

Raising Livestock

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Raising Cattle¹

Beef has long been a popular food in the United States. Keys for a successful farm beef herd operation usually have the following characteristics:

- Relatively low investment in land required per cow.
- Maximum utilization of pasture and roughages.
- Minimum outlay for supplemental feed.
- · Low labor costs.
- Large calf crop.
- Low incidence of disease and parasites.



Housing and Equipment

Beef cattle do not need much shelter. However, during the winter months, weaned calves and cows calving need at least an open shed. Depending on how large or small your operation is, you may need chutes in order to efficiently maintain and care for your cattle. Chutes can be used when worming, dehorning, palpitating or vaccinating. The size and style depends on how much you are willing to spend, size of operation, and how often you will utilize them.

Proper feeding and watering facilities are important. Feed troughs may be used when supplementing the animal's feed through concentrates. There are many different styles, research these and choose the one that best fits your needs. Be sure that your cattle have access to water at all times.

Selection

Any leading beef breed is satisfactory for farm beef production in areas where adapted. If you are not sure about raising purebreds, crossbred calves is an option to look into. Crossbred calves combine traits in breeds to produce a more desirable animal overall (called hybrid vigor).

When selecting cattle, choose the healthiest. Choices should be made based on an excellent combination of muscle, style, balance, alertness, and desirable breed characteristics. Along with deciding upon a breed, you must also decide on what type of beef production to become involved in. Different types of beef production include raising replacement heifers, feeder cattle, small cow herds and feedlot production.

When raising a limited number of cattle on a small plot of land, it may be more economically feasible to consider artificial insemination as a means to breed your cows instead of housing a bull on your land. By taking advantage of this, it is possible to use a high quality bull without having to maintain a bull.

Feeding

Cattle need an adequate supply of protein, energy, water, minerals, and vitamins to obtain optimal levels of production. Cattle utilize these nutrients through a balanced diet (ration). The feed used can be separated into two classes, roughages and concentrates. Roughages are feeds high in fiber and low in total digestible nutrients. This includes grazable pasture, alfalfa, grass hay, and straws. Roughages are the cheapest part of the ration and necessary for the bulk, vitamins and minerals it contains. Concentrates are feeds low in fiber and high in digestible nutrients, which provides more net energy than roughages. This includes grains, cottonseed meal, wheat bran, and soybean meal to name a few. Some tips when feeding cattle at pasture include:

- Manage pastures as described in the *Grazing Management* section.
- Locate feeders near water and next to shade.
- Supplement pastures as needed with hay and concentrates.

Helpful hints include:

- Begin feeding cows before they lose weight.
- Feed herds in groups according to nutritional needs.
- Feed the best roughages to calves, first calf heifers and lactating cows.
- When roughages are scarce, concentrates (grain) may be a cheaper energy source than hay.
- Provide plenty of clean water at all times.

Remember that a good ration should supply protein, energy, water, minerals, and vitamins. Contact your local Extension Office if you need further assistance.

Care and Management

Good maintenance and prevention of disease is the easiest and cheapest method of disease and parasite control. Tips to consider:

- Dehorn calves of horned breeds. This will be safer for you and the animal.
- Castrate male calves. This is necessary to produce beef that meets the American market requirements.
- Wean calves by separating them from their mothers into another pen.
- Once the calf is weaned from its mother the cow will stop producing milk eventually. This is accomplished once pressure is built in the udder. Future secretions will then cease.
- Vaccinations should be considered for the prevention of IBR, Black Leg and Brucellosis. Check with your veterinarian for these and other vaccinations that your cattle need in order to maintain good health.
- Always remember that nature's tonics such as exercise, sunshine, fresh air, an abundance of fresh water and a variety of feeds will provide little need for medical attention.

Cattle Terms

Bovine: Of or pertaining to the Subfamily including cattle

Bull: Male bovine

Calf: The young of the domestic cow

Steer: A male bovine that is castrated before sexual maturity

Heat: Sexual receptiveness in animals

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Raising Sheep²

Sheep are one of the oldest domesticated farm animals. Wool has been used for clothing since the days of the earlier settlers, and flocks of sheep have supplied both food and fiber throughout the development of our country. Colorado ranks as one of the major sheep and wool producing states. Small flocks are found in irrigated areas of Colorado, while large range bands are grazed on the high mountain ranges in the summer and on the desert type lands in the winter. Lambs are fattened on the lush mountain pastures, on green alfalfa fields, on winter wheat fields, and in the feedlots of our irrigated valleys. Lambing operations extend from November to June, depending on feed and weather conditions.

