

beef

Connection

Be Ag Smart! The Beef Connection has been developed and produced by Texas Farm Bureau Agriculture in the Classroom

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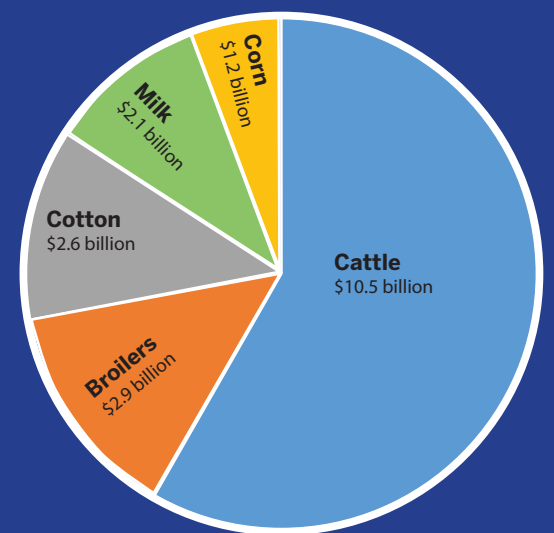
Teachers—For lesson plans, videos and other resources for your classroom, go to texasfarmbureau.org

Fort Worth Stockyards/Cattle drives

Texas is famous for the iconic cowboy way of life. Due to the abundance of cattle in Texas, they were only worth a dollar or two. The northern and eastern states were demanding beef and would pay up to \$20, much more than in Texas. Ranchers wanted higher prices, but the cattle had to be delivered to these states. This need created cattle drives. The two most famous Texas cattle drives are the Chisholm Trail and the Goodnight-Loving Trail. These trails first started in 1866 to take cattle to Kansas and Colorado, where there were railroads to ship the cattle further to buyers who would pay a higher price.

The Fort Worth Stockyards are also iconic to Texas cattlemen. Fort Worth was the last major stop for those following the Chisholm Trail. They could rest and gather supplies before leaving Texas. Between 1866 and 1890, more than 4 million head of cattle were trailed through Fort Worth, giving it the nickname “Cowtown.” In 1876, the railroad arrived at Fort Worth. Cattle were now driven straight to Fort Worth to be shipped by railroad to northern and eastern states to be sold at higher prices.

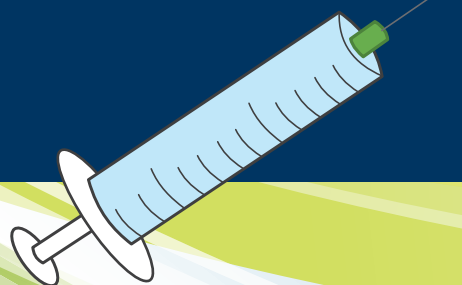
Beef cattle production represents the largest single segment of Texas agriculture.



(Source: Texas Department of Agriculture)

Vaccines

Ranchers care about their cattle. They monitor the cows to make sure they are getting enough feed and they are not sick. If any of the animals are ill, they are observed by the rancher and veterinarian. Together, they decide how to treat the animal. It will only be given just what it needs to get better. By giving their cattle proper care, nutrition and disease prevention, antibiotic usage decreases.



CATTLE BREEDS

Worldwide, there are more than 250 breeds of cattle. Over 60 of these breeds are present in the United States. However, a relatively small number of breeds (less than 20) are used for commercial beef production. Some of those breeds are:



ANGUS
Imported from Scotland in 1873



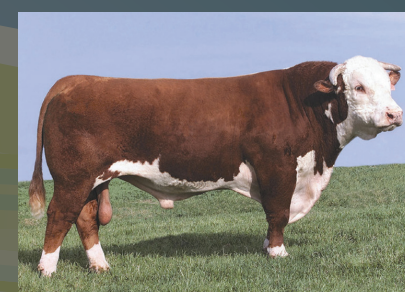
BEEFMASTER
Developed in early 1930s in Texas
Brahman-Hereford-Shorthorn cross



