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# A 4-H DAIRY CALF CLUB MANUAL



NORTH CAROLINA STATE COLLEGE OF AGRICULTURE AND ENGINEERING  
AND

U. S. DEPARTMENT OF AGRICULTURE, CO-OPERATING  
N. C. AGRICULTURAL EXTENSION SERVICE

I. O. SCHAUB, *Director*  
STATE COLLEGE STATION  
RALEIGH

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## PREFACE

When you joined the 4-H Club, you became a member of one of the largest organizations of young people in the world which has taken as its goal to make the best better in all phases of farm and home life. You, as an individual member, are helping to determine what the future of the 4-H Club will be. Your club projects and your activities as a club member are a part of that organization. Your efforts are helping to determine what the local club will be, what your county organization will be, what your state organization will be, and what your national organization will be. Therefore, upon you rests a great responsibility, and you, as a club member, should do everything in your power to make club work bigger and better.

Dairying is one of the more important phases of Extension work in North Carolina, and it probably has a more direct influence on the life of the rural people and upon the welfare of agriculture than any other agricultural activity in this state. Few of us realize the necessity for the dairy cow and her products in building a more profitable system of agriculture. Few of us appreciate the acute need for a larger number of dairy animals in North Carolina. With that in mind it is one of our purposes to help remedy this situation through 4-H Club work and at the same time teach the club member the value and importance of a better type and quality of dairy animals.

This publication has been prepared in order to give you the necessary information in successfully completing this project. It represents the best thought and the latest information available on the subject of raising dairy calves. It is our hope that you will use this information to the best advantage possible. If there is other information which you desire or questions regarding this project, your County Agent will be glad to furnish you with whatever information is available.

L. R. HARRILL, *State Club Leader.*

# A 4-H DAIRY CALF CLUB MANUAL

By

J. A. AREY and A. C. KIMREY,  
*Extension Dairymen.*

## INTRODUCTION

In view of the increased interest in dairying and the constantly growing demand for better dairy cattle as well as more dairy products on the part of North Carolina folks there is no reason why the 4-H Club boy or girl should not prepare to share the returns from such demands. Good dairy cattle always bring a fair price and their product can be profitably sold at all times.

## OBJECT OF THE CALF CLUB PROJECT

1. To encourage an interest in dairying among farm boys and girls.
2. To promote the breeding of better dairy cattle on the farms of North Carolina.
3. To demonstrate proper methods of feeding and management of dairy cattle.
4. To teach correct methods of keeping farm records especially as they relate to the growing of dairy cattle.
5. To teach the farm boy and girl the importance and place of the dairy cow in a well-rounded farm program.

## REQUIREMENTS OF CLUB MEMBERS

Each member agrees to the following:

1. Comply with the general rules of 4-H Club work in North Carolina.
2. Own one or more purebred dairy animals approved by the County Agent or Dairy Specialist. Each animal must be registered in the name of the Club member.
3. Feed and Care for animals according to the recommendations of the local Club leader.
4. Keep an accurate record of the cost of raising each animal and write a story on each year's work both of which are to be recorded in a record book provided by the County Agent. This book is to be delivered to the county agent when called for.
5. Fit and exhibit one or more animals at community, county or State Fair when at all practical.
6. Breed heifers to sires approved by county agent.

