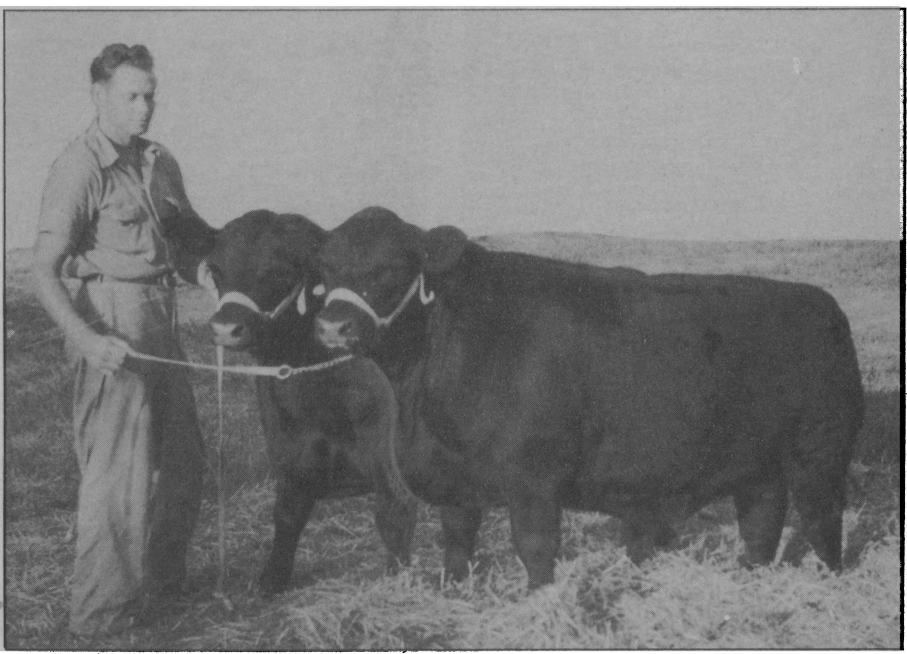


1-240
4-28-49

The. 4-H Baby Beef Project

CHARLES R. KYD*



These calves were the grand champion and reserve champion at the Missouri State Fair in 1947.

The 4-H baby beef project is designed to give you experience in selecting, feeding, fitting, showing, and marketing beef cattle. It is one of the most popular projects in Missouri today, with an enrollment of about 2500.

But frequently club members enroll in baby beef projects when not enough of the right kind of feed is available to fatten the calf. This usually results in a calf lacking finish at show time. In such cases the project is unprofitable.

*In collaboration with R. S. Clough, State 4-H Club Agent.

If you wish to choose baby beef as your project, you should have available about 75 bushels of corn or its equivalent per steer, preferably grown on the home farm, $\frac{3}{4}$ ton of good legume hay, and should be able to get about 500 pounds of protein supplement. You should have a place on the farm where you can stall, feed and care for project animals separately from the other feeding operations on the farm.

A feeding period of 10 to 12 months is necessary to produce a choice to prime carcass, which is desired in this project. Most club shows and sales in Missouri are held during late summer and early fall. Therefore club members find it to their advantage to buy 300- to 500-lb. calves during September, October and November, in order to have their calves in the desired condition by show and sale time the following year. Calves started on feed during late winter and spring seldom are finished properly by show time.

SELECTING THE CALF

Project calves should be carefully selected on the basis of type, quality, indication of fleshing qualities, and breeding.

Three views of a feeder calf of a desirable type for 4-H club purposes are shown in Figures 2, 3 and 4.

Calves are secured from various sources in Missouri each year. The most desirable source is the home farm, if calves of sufficient quality are available.

4-H members enrolled in the cow and calf project may use calves from project cows for baby beef work.

Producers of purebred and high quality grade cattle offer sources of calves in most communities.

If desirable calves are not available in the home community, it is practical for a group of club members to pool their orders and place them in the hands of a county club committee. This committee, with the county agent assisting, may in-

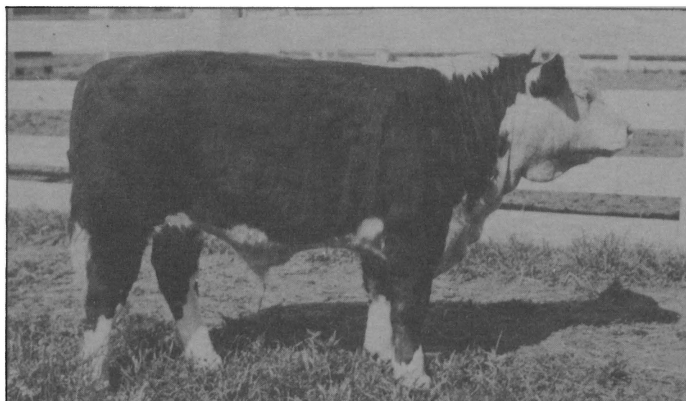


Fig. 2.—Notice the short straight legs, deep body, balance, depth in both rear and fore flanks, straight underline, heavy and rounded in quarters.

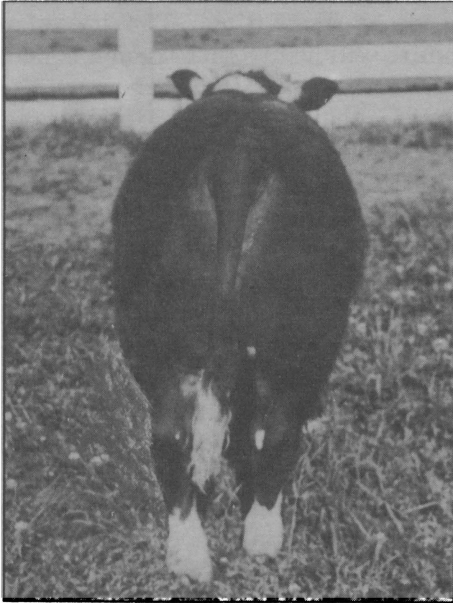


Fig. 3.—Quarters wide and deep, carrying well down to hocks. Rump wide, long and level with smooth tail-head. Ribs well sprung.

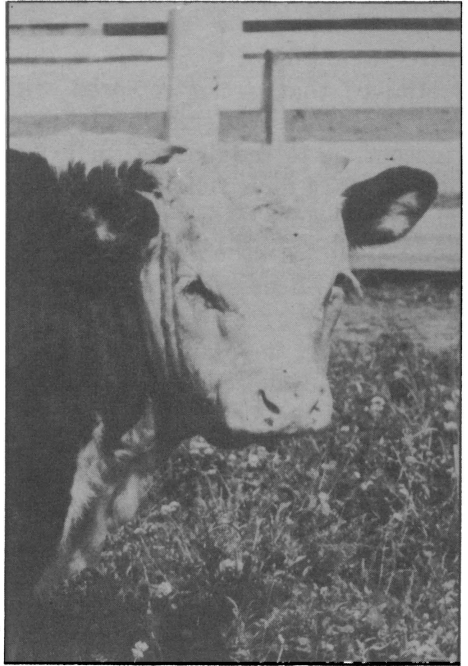


Fig. 4.—Notice the short, broad head and wide muzzle.

investigate various sources and purchase the number needed.

Feeder cattle sales in which the Extension Service and farmers cooperate, which have been established in Missouri during the past few years, are making available an increasing number of feeder calves suitable for project purposes. At these sales, calves may be purchased in lots or singles, and are auctioned by the pound.

The price paid for the project calf should be near the actual value of a calf to go into a commercial feed lot. Finished project calves, other than a few prize winners, must sell on the basis of the open market

price, based on each calf's individual merits.