BRAHMAN
Imported from India in 1854



BRANGUS
Developed in 1932 in U.S.
Angus-Brahman cross



HEREFORD
Imported from England in 1817

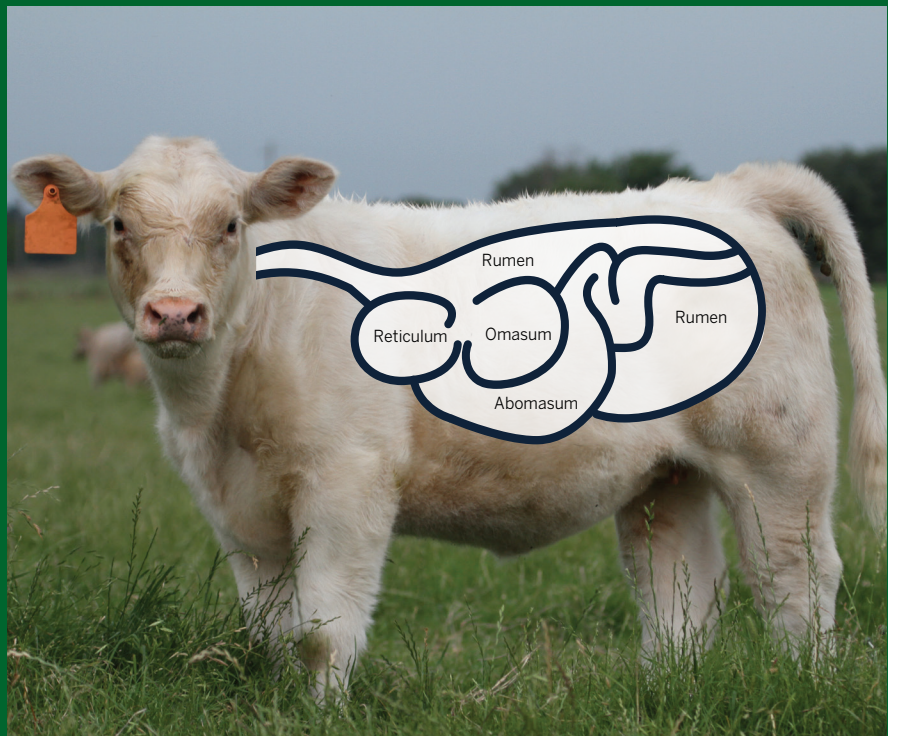


CHAROLAIS
Imported from France in 1936

What does “chew their cud” mean?

Cattle have a four-chamber stomach. Every part of the stomach has a different function. Before the food can pass to certain sections, it must be rechewed.

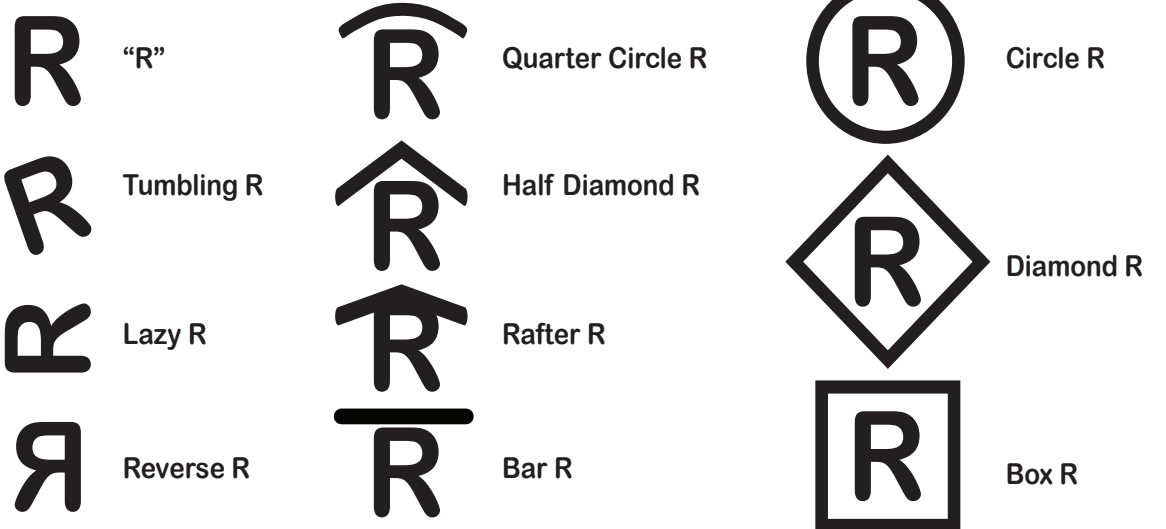
- 1) Cows swallow food.
- 2) The food first enters the biggest stomach compartment, the *rumen*. Here, the food is mixed with bacteria to break down into smaller pieces. This process is called fermentation.
- 3) Next, it moves on to the next compartment, the *reticulum*. Here, the nutrients from the food are absorbed into the bloodstream.
- 4) The cow now burps up a small amount of food (cud) to chew again.
- 5) After chewing her cud, she swallows again and her cud goes into the third and fourth stomach compartments, the *omasum* and *abomasum*, where additional digestion occurs and more nutrients are absorbed into the bloodstream.



