

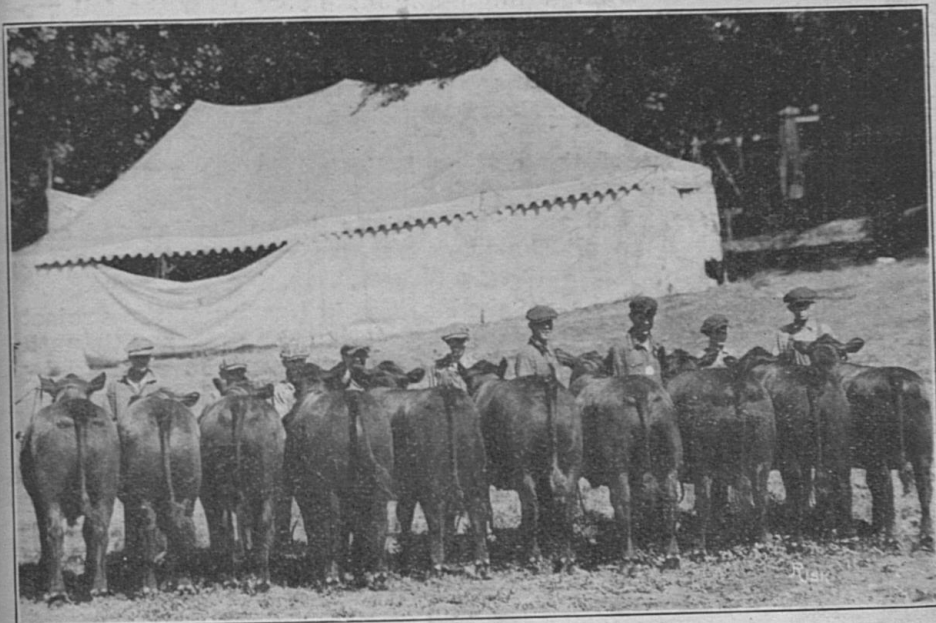
UNIVERSITY OF KENTUCKY
COLLEGE OF AGRICULTURE

Extension Division

THOMAS P. COOPER, Dean and Director

CIRCULAR NO. 106

BABY BEEF PROJECT
JUNIOR AGRICULTURAL CLUBS



Compiled by

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OBJECT

The object of this project is to teach boys and girls the value of producing quick-maturing animals of good type. The experience gained thru the feeding, care and management of the baby beef will aid materially in forming habits conducive to the successful production of beef.

REQUIREMENTS

1. Only members of Junior Agricultural Clubs are eligible for this project.
2. The latest dates for enrollment are October 1 for the fall project and June 1 for the summer project.
3. Each member must feed one or more calves of any good beef breed. These calves may be either steers or heifers and should weigh not more than 500 pounds nor be more than eight months of age.
4. Each member shall keep a complete record of the feeding, care and management of the calf as indicated in the record book. These records shall be used in judging the contest.
5. Each member shall act independently in the feeding and care of his calf and shall do all the work necessary during the project. Help may be obtained for hauling and weighing.
6. All animals must be weighed at the beginning of the project and should be weighed at about the same time in each month until the project is closed. Initial and final weights must be certified by two disinterested persons.
7. At the close of the project the calves of all members shall be assembled at one place for exhibition and judging. This place shall be determined by the county agent. The calves should be not more than 16 to 20 months old at the close of the project.
8. The judges for the contest shall be selected by the county agent or club leader.
9. If impossible to hold a show the club member shall close his project and complete his record book which shall be sent to the county agent or club leader.
10. Basis of award:

