Beef cattle operations have different requirements depending on the type of production that takes place. However, for any operation to be profitable, producers require good handling facilities, proper forage management, and knowledge of production costs and marketing options.

Facilities

Well-planned, usable facilities are essential, whether an individual is a purebred breeder, cow/calf producer, backgrounder, or feedlot operator. Facilities should be well planned and adapted to the needs of the individual producer. The basic handling facility for all operations (see Figure 4.1), includes a holding pen with a narrow chute or alley that funnels cattle into a headgate (see Figure 4.2), which is used to restrain cattle. These facilities are important for herd health care, since they are used when giving vaccinations and medications. Most producers also include loading and unloading areas, which are usually incorporated into the handling facility. The goals behind the design of handling facilities include safety for the producer and the cattle, moving cattle through the facility with minimal labor, and convenience and accessibility.

Modifications or additions can be made to facilities based on factors like the number of cattle owned, amount of capital, and current facilities. Larger cattle operations require more elaborate facilities to accommodate the number of animals present. For example, large farms and ranches may have handling facilities, buildings for feed storage, feed mills (for processing and preparing feed rations), and a maternity barn where pregnant cows are housed when they are close to giving birth. Handling equipment and facilities can be expensive, which affects whether a producer can add new facilities to his or her operation.

Figure 4.1 - Simple Handling Facility

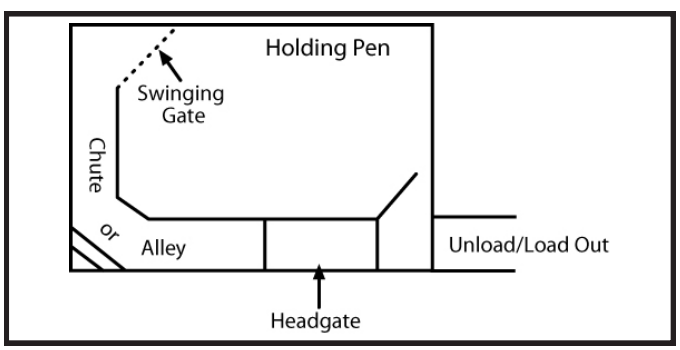

Figure 4.2 - Headgate

Cow/calf producers and purebred breeders require the same basic facilities. These include handling facilities, loading and unloading areas, and feed and hay storage. Larger operations, particularly those owned by purebred breeders, can have a show/sale barn, a maternity barn, more elaborate handling or working facilities, and an office.

Backgrounders have the fewest facility requirements. They usually raise their calves on grass pasture. However, backgrounders still require handling facilities and a loading and unloading area.

Feedlots require handling facilities, a loading and unloading area, feed storage, and a feed mill. Cattle are grouped together in feeding lots and fed until they reach market weight. Large feedlots have tremendous amounts of money invested in facilities, which must be in place before the cattle can be fed.

Forages

A major advantage of producing beef cattle is that they can use forages for food. Beef cattle can eat forages because they are ruminants. Ruminants have a four-part stomach that allows them to digest plant material efficiently. Forages in some form or another are used in all types of beef cattle production.

Introduction to Beef Production

Cow/calf producers and purebred producers use forages to feed the herd year-round . Depending on the weather conditions and location, cattle may graze on grass pastures from May through November. Producers can use grass resources more efficiently by setting up a rotational grazing system. Rotational grazing involves dividing pastures into small units; the cattle alternate between them when grazing. This type of grazing allows the producer to increase the number of animals per acre because they consume most of the available forage. During the summer, the producer harvests excess forages as hay or haylage, which will be used during the winter. In an ideal situation, the cattle require little or no supplemental grain. Cow/calf producers may also feed their cattle on cornstalks or wheat pasture during the winter.

Backgrounders use forages as an inexpensive way to achieve gain in purchased feeder steers. They put steers and heifers on grass pastures or feed hay until they are large enough to go to the feedlot. Backgrounders, like cow/calf producers, may feed cattle on cornstalks or wheat pasture throughout the winter.

Depending on their location, feedlot operators may or may not use forages as the basis of cattle diets. Most feedlots feed cattle grass hay for a few days after they are received. Some feedlots feed a base diet of haylage, but most use a diet of corn silage and grain with protein supplements.

Production Costs

Beef cattle production should be viewed as a business; the goal of any business is to make a profit. One major factor to consider when running any business is return on investment. Costs for beef production vary widely depending on the size of the operation, facilities, labor requirements, loans, and other factors. Fixed costs will be similar for all producers despite the type of production system used. Fixed costs include depreciation, interest on loans, repairs, taxes, and insurance. The types of variable costs a producer has may differ depending on the production system. The major variable cost in livestock production is the cost of feed. Other variable costs include medications, veterinary expenses, equipment, facilities, and the cost of the stock.

