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# DAIRY I---THE 4-H DAIRY CALF CLUB

4-H CLUB CIRCULAR 26

COLUMBIA, MO.

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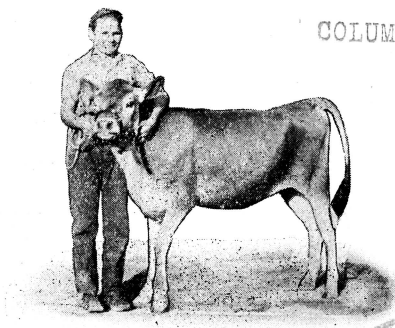


Fig. 1.—A 4-H Club Boy and His Dairy Calf



**COOPERATIVE EXTENSION WORK IN  
AGRICULTURE AND HOME ECONOMICS**  
UNIVERSITY OF MISSOURI COLLEGE OF AGRICULTURE AND THE UNITED  
STATES DEPARTMENT OF AGRICULTURE COOPERATING  
A. J MEYER, Director, Agricultural Extension Service  
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# Dairy I--The 4-H Dairy Calf Club

## REQUIREMENTS OF DAIRY I--THE 4-H DAIRY CALF CLUB PROJECT.\*

**Object.**—The object of the dairy calf club work is to organize boys and girls into club groups for the purpose of demonstrating approved methods of dairy cattle feeding and management, of record keeping, something as to the meaning of pedigrees and their values, dairy cattle judging, fitting and exhibiting, buying and selling prices; and to train the members in leadership.

**Work Required.**—Each club member is required to feed and care for a dairy calf up to the breeding age.

**Records Required.**—Each club member is required to keep an account of all operations involved in the feeding, care and management of the calf and to write a story of the year's work in a record book provided by the Extension Service of the Missouri College of Agriculture.

**Ownership Required.**—Each club member is required to own a heifer calf and to furnish all feed necessary for the project.

**Time Required**—Time to care for the dairy calf.

Time to attend six or more club meetings.

Time for one all-day club tour.

Time for a round-up or a public achievement program at the close of the year.

**Organization.**—The Dairy I Club may be organized at any time, but preferably so that the animals can be bred some time between November 1 and February 1, at which time Dairy II work should be started.

### I. ORGANIZATION OF A STANDARD 4-H DAIRY CALF CLUB.

A standard 4-H dairy calf club is composed of a group of five or more boys or girls from the same community between the

\*Prepared by M. J. Regan and A. F. Stephens, Dairy Extension Specialists, in collaboration with T. T. Martin, State Club Agent.

ages of ten and twenty-one years who are working upon the same dairy club project under the direction of a local club leader.

### Securing Dairy Calves

The following suggestions are made regarding securing dairy calves:

1. Dairy clubs should be organized only in communities which are suited to dairying.
2. The dairy breed which is best adapted to the community should be selected.
3. A substantial man who has the confidence of the community should be secured to assist in buying the calves.
4. Wherever it is possible to buy satisfactory calves locally, it is best to do so, letting the club members make their own selection. If this practice is impossible, the calves should be bought and shipped in together and the members should draw lots for their calves.



Fig. 2.—A standard 4-H dairy club of five members and their calves and the local club leader.

5. The question of finances should be solved by each individual member at home or with the banker.
6. Inferior calves should not be secured for club members. Only good purebreds should be secured. If they cost too much money, real good grade calves should be secured instead. It is always better to have a real successful club with good grades than to encumber the members too heavily in debt with purebreds in a community which does not yet appreciate the value of good dairy stock.

### Meetings.

Standard 4-H clubs are required to hold at least six regular

meetings during the club year. These meetings may be held as often as the local club leader and members desire; however, the meetings usually are held once each month.

Below are subjects suggested for a number of club meetings. It may be necessary to devote two or more meetings to some of the subjects. It is suggested that these subjects be followed in the order named. **Local club leaders and clubs are expected to adapt these subjects to local community conditions.**

### **SUGGESTED MEETINGS FOR THE 4-H DAIRY CALF CLUB**

#### **I. Organization of the Club.—(See Club Secretary's Record Book.)**

1. The business meeting.—The local club leader in charge.
  - (1). Explanation of the duties of the club officers and members. (See the Club Secretary's Record Book.)
  - (2). Election of club officers from the membership of the club President, Vice-President, Secretary, Song and Yell Leader and Club Reporter.
  - (3). Selection of a name for the club. (It is suggested that the name be selected so as to identify the club and the project.)
  - (4). Selection of a time and place for regular club meetings.
  - (5). Appointment of a committee to work up or select an appropriate song and yell for the club.
  - (6). Adjournment of the business meeting for instruction in club project work.
2. Instructions.—The local club leader in charge.
  - (1). Distribution of club literature and the record books and explanation of their use.
  - (2). Explanation of the standard 4-H club requirements. (See Club Secretary's Record Book.)
  - (3). Explanation of the club project requirements. Page 3.
  - (4). Setting one or more club goals, such as:
    - a. Every member will feed and manage a calf as recommended by the Missouri College of Agriculture.
    - b. Every member will take part in the dairy club tour.
    - c. Every member will learn to judge, to demonstrate and to exhibit.
    - d. Every member will fit and show his calf at the round-up or fair.
    - e. Every member will enroll in Dairy II.—The 4-H Bred Heifer Dairy Club, at the close of the 4-H Calf Club work.
  - (5). Giving a brief statement of the main club events for the year, as:
    - a. Holding six or more regular club meetings.
    - b. Giving club team demonstrations before a public audience.
    - c. Planning to take part in local fairs.

