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4-H Beef Club Manual: Extension Circular 2-61-2

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The 4-H beef club affords boys and girls an opportunity to learn the principles of selection, feeding, and marketing beef cattle. The usual procedure is to purchase quality feeder calves in the fall and feed for the next fall market. This method of feeding is very conservative for several reasons. Since calves rather than older cattle are bought, the feeding period is necessarily long and skill in feeding becomes more important than buying low and selling high. Calves make greater gains on the feed consumed than do older cattle. The market for choice, grain-fed cattle is usually highest in the fall. As a boy continues in baby beef work from year to year, he will be buying his feeder calves at about the same season he markets last year's beef, thereby making it a year-round program.

There are other feeding methods that might be used. Starting with a yearling steer or heifer in the fall, roughages might make up the bulk of the winter ration, followed by a grain feeding period in the spring. The amount of grain fed should be determined by the market.

This manual is based on the experience of successful farmers and 4-H club members, and results of experimental work in cattle feeding. Advice of the club leader and the county agent also makes it possible for a club member to profit from the experience of others instead of learning entirely in the "school of hard knocks." The regular club meetings provide an opportunity to talk over the problems and experience of the members. Training in livestock judging as a part of club work is a big help in selecting the correct feeder type as well as judging the finished steer. One of the essential parts of baby beef club work is record keeping. Accurately kept records make possible a very valuable study of different feeding and management practices.

A Market for Feed

Feeding beef cattle should be regarded as a means of marketing products of the farm. Every farm produces a considerable amount of rough feed and pasture which would be of little value unless fed to livestock. Occasionally the cash market for corn, barley, sorghum, or other feed grains may be higher than these crops would return through livestock. Over a long period of time, however, livestock feeding brings a return sufficient to pay for the feed, labor, and risk, and compensates the feeder for his management. In addition to this, feeding crops on the farm helps to maintain soil fertility.

Baby beef club work has done a great deal toward fixing in the minds of both farmer and rancher the correct feeder type—a thick, lowset, compact, smooth, early-maturing calf. This project has been valuable to the farmers of Nebraska in pointing out the advantages of the practice of feeding good calves for a fall market.

Practical and Profitable Training

The objective in beef club work is to feed good beef calves in a practical and profitable manner. Information and experience gained should become the
foundation for commercial operations when the boys start farming for themselves. The experience of a club member can hardly be considered complete, however, unless showing the calf at a local, county, or state fair is a part of it. The beginner should start with a practical kind of calf, bought at a price to assure a profit. From year to year he may buy better calves as his judgment in selection and his experience in feeding and showing justify it. Club members with several years of experience, who enjoy the keen competition of the big shows, may wish to produce a winning calf. This is a natural outlet for the energy of ambitious young people. Purchase of extremely promising calves at high prices is not definite assurance of winning at shows. Proper feeding and development of the calf, fitting him for show, and showing him in the ring are probably as important as the individuality of the feeder calf.

Feeding yearling steers or heifers does not offer as much opportunity for exhibiting at the various fairs and shows. However, there are times when meat production in quantities is more important than quality and finish. There are many opportunities for feeding older animals or calves of lower quality. Several local fairs provide special classes for such animals.

**Characteristics of a Good Feeder Calf**

A naturally thick-fleshed, beefy calf should be selected. Look down the calf's back and pick one which is wide and thick over the crops and top line and carries down deep and plump in the round. The general shape or type should be short and wide with straight lines. Short legged, thick necked, deep bodied calves have the thick muscling the packers want. Baby beef production requires an early-maturing type of calf. He should be deep-bodied, smooth-turned, rounded, and somewhat plump in outline. Probably no other mistake in selection results in so many disappointed 4-H feeders each year as the one of selecting a big boned, rough, angular calf just a little long legged and long bodied. The reason for this mistake is usually the idea that such a calf will grow faster and require less feed than the smooth, early maturing sort. Big, rugged calves may make economical gains but the usual lower selling prices of the calves which "grow instead of fattening" more than offset this advantage.

Real baby beefes can be produced only from good feeder calves of the beef breeds. Other kinds of common cattle will produce meat but do not make as efficient use of feed in making beef, nor are they a source of pride to the member of a baby beef club. Low quality calves may show a profit on a short feed and a rising market, but should not be fed ten to twelve months in baby beef production.

