BEEF BRIEF

BEEF: The meat that comes from beef cattle. Hamburger, steak and brisket are some examples of beef.

BOVINE: Cattle

BULL: A male cow used for breeding.

BY-PRODUCTS: All products, except for beef, that come from beef cattle.

Calf: Cattle less than one year old.

COW: A female cow that has given birth to a calf.

HEIFER: A female cow that has not produced a calf.

HIDE: Animal skin treated for human use, such as leather from cattle.

ROAN: An even mixture of white and pigmented hairs throughout the animals body.

RUMINANT: Animals, such as cattle, that have multiple compartments in their stomach.

SILAGE: Fermented corn, wheat or hay with the stalks and leaves that is chopped and fed to cattle.

STEER: A male cow not used for breeding.

The average American eats 62 pounds of beef each year.
ANIMAL HEALTH

Animal health and well-being are top priorities for livestock farmers across the country. That’s why farmers and ranchers work hard to use the most recent science-based advancements that keep cattle healthy and the beef supply safe. These advancements mean cattle can be raised using less resources, while maintaining high quality meat. Feedlot employees, farmers and ranchers work closely with veterinarians to monitor the health and well-being of the animals. Regular check-ups are done on the herd to prevent illness. If any of the animals are ill, they are evaluated before deciding what the next step is to take care of the animal. Farmers utilize important tools like vaccines along with good management practices to prevent, control and treat disease. By focusing on good animal care, proper nutrition and disease prevention, livestock farmers and their veterinarians reduce antibiotic use—and save money in the process.

BREEDS OF BEEF CATTLE

Just as there are different breeds of dogs, there are different breeds of cattle. The most popular breed of beef cattle in the United States is Angus. Angus are solid black and are known for the high quality meat they produce. Some other common breeds are Hereford, Shorthorn, Charolais, Simmental, Limousin, Maine-Anjou, Brangus, Chianina, Red Angus, and Brahman, which is the most popular beef cattle breed in the world. All of these cattle come in different sizes and colors including black, red, white, roan, gold, brown and gray. Today’s family farmers combine scientific advances with time-honored family traditions to improve their herds through careful selection and genetics. This allows farmers to raise cattle with certain traits, such as easy calving, good mothering instincts, early maturity, heavy muscling and high quality meat. Improvements in cattle farming technologies have helped provide consumers with the lean beef they demand while using fewer resources. This allows America’s farmers to provide safe, high-quality beef at an affordable price.
More than “MEATS” the Eye

We get more than meat from beef cattle. You may be surprised to learn that paint is made from beef cattle—as well as many other products. These are called beef by-products. Because of these by-products, we are able to use 99% of every steer. Some examples of these by-products include candles, crayons, cosmetics, detergent, insulation, plastics, soaps, pet foods, piano keys, luggage, wallpaper, insulin for diabetes, car polishes, textiles for car upholstery, basketballs, baseballs, and footballs. In fact, 11 basketballs, 144 baseballs, or 20 footballs can be made from 1 cow hide. 700,000 footballs are produced annually for the NFL, which means around 35,000 cowhides are used for one single professional sport each year.

In 2017, there were 1.18 million cattle & calves on Illinois farms, which ranks IL 27th in the nation.
Do you know your cut of beef?
Animal Identification

Farmers use many ways to identify their animals: brands, tattoos, ear notches and ear tags. Animal identification allows farmers to observe each animal very closely when it comes to their growth, weight gain, offspring and even how much feed they are eating. Complete this activity to become more familiar with forms of animal identification.

The U.S. supplies 19% of the world’s beef with 9.4% of the world’s cattle.

Packing Plant, Food Service & Retail

Once cattle reach market weight, (typically 1,200-1,400 pounds and 18-22 months of age) they are taken to the processor by semi trucks. Once the meat has been processed, it is inspected to ensure it is safe, wholesome and correctly labeled and packaged. The final beef products are shipped to retail and food service establishments for consumers to purchase.

BIRTH

TO

WEANING

The gestation (pregnancy) period for cows is 9 months. Beef production begins with a cow-calf farmer who maintains a breeding herd of cows that raise calves every year. When a calf is born, it weighs 60-100 pounds. Beef calves are weaned at 6 to 10 months of age when they weigh 450-700 pounds. After the calves are weaned, some are sold at an auction market. A cow-calf farmer may also choose to keep the best females to add to the breeding herd. Younger or lighter weight calves may be sent to a backgrownder or stocker who continues to graze them on grass or other forages until they are 12 to 16 months old. They may also go directly from the cow-calf farmer to the feedlot or from the backgrownder/stocker to the feedlot.
Most beef cattle spend approximately four to six months in a feedlot, just prior to harvest, where they are fed a grain-based diet. At the feedlot (also called feedyard), cattle are grouped into pens that provide space for socializing and exercise. They receive feed rations that are balanced by a professional nutritionist. Feedlots are efficient and provide consistent, wholesome and affordable beef using fewer resources. The time cattle spend in a feedlot is often called the “finishing phase.” All cattle spend the majority of their lives grazing on grass pasture.

