



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. They are called beef by-products. Because of these by-products, we are able to use 99% of every steer. About 400 pounds of beef come from one steer, and the rest of the steer is used for by-products. Some examples of these by-products are candles, crayons, cosmetics, detergent, insulation, plastics, soaps, pet foods, piano keys, luggage, wall-paper, film for a camera, insulin for diabetes, car polishes, and textiles for car upholstery.



Beef Vocabulary

Heifer – young female from the time she is born to just before she has had a calf

Cow – female after she has had a calf

Bull – male

Steer – neutered male

Polled – without horns

Cloven hooves – Hooves split in the center or a two-toed hoof

Feedlot – a fenced-in area where cattle are fed concentrated feed for the last 300-400 pounds of their growth

Cud – cattle graze or eat quickly and then bring up a small amount of food to chew into very tiny pieces. They spend many hours chewing this food, which is the cud

Wean – process of removing a mammal from nursing on milk

What do cattle eat?

Cattle raised on ranches graze on the range, and cattle raised on farms graze on pasture. Calves gain 50-70% of their final weight before they are weaned from their mother by consuming primarily their mother's milk and grazing on the same land that their mother's graze. After weaning, cattle are fed hay, silage, grain and food processing by-products such as cottonseed meal, citrus pulp, tomato pulp, potato peels, sugar beet pulp, almond hulls, cereal by-products, soy hulls, or canola seed hulls. Most cattle feed is produced on non-irrigated land.



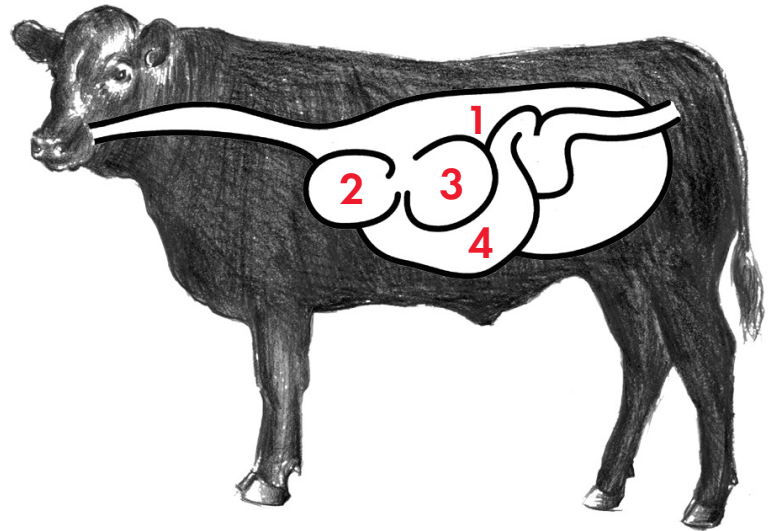
Four Parts in One

Pretend you are going to the fair today. What would you eat? Two hot dogs? Four caramel apples? How about 320 cans of soda? What? You can't drink 320 cans of soda at once! A steer can! On average, a beef animal drinks 30 gallons of water a day. That equals about 320 cans of soda! A full grown steer eats about 25 pounds of feed each day too! They eat corn and hay though... not hot dogs and caramel apples.

Cattle, sheep and goats are called ruminants (ROOM•IN•UHNTS). They have a special stomach so they can digest roughages (grass or hay). There are four compartments in the ruminant stomach called the

- 1) rumen (ROOM•EN),
- 2) reticulum (REH•TICK•YOU•LUM),
- 3) omasum (OH•MAY•SUM), and
- 4) abomasums (AB•OH•MAY•SUM).

