

BABY-BEEF PROJECT

FOR

4-H CLUBS

- Selection
- Feeding
- Training

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UNIVERSITY OF KENTUCKY

College of Agriculture and Home Economics
Agricultural Extension Division

Thomas P. Cooper, Dean and Director

REQUIREMENTS OF THE PROJECT

1. The latest date for enrollment is July 1.
2. Each member shall feed 1 to 5 good beef calves, either steers or heifers. When the project starts the calves should weigh between 250 and 500 pounds each and should be less than 8 months old.
3. Each member shall keep a complete record of the feeding, care, and management of the calf or calves, and enter this record in the "Baby Beef Record Book." These records will be used in judging the contest.
4. Each member shall feed and care for his calf or calves independently and do all the work necessary during the project. Help may be obtained for hauling and weighing.
5. All calves should be weighed at the beginning of the project, and should be weighed each month thereafter if possible.
6. At the close of the project the calves of all members should be brought together at one place for exhibition and judging.
7. At the close of the project (after the show if one is held), the club member shall complete his record book, and turn the record book in to the county agent or club leader.
8. At the close of the project the calves shall be not more than 20 months old.
9. Basis of award: Cost of gain per 100 lb.....50 points
Quality and finish.....50 points

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Baby-Beef Project For 4-H Clubs

By E. S. Good and M. S. Garside

THE OBJECT of the baby-beef project is for boys and girls to learn the value of producing quick-maturing animals of good type. In carrying out the project the club members learn about up-to-date feeding and fattening methods, and gain experience in handling fat cattle and in keeping accurate records. Fitting and showing experience is also expected to be an important lesson.

SELECTING AND STARTING THE CALF

Size and Type

Choose a purebred or good-quality grade calf of any breed of beef cattle. Choose it in the fall, preferably from among calves dropped from June to September, weighing between 200 and 400 pounds, and unweaned. If bought before it is weaned, it can readily be put on a nurse cow if this is the plan to be followed. The calf can be castrated before he is weaned, thus lessening the shrink from the operation. Then, too, he will be about the right age to show the following fall. A boy or girl engaging in club work for the first time should perhaps choose a calf larger than 200-400 pounds.

It is not always possible to tell by the looks of a young calf how it will develop and appear at the time of the show. However, it is best to select one that has a blocky form—wide, deep body; short, straight legs; and a level rump. The tailhead should be level with the back. A short, broad head with a broad muzzle is very desirable, as it is associated with good feeding qualities. A long-legged, narrow, shallow-bodied calf with a high tail-head will not develop into a choice baby beef no matter how well he is fed and handled.

Getting the Calf Started

If the calf does not nurse when first put on the foster mother, he will usually do so after he becomes hungry. If he has never eaten grain, he will soon learn if a handful of grain mixture (pages 8 and 9) is sprinkled in a trough and kept before him. After he begins eating the grain, increase the amount gradually to a full feed in two weeks (6 pounds of grain daily for a 400-pound calf). If the calf is weaned when it is selected, it should be fed very little of the grain mixture at first.

Where to Get the Calves

Club members get their calves from their own or their father's herds, from local breeders, or from the western range. Quite a number of 4-H club members have bought purebred or good-quality grade beef cows and are breeding them to purebred bulls of one of the beef breeds. This procedure is highly recommended. Unless club members breed more of the calves they feed it may become impossible to get from local breeders all the club calves needed. In this event it may be necessary to buy from the western range.

If western calves are to be bought, a group of members could order them together through some commission firm or individual who is familiar with the type of calf wanted. Perhaps a larger number than needed could be shipped in, so that some culling could be done. In all probability, some local feeder would buy the calves not selected by the club members, at a price a little lower per hundred-weight than that charged for the whole group. This would increase the cost to the club members, but not enough to be important. The calves should be vaccinated against shipping fever, at the point of shipment, and against blackleg on arrival.

When the calves are ordered the club members should decide how to distribute the calves on arrival. One good way is to select the calves to be kept as club calves and then draw lots for them.

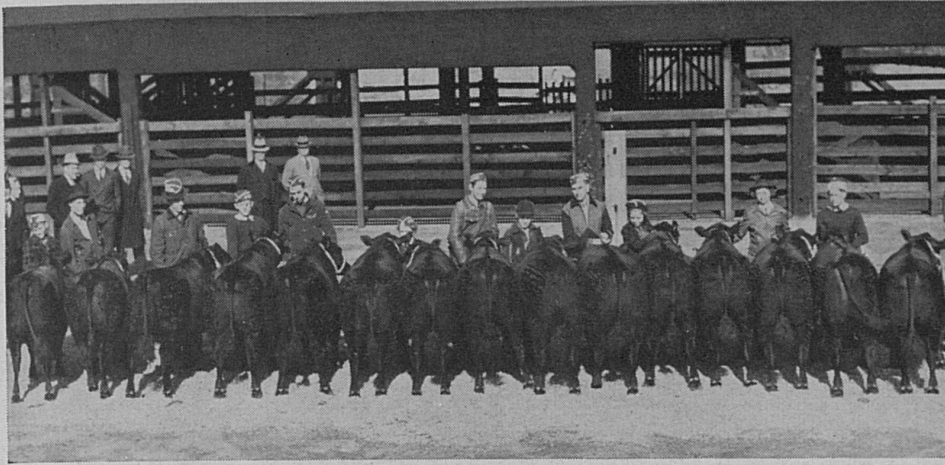
Western calves, having been weaned before shipment, must be finished without milk. To teach them to eat grain, begin with a small amount and gradually increase it so that at the end of three weeks a 400-pound calf will be eating 6 pounds of grain daily. As the calf grows and fattens the amount of grain fed should be increased.

FEEDING THE CALF

Concentrates

Oats are high in crude fiber, quite high in fat, and useful as part of the grain during the time required to put a calf on full feed, as they furnish bulk and aid in preventing the calf from going "off feed."

Corn, which has a large percentage of starch, is one of the best fattening feeds. It can be used liberally unless the calf has a tendency to become hard in his flesh and develops rolls of fat on the ribs nearest the hip. When this occurs, it is best to gradually substitute crushed barley for half the corn, pound for pound. Whole shelled corn may be fed, although crushed shelled corn is preferable. Corn should not be ground



Grand champion carload, Fat Cattle Show, Bourbon Stock Yards, Louisville, 1939. Shown by 4-H Club members of Garrard County.

fine for calves. Corn-and-cob meal is often fed to baby beeves, especially during the middle part of the feeding period. It is more bulky than crushed corn and not so fattening, and is therefore not particularly suitable for the last part of the feeding period. If it is ground moderately coarse it is less apt to cause bloat than crushed corn.

Wheat is as nutritious as corn, but is much more difficult to digest because it contains a sticky substance called gluten which tends to protect the starch from the action of the digestive juices in the stomach. Also, too much wheat causes scours. There is no reason, however, that crushed wheat cannot replace one-fourth of the corn (pound for pound) in the grain mixture if it is first fed in a small amount and gradually increased. Wheat is usually too high in price to replace corn.