- d. Planning to attend and take part in the State 4-H Club Round-Up at the Missouri College of Agriculture.
  - e. Other activities as worked out in the community.
- (6). Securing Dairy Calves. Page 6.
- (7). Assignment of work for the next meeting:
- a. Assignment of the National 4-H club pledge to be learned by all members before the next club meeting. (See the pledge in the suggested outline for the second club meeting.)
  - b. Assignment of topics to be used in response to roll call at the next club meeting, as:
    - (a). Name a standard 4-H club requirement and give one or more good reasons for the requirement.
    - (b). State length of time the calf should be left with the cow and give reasons for the same.
    - (c). State the amount of milk a calf should receive and tell how it should be taught to drink.
    - (d). State how and at what age a calf should be dehorned.
    - (e). State cause of scours and give recommended treatment.
  - c. References: (a) Care of the Dairy Calf Until Six Months of Age. Page 10.
    - (b) Raising the Dairy Calf.—University of Missouri.
    - (c) Parasites of Farm Animals.—University of Missouri.
3. The social hour, games, etc.

## II. Second Club Meeting.—Care of the Dairy Calf Until Six Months of Age.

1. The business meeting.—The club president in charge. Duties of Club Officers. (See Club Secretary's Record Book.)
  - (1). Meeting called to order by the president, who leads the club members in repeating the National 4-H club pledge, as follows: "I pledge my **head** to clearer thinking, my **heart** to greater loyalty, my **hands** to larger service, and my health to better living, for my club, my community, and my country."
  - (2). Roll Call by the secretary, the members responding by reporting on the previously assigned topics.
  - (3). Reading of the minutes of the last meeting by the secretary which should be adopted as a permanent record by the club when approved.
  - (4). Unfinished business:
    - a. Report of the committee on club songs and yells.
  - (5). New business:
    - a. Appointment of a social committee.
  - (6). Songs and yells, led by the song and yell leader.
  - (7). Adjournment for work.
2. Instruction and demonstrations.

- (1). Discussion: Care of the Dairy Calf Until Six Months of Age. Page 10.
    - a. Feeding.
    - b. Dehorning.
    - c. Diseases and parasites.
    - d. Quarters and stanchions.
  - (2). Demonstrations:
    - a. Teaching the calf to drink.
    - b. Dehorning the calf.
  - (3). Assignment of work for the next club meeting:
    - a. Assignment of topics to be used in response to roll call at the next club meeting, as:
      - (a). Name a standard 4-H club requirement not previously given in response to roll call and give one or more good reasons for the requirement.
      - (b). Name the main points in the score card for judging dairy cows and state the percentage of importance for each point.
      - (c). Give the important points to be observed in fitting and showing an animal.
      - (d). Name the important points in the score card for judging team demonstrations and state the percentage of importance for each point.
    - b. References:
      - (a). The Dairy Club Tour. Page 15.  
Schedule of the tour.  
Judging and Selecting the Dairy Cow.—A. C. Ragsdale, Chairman Dairy Department, University of Missouri.
      - (b). Score card for judging dairy cattle. Page 16.  
Individual breed score cards, illustrated judging sheets, judging manuals and judging instructions, may be secured from the breed association.
      - (c). Method of Judging Dairy Cattle. Page 15.
3. Social hour, games, etc.

### III. Third Club Meeting.—The Dairy Club Tour.

1. The business meeting.—The club president in charge.
  - (1). Meeting called to order by the president who leads the club in repeating the National 4-H club pledge.
  - (2). Roll Call by the secretary, the members responding by reporting on the previously assigned topics.
  - (3). Reading of the minutes of the last meeting by the secretary.
  - (4). Unfinished business:
    - a. Report of the social committee.
  - (5). New business:
    - a. Anything for the benefit of the club.
  - (6). Songs and yells.
  - (7). Adjournment for work.
2. Instruction and demonstrations.—The local club leader in charge.

- (1). Discussion: Observations made on the club tour.
  - (2). Demonstrations:
    - (a). Judging dairy animals by use of the score card.
    - (b). How to exhibit a dairy animal.
    - (c). Fitting an animal for the show.
  - (3). Assignment of work for the next club meeting:
    - a. Assignment of topics to be used in response to roll call at the next club meeting, as:
      - (a). Name a standard 4-H club requirement not previously given in response to roll call and give one or more good reasons for the requirement.
      - (b). State age at which a calf should be weaned from milk.
      - (c). Give kind and amount of feed for a calf after weaning.
      - (d). State the seven points to be observed in fitting a calf for the club show.
    - b. Reference.—Feeding and Caring for the Dairy Calf from Six Months to one Year of age. Page 21
3. The social hour, games, etc.

#### IV. Fourth Club Meeting.—Feeding and Caring for the Dairy Calf from Six Months to One Year of Age.

1. The business meeting.—The club president in charge.
  - (1). Meeting called to order, the members repeating the 4-H club pledge.
  - (2). Roll call, members responding by reporting on the previously assigned topics.
  - (3). Unfinished business:
    - a. Report of any standing committee.
  - (4). New business:
    - a. ....
  - (5). Songs and yells.
  - (6). Adjournment for work.
2. Instruction and demonstrations.—The local club leader in charge.
  - (1). Discussion: Feeding and Caring for the Dairy Calf from Six Months to One Year of Age. Page 21.
    - a. Feeding.
    - b. Fitting.
  - (2). Demonstration: Fitting a dairy calf for the show ring.
  - (3). Assignment of work for the next club meeting:
    - a. Assignment of topics to be used in response to roll call at the next club meeting, as:
      - (a). Name all the standard 4-H club requirements in response to roll call.
      - (b). .....
    - b. References:
      - (a). Individual try-outs for the club demonstration team. Page 21 and 24.



- (b). Individual try-outs for the club judging team.  
Page 21 and 24.

3. The social hour, games, etc.

**V. Fifth Club Meeting.—Individual Try-Outs for the Club Demonstration and Judging Teams.**

1. The business meeting.—The club president in charge.
  - (1). Meeting called to order by the president, who leads the club members in repeating the 4-H club pledge.
  - (2). Roll call by the secretary, the members responding by reporting on the previously assigned topics.
  - (3). Reading of the minutes of the last meeting by the secretary.
  - (4). Unfinished business:
    - a. ....
    - b. ....
  - (5). New business:
    - a. ....
    - b. ....
  - (6). Songs and yells.
  - (7). Adjournment for work.
2. Instruction and demonstrations.—The local club leader in charge.
  - (1). Individual try-outs for the club demonstration team. Page 21.
  - (2). Individual try-outs for the team judging team. Page 21.
  - (3). Assignment of work for the club round-up, as:
    - a. Giving detailed instruction regarding the responsibility of each club member, of club committees, of club teams, and of the club as a group, on the club round-up program. Page 24.
3. Social hour, games, etc.

