

4-H Market Steer Handbook

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The 4-H market steer project is one of the more popular animal science projects in the 4-H program.

The 4-H market steer project should be of interest to 4-H members who desire to feed, fit and show a beef animal. Depending on the starting age and weight, most steers will be full-fed for five months or longer. The steer should reach the desired USDA Choice carcass grade at a weight of 1000 to 1000 pounds at about 15 to 18 months of age. The weight and age at which steers reach the choice grade will vary due to breed, frame size and management of the steer.

After the steer is finished, you can exhibit and market your steer at one of the several market steer shows held each spring and summer. In addition, many county shows are held in conjunction with these events, and several steer shows are conducted at county fairs. Check with your local Extension agent regarding your participation.

The market steer project is designed to give you a sense of responsibility. The project encourages decision-making, a trait that is beneficial throughout life. Participation in this project will allow you to conduct financial transactions on a larger scale than the average youth. The project also will help you learn to get along with

other boys and girls in competitive situations and in day-to-day activities. Finally, the market steer project is designed to instill a love for cattle in 4-H youth and an appreciation for their important role in agriculture and society. Hopefully, some knowledge of beef cattle will be gained in the process.

4-H members are expected to respond to the challenges of the market steer project with hard work and responsibility. Listen to the advice of parents. Extension agents, 4-H leaders, breeders and experienced 4-H members about your steer project. You should also follow and practice the principles outlined in this manual. Most importantly, you should quickly learn that it is your responsibility to feed and care for the steers on those cold mornings or at the times you would prefer to be involved in other activities.

A glossary is included in this handbook to help you become acquainted with commonly-used terms in the market beef project.

Market Steer Management

Market steer management includes such things as housing and facilities, equipment, good health practices and general care. Before you and your family get involved in the market steer project, you should have an understanding of what is involved in managing a steer. The following information should be helpful; however, you and your parents can visit other 4-H members who are in the steer project, talk with leaders and the Extension agent about what is required.

Housing and Facilities

Because of the mild climate, expensive, elaborate housing is not required. An open shed and fenced lot will be adequate.

There are many types of housing that are suitable for market steers. These may range from a small shed to a larger shed or barn, depending on the number of steers you have to feed. The shed should be dry and well-ventilated so the animal can keep cool during the summer and warm during the winter. A covered shed that measures 12 feet X 12 feet and 10 feet high would be adequate for one steer. Three sides of the shed should be boarded and the south side should be left open. Locate the shed in one corner of the lot. Build a gate on the side of the shed, opposite from the fence, that can be used to help catch the steer. Leave the gate open during the day to allow the steer free access to the shed.

The steer lot should be just that - a lot where steers are kept. Don't let horses or other cattle run with your show steers. A lot that is 100 feet X 100 feet should be about the right size for one to four steers. Give the calves enough room to exercise, but not so much space they're hard to find to bring up

to feed. Locate the steer lot on well-drained land with a good grass sod so you won't have a problem with mud.

In addition to the housing, you will also need to provide feed and water for your calf. Although the water troughs may be placed either inside or outside the shed, it is best to keep the feed box inside to keep the feed dry from rain or snow.

The feed boxes or bunks should be approximately 18 to 24 inches above the ground or floor, 24 inches wide and 6 inches deep. Each animal should have about 2 1/2 linear feet of feeding space. If hay is fed, the hay racks should be in a dry area away from the feed trough.

Outside temperature and animal size will determine how much water a steer will drink each day. A 1000-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. The size of the water tank or trough will depend upon the number of animals.

Keep fresh, clean water available at all times. During the winter, be sure to remove ice from the water tank or use a heated tank so that the water is available to your animals.

Another requirement for the steer is 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 shed cooler because manure and urine generate heat and prevents stains on the steer's hair coat caused by manure and urine.

Health Practices

A health program is important to a successful steer project. The easiest and cheapest way to control most diseases and parasites is by prevention. Clean sheds, lots, feed and water troughs are necessities in preventing disease and parasites.

Most common diseases can now be controlled by vaccination and sanitation. Vaccinations should be given according to label recommendations by an experienced person.

Most steers are purchased at weaning and are about 6 to 9 months old. Check with the producer to see what health practices, if any, have been performed on the steer. The steer should be vaccinated for Blackleg/Malignant Edema (7-way), Lepto (use 5-way vaccine) and IBRPI3 (nasal or injection form). If the steer has not been vaccinated for these diseases, have this done within the first two or three weeks after the steer is purchased.

In addition to the vaccinations, deworm the steer at the start of the feeding period. One deworming treatment will probably be enough, but there may be the need to deworm again two to three months later. Many commercial dewormers are available in paste, bolus, injectable or as a "pour-on."

Treat the steer for grubs during September and October. Grubs are worms found on an untreated animal's top line, under the skin. They damage the hide and harm the cattle, as well as marring their appearance. Grub treatments are available in either a liquid applied to the steer's back or an injectable form.