EARLY MANAGEMENT

Trucking Calf Home.—Use care in trucking the calf home. Load the calf quietly, and avoid getting him excited. Use a good fitting rope halter, and tie the calf in truck. By proper handling, the calf may be partially halter-broken on way home. If the weather is cool, cover the front third of top and sides of the stock rack of the truck with canvas to prevent exposure of the calf.

Shipping Fever.*—Calves produced on the home farm should be vaccinated with hemorrhagic septi-

*By Dr. A. W. Uren, Department of Veterinary Science.

cemia bacterin or aggressin soon after weaning.

Calves that are vaccinated with the bacterin or aggressin are more susceptible to the disease for a period of 10-14 days following vaccination. Therefore, calves purchased on individual farms should be vaccinated with hemorrhagic septicemia bacterin or aggressin two weeks before moving, if possible.

Calves purchased from sales, terminal markets, or from other sources involving hauling or handling over a period of a few days should be vaccinated with hemorrhagic serum before moving or immediately on getting them home. Do not use the aggressin or bacterin on calves that might possibly be exposed to shipping fever. The serum has an immediate effect in giving immunity.

If the calf goes off feed and begins to run a temperature or show other symptoms of hemorrhagic septicemia, the best treatment is to give large injections of hemorrhagic septicemia serum. Also, start dosing the calf with sodium sulphathiazole at the rate of one grain per pound of body weight per day for three days. It is best to split the daily dose and give half in the morning and half at night.

Castrate Bull Calves Early.—If the calf selected is a bull calf, it should be castrated immediately. A delay in getting this done will cause a greater setback as the calf gets older, and will increase the chance of a coarse, staggy appear-

ance at show time. The use of a knife will insure that the job is done permanently, with no chances of a slip.

Dehorn Calf.—Most club members find it desirable to dehorn the project calf. This should be done at the youngest possible age, and may be done at the same time as castration. If the calf is raised on the home farm, caustic may be used before the calf is 10 days old. Dehorning tubes will do an excellent job on calves up to two months of age, and the Barnes type calf dehorner is recommended for weanling calves.

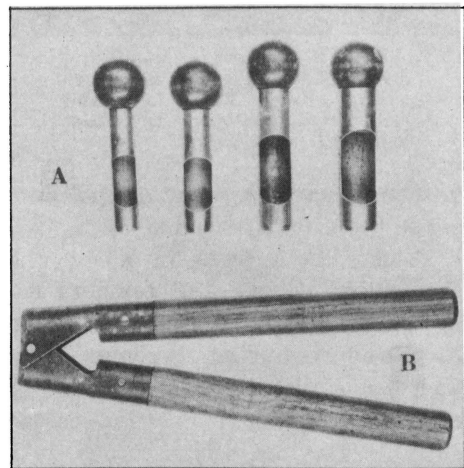


Fig. 5.—Dehorning tools. (A) The four sizes of dehorning tubes. (B) Barnes type calf dehorner.

Vaccinate for Blackleg.—All project calves should be vaccinated against blackleg at the beginning of the project. Calves vaccinated at about two months of age should be vaccinated again at weaning time for best results. Use vaccine which will

immunize the calf against both blackleg and malignant edema.

Worms.—Occasionally a calf is infested with stomach worms. Usually one treatment with liquid phenothiazine will give stomach worm control. For each 250 lbs. of weight, give $\frac{1}{2}$ oz. of a standard commercial phenothiazine drench. Give with a dosing syringe. It is not necessary to keep the calf off feed before treating.

Break Calf to Lead Early.—The best time to break a calf to lead is at the beginning of the feeding period. Tie him securely in a stall for the first few days, and carry feed and water to him. If he is particularly nervous, tying another animal in the same stall will help. A calf likes to be brushed. Regular brushings will also help to quiet the calf. After he has become used to being handled, he should be led to water. Care should be taken to keep him from getting loose or becoming excited. If that should happen, the calf may always be difficult to lead or show.

FEEDING

Starting the Calf on Feed.—The calf should be started on feed gradually. Increases in the amount of feed should be small enough to prevent scours and digestive disturbances. Once the digestive system is upset, the calf is more likely to have later attacks and will not feed regularly.

A bulky starting ration is best. Either equal parts shelled corn and oats or ground corn and cob meal

will make a satisfactory starting ration.

A safe amount of feed on which to start a calf is $\frac{1}{2}$ pound of feed per day for each 100 pounds the calf weighs. Thus, 2 pounds per day of the ration would be the right amount to give a 400-pound calf. This should be divided equally in morning and evening feeds.

The amount fed should be gradually increased after the calf begins to eat. At the end of the second to third week, the calf should be getting about all he will clean up in 30 minutes to an hour after feeding. Two pounds feed for each 100 pounds weight will be about what the calf will clean up on full feed.

Starting a Suckling Calf on Feed.—Calves that are still nursing will not consume as much grain as older calves. Although there is not as much danger of suckling calves overeating on grain when first started on feed as there is with older calves, only limited amounts of feed should be given at the start. After the suckling calf learns to eat, it should be fed only what it will clean up in a half hour.

A satisfactory ration for suckling calves one to three months old can be made of:

Shelled corn	—2 parts by weight
Oats	—1 part by weight

The following is a satisfactory ration for suckling calves over three months of age:

Corn	—8 parts by weight
Linseed, cottonseed or soybean oil meal	—1 part by weight

Hay in the Starting Ration.—Legume hays are preferred over non-legume hays in the starting ration. Give only small amounts at first and supplement with good quality non-legume hays, as large amounts of legume hay may cause bloat. After the calf is used to legume hay, give him all he will eat.

The Fattening Ration.—A good ration properly fed is necessary if the calf is to keep a regular appetite and fatten rather than grow. The feed should be made up of a variety of fresh, palatable, thoroughly-mixed feeds, free from dust or mold. Club members find it profitable to use home-grown grains, and buy only the feeds needed in addition to the grains to balance the ration.

The following rations make use of home-grown grains, available on most Missouri farms, and have been proven satisfactory by the experience of feeders and experimental work at the Missouri College of Agriculture.

Ration No. 1

Corn	—8 parts by weight
Oats	—2 parts by weight
Linseed, cottonseed or soybean oil meal	—1 part by weight

Alfalfa or clover hay—All the calf will eat during the first half of the feeding period and limited amounts during the last half.

This ration has bulk and variety. It is used in the early part of the feeding period. This quantity of oats in the ration may help keep the calf on feed.

Ration No. 2

Corn	—8 parts by weight
Linseed, cottonseed or soybean meal	—1 part by weight

Alfalfa or clover hay—As in Ration No. 1
This is a concentrated ration, and contains a high proportion of fattening feeds. It should be used when a high degree of finish is needed. It is widely used as the finishing ration by Missouri club members.

Ration No. 3

Corn	—6 parts by weight
Barley	—2 parts by weight
Linseed, cottonseed or soybean oil meal	—1 part by weight

Alfalfa or clover hay—As in Ration No. 1

This is a concentrated ration, with a high proportion of fattening feeds, and carries more variety than Ration No. 2. It is a good ration for the last part of the feeding period.

Ration No. 4

Corn	—5 parts by weight
Barley	—5 parts by weight
Linseed, cottonseed or soybean oil meal	—1 part by weight

Alfalfa or clover hay—As in Ration No. 1

This is a satisfactory ration containing a high proportion of fattening feeds. In sections of Missouri raising more barley than corn, this is a desirable ration. In feeding club calves, barley should be limited to half of the grain ration.