Producers have to consider several factors when calculating the costs of production and returns on investment. Suppose a producer wants to buy a few feeder steers. The producer has pasture available but is also going to feed the steers five pounds of grain per head per day. The grain mix is $12 per 100 pounds. The producer can buy 400-pound steers at $62.00 per 100 pounds (or $.62 per pound). Market trends predict 500-pound steers will be worth $64.00 per 100 pounds (or $.64 per pound) in 90 days. Can the producer profit from buying the steers?

The initial cost of one steer is $248 (400 pounds x $.62). The feed costs are $54 for that animal (5 pounds x $.12 x 90 days), which gives a total cost of $302 ($248 x $54). The producer will sell the steer for $320 (500 pounds x $.64/pound). Each steer will yield a profit of $18, excluding any death losses or veterinary expenses.

The producer should also calculate the breakeven price, which is the price required to cover costs. The formula for breakeven price is given below.

$$\text{Breakeven price} = \frac{\text{Total costs}}{\text{Total pounds of calves sold}} \times 100 \text{ lbs.}$$

The producer in the above example must receive $60.40 per cwt (100 pounds), or $.604 per pound, to cover costs.

Choosing a Production System

Many factors must be considered when choosing a production system. The major differences between the systems involve the amount of labor, capital, and time committed, required management skills. Not all producers have the resources or ability to operate a 100,000 head feedlot.

Inexperienced producers with limited resources would be better suited to backgrounding feeder calves or possibly starting a small cow/calf operation. These businesses do not require as large an investment as the others. Labor requirements are also much lower than the other production systems.

Producers with more experience may choose to run large cow/calf or small purebred operations. These types of production require more money, time, and labor.

Skilled producers with solid financial backing may choose to own a feedlot operation or a purebred herd. These operations require the most resources in terms of money, labor, and time. Producers interested in raising purebred livestock must realize that promotion and marketing skills are extremely important to be successful.

Marketing Options

Beef producers have a variety of marketing options available to them. Among them are auctions (including video auctions, in which buyers view a video recording of the cattle being sold that is transmitted via satellite), sales to livestock order buyers, private treaty sales, consignment sales, production sales, direct sales to the packer, and trading in cattle futures. Different marketing options may be used depending on the type of production system.

Cow/calf producers can use several marketing techniques. They generally sell feeder calves to the highest bidder through a local or video auction, but some producers retain ownership of the calves through the feedlot. They make payments to the feedlot operator that cover the feed costs and a daily cost per head to feed and care for the cattle. When the cattle are sold to a packer, the producer receives the revenue. Cow/calf producers sometimes sell their cattle off the farm directly to livestock order buyers who buy cattle for feedlot operators and packing plants. Recently, many producers have formed alliances or marketing groups to market like sets of calves that are the same in size or breed as a branded or labeled product (e.g., Certified Angus Beef).

Cow/calf producers also have the option of using the cattle futures market. In this market, futures contracts are bought and sold. Futures contracts call for the delivery of cattle at some future date. They can help manage the financial risk of beef cattle production if a producer uses them to hedge on cattle prices. Hedging involves buying or selling a futures contract to prevent losses from rising or falling prices.

Purebred breeders, backgrounders, and feedlot operators can also use the cattle futures market, as well as several other marketing options. Purebred breeders may sell their cattle at auctions or private treaty sales, which are sales in which a producer and customer privately negotiate the terms of the sale. They may also sell animals at a consignment sale, a special type of auction in which producers entrust a group of animals to another party, such as a breed association, to be sold for a commission. A fourth marketing option used by purebred breeders is a production sale. This type of sale is an auction by one producer or a small group of producers that takes place on a farm. Backgrounders have fewer options for marketing their animals. They often sell cattle at live or video auctions. Feedlots that own cattle may either auction them off or sell them directly to the packer, with the amount of money received determined by the live weight or carcass grade of the cattle.

Summary

Producers of beef cattle need to consider many factors when evaluating a production system. Well-planned facilities are essential for successful beef cattle production, and all production systems require basic handling facilities. Feeding cattle appropriately on forages is also very important, since forages are often a primary source of nutrients. Production costs vary greatly according to the production system used, and producers can market their beef cattle in many different ways. Producers must evaluate their talents and resources when selecting a production system.

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