# Good Breeding

## Objective

Students will learn about cattle breeds common in Oklahoma. Students will read selections about each breed and show comprehension by answering related questions.

## Background

Beef cattle producers are always working to improve the meat we eat by improving their cattle. One way they do that is to improve cattle breeds. A breed is a group of animals with common ancestry and characteristics that make them different from other animals. To improve beef cattle breeds, producers may cross one breed with another breed by putting a male from one breed with a female from another breed so the two will produce a calf with characteristics of both breeds. For example, many Oklahoma producers cross Hereford cows with Angus bulls to get the high quality meat of the Angus combined with the adaptability of the Hereford. A calf from that union will produce better meat in larger quantity.

An animal born from animals that are not from the same breed is a crossbred animal. Purebred animals are animals with parents that come from the same breed. Purebred cattle can be registered through associations representing the different breeds. Crossbred calves cannot be registered in the associations.

There are over 70 breeds of beef cattle raised in the United States. These breeds are classified in two categories, Bos Indicus and Bos Taurus. Bos Indicus breeds usually have slick hair coats and a larger crest (or hump) behind the head on the neck. Bos Indicus cattle are also more tolerant of heat and insects. Many cattle classified as Bos Indicus have Brahman ancestry. Bos Taurus have long thick coats and a smaller crest. Because they have longer hair, they do not tolerate hot and humid environments as well.

Oklahoma beef cattle producers raise both kinds of cattle. Of the cattle breeds common in Oklahoma, Angus, Hereford and Limousin are Bos Taurus, and Brahman and Brangus are Bos Indicus.

## Procedures

1. Write the vocabulary words on the chalkboard.
   —Students will use dictionaries to find the definitions of the words.
   —Discuss definitions as you read and discuss background.
2. Hand out student worksheets.
   —Instruct students to read Student Worksheets A and B and answer the questions on Student Worksheet C.
3. Students will use information from the student worksheets to create a basic timeline showing when each breed of cattle came to the United States. (ANSWERS: Hereford 1817, Brahman 1849, Angus 1873,

## Oklahoma Academic Standards

### GRADE 2
Reading and Writing Process: R.2; W.1. Critical Reading and Writing: R.5,7. Vocabulary: R.1,5. Research: R.1,2,3; W.11,2,3
Life Science: 4-1

### GRADE 3
Reading and Writing Process: R.2. Critical Reading and Writing: R.7. Vocabulary: R.1,5. Research: R.1,2,3,4; W.11,2,3
Life Science: 2-1; 3-1. 4-2,3,4; Earth's Systems: 2-2

### GRADE 4
Reading and Writing Process: R.2. Critical Reading and Writing: R.7. Vocabulary: R.1,5. Research: R.1,2,3; W.11,2,3
Life Science: 1-1

Limousin 1971.)

4. Students will choose two or more breeds of cattle from the student worksheets and create a graphic organizer, Venn diagram, or dichotomous key to compare/contrast them.
5. Students will each select one of the breeds described in the worksheets provided with this lesson and use online or library resources to research their origins.

## Extra Reading

Pukite, John, *A Field Guide to Cows: How to Identify and Appreciate America's 52 Breeds, Penguin Books, 1998.*
Byard, Jack, *Know Your Cows*, Fox Chapel Publishing, 2012.

## Vocabulary

**adaptability**—the ability of a species to survive in a variety of environmental conditions

**ancestry**—something derived or gained from those from whom one is descended, especially if more remote than a grandparent; a forebear

**Angus**—a breed of cattle originating in Scotland, having no horns and black or dark red coat

**Bos Indicus**—A classification of cattle breeds usually descended from the Indian Brahman breed and distinguished by a slick hair coat and distinctive crest (or hump) behind the head on the neck. Bos Indicus cattle are also more tolerant of heat and insects than other breeds.