Ration No. 5

Corn	—6 parts by weight
Oats	—3 parts by weight
Bran	—1 part by weight
Linseed, cottonseed or soybean oil meal	—½ part by weight

Alfalfa or clover hay—As in Ration No. 1

This ration contains too much bulk to produce rapid gains or finish. It may be used to hold a steer during hot weather, or to secure a more even finish on a calf that has a tendency to become uneven in his fleshing.

Grain Feeds.—Oats are a bulky feed, well liked by the calf, but produce growth rather than finish. Too much oats in a ration will produce a calf lacking finish at show time.

Corn is the best of all fattening feeds. Ration No. 2, the "8 to 1 corn-cottonseed" ration, has repeatedly shown the lowest cost per pound gain, as high a rate of gain, and as good finish, as more complex and expensive rations.

Barley also is a good fattening feed. It is especially good in the last part of the feeding period, to add variety to the ration, and tends to produce firm fleshing.

Wheat bran is a good feed. It is palatable, high in protein, and has a slightly laxative and cooling effect on the animal. It should not be used in excess of 10 to 15% of the ration. Frequently the cost of bran is high as compared with grains, making it an expensive feed.

Protein Feeds.—Linseed, cottonseed, or soybean oil meal are used to supply protein in the ration. Grains do not furnish the quantity needed. All three of these feeds will furnish the protein needed, when fed as recommended. However, calves fed linseed meal usually have sleeker, more attractive coats of hair than when fed the other supplements. Cottonseed meal and soybean oil meal are produced in quantity in Missouri, and are more available and frequently cheaper. Pea-sized cake is more palatable than meal. Feed only the amount needed to balance the ration, as listed in the suggested rations.

Grinding Grain.—It usually pays to grind oats and barley coarsely, after the calves are 6 to 8 months of age. Finely ground, floury feeds continuously fed may result in the calf's bloating, constipation, going off feed, or low consumption of feed.

Corn may be fed shelled or coarsely ground. When shelled corn is used, hogs should follow the calves. In hot weather, ground corn will be-

come stale or rancid, and may cause digestive disorders or cause the calf to refuse to eat. This can be prevented by grinding corn every two or three days.

Water.—The calf should have all the clean fresh water it will drink at all times.

Salt.—Calves should always have loose salt kept before them, as they need large quantities when they are fed heavily.

Mineral.—A mineral mixture of equal parts finely ground limestone, steamed bonemeal and salt should be kept before the calf at all times.

Hay.—The calf must have some bulky or coarse feed. This should be supplied in the form of legume hay such as alfalfa, clover, or lespedeza. Legumes are high in protein and minerals, and are preferred over timothy or prairie hay.

Silage.—Corn silage is a good roughage feed for project calves. The amount fed should be limited to 8 to 10 pounds per day. Too much silage will reduce the amount of grain the calf will eat and may cause a paunchy appearance and lack of finish.

Molasses.—Blackstrap molasses is well liked by cattle, and is often used as an appetizer. It has a feeding value of about 70% of corn. Only small quantities should be fed, because of its laxative effect. About $\frac{1}{4}$ to $\frac{1}{2}$ pint mixed in enough water to moisten the feed, is sufficient and should cause no bad effects.

Molasses and molasses feeds are low in protein, and should not be

fed in place of protein feeds.

Pasture.—Project calves should not be turned out on pasture. Calves on good pasture will grow, but not fatten, and will lose their appetite for grain. A calf may be turned out at night in a small lot carrying a limited amount of pasture, with satisfactory results.

Milk.—Missouri 4-H club regulations require that all calves be weaned by April 1 of the year the calf is shown.

Nurse cows may be used until April 1, but their use adds greatly to the cost of fattening the calf. As most club calves sell for near market price, the use of a nurse cow in most instances results in a financial loss.

Calves raised on the home farm should be weaned at about nine months of age. They should be started on feed before weaning.

Calves bought for project work usually are from seven to nine months of age and can be started on feed satisfactorily without the use of milk.

Use Regularity in Feeding.—Feed the calf twice each day, except in the last part of the feeding period, when it may be increased to three feeds daily. Feed at the same time each day, as irregular feedings will cause a calf to go off feed.

Once the calf is on full feed, keep it on the same ration. Don't change from one feed to another. Any adjustments in ration or amount fed should be made gradually.

CARE AND MANAGEMENT

Good care and management are necessary in addition to good feeding, if fast and economical gains are to be made.

Stall.—The stall should be roomy, well ventilated, have a dry floor and a low, wide manger. The stall should be kept clean and well bedded so the calf will lie down as much as possible. Greatest gains are made when the calf is lying down, comfortable and contented. Clean the stall daily by removing all manure and damp bedding. Add bedding as needed.

The manger and feed boxes should be kept clean to prevent both lack of appetite and disease.

Exercise.—The calf needs exercise during the entire feeding period. It should be allowed to exercise in a dry lot on clear days during winter and spring. From July through September it should be kept out of the hot sun to preserve the gloss of its hair. During that time, the calf should be turned into a dry lot at night to get exercise.

It is a good practice in the last part of the feeding period to exercise the calf by leading it each evening. This not only assures that the calf gets exercise, but also gives a good opportunity to train the calf to show. Practice standing the calf as though he were being shown. Use a show stick to get his feet placed correctly. Use the show halter so the calf will become used to the chain lead strap.

Control Flies.—Keeping the calf

and stall free of flies will result in faster and more economical gains.

As flies around the barn hatch in manure, keeping the stall (and rest of the barns) clean, the manure hauled out to the fields instead of piled outside the barn, will greatly reduce stable fly numbers. Spray walls and ceilings of stall with a solution made of 5 pounds of 50% DDT wettable powder to 12 gallons of water to control stable flies. Usually one spraying of the walls and ceiling will last about 60 days. Spray again when flies begin to show up on walls and ceiling.

5% DDT oil emulsion type spray can be used on walls and ceilings. Follow directions on the container.

Spraying all the cattle on the farm regularly will probably decrease horn fly numbers to an extent that spraying the calf is not necessary. Horn flies hatch out in the pastures and are usually carried in to the barn lots by cattle being pastured. Horn flies usually do not infest barns, particularly darkened stalls.

If the calf is being exercised at night in a lot near unsprayed cattle, then the calf should be sprayed for horn fly control. Use 3 level tablespoons of 50% wettable powder to a gallon of water to make the spray solution. Any type of sprayer is satisfactory, such as the small knapsack sprayer. The important thing is to get the calf wet.

Spray the calf not more often than once every three weeks in spring and early summer if needed.

After regular washings are started in July, discontinue spraying.

Do not use DDT oil emulsion sprays on the calf.

Lice.—A calf infested with lice will not make efficient use of feed or make fast gains. Treat the calf for lice when first purchased in the fall, and again any time during the feeding period, if needed.

10% DDT dusting powder may be used to control lice. It may be applied with a bellows-type garden duster that will make it possible to apply the dust to the underparts of the calf as well as back and sides. Hold the duster close to the calf's hair when applying.

A spray made of 6 tablespoons of 50% DDT wettable powder to a gallon of water is also satisfactory. Any type of sprayer may be used that has pressure enough to get the calf completely wet.

Be sure to cover the calf completely when treating for lice.

Warbles.—If the calf is infested with warbles (grubs or wolves in the back), three treatments with rotenone powder will be necessary for control. Give the first treatment when scabs begin to form above some of the grubs, showing that they are beginning to puncture the hide. This usually begins in the last part of December in Missouri. Two more treatments are needed about 30 days apart to control other grubs which come up later.

Many commercial dusts carrying 1.68 per cent rotenone are available, and are satisfactory. To treat, dust

on the back and work in with a stiff brush.