Barley, nearly equal to corn for beef cattle, produces a smoother flesh than corn. It is a valuable feed to use to replace part of the corn during the last three or four months of the feeding period, especially if the calves have a tendency to be hard in their fleshing or are developing rolls of fat on their backs and ribs. Under such conditions as much as half the corn in the mixture may be replaced by crushed barley, pound for pound. The barley must, however, be gradually substituted for the corn, for it may cause bloat and scours unless the calf is gradually accustomed to its use. Newly threshed barley if fed as a concentrate with legume hay as the roughage is especially likely to cause bloat and scours.

Wheat bran is bulky and most valuable for baby beeves when they are being put on full feed. Later on in the feeding period, the proportion

of bran to the other feeds may be lessened or the bran may be omitted. It is rich in protein and phosphorus, and somewhat laxative in effect.

Cottonseed meal is high in protein and phosphorus and is commonly used in rations for fattening beef cattle.

Soybean oilmeal is becoming popular as a protein supplement and may be used in place of cottonseed meal.

Linseed oilmeal is an excellent feed for baby beeves and is usually fed during the finishing period. Sometimes it is mixed with one of the other protein feeds mentioned.

Peanut oilmeal is considered equal to cottonseed meal as a protein supplement in feeding beef cattle.

In purchasing cottonseed meal, soybean oilmeal, linseed oilmeal or peanut oilmeal one should call for a meal that has not been stored too long in a warehouse. When a calf does not relish one of these meals it is probably because the meal is old and rancid.

Roughages

Roughages are of two classes, proteinaceous and carbonaceous. The legume hays belong to the first class and timothy hay and other grass hays to the second.

Hay should not be fed until it has gone through a "sweat" in a mow, stack, or bale—a process of fermentation that takes about 6 weeks. Fresh-cut hay, particularly legume hay, is especially appetizing when first put into the mow and the calf may eat enough to cause bloat and scouring. Late-cut soybean hay may have an appreciable amount of beans on it which are so relished by the calf that he will overeat, causing digestive trouble. Mixed alfalfa-and-grass hay or clover-and-grass hay in place of straight alfalfa or clover is recommended. Straight lespedeza hay may be fed, but it is better to mix some grass hay, like timothy, with it.

Green corn or pumpkins if fed at all, should be fed only in small amounts, for they both have very laxative effects.

Hints on Feeding Practices

Watch the calf

Good feeders watch their animals while they are eating to note whether they relish the feed and how long it takes to clean up what is put into the manger. If grain is left after the calf has finished his meal, it should be taken out and given to some other animal, and the allowance of grain at the next feeding should be cut down. At the beginning, a calf should be fed at a regular hour in the morning and afternoon; but during the last 3 or 4 months before show time, it can be fed grain 3 times a day, giving at each feed the amount it will clean up in half an hour.

Keep the hay fresh

Hay left in the racks longer than 2 days should be removed and fed to an older animal, and a small amount of fresh hay put into the rack. Remember that it is not a good practice to feed fresh-cut hay.

Feed grain before nursing

If the calf is nursing a cow, be sure to feed the grain before letting it nurse. If it nurses first it may take enough milk to satisfy its appetite and lessen its capacity for grain, and as a result it will grow faster than it fattens.

Don't let the calf fill up on pasture

If a calf eats enough pasture grass to satisfy his appetite he will not eat enough grain to make as rapid a gain as he should. A close-grazed pasture is therefore best for the club calves. If the pasture is palatable and not close-grazed, keep the calf off it except for short grazing periods.

Ground limestone and salt are the minerals needed

A calf full-fed on grain and protein supplements gets plenty of phosphorus but not enough calcium. The small amount of hay eaten when the calf is on a full feed of grain, even if it is a legume hay, does not supply enough calcium. Ground limestone should therefore be kept in a clean container in the barn so that the calf can eat it as desired. Salt should be kept in another container, so that it also can be eaten at will.

Have plenty of fresh water

Unless the calf has access to fresh water all the time, it should be watered from a pail at least three times a day. Keep fresh water before the calf all the time during hot weather. Keep the pail clean and change the water frequently.

Put on full-feed slowly

If a calf has not been accustomed to eating grain from the time he is old enough to eat it, 15 to 21 days should be taken to get him on a full feed of grain mixture. When a baby beef is on full feed of grain he is eating per day an amount of grain equal to $1\frac{1}{2}$ to 2 percent of his weight. Of course, if a calf is fed grain as soon as he is old enough to eat it he will gradually accustom himself to the right quantity of feed.

Weigh the grain and mix it thoroughly

It is best to weigh instead of measure the ingredients of the grain mixture, because weighing is more accurate than measuring. A spring balance can be used. However, if no provision is made for weighing the feeds, dry measure should be used. In dry measure two pints equal one quart, 8 quarts one peck, and 4 pecks one bushel. Also half-bushel measures are on the market. A liquid quart holds about six-sevenths of a dry-measure quart. The formulas for concentrate mixtures recommended (Tables 1 and 2) are stated in pounds or pecks.

TABLE 1.—CONCENTRATE MIXTURES FOR CALVES
NOT NURSING COWS

Feed	Pounds ¹	Pecks	
First period (beginning to May 1)			
Use One of these.....	Ground or cracked corn.....	75	6 $\frac{1}{4}$
	Shelled corn	75	5 $\frac{1}{2}$
	Corn-and-cob meal	75	6 $\frac{3}{4}$
Oats, crushed	10	2	
Wheat bran	5	1 $\frac{1}{4}$	
Cottonseed meal or soybean oilmeal.....	10	$\frac{3}{4}$	
Second period (May 1 to August 1)			
Use One of these.....	Ground or cracked corn.....	85	7
	Shelled corn	85	6 $\frac{1}{4}$
	Corn-and-cob meal	85	7 $\frac{1}{2}$
Cottonseed meal or soybean oilmeal ²	15	1 $\frac{1}{4}$	
Third period (August 1 to September 1)			
Ground or cracked corn.....	75	6 $\frac{1}{4}$	
Barley, crushed	15	1 $\frac{3}{4}$	
Cottonseed meal or soybean oilmeal.....	10	$\frac{3}{4}$	
Fourth period (Sept. 1 to show time)			
Ground or cracked corn.....	60	5	
Barley, crushed	30	3 $\frac{1}{2}$	
Linseed meal and soybean oilmeal, half-and-half by weight ³	10	1	

¹The use of pounds instead of pecks in making these mixtures is highly recommended.

²If the calf is running on young, succulent pasture, the cottonseed meal or soybean oilmeal should be omitted. A ration too rich in protein will scour the calf.

³If the linseed meal and the soybean oilmeal are to be measured by pecks, mix 3 pecks of the linseed meal with 2 pecks of the soybean oilmeal. Then add 1 peck of this mixture (about 10 lb.) to the corn and the crushed barley.

The feeds used in the mixture should be mixed thoroughly. If they are not thoroughly mixed too much of the protein supplement may get into some feeding and cause digestive disturbances.

Weights of different grains and other concentrates, per level quart, are given in the following tabulation.

