

# THE STORY OF COLORADO BEEF

## Number 1

Colorado has around 2.65 million head of cattle, making beef cattle the number one agricultural product in the state.

Colorado livestock and products generate more than \$5.7 billion for the state's economy.



The Red Angus cows and calves pictured here belong to Beatty Canyon Ranch located in Kim, Colorado. They are one of nearly 15,000 cattle and calf farms and ranches in Colorado.

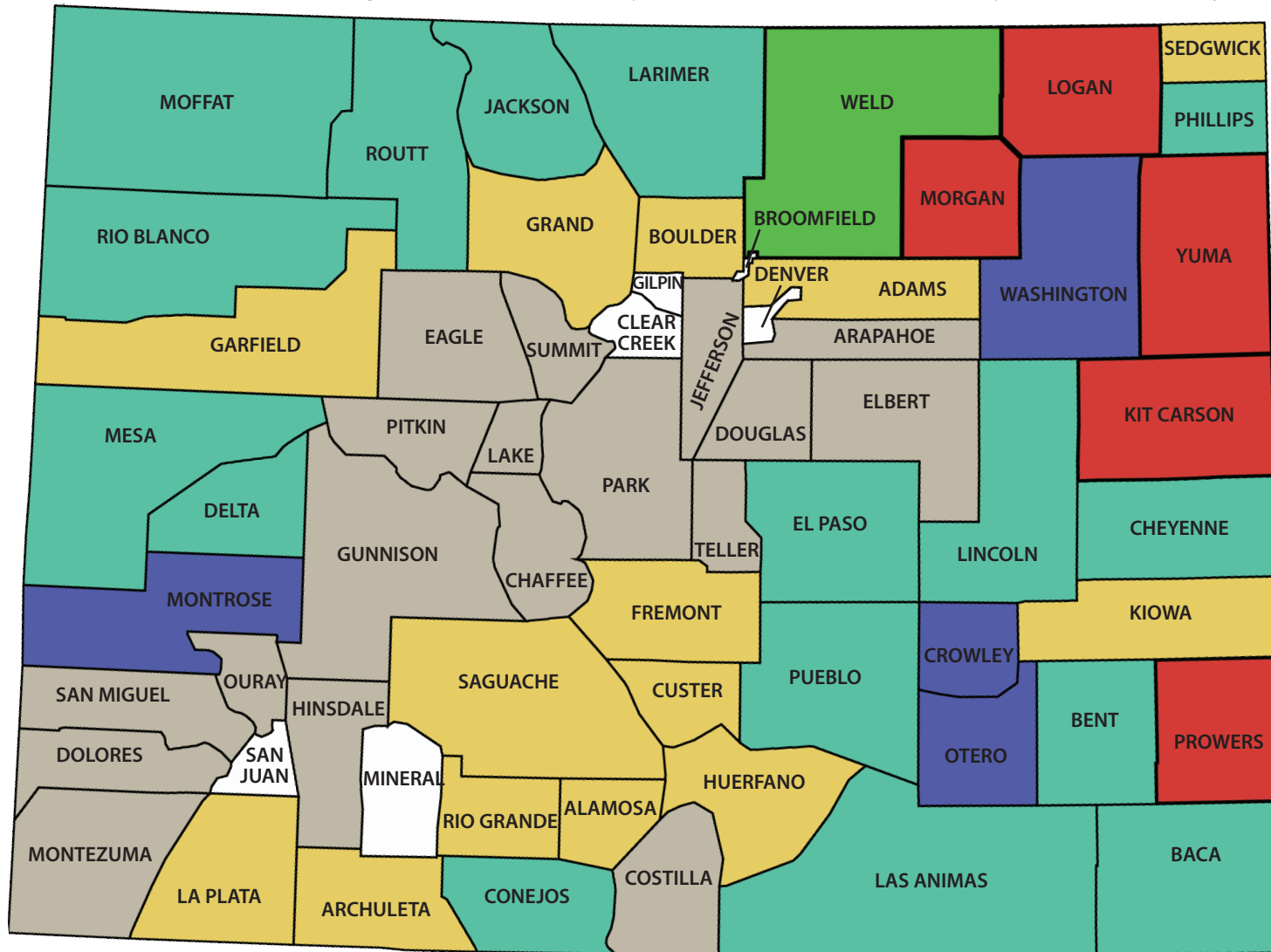
Farmers and ranchers, also called cattlemen and cattlegirls, are caretakers of cattle and the land. The meat we eat from cattle is called beef. Beef gets its start on a farm or ranch. Some are small and some are large, but at the end of the day a farm or ranch is also a business, and usually a family business. More than 90 percent of the beef