A sheep is less expensive than a cow and is easier for the beginner to care for and learn about livestock. Sheep produce meat in less than six months, compared with 12 to 18 months for beef.

Before undertaking a sheep project and deciding upon a breed, you must decide on a primary objective. Primary objectives such as the production of market lambs, a purebred breeder, or wool production are the factors to consider when choosing a breed.

Housing and Equipment

Proper feeding, water and handling facilities are needed as well as proper housing to insure protection from predators and inclement weather. Example plans for facility construction can be found in the *4-H Sheep Handbook* available for purchase from your local Extension Office. In addition, you should have the equipment to dock, castrate, identify and provide essential health care needs such as worming and vaccination. If you are planning on showing sheep, equipment such as clippers and blocking stands will be needed.

Shade is extremely important in the hot summer months. Lambs will not properly gain weight without protection from the heat. A cover, such as a tarp will aid in maximum ventilation. The shade can serve a dual purpose by also providing shelter. When it is constructed so that two or three sides can be closed, it will provide adequate protection from sudden rain or windstorms.

Feed bunks should be sturdy and easy to clean. Build and place them so lambs cannot stand inside of them. Do not place them on the ground. Design water facilities for frequent cleaning. They should be small enough so they can be replenished with fresh water daily or used with an automatic waterer.

Selection

Purchase lambs from a reputable breeder or feedlot. For meat purposes, buy a newly weaned lamb at 50-60 days of age. When selecting your sheep, choose the healthiest one. A lamb with an excellent combination of muscle, style, balance, alertness and desirable breed characteristics is best. You want one that has good muscle development. Try to find a lamb that is structurally correct with adequate bone and body length.

Feeding

Forage, such as grass hay, is the basis of a sound sheep production program. It may be necessary, at certain times during the production cycle, to provide supplemental feeds such as grains. Low quality forage will usually need to be supplemented with energy and protein feeds.

Water is important in all body functions. Water helps the body digest food and carry nutrients to the tissues. It helps the body get rid of waste materials and helps the body cool. Be sure to have fresh water available at all times.

A nursing lamb, market lamb, mature ewe, and pregnant ewes all require different feeding structures to remain healthy and productive.

Care and Management

Sheep require vaccinations against serious disease problems that exist in Colorado and protection from insect pests that are found everywhere. A few disease problems you may want to familiarize yourself with when raising sheep include *enterotoxemia*, or overeating disease, *contagious ecthyma*,

or sore mouth disease and *urinary calculi*. With these diseases, as with many others, prevention provides the earliest and cheapest method of disease and parasite control. Clean sheds, feed and water troughs leave disease or parasites little chance to get started. Good nutrition is essential for health. Observation can help detect signs of sickness. Call your veterinarian when the problem is beyond your control.

Sheep Terms

Ewes: Female sheep

Rams: Male sheep

Wethers: Castrated male sheep

Lamb: Young sheep

Gestation Period for Sheep: 148 days.

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Raising Horses³

Horses provide hobbies, entertainment, exercise and income to many of us. As a rapidly growing pastime and diversified industry in our state, there are a few things you should know prior to purchasing a horse.

Housing and Equipment

Horses need a large exercise area, such as a corral or pasture. They also need natural or man-made shelter from the elements, both hot and cold. This can vary from a stand of trees, to a 3-sided shed, to a complete stable with box stalls. A man made shelter should be clean and well ventilated with no drafts. Minimum space requirements are 10 to 12 feet both width and length, a minimum of 8 feet tall, and a door at least 4 feet wide and 8 feet tall.

Fencing can be a traditional board fence, a rail fence, or electric wire (wide ribbon wire is best). The most important thing is that the fence be visible to the horse. This keeps the horse from becoming tangled in the fence or from running through the fence and into the highway. Electric fence is best used as an interior fence and not an exterior fence.