The ability to put on weight economically is largely an inherited characteristic, but can be judged from outward appearance. A short, wide head, wide over the muzzle, a short neck, and a deep wide chest are associated with feeding quality. Not one calf in a hundred with a long, narrow head or a wild disposition ever gets fat enough to show or sell well. They are generally poor feeders and equally poor individuals. A good feeder needs a very deep, wide middle without paunchiness. He has medium-sized, clean-cut bone, pliable, medium-thick hide, and a smooth coat of fine hair. These characteristics as well as firmness and smoothness of fleshing are indications of what is called quality. Quality is of importance not only to the feeder but also to the packer, because in the fat animal, quality is directly related to the attractiveness, tenderness, and flavor of the meat. A naturally quiet calf with a large placid eye has an advantage as a feeder as well as a companion for the boy or girl.

It is best to select a calf in moderate flesh, carrying some of his "baby fat." If he is thin, he may be slow to respond to his feed, and if extremely thin, he may be stunted and incapable of making a satisfactory gain. On the other hand, feeder calves can be too fat. If the calf is accustomed to eating grain,
that is an advantage; but selecting partially fat calves from a feed lot is not recommended. Often fat is mistaken for natural thickness, with disappointing results. Earlier gains are also cheaper than gains after the calf is fatter.

A steer is preferable to a bull calf. There is bound to be a setback from castration and always some risk. If a bull calf is selected, he should be castrated at once to avoid as much shock as possible and to keep him from getting staggy, which is a very serious fault in steers.

Age and Weight

Most feeder cattle leave the hands of producers at the end of the pasture season from September to November. There are more calves for sale at this time of year, and prices are usually lower than later. Too many 4-H members delay buying until winter and have to play on the sympathy of the owner or pay extra to get a calf not really for sale. They also pay for weight they might have added at less cost. Those interested in beef clubs should make a special effort to have the clubs organized early and the calves purchased in the fall.

Steers twelve to fifteen months of age and weighing 800 to 1050 pounds usually sell well and have made cheap gains. Experiments show that gains are much more expensive both as cattle grow older and as they become fatter. Heifers fatten more quickly than steers and when they become excessively heavy and fat they produce unattractive, wasty carcasses. Under 900 pounds, smooth, trim heifers usually sell near the price of steers. Heavier, more "cowy" heifers sell at a sharp discount. When demand for meat is high, the spread between prime beef showing high quality and medium beef with less quality narrows. During these periods it is best to keep away from prime-finished beef and market the calves when they grade good or low-choice. As most 4-H members wish to market in the fall when prices are usually best for grain-fed cattle and when the finished calf can be shown at a fair, if desired, steers calved in May and later and heifers calved in the fall are best to select. The time between purchase and expected marketing and the intensity of the feeding planned should be considered in deciding age and weight. Many of the most profitably fed heifers are under a year of age when sold. Most shows have age and weight requirements which should be understood by exhibitors.

Yearling Steers and Heifers

The long-time cattle feeding program best adapted to Nebraska conditions centers around calves and for reasons already discussed 4-H club members starting in a beef club will probably fare better by following this method of already available to most 4-H club members, are often mixed with the selection and feeding. However, there are opportunities to feed older cattle to a good advantage, and sometimes it is more convenient to start with a yearling steer or heifer. They are usually fed for a shorter time. Yearling steers can be started in the fall on a ration made up largely of roughages or fodder with the addition of three or four pounds of good alfalfa daily to provide added protein, minerals, and vitamins. When alfalfa is not available, one pound of soybean oil meal or its equivalent should be fed. During late winter additional grain may be included in the ration, working up to a full feed of grain. The steer can then be finished out for market in a period from 30 to 60 days, depending on market demands. Yearling heifers are usually marketed 30 to 60 days earlier than steers. They fatten more quickly and are usually
ready for market with less grain. There are times when good corn silage from corn making 20 bushels or more grain per acre will put heifers in market condition the following spring with little or no additional grain.

The Purchase

Ninety-nine per cent of 4-H beeves sell at or near market price. They should all be bought so they can be sold at such prices without disappointment. Good feeder calves should be purchased and the prices should be in line with regular commercial values of such cattle.

