

A Market for Goats

Objective

Students will read about goat production in Oklahoma and learn about the market for goats among various ethnic groups. Students will research ethnic groups and holidays in which goat meat is an important part. Students will look at several works of art related to goats and make a timeline of the paintings to show the role of goats in history. Students will research to find the origins of the paintings and locate the countries on a map of the world.

Background

Goats were among the first animals to be tamed by humans and were being herded as long as 10,000 years ago. They are part of the caprine family and are descended from the Bezoar, a wild goat native to Asia and eastern Europe. Like cattle, they are ruminants, or cud-chewing animals.

In 2013 Oklahoma ranked in the top five in meat goat production in the US, along with Texas, Tennessee, California and Missouri. Oklahoma meat goat producers had 95,000 meat and other goats in 2014. Most of the recent growth in the goat industry has occurred in Hawaii, Oklahoma, Louisiana, New Mexico and Idaho. After doubling in production in Oklahoma between 1997 and 2007, meat goat inventory has declined since 2009.

Goat is a staple in Africa, Asia and South/Central America, and a delicacy in a few European cuisines. The cuisines best known for their use of goat include African cuisine, Middle Eastern, North African, Indian, Nepali, Pakistani, Mexican, and Caribbean. *Cabrìto*, or baby goat, is the typical food of Monterrey, Nuevo León, Mexico; in Italy it is called *capretto*. Meat from more mature goats is *chevron*.

Goat has historically been less commonplace in American, Canadian and Northern European cuisines but has become more popular in some niche markets, including those that serve immigrants from Asia and Africa who prefer goat to other meat. It has also gained popularity among those looking for alternative sources of protein. Goat meat is low in fat and cholesterol and leaner than poultry, beef, pork or lamb.

While in the past goat meat in the West was confined to ethnic markets, it can now be found in a few upscale restaurants and shops, especially in cities such as New York and San Francisco. Goat meat is rarely found in mainstream grocery stores because of limited, variable and inconsistent supplies. It is more expensive than poultry and other red meats.

Goat meat is savory and less sweet than beef but slightly sweeter than lamb. It can be prepared in a variety of ways—stewed, curried, baked, grilled, barbecued, minced, canned, fried, or made into sausage or jerky.

Goats are easy to handle and inexpensive to maintain. For this reason

Oklahoma Academic Standards

GRADE 6

Social Studies PALS—

1.A.1,B4,C7,D10;

2.A.2.B4,5,6,7,8,9,C.10

Social Studies Content— 1.5;

2.1AC,2A,3D; 4.1,2,4

Visual Art— 1.1,2,3,4; 2.1,2,5;

3.1,2; 4.4

GRADE 7

Social Studies PALS—

1.A.1,B4,C7,D10;

2.A.2.B4,5,6,7,8,9,C.10

Social Studies

Content— 1.1,2,5; 4.1,2

Visual Art— 1.1,2,3,4; 2.1,2,5;

3.1,2; 4.4

Vocabulary

agile— able to move quickly and easily

buck— a male goat

capital—any form of wealth employed or capable of being employed in the production of more wealth

caprine—of, relating to or being a goat

carcass— the body of a meat animal prepared for market

component—a constituent part; element; ingredient

containment—restricting territorial movement

cud— food brought up into the mouth by some animals from the rumen to be chewed again

ethnic— of or relating to groups of people with common traits and customs and a sense of shared identity

halal—permitted or lawful under Islamic dietary laws

immigrant— a person who comes to a country to live there

inconsistent—not regular

kosher— accepted by Jewish law, especially ritually fit for use

niche market— concentrating on a small but specific and well defined segment of the population by identifying needs, wants, and requirements that are being addressed poorly or not at all by other sources.

predator— an animal that lives by killing and eating other animals

production—the creation of value; the producing of articles having exchange value

ruminant— a cud-chewing mammal

savory— having a spicy or salty quality without being sweet

staple— something in widespread and constant use or demand

taboo—prohibited or excluded from use or practice

tradition— a long-established or inherited way of thinking or acting

variable— likely to change

viable—practicable; workable

they are popular as show animals. They require less land and start-up capital than large livestock such as cattle. Because goats are curious, smart and more agile than larger livestock, the biggest expense is adequate fencing for containment and protection from predators.

