

White County 4-H Bottle Calf Project

Introduction

The bottle calf project is offered to all 4-H members. The purpose of this project is to teach proper health care and nutritional requirements of young cattle, to teach basic beef management skills without a large investment, to teach basic record keeping skills, and to provide a better understanding of the feeder cattle industry.

Guidelines

1. Bucket Calf - An orphan or newborn calf; male or female; dairy, beef, or cross; fed on bucket or bottle. NO nursing permitted.
2. Calves must be born between January 1 and May 15, of the current project year.
3. Calf sources - Feedlots, dairies, sale barn, neighbor.
4. Calves will be kept in the beef barn and shown with the prospect steer.
5. The bottle calf may be brought back to show for a second year, it will again be kept in the beef barn and be shown as market steer.

Divisions

Fair divisions will be determined by the grade of the exhibitors:

- Beginner Division - grades 3-5
- Intermediate - grades 6-8
- Advanced - grades 9-12

Judging

1. Calves will be shown at halter. Clipping optional.
2. The bucket calf project will be judged according to the following score card:

Evaluation of a completed record	25%
Evaluation of member's knowledge by interview	25%
Quality and condition of animal	25%
Evidence of training and showing	25%

3. Interviews will take place the day of the show. The judge will expect the member to be with their calf, in the barn, for the interview. The interview might include such questions as:

3. Interviews will take place the day of the show. The judge will expect the member to be with their calf, in the barn, for the interview. The interview might include such questions as:

-Where and when did you obtain your calf? Was there cost involved, and how did you finance it?

-How old was the calf when you received it?

-What health problems did your calf have?

-How did you prepare the calf for moving?

-What is colostrum, and did you feed any to your calf?

-What was your milk feeding program? How long did you feed?

-When did you start giving the calf solid feed?

-Did you feed any antibiotics?

-What is milk replacer?

-Did you warm your milk and how warm?

-What kind of housing did you have for your calf?

-When did you start training your calf?

-What are your plans for your calf after the fair?

-What have you enjoyed most in working with your calf?

4-H Bottle Calf Project Story

Calf Ear Tag Number _____

Name of your calf _____

Source of Calf _____

Purchased (when and where)

Born on our farm

Other (describe)

Description of Calf _____

Breed and/or color

Distinguishing marks

Gender, Etc.

Birthdate of Calf (if known) _____

Value of Calf at Start of Project _____

Weight of Calf at Start of Project (if known) _____

Weight of Calf on First Day of Fair (if known) _____

Value of Calf on First Day of Fair _____

Health

Much like people, cattle have normal ways of looking and acting. When they are sick, their looks and behaviors change. To identify changes in behavior, first you need to know how calves act normally. Then you can watch closely and spot sickness. You can possibly avoid a serious illness, a visit by the veterinarian, or even the death of a calf.

A healthy calf eats well, is alert, and stretches his back when he gets up. If he looks well, he is probably healthy.

What is normal?

Respiration: Watch the animal breathe and count the number of breaths per minute. Normal breaths per minute ranges from 20-28.

Pulse: You can check the heartbeat by holding your ear against the lower left side of the calf's chest and listen for the beats. Or you can place your fingers on the artery that crosses the jawbone at the middle of the lower jaw. The normal heartbeat per minute is 60-70 beats.

Temperature: You can purchase an animal rectal thermometer. Tie a string to the end of the thermometer to maintain control. Shake the mercury down below 98 degrees and insert into the rectum. When you have held the thermometer inside the calf for about 2 minutes pull it out, wipe it with a paper towel. Then read the temperature. The normal temperature is 101.5 degrees.

What is not normal?

Signs of a sick calf:

1. Leaves feed or quits eating entirely
2. Dull eyes, droopy ears
3. Diarrhea
4. Runny nose
5. Dry nose
6. Cough
7. Temperature
8. Swollen or puffy left side (bloat)
9. Limping
10. Unusual skin conditions

Basic Health Tools

Match the health tools to the correct definition.

1. Syringe
 2. Ear tag
 3. Bander
 4. Dehorner
 5. Ear tagger
 6. Tattoo set
 7. Vet wrap
 8. Thermometer
 9. Iodine sprayer
 10. Calf feeder bag
- a. Identify calf
 - b. Treat navels on newborn calves
 - c. Nip off horns
 - d. Take temperature
 - e. Castrate calves
 - f. Administer medicine or vaccines
 - g. Put permanent numbers & letters in the ear
 - h. Administer colostrum or fluids to a newborn calf
 - i. Protect injured joints or hooves
 - j. Pierce ears for inserting plastic tags

Draw a line from the health sign to the correct animal condition.