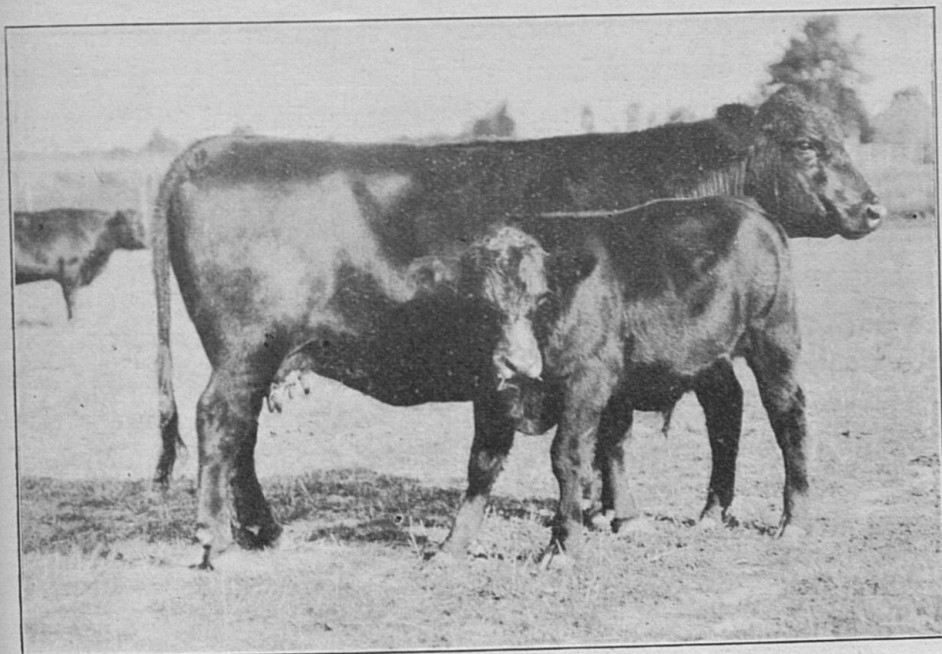
Individuality (conformation, weight for age, final condition), quality, improvement made.....	.30
Largest rate of gain.....	.35
Lowest cost of gains (feed per pound of gain to be considered)25
Completeness of records and story.....	.10

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SELECTING THE CALF

The beef breeds that are suitable for baby beef production are the Shorthorn, Hereford, Aberdeen Angus, Galloway, Polled Shorthorn and Polled Hereford. The breed preferred by the club member should be chosen. Even more important than breed selection is individual selection.



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The head of the beef animal is a good indication of its feeding qualities. The type of head desired is one that is broad between the eyes and short from the eyes to the muzzle. The muzzle should be large and supported by a strong jaw. The calf should be low set, blocky, compact and smooth. He should be symmetrical and of correct proportion. Quality is shown by a clean, hard bone, fine hair, small horn, a pliable hide and general refinement.

The calf selected should be six to eight months old. A pure-bred is preferable, but a high grade or cross bred may be used. If possible, choose a calf that has nursed the cow up to this time, because such calves carry their milk fat, making beeves of higher quality. A bull calf should be castrated between the ages of two weeks and two months to make the best steer.

MANAGEMENT OF THE CALF

The calf in the summer project should have access to pasture. At least a shade where the calf can stay during the hot days should be in the pasture. It is preferable, however, to keep the calf in a cool barn during the hot days, turning it out during the night. A light fly blanket may be used to keep away pestering flies, this usually results in the calf making larger gains. Water and salt should be kept before the calf at all times.

The calf in the winter project should have a box stall that is tight enough to prevent any drafts. Clean, fresh straw should be put into the stall often enough to keep the stall dry. The calf should be turned out a few minutes each day for exercise, the length of time he is left out depending on the condition of the weather. The use of a blanket will help to keep the coat in good condition.

FEEDING THE CALF

The calf in the summer project should have pasture, consequently the rations given below are for a calf on pasture. If

the calf has received no grain up to weaning time he should be given a handful twice a day of the following grain mixture:

Ground oats.....	3 parts
Ground corn	3 parts
Wheat bran	3 parts
Oil meal	1 part

The amount given each day should be increased gradually until at the end of the first week he ought to be eating $\frac{3}{4}$ of a pound of this mixture for each 100 pounds of live weight, along with what clover or mixed hay he will eat. For example, a calf weighing 400 pounds should be getting at the end of the first week three pounds of this grain mixture daily. The amount fed should be increased each day until at the end of the first month he should be eating one pound of the grain mixture for each 100 pounds of live weight.

The proportion of corn in the ration should be increased gradually and the proportion of bran and oats decreased until by the beginning of the third month the calf is receiving $1\frac{1}{4}$ pounds per 100 pounds live weight of the following grain mixture:

Corn	$8\frac{1}{2}$ parts
Cottonseed meal or oil meal.....	$1\frac{1}{2}$ parts
Clover or mixed hay (full feed)	

This grain mixture can be used to finish the calf by gradually increasing the amount fed each day. Near the close of the feeding period the pasture may be getting dry so that silage may be added as a succulent feed. For the last fifteen days of the project the calf should be eating about 12 pounds of ground or chopped corn, 2 pounds of cottonseed or oil meal, 3 pounds of clover hay and pasture or 5 pounds of silage per day. Or the calf should receive about $1\frac{1}{2}$ pounds of the above grain mixture per 100 pounds live weight.

