

# **Beef Cattle**

## **The Beef Cattle Industry in New Mexico**

### **a Brief History**

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Don Juan de Oñate, who arrived in 1598, was New Mexico's first cattleman. Spaniards who came earlier were explorers and gold seekers, but Oñate was a colonizer. His expedition brought families along with their means of survival in a strange new world. Nowadays, it is difficult to understand a time when it was not possible to "go to the store" and buy food, clothing and equipment for a family's daily needs.

Oñate brought 86 ox carts, 1,376 horses, 121 mules and donkeys and 5,503 head of cattle and sheep. Although we don't know exactly how many of those 5,503 animals were cattle, we do know the colonists had more sheep than cattle because they knew raiding Indians could more easily escape with cattle. This was New Mexico's first permanent cattle herd.

The cattle and sheep thrived in their new land, and provided their owners with food, clothing and other household necessities. For example, beef fat is an important soap ingredient, and can be used to make candles.

Spanish colonizers were given land grants by their government in Spain. If a man intended only to farm, he received one "labor" (177 acres), but if he planned to raise livestock, also, he received one "sitio" (4,438 acres). Therefore, most grantees agreed to raise livestock.

In 1680, the Pueblo Indians revolted and drove the Spaniards south, out of New Mexico. Many cattle were left to run wild during this retreat. Don Diego de Vargas led the Spaniards' return in 1692. From then until 1822, cattle provided necessary trade items, like cowhides, to be sent to Mexico on the Camino Real.

New Mexico became a part of Mexico in 1822, and the Santa Fe Trail opened trade with the United States. By then, cattle had evolved into animals suited to their difficult environment. They were bony, tough, long-legged and had horns that sometimes measured seven and a half feet from tip to tip. They were called Longhorns.

About 1840, Colt's pistol was manufactured. These new weapons could easily be carried horseback to defend cattle herds.

In 1850, the United States paid Texas \$10 million for the eastern half of New Mexico, and in 1853, the United States paid Mexico \$10 million for what was called the Gadsden Strip which now is southwestern New Mexico.

The main cattle market became New Orleans, but gold had been discovered in California, and the miners needed food. Some cattle were driven through New Mexico to the gold camps, but as can be imagined this was extremely difficult. However, cattle worth five to fifteen dollars per head in Texas sold for \$150 each in California, so a few hardy souls managed to complete the journey.

During the 1860s, the Indian Wars and the United States Civil War affected the New Mexico livestock industry. Civil War soldiers had discovered that beef was both satisfying and strengthening. P.D. Armour and G. F. Swift both established beef packing plants in Chicago. Competition between the two was so keen they used every bit of each carcass, and earned their profits only from sale of the by-products (hooves, hides, horns, etc.).

These men studied the cost involved in shipping the cattle from the West and Southwest such a long distance. Mr. Armour became the first man to open a packing plant in Kansas City.

For the first time, American factory workers and clerks could afford to eat beef. Armour and Swift not only provided cheaper beef for their customers, they created a vast new demand for cattlemen's product. During this time refrigeration was invented, which further extended the marketing boundaries.

Meanwhile, Navajo Indians had been taken to Fort Sumner, New Mexico, and the United States government had to feed both soldiers and Indians. John Chisum contracted 7,000 head of cattle to the government for delivery in 1867.

Elsewhere, many cattlemen simultaneously decided to drive their cattle to market. Most of them failed because of Indian raiders, Jayhawkers (extortionists) and irate farmers. Texas Longhorns carried the Texas fever tick. It did not harm the Longhorns, but it devastated cattle in the Midwest as they passed through, so Midwestern farmers hated those cattle.

In 1866, New Mexico beef cattle markets were gold miners, the U. S. Army and the U. S. government. Also, cattle were driven through the state on their way to miners in Colorado and to northern ranges. It is said that John Chisum had 26,000 head of cattle in New Mexico during this time, most of them near Fort Sumner and Mescalero.

Jacob F. Glidden of DeKalb, Illinois, changed the beef cattle business forever in 1873 with his barbed wire, although New Mexico ranchers used it mainly to build "drift fences" for many years. These drift fences only kept cattle from completely leaving the territory.

Railroads were built into New Mexico during the late 1870s and early 1880s, and in 1885 the windmill was invented. Trains and dependable water supplies made the cattle business less risky, and promoters formed huge cattle companies and courted investors from Great Britain and the eastern United States. These absentee owners relied on their on-site managers for their "increases." Often, losses were not fully totalled and the "estimated increases" were not accurately reported.

The Indian Wars ended with Geronimo's capture in 1886. That summer no rain came, and the icy winter of 1886-87 was catastrophic with frozen cattle piled up against drift fences. Most of the corporate ranches went bankrupt. The real pioneers remained, establishing smaller operations.

Dependable water and the ability to keep their own cattle separate from others gave cattlemen their first opportunity to improve the quality of their herds. Shorthorns from Great Britain were their first choice, but only inferior individuals were allowed west of the Mississippi, so they turned to another British breed -- Hereford. Records show that one cattleman paid \$75 per head for a herd of Herefords. Texas cattle were then bringing \$15 per head.

New Mexico's Quarantine Law was passed in 1887, prohibiting entry of diseased cattle. That same legislation established the Cattle Sanitary Board, and a cattle inspection system was initiated. The first state brand book was published in 1889, so a person could not sell a beef animal unless it carried his brand. Until 1895, brands were registered at the county clerk's offices.