**VI. Sixth Club Meeting.—The 4-H Dairy Calf Club Round-up.**

{ The club round-up should be held at the close of the work for the club year. Each member should hand in to the local club leader the completed record book so that the results of all the work of the club can be summarized in the back of the Club Secretary's Record Book.

*Suggested Public Program.*—The local club leader in charge.

1. Exhibit of the dairy club calves by the members. An explanation of the placings should be given by the judge, if time permits.
2. A regular meeting of the club. Each member should respond to roll call by giving a summary of his dairy calf club work.
3. A short talk on the work of the dairy calf club for the year. This explanation may be given by the local club leader, by a member of the local dairy club committee, or by the extension agent.
4. Team demonstration. The champion club demonstration team should demonstrate an approved dairy practice which has been learned in the dairy calf club work.
5. Judging demonstration. A team may demonstrate dairy conformation and type.
6. Awards. Each member who completes the work is eligible to receive a 4-H Club achievement pin, if given.
7. Plans for continuing dairy club work for the next year.

*Suggestions.*—Only club members who make a complete report or have their records up-to-date should be eligible to take part in county, district, state, interstate, or national contests, club camps, or take club achievement trips.

## II. CARE OF THE DAIRY CALF UNTIL SIX MONTHS OF AGE.

**Feeding.**—The most particular time in caring for the calf is during the first few months. If the calf is poorly cared for at this time it will be a great deal of trouble to raise and will not be a heavy producer when fresh. Proper care will pay better at this time than at any other period in the life of the animal.

It is always best to raise the calf by hand. Letting the calf run with the cow is bad for the cow and does not do the calf any good. Two pounds of corn meal is about as good as one pound of butterfat for the calf, so it is cheaper to take the calf away and feed skim milk. Leave the calf with its mother for three or four days.

When the calf is first taken from the cow, let it go without milk for ten to twelve hours. Then it will be hungry and will learn to drink a good deal easier. Then take about three pounds of fresh warm milk, back the calf into a corner and straddle its neck. Hold the milk pail in one hand and with the other put two fingers into the calf's mouth and force its head into the pail. After repeating this two or three times the calf will learn to drink of its own accord. It is best to start feeding eight to nine pounds of milk a day and feed three times a day. In about two weeks this may be reduced to twice a day, giving one pound of milk for each ten pounds of live weight. Always make changes in feed as gradual as possible.

In case of strong calves, you may begin to change to skim milk when the calf is about two weeks old by adding one pound of skim milk and taking away one pound of whole milk each day until the calf is entirely on skim milk. If the calf is not strong, it is best to wait a few days longer before starting the change. The skim milk may then gradually be increased to sixteen pounds a day at three months of age. If there is plenty of skim milk, it is well to let the calf have it until it is about six months old, taking it away gradually. *Always see that the milk is warm and sweet and fed in clean pails.*

The calf will begin to eat a little hay and grain at two or three weeks of age. A good way to start the calf eating grain is to put a handful of corn meal into its mouth a few times just after feeding the milk. Then keep a small box of grain in its stall for a few days and it will soon learn to eat. After that, feed it regularly and do not give it any more than it will clean up.

Give the calf all of the fine legume hay, such as alfalfa, soybeans, or clover hay that it will clean up until it goes on pasture. If the calf has real good pasture, there is no need of any other roughage. The calf should be kept off of grass until it is five months of age but should have a lot for exercise.

#### Some Good Grain Rations for Young Calves.

1. Three parts cracked corn, three parts ground oats, one part wheat bran and one part of oil meal.
2. Three parts cracked corn, one part wheat bran, one part ground oats, and one part blood meal.

The grain should be increased so that the calf is eating about one pound per day by the time it is five to six weeks old. Three to five pounds per day is the maximum up to six months of age.

#### Raising Calf Where Whole Milk is Sold.

*Method 1.—The Minnesota Plan.*—Feed the whole milk for two weeks and skimmilk up to seventy days of age with equal parts of corn and oats and legume hay. After seventy days, feed four parts corn, one part bran, one part oil meal, and two per cent bone meal. Feed grain ration so that calf is getting about two pounds at seventy days of age and from three to five pounds at six months of age.

In using skimmilk powder, make the skimmilk by adding one pound of powder to nine pounds of water, making ten pounds of skimmilk.

*Method 2.*—Leave the calf with the cow for the first three or four days. Continue giving eight to nine pounds of milk a day until one week old. Feed three times a day until the calf is two weeks old. In about two weeks this may be reduced to twice a day. Change in feed always should be made as gradual as possible. Use the following feeding schedule.

#### FEEDING SCHEDULE.

- 1st week—whole milk.
- 2nd week—whole milk, dry grain mix, and alfalfa hay.
- 3rd week—whole milk, dry grain mix, and good alfalfa hay freely.
- 4th week—dilute milk with water until at thirty days calf is getting only water, dry grain mixture and alfalfa hay.
- 5th week—and on—feed grain mix, and all calf will clean up in twenty-four hours, (one day's ration may be put in at a time) give alfalfa hay twice per day—all it will eat; calf should have access to fresh water at all times. Increase grain feed until calf

is getting six pounds per day and continue at this rate until calf is six months old.

#### RECOMMENDED GRAIN MIXTURE.

Ground yellow corn.....	100 lbs.	Soluble blood flour.....	50 lbs.
Ground oats.....	150 lbs.	Steam bone meal.....	4 lbs.
Wheat bran.....	50 lbs.	Finely ground limestone	4 lbs.
Linseed oil meal.....	50 lbs.	Salt .....	4 lbs.