Health Sign

Humped-back
Snotty-nosed
Frisky
Yellow, runny feces
Slow-moving
Doesn't come to feeder
Ears forward, alert
Shiny hair coat
Moist nose

Condition

Healthy

Unhealthy

1. What are signs of a healthy calf?
2. What would you do if you saw signs of illness in a calf?
3. Did your calf have any health problems? Did you need to call a veterinarian or did you treat the calf on your own?
4. What are two main health problems baby calves may have?
5. What is a normal temperature for a calf?
6. What is the normal heart beat for a calf?
7. Did you try to take the calf's temperature? What was the temperature?
8. Did you give your calf any vaccinations?

Feeding

Colostrum

When first born, calves lack antibodies and certain nutrients. Newborn calves acquire both immunity against many diseases plus certain vitamins from cows first milk which is called colostrum.

If the calf is born on your farm, be sure the calf receives colostrum within the first two hours.

Follow these guidelines for consumption:

2 quarts in the first two hours

2 quarts in about 8-12 hours

Calves can only absorb the immunities from colostrum for about 24 hours.

On a dairy farm the calf is usually removed from the cow 18-24 hours after birth and is bottle fed colostrum or cow's milk.

Before purchasing a calf, ask the seller if the calf did receive colostrum in the first 12 hours of life. If they did not receive colostrum, they could develop health problems. Start the calf on milk replacer after colostrum.

1. Did your calf receive colostrum in the first 12 hours of its life?

2. Did your calf receive colostrum from its mother or was it colostrum that you mixed up and fed in a bottle?

Milk Replacer

The objective of feeding your calf is to provide the proper nutrients to grow a healthy calf as fast as possible. Purchase a high quality milk replacer. The milk replacer should contain a milk based protein and not a soybean based protein, because soybean protein is hard to digest. Cheap milk replacers are available but may not provide the nutrients needed for the calf to perform well.

Calves should be fed twice daily. Follow the directions on the milk replacer bag. Feed fresh milk replacer at each feeding. Calves should be on milk for at least 4-6 weeks.

Feed at 100 degrees or about the temperature of hot tap water.

Example--

A calf weighing 80 pounds needs 6.4 pounds or 3.2 quarts of milk per day. (1.6 quarts per feeding).

A calf weighing 100 pounds needs 8 pounds of milk
or 4 quarts per day (2 quarts per feeding).

A calf weighing 120 pounds needs 9.6 pounds of milk or 4.8 quarts per day (2.4 quarts per feeding).

1. What supplies do you need to bottle feed your calf?

2. What time did you feed your calf?

3. What was the hardest thing about feeding your calf the bottle?

Calf Starter

Begin feeding a calf starter at about 7- 10 days of age plus a handful of high quality hay. Remember to change feed and hay every feeding to prevent it from becoming stale.

Try to encourage the calf to eat some calf starter after it has finished with its milk. Calves should have access to a little fresh water during the day when they begin to eat feed. Calves do not like finely ground and dusty feeds. Feed should be coarsely ground, cracked, rolled or flaked.

Calves can be weaned at 4-6 weeks when they are eating 1.5 to 2 pounds of calf starter per day. Keep feeding starter up to 3- 4 months of age plus free choice of hay. The calf can then be put on a grower ration of corn, oats and protein. Keep trace mineral salt before it at all times after weaning.

Calves should be weaned from the bottle or bucket before fair.

1. What date did you start giving calf starter?

2. Did the calf eat it right away?

3. What date did you wean your calf off the bottle?



Nutrients

Nutrients in animal feed help animals stay alive and keep them growing. There are 6 classes of nutrients in feeds: water, carbohydrates, fats, proteins, minerals and vitamins.

Water carries the nutrients to the places in the body where they are needed. Water helps remove waste products and helps keep the body cool. Be sure to provide your animal with plenty of clean fresh water. A calf can drink from 1- 10 gallons of water daily, depending on it's weight and the outside temperature.

Carbohydrates are like sugars and starches. They provide calves with energy to breathe, walk and grow muscles. Energy from feed that is not used is stored as fat. Corn is a good source of carbohydrate. Other grains contain carbohydrates too.

