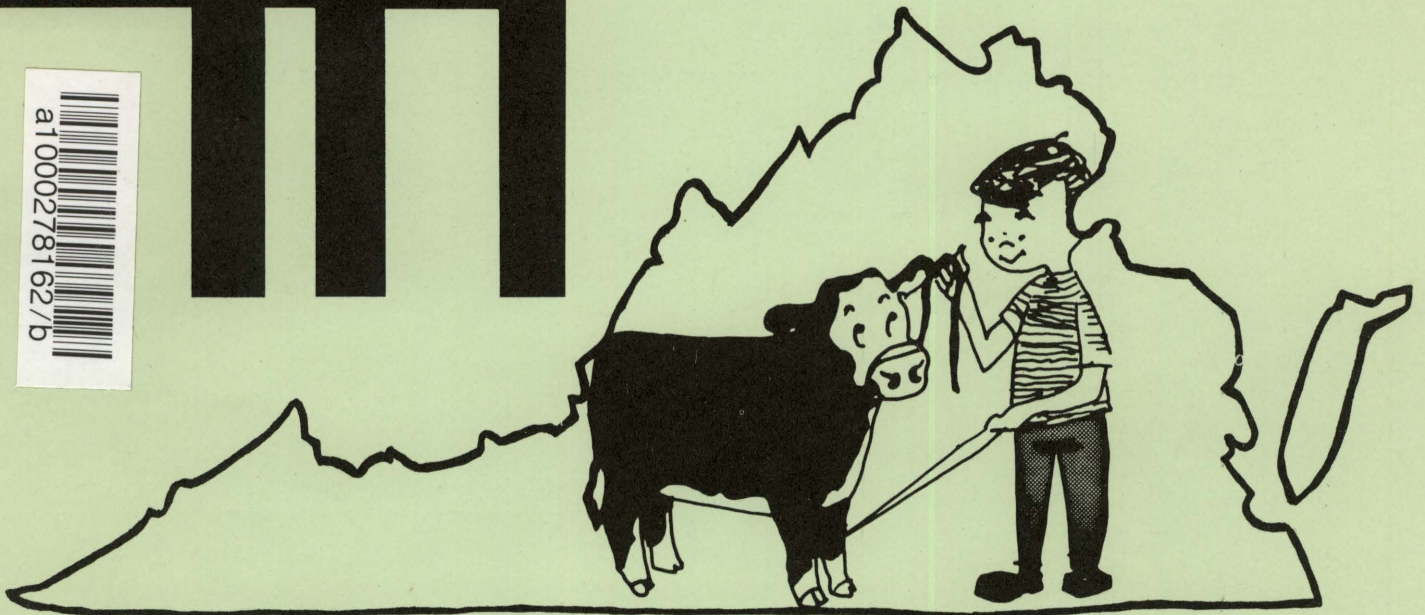
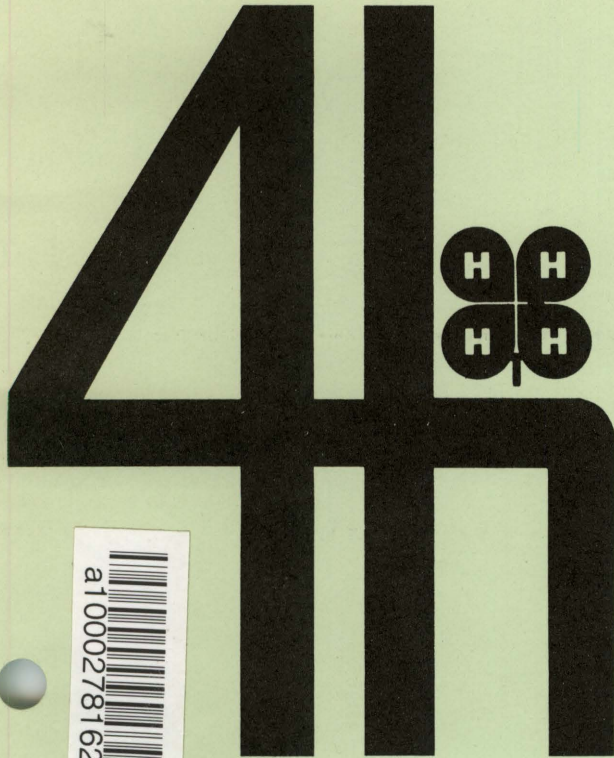


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BEEF STEER

Guide & Record Unit 1



Extension Division • Virginia Polytechnic Institute and State University • Reprint December 1974

Name _____ Age _____ Club Year _____

Address _____ County _____

Name of Club _____ Years in 4-H _____

Name of Leader _____ Record Book 84

This publication was adapted from literature written by Dave Williams, Extension Specialist, Animal Science, University of Nebraska.

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4-H Beef Steer and Record - Unit I

Introduction

This is your 4-H Beef Steer Project Book. It was written for you and other club members of grade school age.

Read the manual before you start your project. It will give you an idea of what you are expected to do.