cattle farms and ranches in the United States are family owned. Cattle production in Colorado has a history of more than 150 years. Cattlemen and cattlegirls have a long tradition of providing us with a wholesome and delicious food supply, while caring for Colorado's land, water, and wildlife resources.

Source: CoBeef.com



# WHERE ARE THE CATTLE?



Beef cows and calves (cattle) can be found in nearly every county of Colorado! This map shows the counties in Colorado where cattle are raised, according to Colorado Agricultural Statistics.

Cattle receive their nutrition by grazing or by being fed a balanced ration by their caretakers. Many of the counties colored white are either cities or where the mountains are so high there is no grass or forage.

## Key - Cattle Numbers

- More than 500,000
- 100,000 to 499,999
- 50,000 to 99,999
- 25,000 to 49,999
- 10,000 to 24,999
- Less than 10,000
- Did not report statistical numbers

What county has the most beef cows and calves?

\_\_\_\_\_

Can you name the five counties that are in the 100,000 to 499,999 range?

\_\_\_\_\_

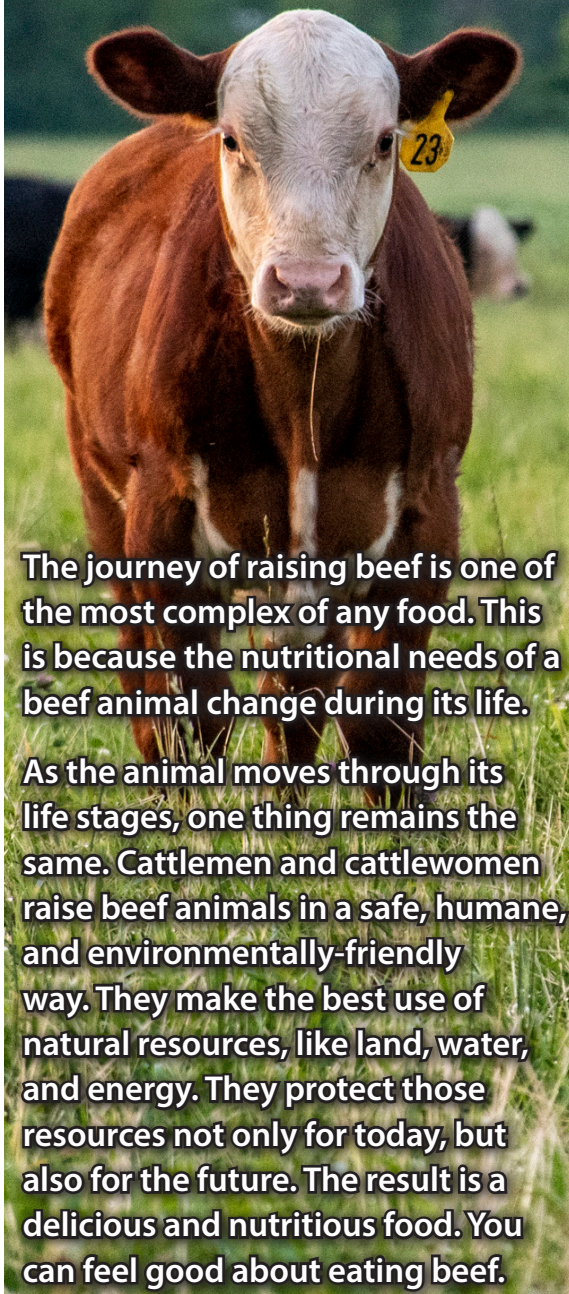
What is the range of cattle numbers for the county where you live?