Reading a brand

Before fences weaved across Texas, ranchers used brands to tell their cattle apart. Cattle were allowed to roam free and graze, unlike today. Hot irons were used to form letters, shapes or pictures to mark ownership of

the cattle. Brands are still used today, but ear tags are also common. Brands have their own language. Read below to learn how to read brands and make your own.



Name the Brand

1.  _____
2.  _____
3.  _____
4.  _____
5.  _____

BEEF ON THE ROAD

Tires contain stearic acid, a byproduct of animal fat that makes the rubber hold its shape under continuous surface friction. Even the asphalt on the road has a binding agent from fat. Other byproducts used in the automobile industry include antifreeze, car polishes and wax and brake fluid.



DID YOU KNOW?

18 Volleyballs
or
144 Baseballs
or
12 Baseball Gloves
or
18 Soccer Balls

The hide from one beef animal can be made into:

12 Basketballs
or
20 Footballs
or
18 Soccer Balls

What's in a name?

Cow—female beef animal that has had a calf

Heifer—female beef animal that has not had a calf

Bull—male beef animal used to breed cows and heifers

Steer—male beef animal that cannot reproduce

Calf—young beef animal

ANIMAL IDENTIFICATION



Animal identification allows farmers the ability to observe each animal very closely and to keep records on an animal's birthdate, mother, father, growth, weight gain, health history, offspring and even how much feed they are eating. Tags can hold the owner's name, telephone number and even the ranch name that the animal belongs to. Numbers on the tags allow the rancher to tell the cattle apart.



Did you know—
Some counties in Texas have more cattle than people?

did you know?

Cows have 32 teeth, just like humans, but do not have any top front teeth!

Cattle chew 50 times per minute.

They can drink between 30 to 50 gallons of water a day—that's a bathtub full!

Cattle need the correct mixture of protein, carbohydrates, fats, minerals and vitamins to grow, just like humans!

BEEF LIFE CYCLE

1

COW-CALF RANCH

Cows and young cows, called heifers, give birth to baby cows, called calves. This happens once a year. Calves drink milk from their mothers the first few months of their lives.

2

WEANING

Calves are weaned, or kept from their mothers, when they are about eight months old and weigh about 500 pounds.

3

STOCKERS AND BACKGROUNDERS

Men and women called stockers or backgrounders then buy calves after they are weaned. The calves are placed in a new pasture with other calves their age. The calves grow as they turn grass, hay and grain into muscle and fat.

4

FEEDYARD

Most cattle then move to feedyards. They spend three to five months at the feedyard. At the feedyard, cattle do not graze on pasture. Instead, they are given a balanced, nutritious diet of grasses, corn plant silage and hay. They also eat grains like corn and wheat. Some cattle stay on pasture for their entire lives. The meat from these cattle is called grass-fed or grass-finished.

5

PACKING PLANT

Cattle are harvested in packing plants where workers break down the carcasses, or meat, into popular beef cuts. The process of harvesting beef is done so the cattle are treated in an approved way and the food is produced safely.