Changes in the homestead law at the turn of the century encouraged settlers. The railroads, also, were promoters and land salesmen, bringing settlers by the thousands. Many of today's ranches were begun by homesteading families.

New Mexico became a state in 1912, and open range ranching ended. The New Mexico Cattle Growers' Association was formed in Silver City in 1914. The purposes were largely protective -- against rustlers and predatory animals -- but cattlemen also protested laws which required homesteaders to plow up and ruin rangelands where crops could not grow, anyway.

During World War I, ranchers were asked to raise as much beef as possible to feed our troops. Being patriotic citizens, they responded. However, the overstocking resulted in range damage.

During the 1920s, the Los Angeles Stockyards Company and others began an experiment whereby locally grown feed was fed to calves. FFA and 4-H members were first to try it. Better quality beef sold less seasonally resulted, and finish feeding began.

The Great Depression of the 1930s affected cattlemen just as it did every other facet of American life. The Dust Bowl particularly affected eastern New Mexico, and by 1936 the "get it back to grass" movement was official. In 1934, the United States Congress corrected the error of the 640-acre homestead law. The Taylor Grazing Act regulated the use of public rangelands. A person could lease the right to graze his cattle on a specific portion of the public rangelands, which made that person responsible for the land's condition. At that point, the rangelands began to improve, because it was in a lessee's best interest to protect that land's productivity. The open range "free for all" days were over.

In 1935, the nation's retailers began advertising beef. *Nation's Business* magazine said this was the most "practical kind of farm relief." A 37 percent price increase resulted. The first New Mexico State Fair was held in 1938. Cattlemen for years had been attending shows to "see what the other fellow was doing" in an effort to produce a better product.

The 1940s saw trucks begin to take cattle to market, but they were abandoned during World War II. The wartime "Food for Victory" program stimulated production, but ranchers had learned their lessons well during World War I. They managed to produce more beef by using supplemental feed rather than putting more cattle on the rangelands.

During the 1940s, Clovis became a major cattle trading and feeding center. Regional auctions began replacing terminal markets, and local packing plants helped New Mexicans finish their product.

Range management practices (deferred grazing, erosion control, reseeding, etc.) became common during the late 1940s and the 1950s. Preventive veterinary practices also were initiated (vaccination against black leg, dipping or spraying for parasites).

Cattlemen moved toward specialization as well. Some raised purebred, registered seedstock for commercial operations to use in improving their stock, while others purchased calves and raised them to yearling age.

The 1950s drought bankrupted many small ranchers. Rainmaking by seeding clouds with dry ice was tried -- unsuccessfully. Science did not always have an answer to Mother Nature's whims.

Many new cattle breeds were imported during the 1960s and 1970s in the never ending effort to "make better cattle." Computer technology and nationwide telecommunications networks kept everyone abreast of the latest scientific developments. A live cattle futures market was established. The release of sterilized male flies controlled screwworms, which long had been a scourge to all livestock.

The 1980s and 1990s saw increased use of artificial insemination and embryo transfer to produce better quality beef. Most modern ranchers hold advanced degrees in range management and/or animal science and have extensive business training. They are producing more, leaner beef with fewer numbers of cattle than ever before.

In 1992, beef cattle were New Mexico's number one agricultural product in terms of cash receipts, bringing in \$725,028,000. Milk was a distant second at \$269,311,000.

New Mexico's cowboys still spend their days outdoors taking care of the land and their cattle. However, they don't sing songs around the campfire at night. They usually are busy studying their computer printouts.

## WHAT IS RANGELAND?

Rangeland is land on which the native vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing use by domestic livestock or wildlife. Rangelands include grasslands, open forests, wetlands and shrublands. Rangelands occupy 47% of the earth's land surface, 54% of the USA and 90% of New Mexico.

Not all rangelands are alike. They vary depending on climate, precipitation, elevation, topography and soils. Rangelands in New Mexico vary from the arid areas of the Southern Desert and San Juan River Valley resource areas to the shortgrass region of the Pecos-Canadian Plains and Valleys to tall grass areas of the Southern High Plains. Open grasslands and woodlands characterize the Western Plateaus and Mesa region whereas forested areas and sub-alpine range are found in the Arizona and New Mexico Mountains and Southern Rocky Mountains Resource areas.

New Mexico rangelands are as vast as they are varied. Rangeland occupies 90% of the State's 77.8 million acres for a total range area of about 70 million acre. New Mexico rangelands are predominantly privately owned (46%), the federal government has about 25 million acres (32%), the State of New Mexico controls almost 9 million acres (12%), and Indian Reservations comprise about 7.5 million acres (10%).

## VALUES OF RANGELAND

Rangeland is:

- \* Land that provides grazing for millions of cattle, sheep, goats, and horses. . .
- \* Land that provides food and shelter for a multitude of wildlife and birds. . .
- \* Land that offers millions of people with 365 days of recreation opportunity each year. . .
- \* Land that provides water for livestock, wildlife, and people. . .
- \* Land that provides a source of wood products. . .
- \* Land that provides energy in the form of oil, coal, natural gas, uranium, wind, water and sun . . . and finally . . .
- \* Land that supports RENEWABLE natural resource - range vegetation.