Grain should be increased so that the calf is eating about one pound per day at five to six weeks of age.

**Dehorning.**—It is always wise to dehorn the calves while they are young. It causes less pain and is less likely to injure them. It is also less work and avoids the danger which horns always have for other stock and for persons working around them. To dehorn the calf, take it when it is five to ten days old and when the soft stubby growth of horn has just begun to appear. Get a stick of caustic potash at any drug store and, after rubbing grease or vaseline around the stubby growth of horn, rub the horn thoroughly with caustic potash. Wrap a cloth around the stick to avoid burning the hand. However, if this is not done and it is desirable to dehorn later, it is best to run the calves into a chute and take the horns off with either a pair of dehorning shears or a saw. The horns should be taken off as close to the head as possible without giving a flesh wound. Care should be taken to select a cool time in either spring or fall when there is no danger of the animals taking cold and when the flies do not bother. If there is danger from flies, it is well to smear a little tar over the wound.

**Scours.**—This is the most common calf ailment and probably causes more loss, both in death of calves and in calves permanently stunted, than any other one thing. In almost every case it is possible to avoid it. It may result from exposure or from improper feeding. Too much milk, sudden changes in feed, cold milk, a change to sour milk, or dirty buckets, are a number of things which may cause scours.

To treat scours, cut the feed to one-half and if it is severe, drench with one-third ounce of castor oil administered in the milk. Keep the feed down to one-half for three or four feeds and then gradually work back to full feed. A few raw eggs substituted for feeds or milk after drenching is an excellent tonic.

**White Scours.**—This is a deadly form of diarrhea which affects the newborn calf. It is caused by a germ which thrives in dirty barns and stalls. It can be distinguished by the whitish yellow bowel discharge. It enters through the calf's navel. To prevent it, clean out the barn and calving stall thoroughly. Sprinkle the

floor thoroughly with a preparation of one pint coal tar to five gallons of water. Bed liberally with good clean bedding and then make several applications of tincture of iodine to the navel of the newborn calf.

**Pneumonia.**—Pneumonia is caused by exposure and cold, wet, draughty barns. Get the calf into a warm, clean stall with plenty of clean bedding and ventilation but no draughts. Keep it warm and well blanketed and give a little warm milk or water frequently. If it gives any indication of constipation, a good drenching with castor oil is advisable.

**Lice.**—There are three kinds of lice, all of which are very detrimental to the stock. Their presence may be suspected by the animals rubbing their necks and shoulders against posts, trees, etc. To kill them, use a dip of one pint of coal tar to four gallons of water. A second application ten days later will be necessary as the eggs will be hatched out by then. If the barn is infested with lice, it should be sprayed thoroughly with the same solution.

Another good remedy for lice is to dissolve one-half pound of hard soap to one gallon of boiling water (use soft water). Then add two gallons of kerosene and pump the mixture until an emulsion forms. Add twenty gallons of water and apply the mixture with a spray, pump or a brush.

**Blackleg.**—This is a very common and fatal disease and all calf club members should vaccinate their calves against it. The first indications are dullness and loss of appetite, lameness and a swelling in the shoulder or hindquarter. At first there is a high fever but later it falls below normal. The calf usually dies within twelve to twenty-four hours after it is affected.

Vaccination is simple and easy, any veterinarian can do it.

**Quarters and Stanchions for Dairy Calves.**—It is best to keep the calves by themselves for the first two or three weeks. Real young calves should never be bumped and jostled about, and the only way to prevent this is to have small individual pens for them. These pens should always be dry and well bedded. By the time the calf is two or three weeks old it is well to turn it in with other calves in a large pen. These large pens should always have stanchions fixed on one side so that the calves can be shut in and each calf will get its share of the feed.

It is almost impossible to feed calves right where they are kept in a large pen unless they are fastened at feeding time. They are likely to spill the feed and the larger calves will take feed from the smaller ones. Also, to prevent calves from suckling one another, it is well to keep them in these stanchions for a while after feeding them.

A simple calf stanchion can be made from scrap lumber in very little time and with little expense. In the long run, it will save a great deal of time in feeding calves and will enable one to raise better calves because they will all get just what feed they need and no more.

The accompanying picture will be of assistance in making stanchions.

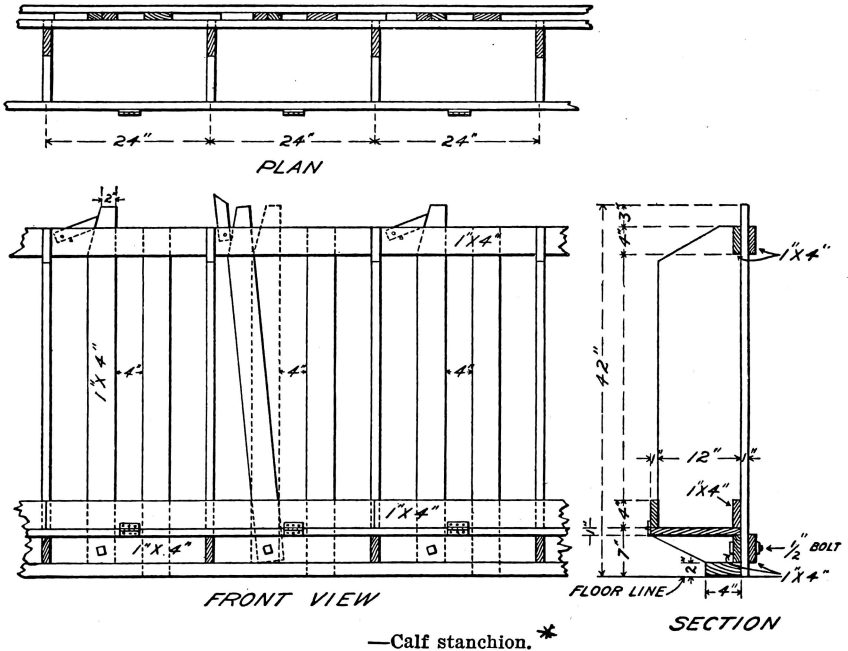


Fig. 3.—Diagram showing how to make a calf stanchion. (Courtesy U. S. Department of Agriculture.)

