

# Beef – From Pasture to Plate

## Birth

Cattle have a nine-month gestation period, and while calves can be born year round, many ranchers plan calving for the spring of each year. Especially in colder climates, this ensures that calves are strong enough to handle harsh winters. Calves remain with their mothers for the first several months of life on farms or ranches.



## Cow-Calf Operation

Most beef calves are born on cow-calf operations. These are farms and ranches like those you may see along highways and country roads. During this stage, cattle graze in herds on large pastures within sight of their mothers.



Most cattle farms and ranches are family owned and operated and daily life revolves around caring for the animals, pastures, barns and fence-lines. For many producers, raising cattle is a family tradition passed down through generations.

## Weaning

As calves reach six to 10 months of age, they are weaned from their mothers. Weaned male calves (steers) may graze until about one year old (yearlings) and then be sold to a cattle feeder or a stocker/backgrounder who will prepare the animal for the feedlot.



## Livestock Auction Markets

Most cow-calf operators sell their weaned calves to the highest bidder at livestock auction markets, where calves are bought by cattle producers called stockers and backgrounders. There are approximately 815 fixed auction facilities throughout rural America, according to the U.S. Department of Agriculture (USDA).

## Arrival at the Feedlot

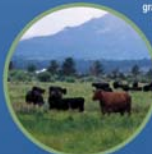
When cattle arrive at a feedlot, they are carefully unloaded and led through a processing barn, where they are tagged for identification purposes, vaccinated and entered into the operation's record-keeping system. Before being grouped into pens by age, the animals may receive a growth promotant.



Most growth promotants are administered in the form of a small pellet placed under the skin behind an animal's ear. It releases tiny amounts of hormone and safely dissolves as the treatment is completed. Most growth promotants contain naturally occurring hormones like estrogen. Growth promoting hormones help cattle build more muscle – producing a leaner beef product for consumers. Growth promoting products are approved by the Food and Drug Administration (FDA) after rigorous scientific tests, similar to those required for human medications, and their use in cattle production has been declared safe by scientific organizations worldwide.

## Stocker and Backgrounding

As weanlings, cattle may be transferred from cow-calf operations to backgrounders or stockers. Like cow-calf operations, these are mostly family-owned ranches and farms where cattle graze on pasture or straw receiving grain to supplement their diets. Once most cattle reach approximately 12-16 months of age, they are taken to a feedlot.



## Life at the Feedlot

Feedlots look different than cow-calf and backgrounding operations because cattle do not graze on pasture. Rather, they typically are separated into herds of 100 animals and live in pens that allow about 425 to 250 square feet of room per animal. Cattle usually spend four to six months in a feedlot, during which they are fed a scientifically formulated ration averaging 70 percent to 90 percent grain, and have constant access to water.

Environmental factors such as water quality, air quality and land utilization are monitored and managed in feedlots daily. Operators are not only responsible for constantly monitoring the health and well-being of cattle, but also for protecting the environment. In fact, most large feedlots have environmental engineers on staff or on contract to ensure the operation is in compliance with the strict Environmental Protection Agency regulations that govern concentrated animal feeding operations.



## Animal Care at the Feedlot

Cattle can become ill at the feedlot because of changes in weather and geographic location, and mingling with other cattle that come from a variety of operations. For this reason, feedlot veterinarians may take preventative measures and give cattle vitamin supplements, vaccinations and parasite treatments to maintain their health. Similar to other stages of production, sick cattle may be given antibiotics and moved into a separate hospital pen away from their herdmates for treatment. This prevents the spread of illness and allows feedlot operators to closely monitor the animal's health.

## Transportation

Once cattle have reached 18 to 22 months old or weigh between 1,100 and 1,250 pounds, they are typically considered "finished" and are transported to packing plants to be slaughtered and processed. Precautions during transportation minimize stress and injury to the animals. Cattle are carefully loaded and unloaded into trailers that are specially designed to avoid injury and strain.



## Supermarkets and Restaurants

Retailers and foodservice operators sell beef products in supermarkets and restaurants, where steps are taken to ensure the final safety and quality of the products. Ultimately, consumers dictate the actions of the beef production chain, from pasture to plate, by determining what kinds of beef they will buy and at what price.



Beef producers read demand signals from the meat case and customers throughout the production chain. For instance, beef cattle are now much leaner than just a decade ago as a result of the consumer demand for products with less fat. Consequently, there are now 29 cuts of beef that meet government guidelines for lean, such as the tenderloin, sirloin and 95% lean ground beef.

America's beef producers are proud to offer a variety of beef choices to meet the changing lifestyles and nutritional needs of consumers. Beef producers have adapted practices to provide consumers with the grain-fed, grass-finished, certified organic or natural beef they desire. While each kind of beef offers specific value to consumers, all beef is nutritious and safe.

## Fabrication

When beef leaves the packing plant, it is in the form of large sections, either primals, like the chuck, round rib and loin, or subprimals which are smaller cuts of meat such as the bottom round, top round, eye round and round tip. Some plants sell subprimals to meat processing facilities where workers skillfully break them down into individual steaks and roasts that are sent to supermarkets and restaurants.

## Safety Inspection/ Federal Regulations

There are a number of interventions in place that decrease and attempt to eliminate potential food safety concerns at packing plants. Because this is the last stage before beef is packaged, plants use multiple interventions to ensure that products are safe.

USDA inspectors oversee the slaughter practices, food safety interventions and carcass grading that take place at packing plants. To grade carcasses, inspectors evaluate characteristics including marbling (distribution of internal flecks of fat, contributing to tenderness and taste) and the age of the animal.



## Arriving at the Packing Plant

When cattle arrive at packing plants, they are moved inside in a quiet and orderly manner. There is little excess movement or unnecessary noise so cattle are not unduly stressed. Packing plant technicians then use a mechanical stunning device to quickly and effectively render animals unconscious.

The slaughter process has evolved over the years based on scientific research to ensure both humane animal treatment and the production of safe food. The Humane Slaughter Act (passed in 1958 and updated in 1978 and 2002) dictates strict animal handling and slaughtering standards for packing plants. These facilities are under continuous federal inspection, with Food Safety and Inspection Service (FSIS) personnel present in plants to ensure compliance with all regulations.



Brought to you by the National Cattlemen's Beef Association on behalf of The Beef Checkoff.