

Beef Breakout Box



Bringing Agriculture to Life Through Hands-On Learning

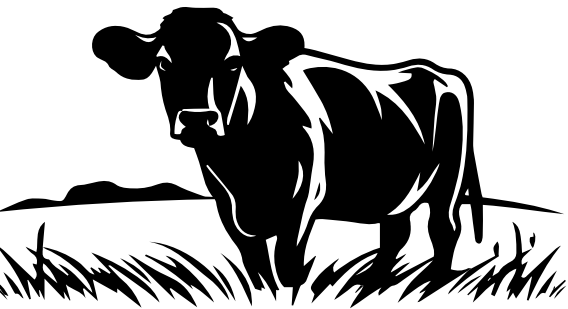
Welcome, Educators!

This packet contains everything you need to recreate the Beef Breakout Box experience in your own classroom. Designed to introduce students to beef production in a fun, hands-on way, this activity blends critical thinking, teamwork, and agricultural literacy—all while aligning with classroom learning goals.

Through a series of interactive stations, students will explore:

- The life cycle of a beef cow
- The essential components of a cow's diet
- The cuts of beef and their locations on the animal
- Common beef breeds and traceability practices

The final goal? Crack the four-digit code to unlock the prize box, just like your students will!



Teacher Instructions

Setup

Prepare Stations:

Set up four stations around the room, each focusing on a different beef-related challenge:

- Life Cycle of a Cow (ordering pictures and solving a math problem)
- Cattle Diet Essentials (snack bag station)
- Beef Cuts Puzzle (diagram and blue light)
- Breed Identification and Tagging (matching breed and tag)
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Materials:

- Life cycle pictures and scissors
- Snack bags, containers with zip ties, and snack items
- Beef cuts puzzle pieces, invisible pen, and blue lights
- Breed clues, Beef Ag Mag, cow head cutouts, ear tags, invisible pen, blue light
- Box, number locks, beef materials, beef sticks

Code Cards:

Provide each student or group with a code card to record the four numbers they collect at each station.



Code Card

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Code Card

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Code Card

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Code Card

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Life Cycle



Place the pictures in the correct order of a cow's life cycle.

Once they're in order, flip the cards over to reveal and solve the math problem.

When you get the correct answer, you'll earn a pair of scissors to move on!



32







26





**Write your answer in the first box
on your sheet**

Food Rations



Cut the zip tie to open the container and unlock your snack baggies. As you build your snack, discover how many essentials a cow needs in their diet.

Write that number in the second box of your code!

Energy Feed

Energy feeds are high-calorie ingredients that provide the fuel cattle need for growth, maintenance, reproduction, and milk production.

Common energy sources include corn, barley, oats, and molasses.

(popcorn)

Protein Feed

Protein feeds help build and repair muscles, organs, and tissues. Common sources include soybean meal, cottonseed meal, canola meal, and dried distillers grains (DDGs).

(sunflower seeds)

Roughage

Roughage includes high-fiber plant material like hay, pasture grasses, silage, and crop residues. It is typically bulky and lower in energy compared to grains.

(raisins)