Scours.—Scours are usually caused by irregular feeding or over-feeding, or by dirty buckets and troughs. Excessive feeding of laxative feeds may cause scours.

When scours occur, reduce the grain ration and legume hay for a few feeds. Clean up the stall, mangers, and troughs, if needed, and keep them clean thereafter.

Bloody or Black Scours.*—Bloody or black scours usually indicate infection with coccidia. A positive diagnosis can be made by a veterinarian.

Coccidiosis infection can be treated by dosing the calf with sulfaguanidine at the rate of 1 grain per pound of body weight per day for three days. It is best to give half the daily dose in the morning and half at night.

Clean the stall thoroughly and scrub stall, manger and feed troughs with a lye solution made of 1 pound can of lye to 12 gallons of water.

Bloat.*—Mild or chronic bloat is usually caused by digestive disturbances. It may be relieved by drenching with 1 oz. of turpentine in a pint of milk or 1 oz. of formaldehyde in a pint of milk. Use at rate of 1 oz. to each 400 lbs. weight. On calves weighing 800 lbs. or more, use 2 oz. of the turpentine or formaldehyde in a pint of milk.

A bit made of a short piece of broom or fork handle, placed in the calf's mouth and held securely in the mouth by tying with a cord or

strap over the poll, is sometimes used to relieve bloat. The calf in working to remove the bit will frequently pass off the gas through the mouth.

If the bloat is acute and if the bit fails, tap with a trocar or bleeding needle. Acute bloat may cause sudden death by suffocation.

Use care in feeding to avoid bloat and digestive disturbances, as mentioned elsewhere in this circular. Once a calf's digestive system is upset, more frequent digestive disturbances will occur thereafter.

Brushing.—A thorough brushing every day will improve the condition of the calf's skin and hair, remove chaff, dandruff and dead hair, and eliminate the need for washing during the spring and early summer. Use a stiff cattle brush for this job. Rough currycombs have a tendency to cut and roughen the hide. Daily brushings help get the calf accustomed to being handled.

Care of Feet.—If the stall is kept clean, dry, and well bedded, and the calf given plenty of exercise, very little difficulty will be had with the feet. If the feet should become sore and foot rot develops, clean them thoroughly and soak them in a saturated solution of bluestone. A water-tight box can be used in which to place the affected foot. A bluestone solution is made by dissolving 1 lb. bluestone in 1 gallon water.

The veterinarian can cure severe cases of foot rot with an injection of one of the sulfa drugs and keep weight loss at a minimum.

The feet should be trimmed as

*By Dr. A. W. Uren, Department of Veterinary Science.

needed, to keep the toes short and the calf standing straight on his feet and legs.

It is best to trim the feet of a club calf while he is standing, if at all possible. If this cannot be done, and if no stocks are available, then it will be necessary to throw the calf. Use the throwing hitch pictured below. Keep the rope tight while the calf is down and the feet are being worked on. Use care to avoid bruising and skinning the calf or breaking a horn.

In trimming the foot, remove the excess toe and bottom growth of the hoof wall with a pair of hoof nippers. Keep the blunt side of the nippers on the outside wall of the hoof. Take off only a small amount at a time, to keep from getting into the quick and causing bleeding and lameness. After removing the hoof wall, level the bottom of the hoof with a hoof knife until the bottom is flat and the calf will stand evenly

on all parts. Use a hoof rasp to shape the foot.

Don't wait until just before show time to trim the calf's feet. There is always a chance of trimming a little too close and causing lameness. Also, the angle of the foot will be changed, making the calf slightly off form for a short time.

Care of the Horns.—If the project calf is not dehorned, it is usually necessary to start training the horns early in the feeding period. The horns should be trained to curve downward, inward, and slightly forward.

If the horns are $4\frac{1}{2}$ to 6 inches long, half pound horn weights are usually sufficient. Horns vary in strength and size at the base, sometimes making it necessary to use heavier weights. If the horns fail to come down with half pound weights, 1 or $1\frac{1}{2}$ pound weights may be needed. Too heavy weights will cause a kink or break in the horn.

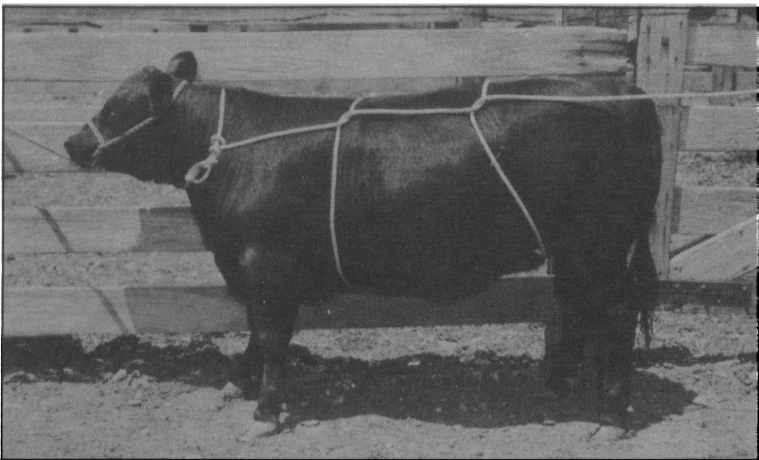


Fig. 6.—Throwing hitch.

Weights should be left on a week and then removed for 4 or 5 days, repeating this until the horns have taken the desired curve. If the weights are fastened with lag screws, the screws should be placed on the underside of the horn.

To avoid a spiky appearance, the tips of the horn should be cut back and shaped to a blunt point with a rasp and steel scraper or a scraper made of broken glass.

THE SHOW

4-H baby beef shows provide an opportunity for the club member to exhibit his calf and to compare, on a competitive basis, the results of his year's project work against that of other members. All club members are expected to exhibit in at least one show.

Community and county shows are the most important from the standpoint of most club members, as only a few calves can or should go to the major shows. Fat calves, economically fed, should be the goal of each club member, and will usually be profitable.

Regardless of where the project calf places in the show, each club member should learn to win or lose in a sportsmanlike manner. Listen to the reasons the judge gives after placing the class. After the show is over, study each animal in detail and see the reasons why the placings were made as they were. Keep these in mind and use what is learned on next year's project calf, so that a better showing can be made.

In order for a calf to make a good showing in any baby beef show, it must be fat. Calves lacking finish, regardless of type, are not prize winners.

Frequently club members with good calves fail to place as high as they might, because the calf is not properly groomed and is poorly trained and shown.

Grooming and Fitting for Show

Grooming.— The purpose of grooming a calf is to make it appear as short, thick, blocky as possible. To have a well groomed calf at show time, it is necessary that the calf be groomed regularly, considerably ahead of the show.

Hair.—The hair is an index to quality and should appear glossy and full of life instead of harsh and dead. Keeping the calf out of the hot sun from July through October will prevent sunburn, which makes the hair appear coarse and dead. Daily brushing throughout the entire feeding period will keep the hair and hide clean and will help the calf develop an attractive coat of hair.

Washing.— Frequent washing keeps the calf free from dirt and stimulates hair growth. Beginning in July the calf should be washed several times a month, with more frequent washings as show time approaches.