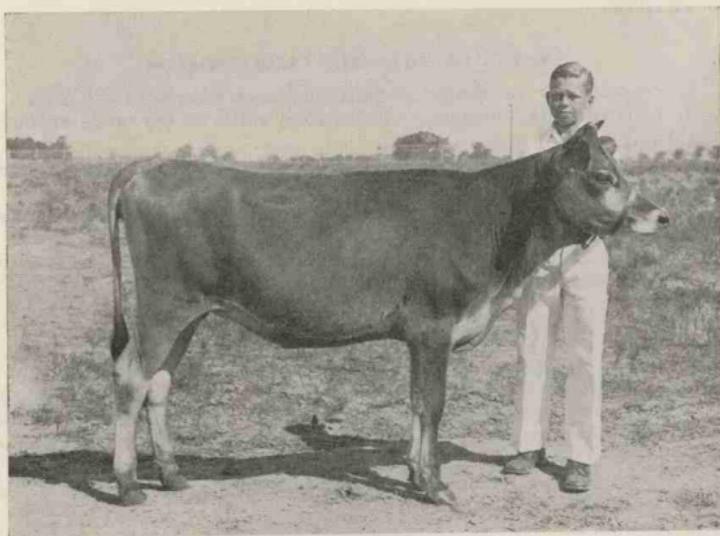
## SELECTION OF CLUB MEMBERS

The first and most important consideration in organizing a calf club is the selection of the members. Only those boys and girls who are interested in livestock and whose parents have a sympathetic understanding of the project should be enrolled in calf club work. The member's ability to finance the project and to properly feed and care for the calf should be

considered. A small club composed of from eight to ten members who successfully complete their project is much to be preferred to a larger number who for various reasons do unsatisfactory work.

#### FINANCING THE CALF

Various methods have been used in financing Calf Club Calves in this State, such as, cash purchases by members and loans secured from banks and through civic organizations. Probably the most satisfactory method in the past has been to secure the money from a local bank on a personal note endorsed by the parent or guardian. In such cases it is advisable for the member to carry on a second club project, such as the growing of an acre of cotton, or corn, the proceeds of which are to be applied to the note.



HEIFER SHOWING GOOD TYPE

#### SELECTING THE HEIFER

In selecting the club calf only those which possess good type and breed characteristics should be accepted. The production records of the ancestors of each calf should also be considered since type and production are the foundation rocks upon which every good herd must be built. For a club member to start with a non-descript purebred animal just because it is cheap is a mistake. Such can only result in discouragement to a possible future breeder.

It is usually desirable for the club member to start with a young heifer, one about five to eight months old. A heifer of this age usually costs less and handles easier than an older one. The new club member will develop

a greater fondness for an animal of this age than he will for an older more difficult one to handle. It is not advisable, however, to select calves much under five months of age since they will still need milk. While it is desirable that most of the members in a calf club start with young heifers it is also important for the county group, when showing, to be able to fill most of the classes in order to increase its winnings. To do this will require that a junior and senior yearling be included in the selections, together with the junior and senior calves.

#### **FEED AND CARE OF HEIFER FROM 5 MONTHS TO FRESHENING AGE**

If the heifer was not weaned when delivered to the club member, it should be fed one and one-half to two gallons of skim milk daily until it is at least six months old. In addition it should receive a sufficient quantity of grain to insure normal growth. This usually requires from one to two pounds daily. A good mixture for this purpose is composed of three parts cracked yellow corn, one part wheat bran and one part crushed oats. Together with the grain feed, the calf should be fed all the well cured leafy mixed hay it will eat until it is about five months old when mixed hay should be replaced with a good grade legume hay.

A calf under six months of age should not be allowed to run at large or be turned in a pasture with the older cattle. It will have less digestive troubles and do better if kept in a stall which is adjacent to a small exercising lot. It is desirable that the lot contain some shade to protect the calf from heat during the hottest part of the summer.

During the summer good pasture will usually provide sufficient feed for heifers ranging in age from eight months to within three to four months of calving time. Should the pasture become short, due to dry weather, or other cause, it should then be supplemented with a sufficient amount of grain to keep the heifers growing and in good condition.