Implant the steer with a growth stimulant. The implant is a small pellet or pellets placed under the skin on the back of the ear. The implant will increase the average daily gain and is a recommended practice. Again, follow implant directions to administer correct doses.

Fly control is a must. During the fly season, control flies on steers by the use of dust, insecticide treated ear tags or routine spraying. Flies cause great discomfort to steers and will reduce their gain and general well being.

Another common problem with beef steers is scours. This is often caused by soured feed, feed too finely ground, too much protein or over-feeding of legume hays. This problem can often be solved by removing the probable cause and reducing the amount of feed fed per day.

Ask your parents, county agent, veterinarian or local cattle producers to assist you with our health program. Your local steer feeding project group may want to go together and purchase the needed health items to save time and money.

General Animal Care

Exercise will help stimulate the steer's appetite, keep him walking more correctly on his feet and legs and prevent him from becoming overly fat. Calves should have an opportunity to exercise each day. One way of doing this is to locate the feed and water at opposite ends of the lot. In the winter, two hours per day of exercise is sufficient. During the summer, allow the calf the choice of being inside or out by leaving the gate open between the housing and exercise area. Provide exercise by walking and leading - don't run cattle.

Feet trouble can be prevented by keeping manure and dirt from packing between the animal's toes. The feet should be trimmed whenever they appear to affect the proper walking of the animal. Most calves need their feet trimmed at least twice a year.

Market Steer Selection

When you have your housing, fencing and equipment in order, the next step is selection of the show steer. Remember, no amount of feed or ability can hide major conformation faults or incorrectness. It takes both top management and a good steer to be a class winner and earn a champion award.

When selecting your club calf, take advantage of all good cattle people in your area. Some sources of help are parents, Extension agent, FFA instructors, breed representatives and producers. These people are interested in you and your project, so seek their advice.

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 than 2.5 pounds daily gain from weaning to slaughter.
3. Weigh more than 900 pounds at 12 months.
4. Grade USDA Choice between 1,000 and 1,250 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. First, determine the number of days between the time the steer is purchased and the date of the show. 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. 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 Extension agent or leader and be sure your steer will exceed the weight requirement by at least 10 percent.

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

Selection Weight	Selection Date		Show Dates
	May 1	July 1	
400	September 1	800	1000 lbs.
450	September 1	890	1050 lbs.
500	September 1	980	1100 lbs.
550	September 1	1030	1150 lbs.
450	October 1	870	990 lbs.
500	October 1	920	1040 lbs.
550	October 1	970	1190 lbs.
600	October 1	1020	1140 lbs.
650	October 1	1070	1190 lbs.
600	November 1	960	1080 lbs.
650	November 1	1010	1130 lbs.
700	November 1	1060	1180 lbs.

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 a 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 weigh 1,100 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
 in 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 at which reach choice grade (lb.)	750- 850	851- 950	951- 1050	1051- 1150	1151- 1250	1251- 1350	1350+	
	7	36.0	38.0	40.0	42.0	44.0	46.0	48.0
	8	37.0	39.0	41.0	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
Age of steer in months	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	50.0	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

Breed

The breed you choose to show is not important. Keep in mind there are good calves and bad calves in every breed and every breed has something good to offer. Crossbred club calves have become very popular the last few years in an effort to combine the good traits of different breeds. If you have a favorite, try to select a suitable calf of that breed or cross.

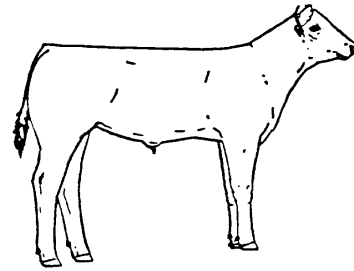
Other Selection Criteria

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.

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. These steers may appear to be heavier-muscled, but they are undesirable in the muscle structure and do not develop into desirable show steers. Also, beware of narrow, flat-quartered steers who lack muscle expression.

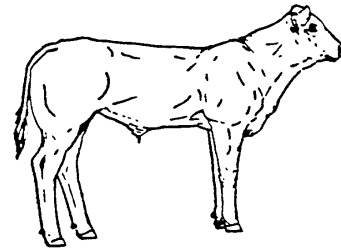
Select a well-balanced, stylish calf that is upheaded and alert. These factors will be an asset in the show ring. It will be nearly impossible to find a steer that perfectly fits all these descriptions. However, select a calf that possesses a desirable combination of

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!



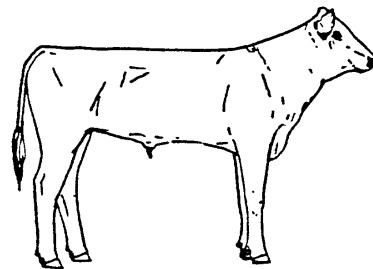
1.

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



2.

2-Round and bunchy-muscled steer



3.

3- A narrow, light-muscled steer

Much Should You Pay for Your Steer?