Vitamins/Minerals

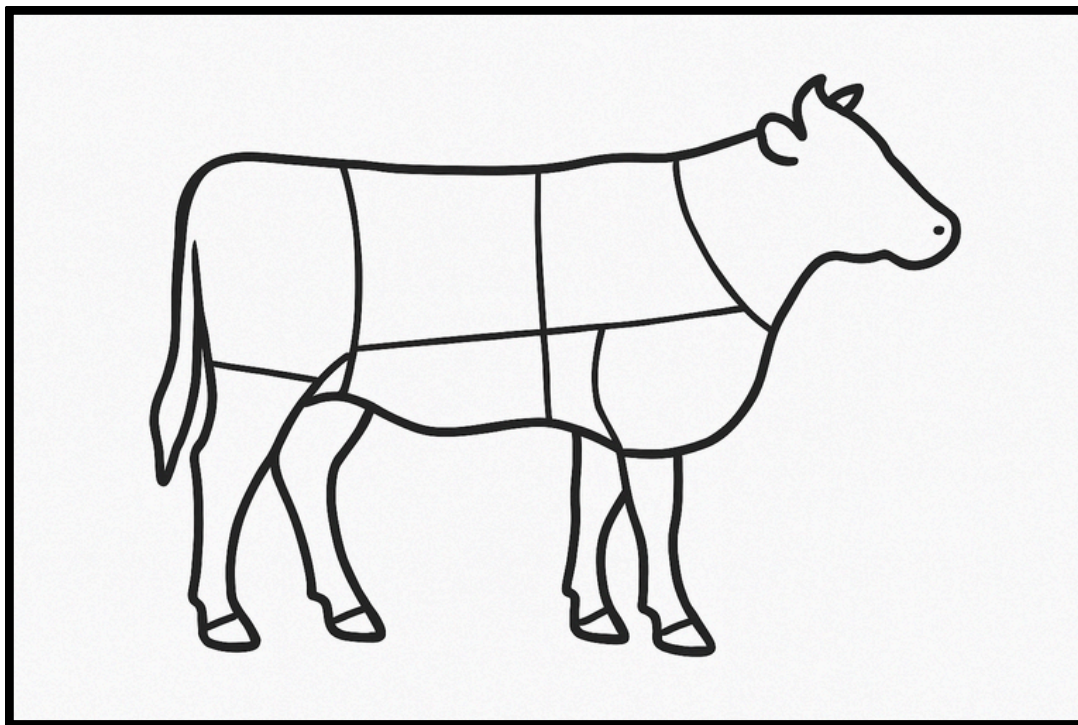
Minerals (like calcium, phosphorus, magnesium, and salt) and vitamins (like A, D, and E) are essential nutrients usually added to feed or provided as supplements.

(popcorn seasoning)

**How many essentials
does a cow eat?**

Put that number in your 3rd box for your code.