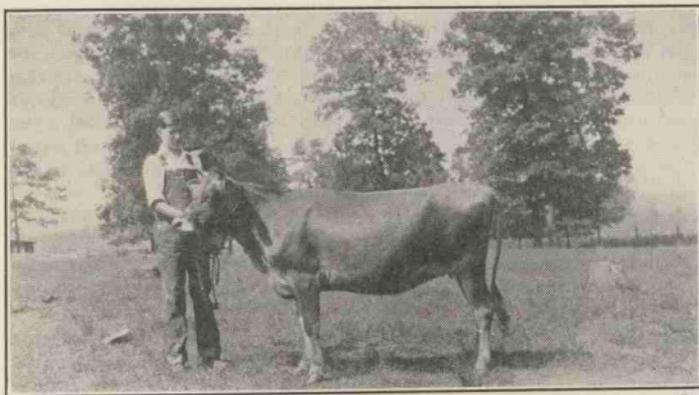
The winter ration of heifers of the above age should consist largely of good roughage, such as, well cured legume hay and silage. They should be fed all the high quality hay that they will eat, and when silage is available, from ten to twenty pounds of it daily, depending upon age. The quantity of grain that they should receive in addition will depend upon the quality and quantity of the roughage fed. If the quality of the roughage is good and the supply ample two to three pounds of grain per animal daily is usually ample to keep them growing and in good condition. Should the quality of the hay be medium to low, as is often the case in this State, more grain will be needed since low grade roughage has a low feeding value.

**AGE TO BREED**

The growth and development of the individual animal will determine the proper time to breed. If the heifer has been well developed the following breeding ages are suggested:

Jerseys .....	15 to 17 months
Guernseys .....	17 to 19 months
Ayrshires .....	18 to 20 months
Holsteins .....	19 to 21 months

Should the heifer be undersize breeding should be postponed for two or three months, to give her more time to develop.



HEIFER OF BREEDING AGE WITH SUFFICIENT GROWTH

**FEED AND CARE JUST BEFORE AND AT FRESHENING TIME**

About three months before the heifer is due to freshen grain feeding should be resumed at a rate sufficient to put her in good flesh by calving time. Usually four to six pounds per day is sufficient for this purpose.

A week before freshening the heifer should be placed in a comfortable well cleaned stall and fed good hay and a grain mixture of a laxative nature such as one composed of wheat bran with ten percent linseed oil meal added. About two to three days before and after calving the ration should be composed of a warm bran mash with good hay. An ample supply of good fresh water is also very necessary.

In the summer time a pasture or lot containing shade, but no other animals, is a satisfactory place for a heifer to freshen.

**WATER AND SALT**

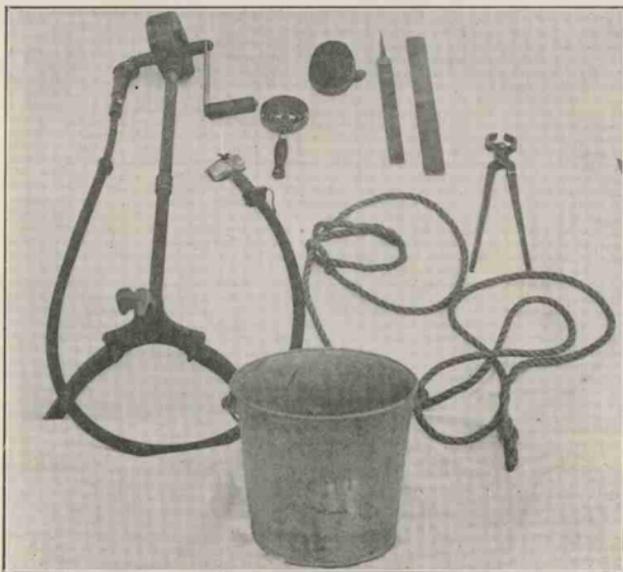
An abundance of fresh water should be available for the heifer all the time. Salt should be added to her grain mixture at the rate of one percent and also made available in a small box placed in her stall.

### SHELTER

Comfortable well bedded and ventilated quarters should be provided for heifers of all ages. They should be kept indoors during unfavorable weather. Heifers unduly exposed to bad weather during the winter do not grow as well and require more feed to keep them in condition than those which have good shelter. When fitting an animal during the summer for a show it is advisable to provide for her a reasonably dark stall in order to reduce the fly annoyance. This can be accomplished by removing the stall window and covering the opening with burlap bagging.

### SANITATION

Cleanliness is absolutely necessary in growing good calves. This applies to the feed, buckets, stalls, and bedding. Only fresh clean milk and grain should be fed. Hay should be fed from racks to prevent it from getting soiled. The feed buckets should be thoroughly washed and sterilized with hot water or steam after each feeding. The stalls should be re-bedded often enough to keep them dry and in good condition.