It is difficult to know how much you should pay for a calf. Many 4-H members have jeopardized their possibilities of making a profit by paying well above the market price for calves.

Experienced cattle feeders are very knowledgeable of the price they can afford to pay for a steer to feed. Cattle feeders have a good idea of the feed cost and what it costs to produce a pound of gain. Feeders also know about how many days an animal must be fed to reach the desired grade. They also have a fairly good estimate of the market price of the finished steers at the time steers are purchased. Perhaps, the market price of the finished steers are "locked in " by forward contracting at the time the steers are purchased.

There are two sources of profit in cattle feeding. These are the "feeding margin" and "price margin." The feeding margin is the difference between the cost per pound of gain and the market price. Price margin is the difference between the price paid for the steer and the price received when the steer is sold. You and your family need to follow the same procedure when you purchase a steer. Use Table 3 as a guide.

Table 3
How Much Can You Pay for a Calf?

If you pay	Price per lb. ¹	Feed Costs etc. ²	Total Expenses (animal, feed, etc.)	Market value ³	Profit loss
\$300	\$0.60	\$240	\$540	\$715	+\$175
325	0.65	240	565	717	150
350	0.70	240	590	715	125
375	0.75	240	615	715	100
400	0.80	240	640	715	75
425	0.85	240	665	715	50
450	0.90	240	690	715	25
475	0.95	240	715	715	0
500	\$1.00	240	740	715	-25

For example, if you select a 500-pound steer calf and pay 70 cents per pound, you will be paying \$350 for the steer. Assuming that the steer will need to be fed to 1,100 pounds to reach choice grade, your calf will need to gain 600 pounds. At a cost of 40 cents per pound of gain, this will total \$240. Your total expense for both the steer at the time of show and sale would be \$590. If you sell a 1,100-pound steer at 65 cents per pound, the market value will be \$715. By subtracting the \$590 total expenses from the market value (\$715), your profit from this steer will be \$125. It is obvious, under the conditions outlined in Table 3, that you cannot afford to pay much more than 90 cents per pound or \$450 for a 500-pound calf and expect to make a profit. Also, remember that feed costs and expenses will vary. Yours may be less or more than what is illustrated in Table 3. You may be able to lower the total expenses by buying a calf from your parents, utilizing home grown feeds and buying a fast-growing calf that gains more weight per day than the average growing calf.

Feeding Your Steer

4-H members should "keep the feed better than the cattle". A balanced ration, plenty of clean, fresh water, regular feedings and clean feed troughs and watering tubs are essential to produce top quality show steers. Champions are not grown on shortcuts, magic potions, formulas or "super secret feeds."

Nutrients and Feeds

To do a good job of feeding your steer, be familiar with the different types of grains, protein sources and roughages that could be used in feeding steers. Grains belong to a group of feeds called concentrates. Concentrates are feeds that are high in

energy and low in fiber. Some common grains fed to steers are corn and oats.

Corn is the most common ingredient in steer rations. Corn is a feed high in energy and moderate as a protein source for finishing steers. Steers like to eat corn and will do best when it is cracked or very coarsely ground. If you live on a farm, you will probably have homegrown corn available.

Oats are another good feed grain for cattle. Oats are not as high in energy as corn and can't be used to fatten cattle by themselves. Oats are palatable and a better source of fiber than corn. So when cost allows, oats should be included in the ration.

Roughages round out and make up the smallest part of the steer's ration. Examples of roughages fed to steers would be hays and silages. Roughages are high in fiber and low in energy. Hay is the roughage most often fed steers. Good grass hay would be adequate for the steer. Roughages help to keep the steer's digestive tract in working order and helps prevent scours. In some situations, it may be easier to buy a commercially pre-mixed ration. A 12 to 14 percent protein "calf finisher" or "bull test" ration would work well.

Vitamins and minerals are important in bone development and maintaining the general health of the animal. The daily

vitamin requirements of your steer would usually be met by feeding normal feed sources.

Minerals and salt should be provided on a free choice basis. Use a small box with two compartments, one for salt and the other for a mineral mixture. The mineral mixture should contain one part salt and two parts of dicalcium phosphate or steamed bone meal. If you choose to mix your own feed, some good rations are outlined in Table 5.

Water is also essential for the market steer. An adequate supply of clear, fresh water is necessary for good growth and the health of the animal. Although water may not be thought of as a nutrient, it is the most important and cheapest nutrient you can furnish your steer. Steers limited to 90 percent of the water they need often have their gain reduced 25-50 percent.

Protein is essential for good muscle development. Protein supplements and high quality legume hays are major sources of dietary protein. In most cases, protein supplements must be added to the steer's ration. Soybean meal and cottonseed meal are the most commonly used protein supplements. These protein supplements are also high in energy and are also called concentrates. Steers on a balanced full-feed ration may consume one to two pounds of protein supplement per day (see Table 4).