The most popular breed of meat goat in Oklahoma is the Boer goat. Boer is an Afrikaans word meaning farmer. The Boer goat was developed in South Africa and first introduced in Texas in 1993. Other breeds used for meat include Nubian, Pygmy and Spanish goats. There are over 210 breeds of goat. Of the 450 million goats in the world, 6 to 8 percent of them are in North America. The largest part of the world goat population can be found in the Middle East and Asia.

Goats are also raised for their wool (mohair, pashmina, cashmere) and milk. Goat milk has many uses, including cheese, ice cream, and baby formula. Goat milk is used as a replacement for cow's milk for babies who are allergic to cow's milk. It has a more easily digestible fat and protein content than cow milk. The high fat content makes it a useful ingredient in soaps and lotions. Goat milk is also high in vitamins and minerals that are good for the skin.

Social Studies

1. Read and discuss background and vocabulary.
2. On a map of the US, students will locate the top five producers of meat goats—Texas, Tennessee, Missouri, California and Oklahoma.
3. Provide copies of the Reading Page.
 - Students will read the information as a class.
 - As a class, discuss supply and demand and the development of new markets driven by the immigration of different ethnic groups into the US. Discuss the meaning of niche marketing. Besides goat meat, another successful niche market related to goats is goat milk soaps and lotions. Because of its high fat content, goat milk makes an excellent base for those products.
 - Divide students into groups of four or five.
 - Students will follow the directions included with this lesson for making goat milk soap.
 - Students will work in groups to develop a plan for marketing the soap, including name, advertising plan, budget, etc.
 - Students will present their ideas in a PowerPoint

presentation, poster, skit or other creative format.

4. Divide students into groups of three or four and assign each group one of the ethnic groups discussed in the reading.
 - Students will use online or library resources to research the assigned ethnic groups, important holidays, dietary laws or taboos and additional food preferences.
 - Working in their groups, students will creatively present information in ways that conveys a grasp of concepts (group poster, Power Point presentation, or oral and written presentation of ideas, video, etc.) Students should cite factual sources.
 - Students will discuss how the culture is like and how it is different from their own.
5. Write the list of ethnic goat dishes shown at right on the board (without the names of the countries). Students will use online or print resources to identify the country where each of the dishes is popular. Students will find the country on a world map and name the continent and region where it is located.
 - .—Discuss the movement of immigrant groups in the past that introduced new foods into the US (Irish stew, Italian pizza, Chinese noodles, Mexican tacos, etc.) Students will list Americanized foods with ethnic origins. Discuss how different students' own diets would be without the addition of ethnic foods such as tacos and pizza.

Visual Art

1. One indication of the importance of goats around the world and throughout history is the large number of goats represented in works of art from many time periods and from different parts of the world. Find the “Ag in Art” link on the OAITC website (Click on “Additional Resources”) and find all the paintings of goats in the “Farm Animals” section (listed at right).
 - Students will make a timeline of the paintings related to goats and research to find their countries of origins.
 - Students will locate the countries on a world map.
 - Students will each select one of the works of art and write a narrative describing what is happening in the piece.
2. Show students the painting at this link by Florida artist Leonid Afremov: <http://afremov.com/SUNNY-GOAT-PALETTE-KNIFE-Oil-Painting-On-Canvas-By-Leonid-Afremov-Size-20-x30.html>
 - Students will discuss the painting, based on the following guiding questions:
 - What is the center of interest?
 - Describe the artist's use of movement in the piece.
 - Describe the artist's use of balance.
 - Identify the different uses of shape, color and value within the piece.
 - Locate and discuss the objects within the foreground, middleground, and background.
 - What sort of meaning do you think the artist is attempting

Ethnic Goat Dishes

barbacoa de cabrito (Jamaica)
birria de chivo (Mexico)
goat curry (Jamaica)
goat roti (Jamaica, Trinidad)
san yang kai tai (China)
biryani (India)
kosha mangsho (West Bengal)
sukuti (Nepal)
yagishashi (Japan)
cabrito (Mexico, Peru, Brazil, Argentina)
roast goat (Southern Italy and Greece)
goat moilee (South India)
masala gosht (India)

Examples of Goats in Art from the OAITC website

- The Goat Herd of Genzano, Jean-Baptiste-Camille Corot (1843)
- Goat, Arthur Dove (1934)
- Study of a Goat, Thomas Gainsborough
- Landscape With Two Goats, Paul Gauguin (1897)
- Woman With Goats, Max Lieberman
- Capra (Goat), Francesco Londonio
- Peasant Farmer With Goat, Marie Vorobleff Marevna
- Goat, Niko Pirosmeni
- Head of a Goat, Diego Rivera

to convey?