The calf in the winter project can be fed about the same rations and in practically the same manner as outlined for the

summer project. Silage should be fed to take the place of pasture which is available during the summer. The amount to feed is about two pounds per day at the start of the project, this to be gradually increased to from five to ten pounds per day during the last month of the feeding period.

Other rations may be used only after the club member has consulted the county agent or club leader.

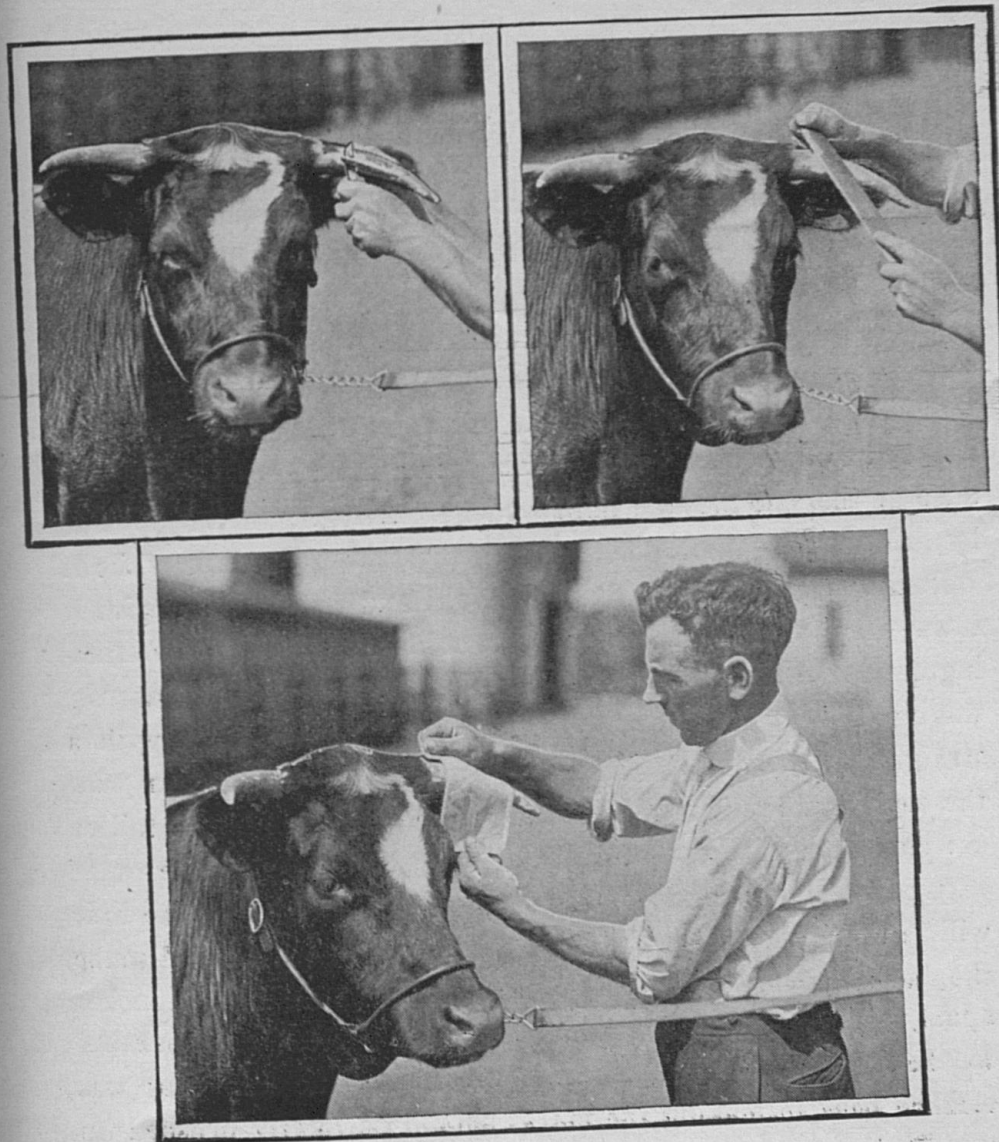
PREPARING THE CALF FOR SHOW

The calf to be in winning condition at the time of the club fair or show must receive careful attention thruout the project. Several specific things, however, should be done to put him into the best possible condition. The calf should be blanketed and kept in the barn during the day for about three weeks preceding the show. This keeps the animal clean and causes the hide to sweat, which softens it and gives it a higher degree of quality. The calf should be brushed each day because this aids circulation, softens and cleans the skin and makes the coat glossy. The animal should be washed with soap and warm water at least once a week. A little bluing in the water is advisable if the calf has white markings.

In grooming the calf a soft brush should be used rather than a currycomb. A piece of sandpaper nailed to a block and used on the hair, rubbing with the grain, pulls out loose and dead hairs and trains the hair to lie smooth. After brushing, it is recommended that the animal be rubbed with a flannel cloth dampened with olive oil.