There are several steps which should be followed in washing the calf. First, brush him thoroughly, with the hair, to remove chaff and dirt. Then wet thoroughly with lukewarm water if the calf is dirty

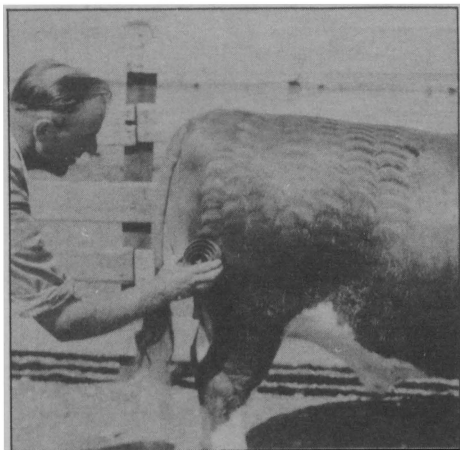


Fig. 7.—Wave curling the Hereford.

or if the weather is cool. Soap the calf while the hair is wet and use a stiff brush to work the lather into the hair. Tar or castile soap is satisfactory. Soap is not needed with every washing. When soap is used, rinse the hair thoroughly with plenty of water, as soap left in the hair will cause dandruff. After the soap is removed, rinse with a weak dip solution. This helps clean the skin and softens the hair. Brush the hair down to remove the dip rinse and to flatten the hair. This leaves the hair ready to be curled.

Curling.—There are two ways of curling the calf's hair. The method used will depend on the breed of the calf and the coat of hair. In either case, the calf should be wet with a weak dip solution, from the last step in washing, or from being wet by brushing with the dip solution.

Curling the Hereford.—Mark the wet, flatly brushed hair with the back of a round currycomb, down-

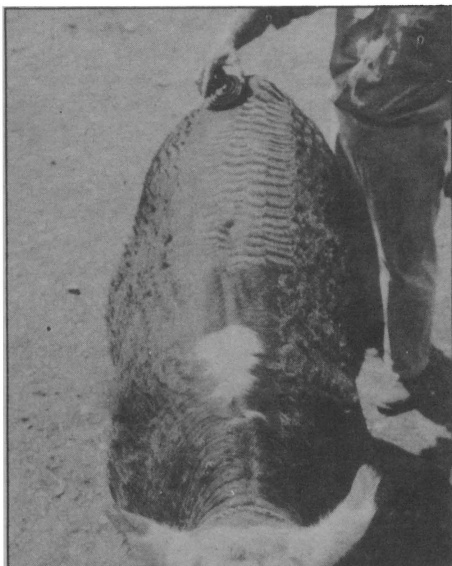


Fig. 8.—Dressing the back on a Hereford.

ward from the edge of the topline, in short wavy motions. Then comb the hair upward with a Scotch comb or coarse straight comb.

Brush upward until the hair is dry. Mark the topline across the back to a point just back of the shoulders with the round currycomb, and comb forward. Part the hair from just back of the shoulders, forward over the croups and neck and brush out flat.

The hair covering all depressions on the animal's body should be combed so it will stand on end.

Curling the Shorthorn.—The hair should be parted down the back and brushed down smooth. Use a marking comb or straight comb and mark lines from the rear of the calf to the front of the shoulder. The first line should be straight and run from the

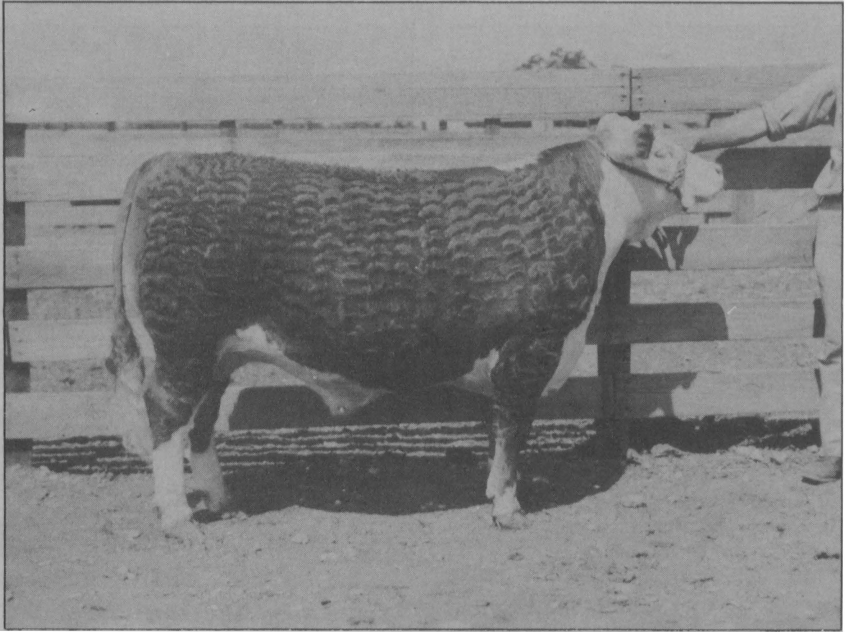


Fig. 9.—Completed curling job on Hereford.

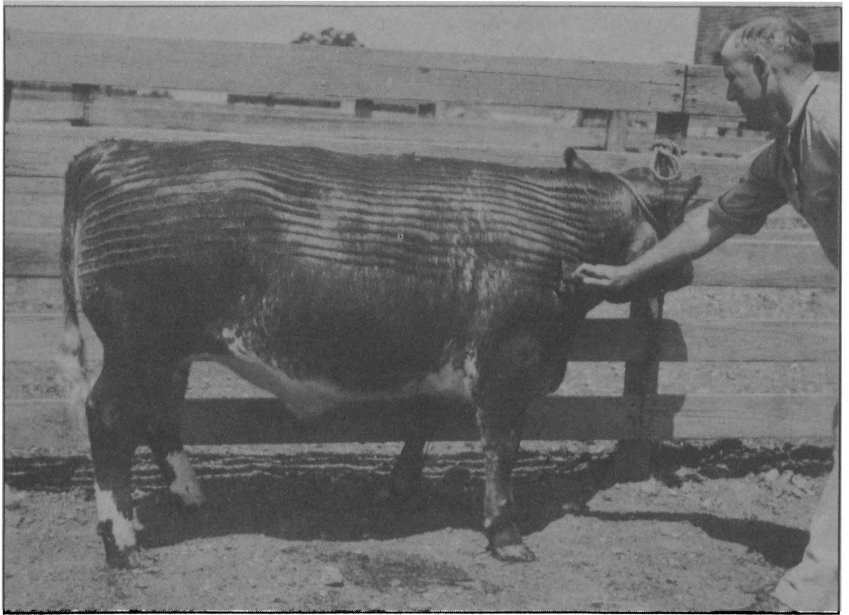


Fig. 10.—Line curling a Shorthorn.

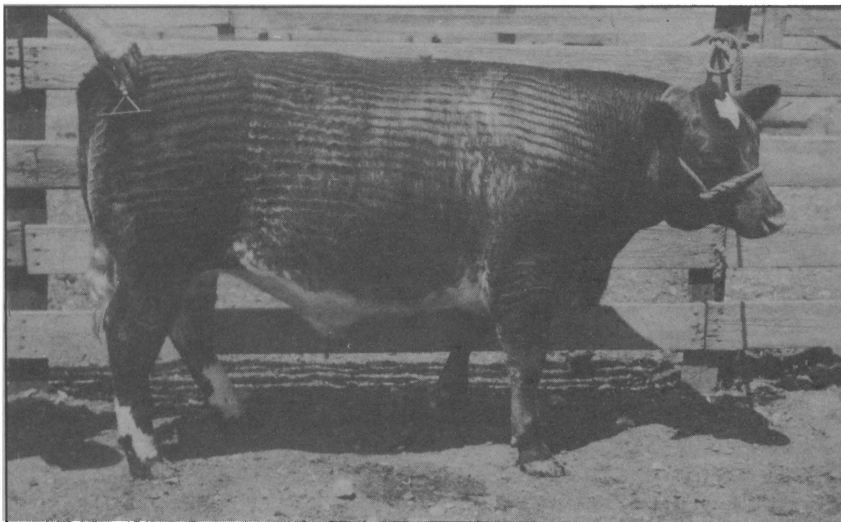


Fig. 11.—Pulling the hair up with Scotch comb.

