Selecting, Producing, and Marketing Beef Cattle

Whether dealing with a commercial cow-calf, purebred cow-calf, or feedlot operation, a beef producer needs to be capable of analyzing and selecting high-quality beef animals that will be profitable. A cattle producer who selects quality animals, provides good feed and care, and is proficient at marketing can make a profit in the cattle business.

Objectives:

1. Explain how to select beef animals.
2. Identify the types of beef production operations.
3. Describe beef marketing options.

Key Terms:

carcass weight
cattle feeders
conformation
cow-calf operation
demand
desirable traits
dressing percentage
expected progeny difference
feeder calves
frame score
pedigree
performance
purebred cow-calf producers
supply

Selecting Beef Animals

When selecting animals, you must realize that no single breed is going to be superior in all traits. You need to decide what your individual priorities are and select a breed or combination...
of breeds to meet your priorities. In addition, you must commit to good management practices to keep the cattle superior. Good management will include feeding nutritious diets, providing comfortable living conditions, continually monitoring animals for health concerns, and conducting constant assessment of better breeding stock.

A very important consideration when selecting animals to improve your herd is choosing reputable producers. This will help ensure animals relatively free of disease and genetic problems, and you will be able to look at performance records to determine the profit potential the selections hold for your herd.

To improve your herd, you must be able to select animals with more desirable traits. Desirable traits are traits that are in demand at the marketplace. Selection of beef cattle is typically based on conformation, performance, and pedigree.

**CONFORMATION**

**Conformation** describes the shape, form, and type of animal. Analyzing the conformation of a beef animal may help to predict the amount and quality of muscle, the structural soundness, the reproductive ability, and other traits that affect profitability.

**PERFORMANCE**

**Performance** describes an animal’s ability to gain weight quickly and efficiently, produce a quality carcass, and reproduce regularly. When selecting beef cattle, individual performance data should be analyzed. Performance data may include information on birth weight, 205-day (weaning) weight, 365-day (yearling) weight, and scrotal circumference.

EPDs are another type of selection tool that may be used to predict the performance traits of beef cattle. **Expected progeny difference** (EPD) is a prediction of how future progeny of a given animal is expected to perform for a particular trait as compared with progeny of other animals within the breed. EPDs describe the genetic value of an animal much like a feed tag describes the contents of a feed sack. An EPD is determined by the combination of individual performance, pedigree, and progeny performance. The most common EPDs utilized in the selection of cattle are the following:

- **Birth EPD**—Predicts the birth weight of offspring. A low number is desired.
Weaning EPD—Predicts weaning weight. A high number is desired.

Yearling EPD—Predicts yearling weight. A high number is desired.

Maternal EPD—Predicts maternal weaning weight and maternal milk. A high number is desired.

Marbling EPD—Predicts the presence of intramuscular fat. A high number is desired.

Ribeye area EPD—Predicts the size of the ribeye. A high number is desired.

An additional tool that may be used to predict individual animal performance potential is frame score. **Frame score** is a numerical description of cattle size used to predict growth patterns and the mature size of an animal. Frame scores typically range from 2 to 9 and are calculated from hip height and age. Optimal frame score depends on feed resources, breeding systems, and marketing options, but most cattle producers prefer cattle in the 5 to 7 range.

**PEDIGREE**

A **pedigree** is a certificate or diagram of an animal’s ancestry. For many years, beef cattle have been selected, at least partially, by the merit of their ancestors. While the pedigree can be a valuable tool when selecting beef cattle, it should not be given as much emphasis as individual performance and conformation.

**FIGURE 2. Pedigree is not as important as performance and conformation.** (Courtesy, USDA)

**Types of Beef Production Operations**

There are three main types of beef production operations: cow-calf operations, cattle feeders or feedlots, and purebred cow-calf producers. Before you decide what type of operation is best for you, make sure you analyze all the advantages and disadvantages to make sure your choice is the most profitable way to utilize your resources. You may also want to look at your local market and decide what supply-and-demand issues you may face.

**COW-CALF OPERATION**

A **cow-calf operation** consists of keeping mature cattle to produce calves to sell to other producers. Cows are bred to calve every year, usually in late winter or early spring. The calves
are then typically sold as feeder calves. **Feeder calves** are weaned animals under a year old that are fed until they are sold to a feedlot.

Cow-calf operations utilize pastures for grazing through the growing months and are less labor intensive than other operations. Cow-calf operations can be especially beneficial when land not suited for crops is used.

Another advantage is that you can increase your herd by keeping animals back each year, eliminating the need to buy animals every year. Some disadvantages of cow-calf operations are the large initial land investment and the length of time between paychecks. In the cow-calf business, there may be lengthy intervals between times of income from selling feeder calves. Cow-calf producers must do a good job of budgeting for feed, minerals, vet bills, and other common expenses during those times.