	Pounds per level quart
Dry Measure	
Barley, crushed	1.1
Corn-and-cob meal	1.5
Cottonseed meal	1.5
Ground shelled corn	1.5
Linseed meal, O. P., pea size	1.1
Oats, whole	1.0
Oats, crushed7
Shelled corn	1.7
Soybean oilmeal	1.7
Wheat bran5
Wheat, ground	1.7
Wheat, whole	1.9
Liquid Measure	
Molasses, black strap	3.0

TABLE 2.—CONCENTRATE MIXTURES FOR CALVES NURSING COWS

Feed	Pounds ¹	Pecks	
First period (beginning to May 1)			
Use One of these.....	Ground or cracked corn.....	80	6½
	Shelled corn	80	5¾
	Corn-and-cob meal	80	7
Oats, crushed	10	2	
Wheat bran	5	1¼	
Cottonseed meal or soybean oilmeal.....	5	½	
Second period (May 1 to August 1)			
Use One of these.....	Ground or cracked corn.....	90	7½
	Shelled corn	90	6¾
	Corn-and-cob meal	90	8
Cottonseed meal or soybean oilmeal ²	10	¾	
Third period (August 1 to September 1)			
Ground or cracked corn	80	6¾	
Barley, crushed	10	1¼	
Cottonseed meal or soybean oilmeal	10	¾	
Fourth period (September 1 to show time)			
Ground or cracked corn	70	5¾	
Barley, crushed	20	2¼	
Linseed oilmeal and soybean oilmeal, half-and-half by weight ³ ..	10	1	

¹The use of pounds instead of pecks in making these mixtures is highly recommended.

²If the calf is running on young, succulent pasture, the cottonseed meal or soybean oilmeal should be omitted. A ration too rich in protein will scour the calf.

³If the linseed meal and the soybean oilmeal are to be measured by pecks, mix 3 pecks of the linseed meal with 2 pecks of the soybean oilmeal. Then add 1 peck of this mixture (about 10 lb.) to the corn and the crushed barley.

Adjust the mixture to the needs of the calf

Usually baby beeves fed in 4-H club work run on rather close-grazed pasture, and the grain mixtures in Tables 1 and 2 are planned for calves on such pasture. If, however, the calves are running on good, young, succulent pasture such as often is found in May and June, the cottonseed meal or soybean oilmeal should be left out of the mixture. Young pasture grass is itself fairly rich in protein, and including a protein supplement in the grain mixture for such calves is likely to cause them to scour.

Blackstrap molasses is good to make a feed more appetizing, and it has also a good effect on the thrift of the animal. One-half pint diluted with ½ pint of water may be fed at each feeding time. Feeding molasses is usually begun about August 15.

Calves that are nursing their dams or nurse cows need less protein in their grain mixture than calves grown and fattened without milk, for milk is rich in protein. Grain mixtures for calves not nursing are given in Table 1, and for nursing calves, in Table 2.

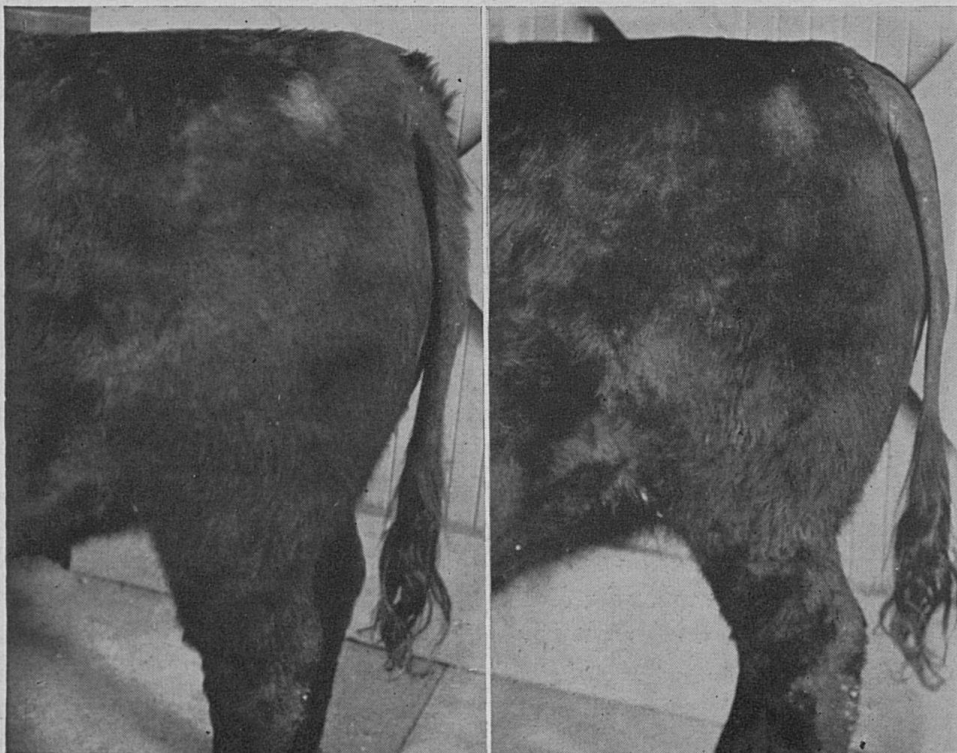
CARE AND MANAGEMENT

Teach the Calf to Lead and Stand

Give the calf the most gentle treatment from the first. One of the best ways to gain its confidence is to brush it gently with the hand or a soft brush. In a few days, put a halter on it and tie it up for an hour or two, lengthening the time until it becomes well accustomed to being tied. Then teach it to lead. This is best done by having someone help by keeping behind the calf and urging it forward when it is inclined to pull back on the halter. It requires a great deal of patience to train a calf to lead and stand properly and be unafraid of people who wish to handle him. (See illustration on page 20.)

Calves Should Be Outdoors Part of Time

It is a general belief that calves being fitted for a baby beef show should be left in a dark stall during the day. It must be remembered, however, that a calf needs sunlight for its best development the same



Tail of baby beef before clipping (left), and after clipping (right).

as a child does. Therefore let the calf out in the sunshine for 2 to 4 hours each day, but where it can get in the shade if it wants to. Sunshine and the hay the calf eats are the only sources from which it can receive Vitamin D, which is essential for proper development of strong, dense bone. Calves kept indoors all the time sometimes walk with a stiffened gait and show signs of tenderness in their legs while standing.