Study the manual during the year. It will give you instructions in choosing, feeding, and caring for your calves.

A Successful Project

To have a good project, you should do these important things:

1. Study your manual so that you will know what to do.
2. Buy your calves in September or October when there are a lot of calves for sale.
3. Choose healthy, choice feeder calves that are of the right age and weight.
4. Feed a good ration made mostly of hay and grain grown on your farm.
5. Be a smart herdsman and see that your calves get the best of care.
6. Groom and show one or more calves at your county fair or local steer show.
7. Complete the records section of this book.

Project Calves

How Many

A calf will usually eat more when fed with other calves. For this reason, you may wish to feed more than one calf, unless you have a brother or sister who also is feeding a calf. Remember, you must keep records on your own calves.

When to Buy

Club calves should be bought in September or October for spring shows. You can find more good calves in these months because most feeder calves are sold in the fall. Calves that are to be exhibited need to be started on grain by the first of October.



Allow for a 200-240 day feeding period prior to slaughter date and/or show date. Use this as a guide if you plan to exhibit your calf at a fall show.

Where To Buy Calves

A lot of good beef cattle are raised in Virginia. There are many places in the state where you can buy project calves. Ask your leader, Extension Agent, or a representative of one or more breed associations to help you.

Here is a list of places where you might get good calves for your project.

1. From your dad's beef herd.
2. From a neighbor's beef herd.
3. From a cattle buyer.
4. From a livestock auction.
5. From one of the many feeder calf sales in the state.

Important: Determine date of birth of the calf when you buy him.

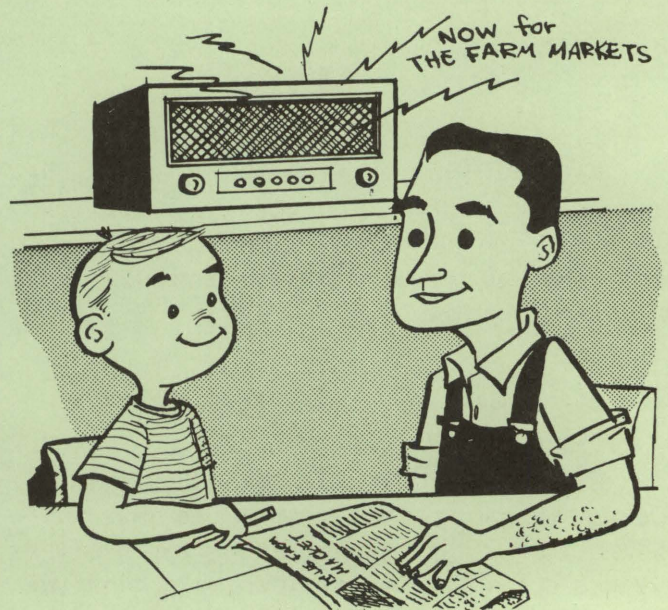
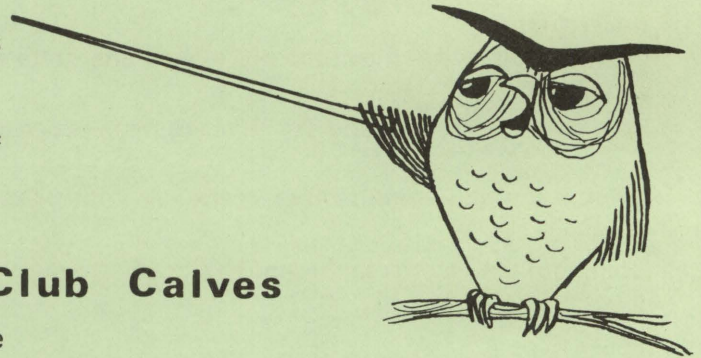
How Much To Pay For Club Calves

Learn to buy your calves for what they are worth. A good price to pay for calves is the price a cattle feeder would pay for them. Cattle feeders use market prices as a guide when they buy calves. You should also use market prices as a guide when you buy calves.

Know the market price for feeder calves before you and your date go to buy your calves. It will help you decide how much to pay for your calves. Market prices for feeder calves are given on radio and TV farm programs. They are also listed in livestock market reports in most newspapers.

Kind of Calves To Buy

Choosing the right kind of feeder calf is important. One reason for the project is to give you training in choosing feeder calves.