The club members, no matter how inexperienced, should be present when the calves are purchased. The person or committee making selections when club members do not do the buying should explain their methods and reasons to the club members. As soon as the boys and girls have learned something about judging they should buy their own calves with only whatever advice seems necessary. They will learn most by experience even if they make some mistakes.

Records

A large share of the value of the club will come from records accurately kept and carefully studied. The record should start as soon as the calf is bought and continue until the calf is sold. The club should set a goal of everyone keeping up records and turning in final reports. If the assistant leader or an experienced club member checks the record books at each meeting and helps those who are having trouble, difficulties will be cleared up before it is too late.

Budget

4-H record books for livestock clubs have space provided to make a budget for the project. Successful cattle feeders plan ahead before they start their feeding operations. Kinds and amounts of feed required, probable costs and selling prices of the animal, interest on investments, equipment charges, and probable net income are all essential in a successful plan. It will be interesting at the end to see how close the actual results compare with plans made in the budget at the start of the year.

Starting a Calf on Feed

Most commercial feeders who are feeding cattle during the winter months for a spring market start their cattle on a full feed of hay, gradually increasing the corn until the cattle are getting all they will consume. This is perhaps the quickest way of getting cattle ready for market. Cattle brought to full feed in this manner ordinarily are not satisfactory feeders over a long feed of eight, ten, or twelve months. A second method of starting cattle on feed is to feed hay and ground snapped corn, gradually replacing the snapped corn with ground ear corn and finally replacing the ground ear corn with shelled or cracked shelled corn. This method of starting cattle has the advantage that with the additional bulk in the grain there is much less chance of cattle going off feed. With the first method considerable skill is necessary in bringing the cattle up to a full feed. If the cattle overeat and scour or lose their appetite, it is necessary to reduce the grain feed to about half and again gradually build up the amount.

Calves can utilize considerable roughage during the early part of their feeding period. Experiments at the University of Nebraska and at the Substation at North Platte have shown that calves, wintered on a ration made up largely of silage, produced choice beef after a heavy summer feed of grain. Silage alone is not a satisfactory ration with which to winter calves that will be fed for the fall market. Since both corn and sorghum silage are low in protein and minerals, these essential elements must be supplied. Even though a calf is permitted to eat all the alfalfa he will take, as well as silage, protein and mineral needs are not entirely met. The addition of from ½ to ¾ pound per day of some high-protein supplement such as soybean meal, cottonseed meal, or linseed meal will supply the additional protein needed. Four to six pounds of good alfalfa per day will supply the bulk of the protein needed to balance the ration, as well as some vitamins and minerals essential for thrift and proper development. Other hays like brome and small grain can be substituted for alfalfa if they were cut early enough and cured properly to provide a high percentage of protein and vitamins. If no alfalfa is available, the feeding of from 1½ to 2 pounds per day of high-protein feed will supply the protein lacking in silage. The mineral needs may not be taken care of by such a ration. A simple mineral mixture such as two parts steamed bone meal, two parts feeding limestone, and one part salt may be placed where the calves can eat it, thereby avoiding any possibility of mineral shortage in this ration. If it is more convenient, one-tenth pound of this mineral may be sprinkled over the calf's feed each day.

Ground fodder may be fed in place of silage. The calf will not like fodder as well as silage and will not make quite as rapid gains. From the point of view of marketing the products of the farm, more beef can be produced per acre with silage than with fodder. This is particularly true of the sorghum,
since the grain in sorghum fodder is not well digested by cattle unless it is cracked. Feeding tests at the Experiment Station at Lincoln show more than fifty per cent more beef produced per acre with sorghum silage than with sorghum fodder.

Such a winter ration consisting of a full feed of silage or other carbonaceous roughages, properly supplemented, is satisfactory if the calf is to be fed for a late fall or winter market. Alfalfa hay plus a limited amount of grain makes a satisfactory wintering ration. If the calf is going to an early or mid-fall market, he will not be sufficiently fat unless additional grain is fed during the winter. From four to eight pounds of grain daily should be fed, depending upon the age and fatness of the calf and the time he is to be marketed. Younger and thinner calves will require a larger grain feed than older and fatter calves, to be marketed at the same season. Following such a winter ration, a full grain feed is necessary during the summer to fatten the calf.

