Your project steer needs many things in order to live comfortably. To grow and produce efficiently, steers need clean, comfortable housing, fresh air, clean water, and a good supply of feed. Taking proper care of your steer will be a great learning experience for you.

Objectives
After studying the materials and completing the suggested activities for this section, you should be able to:

1. Outline the basics of steer care, including proper bedding and living conditions.
2. Give a parent or project leader a tour of the place where you keep your calves and point out what you are doing to take care of them.
3. Calculate the amount of feed required to finish a market steer.

Housing Needs
Don’t buy feeder steers until you have a good place to keep them. People are not allowed to keep farm animals in some areas, so find out the local regulations for the area where you want to keep your steer. Also find out any special laws or rules you must follow to care for your calf.

Make sure you have the right kinds of facilities and equipment to house and care for your steer. Cattle don’t need fancy or expensive facilities to do well. Most 4-H’ers raise their calves in a pen or dry lot. For steers kept outside, a small shed or building with a sloping roof makes a good shelter. The building may have an open front, but it should have enclosed sides during fall, winter, and spring.

Steers need space to lie down, move around, and eat. Provide at least 100 square feet of barn or pen space for each steer to be housed in a shelter or pen. Exercise lots or dry lots should contain at least 200 square feet for each steer.

When steers breathe smelly, stale air, they may get sick or grow more slowly than normal. Provide a good source of fresh air (ventilation), but have a place for your calf to get out of the wind and drafts.

Steers don’t grow well when they are too hot or too cold. Market steers are most comfortable and grow best when the temperature is between 45° and 60°F. Cattle have very thick hides and are designed to tolerate cold weather better than pigs, for instance. In extremely cold weather, steers will use a greater percentage of their feed to keep warm instead of growing. Provide straw or other bedding so your steer can lie in it and keep warm. Many 4-H beef club members tend to overconfine their market steers. Cattle can tolerate very cold conditions as long as they have a dry place to lie down and can get out of the wind.

During hot weather, steers breathe rapidly if they are too hot and grow more slowly because they don’t eat enough feed. Provide shade to
keep your steer comfortable in summer. Exposing your steer to long periods of summer sun could cause sunstroke. A good, cheap source of shade for steers kept outdoors is a frame of poles covered with straw, cornstalks, or plastic feed bags. Trees give shade, too. During hot summer months, keep your calf in a well-ventilated shed during the day (use a fan if necessary), and turn it loose in a dry lot (with little or no grass) at night.

**Keeping Your Steer Clean**

Keep your steer’s pen clean to reduce the chance of disease caused by filthy conditions and contaminated feed and water. A few beef barns are built in ways that keep manure from piling up in them. If yours is not, you will need to remove the manure from your pen daily to keep it clean.

If confined to a small pen that is not cleaned regularly, cattle accumulate manure in their hair coat—particularly on their rear legs. Bedding like straw helps to keep manure from accumulating. If your calf has manure attached to its hair, your pen isn’t being cleaned often enough or you aren’t using enough bedding.

Cattle manure contains nitrogen, phosphorus, and potassium. All three nutrients are necessary for making plants grow. If you have a garden, you can use the manure your steer produces instead of buying commercial fertilizer. Large-scale cattle feeders are required to have a certified plan indicating where their manure will be spread so that the nutrients in the manure match the nutrient needs of plants.

Some places have laws controlling what to do with manure, so find out if there are special rules you must follow where you keep your steer.

**Handling Equipment**

In addition to finding a place to keep your steer, you will also need equipment to move, transport, feed, and water it. If your feeder calf is not halter broken when you buy it, you’ll need a good unloading area to move your calf into its pen or lot. You can get loading chute designs from your extension agent. If you feel a loading chute is too expensive, have an area of the pen, barn, or lot where the steers can be cornered for easier loading and unloading. Moving steers on a stock...
trailer generally makes loading and unloading easier because a ramp is not necessary.

**Feeding Your Steer**

Feed, hay, and water can be provided by self-feeders and automatic waterers, or you can use feed pans or tubs to feed grain and a deep tub or bucket in the corner of the pen for water. You can also feed grain from a tray mounted on the side of the pen. Provide 20 to 24 inches of feeder space per calf. Keeping feed and water above floor level helps prevent steers from soiling their eating and drinking space. Left-over, stale, or soiled feed should be removed before each feeding.

Nutrients found in feed help animals to stay alive and grow. The six classes of nutrients in feeds include water, carbohydrates, fats, proteins, minerals, and vitamins.

Water is used by cattle to carry nutrients to places in the body where they are needed, remove waste products, and help keep the body cool. Be sure to provide your steer with plenty of clean, fresh water. Each calf may drink 5 to 20 gallons daily depending on its weight, the outside temperature, and the type of feed you’re giving. Change the water in watering pans or buckets at least twice each day.

