The floor is made with 1/2-inch by 1-inch welded wire. Sides and tops are built with 1-by-2-inch welded wire. All-wire hutches are more sanitary and durable than wood and wire hutches.

Feeders

Use a feed crock, trough or hopper to prevent feed waste and to keep the feed clean. Because rabbits are fed daily or more often, crocks should hold at least a day's feed supply. Larger crocks or troughs may be wasteful, because rabbits contaminate the feed. Feed and livestock equipment stores sell crocks especially designed for rabbit feeding. These do not tip easily and have a lipped edge that prevents the animals from wasting feed. The main objection to crock feeders is that young rabbits get into them, soiling the feed.

Next make sure that you have the right type of equipment for them to drink out of. They need some type of crock for their water. A water bottle will be fine after you have finished showing your meat pen but it is not sufficient to finish one out for the show. Make sure you give them fresh water 2 to 3 times a day.

Feeding schedules

Feeding regularity is more important than the number of times the rabbits are fed daily. Because rabbits eat mostly at night, feeding them in late afternoon or evening is preferred. Morning feeding is less satisfactory. Offer feed at the same hour every day. If you use commercial feed, follow the manufacturer's directions for feeding.

Green feeds and fresh leaf feeds are not recommended, because the supply may deplete, making ration changes necessary. Feed quality may be poor at times in these rations, and it may be difficult to supply the variety needed for good nutrition.

Animals fed exclusively on green feed never have the good condition or development needed for show animals. Therefore, commercial rabbit feed is generally the best and most practical feed.

A suggestion on conditioning feed. Black oil sunflower seeds are one of the best supplements that you can add. Start slow so that the rabbits do not scour. Work up to about 10 per rabbit. (No more than this) In the winter you can add CRIMPED oats and barley with a little wheat germ oil. Usually you will add 3 part oats to 1 part barley. I add 1/2 cup wheat germ oil to a 5 gallon bucket of this mixture. If you are trying to push a litter you can add a 1/4 cup of molasses to this mixture. The molasses will make them drink more water which will get them to eat more feed. Feed 1/4 cup per rabbit.

Please do not feed bread to your meat pen except on a few exceptions. This will add weight in a pinch but it will also make them soft and flabby. If you are trying to push a pen then use Show Bloom. Never use Calf Mana on a meat pen.

I recommend a cup to put the conditioning feed into, so, that they will not scratch out their feed to get to the goodies. I like the cups that clip on the cage so, that it is easy to

take out after they finish their conditioning feed. By removing this cup after they finish eating their conditioning feed, will help keep them from getting stained.

Sanitation

The rabbits' environment must be kept clean and sanitary. This means removing wastes and keeping housing, feed, water and air relatively free of disease germs and parasites. Sanitation and disease prevention are the keys to a healthy rabbitry.

Clean all manure and dirt from equipment. Scrub it with hot water and detergent. A stiff bristled brush, scraper and elbow grease are the secrets of proper cleaning.

Visitors

Keep your animals as isolated as possible from people and strange animals. They bring diseases and disturb the breeding stock unnecessarily.

Records

It is important that you start weighing each rabbit every week and keeping a chart on how much they are gaining. It is easier to slow one down or push one if you have 4 weeks to work with the rabbits. (It is difficult if you email 2 days before the show with a big weight problem.) They can gain as much as 2 oz. a day the last week.

At first you will need to weigh them twice a week at the time you will be weighing them in at your show. For example, if check in is at 5:00 pm for your show, then you will want to weigh your rabbits at 5:00 pm. It must be done at the same time so that you will have an accurate weight. Remember they usually eat 8 oz. a day. If you weigh them and they weigh 4.15 lbs. and then you feed them 8 oz. they will be overweight when you go to weigh them in.

Preparing For Show

Remember, it is much easier to keep your rabbits clean than trying to get a stain out. A rabbit has natural oils in his coat. So, remember this when trying to get out a stain. Do not use to many chemicals to try and get out a stain. This will take out the natural oils in the coat and it will appear dead in that spot. I have found Clear Eyes for horses is the best to get out stains. Use a white paper towel with no design on it when removing a stain. Squirt a little Clear Eyes on the spot and let it sit for a minute or two and then blot out the stain.

Do not over work their fur. Remember the natural oil, we do not want to destroy that beauty. Work their fur once a day for the three days before the show for a very short period of time or you will kill the natural luster. The night before the show you can put a very little corn starch in the fur. Always work the fur for a few seconds with water before they go on the table. This will take out any static electricity the fur may have in it.

Do not worry about the bottom of their feet. They should be clean, if you do not have any wood in the cage and have not left any wet hay in the bottom of the cage.

If one of the rabbits get loose stools and if the stool gets on one of the other rabbits allow it to dry. If it is a couple of days before the show, allow it to dry and then gently brush it out. (This is the only time you would ever use a brush on a meat pen.) A brush or comb can pull out the fur very easily. If the rabbit gets stained the day of the show use the Clear Eyes.

Begin working with your rabbit daily a day or two after you get them settled in their new home. Rub the hair coat with your hands to remove old, dead hair and give the rabbit a shiny new coat. This also helps gentle the rabbit. This is also the time to teach the rabbit to sit still on a table. Judges do not waste time with rabbits that jump around on the show table.

At The Show

Do not set your rabbits on the ground while you wait to check them in for the show. Young children love to drag their feet, which causes lots of dust. You do not want to put a sneezing rabbit on the table. You also do not want to take a chance of something getting into the rabbits ears.

Check in. Do not get anxious to be the first one to put your rabbits one the table. The coops are cramped and the rabbits will get hot and stress. This will causes them to go soft.

Be a good sport. Every judge comes and tries to do their very best. If you do not understand what the judge was telling you about your rabbits, it is best to be polite and wait until the show is over to talk to the judge. Go up and ask the judge if they have a minute to show you what they were telling you about your rabbits. Normally they are more than happy to help someone that is trying to learn.