## WHAT IS RANGE MANAGEMENT?

Range management is the art and science of optimizing the returns from rangelands. Good range management encourages healthy rangelands, where a rich diversity of the most productive plants and animals prosper. Range management will enhance livestock production, wildlife habitat, wood production, water, recreation, and natural beauty resources for a growing New Mexico.

## WHAT DOES RANGELAND MEAN TO ME?

**Food:** Steaks, roasts, hamburger, lamb chops, cabrito.

**Clothing:** Wool, mohair, fur, leather.

**Water:** For drinking, agricultural, industrial and recreational uses.

**Energy:** Range plants convert solar energy to food utilized by livestock and wildlife and rangelands also supply fossil fuels.

**Recreation:** Camping, hunting, fishing, hiking, and many other activities.

**Beauty:** Plenty of open space to see and feel.

**Economic stability:** Insures a supply of meat and clothing for Americans.

**American Heritage:** Preserves a way of life unique to the American West.

**Archaeological:** Provides information about the history of the land and the people who used it.

## WHERE CAN I SEE RANGELAND?

Rangeland is everywhere in New Mexico. Each resource area has its own unique characteristics. Our national parks and monuments are on rangeland. National wildlife refuges, historic sites, national forests and grasslands, state parks, public domain, and state wildlife management areas are all primarily rangeland. Enjoy these rangeland areas while in New Mexico.





**SHARPEN YOUR RANGELAND I. Q.**  
(Answer True or False)

1. About one-third of the earth's surface is land and about 47 percent of the land is rangeland.  
T or F
2. Ninety percent of New Mexico, or nearly 70 million acres, is rangeland. T or F
3. About 83 percent of the total land area of the 11 western states is classed as forest and/or rangeland.  
T or F
4. Livestock ranges in the U. S. extend from sea level to 5,280 feet. T or F
5. Western ranges vary from semi-deserts to lush mountain meadows. Rainfall varies from less than 5 inches annually to more than 60, averaging 15 inches for the entire area. T or F
6. In New Mexico the average drought frequency is once every 50 years. T or F
7. It takes approximately 10 years to form 1 inch of soil in the western range country. T or F
8. In most states west of the Mississippi and a few to the east, grass is the leading source of income mainly through the sale of livestock. T or F
9. Grazing reduces the fire hazard on rangelands by utilizing plant matter that would ordinarily accumulate as dry fuel. T or F
10. Beef and veal consumption per American is expected to rise from 112 pounds in 1972 to 135 annually in 2000. T or F
11. Indians in America had no horses until the early Spanish explorers brought them into Florida and Mexico in the early 1500's. T or F
12. Bison, pronghorn, antelope, elk, mule deer, whitetailed deer, blacktailed deer, big horn sheep, mountain goats, bear, and cougar were native to the western range before the arrival of European settlers. All of these big animals still survive there today. T or F

ANSWERS: 1. T 2. T 3. T 4. F (12,000 ft.) 5. T 6. F (3 years)  
7. F (1,000 years) 8. T 9. T 10. T 11. T 12. T

## New Mexico Agriculture

### Understanding Grazing

Grazing is one of the most controversial issues in the west today. Many people believe that cattle are bad for the land. Others believe that cattle are beneficial to the land and our economic society as well. Learning more about grazing will help you form an educated opinion.

Cattle, along with sheep and goats, are called ruminants (pronounced room-in-uhnts). They have a special kind of stomach with four compartments. This unique feature allows them to digest plants that humans can not. They convert this plant life into nutritious high protein food for humans.

Approximately eleven billion acres of land in the United States is classified by the government as grazing land, 85% of this land is unsuitable for crop production. The grazing ruminant efficiently converts grass to meats. Thus allowing man to harvest forage from millions of acres of land that otherwise would not be used for food production. At least 80% to 85% of the food stuffs eaten by cattle throughout their lifetime come from sources humans cannot or do not eat.

The grazing process of cattle is like mowing a lawn. It invigorates and rejuvenates plant life and promotes continued growth. The animals remove the vegetation, disturb the soil with their hooves, (a form of cultivation,) and deposit nutrients that in turn stimulate the regrowth of prairie grasses. Grazing also reduces the amount of dried weeds and grasses acting as a natural method of fire control.

On the whole, rangelands of the west are in better condition today than they have been in the past one hundred years. Ranchers work with range scientists and federal managers to insure that the lands they use remain productive. Their jobs and lifestyles depend on taking care of the land. Cattlemen who have permits to graze cattle on public lands work as partners with federal land managers to conserve and improve the federal lands they use.

Wildlife such as deer, elk, antelope, and big horn sheep also depend on improvements made by livestock ranchers. Stockponds and water troughs provide water for wildlife as well as livestock. The rancher provides salt and minerals for his livestock which is also used by wildlife. Other benefits from cattle grazing include control of poisonous weeds, improved vegetation, predator management and erosion control. Rangelands provide food and cover for all wildlife.