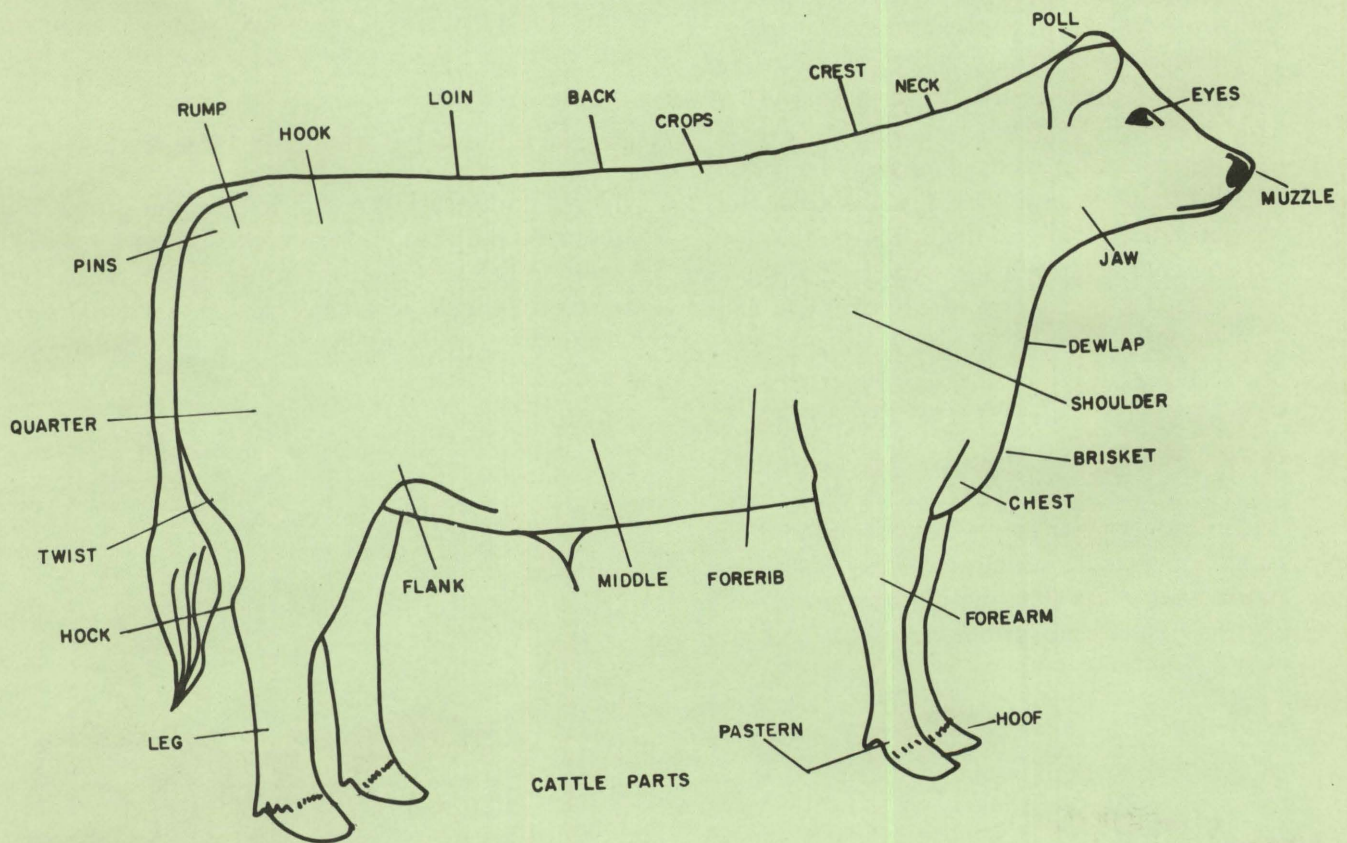
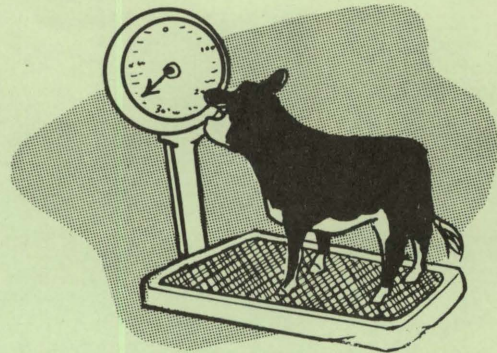


You will want someone to help you pick your calves. This will probably be your dad. You should always go with your dad when he gets your calves. This will give you experience and help you learn how to select calves.

Feeder calves for the 4-H Steer project should be of choice or fancy grade. There are 5 grades of feeder calves. Select a calf that is similar to the type shown below.

The important parts of a calf are shown in the drawing. Learn each part and where it is located on the calf.

Project calves should be of the right age and weight. Steer calves selected in September or October should have been born in December or January. Choose calves that are heavier than their herd mates at the same age.