Manure can accumulate rapidly! You should have a plan in place for manure use or disposal. Composting can convert manure and yard waste into organic fertilizer. You will also need a plan to control flies and insects.

Selection

In order to properly select a horse that will fit your needs it is important to consider the following factors:

- Breed of horse.
- Temperament of horse.
- Styles of riding.
- Experience of rider.
- Age of horse.
- Horse's level of training.
- Horse's overall health.
- Any previous illness or injury to the horse.

It is best to have a horse expert and veterinarian help you determine if the horse you are looking at meets the above factors for your situation.

Feeding

An average saddle horse that weighs 1,000 pounds will eat approximately 17 to 26 pounds of feed per day (total ration). The total ration is a combination of hay, grain, and pasture. Salt should always be available to the horse. Please see the section on <u>*Grazing Management*</u> for daily needs obtained through grazing.

Additionally, your horse will need supplemental hay during periods of snow cover or other times when pasture forage is unavailable. A small rectangular bale of hay can weigh between 45 and 85 pounds. How much hay to buy and feed your horse should be based on the weight of the bales and the nutrient value of the hay. You can feed less hay if it is of higher quality. It is best to have your hay analyzed to determine the nutrient value. Please refer to the <u>Hay Quality</u> section for specifics. A few rules of the thumb about hay:

- Legume hay (alfalfa and clover) is higher in protein than grass hay.
- Grass hay will keep the horse busy longer, and prevent boredom.
- Second and third cuttings of hay are higher in protein than the first cutting. Horses only need 10-12% protein in their feed.
- Second and third cutting alfalfa averages 18-24% protein, which can be more than the horse needs.
- Hay for horses must be mold and dust free.
- Hay should be stored in a barn or under a tarp to protect it from deteriorating in quality.
- Weed seeds can be passed through manure and infest your pasture. Buy hay that is weed free.
- Some weeds are poisonous to horses.

A grain mixture should be added to the diet when you increase the horse's training, work or activity. Young and old horse may also need grain. Some hints on grain rations are listed below:

- No work=no grain.
- Light work (1-2 hours per day)=1-1.5 pounds of grain per hour of work.
- Medium work (2-4 hours per day)=1.5 to 2 pounds of grain per hour of work.
- Heavy work (4 or more hours per day)=1.5 to 2.5 pounds of grain per hour of work.

Your horse must have plenty of clean, fresh water available at all times. A horse will drink 10 to 15 gallons of water each day, depending on temperature, humidity levels, ration and workload. In the winter months stock tank heaters will help stop ice buildup so that the water is always accessible.

Health Care

It is critical that you develop a partnership with a veterinarian prior to an emergency situation. This can be done by consulting your veterinarian for your horse's preventative health care needs.

A veterinarian should check your horse's teeth at least once a year. The teeth may need to be floated (filed) due to uneven wear from the grinding motion used while eating.

All horses should be vaccinated at least once a year, usually in the spring. Age, use and overall health of your horse determine a vaccination program. Time of year influences the risk of infectious diseases. Contact your veterinarian for recommendations.

For internal parasite control your horse needs to be de-wormed several times each year. The frequency of treatment varies with your management style.

Foot care is very important. Clean out hooves before and after you ride. Examine them regularly for problems. Hooves should be trimmed regularly. The need for hoof care varies with the use and age of your horse. Contact a qualified farrier (horseshoer) for recommendations.

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Raising Swine⁴

Hog production, like most of farming, has become highly specialized. Before undertaking a swine project and deciding on a breed, you must decide what is expected. Raising swine for meat is different than raising them for breeding purposes. Raising potbellied pigs is different yet. However, if done as a hobby, a family size of four will have enough pork for meat purposes, by raising one hog at a time, twice a year.

Housing and Equipment

Swine do not require a great deal of space. The basic equipment needs are a small shelter, self-feeder and waterer. A properly built pen will keep the pigs clean and consequently keep odors to a minimum. The following table lists the space requirement recommendations for pigs using a building with a form of overhead covering:

Pig Class Square Feet

Growing-finishing 6 sq.ft. inside, plus 6 sq.ft. outside Sows 11-12 sq.ft. Inside, plus 11-12 sq.ft. Outside Boars 40 sq.ft. Inside, plus 40 sq.ft. Outside

Shade is extremely important for hogs. In very hot weather it may be necessary to wet them down to prevent prostration. If some form of shade is not available, as in a treeless pasture, erect a simple shelter, open on all four sides and as far off the ground as possible.

