

## Should I take a FEEDER CALF as a 4-H project? - Dairy Beef

Choosing to take a livestock project in 4-H should involve sound decision making. This fact sheet provides basic information to help you make a good decision.

### SPACE NEEDED

- 30 - 40 square feet per animal in confinement
- 400 – 600 square feet exercise area

### COMFORT ZONE

- 40-65° F for optimal performance

### WATER REQUIREMENTS

- Access to clean, fresh, cool water is critical
- 6 - 10 gallons per day

### FEED CONSIDERATIONS

- Will eat 9 - 15 pounds of feed per day (3% of body weight per day)
- Will gain from 3 – 2.8 pounds per day (Average Daily Gain or ADG)
- Needs approximately 5 pounds of feed per pound of gain (Feed Efficiency)

### MARKET CONSIDERATIONS

- Approximate purchase cost for a 100 lb. calf is \$ 400-500/calf for a dairy feeder
- Should weigh 400 - 600 pounds when project is completed
- Should reach this weight at approximately 5-6 months of age

### BUDGETING

- Projected market price is \$ 2.00 per pound
  - Projected feed cost is around \$ 320 and includes:
    - Hay
    - Corn
    - Soybean Meal
    - Salt & Mineral

Prepared by Bonnie Malone, Extension Educator 4-H Huron County, Ohio and Vicki Schwartz, Associate State Leader, Ohio 4-H.

Revised 12/14



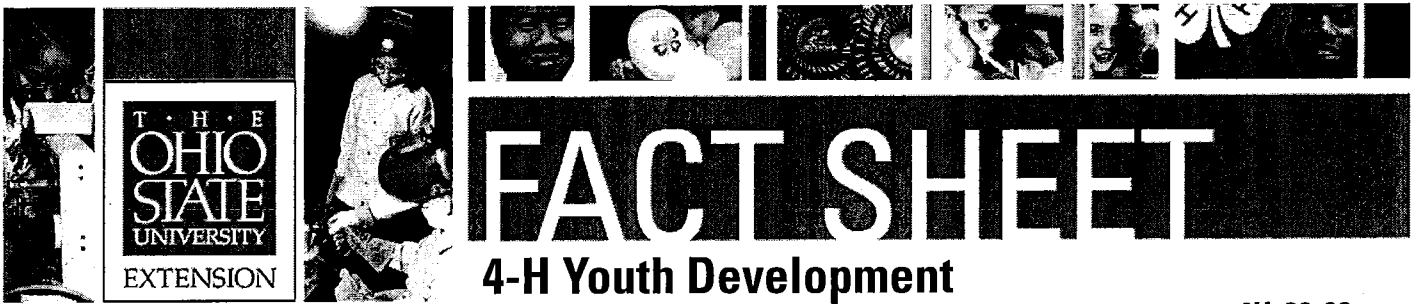
**THE OHIO STATE UNIVERSITY**

COLLEGE OF FOOD, AGRICULTURAL,  
AND ENVIRONMENTAL SCIENCES



**crawford.osu.edu**

CFAES provides research and related educational programs to clientele on a nondiscriminatory basis. For more information: [go.osu.edu/cfaesdiversity](http://go.osu.edu/cfaesdiversity).



4H-28-08

# Guidelines for the Purchase and Care of Dairy Beef Feeders

**Bonnie Ayars**

Ohio State University Extension  
Dairy Program Specialist

**Don Sanders**

Associate Professor  
OSU LA Field Services

## Introduction

You are now in charge of an important responsibility. You will learn how to assume leadership, make choices, and problem solve as you accept the challenge of this project. Ask questions of your advisor, parents, veterinarian, and other mentors. They can each provide you with advice and information. You *need* to be prepared to care for the project prior to your purchase. After you do this, you will be responsible for the daily care of your dairy feeder and you will learn more about proper health procedures as the project continues. Remember that the more you plan and stay informed, the more successful this experience will become.