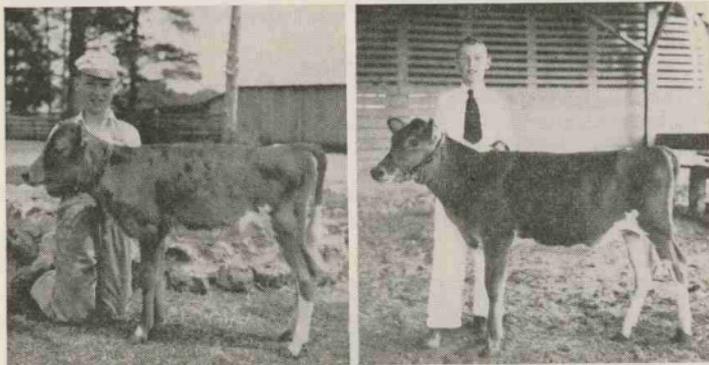


FITTING EQUIPMENT  
(Courtesy Washington State Extension Service.)

### FITTING AND SHOWING

Showing should be a real part of the calf club work for the year. It gives the club member an opportunity to find out how his heifer compares with those of the other members as to type, condition, training and development.

Class animals exhibited by expert showmen will prove of great help to the club member in his future efforts at showing.



HEIFER BEFORE AND AFTER FITTING.

It is usually advisable for the club member to show his calf in the open classes at the fair as well as in the club classes. In the open classes competition is keener and the experience gained from showing against high-

### FEEDING

The ration during the fitting period should be the same as the one to be used during the show period. The amount fed to be varied according to the condition of the animal. It is not good policy to change the formula during the fitting period as this might put the animal off feed. Plenty of good mixed hay should be fed. Soaked beet pulp is also an excellent feed to supplement the roughage ration.

Assuming that the animal to be fitted is in good thrifty growing condition six to eight weeks fitting will put it in good show condition.

There are many good fitting rations and most showmen develop a formula to suit themselves. In the past the fitting ration has been aimed largely at fattening the animal and adding what quality to the skin that might be possible. In recent years breed associations and judges have cautioned against over fattening, this has led, on the part of many showmen, to the use of less fattening grains in the fitting ration.

The following grain mixture will give good results:

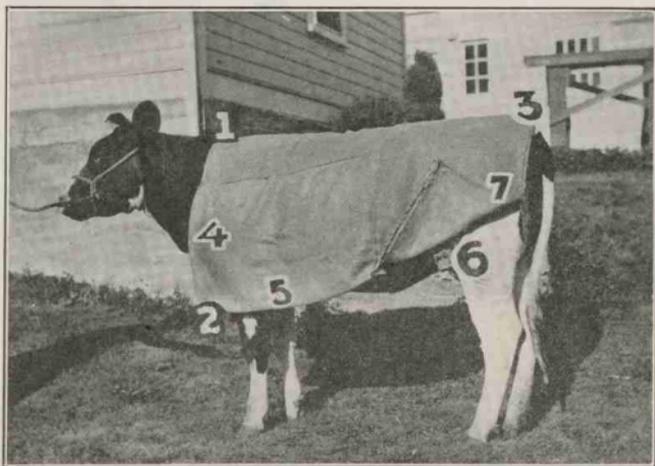
30 lbs. ground corn	15 lbs. sweet feed
30 lbs. ground oats	15 lbs. wheat bran
	10 lbs. linseed, peanut or soybean meal

The amount of grain to be fed should be governed by the general condition of the animal. Feed sufficient grain to get the animal in good flesh, care being taken not to over-fatten. If any digestive trouble should appear during the fitting or show period reduce the amount of feed immediately, and when the disturbance seems to be over put animal back on normal feed gradually.

It is a good practice to give the animal to be fitted a thorough washing when fitting is started. Wash on a warm day using luke warm water and a tar or other good cleaning soap. It is seldom necessary to wash the animal all over after this. Washing too frequently done leaves the skin dry and harsh. Stained places on the animal should be washed out each day. For animals with white spots or white switches, use a little blueing in the rinse water, this will aid in maintaining whiteness.