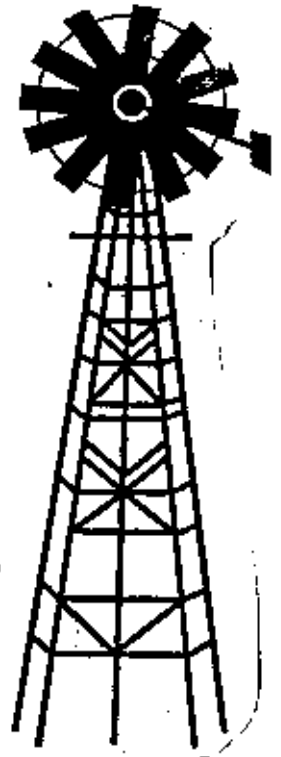
Grazing is a critical element in the production of livestock for America's food supply. It is important that we understand all the aspects of grazing. Without grazing one of our major food sources would be lost.



Name \_\_\_\_\_

### Questions

1. What is a ruminant?
2. About how many acres of land in the United States are classified as grazing land?
3. How much of this land is suitable for crop production?
4. How is man able to use the land that is unsuitable for crop production to produce food?
5. Why do range scientists feel that cattle help keep the land healthy?
6. How does wildlife benefit from livestock grazing?



## New Mexico Agriculture

### How Does A Cow Grow?

Cattle are raised on ranches in New Mexico, as well as many other places in the United States. A cow is usually two years old before she has a baby calf. After she becomes pregnant, it takes nine months before the calf is born.

When the calves are almost a year old they are sold to feed lots. They are sold either through an auction barn or by video auction. (Video auctions are just one way in which ranchers use modern technology.)

At the feed lot, the calves are fed corn, grains and molasses. They are also fed many crop by-products such as citrus pulp, almond hulls, cotton seed, corn stalks, and sugar beet pulps. These by-products are agricultural leftovers that would not otherwise be used.

Cattle stay in feed lots for four to five months and gain about three pounds a day. They grow to weigh 1,000 to 1,200 pounds and are then sent to the market to provide us with healthy, nutritious food. They also provide us with beef by-products.

Whether a cow is on a ranch or in a feed lot they are always taken care of by cowboys, cattle growers, or veterinarians. Cowboys must feed the cattle and make sure they always have water and that they are healthy.



## New Mexico Agriculture

### What is a Cattle Grower?

A cattle grower is a CARETAKER. He or she cares for the well being of their animals, the vitality of the land and the future of their family. Cattle growers are committed to protecting the environment and responsible in the use of natural resources. They combine modern science with skills gained from practical experiences to assure the preservation of the land. Cattle growers are beef producers who are dedicated to the production of a safe, wholesome and healthful food.

Cattle growers must be committed to the land and to their animals. This is their job and if they fail to do their job in the best way possible, they would no longer be able to earn a living. Many of the ranches in New Mexico have been in the same family for generations. Ranchers care for their land. They provide for the land and the land in return cares for them.





# CATTLE IN SUSTAINABLE AGRICULTURE

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

Cattle play an important role in environmentally sustainable food production. Growing grasses and legumes for cattle feed is an excellent way to protect some land from erosion. Nearly half of the total land in the continental U.S. can only grow grass or other leafy vegetation. Much of this land is too rocky, dry, marshy or susceptible to erosion to be cultivated for vegetables or cereal crops edible by humans.

Good resource management makes sense to cattlemen. Farm and ranch families know that preserving the land for future generations depends on today's care. Listed below are the components of an environmentally sustainable cattle farm or ranch. Can you find them?

- |              |                |             |
|--------------|----------------|-------------|
| Agriculture  | Feed Grains    | Preserving  |
| Barley       | Forage         | Rancher     |
| Bovine       | Geese          | Range       |
| Bull         | Good Stewards  | Renewable   |
| By-products  | Grain Surplus  | Resources   |
| Calf         | Grasses        | Ruminant    |
| Cattle       | Habitat        | Soil        |
| Conservation | Humane         | Steer       |
| Cow          | Manure         | Sustainable |
| Deer         | Nitrogen cycle | Water       |
| Ducks        | Oats           | Waterfowl   |
| Efficient    | Pasture        | Weather     |
| Enhancing    | Prairie        | Wildlife    |



*Cattlemen*  
STEWARDS OF AN AMERICAN TRADITION



NATIONAL CATTLEMEN'S ASSOCIATION  
AND BEEF BOARD



Courtesy of the Canadian Cattlemen's Association

Name \_\_\_\_\_

## New Mexico Agriculture

**EXERCISE** - Naming parts of a cow. Read the names and meanings, then label the parts by filling in the blanks. One part is already named for you.