### CATTLE FEEDERS OR FEEDLOTS

**Cattle feeders** are producers who feed beef animals out for the harvest market. Owners usually buy feeder calves and try to finish them in as little time as possible. The initial investment is high for this type of operation because of the need for high-quality feed and the need for housing and equipment. The production lag is less than in a cow-calf operation because you can expect to turn the animals in four to six months. In addition to higher feed, housing, and equipment expenses, labor and trucking costs are also high. With all the expenses and the need for quick turnover time, being a good manager is essential in a cattle feeder operation. Fluctuating market prices also present a risk.

### PUREBRED COW-CALF PRODUCERS

**Purebred cow-calf producers** raise purebred breeding stock and provide replacement heifers, replacement bulls, and/or semen for cow-calf operations. Their stock provides genetic improvement to herds. The initial startup costs of purebred operations are high because genetically superior animals are more expensive than average animals. Another large investment is the time it may take to develop high-quality animals. Years are sometimes required to show the success of an animal by keeping records of its offspring. A very knowledgeable manager is needed to run a profitable purebred operation.
Beef Marketing Options

Depending on your type of operation and the location, you may have many marketing options, or you may be limited with what you can do. No matter how you decide to market your product, you will always see the laws of supply and demand governing the market price. **Supply** is the overall amount of product available at any given time. **Demand** is the amount that could be purchased at a given time for a given price. There are seasonal pricing patterns you can watch to help you decide when to market your animals for the best possible profit. Since several ways exist to market beef cattle, you need to determine which one is best for you based on marketing costs, convenience of the market, and market price.

PUREBRED MARKETING

Purebred marketing is one way of marketing your beef cattle. The sale of purebred animals tends to be done privately or at auctions. If you choose to market animals at auctions, you will need to consider advertising costs and the payment of auctioneers when figuring profit.

LOCAL SALE BARNs

Local sale barns are popular because of their convenience to sellers and buyers. Many small producers utilize this market because the sale barns are nearby. Sale cost is either a percentage of the sale or a fixed amount. In a sale-barn auction, cattle go to the highest bidder.

DIRECT SALES

Another option in marketing cattle is to sell them directly. Many large producers use direct selling to avoid paying commission or sale costs. Almost 70 percent of harvest cattle going to packers come from direct markets.

Feedlot managers have the option of selling harvest cattle by live weight or carcass weight. For example, a steer could sell for 85¢ per pound of live weight. If the steer weighed 1,250 pounds, he would sell for $1,062.50 (1,250 × 0.85 = 1,062.50).

The second option is to sell cattle by carcass weight. **Carcass weight** is determined shortly after harvest and is the weight of the carcass. **Dressing percentage**, which is the percentage of live animal weight that becomes carcass weight, is usually around 63 percent. Dressing percentage is calculated by dividing carcass weight by live weight and then multiplying by 100. If a steer had a 1,250-pound live weight and a 64 percent dressing percentage, his carcass weight would be 800 pounds. If this steer sold for $1.35 per pound of carcass weight, he would sell for $1,080.00 (800 × 1.35 = 1,080). It may be advantageous to sell cattle by carcass weight if they have a higher-than-average dressing percentage.
The selection of quality animals can be very important to the profitability of beef cattle operations. The selection of beef cattle is typically based on conformation, performance, and pedigree. Conformation describes the shape, form, and type of an animal. Performance describes an animal’s ability to gain weight quickly and efficiently, produce a quality carcass, and reproduce regularly. A pedigree is a certificate or diagram of an animal’s ancestry.

There are three common types of beef production operations. They are cow-calf operations, cattle feeders or feedlots, and purebred cow-calf producers. These operations market their cattle in one of three ways: purebred marketing, local sale barns, or direct sales.

Checking Your Knowledge:

1. List the three things typically used in beef cattle selection.
2. List at least three commons items that may be found in performance data.
3. What three items are used to determine EPDs?
4. Which bull has a more desirable Birth EPD—Bull A with a BEPD of –0.5 or Bull B with a BEPD of 1.5?
5. Which female has a more desirable Weaning EPD—Female A with a WEPD of 24.0 or Female B with a WEPD of 12.4?
6. What is considered the optimal frame-score range for beef cattle?
7. Name two disadvantages of owning cow-calf operations.
8. What is the average dressing percentage for cattle?
9. What is at least one advantage of direct sales?

Expanding Your Knowledge:

View live animals or a livestock judging video. Analyze at least four animals and determine the positive and negative traits that each possesses.

Web Links:

University of Nebraska
http://beef.unl.edu/

National Cattlemen’s Beef Association
http://www.beef.org/

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