Table 4
 Recommended Protein Levels and Approximate
 Daily Feed Intake (As Fed Basic)

Growing and Finishing Calves	Average Daily Gain (lb./day)	Average Daily Feed Intake (lb.)	%Protein in Ration	% TDN in Ration
400 lb.	2.0	10.5-11.5	11.5-12.0	66
600 lb.	2.5	12-15	11.0	66
800 lb.	3.0	19-22	10.5	70-72
1000 lb.	1.5	23-26	10.5	70-72

Feedstuffs	Rations								Percent Protein	Percent TDN
	A	B	C	D	E	F	G	H		
	%	%	%	%	%	%	%	%	%	%
Crimped Oats	45	32	--	20	24	40	25	35	12	68
Rolled Barley	--	--	--	20	--	--	20	--	11	74
Cracked Corn	35	32.5	--	25.5	38.5	20	20	--	9	80
Ground Milo	--	--	--	--	--	--	--	30	11	71
Citrus Pulp	--	--	--	--	4.8	--	--	5	6	76
Wheat Bran	10	--	--	--	4.8	--	10	10	15	60
Ground Ear Corn	--	--	80	--	--	--	--	--	7.5	73
Calf Manna Or Sho-Glo	10	--	--	--	--	5	--	10	25	76
Dried Molasses	--	3	5	5	4.8	--	2	--	3	68
Dehydrated Alfalfa Pellets	--	5	--	--	4.8	10	4	--	17	55
Cottonseed Hulls	--	15	--	15	9.6	20	--	10	4	44
Cottonseed or Soybean	--	9	15	8	7.2	5	4	--	42	78
Trace Mineralized Salt	.5	--	.5	.5	.5	.5	.5	--	--	--
Limestone	1.0	--	1.0	1.0	1.0	1.0	.8	--	--	--
Protein %	12.6	11.7	12.5	11.0	13.0	12.5	12.0	12.1	--	--
TDN %	72.2	63.5	73.1	64.7	72.0	67.2	72.3	66.5	--	--

* Add Vitamin A at 1,000 I. U. per lb. of feed.

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.

Starting the steer on feed is very important. Gradually start the calf on feed. The first few days, feed one to two pounds of grain and all the grass hay he will clean up. Then increase the concentrate a half pound daily until the steer is receiving one pound per 100 pounds body weight (600-pound steer = 6 pounds). This should take a week to 10 days. Now, slow down to a gradual increase of two pounds per week until the calf is receiving two pounds of grain per 100 pounds body weight (700-pound steer = 14pounds). Feeding half of the feed in the morning and the remainder at night should prove satisfactory for most steers. However, extremely fast-growing calves may need to be fed more often.

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. Nervous 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.

Place the feed trough and hay rack where they will be protected from the weather.

A watchful eye and good judgment prevent many problems. The droppings are an excellent indicator of the steer's well-being. Beware of scours and loose or sour-smelling droppings. Droppings should never be hard, but should be thick enough to "pile-up" and look oily. Overfeeding drastically changes the ration. Feeding excess protein or irregularity of feeding are some causes of scours.

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.

Equipment

You will need a few basic pieces of equipment before purchasing a steer.

Work Halter The first piece of equipment needed is a good work halter. Buy or make a halter from half-inch polypropylene rope. Polypropylene is a plastic that won't swell and tighten on the calf's head when it gets wet. For this reason, avoid using a hemp rope halter. Polypropylene will not rot and should last through many calves, if provided proper care.

Rice Root Brush There is no substitute for a good rice root brush. There are many cheaper, plastic-bristled brushes on the market, but they don't do the job as well. It is a good idea to soak the brush in water overnight when it is new to keep the bristles from falling out.

Scotch Comb Scotch comb is essential to training and pulling up the hair of the steer. It comes in a 6- or 9-inch comb, but a 9-inch comb may be more useful. Make sure the teeth are coarse enough to prevent pulling hair from the steer.

Plastic Curry Comb Plastic curry comb is very useful for washing and removing mud and dirt from the hide.

These few pieces of equipment are all you will need to begin the project, but before the show you will need some of these items: leather show halter, show stick, feed pan, water bucket, hose, neck rope, show box, hair coat dressing and saddle soap.

Training and Grooming

Halter breaking and gentling your calf should be the first job after you get the calf home. Remember, the calf grows faster than you do and the longer you wait to break the calf, the tougher the job will be.

Sometimes it is easier to halter the calf and tie him on the trailer. The steer should have settled down and stopped fighting the halter by the time you get home.

Tie the calf to a sturdy fence or post in a cool, comfortable place. Never tie an animal to anything that will break or come loose. Be sure the halter is positioned high up on the bridge of the nose to prevent restricting his breathing. Securely tie the steer up high (3 to 4 feet) with only 12 to 18 inches of slack. The steer may get his feet over the rope if it is too low or too long. Also, always tie the rope with a slip knot which, if necessary, can be easily loosened. The "stall" or "manger knot" is the one most often used. This knot is good because it is:

- simple to tie
- simple to untie
- the animal cannot untie himself

Stay with the calf at all times while he is fighting the rope.