Calf Care

Bringing Calves Home

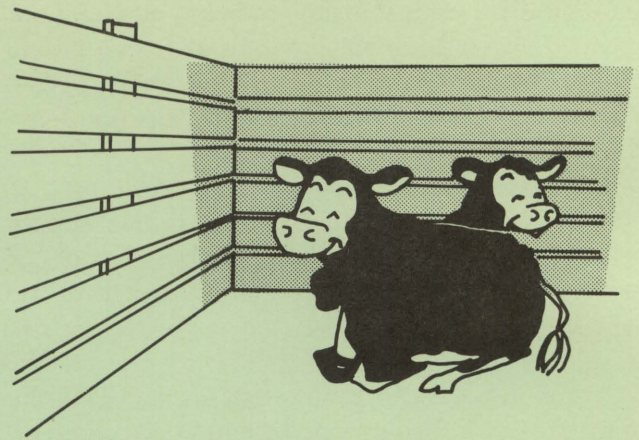
Be careful when you load and truck your calves to their new home. Before your calves are loaded for the trip home, take these safety measures:

1. Cover the truck bed with a 2" layer of sand. This will keep the calves from slipping and hurting themselves.
2. Put a 10" layer of straw over the sand in cold weather to help keep the calves warm.
3. In case of bad weather, cover the front third of the stock rack with canvas. Cover the sides as well as the top. This will help keep the calves from catching a cold on the way home.
4. Load and unload calves quietly so that they will not get excited and try to break loose. A calf that gets loose and has to be chased may become wild. A wild calf is difficult to train.
5. When one calf is trucked alone he should be haltered and tied. Tie his halter lead about 18" above the truck bed. Allow enough lead rope so he can lie down and rest. Tying the calf for the trip will help to gentle him.

Getting Calves Used To Their New Home

Once you get your calves home, unload them gently and move them quietly to their stall. The stall should be dry and bedded with clean straw.

For the next week, let the calves stay in their



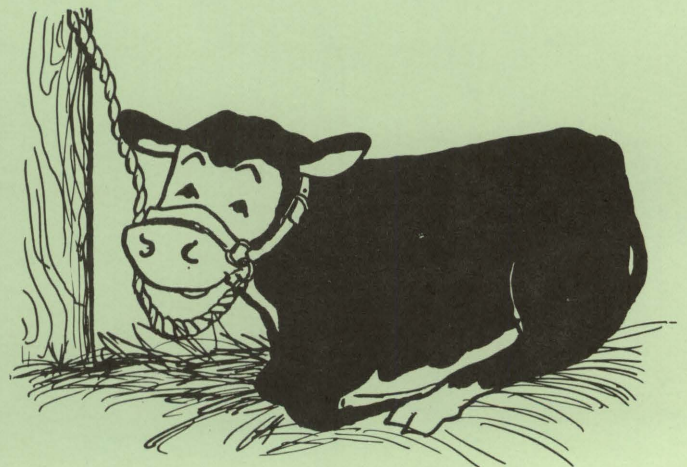
stall and rest. Getting to be friends with your calves is your first job in training them. When you visit their stall, talk to them so that they will get used to your voice. Never do anything to frighten your calves or to make them angry.

Feed your calves only hay and water until they are used to their new home. Give them fresh water everyday and let them have all the hay they will eat. Feed good grass hay or grass-legume hay.

Halter Break Calves Early

When a calf is used to his new home, he should be haltered and gentled. "Halter breaking" means to get the calf used to wearing a halter and to stand quietly when he is tied. It is done by haltering the calf and tying him in his stall for a few days.

"Halter breaking" is an important part of a calf's training. It should always be done within two weeks after you bring the calf home.



Teaching The Calf To Lead

After the calf is halter broken, teach him to lead. At first, the calf will give you trouble. He will balk and then try to get away. Have your dad help you until the calf leads well enough for you to handle it. Do not let the calf get away because he will try it again and again. Be gentle but firm with the calf.

Start the training by leading your calf to places that he wants to go. Lead him to his bunk at feeding time or to his water trough when he is thirsty. Then turn him loose. Do this for a few days and he will begin to lead.

When your calf has learned to lead, take him outside of his exercise lot. Lead him to strange places. Talk to the calf as you lead him. This will assure him that everything is all right. Ask other people to handle him. He needs to learn that strangers will not harm him.

Teaching the calf to stop is another important part of his training. The proper way to stop the calf when you are leading him is to:

1. Turn toward him.
2. Turn his head to one side.
3. Push back a little on his halter lead.



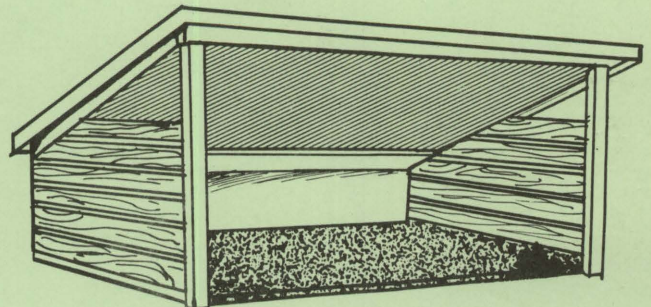
Do not try to stop the calf by trying to push harder against him than he does against you. Remember, the calf is a lot bigger than you.

Housing and Equipment

Housing For Your Calves

Housing for your calves should be simple and comfortable. It must be cool in the summer and protect the calves from winds and storms in the winter.

A shed open to the south may be used for housing your calves. You may also use a stall in a barn that is free from drafts. Do not keep your calves in a tightly closed barn. A tightly closed barn is usually damp and unhealthy for your calf.