### BLANKETING

When active fitting is begun the animal should be blanketed. A satisfactory fitting blanket can be made from burlap bags. This blanket should



(Courtesy Washington State Extension Service.)

**BLANKETING.** The blanket should be made so that the front edge will cover the wither and lower point of the shoulder (1 and 2). The back edge should come to the tail setting (3). The straps should be fastened at points 4, 5, 6, and 7. Strap 5 should be attached about 6 or 8 inches from the lower edge on each side. In order to prevent tearing out, a 6-inch square of denim may be sewed on at each point where the straps are attached.

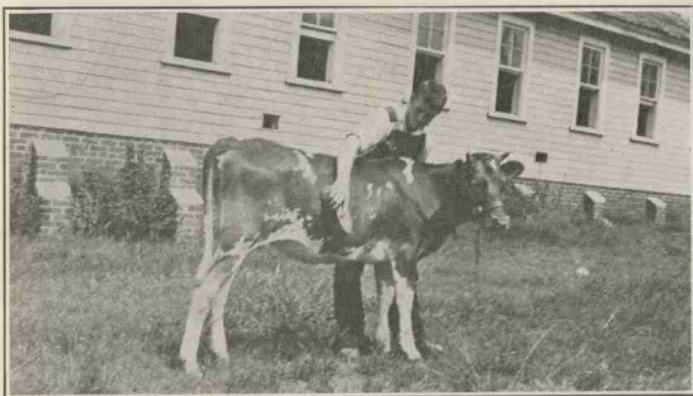
cover all the body of the animal, except the head, neck and legs. If the hair is extremely long or the hide very heavy and coarse a woolen blanket should be placed under the burlap, this will hasten the shedding of the long hair and the softening of the hide. If the weather is hot the woolen blanket may be left off during the day and replaced at night.

The object of blanketing is cleanliness, to cause the shedding of long

hair, to cause the hair to lie more smoothly and to produce a soft and pliable hide. When blanketing is once started it should be kept up until the fitting and showing of the animal is over for the season.

#### DAILY GROOMING

Each day the blanket should be removed and the animal carefully gone over with a soft bristled brush. The use of a curry comb or stiff bristled brush will encourage the formation of a heavy harsh hide, therefore a soft bristled brush should be used, after a brushing with this the animal should be rubbed thoroughly with a piece of rubber, such as a cross section cut from an old automobile tire or a rubber shoe heel, this will aid in removing loose hair and will not irritate the skin. Following this the animal should be rubbed with the bare hands before replacing the blanket.



BRUSHING THE ANIMAL

#### HOW AND WHEN TO CLIP

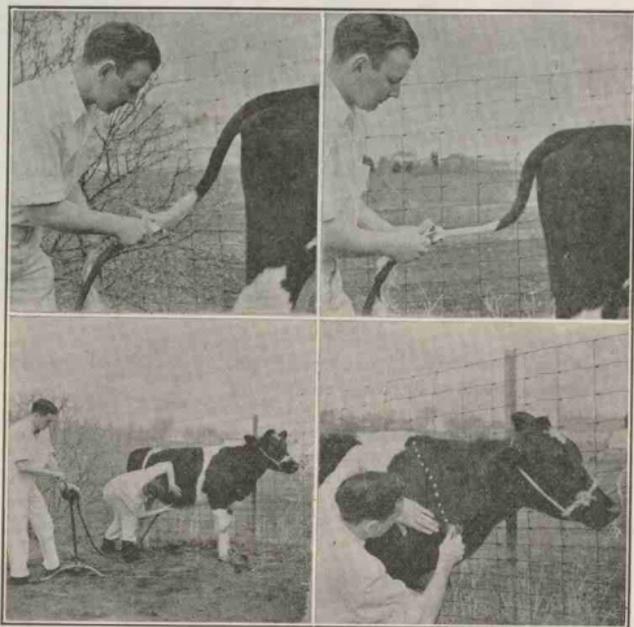
Only in rare cases should the animal be clipped all over. It is better fitting practice to shed the long hair out by means of blanketing and grooming. Those parts of the animal that cannot be blanketed should be carefully clipped, these of course are the head, tail and belly. In clipping the head begin at the nose and clip a line to each eye and then clip out between them, widening out to include the entire head and neck, clipping back to the withers and down to the front of the shoulder. Care should be taken to blend the clipped portion into the unclipped part of the shoulders and withers. If too close clipping is done on the top of the neck it may leave a dropped or ewe neck appearance.