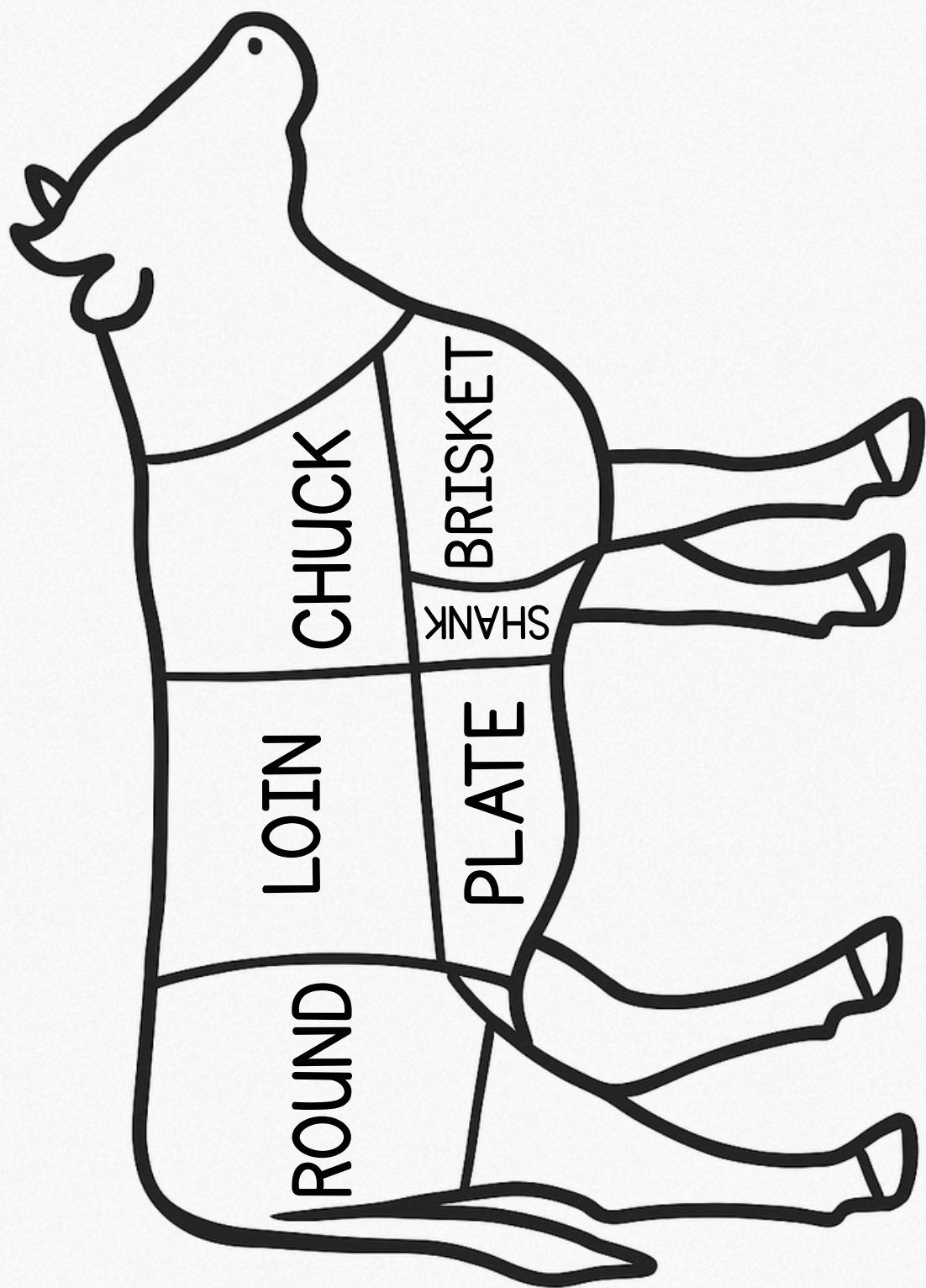
Cuts of Beef



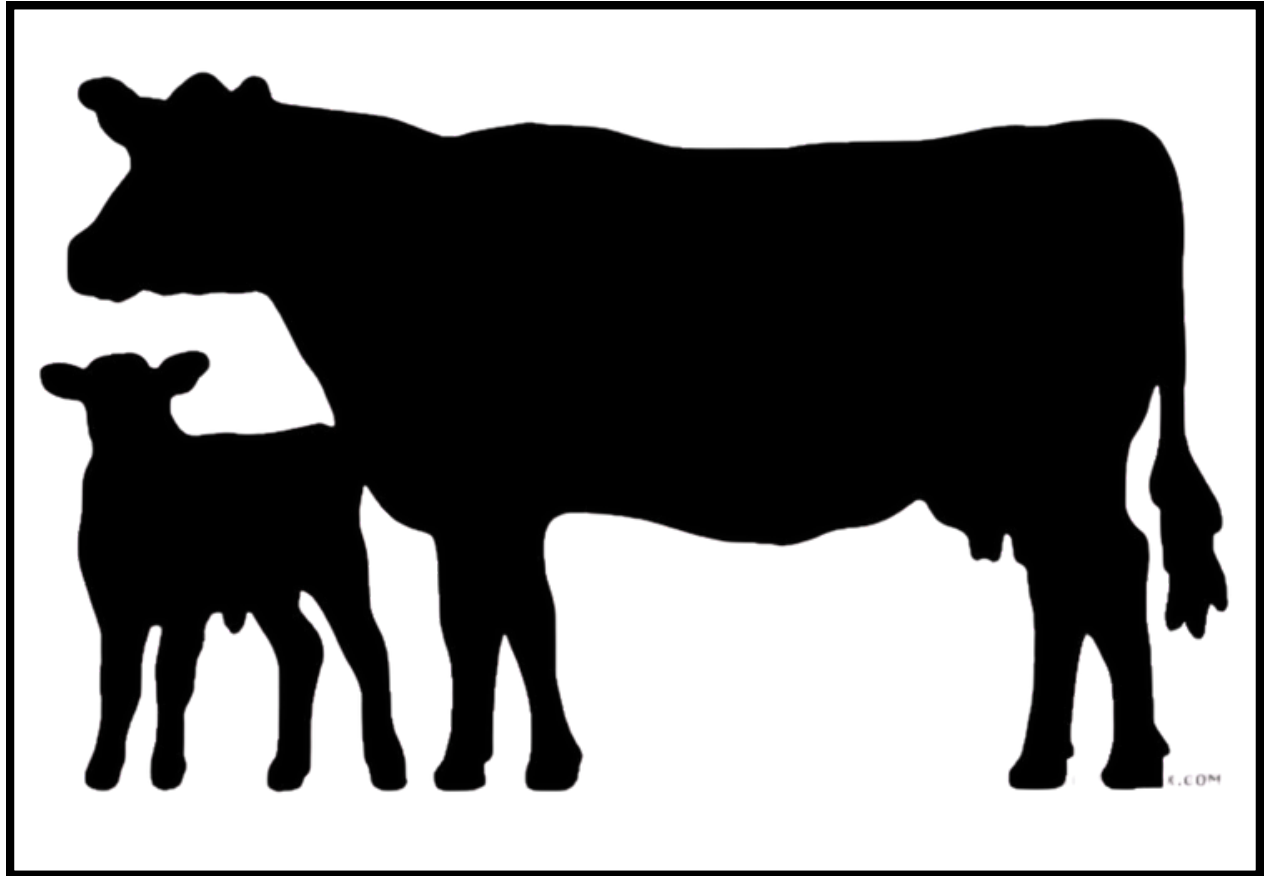
Place each cut of meat in its correct location on the beef diagram.