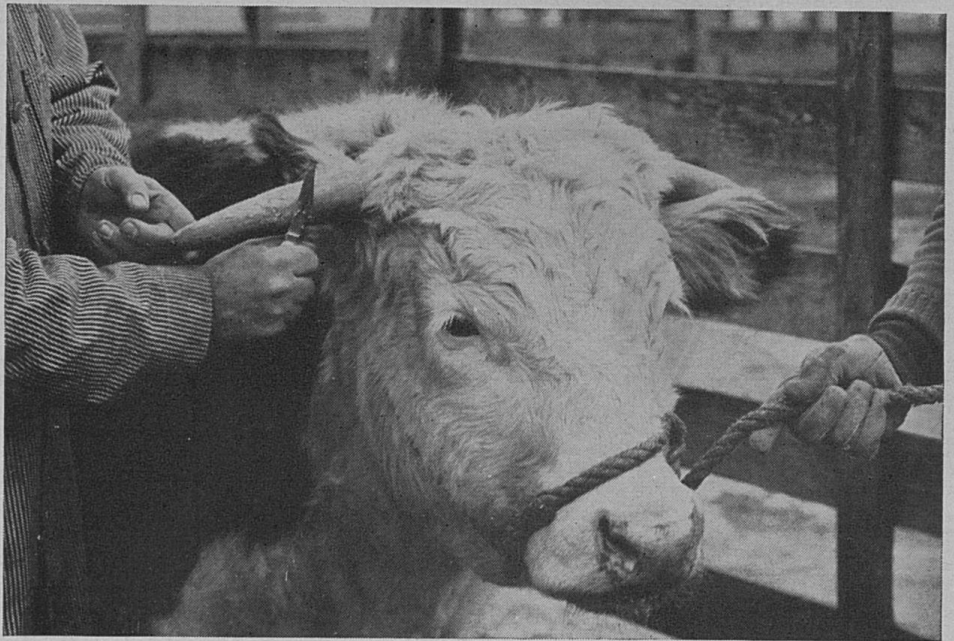
During the last 4 to 6 weeks before show time, the calf can be left in the barn most of the day to soften the harsh hair caused by sunshine. If during these last few weeks a calf is turned into a lot with little pasture, after the evening feed—about five o'clock—and brought into the barn at about eight o'clock in the morning, he will probably receive enough Vitamin D. He will also get some exercise in the field, which is helpful. Then, too, the dew on the grass softens his feet and makes them more easily trimmed. Clean and bed the stall each day while the calf is out on pasture.

Clip the Head and Tail

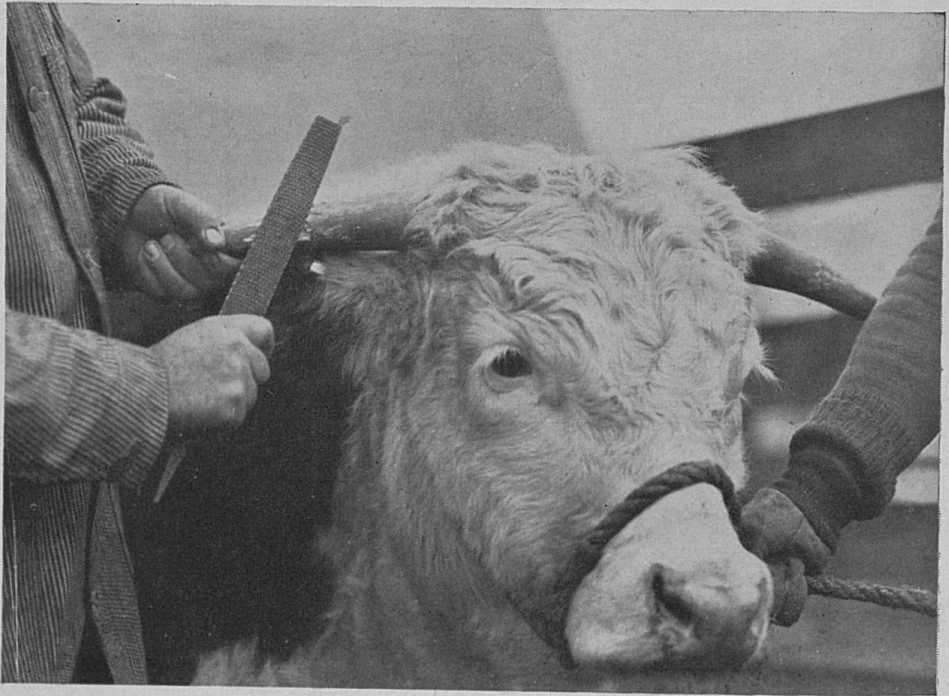
Calves of the hornless breeds should be clipped about the head and ears and under the lower jaw. Clip back to a line about 3 inches behind



An Angus calf properly clipped about the head and ears. Note his trim appearance.



Removing the scaly parts of horn with a sharp knife. Take care to keep the cuttings thin so as not to mar the horn. To steady the horn and at the same time avoid being cut if the steer jerks his head, keep the forefinger on the opposite side of the horn from that being trimmed.



Smoothing the horn with a rasp. Use a rasp that is rather coarse on one side and finer on the other. Grasp the tip of the horn firmly, and always rasp from the point of the horn to the base, so as to avoid injuring the hand if the steer jerks his head.



Paring the sole of the hoof with the baby beef held in stocks. After the foot is fastened securely, take a sharp 1-inch wood chisel, flat side to the hoof, and trim a very thin slice from heel to toe. Continue to take these thin slices until the foot is fairly flat. Don't try to trim hooves by yourself unless you have done it before under careful supervision. Cut off the end of the toe (as shown on page 14) before paring the soles of the other three feet.

the ears. Clip the outside of the ears also. Tails of calves of all breeds should be clipped down to the beginning of the twist. A calf high in the twist should have a longer brush than one that is deep in the twist, as the long brush gives him the appearance of having deeper hindquarters. Clip the tailhead one week before showing. Don't trim the legs.

Smooth and Polish the Horns

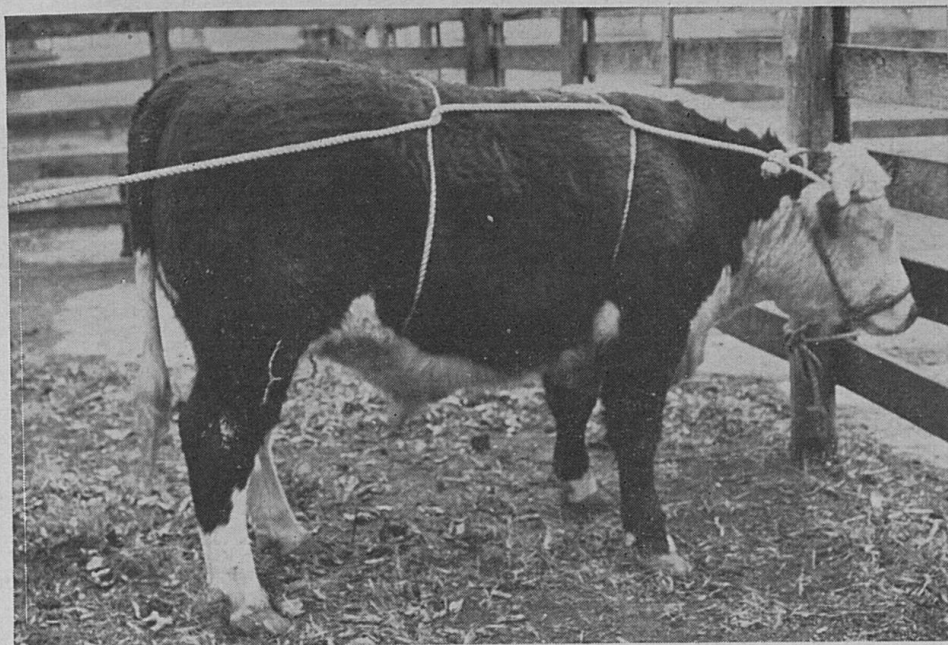
If the horns are scaly and uneven, trim away the scaly part with a heavy, sharp knife, and then scrape the horns with a piece of broken glass. If the scales are not too large they can be removed by rasping the horn with a coarse file, then rubbing it with coarse sandpaper, scraping with broken glass, and finally rubbing with fine sandpaper. After