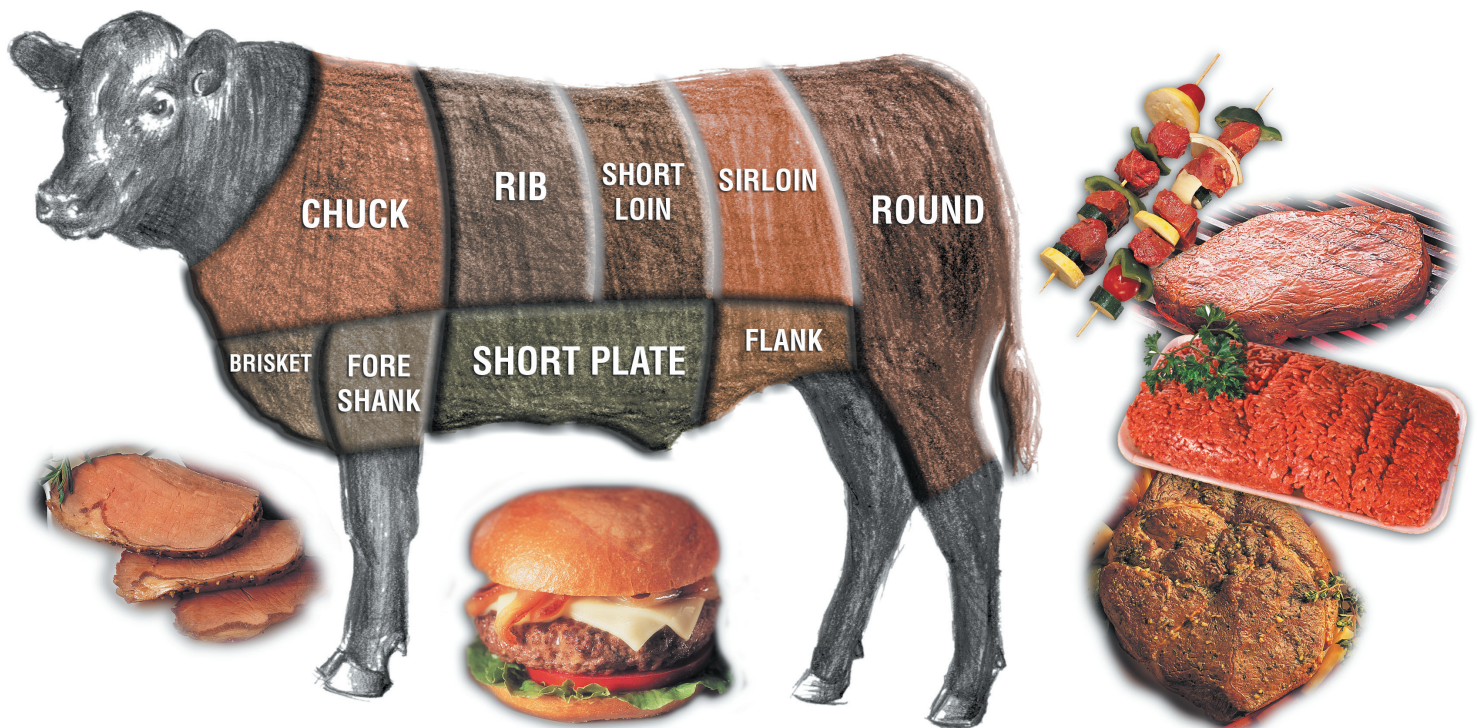
Tiny microorganisms in the stomachs help cattle digest the roughage they eat. To break down the grass and hay cattle must “burp up” a mixture of what they have already eaten. It is called a “cud” and is about the size of a baseball. Cows may spend as many as eight hours a day chewing their cud.



Have you ever eaten these cuts of beef?

See if you can find them at your grocery store.

Pot Roast • Sirloin Steak • Ground Beef • Rib Eye Steak
Tenderloin Steak • Round Roast





Read About Breeds

Just as there are different breeds of dogs, there are different breeds of cattle.

Today's cattle are often crossbred to produce certain characteristics.

This helps improve the quality of the farmer's product. Write the correct picture number next to the breed descriptions below.