\_\_\_\_\_

How many counties raise between 10,000 and 99,999 beef cows and calves?

\_\_\_\_\_

# EXPLORE THE BEEF LIFE CYCLE



The journey of raising beef is one of the most complex of any food. This is because the nutritional needs of a beef animal change during its life.

As the animal moves through its life stages, one thing remains the same. Cattlemen and cattlemen raise beef animals in a safe, humane, and environmentally-friendly way. They make the best use of natural resources, like land, water, and energy. They protect those resources not only for today, but also for the future. The result is a delicious and nutritious food. You can feel good about eating beef.

## 1 COW-CALF FARM OR RANCH:

Raising beef begins with ranchers. These ranchers have a herd of cows. The cows give birth to calves once a year. Calves can be born any time during the year, but most are born from January to May. About 40 percent are born in the fall. When a calf is born, it can weigh between 60 to 100 pounds. For the first six months of its life, each calf will live off its mother's milk and eat grass.

## 2 WEANING:

Calves are weaned or separated from their mother's milk at six to ten months of age. At this weaning stage, they weigh between 450 and 700 pounds. These calves continue to eat grass. They may also eat a small amount of feed. This feed is plant based and gives the calves extra energy and protein to help them grow.

## 3 STOCKERS AND BACKGROUNDERS:

After weaning, the calves may be sold to ranchers called stockers or backgrounders. These ranchers continue to care for the calves. The calves grow and thrive by eating grass in pastures. The calves also eat additional feed, which includes vitamins and minerals. This additional feed makes sure the animals are getting all of their nutritional needs.

## 4 LIVESTOCK AUCTION MARKETS:

After weaning and/or during the stocker and backgrounder phase, many calves leave the farm or ranch where they were born. They may be sold at livestock auction markets, online auctions, or through a company cattle buyer. The calves are typically between 6-12 months of age at this stage.

## 5 FEEDYARD:

Mature cattle are often moved to feedyards. Here cattle typically spend four to six months. They are free to eat at feed bunks. The feed is a carefully balanced diet made up of roughage and grain. Roughage can be hay and grass. Grains include corn, wheat, and soybean meal. Veterinarians, nutritionists, and caretakers work together to provide individual care for each animal.

## 6 PACKING PLANT:

Cattle reach market weight around 1,200 to 1,400 pounds at 18 to 22 months of age. They are then sent to a packing plant (also called a processing facility). United States Department of Agriculture (USDA) inspectors oversee safety, animal welfare, and quality standards. Their goal is to make sure all standards are met. There are strict standards from the time animals enter the plant until the final beef products are shipped to grocery stores and restaurants.



# SUPERHEROS FOR THE PLANET

Did you know that beef cattle are superheroes?  
Beef cattle production helps protect the planet.

Beef farmers and ranchers care deeply for the planet and have an interest in sustainability. They want to care for the land that was passed on from their ancestors and leave it better for the future. They use cattle as a tool to improve nature.

Cattle munch on grass and plants that humans can't eat and turn them into beef that we can eat. When cattle eat plants and digest them with their special stomachs, it causes them to burp. Cattle burps are part of a natural cycle. The gases they release only stay in the atmosphere for a short time before they return to the soil. Cattle grazing helps this process by using their hooves, or feet, to speed up plant growth.

The land where cattle live is also a home for many insects and animals like birds and butterflies. This land also allows people to enjoy nature by biking, hiking, camping, and more. Cattle are superheroes that help the planet and provide delicious beef dishes like steak and hamburgers to people, too!

**How can YOU be a superhero for the planet? In the space below, create a superhero name and describe their power for protecting the planet.**

Superhero name: \_\_\_\_\_

Superhero power: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Can you match the beef cattle feeds pictured on the right with the descriptions below?**

**A - Grass/Hay:** Grass can be cut and made into hay for livestock. Different types of hay will have varying levels of protein and fiber.