Once you've matched them all correctly, use the blue light to reveal the hidden number on the diagram. Write that number in the third box of your final code!





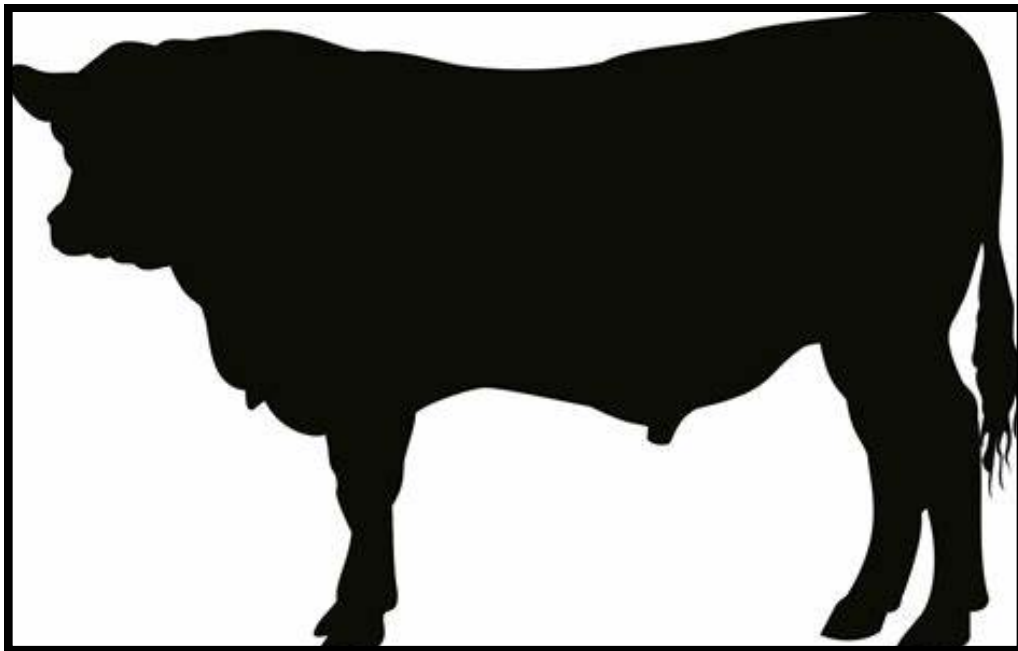
Find Your Breed



In the file folder you will find a description of your breed. Use the Beef Ag Mag to find out which breed is yours.