Fats are also energy sources. Some fat is found in grain and hay.

Protein is used to make and repair muscle. Soybean meal, alfalfa and clover hay are good sources of protein. Corn is not a good source of protein.

Vitamins and minerals are added to calf diets. Minerals such as calcium and phosphorous are important for good bone development. Other minerals help the body work properly. Some minerals are found in forages and grains but some need to be added. Salt and mineral blocks are often used.

Most of the feed you will use is a commercial feed and the ingredients are already mixed for you.

1. What did you feed your calf? (if you purchased feed – include the ingredients)



Housing

Keep your calf in a pen (4' x 6') until weaned. Calves do best in their own hutch or pen. Calves should not be housed near or with other livestock. Two or more calves housed in the same pen is not a good idea because of sucking problems. Calves can pick up disease organisms from each other or other livestock.

Thoroughly clean and bed pens often with fresh straw or bedding.

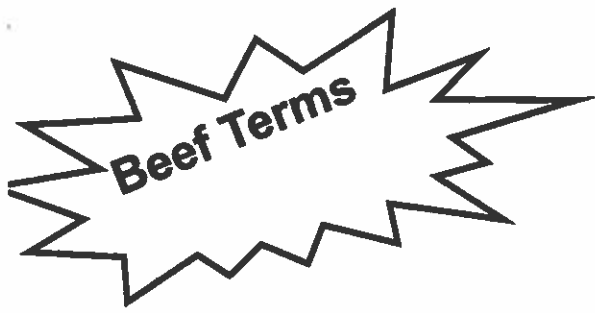
Clean fresh air is important in preventing health problems, but try to prevent drafts on the calf.

Place feed boxes and water buckets so that the top is about 20 inches from the floor. Water should be placed at the front of the pen near the feed.

1. How did you create the house for your calf? What resources did you use?

Include a picture here of your calf's house (draw or take a picture)

2. What would you change about your calf's home, if you could, to make it better?



Unscramble these common beef terms.

ULBL _____

VSCAEL _____

NVCLAIG _____

WOC _____

RCDRSEBOS _____

MDA _____

HFREIE _____

RRSGTEDEIE _____

ESRI _____

ESTSER _____

1. Uncastrated male cattle of any age.
2. Young cattle of either sex less than one year of age.
3. The act of giving birth
4. Female that has one or more calves.
5. An animal with purebred parents of different breeds or grade parents.
6. The mother of a calf.
7. A female that has not had a calf.
8. An animal whose name, along with the name and number of its sire (father) and dam (mother) has been recorded in the records of its breed association. The association gives the animal a registration number and a registration certificate showing the animal has been registered.
9. The bull that fathers a calf.
10. Male cattle that were castrated at an early age before sex characteristics developed.

WORD BANK

Steers

Calving

Sire

Crossbred

Calves

Dam

Bull

Registered

Heifer

Cow

Practical Farm Knots

The ability to tie a variety of knots is a useful skill to have when working with livestock, especially beef animals. A good tie is one that is easy to tie, stays tied when you want it to, but is also easy for you to untie after the knot has done its work.

1. Why do you want a knot that is easy to tie, stays tied when you want it to, but will be easy to untie?

Here are examples of practice farm knots. Try them. If you need more directions, contact the Extension Office.

Circle the one that you use the most.

Knot Patterns
Quick Release Knots



Bowline Knot



Double Half Hitch



Honda Knot



Bottle Calf Project Record Summary

Member's name _____

Date you received your calf _____ Beginning Weight _____

Beginning cost of calf	\$ _____	(line 1)
------------------------	----------	----------

Other costs

Medications & Vet Fees \$ _____

Equipment and Housing \$ _____

Trucking Fees \$ _____

Bedding \$ _____

Miscellaneous \$ _____

Total of Other Costs \$ _____
(line 2)

Feed:

Financial Summary

Beginning cost of calf (line 1)	\$
Other Expenses (line 2)	\$
Total Feed Cost (line 3)	\$
Total Expenses	\$ (line 4)

Date at the end of the project

Ending weight

Selling price of the calf

\$ _____

Subtract total expenses (from line 4)

\$ _____

Profit (or loss) on the project

\$ _____

Project Evaluation

Days on Feed _____ **Total Gain** _____

_____ Total Gain = **Average Daily Gain** _____
Days on Feed

(divide total gain by days on feed)