## Guidelines Prior to Purchase

1. Establish a VCPR (veterinarian, client, patient relationship). This means to contact your local veterinarian to discuss the health care of the animals you are about to purchase. You are probably going to have many questions and this will be a step in the right direction.
2. Obtain a list of local dairy farmers who sell bull (male) calves. Call ahead and ask to be added to their list of customers. You can also inquire about price, age to pick up calves, and the care and health procedures they follow for newborns.
3. Avoid purchasing from multiple sources (such as sale barns or calf brokers). These calves are exposed to many types of possible health-related issues.
4. Plan ahead for where you will house and care for your animal. Consider how you will transport the animal

- you purchase to your location. Will you have to pay someone to haul the animal for you?
5. Develop a list of questions to ask of the farmer selling the calves. Make sure you understand why you are asking the questions. Sources of printed information that you may find useful include your *Dairy Beef Feeder Project and Record Book* and the *Dairy Resource Handbook* (Chapters 5, 6, and 8). Your advisor and/or 4-H Extension educator can provide these resources if you do not already have them.
  6. Questions should provide you with useful information and could include: calf's birth date, when and how much colostrum was fed, was the navel dipped after birth, any vaccines that have been administered, general behavior and appearance of calf, and whether cash or check payment is required.
  7. Usually calves of the Holstein or Brown Swiss breeds are preferred for dairy beef feeders. Crossbred dairy breeds can be used for dairy beef feeders as long as the sire and dam are dairy breeds. Calves from crossing a dairy breed with a beef breed are typically unacceptable for showing as a dairy beef feeder. Therefore, proof of parentage of the calf is important in selecting your project animal.
  8. Using the list of supplies and equipment on the next page, develop a budget of how you will purchase these items and where you will be able to purchase them. Many of the supplies will be necessary to have prior to the purchase of your animal. You could even work with another 4-H member who is taking a similar type of project to share some of these expenses.

## Supplies and Equipment

1. Enough space for a pen must be provided to allow 25 to 30 square feet per animal.
2. Rectal thermometer — Best source of information about your animal's health.
3. Weight tape — Needed to record your animal's growth and weight gain. It is needed to fill in your project book.
4. Resource books mentioned on the previous page and/or web sites with information to assist you.
5. Calf milk replacer — Read the tag and purchase one that contains 20% or better for fat, 20% or better for protein, and less than 0.5% fiber. A whole milk diet is also acceptable.
6. Bottle and nipple that is sized for adequate flow. You may need to adjust the opening.
7. Clean buckets — one for grain and another one for milk — that can also be filled with water after the calf has been weaned from milk. Cleanliness is essential.
8. Use diluted bleach to sanitize bottle, nipple, and buckets.
9. Bedding material for your calf's pen; it should be absorbent to always provide a dry environment.
10. Grain that is formulated as a calf starter.
11. Medications according to your veterinarian's recommendations that cover a variety of health issues, preventative vaccines, and electrolytes in case of scours (diarrhea).
12. Be sure to **read** labels and **follow** all directions to meet quality assurance standards.

## Purchasing Your Dairy Beef Feeder

1. Arrange a time that is convenient for both you and the farmer to go to the farm. Arrive on time and be prepared to transport your calf.
2. As you ask questions, be polite and demonstrate your genuine interest.
3. Do not pick up a calf until it has received all of its needed colostrums, and preferably pick it up when it is at least 2 to 3 days of age.
4. Look for a calf that has a thick brisket, broad at the shoulders, and has a wide loin (see figures 1, 2, and 3).
5. Do your own visual inspection of the calf and check the following:
  - \_\_\_ Calf appears alert and active.
  - \_\_\_ Ears are not droopy.
  - \_\_\_ Nose is clear and free of mucus.
  - \_\_\_ Breathing appears to be normal.
  - \_\_\_ Tail is dry with no signs of diarrhea.
  - \_\_\_ Feces in pen appear light brown in color, pasty, and void of blood.

\_\_\_ Environment appears clean, dry, and ventilated.

\_\_\_ Navel area is dry and free of swelling.