#### CLIPPING

The tail should be clipped from the top of the switch to the rump, exercising care to blend the clipping neatly with the unclipped part on top of the rump. If this is not done a dropped appearance may be given to the

rump. The rear of the flanks may be clipped if the length of the hair seems to justify it.

The bellies and udders of cows and springing heifers should be well clipped, this tends to bring out the veining and causes the udder to make



(Courtesy Washington State Extension Service.)  
CLIPPING

a better show. In clipping young heifers if too close clipping of the belly is done, it may make them appear shallow in the body.

#### ATTENTION TO HOOFS AND HORNS

Neat, shapely horns add greatly to the appearance of a dairy animal. If the horns are naturally out of shape, gradually bring them into proper shape with horn trainers.

In fitting horns, first scrape the rough parts off with a piece of broken glass or rasp. After this use sandpaper and emery cloth. A few days before the show, begin polishing the horns daily, using strips of flannel cloth, apply a small amount of pumice stone and sweet oil, letting the final polish be made with a strip of clean flannel cloth, see-sawed around the horns from three to five minutes. The final polish should be on show day.

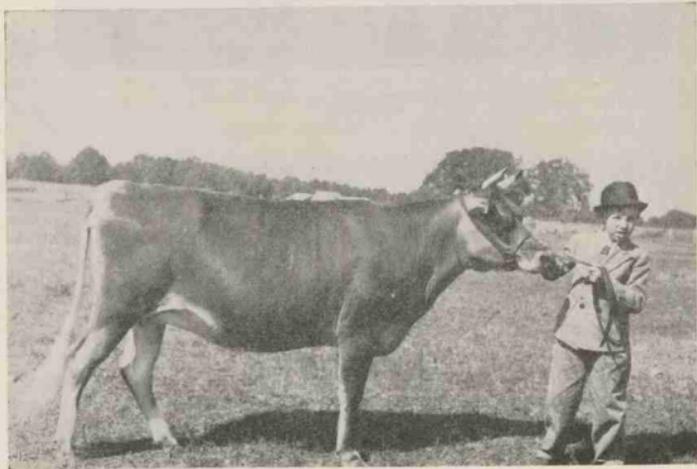


DRESSING HORNS

If the hoofs are long and unshapely they should be trimmed. Clean and polish the hoofs, especially just before showing.

#### TRAINING TO LEAD

Animals are often seen in the show ring that have not been properly trained, this makes it next to impossible for the judge to see the animal at its best. It is very necessary that the animal to be shown be trained to lead well, to stand with its head up and top line straight. The animal



TRAINING TO LEAD

should be so trained that it will properly pose when spoken to or lightly touched by the hand or foot of the showman. This can only be done by long and careful training. Lead the animal each day, also train it to lead among other cattle noticing them as little as possible.

Do not use a broad leather halter, but rather, the regulation round roll leather halter. The kind of halter materially affects the appearance of the animal when it is being shown. It is a good practice to train the animal to lead and obey with the same type of halter that is to be used on show day. A stubborn animal may often be taught to lead by at first leading it beside another animal that leads well.

#### PREPARING SWITCH

During the entire fitting period the switch should be kept clean. The night before show day the switch should be carefully washed out with soap water then while still wet it should be braided into four or five different braids of three strands each. These braids should be tied with strings and allowed to remain until just before the animal is to be shown. Just before showing the braids should be loosed and the switch combed out with a coarse comb.