About a week before the fair the clippers should be used on parts of the calf. If it is an Angus the hair about the head and ears, legs and tail should be clipped. Clip the tail, starting at the top of the brush up to the tail setting, where it should be clipped so as to blend with the hair on the rump. The hair from the hoof to the hocks on the hind legs and to the knees on the front legs should be clipped. In both places blend in with the hair about the knees and hocks. The object in clipping is to make the calf appear to have as much quality as possible.

With Shorthorns and Herefords, the hair about the head and ears should not be clipped, except the rough, shaggy hair in the ears. The only places where the hair is ordinarily clipped on these two breeds are the tail and legs, as directed for the Angus.

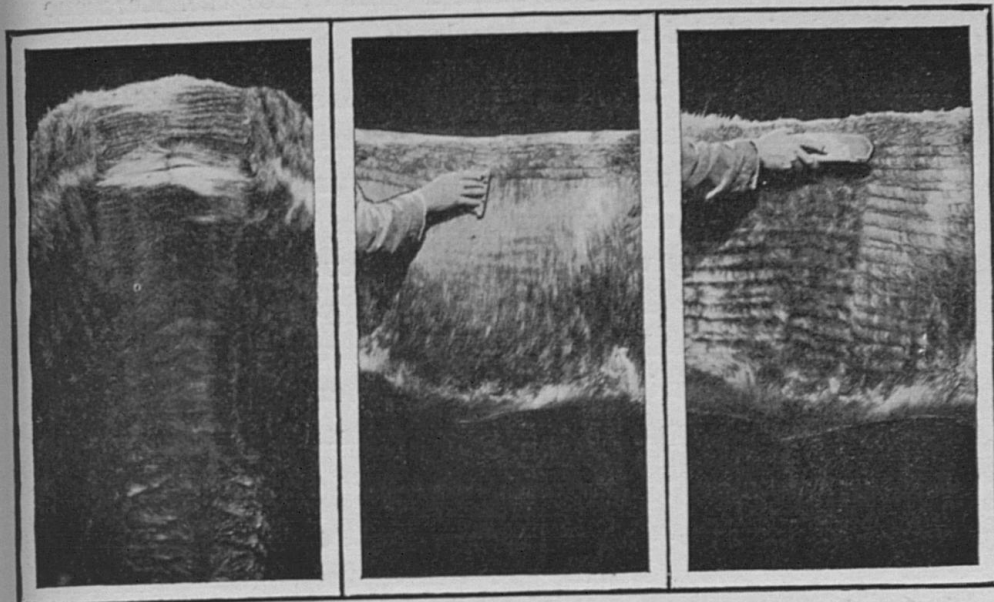


POLISHING THE HORNS

With a sharp knife first remove the rough, scaly portions of the horn, cutting toward the tip and using care not to cut too deep. The rasp is then used, filing on the upward stroke only, lifting it off the horn on the downward stroke. Finally, the smooth horn is polished with a woolen cloth moistened with linseed oil.

A month before the show one should begin to polish the horns and trim the hoofs. In preparing the horns, first cut off the rough, scaly part with a sharp knife and then dress them down to their natural shape with a fine rasp or a piece of glass. After the horns have been worked down to a uniform surface, which may require several dressings, polish with a woolen cloth and a little linseed oil. The hoofs should be treated in much the same way, using a farrier's knife to trim the sole so that the calf can stand squarely on his feet.