6. Assist in loading the calf and provide transportation that is safe and warm.

### Muscle Thickness Scores

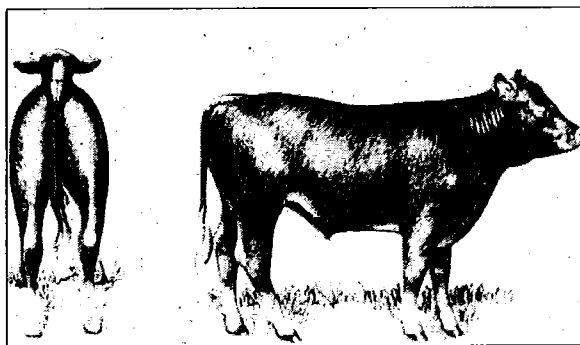


Figure 1. No. 1—Minimum qualifications: slightly thick muscled throughout; thrifty; moderate width between rear and front legs. Slight covering of fat.



Figure 2. No. 2—Minimum qualifications: narrow through forequarter and stifle area; thrifty; front and rear leg set close together.

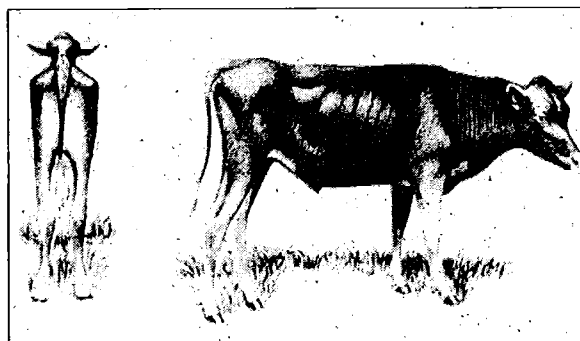


Figure 3. No. 3—Minimum qualifications: thrifty; less thickness than No. 2 grade.

Source: *Dairy Market Feeder*, 4-H 121. (1996). Columbus, OH: Ohio State University Extension.

## Routine Care of Your Project

1. You now have the daily commitment to your animal's needs.
2. Select a name that fits the calf's personality and provide identification in the form of a tag or tattoo.
3. For the next two weeks, inspect the navel for infection and take your animal's rectal temperature twice daily and keep a chart of the results. The temperature will probably be slightly higher in the afternoon/evening. The average temperature should be 100 to 101.5 degrees Fahrenheit. It may not be the most pleasant chore, but it will provide you with facts that can help you evaluate the general health of your project.
4. Carefully mix your calf replacer according to label directions and feed approximately two quarts, two times a day, at the proper temperature. Being consistent with the amount and blend of the milk replacer is essential. If the weather changes so that the average temperature drops to less than 32 degrees Fahrenheit, you may need to feed three times a day as your calf will need the additional energy to stay warm.
5. Provide clean water daily. You can do this prior to the calf drinking milk from a bucket. Sometimes, curiosity leads the calf to the bucket, so the next step of the calf drinking milk from a bucket comes more naturally.
6. Provide all the calf starter that your animal will eat in one day because fresh feed should be provided daily.
7. When your calf is 7 to 10 days old, you may attempt to train it to drink from a bucket. Lead its head into the bucket as it sucks on your fingers, and even put the nipple into the bucket to "bait" it into the milk. After all, the calf has been sucking and angling its neck upwards and now it must learn to look down and drink. Some do it easily and others can challenge your patience. If you are having difficulty, just try again in a few days. Do not attempt this process when the weather is cold or when your animal is under stress! Pages 42 and 43 of your *Dairy Beef Feeder Project Book* provide helpful information.

## Health and Veterinarian Care Guidelines

These are *only* general guidelines. Your veterinarian's plan is the one you should follow. These guidelines demonstrate the importance of establishing a VCPR.

1. Administer a modified live, 4-way vaccine, five days after purchase and a booster at the end of a month. At the end of two weeks, vaccinate with a 7-way clostridium product. Follow all label directions and

record all health information in your project book. Have your veterinarian or 4-H educator assist you with vaccination procedures.