3. The painting by Afremov is an example of abstract art. Abstract art uses elements of form (as color, line or texture) with little or no attempt at creating a realistic picture.
 - Students will compare Afremov’s painting with Arthur Dove’s “Goat” on the OAITC website.
 - Students will find other examples of abstract art represented in the goat paintings on the OAITC website.
 - For each work of art, students will list elements of the painting that make it abstract and not realistic.
4. Students will create their own representations of goats, based on what they have seen in the paintings and using a variety of media (painting, drawing, collage, clay sculpture, etc.)

Extra Reading

Bregoli, Jane, *The Goat Lady*, Tilbury, 2004.

Hurst, Janet, *The Whole Goat Handbook: Recipes, Cheese, Soap, Crafts & More*, Voyageur, 2013

Miller, Sarah Swan, *Goats (True Books: Animals)*, Children’s, 2001.

Poirier, Mark Jude, *Goats*, Miramex, 2002

Singer, Isaac Bashevis, and Maurice Sendak, *Zlateh the Goat and Other Stories*, Harper Collins, 2001.

Goat Milk Soap

goat milk melt-and-pour soap base (2lbs)
rubber spatula
lavender essential oil (or other scented oil)
spray bottle filled with rubbing alcohol
soap mold or ice cube trays

1. Cut the soap base into chunks and place in microwave safe dish. Heat in 30-second increments, stirring with the spatula after each heating. Continue until soap base is evenly melted. Do not allow the soap to boil.
2. Add a few drops of lavender oil and stir. If bubbles start to form on the surface, spray lightly with the alcohol.
3. Pour into mold or ice cube trays. Spray surface with alcohol if bubbles form.
4. Place in a cool area such as the refrigerator until soap is fully set. Remove from molds and wrap in wax paper.

Ag Careers: Market Research Analyst

Market research analysts help their clients figure out who their consumers are, what those consumers want and how much they’ll pay for what they want. Analysts reach these conclusions with traditional methodologies like focus groups and surveys.

Market research analysts also produce reports on sales trends and consumer demographics, preferences, needs and buying habits. They must be able to present their findings to clients in an easy-to-understand way.

People in this career work for a range of employers, including research companies, colleges and government agencies.

A Niche Market for Goats

A marketing niche is a small segment of a larger market that targets a very specific group of committed buyers. Rather than try to capture a share of the entire market, the niche business targets a very specific slice. The market for goat meat is a good example. Goat producers can't compete with beef, pork or chicken producers in the US because those are well-established markets that cater to the tastes of most Americans. But goat meat is a traditional part of the diet for many of our growing immigrant populations. Goats are the principle source of animal protein in many North African and Middle Eastern nations. Goat is also important in the Caribbean, in Southeast Asia, and in developing tropical countries. Goat meat is a traditional part of the diet for many Asians and Latinos.

Goat meat also works well in a niche market because getting started is less costly than it is for other kinds of meat production. Goats are easy to handle and inexpensive to maintain. They require less land and start-up capital than large livestock. The biggest expense is adequate fencing because goats are curious, smart and more agile than larger livestock.

Probably the most important requirement for getting started in a niche market is to know as much as possible about the potential customers. To meet the demand for goat meat among target groups the goat producer needs to understand the kinds of goats required for each ethnic group and in particular for the different holidays where goat meat is a traditional part of the celebration.

Christian Holidays

EASTER is a Christian feast commemorating the Resurrection of Jesus after his crucifixion. The Orthodox Eastern Church calculates Easter differently from Western Christians, so the Orthodox Easter usually comes several weeks after that of the West. Eastern Orthodox Christians come from a variety of ethnic backgrounds: Greek, Russian, Egyptian, Romanian, Serbian, Ukrainian, Armenian, Bulgarian, Georgian, Albanian, Ethiopian, Syrian, and American. Fleshy, milk-fed kids with relatively light-colored meat, 3 months old or younger, are required. Kids weighing less than 20 lbs are generally disappointing to buyers due to low meat to bone ratios and high carcass drying losses. Kids gaining less than 10 lbs per month or 1/3 pound per day after accounting for birth weight are generally not fleshy enough to be considered prime. There generally is a slight price (per lb of live weight) penalty for kids weighing over 40 lbs. Acceptable weights generally range from 20 to 50 lbs with 30 lbs considered optimum by most buyers. Eastern Orthodox Christians prefer a slightly larger milk-fed kid (i.e. around 35 lbs).