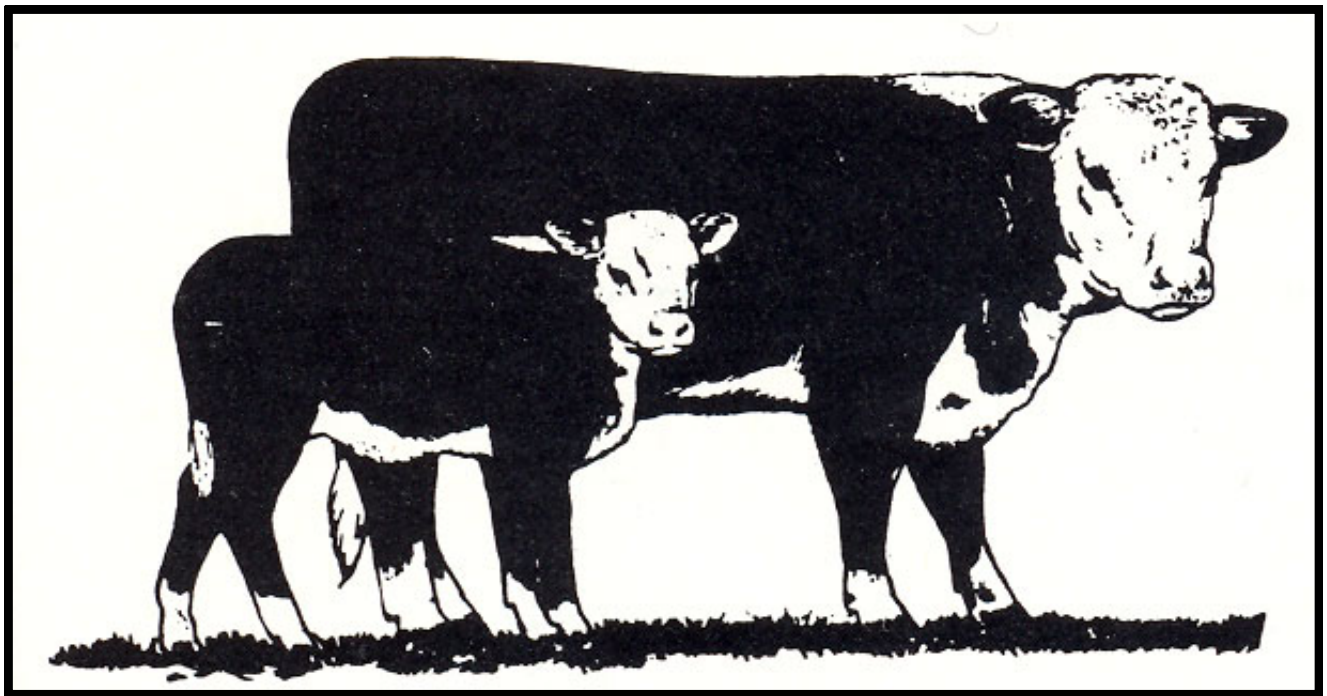
Then, find the head to match your breed and the ear tag number given. Tag your cattle's ear so they are easy to identify.

Your cow is a solid black breed that originated in the rolling hills of Scotland. Known for its excellent meat quality and natural hardiness, it has become the most popular beef breed in the United States. You won't find horns on this animal, just smooth heads and strong frames built for efficient beef production.



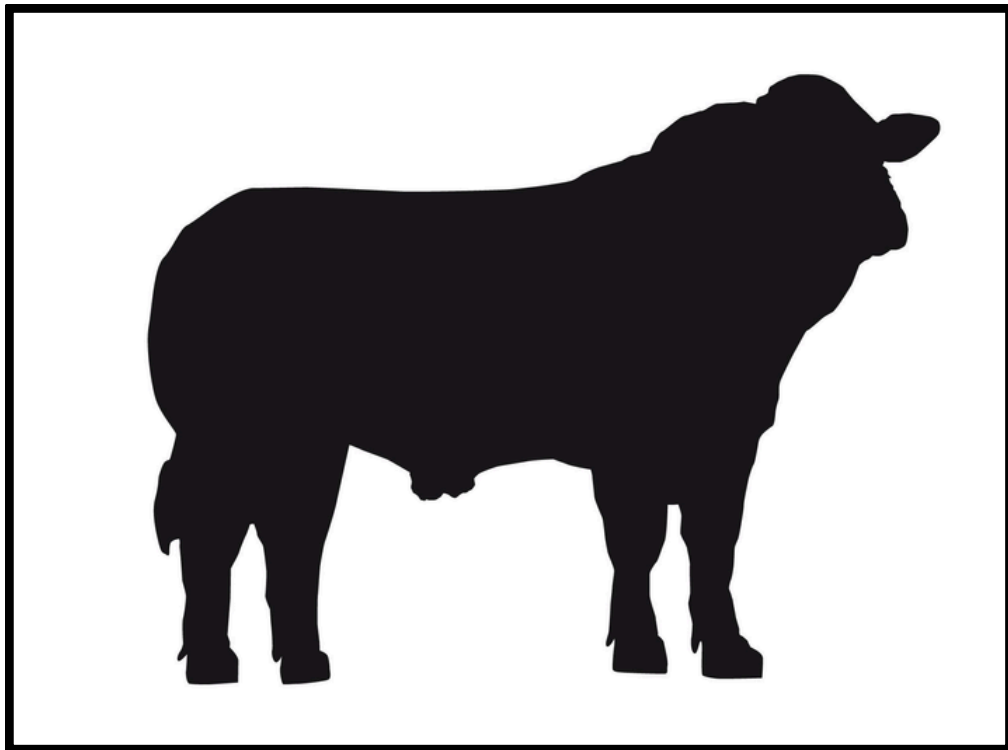
Tag#: 4201

This red and white breed originated in England and is known for its calm nature and adaptability to many environments. With its distinctive white face and underline, it stands out in any pasture. It ranks as the second most common beef breed in the United States and is easily recognized by its rich red body and bright white markings.