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.

After the calf has settled down and will allow you to scratch him, try leading him to water. It might be best to wait until the morning after you first tied the calf to do this, because his head will be sore and he will appreciate the water. Do not carry water to your calf -- to do so defeats your purpose.

Place a bucket or trough of clean, fresh water at the far end of the pen. Quietly untie your calf while talking softly and scratching him. Pull him toward the water. Most steers will probably balk, but keep steady pressure on the rope until he takes a step forward, then immediately release the pressure on the rope. Repeat the process of giving and taking. At the beginning, do not expect your calf to lead well. Leading is a process the calf must learn and you must teach.

When you reach the water, back away from the calf and allow plenty of time to drink. If the steer will not drink after five or six minutes, lead him back. The calf will probably drink the next time.

While leading the calf, have someone place some feed at the tie space. This way a reward is provided in allowing to be lead to and from water. Give your calf no more than 20 minutes to eat feed. After that time, take the feed away and give plenty of fresh hay. (Never leave buckets of any kind around where the steer can become entangled.)

If you stick to this process and generously brush the calf, he should be settled enough to turn him loose at the end of three or four days. However, it is very important that you catch the steer, lead him and brush him at least once a day for the next several weeks. This is to make sure the

lesson has been learned and is not forgotten. Halter breaking can be eased by taking the time and patience when your calf is young.

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.

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.

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. However, most 4-H'ers don't spend enough time teaching a steer to set up.

Trimming Feet

Trimming your steer's feet is an important part of show preparation. Your steer's feet will definitely need to be trimmed about four to six weeks before the show. Some calves may have excess hoof growth and require trimming three to four months before show time, and again one month before the show.

Steers should be placed on a foot trimming table or in a foot trimming chute so they can be properly restrained. Hoof nippers, a hoof rasp and a wood chisel will be needed. An electric disc sander may replace the nippers and rasp, but be careful! Foot trimming requires time and experience, so get your Extension agent and adult leaders to help. Some 4-H steer groups designate one day for hoof trimming when all members bring their steers to a central

location. This allows the job to be done in one day, plus it keeps everyone's enthusiasm up about their steer project.

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.
4. Rinse well with cold water.
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.

Before wetting the calf, be sure to brush it thoroughly to remove all dirt, manure and dandruff. Wet the steer and scrub with soap, a rice root brush and plenty of elbow grease. After a thorough job of washing, rinse completely. Be sure to do an extra good job of rinsing, because soap left on the steer is the main cause of dandruff. 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

Before any clipping can be done on the steer, his hair coat must be thoroughly cleaned and trained to stand up. Proper hair care should begin as soon as you get your steer haltered.

When the steer is gentle enough to handle

and brush, rinse all over with clean, fresh water. Be careful not to get water in the animal's ears. Rake the excess water from his hair with the back of a Scotch comb. First, brush the hair up. Using the Scotch comb, pull the steer's hair up all over, including his legs. It is extremely important to train the leg hair to stand up. If corrective clipping needs to be done on the legs, there will be hair to work with. If you have an electric blower, blow your calf until he is almost dry. Always blow the hair up. If you do not have a blower, brush him dry. It will not hurt to leave the calf damp if the temperature is about 40 F, but never leave the steer wet in colder weather.

Daily rinsing and lots of brushing are essential to healthy, well-trained hair. When the steer's hair is cleaned and trained to stand up, you are ready to begin clipping.

Clipping and Blocking

Clipping is most important to enhancing the steer's appearance. It will not actually change, but when done properly it can minimize faults and enhance strong points of your steer. A professional job of clipping and blocking is learned and developed through much time, patience and experience. It is an important part of show preparation that requires assistance from your parents, 4-H leader or older 4-Hers. However, over time, you should develop clipping and blocking skills.

You will need large animal electric clippers with a sharp set of blades. A blocking chute will help hold the steer still and make the job easier.

To do the actual blocking and clipping, you will need a set of small animal clippers, sheep shears or goat head clippers. If you are

just beginning, you should start with the small clippers. Goat head or sheep shears are dangerous and should not be used until you have mastered the art of blocking.

There are many different ideas on clipping steers with no clear cut right or wrong way. However, you must analyze your own steer and realize his strong and weak points. Each steer must be clipped to enhance or minimize these points:

Clip the head close to the skin. You may leave the hair on the poll to give it more prominence and to give the head a longer appearance. Do not clip the hair in the ears. Blend the hair line where the neck and head join.

Next clip the throat and brisket area. Again, blend the hair lines and block the neck and crest down as close as possible to make the front end appear trimmer.