CHRISTMAS is a Christian holiday celebrating the birth of Jesus Christ. EPIPHANY is a prime Christian feast, celebrated January 6, called also Twelfth Day or Little Christmas. Its eve is Twelfth Night. It commemorates three events—the baptism of Jesus, the visit of the Wise Men to Bethlehem, and the miracle at Cana. The Christmas market is for milk-fed kids. This type of kids is rare, because they must be produced by out-of-season breeding in May for October kiddings. Kids as light as 18 lbs are readily accepted, and quality control is generally not as exacting as with Easter kids.

Jewish Holidays

PASSOVER is a holiday beginning on the 14th of Nisan (first month of the religious calendar, corresponding to March–April) and traditionally continuing for eight days, commemorating the exodus of the Hebrews from Egypt. Also called Pesach. It is considered a time of family gatherings and lavish meals, called Seders. ROSH HASHANAH is the Jewish New Year. Rosh Hashanah begins the 10 day period known as the

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High Holy Days. CHANUKKAH is the Jewish festival of rededication, also known as the festival of lights. It is an eight day festival beginning on the 25th day of the Jewish month of Kislev. Milk-fed kids are preferred for Jewish holidays, but these are hard to get because it requires out of season breeding. Quality control is not as important as it is with Easter.

Islamic Holidays

RAMADAN is the ninth month of the Muslim calendar. During this month Muslims observe a month-long fast. EID UL-FITR marks the end of Ramadan. Male and female kids with all their milk teeth (not older than at 12 months) are required for Ramadan. Males can be whole or castrated. Overly fat kids are less desirable. Optimum live weight is about 60 lbs, but weaned kids from 45 - 120 lbs. are accepted by different buyers.

EID UL-ADHA is second in the series of Eid festivals that Muslims celebrate. Eid ul-Adha is celebrated as a commemoration of Prophet Ibrahim's willingness to sacrifice his son Ismail for Allah. On this day Muslims sacrifice animals which have been deemed Halaal, or fit for sacrifice. They not only eat the meat themselves but distribute it amongst their neighbours, relatives and the poor and hungry. Yearlings (animals with one set of adult teeth) that are blemish free are preferred for Eid Ul-Adha. Animals with broken horns, open wounds, torn ears or physical unsoundnesses generally do not meet the criteria. In some cases, castrated animals or lambs with docked tails are frowned upon.

Hindu Holidays

NAVADURGARA OR NAVRATRA DASHARA OR DASSAI is a Hindu holiday honoring the goddess Durga. Goats are generally slaughtered from the 7th to the 10th day of the holiday after which families meet together and celebrate with curried goat while receiving family blessings. Female goats are not acceptable for this holiday. Relatively tender male goats are generally used. Size of carcass depends on number of people expected to be fed. DIWALI is a five day festival which occurs on the 15th day of Kartika. Diwali means "rows of lighted lamps," and the celebration is often referred to as the Festival of Lights.

OTHER HOLIDAYS

Goats for JULY 4TH WEEKEND are animals suitable for barbecue, generally cabrito kids or young bucks, does, and wethers with one or no sets of adult teeth.

Many CARIBBEAN HOLIDAYS such as carnival and Jamaican Independence Day use goat meat for celebratory feasts. Optimal goats for the Caribbean holidays are young 60 lb bucks. However, older animals of all sexes are often in demand, and customers may prefer to buy them rather than pay the extra price for prime young bucks.

The HISPANIC MARKET for goat is for 20- to 35-lb live weight milk-fed kids for cabrito and larger animals for seco de chivo and can be especially strong in some regions during Cinco de Mayo (May 5th), Mexico's Independence Day.

Source: Penn State Extension <http://extension.psu.edu/animals/goats/marketing/ethnic-holiday-calendar>

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