Keep the stall or shed clean and dry at all times. Use straw for bedding in winter months. A 4 to 6" layer of sand may be used for bedding in the summer. Calves do better when they have a good place to lie down after eating.

Exercise Lot

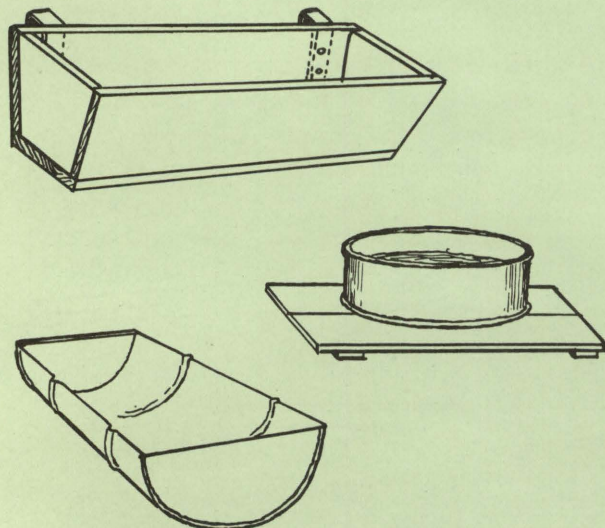
Your calves will need an exercise lot next to the shed or barn. Exercise is important for club calves. It gives them a better appetite and builds good leg muscles.

A lot that is 20 by 50' is large enough for 5 or 6 calves. If the lot is too big, your calves will run more than they should. They may also be hard to catch. A nervous calf may become wild in a large lot. If the lot is too small, the calves will not get enough exercise.

Feeding Equipment

Feed bunks for calves should be about 18" off the ground. Grain and silage hay may be fed from the same bunk. Loose hay is usually fed in a hay rack.

A mineral box should be built inside the shed or stall. A box 12" square and 6" deep is big enough for several calves. A good mineral supplement can be made by mixing salt and steamed bone meal. Mix 1 pound of salt with each pound of bone meal. Always keep supplement in the box for the calves to eat.



Calves should have clean, fresh drinking water at all times. Two good water troughs can be made from a 55 gal. metal oil barrel. Cut the barrel around the middle with a hack saw. Then file off the sharp edges. Before using, give each trough a good cleaning to remove all of the oil.

Never let the water trough overflow. In case it does, have the trough located where water will drain out of the lot. Do not let mud holes form in the lot.

Feed Facts

Concentrates and Roughages

There are two classes of livestock feeds:

1. **Concentrates:** feeds that are high in food value and low in fiber.
2. **Roughages:** bulky feeds that are low in food value and high in fiber. Beef cattle can use roughages in their rations because they have four stomachs.



CONCENTRATES



ROUGHAGES...

Concentrates Used

Corn is the most popular grain for fattening cattle. It can be fed as the only grain in a ration. Ground ear corn is good for fattening calves.

Oats is a good grain for starting calves on grain. You may leave 1 or 2 lbs. of oats in the ration after calves are on full feed. Oats are too expensive to use in large quantities in the ration.

Barley produces good grains but should not be used for more than one-half of the concentrate.

Wheat Bran adds bulk to the ration and makes it taste better. It is often used to start calves on feed.

Protein in Supplements are concentrate feeds that are high in protein. They are used to make up for the protein shortage in corn and other grains. Soybean meal is a good protein supplement.

Roughages Used

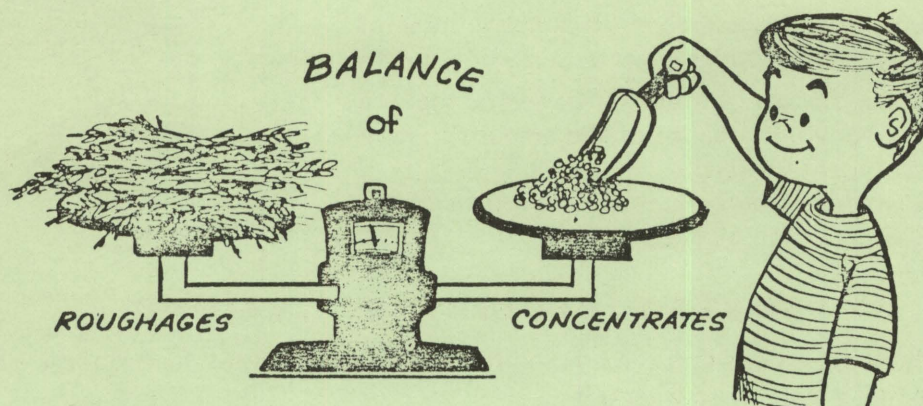
Alfalfa Hay has more food value than other roughages but it sometimes causes bloat. When good alfalfa hay is fed, little or no protein supplement is needed in the ration.

Clover Hay is a legume hay similar to alfalfa in that it has a high protein content.

