Types of Beef Cattle Operations—Part One

BEEF is America's best-selling protein. As a result, beef cattle production represents the largest single segment of American agriculture. In 2002, 31 percent of farms were classified as beef cattle operations, which was more than any other type of production. In 2006, more than 800,000 ranchers and cattle producers worked in the United States. Learning the types of beef cattle operations provides a greater appreciation for the workers who provide you with steaks and burgers.

Objectives:

1. Compare and contrast the components of cow-calf, backgrounding, and finishing operations.
2. Examine the factors that affect profitability.

Key Terms:

background-stocker operations
backgrounder
commercial
cow-calf operations
creep feeding
custom feedlot
finishing operations
seedstock breeders
stocker

Beef Cattle Systems

Several methods are used to organize and classify the types of beef production systems in the United States. The most commonly used systems are cow-calf, backgrounding, and finishing operations.

COW-CALF OPERATIONS

Mainly family owned and operated, **cow-calf operations** involve keeping mature cattle to produce calves to sell to other producers. Cows are bred to have a calf every year, usually in late winter or early spring. Although the cows and calves generally graze on large pastures, **creep feeding** (supplemental feeding) is used to allow calves to gain more weight while nursing. Generally, calves are weaned at 6 to 10 months of age.

There are two different general classifications of cow-calf operations. The **commercial** cow-calf producer raises most of the potential steers and heifers for harvest. The other type of operation is known as **seedstock breeders**. These producers keep herds for purebred breeding stock and provide replacement bulls or semen for cow-calf operations.

Components

Components of a cow-calf operation include pasture ground, a few facilities for calving, feed, feed storage and handling, mineral supplements, creep feeding supplies and equipment, calf processing and loading facilities, an office, and cattle.

FIGURE 1. Quality pasture ground is one of the several components of a cow-calf operation.

Commercial cow-calf producers utilize crossbred and a few purebred cows. These producers rely on seedstock breeders for the replacement of heifers and bulls. The focus of the seedstock breeder is to provide genetic improvements for other cattle breeders. The initial start-up cost for a seedstock breeder is relatively high because genetically superior animals are more expensive than average animals. Another large investment is the time to develop high-quality animals.

Cattle Cycle

The biology of the beef cow and the expectations of the beef industry are the two main factors that cause the cattle cycle. Like several livestock industries, the cattle cycle takes a while to respond to increased demands for beef due to the gestation period of cows. A replacement heifer may take three years to produce a harvested animal, which is why the cattle business

cannot be compared to a factory industry. Time, patience, and sound management/marketing programs are crucial for a cow-calf producer to understand the cattle cycle.

BACKGROUNDING OPERATIONS

Background-stocker operations are used to grow feeder cattle. Some calves are too small/light to enter the feedlot, so a **stocker** operation utilizes a grazing program. A **backgrounder** will usually grow the calves in a drylot where they receive feed with a high roughage ration. Normally cattle are moved onto the feedlot operation at 12 to 18 months of age. Like the cow-calf operation, background-stocker operations are typically family-owned ranches and farms.

One main goal of a background-stocker operation is to produce replacement cattle for the herd or a mature animal for the feedlot. Many cattle are not physically sound enough to enter a feedlot after weaning. Backgrounding systems, sometimes called "preconditioned programs," grow the cattle by adding frame but not fattening the animal.

Components

Some backgrounding operations utilize pastures and open ground for grazing or drylots. A

FIGURE 2. When a calf involved in a cow-calf operation is old enough, it will be sold to another producer. (Courtesy, Gary and Pam Naylor, Missouri)

FIGURE 3. Vaccinations help prevent disease. (Courtesy, Thunderbolt Angus)

FIGURE 4. Background-stocker operations are usually set up on ranches and farms owned by families. (Courtesy, Texas Department of Agriculture)

stocker operation generally has a grazing program that uses different types of grasses or other cereal grain forages, and a backgrounder usually will grow the calves in a drylot. The main components of a backgrounding operation include a pen, feedbunk, feed storage and handling, processing and loading facilities, an office, and cattle.

FINISHING OPERATIONS

Feedlots look different than the first two beef systems described. **Finishing operations** involve feedlots used to complete the final phase of the beef production system. Cattle are fed in fenced areas, and feed is brought to them. Some cattle are finished on pasture. The cattle typically spend four to six months in a feedlot. They are fed to harvest weight, which is generally between 1,100 to 1,300 pounds. The feedlot operation can be owned by an individual or partnership; more commonly, however, a corporation owns the feedlot operation—especially as the feedlot size increases.

These operations prepare beef animals for the harvest market. Owners usually buy yearlings or feeder calves and try to finish them in as little time as possible. Yet some operations act as a **custom feedlot**, which is an operation that provides the technology, skills and services, facilities and location to a producer who wants cattle fed to market weight. Many producers want to retain the ownership of cattle through harvest; others have a desire to feed out purchased cattle.