Hereford: Red body with a white face, belly, feet, and tail switch ____

Angus: Black (but sometimes red) ____

Shorthorn: Red, white, red-and-white spotted, or roan (red and white mixed) ____

Charolais: White and thick-muscled ____

Simmental: Yellow-brown with white markings ____

Cattle Toss

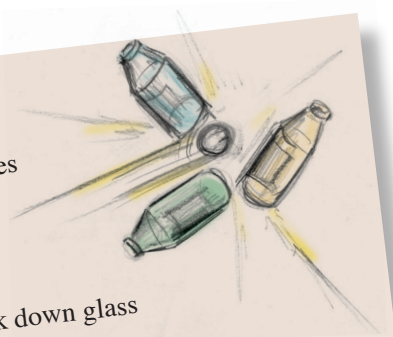
Many fairs and carnivals have special places where you can ride Ferris wheels and play games. Did you know that you can find cattle there too?

That's right. The balls you throw to knock down glass bottles

are probably made from leather, which comes from cattle.

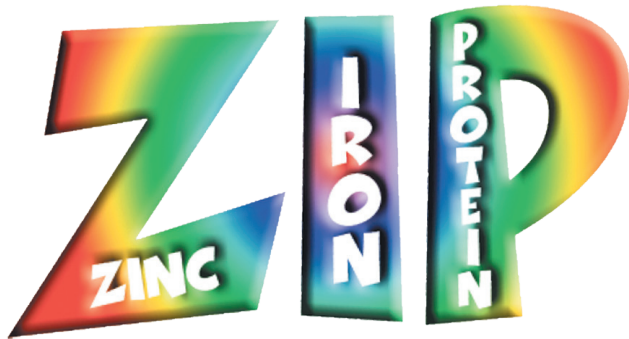
The hide from one steer can make 144 baseballs, 20 footballs, or 12 basketballs. Companies that make sports equipment use more than 100,000 hides each year.

Make a list of other sports equipment that you think is made from cows. Compare the size of the equipment on your list to size of the baseball, football, and basketball. How many pieces of your equipment do you think come from one hide?



NUTRITION NEWS

Beef Has ZIP



Beef is a good source of ZIP! What is ZIP? ZIP stands for Zinc, Iron, and Protein. These three nutrients are especially important for girls and boys in their growing years.

Zinc is a mineral the human body needs to grow, learn, heal, and keep itself healthy. Zinc is also important for attention, short-term memory, and problem solving. Lean beef is one of the best sources of zinc.

Iron is another mineral important to human health. Iron is needed for the blood to carry oxygen to cells. Without enough iron humans get tired, weak and grouchy. Older girls need extra iron and only 40 percent get enough.

Protein is needed to build muscles, nerve tissue, blood, enzymes, hormones, antibodies, and organs. Protein is needed to build, repair and maintain the body. Protein is made up of amino acids. About 20 different amino acids can be found in protein. The body makes all but 9 of these amino acids. These are considered essential amino acids. No single plant food contains all of these essential amino acids. Animal sources of protein do contain all 9 essential amino acids. Animal sources of protein are considered complete protein while plant sources of protein are considered incomplete.

Does beef provide any other nutrients? Yes, beef also provides B complex vitamins such as niacin, riboflavin and B₁₂. B vitamins are needed to release the energy in foods eaten. Beef also provides selenium and phosphorous.

THE NUTRITIONAL ADVANTAGE OF BEEF

ZINC –

3 ounces of beef =



Almost 12 (3 ounce) servings of tuna



B₁₂ –

3 ounces of beef =



7 (3 ounce) servings of chicken breasts



IRON –

3 ounces of beef =



3 cups of raw spinach

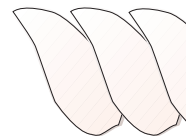


RIBOFLAVIN –

3 ounces of beef =



2¹/₃ (3 ounce) servings of chicken breasts



THIAMIN –

3 ounces of beef =



1³/₄ (3 ounce) servings of chicken breasts



This issue of Ag Mag has been provided by:



To learn more about Agriculture, visit us at www.agintheclassroom.org, or contact your county Farm Bureau® office or Illinois Agriculture in the Classroom, Illinois Farm Bureau®, 1701 Towanda Avenue, Bloomington, IL 61701