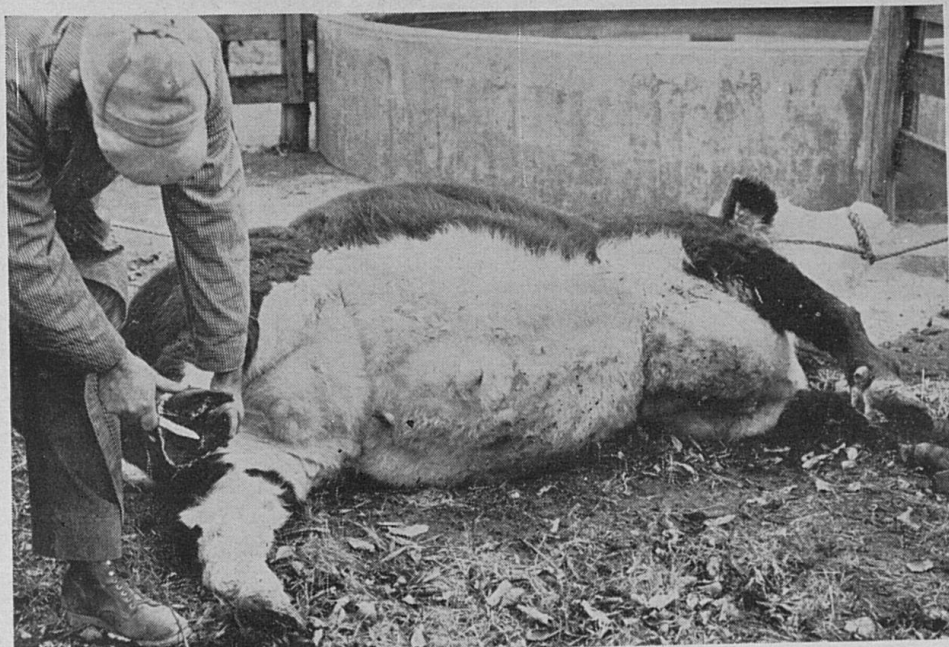
Cutting off the end of the toe with baby beef held in stocks. After the sole has been pared, (see page 13) hold the chisel upright and take off the sharp point of the toe. Pare off about $\frac{1}{4}$ inch more from the bottom of the toe-end of the hoof, then round off the square-cut point of the toe.



If you have no stocks, cut off the end of the toe and round off the square cut by using a long-handled chisel and a maul. Do this before trimming the sole, as shown on page 15.



If you have no stocks, throw the baby beef by pulling back on a rope arranged as shown here. Use a no-slip knot and tie the calf low on the post. For polled baby beeves tie the rope around the neck, being sure to use a no-slip knot. The knot should be located parallel to that part of the rope held by the operator. When the calf is thrown, keep as tight a pull on the rope throughout the trimming as was necessary to throw the calf.



Trimming the feet of a baby beef after he is thrown. Trim the sole as described under the picture on page 13, but use a strong, sharp knife instead of a chisel. Do the trimming after a rain, when the hoofs are soft. To avoid being thrown and perhaps injured if the calf kicks, keep your weight off the foot next to the steer's leg.

the horn is smooth, polish it by rubbing briskly with a woolen cloth moistened with sweet oil on which a little tripoli has been dusted.

Horns that curve upward and outward should be made to curve slightly inward and downward. They can be made to curve downward by attaching proper weights to the horns. And they can be curved inward by attaching straps to the two weights and tightening the front strap.

Keep the Hoofs Trimmed

The toes of a baby beef must be trimmed when they become too long. If the toes of the hind feet are too long the calf will stand on its heels, and this will give it a drooping rump. Sometimes the toes turn up, and this gives the calf an unsightly appearance. In counties where the baby-beef project is emphasized the county 4-H club organization might well have stocks so built as to be taken in a truck from farm to farm.

The proper way to trim a hoof is to cut off the end with a chisel and hammer and then to trim the sole with a sharp chisel, being careful not to cut too deep. The best way to hold the calf for such trimming is to place it in a stocks, as pictured on page 13. If no stocks are available, the ends of the toes can be removed as shown on page 14, and then the calf can be thrown and the soles pared down with a strong, sharp, knife.

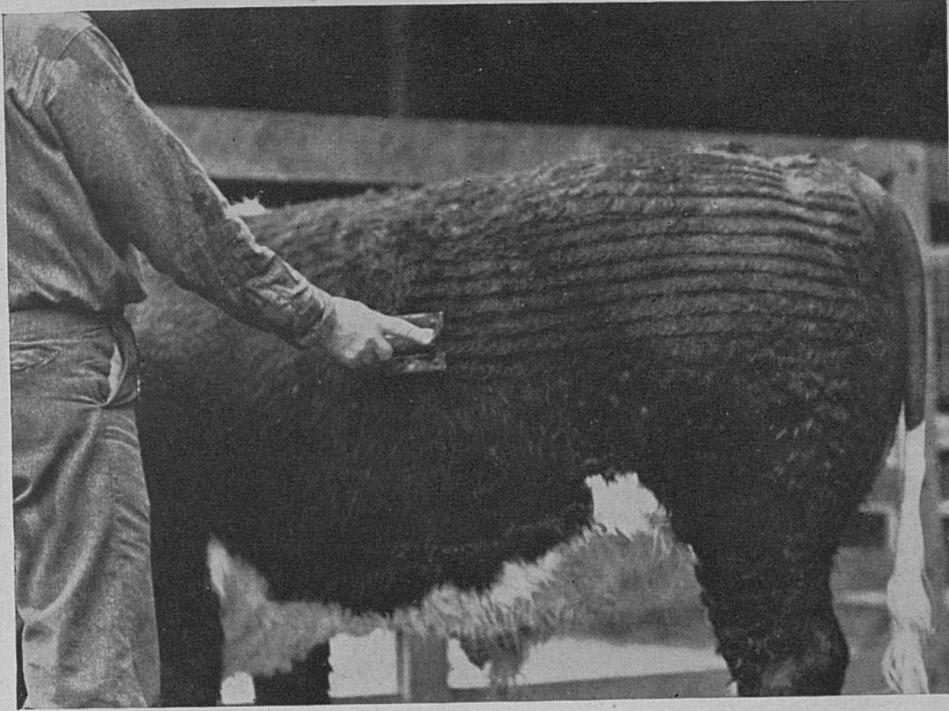
Keep the Coat Well Groomed

Two kinds of curls are used in preparing the coat of a baby beef for the show ring. The one most used is the "parallel curl." First, brush the calf, and then wet the hair with a solution of 1 tablespoon of some good disinfectant to 1 gallon of water. Second, with a hard rubber comb, or Scotch comb draw parallel lines 1 to 1½ inches apart, from head to tail. Third, with the same comb or a brush bring the hair upward, beginning at the bottom line and moving to the top line. (See illustration on page 17.)