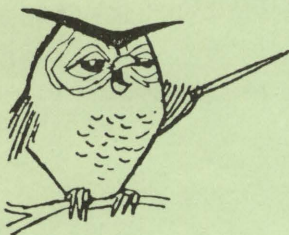
Grass Hay such as timothy or orchardgrass has a high feed value but is low in protein. Therefore, protein supplementation is needed.

Mixed Hay such as grass and clover provides a good balance of nutrients.

Corn Silage is an economical and valuable roughage but is very low in protein. A protein supplement is needed when corn silage is fed.



Feeding Calves



Getting The Calf On Full Feed

When your calf is used to his new home, start him on a finishing ration. Here are some rules that you may use in getting your calf on full feed:

Starting Ration

1. Feed all the hay your calf will eat twice daily. Good grass or grass-legume hay should be used while your calf is starting on feed.
2. Feed 1 lb. of oats or ground ear corn the first day. Add 1/4 lbs. more to the ration each day for a week.
3. Start feeding a mineral supplement on the first day. Feed the minerals in a box so the calf can eat them anytime he wishes. Keep a fresh supply of minerals in the box at all times.

After A Week

1. After your calf has been eating oats for a week, you can start adding protein supplement and corn to his ration.
2. Have someone help you decide on the amount of protein supplement needed in the ration. Add a little supplement at each feeding so that all of it being fed in 3 days.
3. Add 1 lb. of corn every 4 days until it takes the calf about 30 minutes to eat all of his concentrate at each feeding.

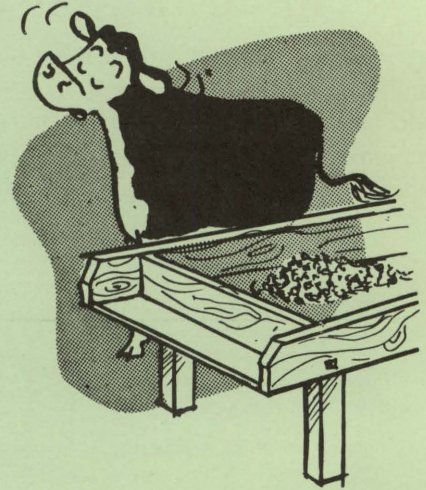
Now Add Corn

1. Continue to add corn to the ration, but at a slower rate.
2. Add 1 lb. of corn every 10 days until your calf is on full feed. If you add grain faster, you may cause him to go "off feed".
3. Your calf will be on full feed when he takes about 1 hour to eat his grain and supplement at one feeding. He will be eating about 2 lbs. of concentrate each day for every 100 lbs. that he weighs.
4. It will take about 6 weeks to get a calf on full feed.

What If The Calf Goes Off Feed?

Your calf may go "off feed" and refuse to eat all of his concentrate. If this happens you can get him back on feed again this way:

1. Cut out half of the concentrate part of the ration.
2. Give the calf all the hay that he will eat.
3. Feed one-half the regular amount of concentrate until the calf starts eating good again.
4. Then, increase the concentrate for 3 days so that the calf is back to within one lb. of the amount that he ate before he went off feed.
5. Gradually increase the amount of concentrate until the calf is back on full feed.



Suggested Finishing Rations

Here are some finishing rations that can be used for 500-lb. calves on full feed. Choose a ration that has the kind of grain and hay grown on your farm.

NOTE: Economy with satisfactory performance should receive primary consideration. Corn is usually the cheapest source of energy and should be the main ingredient in all purchased feed. Oats, while excellent feed, usually are too expensive to be added to purchased feed. Feed small grains only if home grown.

BEWARE: TOO HIGH PRICED FEED AND AN EXCESSIVE PRICE for the calf contribute to most financial failures of 4-H steer projects.

Ration 1 - full feed - corn silage

- 2# - 50% protein supplement
- 1# - corn per 100# body weight

Ration 2 - full feed plus 2# legume hay or 5# silage

- 2a. 89# - corn and cob meal
- 11# - 50% protein supplement
- 100#

- 2b. 87# - corn and cob meal
- 13# - 44% S. O. M.
- 100#

Ration 3 - full feed with 4# legume hay or 10# silage

- 92# - cracked shelled corn
- 8# - 50% protein supplement or 10# 44% S. O. M.
- 100#

Ration 4 - (Home raised) feed with 4# clover hay or 10# silage

46# - cracked corn
46# - cracked barley
8# - 50% protein supplement or 9# 44% S. O. M.
100#

Ration 5 - (Home raised) feed with 4# legume hay or 10# silage

60# - corn
32# - oats
8# - 50% protein supplement or 9# 44% S. O. M.
100#

Ration 6 - (Home raised) feed with 4# clover hay or 10# silage

6a. 46# - cracked corn
24# - oats or barley
6# - 50% protein supplement or 7# 44% S. O. M.
24# - wheat
100#

6b. 69# - cracked corn
23# - wheat
8# - 50% protein supplement or 9# 44% S. O. M.
100#

Ration 7- (for self-feeding and beginners. Use home raised ingredients as far as possible)

25# - ground legume hay
54# - cracked corn
8# - molasses
13# - 44% S. O. M.