**B - Steam Flaked Corn:** Corn is often processed with a steam-flaker to make the nutrients easier to digest. Corn is a great source of energy.

**C - Rolled Oats:** Oats are a good source of fiber and can be fed during most stages of growth.

**D - Sugar Beet Pellets:** Pulp leftover from processing sugar beets into sugar for humans is made into pellets for feed for cattle and contains energy and fiber.

**E - Mixed Ration:** A ration is a mixture of many feed sources (such as oats, corn, pellets and ground hay) to create a balanced diet for the cattle to include protein, energy and fiber.



Answer 1: \_\_\_\_\_



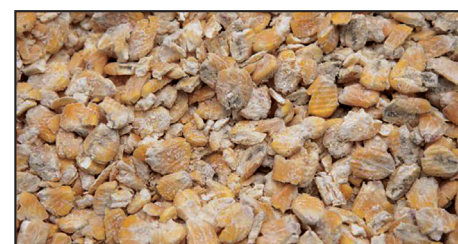
Answer 2: \_\_\_\_\_



Answer 3: \_\_\_\_\_



Answer 4: \_\_\_\_\_



Answer 5: \_\_\_\_\_



# COLORADO LAND USE

Land is one of our most vital resources. We build our civilizations on it. It is habitat for thousands of species and a critical part of our ecosystem. We need land for agriculture to produce the food, clothing, and shelter we need. There are about 66.6 million acres of land in Colorado. This is all of the land available for homes, schools, airports, roads, farms, ranches, recreational areas, wildlife habitat, and everything else! Most of Colorado's land is too rocky, cold, hot, or dry to grow crops, but it can support livestock. Cattle are able to graze federal land, forest land, pastureland, and rangeland. Proper grazing of these lands helps to reduce risk of wildfires.

The chart on this page represents all the different uses of land in Colorado, according to 2017 data from the U.S. Department of Agriculture.

## Vocabulary of land uses:

**cropland:** a land cover / use category that includes areas used for the cultivation of agricultural crops

**Conservation Reserve Program (CRP) land:** a land conservation program administered by the federal government where farmers agree to remove environmentally-sensitive land from agricultural production and plant species that will improve environmental health and quality

**developed land:** land that houses, buildings, etc. have been built on and land used for industrial purposes

**federal land:** lands owned by the United States federal government

**forest land:** an area of land covered by forests

**other rural land:** all land that is not urban and includes farmsteads and other farm structures, field windbreaks, barren land, and marshland

**pasture / pastureland:** land covered with grass and other low plants suitable for grazing animals, especially cattle or sheep

**rangelands:** open land vegetated mainly by native grasses, forbs, and shrubs used by grazing wildlife and livestock

**water areas:** a land use category to describe bodies of waters and streams that have permanent open water

Using the chart legend, write in the correct labels for each piece of the pie chart to show how land in Colorado is used.