Tag#: 3267

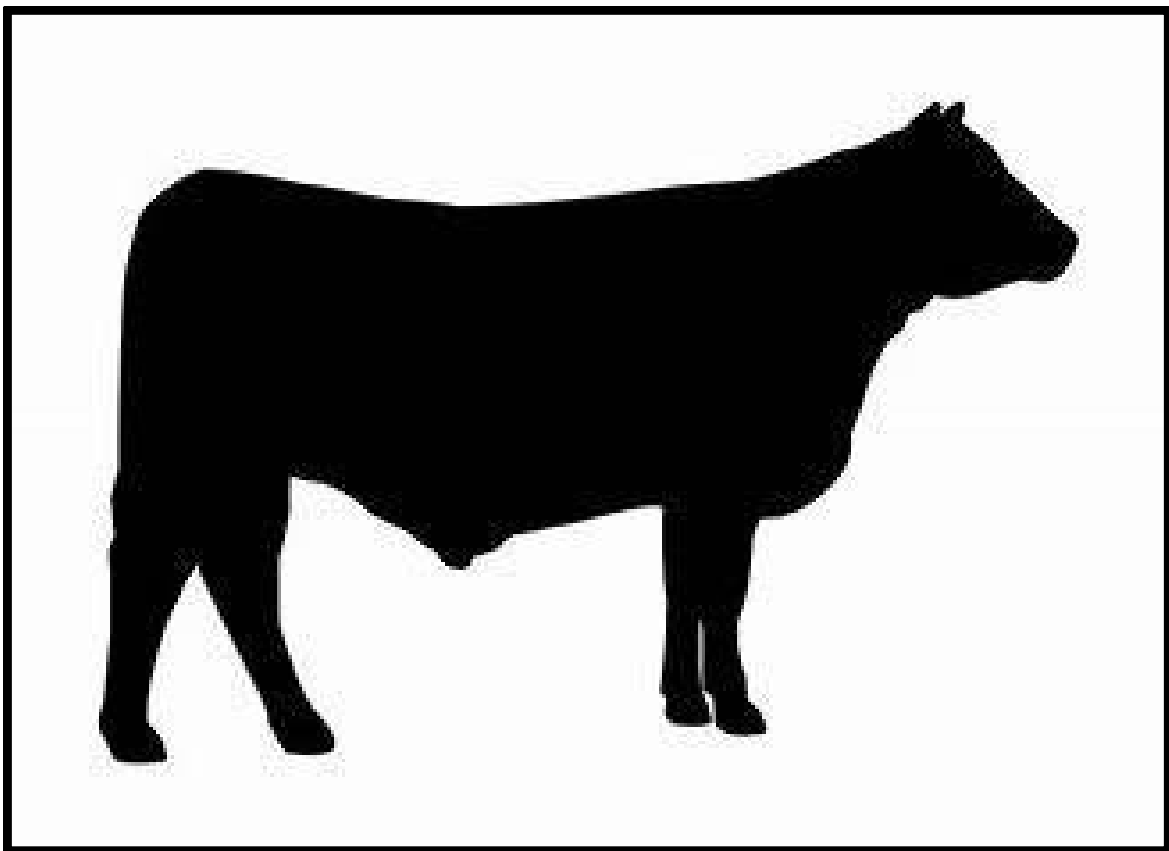
This large-framed breed began its journey in Switzerland and is known for both strength and versatility. Its coat is typically a mix of tan and white, often with a white face and patches across the body. As the third most common beef breed in the United States, it's valued for rapid growth and high meat yield.