It is of very great importance that the quarters for calves be light and dry. Plenty of bedding should be furnished and changed often enough to keep the pens dry all of the time. After the calves are a few weeks old, they can stand quite a bit of cold if they are dry. Darkness or dampness or both are very likely to cause any one of numerous calf diseases.

The calves should have a lot to exercise in. They should be turned out at least once every day except on the most stormy days.

### III. THE DAIRY CLUB TOUR

#### How the Tour is Conducted.

It is recommended that the county extension agent and the local club leaders conduct the dairy club tour in June or July. At that time of the year the project work will be far enough along to show results.

Usually, one all-day automobile tour is conducted for all the dairy clubs of a county. The dairy club members, their parents, local dairymen and other interested persons of the communities should be invited to take part in the tour.



Fig. 4.—4-H club members judging dairy cattle while on club tour.

The program generally consists of making a visit to one or more farms on which good dairy cattle are produced and to the home farms of as many of the club members as possible. The tour is made more interesting if each dairy club member shows his calf and tells the visitors about his project work when they arrive at his home farm to observe his animal. A regular club meeting should be held at noon following a picnic lunch. Special training should be given the club members in fitting, showing and judging dairy cattle while on the club tour, which should help to prepare them for taking part in the dairy club judging contests of the county and at the State 4-H Club Round-Up, which will be held at the Missouri College of Agriculture early in August.

#### Judging.

The following score card should be used during the dairy club tour to assist in an intelligent inspection of the dairy calves.

## SCORE CARD FOR JUDGING DEMONSTRATION TEAMS IN MISSOURI

## SCORE CARD FOR DAIRY COWS

Scale of Points	Per Cent	1	2	3	4
<b>INDICATING EFFICIENCY OF MILK SECRETING SYSTEM—FORTY POINTS:</b>					
Udder—large, evenly quartered, well held up, not meaty, attachments long, teats squarely placed and of convenient size.....	30				
Milk Veins—capacious, entering a few large wells or numerous small ones.....	10				
	40				
<b>INDICATING CAPACITY—TWENTY-FIVE POINTS:</b>					
Muzzle—wide.....	1				
Jaw—wide in angle, strong.....	1				
Barrel—deep, wide, long, well held up with ribs broad, long, far apart, slanting, well sprung.....	23				
	25				
<b>INDICATING CONSTITUTIONAL STRENGTH AND VIGOR—FIFTEEN POINTS:</b>					
Nostril—large, expanded.....	1				
Eye—prominent, bright, intelligent.....	1				
Chest—wide, deep.....	4				
Skeleton—developed for strength, of good quality; roomy—long and level at pelvis.....	5				
Skin—loose and mellow showing good circulation and secretion.....	2				
Carriage—energetic, prompt, alert.....	2				
	15				
<b>INDICATING DAIRY TEMPERAMENT—TEN POINTS:</b>					
Body—wedge shape. General appearance—angular and lean, yet clean cut and neat in every part.....	10				
<b>BREED TYPE—TEN POINTS:</b>					
Points characteristic of the particular breed such as size, color, temperament, ruggedness of build, etc.....	10				
Name.....	Cut				
Date..... Class.....	Score				



**Method of Judging Dairy Cattle.**—If one expects to become a good judge of dairy cattle, the first step is to make a careful study of the correct form or type and by so doing to fix in his mind a picture of the ideal animal. This can best be accomplished through the use of ideal type models or pictures and through use of slides or pictures of representative animals of the different breeds. The next step is to train the eye properly to compare the animals to be judged and to ascertain the deficiencies as compared with the mental picture of the ideal animal.

It is essential in all types of judging that the club member first familiarize himself with the different parts of the dairy animal and their correct form.

Milk production is the primary function of the dairy cow, and dairy judging is based on the fact that there is a correlation between the form of the animal and her ability to produce milk. Though there are certain particular characteristics common to one breed alone, such as color, size, and special conformation of the body, the chief characteristics of the dairy cow are common to all breeds and may be termed the essentials of a dairy cow. A general score card, listing those points and ascribing a definite numerical value to each, has been prepared. It lists and describes each part in groups under the following heads:

1. Style and general appearance.
2. Dairy conformation.
3. Constitution.
4. Capacity for feed.
5. Development of milk secreting organs.

(See score card. Page 16.)

**Method of Procedure in Judging.**—In order to judge dairy cattle intelligently, it is necessary to understand the relative importance of each part of the animal. The general score card serves as a means of acquiring this knowledge.

The best way to become familiar with the score card is to make use of it in scoring a few animals. Care must be taken, however, not to use the score card to such an extent that one becomes dependent upon it for judging. It should be used only in the beginning as an aid in formulating a mental picture of the ideal animal. After the score card has been used a few times, comparative judging should be started by placing a group of cows according to their merits as dairy animals.

The animals should first be compared as a whole rather than as a mass of individual parts, and should be viewed at a distance of not less than fifteen or twenty feet. They should be viewed from the side, rear, and front, comparing them for the points listed above.

Too often, the beginner in judging makes first a detailed examination of the animal from a close-up view and feels the animal, and then from a mass of details thus secured, tries to make a decision. It is much easier to place the animals from their general appearance at a distance of twenty feet, and then to feel them over and closely examine details in order to confirm the first decision.

The close up examination should consist of feeling the hide to ascertain quality, feeling the ribs to ascertain whether the eye was misled by a covering of flesh, examining the udder for quality, ascertaining the number and size of the milk wells and the size and tortuousness of the milk veins.

In comparing the deficiencies and the points of superiority of two animals, it should be remembered that while the importance of each part is proportionate to the rank on the score card, if a very marked deficiency should occur, a greater cut should be made than is allowed in the score card. For example, the loin is allowed three points on the score card, yet an animal having a very weak, low loin would be cut severely.