In the Shorthorn and Hereford breeds curling the hair makes the coat attractive. Seldom, if ever, is the coat of an Angus curled, altho, if the hair is long, it may be advisable. In the other two breeds the condition of the calf determines whether or not his coat is curled. If he is smoothly and evenly fleshed and his coat is fine, it is better not to curl, but if he is inclined to be a bit rough and his hair a little long, the appearance of the calf may be improved by curling. Curling is done by first washing the animal and then working the hair while it is damp. First brush it down straight and smooth, then give it a wavy appearance with a curry comb. This is done by starting near the back bone and drawing the comb downwards, waving it back and forth. Curling may also be done with a straight-back comb while the hair is damp. Mark the hair with the comb or brush from in front of the shoulders to the tail or extreme back of the round. The lines should be on the outer edge of the flat portion of the back so the end of the the hair will curl up even with the level portion of the back and make the back appear wide. The lines should be about $1\frac{1}{4}$ inches apart, distance depending upon the size of the calf, and parallel to the first line. After all lines are made, the hair that was combed back in making the marks should be lightly brushed up with a brush or currycomb. Curling and showing should be practised several times before the show.



The hair is first parted along the back before curling.

Making the parallel lines along the sides to curl the hair.

Brushing up the tips of the hair to give the fluffy, wavy appearance.

EXTERNAL PARASITES AFFECTING CALVES

Cattle lice: These are animal parasites which do most damage during the winter months. Lice can be destroyed by dipping the cattle in coaltar dips, one part dip to thirty of water. The dipping should be repeated within a week or ten days to kill the lice which may be hatched from the eggs or "nits" deposited on the hair of the animal at the time of the first treatment. Dipping is advisable in large herds, but with only one calf lice can be killed by the application of a suitable spray mixture with a small spray or brush. An emulsion of crude petroleum is effective. The proportions for making it on a large scale are 5 lbs. soap, 20 gals. petroleum and water enough to make 100 gallons. To make a small quantity, dissolve an ounce and a half or 2 ounces of soap in about a quart of hot water. Add 3 pints of crude petroleum and shake or churn well until an emulsion is

formed. Dilute with water to make 2 gallons, for use. Kerosene may be substituted for crude petroleum.

Cattle mange: This is caused by a small mite which attacks the skin and causes it to become scurfy. Mange spreads from one animal to another by contact or may be caught from infested stables. Stalls, fences and posts which the animals may touch should be whitewashed as a preventive measure. It can be remedied by dipping or by the application of the dip solution already mentioned with a small spray or brush. Washing or dipping the animal with a two-per-cent water solution of "liquor cresolis compositus" is a good remedy. Application of petroleum emulsion is even more effective.

Ox warbles or grubs: These pests cause damage by boring holes thru the hide. During the winter they grow under the hide, principally along the back, forming enlargements. Late in winter or in early spring the fully developed grub bores a hole thru the hide of the animal, emerges and drops to the ground where it completes its life cycle and comes forth as a fly, to start a new generation by laying eggs. No really preventive measures can be taken against ox warbles or grubs. In the spring, when the grubs are ready to drop from the animal, they should be squeezed out and destroyed. This can be done easily at the proper time and the grubs that are not ready to emerge can be dislodged by making a small slit in the hide with a sharp knife.

DISEASES

Of the infectious diseases Blackleg is probably most common among calves. It affects cattle 2 months to 4 years old and sometimes older. Blackleg infection is believed to occur thru cuts from barbed wire or other wounds altho infection thru the intestines no doubt is possible. The most important symptom of the disease is the formation of a tumor-like swelling under the skin on one of the quarters. The affected animal is very frequently lame. When the swelling is handled a peculiar