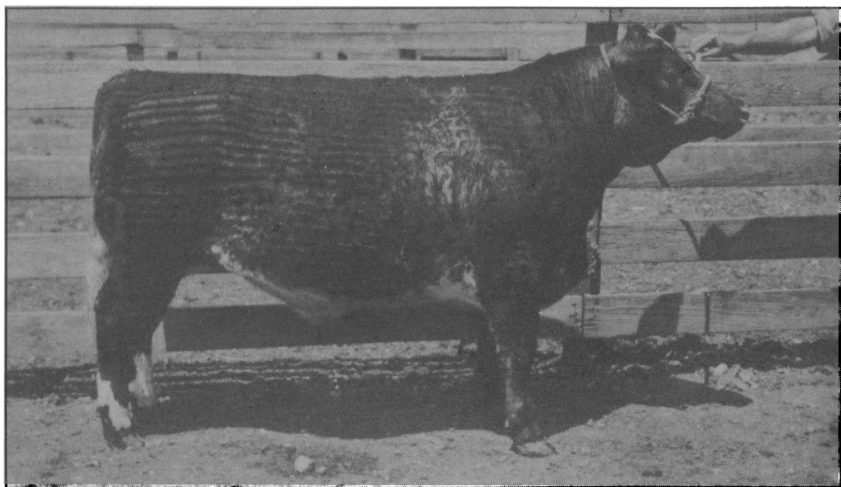


Fig. 12.—Completed curling job on a Shorthorn.

pin bones over the point of the hip and up to the shoulder-neck line.

Make all lines parallel to the first line and about one inch apart until the flank is reached. Extend lines on rear and forelegs down to the hock and knee. Comb upward with

a Scotch or straight comb, and brush until dry.

Curling the Angus.—Angus steers may be shown curled on shoulders and neck and smooth on the sides, or curled all over.

When curled on shoulders and

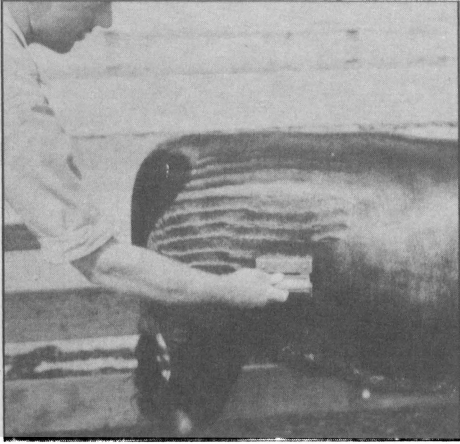


Fig. 13.—Line curling hindquarters on an Angus.

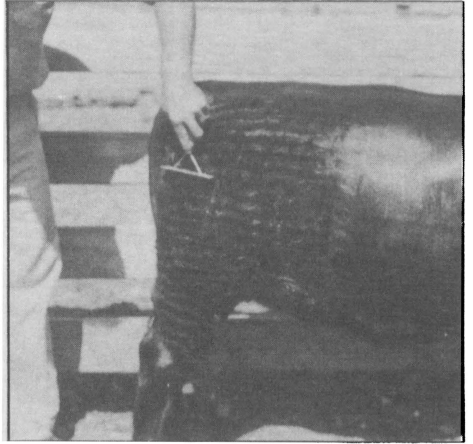


Fig. 14.—Pulling the hair up with Scotch comb.

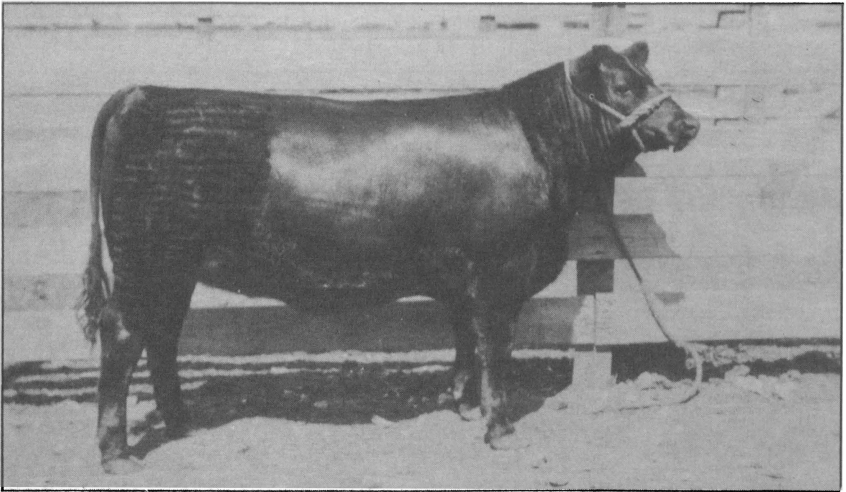


Fig. 15.—Completed curling job on an Angus.

neck, parallel lines are marked with a marking comb or straight comb. The first line on the hip should be straight and run from the pin bones to just forward of the point of the hip.

The top neck line should be even with the hip line. Extend the lines down to the hock joint. Comb up-

ward with a Scotch or straight comb, and brush until dry.

Part the hair down the back and brush down to the curled lines. Brush the sides down smooth.

When curled all over, use the same method as described for Shorthorns.

Quarters.—From the rear, with all three breeds, quarters are brushed

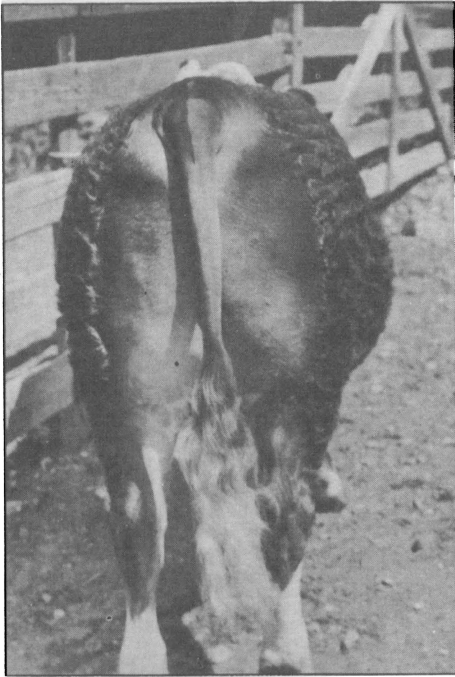


Fig. 16.—Brushed out quarters.

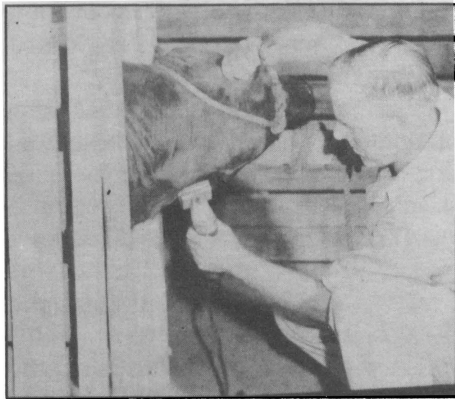


Fig. 17.—Clipping Angus head.

straight out to give a broad, full appearance to the rounds.

Tail Switch.—The tail switch should be fluffed out by brushing out wide each time the calf is

brushed. The switch may be braided into several small braids while wet and allowed to dry. Then unbraid and fluff it out by holding the tip of the tail and brushing upward. Then a few downward strokes with the brush will leave the switch smooth and attractive.