**Judging Young Dairy Stock.**—In judging immature classes, the same things are looked for as in mature animals, but as some of the most important points are not developed in the young animals, the indication for development must be taken into consideration. This is particularly true of the mammary development. The younger the animal, the less development of udder and veins is to be expected, but several things to be considered indicate future development.

In judging a class of young heifers, the udder should be examined carefully for uniformity of quarters and teats, length and width of udder, rear and fore attachments, and quality of udder. Close examination will also reveal the length and tortuousness of the milk veins.

In dairying conformation, the same refinement is looked for as in older animals, although care must be taken to differentiate between animals in good condition and a tendency toward beefiness, as young animals are generally in good condition. Springing heifers that have been properly fed usually carry much fat and are sometimes said to be coarse over the withers when this is due to an accumulation of fat that will come off when they freshen.

**Judging Dairy Bulls.**—In judging dairy bulls, the same essentials are looked for as in judging dairy cows; namely, constitution, capacity for feed, dairy conformation, style and general appearance, and development of rudimentary mammary system. In addition to this, it is important that the bull also possess masculinity.

Masculinity is indicated by a broader head with thicker and straighter horns than those of the cow. The neck is wider with

a well developed crest on top and the shoulders are more prominent than those of the cow. Care must be taken to differentiate between coarseness and masculinity in development of these parts.

**Giving Reasons.**—In a judging contest, the giving of either oral or written reasons is very important. It is customary to give equal weight to both reasons and placing. A class, therefore, may be placed correctly and if no reasons are given, the contestant would get a rating of 50 out of a possible 100 points.

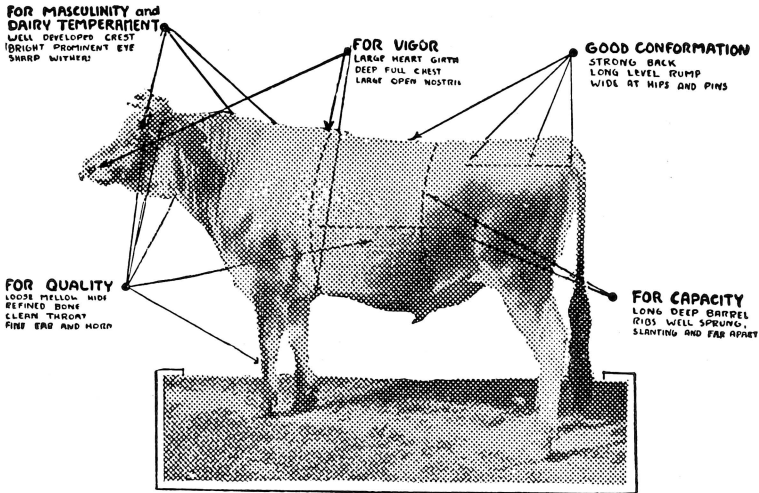


Fig. 5.—Typical high type bull with important points designated. (Used through courtesy of the dairy husbandry department, University of Missouri.)

In giving reasons, show why an animal is superior to the one over which it is placed, and do not give points of inferiority. Make reasons comparative rather than descriptive and present them in logical order. It is well to summarize under the leading heads of the score card and reasons for placing one animal above another and then give details in succession under each head. The reasons should be brief and specific. General terms as “better” and “best” should be avoided and good descriptive terms used instead.

Listed below are a number of descriptive terms used in referring to dairy cattle.

#### Descriptive Terms Used in Referring to Dairy Cattle.

1. *Pertaining to General Conformation and Appearance.*—Superior dairy or breed type, more size and scale, superior balance, neater, more style.

2. *Pertaining to Milk Secreting System.*—Udder or mammary system well developed, symmetrical, attached high behind, extends well forward, level floor, shows good balance, is of fine texture,

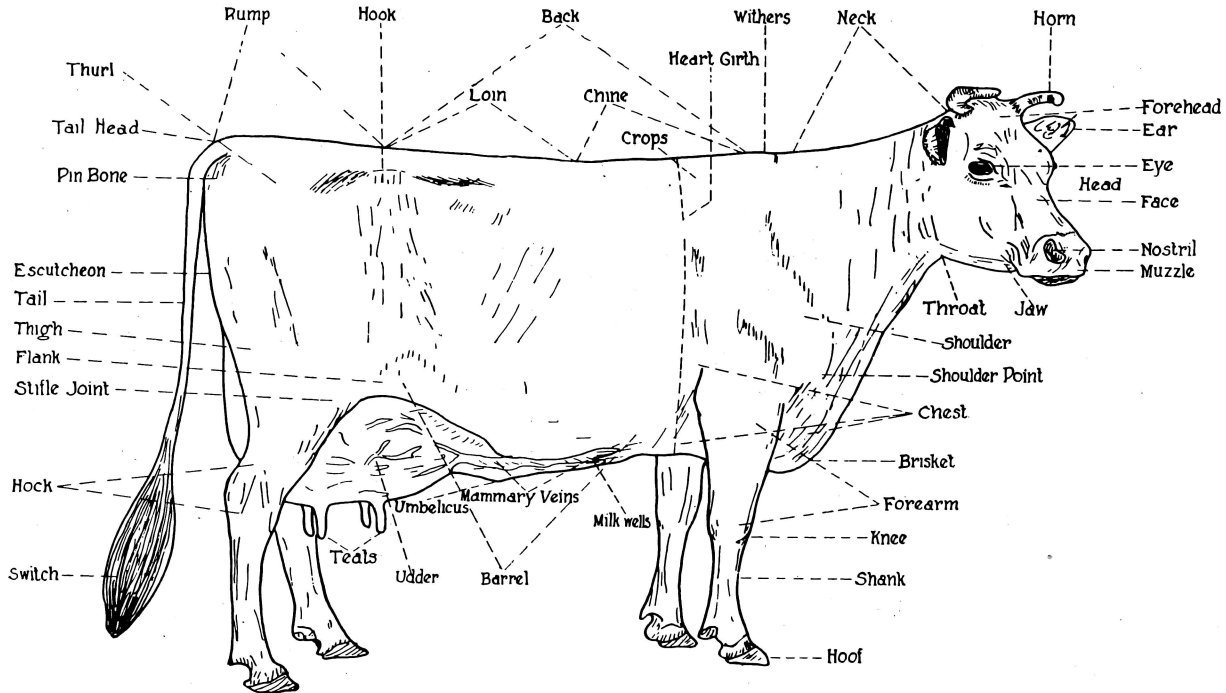


Fig. 6.—Parts of a dairy cow. (Used through courtesy of the dairy husbandry department, University of Missouri.)