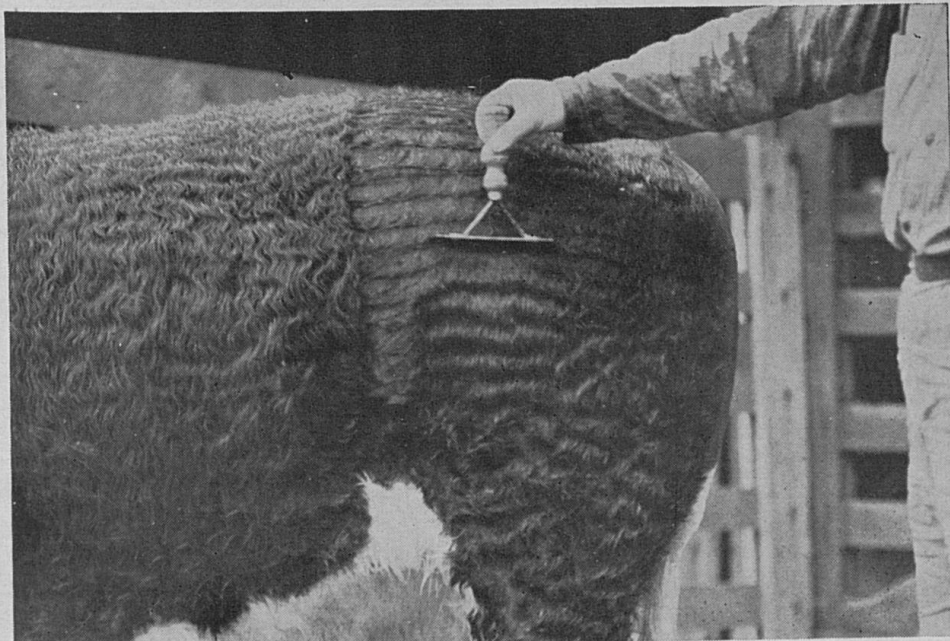
Sometimes the "circular-comb curl" is used, but not so often as the parallel curl, for it is more difficult to make. First, wet the hair with the solution mentioned in the preceding paragraph. Second, with a circular comb and a wrist movement make curls, starting at the top line and moving to the bottom line. Third, brush the hair upward as in making the parallel curl. (See the illustration on page 17.)

To stress the width of the back, part the hair of the calf down the center of the back from neck to tail head with a Scotch comb or a hard rubber comb, and comb it outward from the part to the edge of each side

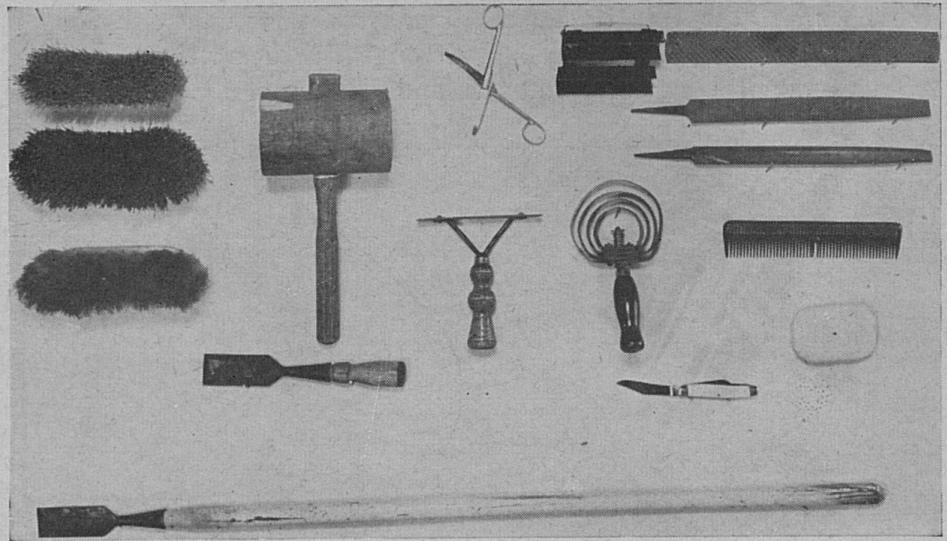
of the back. If the hair is dry and lusterless, it can be enlivened by rubbing it lightly with a woolen cloth on which a small amount of a mixture of equal parts of sweet oil and denatured alcohol has been



Making parallel lines before curling or fluffing.



Fluffing or brushing hair upward after drawing parallel lines.



Equipment needed in grooming hair and trimming the horns and feet of baby beeves.

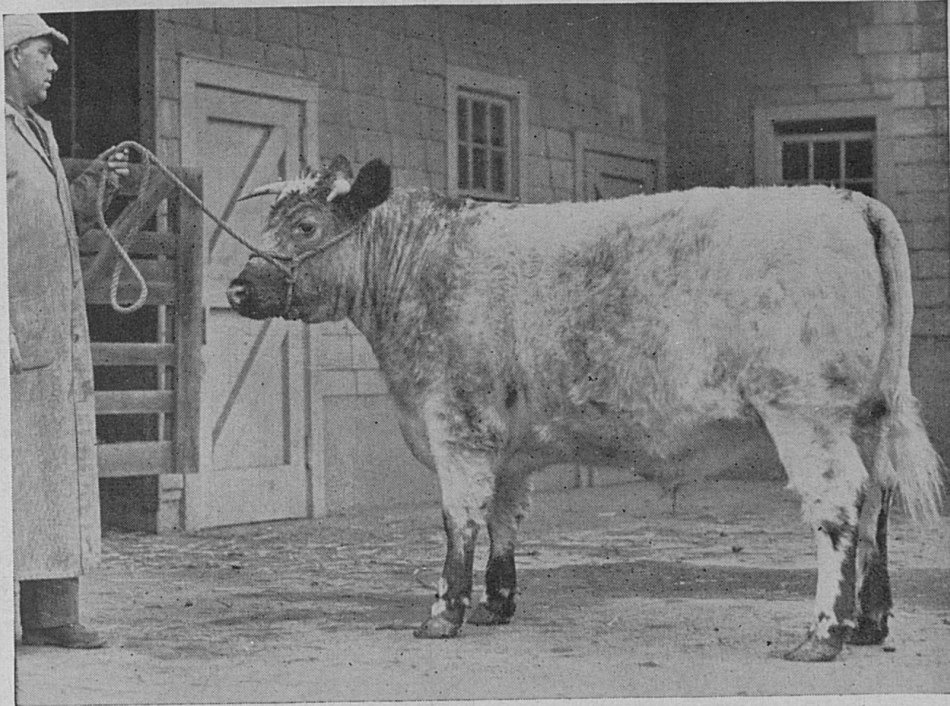
added. If too much of this material is used, however, the hair will appear gummy and spotted, and will detract from the looks of the steer.

Hereford and Shorthorn

Cattle are groomed for show in the same way. Brush the calf lightly every day during March and April, as this aids in making it gentle and also helps in shedding the winter coat. After this time, brush it lightly two or three times a week with a stiff brush followed with a soft brush. Two months before show time brush the calf and curl its hair daily. After the hair is trained to curl, wet and curl it two or three times a week. Wash the calves once a week with soap and water for a period of 4 weeks before the show. Rinse all soap out of the hair after each washing. Scrape off the surplus water with the back of a Scotch comb, curl the hair, and turn the calf into a stall free from drafts.