**Brisket:** part of the chest of the cow.

**Hock:** the joint in the hind leg.

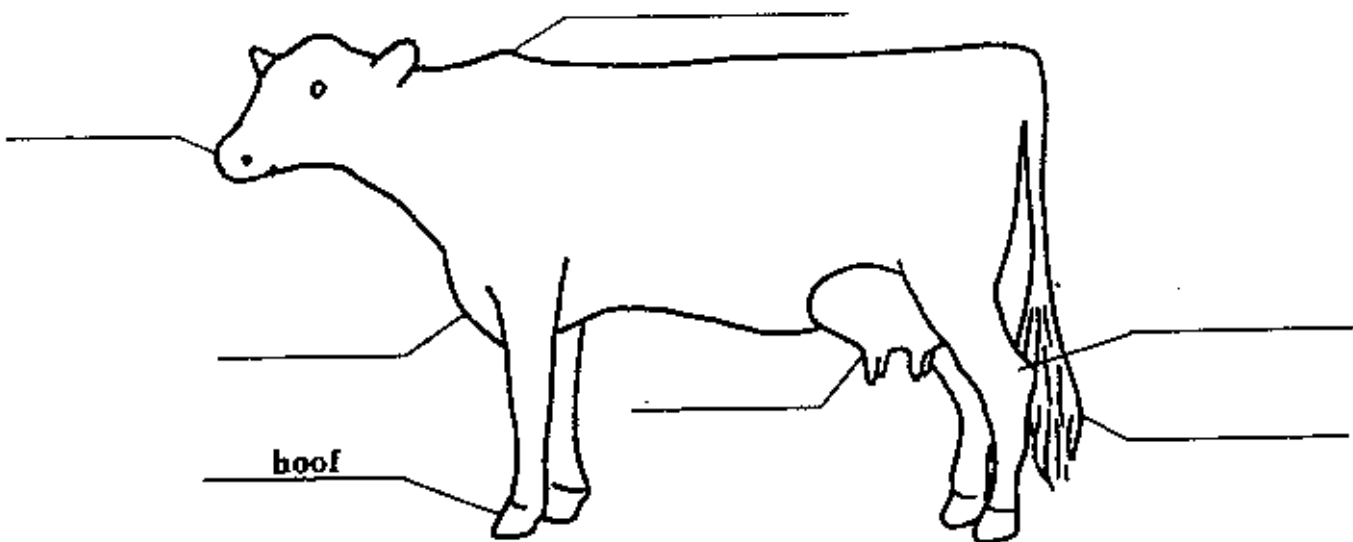
**Hoof:** the hard covering over the lower part of the foot.

**Muzzle:** the forward part of the head with the jaws and nose.

**Switch:** the bushy tip of the tail.

**Udder:** the bag-like organ that holds milk in this dairy cow.

**Withers:** the high point on the back of the cow.





New Mexico Agriculture

A Cow is a Cow is a Cow - Not!!

Like people are different, cows are also different. There are many different breeds. Here are some examples of the differences.

**Angus** cattle are either solid black or solid red in color. **Charolais** are a whitish color and are a larger breed. **Hereford** cows have a white face and red bodies. They have white on the belly, legs and tail. **Limousin** cattle are light yellow, red or black. **Brahman** cattle can be light gray, red or almost black. They have a hump on their shoulders and large drooping ears. A **Brangus** is a cross between a **Brahman** and an **Angus**. **Holstein** cattle are a dairy breed and are black and white.

Other common breeds of cattle in New Mexico are:

Belgian Blue	Pinzgauer	Longhorn
Beefmaster	Jersey	Guernsey
Barzona	Simmental	Santa Gertrudis

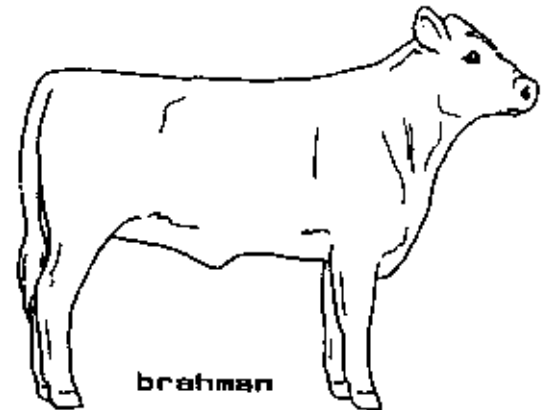
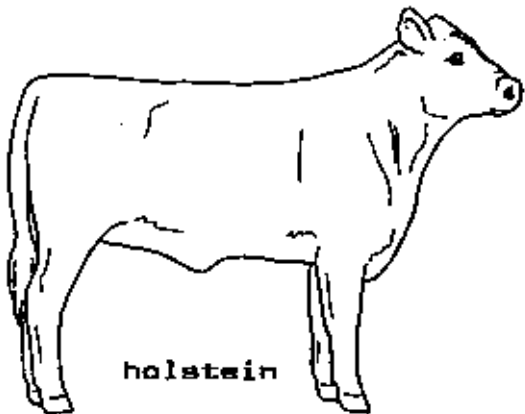
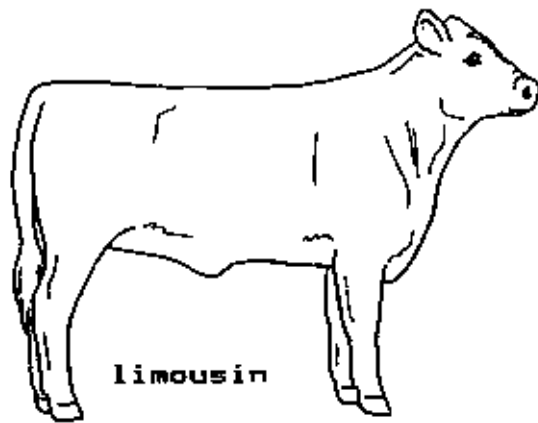
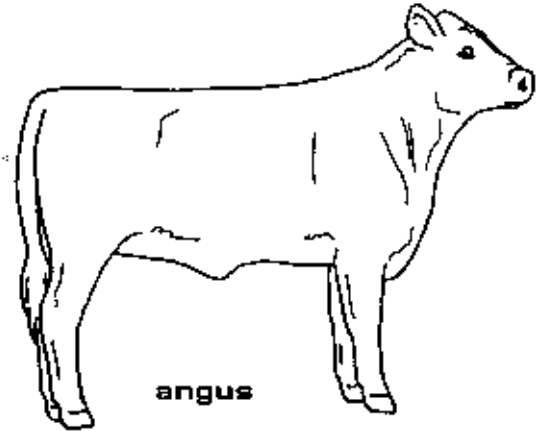
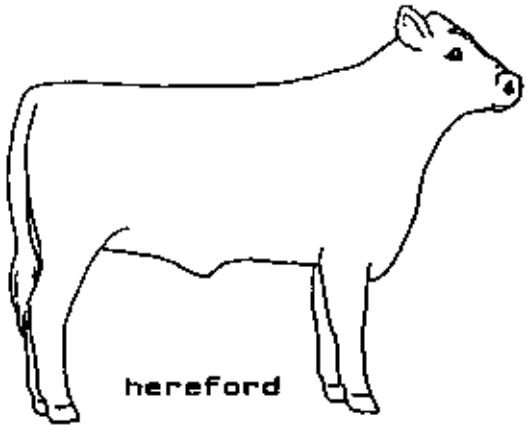
Search and find all the breeds in the puzzle below.