Minerals:

- a. Keep trace mineral salt before cattle.
- b. Keep a calcium-phosphorus mineral before cattle.

Hormones: (Use only one of the following)

- a. Implant with one 12 mg. implant of stilbestrol at beginning and repeat in January for spring shows. Adjust time accordingly for fall shows.
- b. Implant with 36 mg. of zeranol early in the feeding period and not less than 65 days before slaughter.
- c. Implant with a combination of the hormones, progesterone and estradiol according to manufacturers directions and not less than 60 days before slaughter.

Protein Supplements:

- a. Soybean oil meal is usually the best buy in Virginia and also the best quality protein of all oil meals.
- b. 4-H Club members will find commercial 50% protein beef supplements to be the most practical way to supply protein, Vitamin A and mineral to rations.

Forages:

- a. Legume hays are usually more desirable for calves. Avoid feeding alfalfa with barley - it sometimes causes bloat.
- b. 2 1/2 lbs. of corn or grass silage will replace 1 lb. of hay for supplying roughage and is in some respects better.

Getting Ready for the Show

When you show your calf, you will want him to look his best. For this reason, you should learn how to train and groom calves.

Training Calves For Show

Start training your calves soon after you get them. A young calf will be easier for you to train than a large, older one.

In training calves for show, teach them these four things:

1. To lead.
2. To stop.
3. To stand.
4. To back up.

Grooming Calves

A calf always looks better if he is well-groomed. Washing, curling and brushing are things that you should learn about grooming. Trimming the feet and clipping hair are important too, but you can learn to do this by yourself when you are older.

Instructions on Fitting and Showing

Get your dad or an experienced showman to teach you how to properly groom your steer.

The 4-H Beef Fitting and Showing Manual has instructions on training and grooming calves. If you do not have a copy, ask your leader or Extension Agent to get it for you.



PROJECT STORY

Write a short story about your project this year.

PROJECT PICTURES

Take a picture of your project animals at the beginning and at the end of your project.

Beginning of Project

Date picture taken _____

End of Project

Dat picture taken _____

INFORMATION ON PROJECT ANIMALS

Breed	Date of Birth	Ear tag number, ear notch, tattoo or other identification	Date Started on feed	Beginning Weight	Cost of Steer	Date Sold	Final Wt.	Selling Price
TOTALS								

Total pounds gain _____ Divided by _____ = _____ Average Daily Gain
 Total cost of feed _____ Divided by _____ = _____ Feed cost per lb. gain
 Total pounds gain _____ Divided by _____ = _____ Pounds feed per pound gain
 Sale weight _____ Divided by _____ = _____ Weight per day age
 Sale weight _____ Divided by _____ = _____ Total cost per pound

SECTION II

RECORD OF FEED USED

Kind of Feed	Total Pounds Fed	Cost
Grain (or grain mixture)		\$.
Protein Supplement		\$.
Mineral Supplement		\$.
Salt		\$.
Hay Silage		\$.
		\$.
		\$.
TOTAL		\$.

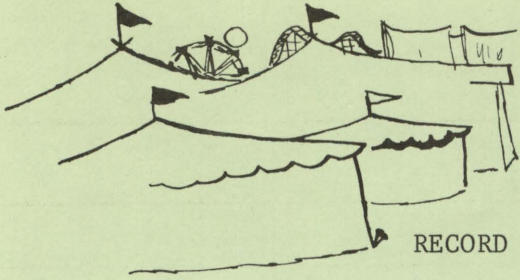
SECTION III

EXPENSES OTHER THAN FEED AND LIVESTOCK

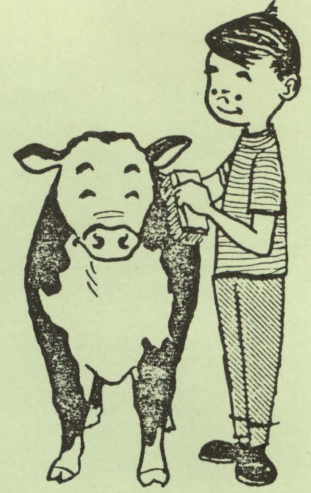
Date	Expense Items	Cost
Example: December 10		\$
TOTAL		\$

NOTE: In this section, include such expense items as drugs, veterinarian fees, fly spray, cost of trucking and selling project animals, etc. Do not include cost of show equipment.