Components

Cattle are carefully unloaded at the feedlot and are directed through a processing barn. During the processing system, cattle are tagged, vaccinated, and entered into the operation's record-keeping system. Cattle also receive a growth promotant and are grouped into pens by age and/or size. The growth promotant is a small pellet that is positioned under the skin behind the animal's ear. The purpose of the pellet is to release micro amounts of a growth hormone like estrogen. The hormone helps cattle build more muscle, producing a leaner beef product for consumers.

FIGURE 5. After being unloaded at the feedlot, cattle are tagged for ease of identification.

Once animals arrive at the feedlot, they are separated into herds of 100 and are housed in pens that allow for 125 to 150 square feet per animal. The cattle typically spend four to six months in the feedlot. While there, several environmental factors are monitored and managed daily. In a large feedlot operation, the top environmental concerns are water and air quality and land utilization. In such operations, the producer is responsible for protecting the environment.

FIGURE 6. Feedlots are a part of the final phase of beef production.

Other components of a finishing operation include a full-feed program with high-concentrate rations, feedbunks, feed storage and handling, processing and loading facilities, an office, and cattle.

Factors Affecting Profitability

Several factors can affect cow-calf operation profitability. Operation costs include major inputs from feed, veterinarians and medicine, bedding, marketing, custom operations (embryo transfer and artificial insemination), fuel, electricity, repairs, and interest on operating inputs. Ownership costs include the annual cost of maintaining the capital investment in cow-calf facilities/equipment, property taxes, and insurance.

Feeder cattle prices also affect profitability. These prices are affected by the prices paid for cattle, which are influenced by the consumer demand for beef. Response time may seem slow

FURTHER EXPLORATION...

ONLINE CONNECTION: Environmental Stewardship Award Program (ESAP)

Do you ever wonder how cattle play a role in our food chain? Grazing, a practice conducted by thousands of cattle each day, serves as an important step. Do you know how important grazing is for the environment? Cattle producers work extremely hard to guarantee a high-quality beef product for Americans. They also strive to protect the environment through well-managed production practices. To learn more about how American cattle producers protect the environment, visit the following link:

http://esap.beefusa.org/default.aspx

in terms of increasing or decreasing production due to consumer demand, but the producers must work within the confines of the cattle reproductive cycle.

The factors affecting backgrounding operation profitability are the health of the animal, the cost of grain, death loss, the weather, the government, imports/exports, feed costs, overhead costs, the price of calves, and the price of feeders.

The initial investment affects finishing operation profitability. The initial investment is high for this type of operation because of the need for high-quality feed, housing, and equipment. The production time is less than in a cow-calf operation because you can expect a return on the animals in four to six months. Other factors affecting the finishing operation profitability are housing, veterinarian fees, equipment expenses, labor, and trucking costs. Fluctuating market prices also present a risk.

Summary:

The most commonly used systems are cow-calf, backgrounding, and finishing.

The components of a cow-calf operation are numerous. Some examples are pasture ground, a few facilities for calving, feed, creep feeding supplies, calf processing and loading facilities, and cattle. Commercial cow-calf producers utilize crossbred and a few purebred cows. These producers rely on seedstock breeders for replacement heifers and bulls. The biology of the beef cow and the expectations of the beef industry are the two main factors that cause the cattle cycle.

One main goal of a background-stocker operation is to produce replacement cattle for the herd or a mature animal for the feedlot. Backgrounding systems grow the cattle by adding frame without fattening the animal. The main components of a backgrounding operation include a pen, feedbunk, feed storage and handling, and cattle.

A finishing operation includes large pens, feedbunks, and cattle; these operations are used to complete the final phase of the beef production system. Producers who want to retain the ownership of their cattle through harvest or those who have a desire to feed out purchased cattle use custom feedlots. Cattle typically spend four to six months in a feedlot.

Factors that can affect cow-calf operation profitability are operation costs, ownership costs, and feeder cattle. The factors affecting backgrounding operation profitability are the health of the animal, the cost of grain, death loss, and the price of calves and feeders. Factors affecting the finishing operation profitability are housing, veterinarian fees, equipment expenses, labor, and trucking costs.

Checking Your Knowledge:

1. What is the difference between the types of beef production systems?
2. Why are seedstock breeders important to the beef industry?
3. How does the cattle cycle function?
4. What is the main focus of a backgrounding system?
5. How do you choose a custom feedlot?

Expanding Your Knowledge:

Research current legislation pertaining to the reduction/elimination of antibiotics used to treat livestock. Research and study the important factors of the Preservation of Antibiotics for Human Treatment Act of 2007 and how a phase out of antibiotics in feed would affect beef production.

Web Links:

Beef: From Pasture to Plate
http://www.beeffrompasturetoplate.org/

Iowa Beef Center
http://www.iowabeefcenter.org/

National Cattlemen's Beef Association
http://beef.org/

Agricultural Career Profiles
http://www.mycaert.com/career-profiles