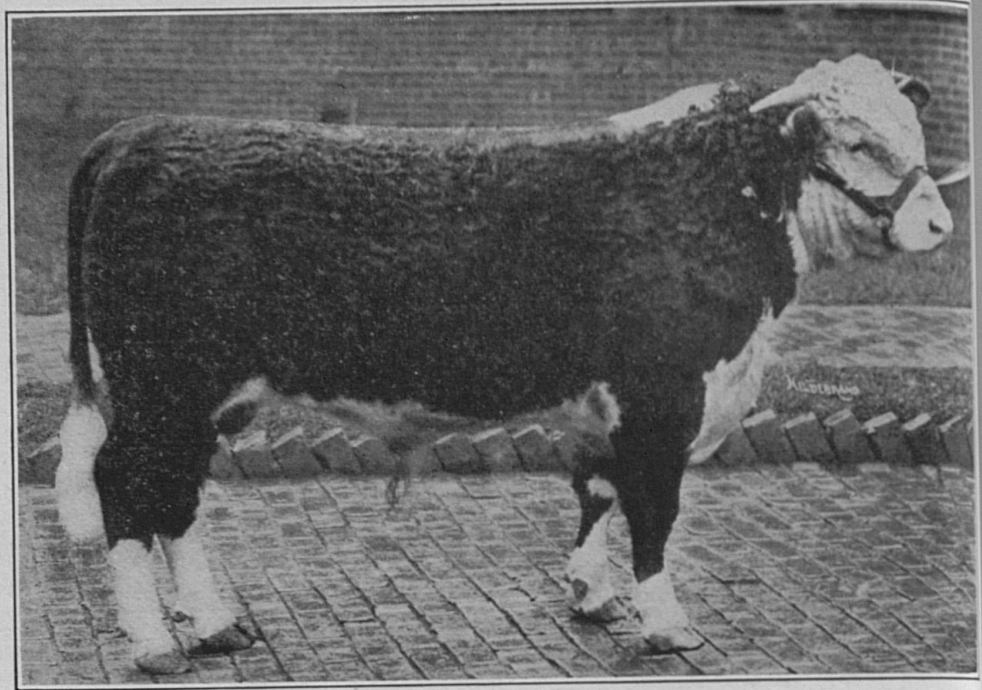
crackling sound is heard, caused by the collection of gas under the skin. The swelling never occurs below the hocks or knees. After the animal has become affected with blackleg very little can be done to save its life. Vaccinating calves while still healthy to prevent them from contracting the disease is the only satisfactory way to reduce losses from blackleg. The calves should be vaccinated when about 2 to 6 months old and again within 6 months. The club member should use this precaution or not, as he thinks best.

EQUIPMENT NEEDED AT THE SHOW

1. A light blanket and strong halter for the calf.
2. A water pail, brush and soap for washing.
3. Bluing to put into the water to clear the white markings on the calf.
4. Sweet oil and a sheet of fine sand paper for polishing hoofs and horns.
5. A white suit to be worn by the club member.
6. A cardboard sign 8x12 inches stating the name of the calf, age, weight, rate of gain and the name and address of the exhibitor.

SHOWING THE CALF

Before going to the show the calf should be taught to stand squarely on its feet with top line straight and head held in an attractive manner. It is proper and convenient to stand on the left side and hold the calf with the left hand, having the right hand to keep the animal in position. The judge is often favorably influenced by an inferior animal that is well shown. Experience in the show ring will teach the club member the art of showing.



A Hereford with hair curled for the show ring.

RECORDS

It is easy to keep records if one is careful to write down all the items each day. Calculate the expense of each operation as soon as the work is done and write it in the record book. Keep up the record and when the project is completed there will be no doubt concerning its correctness. It will give you an interesting true story about the cost of producing a baby beef and the profit of the undertaking.

STORY OF THE PROJECT

Subject: "How I Raised My Baby Beef."

Instructions: In the back of the record book is a space in which to write the story. Pen and ink must be used. The story must be the work of the club member. Neatness, spelling, punctuation and completeness of story are points that will be considered by the judge.

The following outline is suggested:

1. Name and location of club.
2. How and where calf was secured.
3. Name, breed, and age of calf.
4. Weight of calf and cost of gain made.
5. Amount and cost of feeds, profit made.
6. Things of most interest learned in this project.