2. At four to six weeks of age, a tetanus shot is very important if a band is used to castrate your calf. Discuss this with your veterinarian.
3. Decide on the method of dehorning your calf. An electric dehorner can provide better results and less stress than other methods. At one month of age, or just as soon as the horn buttons can readily be felt, would be a good time to dehorn, but avoid doing this when you are giving vaccines.
4. Castration should be done by your veterinarian. Discuss the methods and select one that you prefer. This should be done when the calf is less than 10 weeks old.
5. The first two weeks are very important for you and the calf. It is important that you carefully observe your calf to sharpen your sense of its visual appearance and smell for any of the routine health issues that might happen. You will be glad that you learned how to take your animal's temperature. It can provide information that the calf cannot!

*Here are some of the common health-related illnesses:*

### **Scours (Diarrhea)**

**Symptoms:** Looseness of bowels and thin feces that are foul-smelling. You may not see it but look for a wet tail and tail head.

**Treatment:** Can include electrolytes as the animal can quickly dehydrate. Some good methods for determining dehydration are to stand in front of the calf and evaluate its eyes to see if they appear sunken. Another technique is to pinch the skin on the side of the neck and "tent" it. This means to raise it from the body and watch for how long it takes to return to normal. Skin of healthy calves will return to normal within three seconds. A dehydrated calf's skin will stay "tented" for up to 10 seconds. The longer it takes to eliminate the wrinkle, the more severe the dehydration. Again, consult your veterinarian for treatment, but have all temperature readings and symptoms recorded beforehand. Feed smaller amounts at each feeding and more times daily. Do not remove milk from the calf's diet. Feed electrolytes at least 15 to 30 minutes prior to feeding milk. If the calf will not drink from a bucket, try the bottle.

### **Pneumonia**

**Symptoms:** High temperature, coughing, rapid breathing, and generally slow actions of animal; this can even result after scours.

**Treatment:** Be proactive! Consult your veterinarian to decide upon a treatment that will bring about quick results. Double-check the ventilation in your housing and make sure there are no drafts. Bedding should be dry.

*Remember to keep all feeding equipment separate from each animal and sanitize between feedings. You can spread the infection to other animals.*

### **Parasites**

Generally you shouldn't worry about internal parasites (worms) in newborn calves. However, external parasites, such as lice, can be a problem. Lice can be detected by

placing the calf in bright sunlight or by using a bright flashlight to shine on the skin of the neck, behind the ears, or near the tail head. Often, the lice can be observed crawling away from the bright area.

### **Conclusion**

Your goal is to have your animal reach 500 pounds by seven months of age. In those beginning two months of growth and development, health and feeding will greatly influence your ability to be successful. After weaning, ask your project helper to share some advice on feeding suggestions and how to reach that optimum weight. Together, you can review some guidelines in the *4-H Beef Resource Handbook, 117R*.

## **For Increased Growth and Health:**

Provide housing for your calf that is free of drafts. Also provide deep bedded straw (when the calf lays down its legs should be covered in straw) to help keep calves warm. As temperatures change open buildings to allow air movement at no time should the scent of ammonia greet you in the barn.

Feed calves 3 quart of 100 degree water with 15 ounces of milk replacer (normally 1.5 cups) twice daily till 6-7 weeks of age or longer to increase calf growth on last week of milk feed 3 quart of milk once per day. During this time provide free choice water and grain.

To ensure calf health take the calf's rectal temperature daily for the first week normal calf temperature is 101.3 °F. if temperature increases by .5°F consult your veterinarian.

If a calf is scouring feed the normal amount of milk but also feed 2 quart of electrolytes between each feeding until calf is over scours (Diarrhea).

Once calves are off milk (weaned) feed them free choice grain, small amount of hay may be provided or if calves are bedded with straw they will eat it for roughage.

## **EMPOWERMENT THROUGH EDUCATION**

Visit Ohio State University Extension's web site "Ohioline" at: <http://ohioline.osu.edu>

Ohio State University Extension embraces human diversity and is committed to ensuring that all research and related educational programs are available to clientele on a nondiscriminatory basis without regard to race, color, religion, sex, age, national origin, sexual orientation, gender identity or expression, disability, or veteran status. This statement is in accordance with United States Civil Rights Laws and the USDA.

Keith L. Smith, Ph.D., Associate Vice President for Agricultural Administration and Director, Ohio State University Extension  
TDD No. 800-589-8292 (Ohio only) or 614-292-1868