Acceptable beef can be produced by wintering calves or young cattle on roughage as suggested, and then feeding them grain on good pasture through the summer. The grain allowance should be increased during the season, particularly when the grass dries up or matures. The last 60 to 90 days should be in the dry lot. Calves handled in this manner may not be in top show condition, but the carcass will meet normal demands and the gains will probably be efficient and economical.

It is impossible to keep most calves on a full feed over a long feeding period, particularly during the summer time when the heat and flies are bothering, without considerable variety in the ration. Calves fed roughage, or roughages and a limited grain ration, during the winter are easier to keep on a grain feed than calves having a heavy grain feed during the winter. A summer fattening ration with two or three concentrate feeds is much more attractive to the calf than one concentrate alone. In other words, the addition of a high-protein feed to the summer ration of corn and alfalfa helps stimulate the appetite. A further addition of some bulky, well-liked feed such as bran, ground oats, or ground barley, in limited amounts is helpful. Ten per cent bran or oats, or up to 25 per cent of barley, is often fed during the summer period. If a calf begins to lose interest in his feed, some slight gradual change in the feed, either the addition of some molasses or substitution of one of the grains or the replacement of one high-protein feed by another, may bring him back to full feed. Cracking the corn will usually increase the amount eaten and the rate of gain. It sometimes becomes necessary to limit the amount of hay in order to encourage greater grain consumption during the latter part of the feeding period. Many showmen feel that a ration with some bran, oats, or barley will produce smoother flesh than a straight corn ration. Some go to considerable bother to cook barley, or they include molasses or other feed rather high priced in relation to its feed value. Such feeding methods are hardly practical and very often the results are disappointing.

High Protein Feeds

Soybean oil meal or pellets, cottonseed meal or cake, and linseed oil meal are about equal pound for pound as protein supplements for cattle. A mixture of equal parts of either two or three of these feeds seems to give better results than any one of them alone. Most commercially-mixed protein supplements contain other ingredients which lower the protein content. Common farm grains, already available to most 4-H club members, are often mixed with the protein concentrates to make commercial feeds containing from 12 to 32 per cent protein. In considering the use of commercially prepared feeds, the club member should keep in mind that there is as much protein in 100 pounds of soybean or cottonseed meal as there is in about 130 pounds of 32%, or 175 pounds of 24%, or 230 pounds of 18% commercial supplement.

### Some Fattening Rations

<table>
<thead>
<tr>
<th>Ration</th>
<th>Corn</th>
<th>Oats or bran</th>
<th>Soybean meal</th>
<th>Ground barley</th>
<th>Linseed meal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prairie or cane</td>
<td>7</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>(Pea size)</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
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</tbody>
</table>

County agents have feeding circulars and reports of feeding experiments to supplement these feeding suggestions.

"The Eye of the Master Fattens His Cattle"

The importance of good care cannot be over emphasized. Only clean, fresh feed should be given. Musty, moldy, worm-infested feed, or feed which
cattle have muzzled in and left, should not be forced on the animal. All left-over feed should be removed from the feed box before putting in fresh feed. Plenty of fresh, clean water should always be available for calves. This is especially important in warm weather. Salt should also be where the calf can go to it any time. Common barrel salt is best. Regularity of feeding is a practice of almost religious observance among good feeders. Quiet, slow movements, a low voice, and a caressing hand promote the good feeding temperament so important to success and pleasure with livestock. The calf makes best use of his feed lying down, so comfortable quarters will save feed. Many 4-H feeders have been successful in using a self-feeder after calves are on full feed. It must be watched to see that it is working and the feed is fresh. Therefore, it saves little or no labor, but assures that the calves are really on full feed.

**Care in Hot Weather**

It challenges the skill of the best feeders to keep calves gaining well during the summer while heat and flies bother them. If their comfort is not given special attention, satisfactory gains can not be expected. A cool, airy stall or shed, darkened by old sacks split and hung over open windows and doors, should be provided for protection from sun and flies during the day. The quarters should be absolutely clean so as not to attract flies. Strips of burlap or split sacks hung from the ceiling will permit the calf to brush off the flies. A blanket can be made of burlap as further protection from flies and it will also smooth the hair coat. Fly sprays often roughen or discolor the hair and are an unnecessary expense.