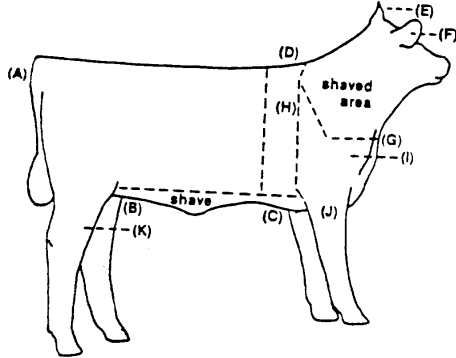
Longer hair may be left behind the sheath to give the effect of a deeper body, being careful not to clip too high on the sides. Take special care in blending these lines. Keep in mind that distinctive hair lines or drastic contract in hair length takes away the illusion of length, and this is undesirable.

The tail should be clipped close, starting about 8 or 9 inches from the top and clipping upwards to the tail head. Be sure to leave enough hair on the tail head to square it off when you dress him.

Using the small clippers, trim all the long hairs off the body. The objective is to make the steer look as smooth as possible all over. Leave the hair slightly longer. Where you want more bulge and muscle expression. Block the tail head as squarely as possible. Block the top line to

appear level from the side and rounded and uniformly turned when viewed from the rear. Keep in mind that fat is flat and square, and desirable muscle is smooth and rounded. Watch and study more experienced people clip and block cattle and practice your techniques.

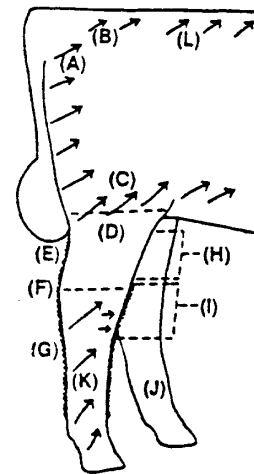
Guidelines for Clipping



- A. Tail and tailhead - the tailhead is used to enhance the visual effect of a level hip. It can add body length or thickness by the way it is clipped.
- B. Rearflank - Use this as a guide for beginning the bellyline. This can be used to create an illusion of more volume or less volume. By lowering the line from the standard clip and leaving long hair from the navel area back, a look of greater volume is achieved.
- C. Point of elbow - Use this as a guide for ending the bellyline .
- D. Top of shoulder joining neck - Hair should be utilized in this area to give the appearance of a smooth joining of these two parts.
- E. Poll - Leave the hair on the head to give

- added head length and youthfulness.
- F. Ear - Leave most of the hair on the ear; thinning is acceptable.
- G. Point of shoulder - Use this as a guide point when clipping the front end. Hair should be trimmed very short in this area to reduce prominence.
- H. Behind the shoulder - The hair is left in this area to ensure proper blending of the shoulder joint.
- I. Under the shoulder point - This hair and some neck; hair is left long and used to blend in a prominent shoulder.
- J. Front leg - Usually clip to the knee for breeding cattle to show angularity.
- K. Front of rear legs - Clip this area to help give the appearance of a straighter hind leg.

Clipping the Tail



- A. Extend the hair at the tailhead so it has the appearance of a corner.
- B. The hair down the middle of the tail is clipped into a short 'V'
- C. A tailhead with a slight upswing on the end will help to level out the hip.
- D. The tailhead hair may be held up with wax or glue and then trimmed to the desired shape.

Blocking the Hind Leg

- A. Hair in this area should be brushed around the hindquarter to add dimension when viewing the animal from the rear.
- B. Hair in this area is used to fill in the hip to make it appear to be more level from hooks to pins.
- C. Hair is pulled up and out and held in place to add muscularity.
- D. This area is trimmed very short on steers, but hair is left longer on breeding cattle.
- E. Hair is always left in this area above the hock to reduce hock prominence.
- F. The ball of the hock is shaved to the skin about a three-inch long area to reduce hock prominence.
- G. The long hairs only are trimmed after boning the leg (pulling the hair up) to give the appearance of a straighter leg.
- H. Shave or trim this area close to the skin, beginning right above the hock area to

straighten the leg. (very important)

- I. Leave all of the long hair here to fill in the hock joint area and to straighten the leg. (very important)
- J. Trim this area around the entire leg to give a straight symmetrical appearance.
- K. The hair on the inside and outside of the cannon bone is pulled slightly forward to help add hair length to the front of the leg.
- L. The loin area should be clipped flat on top and the hair left on the loin edge should be rounded.

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.

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.

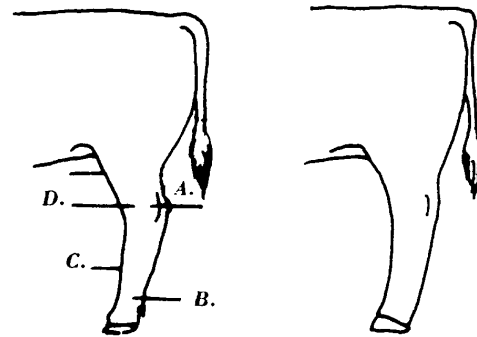
There are many livestock products to use on the body hair to help hold it, such as foam or setting solutions. However, if you have done a good job of rinsing and breaking the hair, you will not need to use much of these products.

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.