Clipping.—The heads of Angus cattle, other polled cattle, or dehorned cattle should be clipped a few days before the show. The head should be clipped to a line about one inch back of the jaw bone. The eyelashes, the hair inside the ears, and the long hair around the muzzle should not be clipped.

Do not clip the hair from the heads of horned calves. Just brush it in an orderly and natural way, and don't part it.

The tail on Hereford and Angus calves should be clipped from a point just opposite the split in rounds up



Fig. 18.—Place to start clipping tail.

to the tail head. This should be done about two weeks before the show.

Grooming on Show Day.—If the calf is groomed regularly ahead of show time, the hair will be set and trained to stand up as desired. This will give the hair a natural look when the calf is shown, as he should be shown with the hair dry. Wash the calf far enough ahead of the show so that he will be clean and dry. A little bluing added to the rinse water will help bleach the white hair.

A mixture of equal parts sweet oil or olive oil and denatured alcohol, applied as a fine spray after curling, or rubbed on with a flannel rag, will add luster to the hair. Do not use it other than on show day, as the oil will collect dirt and make the hair look dead. Wash it out after the show. Only a little of the oil is needed. Too much gives the calf a wet, greasy appearance.

Horns.—The rough surface of the horns should be removed with a rasp or scraper. Finish by rubbing with emery paper and polish with a woolen cloth moistened with a few drops of oil.

The hoofs can also be polished, if desired.

Care at Show Time.—Several precautions should be taken to prevent the calf's going off feed when he is moved to the show. Most of the shows in which club members participate are county shows involving hauling the calf to the show and home the same day. In doing this,

feed the calf the regular ration the day before the show. Do not give over a half feed of the regular ration the morning of the show day. Do not water until after the calf is moved. When you get to the show, give a limited amount of water and be careful not to overfill the calf.

If the calf is to be shown at a county or district show which involves greater distances and several days, the calf should be handled as follows. Feed the regular ration the morning of the day before the calf is moved to the show. Water the calf as usual the day before moving. Feed hay but no grain the evening before moving and give the calf access to water. Do not feed or water the calf on the morning of moving, until the calf arrives at the show. Then water and give a little hay if in the afternoon and feed hay and grain in the evening, and feed and water thereafter on the same schedule as at home.

Regardless of the type of show attended, the calf should be trained at home before show time to eat tied up, out of the feed box to be used at the show, and to drink water out of a bucket.

The calf should lie down as much as possible before it is shown. Animals show to better advantage when they are not gaunt. Therefore, it might be advisable to give the calf feed and water just before showing. However, too great a fill will give the calf a paunchy appearance.

Showing the Calf.—It is important that the calf be properly shown. A

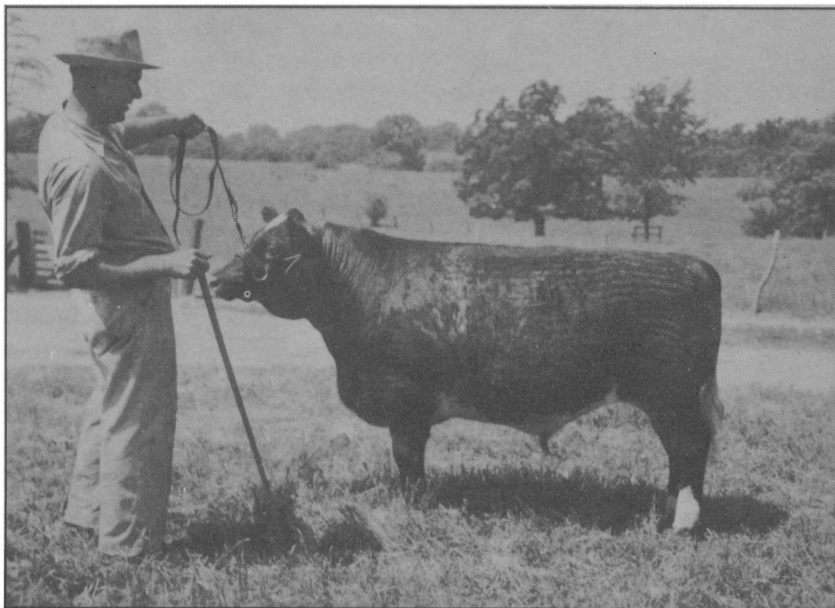


Fig. 19.—Proper position in showing.

good showman exhibits his calf in such a manner that it presents the best possible appearance at all times to the judge.

At the show, have the calf groomed, dry, and ready to go into the ring when the class is called.

Be dressed in clean clothes suitable for the occasion.

Lead the calf into the ring quickly when the class is called. The chain of the halter should lead from the left side. Always lead the calf with the lead strap in the right hand and the show stick in the left hand.

If possible, stand the calf so that his front feet are on high ground. When standing and showing the calf, face it and hold the lead strap in the left hand and use the show stick in the right hand.

Use a show stick, not your feet, to get the calf's legs into position.

Stay alert and keep the calf standing correctly. Don't overshoot. Once the calf is standing squarely, leave it alone.

Always watch the judge and never let him see the calf not standing squarely.

Never stand between the judge and the calf.

Do what the judge tells you quickly and politely.

Don't visit with the crowd or other members showing.

If the calf becomes unruly or difficult to make stand, lead it out of line, turn it around, and lead it back into the proper place.

Be a good sport regardless of where the calf places in the show.

MARKETING

Several types of marketing facilities are available to club members throughout Missouri for marketing 4-H club calves.

Several district baby beef shows hold auctions following the show.

Major interstate shows hold pre-show sales for calves sifted out of the show, and also sales for all calves shown, at the completion of the show.

4-H club marketing days are held at some terminal markets. Calves are sorted into uniform lots according to breed, weight, quality, and finish, and are sold in lots through the regular market channels. Market men explain terminal marketing methods and procedures to club members, who follow their calves through the stockyards as they are graded and marketed.

4-H club baby beef calves should be marketed when they are finished. Calves are sometimes held and fed too long, resulting in an "overdone" and expensive carcass. An overdone carcass is more wasty and less attractive to buyers.

It is not ethical or wise to overfill the calf on feed and water just ahead of the sale. Experienced buyers know when this has been done and will lower the price accordingly. An overfilled calf may appear to have a lower dressing per cent than it naturally has and will bring a lower price, in addition to the buyer's deducting for the fill.

Give only the regular amount of feed and water at the regular feed-

ing time the morning of the day of the sale.

Choose the place and type of marketing facility to fit the condition and quality of the calf, the location, and the county 4-H program.

LIVESTOCK JUDGING

Acquiring the ability to judge beef cattle will require time, study, and practice by the 4-H club member. Members should study judging as well as feeding and management as a part of the baby beef project.

A 4-H club member who becomes a good livestock judge will find this knowledge a source of profit and satisfaction. The recognition of what constitutes a good animal and the ability to see the good points and defects of each individual is of great advantage in selecting animals for any purpose.

Get Ideal Type in Mind.—A member should get in mind the ideal beef type as one of the first steps in learning to judge. When attending 4-H club shows, fairs, major shows or any other type of livestock show, place the classes along with the judge. Listen to the reasons given. After the show is over, visit the barns and study the animals and placings.

Visit the breeders of purebred cattle in the neighborhood. Purebred breeders welcome visitors and are always glad to discuss points of type with 4-H club members.