The calf should be fed when it is cool, early in the morning and late in the evening. A lot should be provided in which the calf is turned to exercise as soon as it cools off in the evening. Plenty of fresh, clean water should be where he can reach it easily at any time.

**Diseases and Parasites**

**Blackleg.** There is no practical cure known. Calves should be vaccinated to prevent this disease.

**Lice and ox warbles.** Lice can be controlled by systematic dipping or spraying with a mixture of 1 pound derris (5% rotenone) 10 pounds wettable sulfur, and 100 gallons water. Calves should be treated at from 14 to 17-day intervals until all lice have been killed. Cattle grubs or warbles can be controlled by applying a wash made by dissolving 4 ounces of soap or 6 ounces wettable sulfur in 1 gallon warm water and mixing in 12 ounces derris (5% rotenone). Treatments should begin at the first sign of grubs making bumps along the calf's back, and followed every 30 days until all grubs have been killed. A mixture of equal parts by weight of wettable sulfur and derris makes a dusting powder that is effective in controlling both lice and grubs, if the powder is worked down to the skin. For lice, dust every 14 to 17 days; for grubs, at 30-day intervals. Kerosene emulsion, coal tar, or nicotine dips are effective. If cattle are washed or sprayed in cold weather, it should be done in the morning and they should be kept in the open until dry.

**Scab or Mange.** Itching which causes the calf to lick, rub, or scratch persistently is an indication of scab, lousiness, or other skin trouble. Scab is caused by an extremely small mite which may be seen against a smooth, dark surface if scraped from the affected skin with a dull knife. The skin affected becomes thickened and hardened as it rarely, if ever, does under other conditions. Correct diagnosis and early treatment will make the cure comparatively easy and prevent serious loss. Two dippings, 10 to 14 days apart, with lime-sulfur or nicotine should cure scab. If this is not effective, consult U.S.D.A. Bulletin 1017 for further information, or consult a veterinarian.

**Ringworms** appear usually about the eyes or nose. Treat with tincture of iodine. Apply iodine several times around the outside edges of the ring.

**Warts** mar the appearance of a calf. They can usually be softened away by applying castor oil or even crankcase oil every day or so. Another good method for removing large warts is to cut them off.

**Scours** among any but baby calves usually result from overfeeding, unclean feed, exposure, or over-heating. The feed should be reduced and prairie or other grass hays substituted for all or part of the alfalfa for a few days. In severe cases, dose with a pint of castor oil or bran mash (one gallon of bran through which hot water has been poured). Calves seldom go off feed when fed clean feeds and cared for at regular hours. White scours in new-born calves occur from an entirely different cause. See Nebraska Experiment Station Circular 46.

**Bloat** is usually caused by gases formed by rapidly decomposing feed. Green, rapidly growing plants are the most common offenders. Fine, leafy alfalfa or wet feed may cause bloat in calves on feed. Vigorous rubbing and kneading of the abdomen while placing the animal on an incline with its head toward the top may bring relief. When the animal shows marked distress, time should not be wasted. He should be "tapped" with an instrument known as a trocar, or even with a knife, to permit the gases to escape. Cattle on feed which bloat regularly make unsatisfactory gains. Sometimes the condition may be corrected by replacing alfalfa with wild hay and cotton cake or by reducing the feed greatly and building up to a full feed very gradually. Bloat is discussed fully in Nebraska Extension Circular 231, which each club should study.

**Lumpy Jaw** is caused by a fungus that is found in many of the cultivated or wild grasses. It makes its appearance, in most instances, in the form of small, hard lumps under the skin in the region of the throat. Eventually the disease involves the jaw bone, from which it derived the name. It is most successfully treated when the lumps first appear. Surgery and some of the iodides given internally under the direction of a veterinarian will usually bring about a cure.