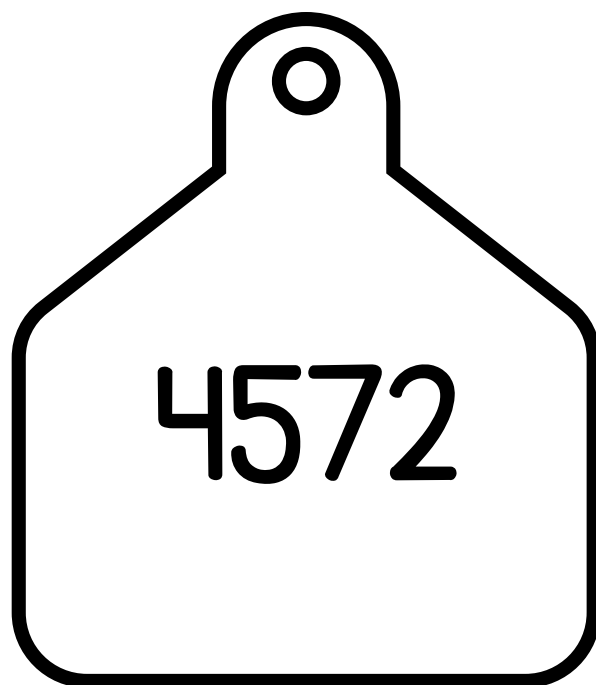
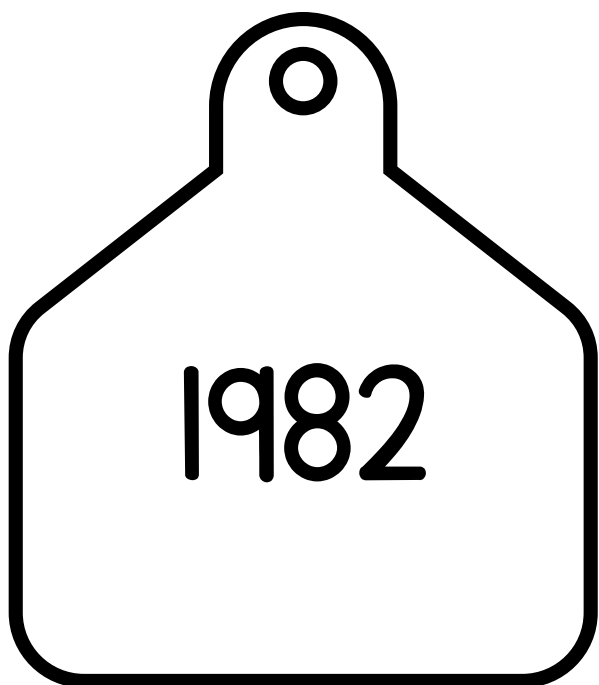
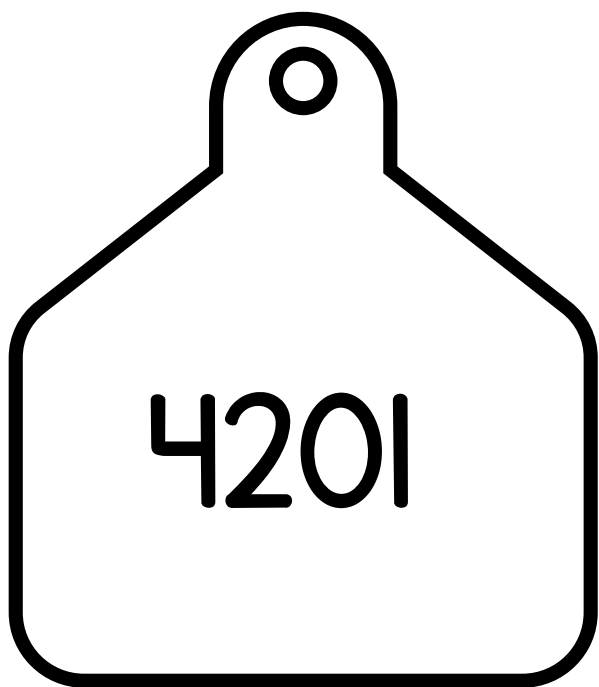
Tag#: 1982

This muscular, tan-colored breed hails from the countryside of France. Known for its lean meat and strong build, it has earned a solid reputation in the beef industry.

As the fourth most common beef breed in the United States, its sleek coat and powerful frame make it easy to spot among the herd.



Tag#: 4572



Angus



Hereford



Simmental



Limousin