The top 5 counties in Illinois for beef cattle production are: JoDaviess, Adams, Fulton, Hancock and Henry.
Beef is a good source of ZIP: Zinc, Iron and Protein. Beef also provides B-complex vitamins such as niacin, riboflavin, thiamine and vitamins B6 and B12, among others. B-VITAMINS work to promote growth and maintain health. You need essential B-vitamins to release the energy in food. Beef is one of the best sources of many essential B-vitamins.
**CAREERcorner**

Doug Hankes  
Meat Processor  
Thrushwood Farms Quality Meats, Inc.  
Galesburg, IL

1. **Tell us how you became involved with the beef industry.**
   I have been very fortunate with parents that both grew up on grain and livestock farms. I thoroughly enjoyed showing cattle and pigs and being involved with the local meats judging team. I was very active in 4H meats judging and FFA, which is where my love of the meat industry really blossomed. I attended the University of Illinois and was active in Hoof N Horn, Alpha Gamma Rho and on both the University's Meats and Livestock Judging teams. It was the people that I met at the U of I that really fostered my love of the meat industry and livestock.

2. **What is your specific role with Thrushwood Farms?**
   I am in charge of operation and sales. I work with our customers to determine what products they need made and go over ideas for new options that we can produce for them. I assist with coordinating the production, cooking and packaging of the meat sticks. One of the areas I enjoy most is developing new products.

3. **Tell us about Thrushwood Farms.**
   Thrushwood Farms is a family owned business that was started in 1978 as a small town butchershop. We harvested animals for local farmers and for our retail store. We did this primarily until the early 2000’s. Our company has always been known for our smoked hams, bacon, all beef summer sausage and dried beef. I joined my parents in 2004 after receiving my Bachelors of Science degree from the University of Illinois in Animal Science. In 2007, we became a federally inspected meat plant which opened a lot of new markets for us to sell our products. That was also around the time at which we started to focus on shelf stable snacks such as snack sticks, jerky and other meat products. Our two bestselling snack sticks are our all beef stick and our sweet teriyaki snack sticks. In 2012, we doubled the size of our facility which is over 27,000 square feet of meat processing.

4. **Technology is becoming very important to farming, how is technology used at Thrushwood Farms?**
   We use technology every day at our facility. We now have packaging machines and smokehouses that can be logged into from halfway around the world to provide technical assistance. We will continue to see more automation and technical advances in our family’s business.

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**Four Parts in One**

Cattle, sheep and goats are called ruminants. They have a special kind of stomach which allows them to digest very tough food. It has four compartments called the rumen (1), reticulum (2), omasum (3) and abomasum (4). Ruminant animals first chew their food to soften it, swallow it, and then return it to their mouth for continued chewing. This is called chewing the cud. After chewing the cud, it is swallowed a second time, broken down further, and digested. Cows will spend up to eight hours a day chewing their cud.
1. Describe your background and how you became interested in animal nutrition.

I am a native of Wyoming and grew up on a cattle ranch. I started my Master’s in nutrition and was completely fascinated with all aspects and immediately knew that I wanted to be a ruminant nutritionist. After completing my PhD, I started working at SIU and conducting applied research and sharing that knowledge with the students and cattle farmers. I learn something new every day and thoroughly enjoy hearing when cattle farmers try something I have done and have success.

2. Tell us a little bit about your job and what you enjoy most.

I teach, conduct research, and serve cattle farmers by supervising the Beef Evaluation Station. I enjoy the variety and love seeing students putting the knowledge they obtained in the classroom to use out at the farms. I enjoy sharing research with the beef farmers, learning from them, and helping them troubleshoot issues. Lastly, I enjoy helping beef farmers through performance testing their bulls at the station.

3. How do you ensure the quality, safety and health of your beef cattle?

The quality, safety and health of our cattle is the most important job on our farm. An important part of ensuring the health of our cattle is getting a veterinarian to advise us on the many health procedures that must be done to ensure our cattle stay healthy. They prescribe medications if one of our animals get sick. We are all trained to spot diseases and try to check on each animals condition every day.

Rebecca Atkinson, PhD
Associate Professor/Department of Animal Science, Food and Nutrition
Southern Illinois University, Carbondale, IL

4. How does your research benefit livestock farmers?

Extending the grazing season has many benefits but it may not be feasible to do. However, if my research concludes that it will reduce costs, increase profit, and/or is sustainable then I share my findings so that farmers can have the tools necessary to implement it. I also discuss the pros and cons so they can decide if it is a good fit for them or if it is too high risk.

5. What subjects helped prepare you for your career?

Animal science and biochemistry were essential, but at the end of the day “doing it” was the best preparation! I was very fortunate to grow up on a ranch and learned a lot. I am a firm believer in hands-on learning, so every chance I get my students will apply what they learn in the classroom at the university farms.

Alan Adams
Beef Producer
Sandwich, IL

1. Tell us about your farm and how you became involved with the beef industry.

My wife JoAnn and I live on a family farm near Sandwich, Illinois. We have a 55 cow herd that produce calves each year and graze the pastures on our farm. We also have a beef feedlot where we buy young cattle and raise them to market weight. I started in the beef business when I was eight and by the time I graduated from high school, I was part owner of the cattle we fed each year on our farm. When I was a senior in college, a neighboring farmer retired and I asked to rent the farm. I borrowed money, from a bank, to pay for seed, fertilizer and feed for some feeder cattle and pigs. My parents let me use their farm equipment in return for helping them on their farm. I enjoyed working outside and caring for the cattle and because my farm had a lot of pasture land, I concentrated on increasing the cattle operation to take advantage of all the grass and hay I could produce.

2. What is your favorite part about your job?

My favorite part of my job is taking care of baby calves. We must watch the mother cows very closely to make sure the calves are born safely. Occasionally, we need to assist the cow to help her have a smooth delivery. The young calves also need attention to make sure they get off to a good start. It’s important that they start getting their mothers’ milk immediately. It’s hard work but watching the new calves as they start to grow makes it all worthwhile!

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