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



A Cow is a Cow is a Cow - Not!!

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After reading the description above about the different breeds of cattle raised in New Mexico, color the above steers (male cattle) as marked. Which is your favorite?



## New Mexico Agriculture

### Beef and Your Health

Experts recommend that we eat a wide variety of foods from several categories everyday. One type of food can't keep us healthy. When you eat a steak or a hamburger you are getting different kinds of important nutrients.

Beef supplies high quality protein. Complete protein helps build, maintain and repair body tissues, and increase our resistance to infection and disease. Plant proteins when eaten alone do not contain complete protein.

Beef is also a good source of B vitamins. Vitamin B-12 is only found naturally in animal foods.

One of the most important nutrients in beef is iron. Iron helps red blood cells carry oxygen to and away from the other body cells. Beef is one of the best sources of iron.

Zinc is a mineral the body needs to form enzymes and insulin. Like iron, zinc is especially difficult to obtain when meat is not included in the diet.

Beef is a nutrient - dense food. It can be included in almost every balanced diet designed for good nutrition and health.

1. Name foods that you eat that have beef in them.
  
  
  
  
  
  
  
  
  
  
2. Using an encyclopedia, find other food sources of iron and zinc.
  
  
  
  
  
  
  
  
  
  
3. Look up what B vitamins are and what they do for our bodies.
  
  
  
  
  
  
  
  
  
  
4. Why is it important for us to eat a variety of foods?

Name \_\_\_\_\_

## New Mexico Agriculture

### Beef and You

Beef is an important part of a balanced diet. It has vitamins and minerals that help our bodies grow and keep us healthy. We find beef in many different kinds of foods.

Put a B by the foods that are beef or have beef in them.

Tacos

Chicken

Pizza

Cake

Hot Dogs

Roast

Barbecue

Eggs

Green beans

Hamburgers

Spaghetti

Steaks

Cereal

Ham

French Fries

Lettuce

Ice Cream

Enchiladas

Circle your favorite foods.



## New Mexico Agriculture

### A Beef Read and Learn Puzzle

Beef is a food product that comes from cattle. It only takes a few minutes to buy a hamburger, but it takes about two years to produce the beef that it comes from. Beef is recommended in balanced diets for good nutrition and health. About fifty nutrients are needed daily for body growth, maintenance and repair. No one food contains all nutrients in the required amounts. We need to consume a wide variety of foods from several different food categories every day. Beef meets requirements for protein, B-12, iron, zinc, and other essential nutrients.

The beef industry has changed as dietary guidelines have changed, making beef leaner with less fat. Leaner cattle and beef, with less waste fat, are being produced and marketed. Beef is inspected and regulated by the government and is a safe food. It is also considered a renewable resource.

Hamburger, steak, roast, hot dogs, and beef ribs are some direct beef foods. Other foods that we use beef in are pizza, spaghetti, and enchiladas.