Selection

Buy a weaned pig weighing about 40 pounds, eight weeks old. The hog should have already been wormed. If you are raising swine for eating purposes only, then purchased male pigs should already be castrated, and now referred to as a barrow.

When selecting a pig, choose the healthiest one. Even if you have little experience with swine, it is easy to spot the healthy ones in a litter. Do not pick a small, listless animal or one with obvious defects. Choose one with bright eyes, alert nature and a good appetite.

Feeding

Since feed costs represent 70 to 75% of the cost of swine production, you should carefully analyze all aspects of the feeding program. Swine require various levels of nutrients depending upon size and weight. In general, nutrients can be classified as energy, protein, minerals and vitamins.

Energy is expressed as the amount of total digestible nutrients (TDN). As a general rule, rations that contain 70-80% TDN are adequate for all classes of pigs. Young pigs, up to 77 pounds, need about 16% protein in their diet for optimum growth and development. On the average, a 40-pound pig will eat about 2.75 pounds of 16% protein feed a day and gain 1.10 pounds a day. Barrows will eat slightly more and gain slightly more than gilts, and consequently often cost a little more to purchase. Pigs this age require about a gallon of water per day.

Vitamins and minerals are important in any animal's diet, and swine are no exception. Most producers will either buy a complete ration from a feed company or purchase a hog supplement to

mix with homegrown feeds. If you do the latter, be sure to follow the manufacturer's instructions. Follow the nutrient requirements closely.

Care and Management

The care and management of the market hog is fairly simple. Usually all you need is to provide pigs with plenty of feed, water and adequate protection from the weather. However, a few other precautions should be followed:

- After purchasing your pig, take it home and allow it to get acquainted with the new surroundings. Then you should:
- Spray for lice.
- Treat for worms with a recommended wormer, once at about 40-50 pounds and again at 100 pounds.
- Check with your veterinarian on what shots, if any, are recommended.
- Provide feed and fresh water free choice at all times. (Best through the use of self-feeders).
- Watch that the pig does not get too hot in the summer. Since swine do not sweat as we do, they may need some help from you. You may need to spray pigs with a fine mist of water on very hot days.
- Cleaning the pen frequently and thoroughly will help you to raise your hogs without additional antibiotics and medication.
- Keep bedding dry.
- Sunshine and fresh air are the cheapest and best disinfectants.
- Good nutrition is essential for health.

Swine Terms

Gilt: Young female swine

Sow: An adult female swine

Boar: An uncastrated male swine

Barrow: A castrated male swine

Gestation Period for Swine: 114 days.

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Additional Information

¹ RAISING A FEW CATTLE FOR BEEF, Larimer County Cooperative Extension, Colorado State University Cooperative Extension. Prepared by Denise Stapelton, Agriculture Consultant, Colorado State University Extension, Larimer County. Information acquired from 4-H manual: Your Colorado Beef Breed Project, USDA bulletins: Raising a Few cattle for Beef and Keep A Cow.

² SHEEP MANAGEMENT, Larimer County Cooperative Extension, Colorado State University Cooperative Extension. Prepared by Denise Stapelton, Agriculture Consultant, Colorado State University Extension, Larimer County. Information acquired from 4-H Sheep Handbook and Colorado 4-H Sheep Production.

³ Colorado Horse Care, Pamphlet, sponsored by Colorado State University Cooperative Extension and Colorado Horse Development Board.

⁴ SWINE MANAGEMENT, Larimer County Cooperative Extension, Colorado State University Cooperative Extension. Prepared by Denise Stapelton, Agriculture Consultant, Colorado State University Extension, Larimer County. Information acquired from Pork Industry handbook, Oklahoma State University. Local Extension Service Offices include:

Adams County, Henderson, CO (303) 637-8100

Arapahoe County, Littleton, (303) 730-1920

Weld County, Greeley, CO (970) 356-4000

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