Aberdeen-Angus

Calves should be brushed off daily during March and April, and two or three times a week after that. It is a good plan to wash the Angus baby beef two or three times before the show and cover him with a light blanket in the meantime. The hair of Angus calves shown in Kentucky is usually curled only on the neck, fore shoulder, and thighs, using the parallel curl (See page 23).



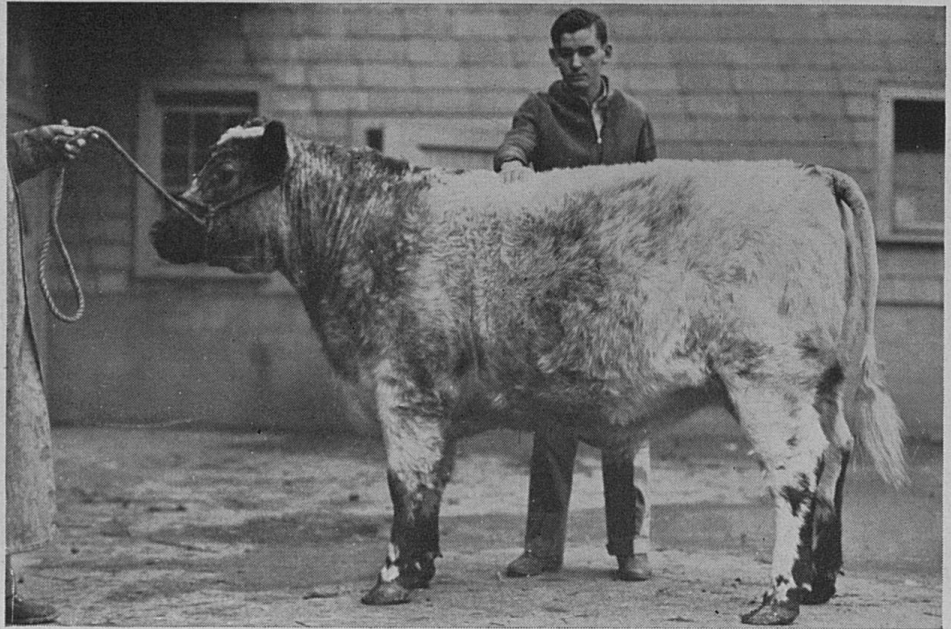
A baby beef well groomed and trained to show. This steer, trained from calfhood, would stand several minutes in one position without moving.

Training the Calf to Show

To show at its best, the calf must be properly trained. Start the training soon after the calf is put on feed and taught to lead. Walk on the left side of the calf, holding the rope in the right hand. Teach the calf to stand squarely on all four feet, with his head level with the top of the back. He should be taught to stand in this position for 15 to 20 minutes, but do not make him stand too long at first. Gradually increase the time until he will stand at ease.

A long walking stick is needed for placing the hind feet. Gently press on the foot, and with a pull on the halter show which way the foot is to be moved. Don't have a nail or sharp point on the stick, for this will hurt the calf and cause him to want to move around. Use your foot to place the front feet of the calf.

When your county agent, neighbors, or other visitors are on the farm, have them approach and handle the calf in the posed position. This gets it used to being handled by strangers, so that it will not be afraid on show day.



Teaching the baby beef to stand while being judged. This steer, the same as shown on page 19, has been handled in this way so often that he enjoys it, and is not afraid of strangers. He represents the proper type for the Shorthorn breed.

PROTECTION FROM INSECTS AND DISEASES

Lice

Calves that are lousy in winter should be treated with a lice-powder preparation. During cold weather don't dip the calf nor wash it with any material mixed with water as a treatment for lice, for such washing or dipping might bring on a cold or pneumonia. A safe treatment is to dust the neck, throat, under the muzzle, back, upper sides, and hind-quarters of the animal with a dust made up of 9 parts of pyrophyllite and 1 part of either derris or cube containing 5 percent rotenone, and brush the material well into the hair. Repeat after 10 days. A tin can or quart jar with a few holes punched (inside out) in the cover with a 20-penny nail makes a good container for dusting.

Blackleg

It is a good precaution to vaccinate calves for blackleg if this disease has been on the farm in recent years. Some farmers vaccinate all calves on the farm as protection against the disease, and this practice is highly recommended.

Scours

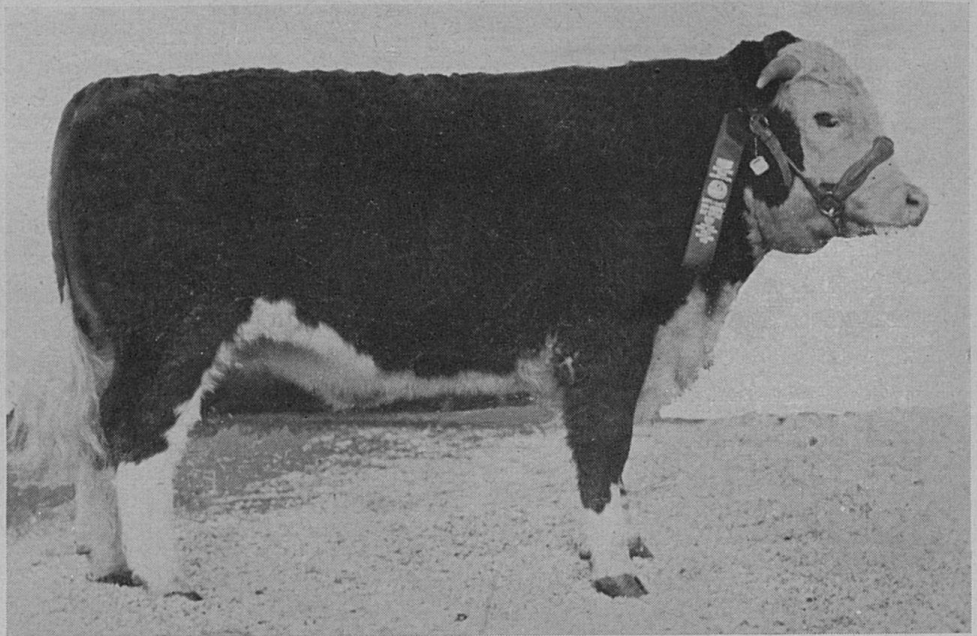
Scours in calves may be caused by too sudden a change of feed; by overeating new-cut hay, especially a legume hay; overfeeding of wheat or recently harvested barley, or of any feed much relished, like green corn or pumpkins. Also, if a calf receives too much milk, or too much of any feed containing a high proportion of protein, scours may result. Then, too, there are infectious types of scours.

Determining and removing the cause of scours is of more importance than treatment. For treatment, however, 6 to 8 ounces of mineral oil given as a drench may bring relief. Young calves may be given a drench of 1 teaspoonful of paregoric, 2 teaspoonfuls of listerine, and 2 ounces of castor oil. This may be repeated once if necessary. Bismuth subnitrate is very effective in treating calves for scours giving a rounded tablespoonful in one-third cup of water twice a day. Give the mixture to the calf with a spoon. The services of a veterinarian are needed if the symptoms persist, or if the calf has the infectious type of scours.