The rest of the nutrients needed by growing cattle are found in solid feeds. Cattle have a four-part stomach that allows them to digest forages such as grass or hay along with grains. Some forage or hay must be included in the diet for a steer’s digestive system to work correctly.

Nutrients in forages or grain include the following:

- **Carbohydrates** like sugars, starches, and cellulose provide the largest amount of energy in cattle feeds. Energy is used for body functions such as breathing, walking, or growing frame and muscle. Extra energy consumed from feed is deposited as fat. Grains like corn are the best sources of carbohydrates and provide the largest amounts of energy. Forages contain different kinds of carbohydrates that contain less energy than grains.

- **Fats** are concentrated energy sources. Some fat usually is present in hay and grain. Fat is sometimes added to commercial feedlot rations to increase the amount of energy the feed provides and thus to increase the steer’s growth rate.

- **Protein** is used for making and repairing muscle. Soybean meal, linseed meal, and legume forages (such as alfalfa and clover) are good sources of protein. Corn is a relatively poor source of protein.

- **Vitamins and minerals** are two other categories of nutrients commonly added to steer diets or fed free choice.

Minerals such as calcium and phosphorus are important for bone development. Other minerals help many of the body processes work correctly. Some of the minerals a calf needs are found in the forages and grains they eat, but others must be added to the diet in a mineral mix or fed free choice.

Vitamins are needed in very small amounts to assist in many body functions. Some vitamins are found in feed—often in forages—but additional vitamins are usually added to the feed or supplied in a free-choice vitamin and mineral mix.

Some ingredients commonly used in steer feeds are high-quality grass hay, lower-quality legume (alfalfa or clover) hay, oats, shelled corn, soybean meal, minerals, and vitamins. The grain, vitamins, and minerals usually are ground and mixed together so that the nutrients needed by the cattle are eaten in the right amounts. Hay can
be ground and mixed with the grain, but it’s usually best to give your steer baled hay to keep its digestive system functioning properly. Grain mixes should be coarsely ground.

If you follow directions carefully, the feed can be medicated. Lasalocid (Bovatec) or Monensin (Rumensin) are feed additives that help steers grow faster and more efficiently. They also prevent bloat and control coccidiosis caused by coccidia (see Section 8).

You may purchase commercial feed or make your own. The specific feedstuffs you choose for your steer depend on how fast you want your steer to grow and how quickly you want it to finish. The more energy you feed your calf, the faster it will grow and the quicker it will finish or deposit fat. Generally, diets that are extremely high in energy (mostly corn, with very little forage) are reserved for the last 60 to 90 days of the feeding period. Large-framed calves should be fed a high-energy (85 percent grain) diet for the entire finishing period, while calves with smaller frames can be fed a diet of 40 to 60 percent forage up until the last 60 to 90 days, when the energy content of the diet should increase. Alternately, smaller-framed steers can be fed a higher-grain diet, but the grain should have a lower energy content. Grains like oats are lower in energy compared to corn.

Below are some general guidelines to help you decide how much energy to feed your steer.

On the next page are some very simple diets with high, medium, and low energy levels. All diets are approximately 13 percent crude protein, and should be accompanied by good-quality grass hay fed free choice. Corn may be rolled or coarsely ground. The 34 percent protein supplement should be pelleted and should contain protein, vitamins, minerals, and Bovatec or Rumensin. Molasses (5 percent) can be included in each ration to help control dust and make the feed taste better.

<table>
<thead>
<tr>
<th>Feeding period</th>
<th>Over 1250 lbs finished wt.</th>
<th>1100–1250 lbs finished wt.</th>
<th>Less than 1100 lbs finished wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early (100 days)</td>
<td>High (13% protein)</td>
<td>Medium (13% protein)</td>
<td>Low (13% protein)</td>
</tr>
<tr>
<td>Mid (100 days)</td>
<td>High (12% protein)</td>
<td>High (12% protein)</td>
<td>Medium (12% protein)</td>
</tr>
<tr>
<td>Late (60–90 days)</td>
<td>High (11% protein)</td>
<td>High (11% protein)</td>
<td>High (11% protein)</td>
</tr>
</tbody>
</table>
High energy diet (13% crude protein)
Rolled shelled corn ..................................................... 80%
Oats ............................................................................ 10%
34% supplement ........................................................ 10%
Total.......................................................................... 100%

Medium energy diet (13% crude protein)
Rolled shelled corn ..................................................... 47%
Oats ............................................................................ 47%
34% supplement .......................................................... 6%
Total.......................................................................... 100%

Low energy diet (13% crude protein)
Oats ............................................................................ 65%
Rolled shelled corn ..................................................... 30%
34% supplement .......................................................... 5%
Total.......................................................................... 100%

Ask your leader for help if you’re not sure what to feed.