**Bos Taurus**—a classification of cattle breeds distinguished by a long thick coat and small crest (or hump) behind the head on the neck

**Brahman**—a breed of cattle developed in the southern United States from stock originating in India having a hump between the shoulders and a large fold of loose skin hanging from the neck

**breed**—a group of animals descending from a common ancestry and possessing certain common characteristics which distinguish it from any other group

**characteristics**— features that helps to identify, tell apart, or describe something

**crest**—the enlarging of the shoulders and neck on male cattle. The size shows the age of the animal.

**environment**—the total of all external conditions which act upon an organism or community of organisms to influence development or existence

**Hereford**—any of a breed of beef cattle developed in Herefordshire, England, having a reddish coat with white markings

**humid**—containing or characterized by a high amount of water or water vapor

**importation**—the act or business of bringing in goods from a foreign country for sale or trade

**Limousin**—a breed of golden red cattle originating in France, the largest exotic breed in the United States

**registered**—officially recorded as having met certain criteria on a list maintained by a recognized organization

**resistance**—the ability of an organism to withstand the effects of a harmful environmental agent, e.g., disease
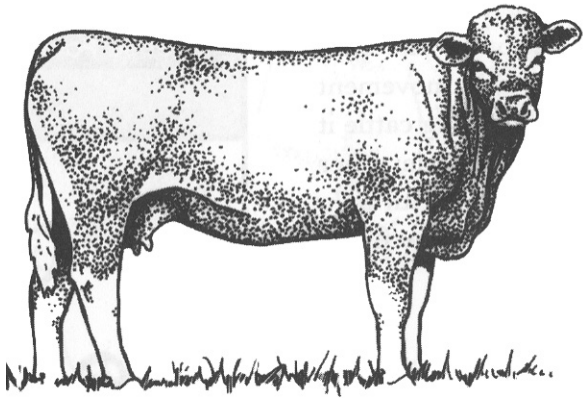
## What Am I?

1. Cut out pictures of cattle breeds included with this lesson.
2. Without letting students see the pictures, pin one to each student's back.
3. Students will circulate and ask each other questions to try to identify what cattle breed they are representing.
4. Any question may be asked except the direct one, "What am I?"
5. The first student to guess his or her cattle breed is the winner, but the game continues until all or most of the players have guessed what they are?

# Good Breeding

Read the information about beef breeds, then answer the questions on student worksheet C.

## Limousin

In France, experts have found 20,000-year-old cave drawings of animals that look very much like modern-day Limousin cattle. These golden red cattle are valued for their sturdiness, good health and adaptability. Limousin developed these traits by surviving for hundreds of years on the rocky soils of south central France, in the regions of Limousin and Marche.
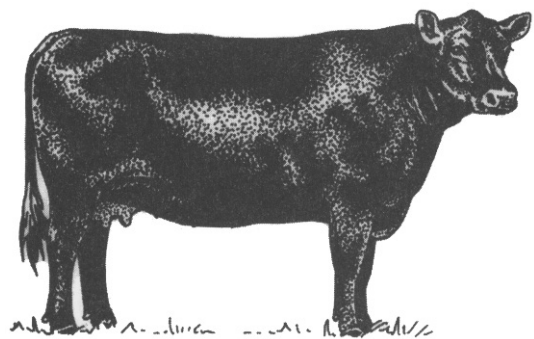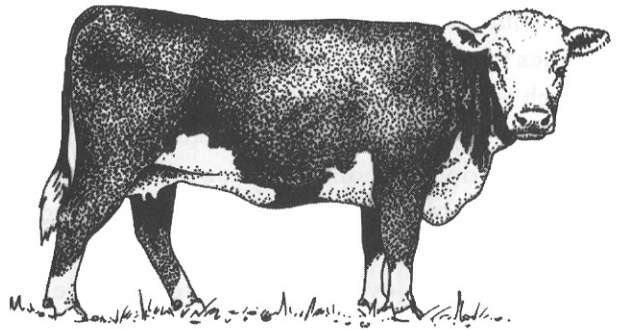
American cattle producers have been interested in importing Limousin since the 1800s, but the US government did not allow importation due to health reasons. In 1969 the North American Limousin Foundation was organized in Denver, Colorado, with the hope of convincing the government to allow importation. The first Limousin bulls were imported into the United States in 1971.

## Hereford

Herefords came to the United States in 1817, when the Kentucky statesman Henry Clay imported a bull and two females. The first breeding herd in America was established in 1840. Herefords were densely-populated in the New England states and were moved into the west as the demand for beef increased.

The breed is known for its distinguishing markings and beef quality. The Hereford has a red body with white markings on the chest and neck and a solid white head. Hereford can be horned or polled.