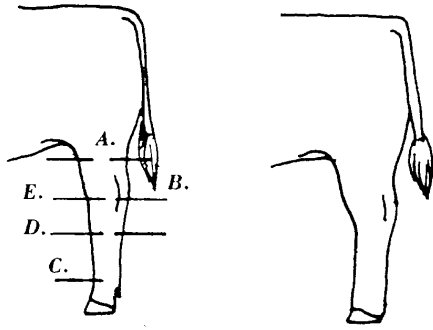
Correcting the Sickie Hock

Most incorrect legs are the result of too much set to the leg, or sickie 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.



Correcting Sickie Hock

- 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 county. 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. Be sure that you are dressed in clean jeans and shirt and are wearing leather shoes to protect your feet (no athletic shoes). You should have your show stick and a brush or comb with you. It is recommended that no hats or caps be worn.
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

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

When leading your steer into the ring, follow the instructions of the ring steward. In most shows, you will be asked to head your calf toward the rail. Pull your calf in line and try to keep 3 feet between your steer and the one you line up on. This space will allow you to show and the judge an opportunity to see your steer.

Keep your eye on the judge. Be careful and do not run your steer up on the one 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. When you stop, set the calf up quickly.

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.

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.
Be a good sport.

16 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.

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.

Exhibitors will be asked to "walk" the steers and line up "head to tail" so the judge can see your steer from the side. Leave three (3) feet between your steer and the steer in front of you.

Evaluating the Efficiency of Your Market Steer Project

Because cattle are raised to produce meat, identifying animals that will efficiently produce lean, flavorful and wholesome beef is an important part of beef production. It is also important to evaluate the effects of the feeding and management program on beef production.

The only way to determine efficiency of beef production is by keeping accurate records on the live animal and evaluating the beef carcasses produced.

Recordkeeping

Recordkeeping is an important part of any project or business and the market steer project is no exception.

A record book is available for use with the market steer project. Ask your 4-H Extension agent for a copy of the 4-H Market Steer Annual Record Book. The record book will help you have an organized record of your expenses and income. The record book provides other useful information. Since you have your steer's initial or purchase weight you can weigh it every 45 to 60 days and calculate average daily gain. You can also calculate the feed conversion of your steer by dividing the total pounds of feed fed by total pounds of weight.

Carcass Evaluation

Evaluating the carcass produced is an important phase of the market steer project and is highly recommended as a continuation for 4-H'ers in the program.

Check with your local Extension Agent or 4-H leader to determine if you have the opportunity to secure carcass information on your steers when marketed.

You should learn about USDA Quality and Yield Grades of market steers and relationship of muscling and finish to quality and yield grades. You should try to secure the following information on your steer's carcass:

1. Hot carcass weight: Hot carcass weight is the weight taken soon after slaughter before the carcass was chilled. This value is generally obtained from the tag on the carcass in the packing plant.

2. Ribeye area: The ribeye area is measured on the cross section of the ribeye (longissimus dorsi) muscle between the 12th and 13th ribs. A plastic grid overlay is an easy method of measuring the ribeye area.

3. Fat thickness: Fat thickness is the depth of fat over the ribeye muscle at the 12th rib. Fat thickness is usually measured to the nearest 0.005 inch with a metal fat probe at a point 3/4 of the length of the ribeye muscle and perpendicular to the outer surface of fat. Fat thickness over the ribeye muscle has the greatest influence on yield grade of your steer than any other carcass trait. The greater the fat, the higher or less desirable is the yield grade.

4. Kidney, pelvic and heart fat percentage should be estimated to the nearest 0.5 percent by a federal grader.

5. Yield grade is a number that represents the percent cutability. Cutability is an estimate of the percentage boneless, closely trimmed retail cuts from the round, loin, rib, and chuck. Yield grade 1 carcasses have a better cutability than yield grade 5 carcasses.

6. Carcass quality grades (Prime, Choice, Select, Standard, etc.) depend largely on the amount of marbling in the ribeye in relation to the age of the animal. Marbling is the small flecks of fat deposited in the ribeye muscle. Marbling is usually evaluated by a USDA grader. To grade Choice, slaughter animals between 10 to 48 months of age, require at least a small degree of marbling.

Cattle Terms You Should Know In Working with Your Steer Project.

Average Daily Gain(ADG): The weight gain during a feeding period divided by the number of days of the feeding period. For example, if a steer gained 300 pounds during a 100 day period, then its ADG 3.0 pounds per day.

Breed: A group of animals that have similar characteristics which are passed from generation to generation.

Breeder: The owner of the cow (dam) of a calf at the time she was bred

British breeds: Hereford, Angus, Shorthorn - introduced to the United States in 1800s and of British origin.

Bulls: Uncastrated male cattle of any age.

Calves: Young cattle of either sex less than one year of age.

Castrate: To remove the testes of male cattle.

Concentrate: A high energy feed that is low in fiber and high in energy.

Crossbred: An animal with parents of different breeds.

Dehorn: To remove a calf's horns by mechanical dehorners, sawing or chemical paste. All steers exhibited in 4-H and FFA steer shows in Tennessee must be dehorned.