Ox warbles (grubs, wolves)

The ox warble found in the backs of cattle in early spring in Kentucky is the larva of what is known as the "heel fly." This fly, resembling a small bee in size and appearance, causes an annual loss to the cattle industry in the United States estimated at 50 to 100 million dollars. The grubs, when they come out through the skin leave holes in the hide which lower its value for leather. And because the flesh of the animal around each warble is discolored and otherwise affected, the sale value of the carcass is lowered if the animal has warbles at the time it is slaughtered. Then, too, there is the loss caused by the annoyance of cattle at the time the fly is depositing its eggs, even though no pain is caused by the act. Cattle have an instinctive fear of this fly and will run about the field whenever it makes its appearance. The eggs deposited on the hairs of the animal near the heel hatch in about a week and the small larvae enter the skin through the hair follicles and work their way up through the body to appear in the spring as grubs beneath the skin on the back. The progress of the grubs in the body is painful, and if they are numerous they cause unthriftiness of the animal. When the grub has grown enough it comes out through the hole it has made in the hide, drops to the ground, and completes its life cycle by maturing into a fly capable of laying eggs.

For treatment for cattle grubs (warbles, wolves) use a dust made of 2 parts by weight of pyrophyllite to 1 part by weight of derris or cube containing 5 percent rotenone. Rub the mixture well on the skin by a stiff brush or by the ends of the fingers. Apply the treatment just before



First-prize Hereford baby beef at the Fat Cattle Show, Bourbon Stock Yards, Louisville, 1939. This steer represents the proper type, fitting and grooming for Herefords.

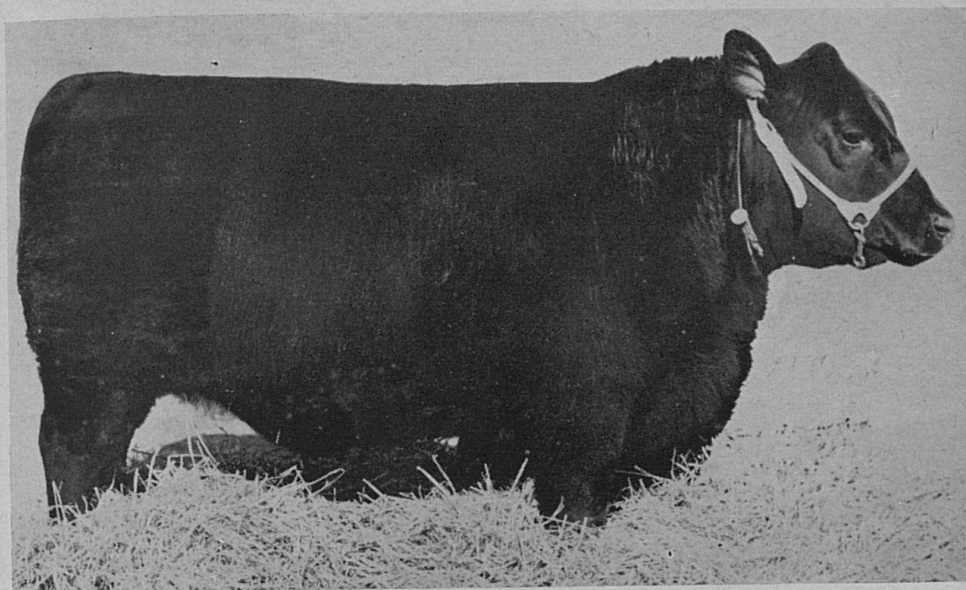
the grubs begin to drop from the animal's back. Apply three treatments 30 days apart. This treatment will also kill lice, if the material is applied to the parts of the animal harboring lice.

Flies

Flies take a heavy toll from cattle because they annoy them day and night and at the same time take an appreciable amount of blood from them. It is easy to control flies on cattle by spraying them with a 2½ percent suspension of DDT about once a month during fly time.

Use only the water-suspensible powder form of DDT. Mix 1¼ pounds of such a powder containing 50 percent DDT in 3 gallons of water. If the powder contains 25 percent DDT use 2½ pounds of it to 3 gallons of water. After thorough mixing spray each baby beef with about one pint of the material. Spray the animal around the base of the horn, neck, shoulders, back, rump, sides and belly. No matter what kind of sprayer is used the DDT must be kept suspended by frequent shaking or stirring of its contents.

Nurse cows should also be treated. It is well to spray the interior of the calf stall with the same DDT mixture used on the calf. Be careful not to spray the feed of the calf nor the interior of the mangers. Do not use an oil suspension of DDT.



Grand Champion Baby Beef, Fat Cattle Show, Louisville, 1940. This steer represents the proper type, fitting and grooming for the Angus breed.

Ringworm

Ringworm is a fungus disease found mostly in circular patches on the skin, scabby and bare of hair, about the head and neck. The disease is infectious and is easily transferred from animal to animal by direct contact or by means of combs and brushes previously used on infected animals. The treatment consists in removing the scales with a stiff brush, then washing the infected parts with soap and water, allowing them to dry, and then applying tincture of iodine, or sulfur ointment, or acetic acid.

Bloat

Any feed which causes indigestion or scours in cattle may cause bloat. Calves running on red clover or alfalfa pasture, or on a pasture containing considerable white clover, may bloat to such an extent as to cause death unless proper relief is given promptly. In the usual cases of bloat, 6 to 8 ounces of mineral oil should be given as a drench to the bloated calf. A quart of warm, fresh cow's milk administered as a drench may give relief.

If, however, the calf is so bloated that he is in much pain and begins to reel while standing or walking, quick relief is necessary to save his life. This relief is to let the gas out of the paunch by making an incision on the left side between the last rib and hip joint, where the paunch is close to the skin. This place is sometimes called the "hunger hollow."

The incision may be made with a sharp knife, or preferably with a special instrument called a trocar. The knife or trocar is forced inward, downward, and slightly forward. When the knife is withdrawn the gas escapes through the incision. A trocar is a sharp pointed instrument incased in a sheath in such a manner that the sharp point can be withdrawn leaving the sheath inserted into the paunch. The gas then escapes through the sheath. The sheath should be held in place for some time, otherwise it might be blown from the opening by the violent expulsion of gas. It is best to call a veterinarian to perform this operation unless it is necessary to operate at once to save the animal's life.

Warts

Warts are frequently found on the head and neck of a calf. They are small tumors in the skin and are usually of a temporary nature. They often come off spontaneously during the summer, but a daily application of castor oil or salty bacon grease hastens their disappearance.

EQUIPMENT NEEDED AT THE SHOW

A galvanized iron pail should be used for watering the calf and should not be used for any other purpose. For washing and grooming the calf another galvanized iron pail is needed, together with tar soap, fiber brush, high-grade bristle brush, circular spring curry comb, and a coarse comb or Scotch comb. For polishing the horns a file, coarse and fine sandpaper, and a small bottle containing equal parts of alcohol and olive or vegetable oil should be provided. A good leather halter or a new rope halter should be kept for use when showing. An Angus calf needs a blanket for protection against flies and to keep the calf clean. A pitchfork is needed about the stall. A long cane or "show stick" should be used in posing the calf.

KEEPING RECORDS

To get the most good from feeding baby beeves, the club member must keep careful records on all work and supplies used in the project. Keep these records in the "Baby Beef Record Book." Your county agent will have a copy of the record book for you.