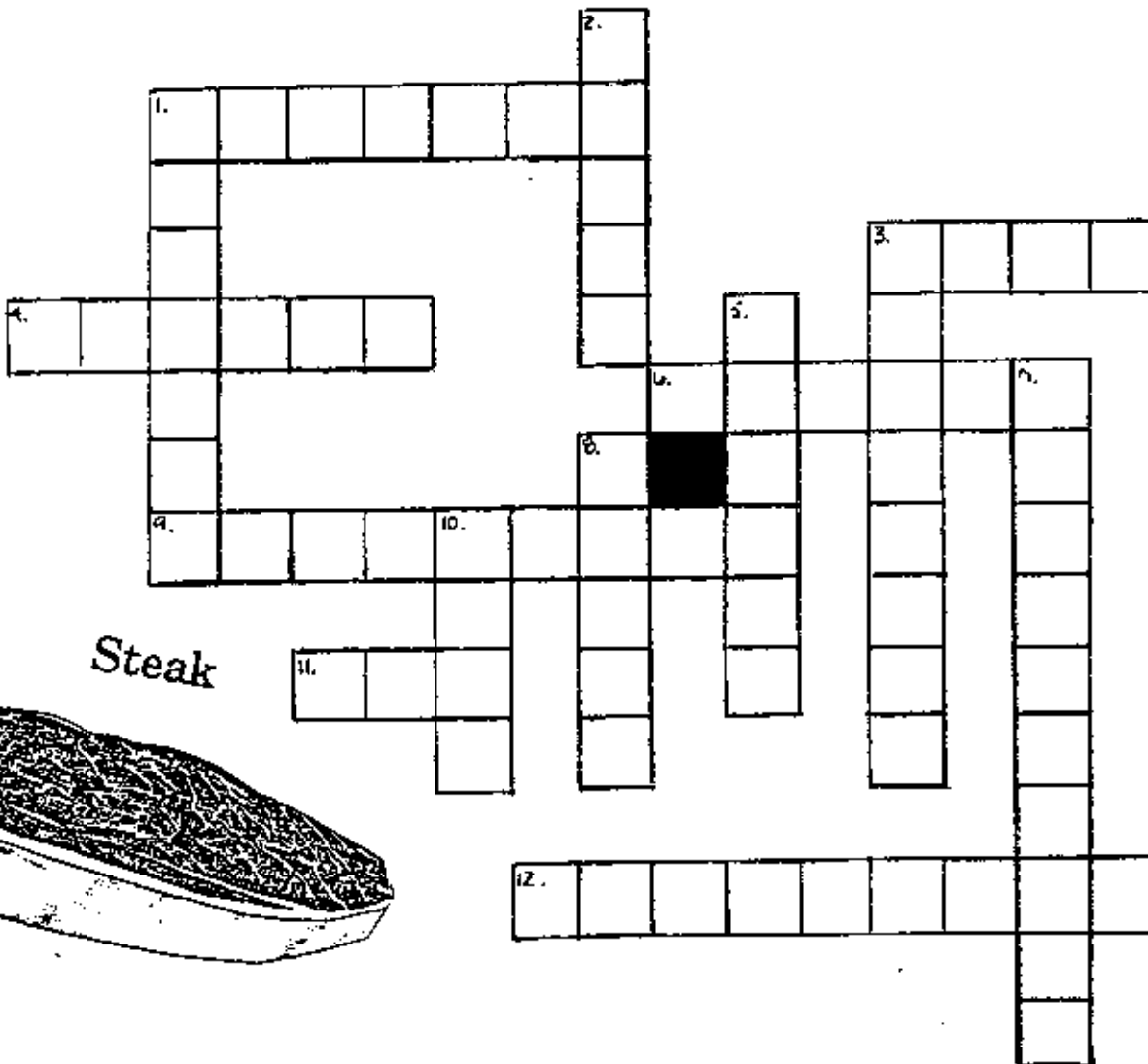


Down

1. Beef meets requirements for \_\_\_\_\_.
2. \_\_\_\_\_ is a beef food that we eat.
3. Beef is recommended in \_\_\_\_\_ diets.
5. \_\_\_\_\_ cattle are being produced and marketed.
7. A favorite food often eaten at fast food restaurants.
8. Another favorite food that can have beef on it, has a crust and cheese on it.
10. An important nutrient that comes from beef.

Across

1. Beef is a food \_\_\_\_\_.
3. \_\_\_\_\_ is recommended in balanced diets.
4. Beef comes from \_\_\_\_\_.
- 6 & 9. Beef is recommended for good (9) \_\_\_\_\_ and (6) \_\_\_\_\_.
11. It takes about \_\_\_\_\_ years to produce beef.
12. Beef is inspected and \_\_\_\_\_ by the government.



Steak



Name \_\_\_\_\_

New Mexico Agriculture  
Cattle Products

Man has learned to use most parts (99%) of a cow. Besides the beef we get from cattle, many other products come from other parts of the cow. To find some of these products, write the letter on the line that comes before the letter under the line.

N   B   S   T   I   N   B   M   M   P   X   T

D   B   O   E   Z

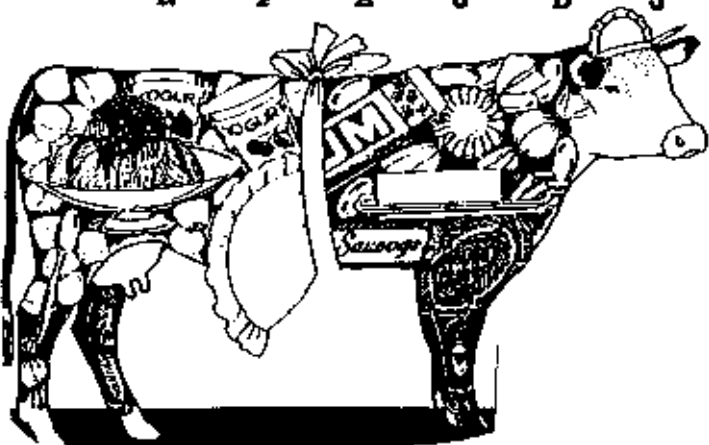
M   P   B   U   I   F   S   H   P   P   E   T