## Angus

In 1873, George Grant transported four Angus bulls from Scotland to the middle region of the Kansas prairie. Grant's dream was to found a colony in America. The bulls and their offspring were considered "freaks" because of their polled (naturally hornless) heads and solid black coats. Today, Angus are well-known among cattle producers and are no longer considered freaks.
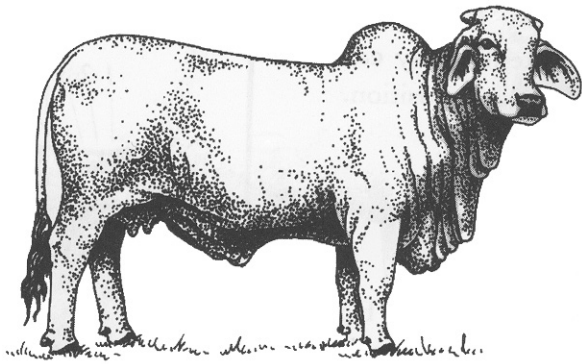
The black cattle are often used in crossbreeding. They produce small calves, are excellent mothers and produce meat of outstanding quality.

In 1883 The American Angus Association was founded by 60 members. In the first century of operation, over 10 million head of cattle were recorded, making Angus the largest breed organization in the world.
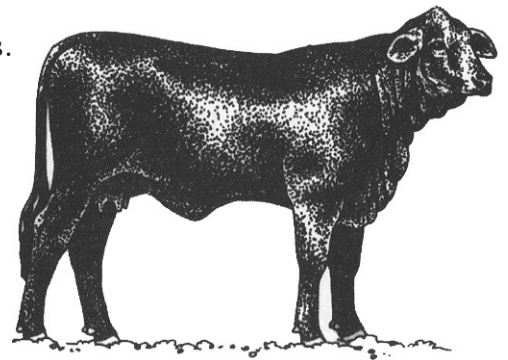
# Good Breeding

## Brahman

This breed was brought to America in 1849 from its homeland of India. It did not become popular for another 60 years. Brahman are favored in the South and Southwest because they can tolerate the extreme heat and abundant insects found in those regions.

Brahmans are medium in size, compared with other US breeds. The calves are small at birth and grow rapidly. They vary in color from light gray to red to dark gray. The animals do have horns, but some breeders surgically remove them. The Brahman is easily identified by the large hump at the base of its neck.

## Brangus

The first research into crossing cattle breeds began in 1935 at agricultural experiment stations across the country. During that same period, some ranchers were conducting their own breeding programs. Clear Creek Ranch of Welch, Oklahoma, and Raymond Pope of Vinita, Oklahoma, were two Oklahoma producers involved in breeding programs. They combined outstanding traits of Brahman and Angus cattle to produce the first Brangus cattle.

Brangus look like Angus but have higher crests and less hair. Registered Brangus must be three-eighth Brahman and five-eighth Angus. They must be solid black and polled. Brangus females excel in fertility and milking ability.

Name_____

# Good Breeding

1. Which breed of cattle is known for its heat tolerance and insect resistance?


2. What breed is considered the largest breed in the world?


3. What breed association was formed in Oklahoma?


4. Drawings of the ancestors of what breed have been found on cave walls in France?


5. Describe the breed of cattle was imported to the United States by the great statesman, Henry Clay?


6. What breed of cattle do you think would be best to use for crossbreeding? Why?


7. Why are Limousin cattle the largest exotic breed in the United States?"


8. Which breed of cattle is used more in the South and Southwest regions of our country?


9. Which breed has a red body with a white face and white markings on the chest.

# Good Breeding (answers)

1. Which breed of cattle is known for its heat tolerance and insect resistance?
   <u>Brahman</u>

2. What breed is considered the largest breed in the world?
   <u>Angus</u>

3. What breed association was formed in Oklahoma?
   <u>Brangus</u>

4. Drawings of the ancestors of what breed have been found on cave walls in France?
   <u>Limousin</u>

5. Describe the breed of cattle was imported to the United States by the great statesman, Henry Clay?
   <u>Answers will vary but should describe the Hereford: "The Hereford has a red body with white markings on the chest and neck and a solid white head. Hereford can be horned or polled."</u>

6. What breed of cattle do you think would be best to use for crossbreeding? Why?
   <u>Answers will vary.</u>

7. Why are Limousin cattle the "largest exotic breed in the United States?"
   <u>Over 1 million have been registered.</u>

8. Which breed of cattle is used more in the South and Southwest regions of our country?
   <u>Brahman</u>

9. Which breed has a red body with a white face and white markings on the chest.
   <u>Hereford</u>