**Training the Calf**

Sometimes the club member hopes to exhibit at one of the big fairs, but it is even more important to show the calf to friends, neighbors, and visitors. The best show in the world is right out in the home yard with people who are interested in the boy or girl. Club and community fairs draw more real interest than the bigger fairs where everyone is less well known and where there are so many other things to see and do. Regardless of where they are shown, calves should look their best. The club member is proud of his four-legged friend and wants others to appreciate his real worth. To show to advantage the calf must be trained to lead well and stand squarely. The sooner the calf is
broken to lead, the less trouble he is. He may be haltered and tied in his stall a few days until he is accustomed to the halter and knows it can hold him. Tying at feeding time is a good practice. Enough help should be obtained to be sure the calf does not break away when he is taken out. Avoid frightening an animal. The halter rope may be lengthened with another short rope so that one or two others can help. Do not make the mistake of putting on two ropes and leading from both sides. The calf should be stopped by pulling to the side and turning him, not by pulling back harder than he can pull forward. If a calf gets away, he is likely to keep trying to do it again for a long time. When the calf can be led well, he should be trained to stand. He will be easier to train outside his lot than where he feels too much at home. He should be accustomed to strangers and crowds in whose presence special care is necessary to prevent him from getting loose.

Spiked horns and proper use of horn weights.

Hair, Horns, and Hoofs

A calf must be clean and well kept to be attractive. Clean bedding, occasional brushing, and two or three good washings with soap and water before show time will keep his coat clean and free from scurf. Horns should curve down and in to look well. If they are not of this shape naturally, they will need to be trained with weights. Smoothing and polishing with a rasp, scraper, emery cloth, and a woolen cloth dampened with sweet oil add much to their appearance. If horns are not trained and polished, they detract rather than add to the calf’s appearance. Unless a boy is prepared to take good care of the horns, they should be removed as soon as the calf is purchased. If horns are removed, be sure to get them close—so close that a half inch of skin around the base of the horn is included. This prevents the appearance of stubs. The feet should be trimmed so that the calf can walk easily and naturally. Long toes hurt the appearance of too many 4-H calves. Hoofs may be smoothed and polished as horns are.

Fairs

Fairs give a fine opportunity for 4-H members to compare results and to see the best of other boys’ and girls’ products. Fairs also offer an excellent opportunity to make new friends and to exchange ideas with others who have similar interests. Usually premium money and extra sale price for the calves cover show expenses. The visitors at the shows and the buyers at sales represent those who provide the show quarters, premiums, and show management. They are entitled to see calves in the best possible condition, clean, attractively decorated quarters, and a prompt, showy program. Four-H members are always glad to render any courtesy possible to these friends.

The art of livestock showmanship, and it is an art when developed to the perfection many 4-H boys and girls have reached, has only indirect application in beef production. Purebred livestock producers have a real need for showmanship and 4-H work has shown some boys that they were adapted to the purebred business. Many people would never have noticed baby beef work and learned its value had their attention not been attracted by public shows. A business-like but friendly atmosphere should mark a 4-H show. Every attempt should be made to give information about 4-H work and baby beef production through signs, demonstrations, conversation with visitors, and any other means at hand.

Fitting for Show

Only animals of individual merit, clean, well groomed, and well trained will bring favorable attention to 4-H work. If for some reason a calf can not meet these standards, he should be marketed, not made a public exhibit. A
flattened in the comb, putting the lines twice as far apart. When the hair is very short, a curl can sometimes be set by running the lines as shown in the illustration, giving a diamond effect.

A very popular curl is made by placing the point of a round curry-comb against the body and bringing it slowly down the side, moving the wrist rapidly from side to side. All these curls are completed by brushing or combing the hair up lightly. The hair on the back is usually combed to the sides to a point back of the shoulder where it swirls in all directions. From there back it may be combed back and waved with the round comb but is usually not brushed up. The hair on the face is combed in natural directions; the hair at the poll of the head combed down on the face tightly to make the head appear short. The rounds and twists are combed out to give the appearance of width. All but the switch of the tail should be clipped about two weeks before show. The switch may be braided wet and tied, and combed out when dry. Angus heads should be clipped two weeks before showing. This presents a neat attractive head. The poll, face, and cheeks are clipped close. Sometimes the ears are clipped too.

Curling should be done several times to find the way each calf looks best and because the curl stays better when it is repeated. The curling should be done before the show and the calf shown dry. Angus and other short-haired cattle may be shown with their hair brushed smooth and lightly oiled with sweet oil. They usually have their heads clipped back about as far as the halter goes.

Making the curl with parallel lines.

boy or girl planning to exhibit should select, feed, groom, and train the calf with that in mind. No amount of skill in handling a calf in the ring will take the place of months of preparation.