Be careful that your calves do not have access to poisonous plants or shrubs. Some plants, such as nightshade and yew, are toxic to cattle. Dead wild cherry leaves are also toxic to cattle. If there are wild cherry trees in or near your steer’s lot, be sure to remove fallen branches promptly. Make sure your steer is kept away from any potentially dangerous plants. Ask your extension agent for more information on poisonous plants.

Starting Your Steer On Feed
Calves that have not been fed grain previously should be started slowly. At first offer calves three pounds of grain per day. Increase the amount offered by three pounds each week until you reach the desired feeding level. Increasing the amount of grain too quickly could cause your calf to go off its feed. If your calf suddenly stops eating its grain but appears otherwise healthy, reduce the grain by half and offer good-quality grass hay free choice for three or four days. Gradually raise the amount of grain again, but by no more than three pounds per week.

How Much Feed Will My Steer Eat?
Steers’ eating habits are like those of people. Some eat a lot, and some not so much. Also, the bigger they are, the more they eat. A 500-pound steer may be able to eat only 12 pounds of feed (hay and grain combined) per day. A market-weight steer may gobble 25 to 30 pounds a day. Most steers average around 18 to 20 pounds a day over the entire feeding period.

One way to figure out how much your steer should eat each day is to multiply its weight by 2.2 percent (.022). This tells you the pounds of dry matter (not including moisture in the feed) that your steer can be expected to consume each day. Hay and grain mixes are usually about 90 percent dry matter, so to figure out how much feed your steer will eat as-fed, divide this amount by .90.

For example, an 800-pound steer is expected to eat 17.6 pounds of dry matter (800 x .022). Converted to an as-fed basis, this means your steer will eat about 19.5 pounds of feed (17.6 pounds divided by .90). Generally, steers should be fed no more than 85 percent grain in the diet, so our 800-pound steer should eat no more than 16.5 pounds of grain per day (19.5 x .85).

You should be able to calculate the total amount of feed each steer will eat between the time you buy it until the time you sell it. This calculation is simple. First, you need to know the amount of weight you expect your steer to gain. This will depend on your steer’s starting weight and how many days there are from purchase to show day. (See “How big should my feeder steer be?” in Section 5.)

Let’s say for this example your steer needs to gain 600 pounds. A steer eats about 7 pounds of feed for every pound of weight it gains. So, if your steer needs to gain 600 pounds, multiply 600 times 7 to arrive at the total amount of feed your steer will eat while you own it. In this instance, the total is 4200 pounds of feed. If your steer is on a high energy diet for the entire feeding period (85 percent grain), then 85 percent, or 3570 pounds, of the feed it eats will be grain. The remaining 630 pounds will be hay.

You can also use feed intake to control your steer’s weight gain. For instance, if you buy a small-framed steer that is heavier than it should
be, you can reduce the amount of grain so that your steer will gain less weight per day. When your steer gets back on track, you can resume normal feeding.

**Monitoring Your Steer’s Progress**
You should also monitor your steer’s rate of gain with a weight tape or scales at one- to two-month intervals during the entire feeding period to make sure the steer is growing at the correct rate. Increase the amount of grain fed and/or the energy level of the ration if your steer is growing too slowly. Decrease the amount of grain fed or the energy level if your steer is growing too fast.

To make sure you arrive at the show with a properly finished steer, have your leader or other qualified adult check your calf about 90 days before the show. That person can help you alter the ration or amount of grain fed to make sure your steer is finished correctly.

**Exercise**
Daily exercise builds muscle and helps keep people healthy. You should exercise your steer frequently to help it develop muscle volume and tone. Some 4-H’ers walk their steers a mile or two each day beginning in the springtime when the weather breaks. Walking should be done in the morning or evening during hot summer days to prevent steers from overheating.

**Suggested Activities**
- Visit a beef feedlot and learn about the feeding and watering system. Also observe how the owner keeps the steers comfortable.
- Plot on a graph how much feed your steer is eating each day.
- Lead your parent or project leader on a tour of the place where you keep your steer. Point out the things you are doing to make your calf comfortable. Show that each of the following are taken care of:
  - Is there plenty of feed?
  - Is the steer being fed properly?
  - Is the water plentiful and clean?

**Extra Activities to Try**
- Collect samples of ingredients typically used in beef cattle rations so you can learn to identify them. Discuss with your leader or parent what each ingredient contributes to the ration.
- Look at a tag from a commercial steer feed. Name the main ingredients and tell how much protein is in the feed.

**Ideas for Presentations and Speeches**
- How I take care of my steer.
- My steer’s basic needs.
- Beef facilities and equipment.
- Beef identification systems.

**Things to Talk About**
- What do you need to do to take care of your steer?
- How do you know if your steer is too cold or too warm?
- Why should you keep records of the feed your steer eats?