full, pliable, soft, mellow, elastic; shows lack of development, deficient in fore or rear quarters, quartered, divided, tilted, funnel shaped, pendulous, meaty, hard, non-elastic, teats of convenient size and well placed, udder veins plainly visible, milk veins large, long, tortuous, crooked, branching, entering large wells.

3. *Pertaining to Body.*—Long, deep, close-coupled, *shallow barrel*, capacious, roomy, lacking in barrel capacity, cut up in middle, good spring or rib, slab sided, ribs wide apart, set too close together, straight, strong back, low weak back.

4. *Pertaining to Hind Quarters.*—Rump long level, carries out well to tail head, hocks and pin bones prominent, high and wide apart, level between hocks and pin bones. Neat, level tail head, rough, high, prominent, pinched tail head. Hind quarters trim, not meaty or beefy. Thigh thin.

5. *Pertaining to Forequarters.*—Light, trim, well laid in over shoulders, sharp withers, shoulders smooth and sloping. Heavy over shoulders, coarse and blunt over withers, falls off in crops, rough over shoulders. Chest deep, full and wide at floor, showing good constitution, large heart girth, shallow or narrow chested.

6. *Pertaining to Head and Neck.*—Neck refined, long, neatly joined to head and shoulders, brisket lean and light, throat clean. Neck coarse, heavy, ewe-necked. Head clean cut, forehead broad and dished, ears fine, eyes large and bright. Broad, strong muzzle, large open nostril, strong clean cut jaw, shows femininity or sex character, characteristic of breed type. Dull eye, listless appearance, coarse, bullish head.

7. *Pertaining to Temperament.*—Superior dairy temperament, more angularity throughout, prominent hocks and pin bones, sharp withers, wedge-shape, nervous, irritable, or placid, gentle disposition.

8. *Pertaining to Quality.*—Fine silky hair, loose, mellow hide, superior handling qualities, fine boned, coarse hair, tight, harsh hided, board hide, poor handler, raw boned.

9. *General Terminology.*—Avoid too much repetition. Avoid the use of "better" as in saying "better barrel," "better head." Instead, tell why it is better, as "larger, more capacious barrel," "more feminine head."

#### IV. FEEDING AND CARE FOR THE DAIRY CALF FROM SIX MONTHS TO ONE YEAR OF AGE

**Feed and Care.**—By the time the calf is six months old it is old enough to be weaned from milk. If this is during the summer season and there is plenty of grass pasture, it likely will need little

or no other feed. If, however, pasture is short and the calf is not doing the best possible, it will probably pay to force it along with a little grain. And it always pays to have some good green forage crop, such as cane or oats and Canada field peas, coming on to feed during the drought periods in the summer. During such times the calves need more feed than they can get on short pastures.

Through the winter season for calves of this age, it will pay to give them about two pounds a day of a good grain mixture, such as those mentioned in Meeting II. In addition, they should have what corn silage they will clean up, usually five to ten pounds a day, and all the legume hay they will eat. Keep them in good condition, not too fat, and making a good uniform growth. It is better to feed with this object in view than to feed with any set rule in mind.

Always see to it that the calf has access to fresh, clean water (warmed if possible in winter) and salt, and that the quarters are kept clean.

**Fitting the Calf for the Club Show.**—While the average club member does not want to become a professional showman, yet there are a few simple rules which the member should observe in getting the calves ready for the club show. Some of these are:



Fig. 7.—The 4-H dairy club round-up.

1. Calves should always show a large body capacity without being "potbellied." In order to accomplish this, they should be fed all the roughage they will consume all the time after six months of age.

2. Calves should be sleek and show a good quality of skin and hair. There are two good methods of accomplishing this. One

is to keep the calf up with a blanket over it for a while before the show, and the other is to add a little extra laxative feed like oil meal or wheat bran to the grain ration for a month or so before the show. Currying well at least once a day will help, too.

3. The animals should have a neat and clean-cut appearance, especially about the head and ears. Sometimes clipping the long hair will help the appearance of a heifer remarkably.

4. The heifer should be broken to lead before the show and should be led in with a neat halter, the member walking on the left side of the animal. It is possible to make a very nice looking halter out of an ordinary small rope.

5. If the horns have been allowed to grow and the horns and hoofs are rough, sometimes it is well to smooth them off with a little sandpaper.

6. Especial care should be taken to keep the heifers in good physical condition, especially just before the show.

7. Clean the heifer thoroughly before leading her into the show ring. No judge can place an animal up, if it is covered with dirt and filth. Besides that, any good club member would be ashamed of his animal in that condition. A little time with a bucket of water and a brush will be well spent. The following outline should be used:

- (1). Wash the animal with tar soap.
- (2). Train horns. Shorten long, coarse horns with a rasp. Scrape horns with glass or mower section, smooth with paste, pumice stone and sweet oil. Smooth with emery paper. Polish with sweet oil or metal polish. Feet should be trimmed squarely to allow animal to stand.
- (3). Groom daily, using soft brush.
- (4). Sponge daily, using a bucket of water to which has been added one teaspoonful of tincture of green soap. Then hand rub the animal.
- (5). Keep the animal blanketed. The blanket may be made from burlap sacks.
- (6). Keep animal in dark stall away from flies during the day. It may be allowed on pasture at night.
- (7). Feed a mixture of one part wheat bran, one part ground oats, one part ground corn, and one-half part oil meal with legume hay. The amount of grain to feed should be governed by the condition of the animal.
- (8). Ten days or a week before the show, clip the head and neck, belly, udder and tail.
- (9). The heifer should be trained to stand, pose, and to be led each day so that at show time she may be shown to an advantage. An untrained heifer never wins many prizes.