Calves look wider and smoother if their hair is nicely curled. Shorthorn and Hereford calves usually have long enough hair to curl if they have been protected from the heat of the day. Angus calves are frequently shown with the hair smooth on the sides but lined with a lining comb on the neck and forepart of the shoulders and on the rear quarters. These lines are brushed up. If an Angus calf has sufficient hair on the sides, the parallel lines may be used and brushed up. The calf is washed thoroughly with soap and water, rinsed clean, and then wet with water having a little dip in it. He is ready for the curl.

Curling can best be done by watching and practicing. Some experienced person should explain how it should be done. Perhaps the easiest curl is set by running straight parallel lines along his side with an ordinary curry-comb as shown. If the hair is long, a better job is done when half the bars are

The curl with the round comb.
In the Ring

The judge expects a calf to show at his best. Calves should be ready to come into the ring when the class is called; that is only courtesy to the management of the show and other exhibitors and is sure to make a better impression with everyone than to delay the judging. At the larger shows there is usually a ringmaster who will show exhibitors where to put their calves and direct them to move as the judge wishes. The show will be much more attractive to the spectators if everyone is alert to move when and as directed and tries to keep in line. Showmen should watch their calves and the ringmaster all of the time. They may be signaled when they least expect it and then, too, the judge is looking for calves out of position in order to see their faults. If possible, the calf's front feet should be as high as his back feet or higher, and he should stand squarely with his back straight and his head alert. A show stick about four feet long with a nail through the end will help place the calf's feet and may be used on his underline or tail head to bring his back line straight. Training with this stick is more valuable than rough use at show time. The calf is led from the left side, with the lead rope in the right hand about one foot from the halter. It is preferable to walk facing forward. Good showmen make room for other showmen and accept the judge's decision like gentlemen no matter how disappointed they are. The class is usually paraded from the ring in the order placed. (See Extension Circular 0-23-2.)

Marketing

Most 4-H beef calves are sold through the regular established marketing agencies. The two most common are the central markets like Omaha and the local auction market. When selling at a central market, the cattle are delivered by truck or rail to the Yards Company. The Yards Company accepts the consignment and delivers it to the commission firm designated by the seller. Cattle are yarded, fed, and watered. The commission firm is the sellers' agent on the market, and buyers representing packers, order buyers, and others bargain with commission firms for the livestock. When the animals are sold, they are weighed by the Yards Company and delivered to the buyers. Payments are made to the consignor by the commission firm after charges for trucking or freight, yardage, feed, and commission for selling are deducted from proceeds of sales. Commission firms are bonded for the protection of the seller.

When cattle are sold at local auction markets, they are delivered to the auction company. The auction company yard the cattle, feed, and water them. In selling, the cattle are run through an auction ring where buyers bid on them. Sales returns are made to the seller through the auction company with deductions for yardage, feed and water, and sale charges. Auction companies are bonded for the protection of the seller. Price trends are pretty well established by sales on central markets. Every 4-H livestock member should take advantage of opportunities to visit the markets and see how they operate.

Shipping

The grain ration should be reduced before shipping. There will be less shrinkage if alfalfa is replaced with prairie hay or straw and the grain ration with oats, a day before shipping. Do not salt excessively or withhold water. If this is done the calves will overfill, scour at the show or market, and possibly bloat. Let the animal drink sparingly when it reaches its destination; at shows gradually resume the usual ration. Some truckers handle stock roughly or carelessly; they should not be trusted with 4-H calves. Proper bedding is important. Clean, wet sand is good in hot weather; straw and sand in cold weather.
Finish-Up

Much of the value of 4-H work is lost if it is not brought to a good strong close. The record books should all be complete. They should be studied and compared carefully. Final reports should be made by all members. If the year was a success, it is a pleasure to get results in definite form and to celebrate and tell the community about a good year at an achievement day. If things did not go so well, there are reasons. The agricultural agent and county committee members can help find them. Study of the records, visits to other clubs, and a mental review of the year will help plan for greater success next year. The close of the year is the time to organize so that plans for next year can be well made.

Many older experienced baby beef boys are building herds. Pictures show the right kind of foundation stock of the Angus and Shorthorn breeds.