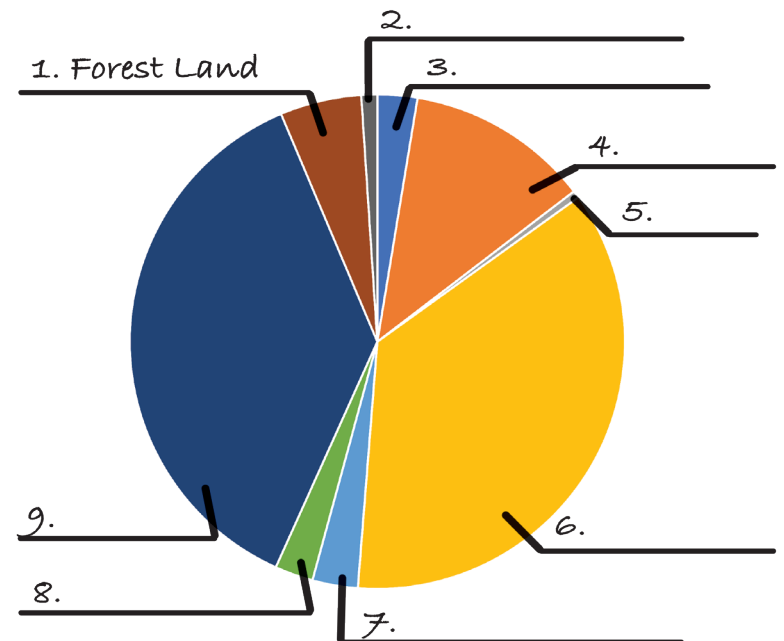


Chart Legend: Colorado Land Use\*

<b>Cropland: 12.0%</b>	<b>Other Rural Land: 1.0%</b>
<b>CRP Land: 2.5%</b>	<b>Pastureland: 2.6%</b>
<b>Developed: 3.0%</b>	<b>Rangeland: 36.9%</b>
<b>Federal Land: 36.2%</b>	<b>Water Areas: 0.5%</b>
<b>Forest Land: 5.3%</b>	





# TEST YOUR BEEF SUSTAINABILITY KNOWLEDGE

Beef farmers and ranchers are committed to raising cattle in a way that is good for the planet. In fact, cattle do more than provide beef for you to eat: they also preserve the land where they live. How much do you know about beef's role in sustainability? Or are you a sustainability expert? Take the beef sustainability quiz below.

1. Where do cattle protect open space and enhance wildlife habitats by grazing?<sup>3</sup>

- a. the West coast
- b. across the entire United States
- C. the Rocky Mountains
- d. Florida wetlands



2. Cattle grazing can \_\_\_\_\_, which not only protects animal habitats, it allows people to enjoy the outdoors by biking, hiking, camping, and more.<sup>3</sup>

- a. destroy land
- b. conserve land
- c. remove land



3. The land that cattle graze on protects the habitats of \_\_\_\_\_ species of animals like ducks, butterflies, ladybugs, elk, and more.<sup>3</sup>

- a. several hundred
- b. 20
- c. 5
- d. 2 million



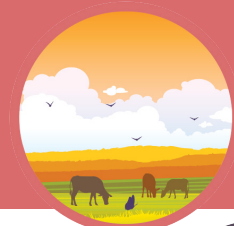
4. By adopting a vegetarian diet for a year and eliminating beef, you would reduce your household's total greenhouse gas emissions by only \_\_\_\_\_. That's less than the emissions from ONE flight across the Atlantic Ocean!<sup>1,2</sup>

- a. 25%
- b. 17%
- c. 3%
- d. 37%



5. What happens when cattle graze on open space?<sup>3,6,7</sup>

- a. they reduce fuel for wildfires by munching on overgrown natural forages
- b. they provide habitats for wildlife like deer, birds, and even insects and butterflies
- c. they take plants that humans can't eat and turn them into wholesome, delicious beef that we can eat
- d. all of the above



6. True or false: Cattle are the largest emitters of greenhouse gases in the United States.<sup>4</sup>

- a. True. Cattle production is a major cause of greenhouse gases.
- b. False. Cattle are part of a natural carbon cycle, releasing just 2% of emissions when they burp, yet the transportation and electricity industries make up nearly 60% of emissions, combined.



7. \_\_\_\_\_, or poop, from cattle can help improve the soil, which is important for worms and plants to grow and thrive.<sup>8,9</sup>

- a. rumen
- b. fertilizer
- c. manure
- d. compost



8. Cattle are part of Mother Nature's carbon cycle because...<sup>5</sup>

- a. The methane they release when they burp only stays in the atmosphere for about ten years before it's recycled in the soil and reabsorbed by growing plants.
- b. Cattle are the largest emitters of greenhouse gases in the United States.
- c. They don't release any methane at all.





# MEET A COLORADO RANCHING FAMILY

## THE JOHNSTON FAMILY, CANON CITY

We are a first-generation ranching family that manages a large cow-calf herd in southern Colorado. Cow-calf means that we have cows (females) and bulls (males), and every year each cow has a calf (baby) in the spring. The calves are sold in the late fall, after they have been weaned (separated from their mothers). The ranch has two divisions, one high up in the mountains and the other on the plains. Our land isn't very good for raising crops—it's too dry and cold with a short growing season on the mountain, and too dry and hot down on the plains—it's great for growing grass and other plants that cows can eat!