MARKETING THE BABY BEEF

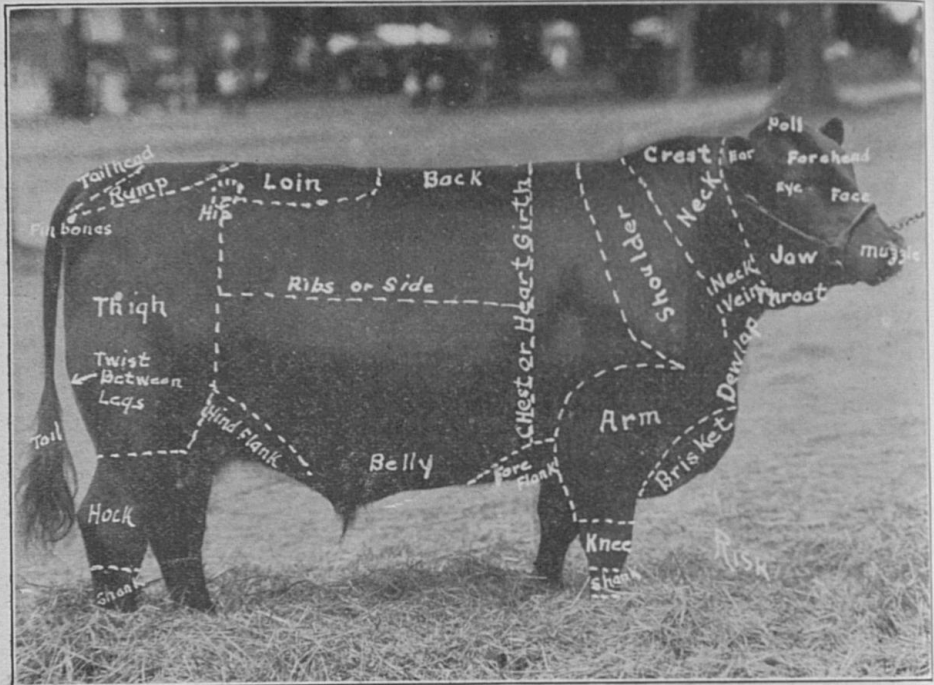
When the project is finished the calf should be marketed to the best advantage. He may be sold to a butcher, a local buyer, cafeteria, hotel or shipped to market. Where there are enough members of this project in the same community a car may be chartered and the entire club send their calves as a group to market. The club leader or county agent may be consulted in regard to marketing the club baby beef.

REFERENCES

Farmers' Bulletins No. 811, The Production of Baby Beef; No. 1135, The Beef Calf; No. 612, Breeds of Beef Cattle; No. 812, Livestock in the Blue Grass Region of Kentucky.

THE SCORE-CARD

The following is the score-card used by the University of Kentucky in judging cattle. All boys and girls expecting to be successful cattle breeders or contemplating entering the judging contest should study this score-card.



The Points of a Beef Animal.

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STUDENT'S SCORE CARD NO. 2

Beef Cattle

Fat

STANDARD OF EXCELLENCE	SCORE				
	Perfect	Student's		Corrected	
		No. 1	No. 2	No. 1	No. 2
A. General Appearance—35 Points					
Weight, estimated.....lbs.; actual.....lbs. Acc'ding to age.....lbs.; dressed wt.....%	8				
Form , straight top and bottom lines; deep, broad, lowset, compact, sym- metrical	9				
Quality , firm handling; hair fine; pli- able skin; dense, clean bone; evenly fleshed without ties or rolls	9				
Condition , deep, even covering of firm flesh, especially in the regions of val- uable cuts	9				
B. Head and Neck—7 Points					
Muzzle , mouth large, lips thin, nostrils large	1				
Eyes , large, clear, placid	1				
Face , short, quiet expression	1				
Forehead , broad, full	1				
Ears , medium size, fine texture	1				
Neck , thick, short; throat clean	2				
C. Forequarters—11 Points					
Shoulder Vein , full	2				
Shoulder , covered with flesh, compact on top; snug	5				
Brisket , advanced, breast wide	1				
Dewlap , skin not too loose and drooping	1				
Legs , straight, short; arm full; shank fine, smooth	2				
D. Body—31 Points					
Chest , full, deep, wide; girth large; crops full	5				
Ribs , long, well sprung, thickly fleshed	8				
Back , broad; straight, well fleshed	8				
Loin , thick, broad, deeply fleshed	8				
Flank , full, even with underline	2				
E. Hindquarters—16 Points					
Hips , smoothly covered, distance apart in proportion to other parts	2				
Rump , long, level, even, wide; tail head smooth, not patchy	4				
Pin Bones , not prominent, far apart	1				
Thighs , full, deeply fleshed	3				
Twist , full, deep; purse in steers, full	4				
Legs , straight, short, shank fine, smooth	2				
Total	100				

Animal Date

Student