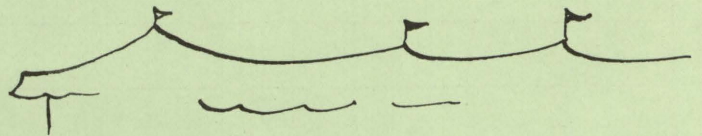
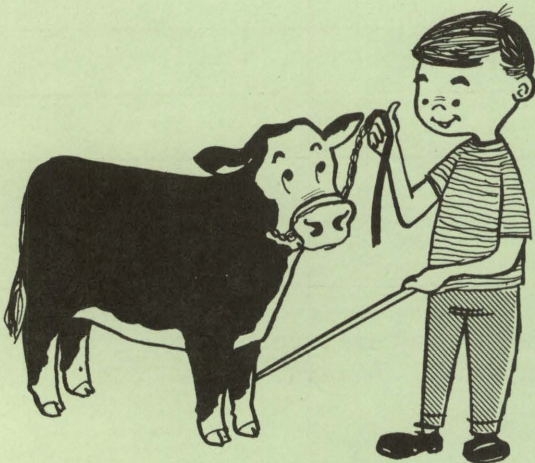
SECTION IV



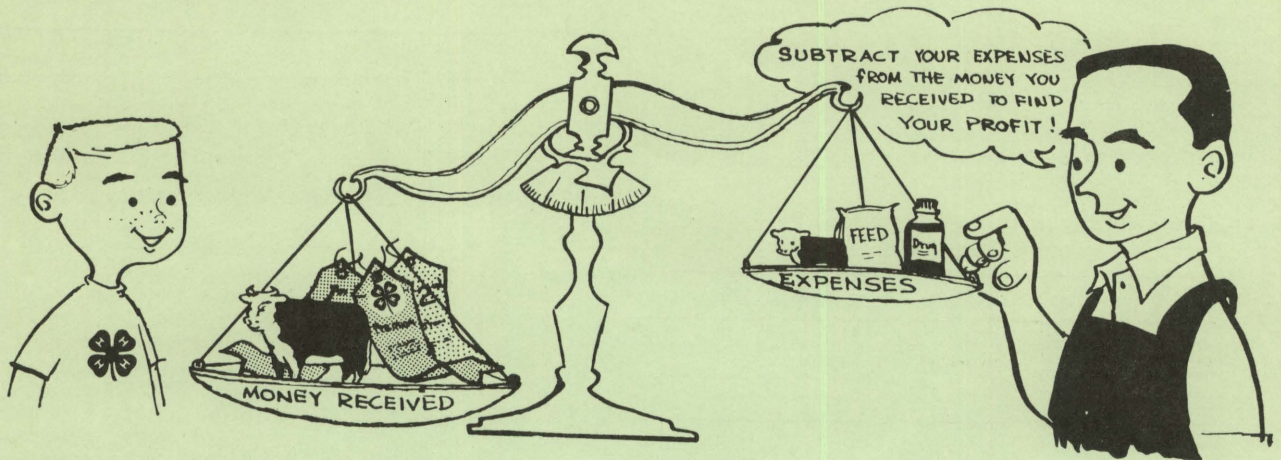
RECORD AT FAIRS AND SHOWS



Kind of Exhibit	Name and Place of Fair or Show	Date	Number Exhibits In Class	Placing or Award	Value of Premiums Won
					\$



SECTION V
FINANCIAL SUMMARY



On this page you will determine how much money you have made or lost on your project animals. You can determine your profit (or loss) by:

A. Receipts

1. Value of animals on hand at the end of the project-----\$ _____
 2. Money received from sale of project animals-----\$ _____
 3. Total value of premiums won at fairs-----\$ _____
- =====
- TOTAL \$ _____

B. Expenses

1. Cost of project animals-----\$ _____
 2. Cost of feed used-----\$ _____
 3. Expenses other than feed-----\$ _____
- =====
- TOTAL \$ _____

PROFIT OR LOSS \$ _____

(Subtract expenses from receipts)

4-H Activities Record

I. Club Responsibilities

Number of meetings your club held this year. _____

Number you attended. _____

Offices held in 4-H club work this year.

Committees you served on. _____

Did you serve as a 4-H member leader?
yes _____ no _____

II. Project Activities

Projects you completed this year.

Give location for each activity below (Local, L; County, C; District, D; State, S; Regional, R; National, N).

Talks. Give title. _____

Demonstrations. Give title. (Include dress revue.) _____

Exhibits. Give name of project.

Judging Contests. Give type.

Showmanship Contests. Give type.

Public Speaking Contests. Give title.

III. Other Activities

Place a check (✓) beside the following activities and events in which you participated.

- () Project tour
- () Project workshop
- () Judging school
- () Fitting and Showing school
- () Officer training
- () Leadership training
- () Community service project
- () 4-H Church Sunday
- () National 4-H Club Week
- () County Camp
- () Conservation Camp
- () TV Camp
- () Electric Congress
- () State 4-H Congress
- () National 4-H Congress
- () 4-H Citizenship Short Course
- () 4-H Citizenship Conference
- () Achievement Day
- () Health Check-up by Doctor
- () Dental Check-up by Dentist
- () News articles written, No. _____
- () Radio programs, No. _____
- () TV programs, No. _____
- () Others _____

IV. 4-H Awards and Honors

List those received this year.

Date project completed. _____