Dressing: The washing, clipping and grooming of steers before entering the show ring.

Exotic breeds: Breeds of cattle introduced

into the United States in the mid 1900s. Most had increased size and growth characteristics. Examples are Charolais, Chianina, Simmental Limousin and similar others.

Finished: A term indicating the steer is sufficiently fattened and grown out for slaughter.

Frame: The size and height a steer possesses.

Grooming: Washing and brushing to train a steer's hair coat in preparation for a show.

Heifers: Female cattle which have not had a calf.

Marbling: The intramuscular or flecks of fat that are distributed throughout the muscle. Marbling is the primary factor that influences quality grade.

Polled: Naturally hornless.

Prospect steer: A 400- to 700-pound weanling calf selected for future show purposes.

Purebred: An animal whose parents are of the same breed and are recorded with the breed's registry.

Registry: An association of one pure breed of cattle designed to keep of official registrations of cattle and to regulate breed activities.

Roughage: A highly fibrous feed such as hay, grass or silage.

Set-up: To position a steers feet properly with a show stick.

Show stick: A metal or wooden stick about 4

1/2 feet long with a hook on the end used to position a steer's feet in the show ring.

Stag: Male cattle that were castrated after secondary sex characteristics developed. Stags appear "bullish". They are coarse at the head, crest and shoulder. Stags do not make good show steers.

Steers: Male cattle that are castrated before reaching sexual maturity.

Straightbred: A purebred animal that is not registered.

Tattoo: Permanent identification of cattle placed in the ears.

TDN: Total digestible nutrients; a value that indicates the relative energy value of a feed. The greater the value, the greater the energy content of the feed.

Weanling: A young calf of either sex, usually 6 to 9 months of age, that had been separated or "weaned" from its mother.

Weight Per Day of Age (WDA): The weight of the steer divided by his age in days.

Quality Grade: An evaluation of eating quality based upon carcass marbling and maturity. Example USDA quality grades are Prime, Choice, Select and Standard.

Yield Grade: A number grade from 1 (best) to 5 (poorest) that is used to identify the percent boneless, closely trimmed retail cuts from the round, loin, rib, and chuck.

Suggested Market Steer Project Learning Activities.

Contact either your Extension Agent in charge of 4-H or local 4-H beef leader for information on how you can enroll in the 4-H beef project.

- * Select, own, feed and manage at least one market steer.
- * Weigh and identify your steer.
- * Begin keeping complete and accurate records such as date of purchase Contact your local Extension office for a record book.
- * Complete the 4-H beef project manual for the grade in which you are enrolled.
- * Learn the parts of a beef steer and locate the location of the high-priced cuts of beef
- * Attend and participate in at least one livestock judging training.
- * After you have attended and participated in livestock judging, what are the similarities between market steers, market lambs and market hogs? Locate the high priced cuts on drawings of the market animals.
- * Exhibit a steer in at least one show.
- * Join either the 4-H beef or livestock project group in your county.
- * Visit a feeder calf sale and record the different breeds and crosses between breeds marketed.
- * Visit a feeder calf sale and record the grades of feeder cattle marketed. If possible, record the prices for the various grades of feeder cattle. Which grade sells for the highest price? Carry out an external parasite control program on your steer. Also either work with your parents, Extension agent or a local beef producer in an internal parasite control program.
- * Contact a local veterinarian and ask permission to go on calls to treat cattle Write a story about what you saw and learned.
- * Visit a local supermarket and determine the different ways beef is sold.
- * Work with either your 4-H beef project group or other 4-H members in a beef promotion program at a local shopping center and or supermarket.
- * Attend a steer show such as the Knoxville Finished Cattle show or the Tennessee Junior Livestock Exposition What breeds of cattle are the most popular?
- * Write an article on the nutritional value of beef and submit it to your local newspaper for

publishing.

- * Write an article on the economic importance of beef cattle in your county and submit it to your local newspaper for publishing.
- * Attend educational activities on beef such as field days clinics tours, etc. Keep a weekly record of market prices of feeder steers and finished steers for 6 months and determine which were the best times to buy and sell steers.
- * Give demonstration to other 4-H members on things that you learned while participating in the 4-H market steer project.
- * Write a summary of what a 4-H member can learn from training feeding and showing a market steer.
- * Give a demonstration on how to determine cutability (yield grade) and show a comparison between an animal with a yield grade of 1 and one with a yield grade of 4.
- * Interview supermarket managers and learn what type of beef consumers prefer.
- * Write a summary either supporting or rejecting the statement. All steers should be marketed when they weigh 1,000 pounds.

Try to complete one extra activity for each extra year of participation in the market steer project For example, the second-year member would complete three activities. third-year member would complete four activities.

The market steer project can be a great learning and fun-filled experience for you and your family Do not be afraid to ask for advice from older 4-H members, parents. 4-H Leaders and your Extension Agent Always work hard and faithfully with your steer project.

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