## DEMONSTRATIONS

**The Demonstration as a Method of Learning and Teaching.**—In so far as possible, all club members should be instructed in the regular club meetings by the demonstration method. As a usual thing, one or more members of each club can begin doing before the club useful phases of the work program soon after the processes have been demonstrated to the club by the club leader.

After two or three months of practical experience in handling real things, all mature club members should be able to give public team demonstrations. The scope of the team demonstration usually should be limited to the essential processes of one phase of the club work of the current year. A team of two or three of the best demonstrators, according to the number needed, should be selected from the membership of one club by individual try-outs in competition. All teams should have an opportunity to demonstrate before the local club group and the people of the home community, and the championship team should represent the local club at the county round-up, if one is held.

### Suggested Subjects for Team Demonstrations.

1. A dairy judging demonstration.
2. Teaching a dairy calf how to drink.
3. Preparing the dairy calf for the show ring.
4. Making a practical blanket for the dairy calf.
5. Methods of handling a dairy calf.
6. Dehorning the calf.
7. Ridding the dairy calf of lice.

Any practical problem of importance regarding the dairy calf project which lends itself to demonstration purposes may be demonstrated.

### Preparing the Dairy Calf for the Show Ring. (Suggested Demonstration Outline.)

**Project.**—For members of the 4-H Dairy Calf Club.

**Team.**—For a team of two members from one club group, designated in this outline as "A" and "B."

**References.**—Dairy I—The 4-H Calf Club, Missouri College of Agriculture, Columbia, Missouri. Judging the Dairy Cow.—U. S. Department of Agriculture, Bulletin No. 434.



**Equipment Needed.**—A dairy calf, show halter, curry comb, brush, clippers, rasp, scraper, cloth, bucket of water, and a stick or cane.

**Time.**—Fifteen to thirty minutes.

<p style="text-align: center;"><i>A. Speaks.</i></p> <p>A leads in giving a spirited club song, or in repeating the 4-H club pledge; gives a brief history of the club; introduces his teammate and himself and then announces the problem on which the team will demonstrate.</p> <p><i>Fitting the Dairy Calf for the Show</i></p> <ol style="list-style-type: none"> <li>1. Why fitting is necessary.</li> <li>2. Purpose of fitting.</li> <li>3. Names operations necessary to fit a dairy calf for the show.</li> <li>4. Demonstrates and explains how to polish the horns (if the calf has horns) and how to clip the hoofs.</li> <li>5. Demonstrates and explains how to trim the tail and how and where to crop the heifer for show purposes.</li> </ol> <p>“_____ will continue the demonstration.”</p>	<p style="text-align: center;"><i>B Assists.</i></p> <p>B joins in giving club song or pledge. Stands at attention.</p> <p>Holdes the dairy calf.</p>
<p style="text-align: center;"><i>A Assists.</i></p> <p>Finishes fitting horns, hoofs and hair.</p> <p>Quietly collects demonstration equipment.</p> <p>Stands at attention.</p> <p>Answers questions referred to him regarding his part of the demonstration.</p> <p>Joins in giving a club song.</p>	<p style="text-align: center;"><i>B speaks and Demonstrates.</i></p> <p>B holds the calf and explains:</p> <ol style="list-style-type: none"> <li>1. Feeds to use in fitting the calf for the show ring.</li> <li>2. Reasons for blanketing and keeping the animal inside previous to the show.</li> <li>3. Demonstrates and explains how calf was trained to lead; how to lead an animal into the show ring; and how to hold it while being judged.</li> </ol> <p>Summarizes briefly the points made in the demonstration, pointing out the results on the calf.</p> <p>Asks for questions.</p> <p>Leads in giving a club song.</p> <p>Concludes the demonstration by thanking the audience for its attention.</p>

**SCORE CARD FOR JUDGING DEMONSTRATION TEAMS IN MISSOURI**

	Perfect Score	Actual Score
1. <b>Subject Matter</b> -----	30	
(1) Importance of the subject-matter presented and relation to fundamental problems of home or farm.		
(2) Accuracy of statements made in oral presentation and proper methods in doing the work.		
(3) Completeness with reference to the giving of all steps necessary to clear understanding of process.		
(4) Clearness and definiteness of statements made in simple language easily understood.		
(5) Replies to practical questions. Judges' questions only should be considered in team scores. Team should give authority for subject-matter presented.		
2. <b>Team Work</b> -----	20	
(1) Preparation, arrangement and use of materials. The team will be responsible for the arrangement and preparation of equipment and its use.		
(2) Organization of work, each member in so far as practical to be kept busy with a definite part so that the work and instructions given will proceed without delay, but each member of the team should be able to demonstrate the whole process.		
(3) Appearance and conduct of the team. Appearance and conduct includes the personal appearance of the members, and of the team as a whole. They should be businesslike, pleasant and so far as possible, a unit in action and appearance.		
(4) The team member not actually directing the demonstration should reinforce the point at hand or at least should not detract from the theme of the demonstration.		
3. <b>Skill</b> -----	20	
(1) Ease in procedure.		
(2) Workmanship and efficiency of manipulation.		
(3) Neatness and cleanliness in doing work.		
(4) Speed, system or dispatch.		
4. <b>Results</b> -----	15	
(1) Effect upon the audience, and also upon materials used in the demonstration, as may be shown in the finished product.		
(2) All processes made clear.		
5. <b>Practicability</b> -----	15	
(1) Value of principles given for the home and community.		
(2) Actual club practices shown.		
Total Score-----	100	

Date----- Demonstration Team-----

Signed----- (Judge)