#### FEED AND CARE ON SHOW DAY

On the morning of show day the animal should be given a liberal feed of hay and beet pulp as well as the grain ration. This will enable the animal to show a good middle. Just before entering the show ring the animal should be watered, care being exercised not to allow too much water as this would produce a "pot bellied" appearance. The water given should not be cold, but of medium temperature. If the water be too cold it will cause the animal to "bow up" in the back and the hair to stand on end thus making it impossible to properly pose and show the animal.

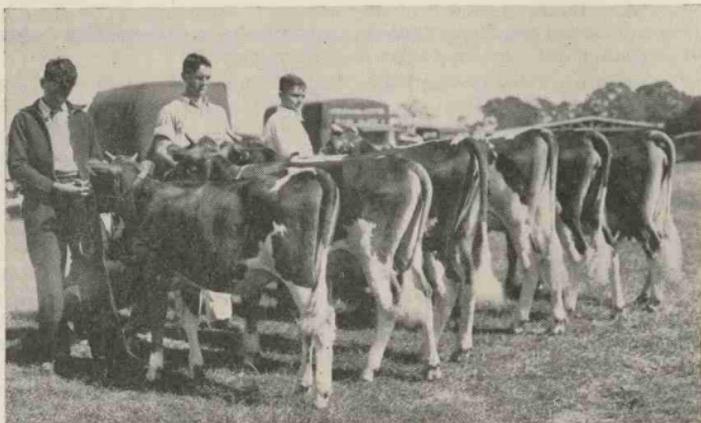
Just before entering the show ring give the animal a final rubbing with a flannel cloth, barely moistened with olive oil. After going over the animal with this cloth rub it down with the bare hand. See that the horns have a final polish and that the hoofs are clean.

#### IN THE SHOW RING

Once in the show ring it is up to the showman to assist the animal to make the best appearance possible. Poor individuals, and poorly fitted animals cannot be made over in the show ring, but good individuals well fitted can be so poorly shown as not to attract either the judge or the spectators.

Slow movement and patience is the best policy in the show ring. If the animal steps radically out of pose, lead it out in a circle and back into position rather than attempt to back up the animal. The showman should keep one eye on the judge and one on the animal, never allowing the animal to become obscured from the vision of the judge.

The good showman never allows his attention to drift to either his fellow showman or the spectators.



READY FOR THE JUDGE

Endeavor to be the first to enter the show ring. This shows alertness and often gives the judge a more complete view of a good animal than might otherwise be possible.

4-H Calf Club members should wear white during the show. Cleanliness and neatness on the part of both showman and animal to be shown adds greatly to the impressiveness of the occasion.

#### SPORTSMANSHIP

Never question, in the show ring, the decision of the judge as to the placing of the animals. It is good sportsmanship to always be ready to congratulate the showman whose animal is placed above yours and have a pleasant remark for the ones placed below.

#### STANDARD CLASSIFICATION AND BASE DATES

**JUNIOR CALF**—All animals dropped after January 1, in year which shown.

**SENIOR CALF**—All animals dropped after July 1, and including December 31, of year previous to show.

**JUNIOR YEARLING**—All animals dropped after January 1, and including June 30, of year previous to show.

**SENIOR YEARLING**—All animals dropped after July 1, and including December 31, of second year previous to show.

**TWO YEAR OLD**—All animals dropped after January 1, and including June 30, of second year previous to show.

**CLUB MEETINGS**

When practical several meetings of the county club should be held during the year. A program should be previously arranged for each by the Club leader. The following are suggested topics for discussion at these meetings:

Feed and Care of the Calf from Birth to 6 Months of Age

Feeding the Calf Grain and Roughage

Feeding Milk Substitutes

Weaning the Calf

Dehorning

Feed and Care of Heifers when on Pasture

Feed and Care of the Yearling Heifer During the Winter

Importance of Cleanliness in Calf Raising

Common Calf Diseases

Fitting, Training and Showing

Feed and Care of the Milk Cow

Literature recommended for members to study:

N. C. Extension Circular 177, Raising Dairy Calves to Breeding Age.

N. C. Extension Circular 193, Feed and Care of Dairy Cows.

THE CLUB PLEDGE

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I PLEDGE:

*My Head to clear 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.*

THE CLUB MOTTO:

*"To Make the Best Better."*