### Who is involved:

Bert and Cassidy (aka Mom and Dad) and their three boys: Wacey, Buster, and Kirby. Plus a lot of dogs, horses, and several barn cats! There are also ranch hands and their families who live and work on the ranch.

### Why we ranch:

We are first-generation ranchers, which means that we are the first ones in our families to decide that we wanted to ranch. Bert knew he wanted to be a cowboy from the time he was really little. He participated in rodeo all the way through college and started working on a ranch as a teenager. Cassidy discovered ranching in college and knew that it was what she wanted to do for the rest of her life almost right away. Because they didn't grow up on a ranch, they work for big ranches that need a lot of cowboys to take care of all the cattle. Together they have lived and worked on several large ranches in three different states but are glad to be back home in their native Colorado. Wacey loves to go with dad on his horse, Zombie, to help move and care for the cattle. Buster hangs out with mom, helps keep cow records straight, and makes sure we have enough snacks. Kirby loves to be anywhere that he can wear boots that might have a cow, horse, cat, dog, backhoe, tractor, skidsteer, or a pickup truck, so he's a happy camper no matter what.

### Describe a typical day:

This time of year (the middle of winter) is all about keeping cattle fed and getting ready for calving (when cows give birth to calves). We should have calves any day now, so the barns have been bedded, the vet room has been stocked, and we are ready to go! Every morning we feed cows and break water that has frozen during the night, check on the horses in the pens, and generally get a good look at everything to make sure all is well. The heifers (first-time moms) that are getting ready to have their babies are in a pen near the barn so we can keep a close eye on them.



The Johnston Family  
Cassidy, Kirby, Bert (standing)  
Buster and Wacey (on fence)



Heifers standing in a pen.



# PEANUT BUTTER, CHOCOLATE, HAZELNUT, BEEF JERKY COOKIES

This cookie is definitely worth a try! Creamy peanut butter and chocolaty hazelnut spread and highlighted by the smoky and salty flavors of Beef Jerky.

## INGREDIENTS:

3/4 cup butter, softened (1-1/2 sticks)  
1/2 cup sugar  
1/2 cup brown sugar  
1/2 cup creamy peanut butter  
1/2 cup chocolate-hazelnut spread  
1 egg  
1 tablespoon vanilla extract  
1-1/2 cups all purpose flour  
1 teaspoon baking soda  
1/4 teaspoon kosher salt  
2/3 cup finely chopped beef jerky  
1/4 cup bittersweet chocolate chips



## COOKING:

1. Preheat oven to 350°F. Combine butter, sugars, peanut butter and hazelnut-chocolate spread in large bowl. Using hand or stand mixer, mix until and fluffy. Add egg and vanilla; mix until fully incorporated.

2. Combine flour, baking soda and salt in medium bowl; whisk together. Add flour mixture to butter mixture; mix until fully incorporated; do not over mix. Add in jerky and chocolate chips. Divide dough into 24 equal balls. Place on 2 ungreased shallow-rimmed baking sheets. Bake in 350°F oven 13 to 15 minutes or until tops are evenly cracked. Cool 10 minutes before serving.

## FUN BEEF FACTS

Beef cattle are raised in all 50 states of the United States!

Dogs and cats drink water by lapping water with their tongues, while cattle and horses make use of a sucking action.

Taking into account all water from farm to fork, it takes 308 gallons of water to produce one pound of beef to eat.

Cows regurgitate their food and re-chew this cud to help digestion.

For every 100 pounds of human food produced from crops, there are 37 pounds of plant leftovers produced. Cattle can consume these products that would otherwise go to the landfills.

It is possible to lead cattle upstairs but not downstairs. The knees of cattle cannot bend properly to walk back down.

Source: [BeefItsWhatsForDinner.com](http://BeefItsWhatsForDinner.com)



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