Q   B   J   O   U   C   S   V   T   I   F   T

N   B   L   F   V   Q

C   B   T   F   C   B   M   M   H   M   P   W   F   T

N   F   E   J   D   J   O   F





New Mexico Agriculture

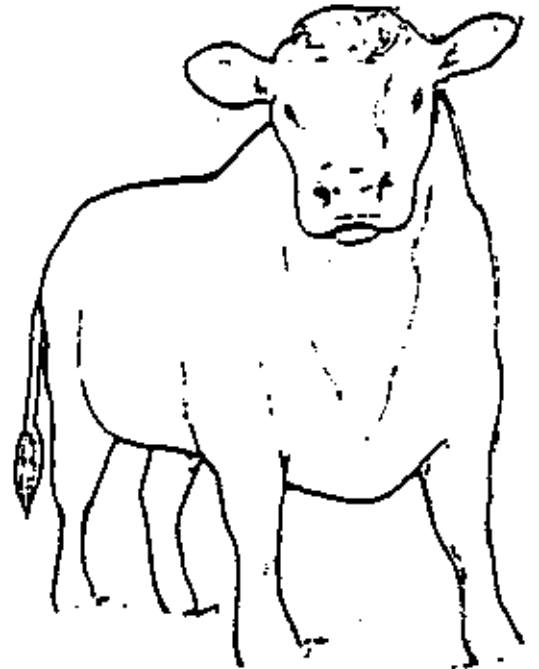
Recycling Cattle

We all know that beef comes from cattle. We should also know that many other products come from cattle, too. Almost all of the other parts of a cow are made into things that we use everyday. This form of recycling is called rendering.

Cattle are a renewable resource, something that we never have to run out of, unlike other resources that we use. By-products are things that are produced during the manufacturing of something else. In this case, by-products are all the things we get from cows besides beef.

Here is a list of just a few of the things called beef by-products.

- |                     |               |
|---------------------|---------------|
| Pet food            | Margarine     |
| Cosmetics (make-up) | Candles       |
| Marshmallow         | Glue          |
| Crayons             | Film          |
| Soaps               | Yogurt        |
| Plastics            | Paint Brushes |
| Luggage             | Gelatin       |
| Shoes               | Buttons       |
| Wallpaper           | Tires         |
| Gum                 | Cellophane    |
| Medicine            | Deodorants    |
| Perfume             | Car Wax       |
| Lubricants (oils)   | Vitamin B-12  |
| Candy               | Bandages      |



Pretend you are on a scavenger hunt in your house. Where would you find these products? Put a K by the product you might find in your kitchen, a B for bathroom, a G for garage, and a C for closet.



Name \_\_\_\_\_

### New Mexico Agriculture

### Cattle Products

We get many products from cattle. Some are things that we eat while others are things that we use.

Unscramble the words below to find a few of the things we get from cattle.

\_\_\_\_\_ **nug** \_\_\_\_\_

\_\_\_\_\_ **eci roma** \_\_\_\_\_

\_\_\_\_\_ **efeb** \_\_\_\_\_

\_\_\_\_\_ **strei** \_\_\_\_\_

\_\_\_\_\_ **psoa** \_\_\_\_\_

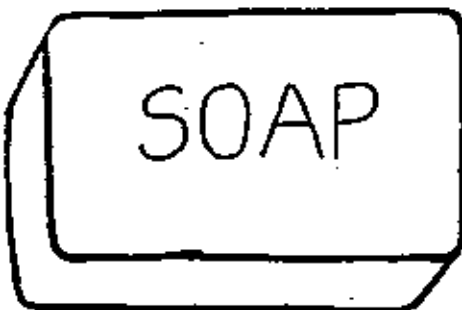
\_\_\_\_\_ **wifi** \_\_\_\_\_

\_\_\_\_\_ **raycons** \_\_\_\_\_

\_\_\_\_\_ **glageug** \_\_\_\_\_

\_\_\_\_\_ **lmik** \_\_\_\_\_

\_\_\_\_\_ **sgelu** \_\_\_\_\_



## New Mexico Agriculture

## CATTLE – AN EFFICIENT RESOURCE

Man has learned to utilize most of the parts of a cow, 99% of every animal is used. However, less than half is actually eaten as beef. The rest is used for what we call by-products.

Fat and gelatin provide us with basic goods such as soap, shampoo, cosmetics, desserts, tires and film.

Internal organs, such as the liver and pancreas, are used in medicines and in the treatment of some diseases.

External products, such as the hide, hooves, and hair are found in a wide variety of products. Some examples of products from the hide are leather furniture, clothes, shoes, and sports equipment such as gloves and balls. Examples of other uses of the external products are glue, paintbrushes, combs and insulation.

Almost nothing is left to waste. Animal products are a natural ingredient in many things. Synthetics are imitation substances sometimes used on place of natural ingredients. However, scientists are finding that in many cases, natural products work better than synthetics and may actually help conserve our resources.

Answer the following questions about what you have read.

- |    |   |   |   |
|----|---|---|---|
| 1. | Cattle provide us only with beef.   | T | F |
| 2. | By-products is the term used for the parts of a cow that would otherwise be wasted. | T | F |
| 3. | Tires are a by-product of cattle.   | T | F |
| 4. | Medicines can be made from the internal organs.                                     | T | F |
| 5. | Much of the animal is wasted.   | T | F |
| 6. | Synthetic products are always better than natural.                                  | T | F |

# SCAVENGER HUNT

THERE'S A COW IN MY...

**CLOSET!**

**REFRIGERATOR!**

**BATHROOM!**

**LIVING ROOM!**

**KITCHEN!**

**DRAWER!**

NAME \_\_\_\_\_

**DIRECTIONS:** Because the farmer is a good caretaker of animals, you will find many products provided by animals in your home. See if you can find a cow in the following places.