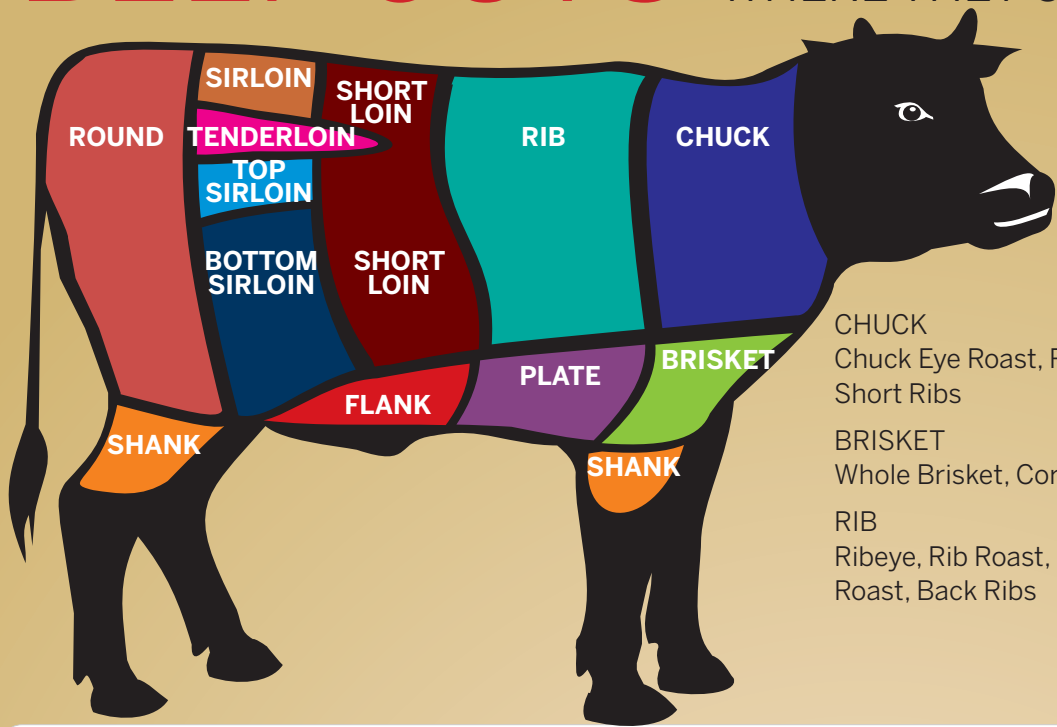
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FOOD SERVICE AND RETAIL

Beef moves from the packing plant to other processing facilities that send individual steaks, roasts and other cuts to grocery stores and restaurants. About 90 percent of the beef raised in the United States is eaten in the United States.

BEEF CUTS

WHERE THEY COME FROM—



CHUCK
Chuck Eye Roast, Pot Roast, Short Ribs

BRISKET
Whole Brisket, Corned Brisket

RIB
Ribeye, Rib Roast, Rib Steak, Roast, Back Ribs

SHANK
Shank Cross Cut

SHORT LOIN
T-Bone Steak, Porterhouse Steak, Top Loin Steak, Tenderloin Roast/Steak

PLATE
Skirt Steak (fajitas)

FLANK
Flank Steak, Flank Steak Rolls

SIRLOIN
Sirloin Steak, Top Sirloin Steak, Beef Tri-Tip

ROUND
Round Steak, Top Round Steak, Bottom Round Roast, Eye Round Roast, Tip Steak, Boneless Rump Roast

BEEF NUTRITION

Beef is a very important component of our diet. Beef provides us with three essential nutrients: protein, iron and zinc. Protein builds, maintains and repairs body tissues. Iron helps red blood cells carry oxygen to body cells and tissues. Zinc helps with growth and maintaining the immune system. Beef also provides B-vitamins, which promote healthy skin, a healthy nervous system and are important for digestion and metabolism. One 3-ounce serving of lean beef provides 50% of the daily value of our need for protein.



WORD SEARCH FUN!

ANTIFREEZE
BELTS
CANDLES
CRAYONS
FOOTBALLS
MARSHMALLOW
PAPER
PURSES
TOOTHPASTE
BANDAGES
BOOTS
CHEWING GUM
CREAM
GLOVES
MEDICINES
PASTA
SHOE POLISH
BASEBALLS
CAKE MIX
COSMETICS
DEODORANT
ICE CREAM
PAINT
PLASTICS
TIRES

C B E L T S Y I T S P W G C O
R R H O E U C N H H O A U H M
Y X A V W E A O L L T G P C A
N M O Y C R E E L F O I Y E E
T L F R O P B A N D A G E S R
G O E D O N M G K S T O O B C
S A O L E H S C I T S A L P H
M E I T S A N T I F R E E Z E
D S N R H S L L A B T O O F W
H N A I Z P E C A N D L E S I
X M Z F C B A S E B A L L S N
P A S T A I R S R T N I A P G
T I R E S L D S T U H W C I G
X I M E K A C E B E P C T O U
D Q H S C I T E M S O C Y F M

Humans cannot digest grass but cattle can! Grazing animals more than doubles the area that food can be produced from by using land that isn't suitable for crop production.