Learn the Parts of the Animal.—A knowledge of the name and location of the parts of the animal is

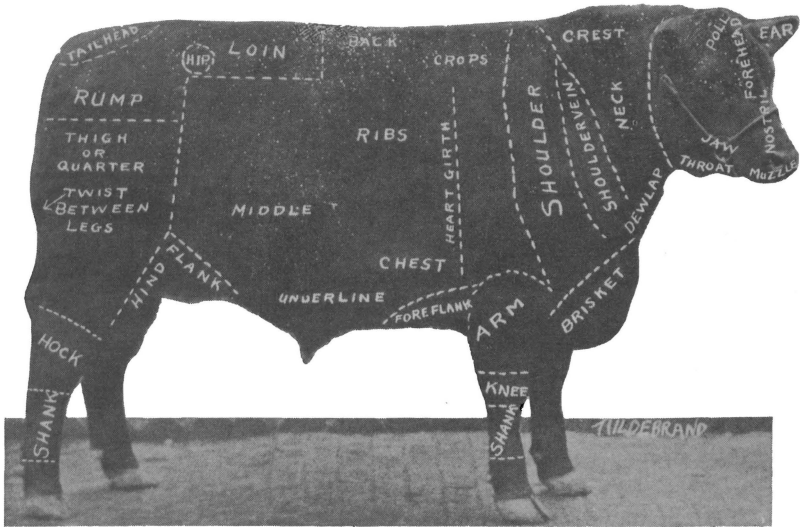


Fig. 20.—Diagram showing location of various parts of a beef calf.

necessary to understand reasons given by judges or to be able to discuss placings intelligently.

Study Figure 20, in which the parts of a beef calf are labeled, until each part and its location is known.

The Score Card.—A study of the score card will assist the member in evaluating the importance of the various parts of the beef animal. Also, by scoring a few animals a habit of looking at all the parts of the animal will be formed, so that no part is overlooked.

Comparative Judging.—Comparative judging is the term applied to judging a class of two or more animals and placing them in order according to their individual merits.

Comparative judging should first be studied by starting with two animals and comparing the important parts. General appearance is important in judging all animals. Observations should include side, front,

and rear views. These views will give opportunity to determine the quality, depth of body, length of leg and neck, width of body, thickness and depth of quarters, and spring of rib. Stand well back from the class of cattle in studying general appearance.

After general appearance is determined, handle the cattle to determine the thickness, evenness, and quality of fleshing.

Reasons.—At all 4-H club judging contests, members are required to give the reasons why they placed the class in the order given. The reasons count equally with the placings in scoring individuals and judging teams. The set of reasons given by the member will show the contest judge whether the member actually saw the individual points of each animal in the class and gave proper evaluation.

In giving oral reasons to the

SCORE CARD.—BEEF CATTLE—(FAT STEERS)

SCALE OF POINTS		Possible Score
Age, estimated.....yrs.,	actual.....yrs.	
GENERAL APPEARANCE—26 Points		
Weight, estimatedlbs.,	actual.....lbs.	
score according to age.....		6
Form, straight top line and underline; deep, broad, low, medium length, symmetrical, compact, standing squarely on legs.....		8
Quality, bone of firm texture, fine skin; silky hair; clearly defined features and joints; mellow touch.....		6
Condition, thick, even covering of firm flesh, especially in regions of valuable cuts; indicating finish; light in offal.....		6
HEAD AND NECK—8 Points		
Muzzle, wide, lips thin; nostrils large and well apart; jaws wide		1
Face, short, broad, profile straight.....		1
Forehead, broad.....		1
Eyes, large, full, clear, bright.....		1
Ears, well carried, fine, medium size.....		1
Neck, thick, short, throat clean, dewlap slight.....		3
FOREQUARTERS—12 Points		
Shoulder Vein, full smooth.....		3
Shoulders, smoothly covered with firm flesh; compact.....		5
Brisket, broad, full; breast wide.....		2
Legs, straight, short, strong, wide apart; forearm full; shank fine; feet sound		2
BODY—32 Points		
Chest, deep, broad; girth large; fore flank full.....		4
Crops, full, thick, even with shoulders.....		5
Back, broad, straight, medium length; thickly, evenly and firmly fleshed....		7
Loin, broad, straight; thickly, evenly and firmly fleshed.....		7
Ribs, deep, well sprung, closely set, thickly, evenly and firmly fleshed.....		7
Flanks, full, low.....		2
HINDQUARTERS—22 Points		
Hips, smoothly covered, proportionate width.....		3
Rump, long, level, width well carried back; thickly, evenly and firmly fleshed		5
Pin Bones, wide apart; not prominent		1
Tail, fine, tapering, medium length.....		1
Thighs, deep, wide, well fleshed.....		4
Twist, deep, broad, well filled.....		6
Legs, straight, short, strong, shank smooth, feet sound.....		2
Total.....		100

judge, the member should stand squarely on his feet, face the judge, and talk convincingly. He should tell in his own words what he saw in each animal. Give the good and bad points on all. Keep the reasons brief and discuss only the points that were noted. Don't try to fit one set of reasons to all classes. If there was a close pair, an easy top or bottom, a particularly good or poor class as a whole, mention it in the reasons. Never use the terms "better", "good", "best", unless a discussion is given as to why it was "better".

The following is a good sample of oral reasons on fat steers:

"My placing of this class of mixed fat steers was 1-2-3-4.

"I placed Number 1 over Number 2 because he was deeper bodied and lower set in his type, heavier in his hindquarters, was thicker fleshed, especially over the ribs, and was thinner in his hide than 2. I will concede in favor of Number 2, how-

ever, that he was more compact in his shoulders, was somewhat less wasty in his middle, and handled a bit firmer than 1.

"The second pair, 2 and 3, I considered fairly close and will grant, that Number 3 was a little more ideal in the quality of his fleshing, was neater at his throat and brisket, and showed more general quality than 2. Yet I preferred Number 2 because he was more compact, stronger in his back, was broader at the loin and rump, thicker in the rounds, and was a thicker fleshed steer down his top, particularly over the loin, than Number 3.

"In the last pair, I considered 3 an easy winner over 4. While Number 4 was a closer coupled steer with a stronger back and more level rump than 3, Number 3 was lower set, was wider and deeper bodied, was heavier in his rounds, and was considerably thicker fleshed all over than 4. I faulted 4 for upstanding type, light hindquarters, and lack of finish."

INDEX

	Page
SELECTING THE CALF	2
EARLY MANAGEMENT	3
Trucking Calf Home; Shipping Fever	3
Castrate Bull Calf Early; Dehorn Calf	4
Vaccinate for Blackleg	4
Worms; Break Calf to Lead Early	5
FEEDING	5
Starting the Calf on Feed	5
The Fattening Ration	6
Protein Feeds; Grinding Grain	7
Water; Salt; Mineral; Hay; Silage; Molasses	7
Pasture; Milk; Regularity in Feeding	8
CARE AND MANAGEMENT	8
Stall; Exercise; Control Flies	8
Lice; Warbles	9
Scours; Bloat; Brushing; Care of Feet	10
Care of Horns	11
THE SHOW	12
Grooming; Hair; Washing	12
Curling	13
Quarters	16
Tail Switch; Clipping	17
Grooming on Show Day; Horns; Care at Show Time ...	18
Showing the Calf	18
MARKETING	20
LIVESTOCK JUDGING	20
Know Ideal Type; Learn Parts of Animal	20
The Score Card	21-22
Comparative Judging; Reasons	21-23

UNIVERSITY OF MISSOURI COLLEGE OF AGRICULTURE AND THE UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

J. W. BURCH, Director, Agricultural Extension Service

Distributed in furtherance of the Acts of Congress of May 8, and June 30, 1914