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# Marketing Meat Goats, the Basic System

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*Marion Simon, State Specialist for Small Farm and Part-time Farmers, Kentucky State University Cooperative Extension Program, 400 East Main St., Frankfort, KY 40601*

### **Abstract**

Goat meat is an important food source worldwide and in several areas of the United States, particularly among nontraditional, “new” immigrant, and ethnic groups. Even though goats provided an important resource in the development of the United States, goat production became localized and was bypassed by the commercial and industrialized agriculture that has characterized the United States for the past century. Because of the U.S. commercial agriculture system, goat meat is a new commodity to American consumers, and goats are new enterprises for American producers. As a result, the market structure and infrastructure currently available to cattle, poultry, and swine producers have not been developed for goat producers. Goat producers are faced with swings and variations in prices that depend on the buyers in their local market, the availability of goats in the United States, the price and availability of imported products, and the consumption patterns of nontraditional and “new” consumers.

**Key Words:** Goat marketing, Hispanic and Ethnic Markets for Goats, U.S. 2010 Goat Markets

### **Introduction**

Some of the highest prices for market meat goats in the history of USDA’s recorded statistics on meat goat prices were recorded in 2010 and 2011. Despite these record prices, it is still important to discuss goat marketing risks and ask other important questions about goat production, such as:

- Why have the prices been so high?
- What can cause the prices and economic returns to producers to vary during the year or from year to year?
- Has the economic recession affected the meat goat industry?

## **Seasonality of Goat Markets**

It has been said that everyone in the world eats goats but Americans. But the preference for goat meat in the United States is rapidly increasing. The United States has a rapidly growing population from traditional goat-consuming areas. Presently, 16% of the U.S. population is Hispanic and 4% of the population Asian. The Hispanic population in the United States has grown rapidly, over 5-fold since 1970. By 2050, the U.S. Hispanic population is expected to be 30% of the U.S. population, and the Asian population is expected to be 8% of the U.S. population (U.S. Census Bureau, Population Division <http://www.census.gov/2010census/popmap>).

In general, what do these population trends mean for producers? Because the Hispanic population is located across rural and urban areas nationwide, they should provide a significant consumer base for goat meat products, particularly fresh goat meat served around festivals or significant occasions (e.g., birthdays). Because many Hispanics are Christian, and many are Catholic, producers can expect the highest consumption periods for Hispanics, especially Mexicans, to be around Christmas, New Year's, and (the Western, Roman, or traditional) Easter. The celebration of Cinco de Mayo (May 5) also increases goat meat consumption by Mexicans during the period surrounding Easter. For those celebrating the Western or traditional Easter, the ideal goat is a milk-fed kid weighing 30 pounds. For those celebrating the Eastern, Orthodox, or Greek Easter (which generally coincides with, or follows, the Western Easter), a slightly larger, 35-pound milk-fed kid is preferred.

The Latino market prefers a suckling kid weighing 20 to 35 pounds with larger kids preferred for pit barbecuing. Caribbean holidays create a market for intact 60- to 80-pound bucks, but older goats of either gender may be acceptable. Most of the Caribbean festivals occur in the fall with "curried goat" as the traditional dish. Most Caribbean consumers say that the smell of the intact male goat improves the flavor and potency of the soup. Suckling kids are popular during Christmas and New Year's, but larger kids may be acceptable. The demand for "curried" and market kids also increases during this holiday period (Geisler, 2009).

The United States is also experiencing growth in religious groups that prefer goat meat, particularly those of the Muslim/Islam faith. In 2007, the Bureau of the Census estimated over 1.35 million adults in the United States associated with the Muslim/Islam religions, up from 1.1 million in 2004. However, these numbers are highly disputed. Smith estimated the number to be 1.89 to 2.8 million in 2000, while Bagby estimated between 6 to 7 million in the same year. The Pew Research Center estimated 2.45 million in 2009. Kettani (2010) estimated the U.S. Muslim population to be 5 million in 2000 and 6.99 million in 2010 with a projected population of 7.99 million in 2020. Zogby International (2000) estimated the North American Muslim population to be 7 million in the United States and 1 million in Canada, for a market of 8 million Muslims consumers.

These comprise 2.3 million households with the average family size 25% larger than the U.S. average. Of these, Zogby International (2000) estimated 24% to be African American, 26% to be Arab, 26% to be South Asian, and 24% other, with an annual growth rate of 6% rather than the 0.9% indicated by the U.S. Census. Zogby International estimates the Muslim population will be 16 million by 2014.

Cornell University (2002) made these findings and drew these conclusions: 67% of the American Muslims were under 40 years old; 67% had a bachelor's degree or higher; 66% had over \$50,000 annual income (2002) with 26% of these over \$100,000 annual income (2002). Mujahid (2000) reported that most Muslims lived in major cosmopolitan areas of the United States with an estimated 20% in California, 16% in New York state, 8% in Illinois, 4% each in New Jersey and Indiana, and 3% each in Michigan, Virginia, Texas, and Ohio. Ba-Yunus reported that in Illinois in 1997 Muslims had an average household income of \$53,500 with African-American Muslims averaging \$32,000 and Arab Muslims averaging \$69,000. He also noted that in Illinois, about 25% of the growth in the Muslim population was due to conversions and that about 41% of these new (converted) Muslims in Illinois and 61% in New York state are projected to leave the Islam faith within a few years.

What does this mean for producers? Although the estimated population varies greatly, based on this information, Muslim/Islam consumers should provide a significant consumer base for goat meat, particularly around major cities and metropolitan areas. Income should keep the demand inelastic for many (price will have little effect on consumption). Many of the Muslim/Islamic population, particularly those who are foreign born or raised in Muslim families, consume goat daily as their normal diet. Those who are American converts may consume a variety of meats, with a preference for goat meat around holidays and religious periods.

Muslim holidays are based on the lunar calendar. Ramadan is a month-long holiday where families celebrate the beginning and end of Ramadan. Festival meals take place each night since no food is consumed between sunrise and sunset. Male or female kids that are less than one year old and weigh 60 pounds are desired, but weaned kids between 60 to 120 pounds may be acceptable. Ramadan falls on the ninth month of the Islamic calendar. Ramadan has coincided with the period of September through November, the months when most kids are weaned and sold (during the period when monthly prices fall or "bottom" due to seasonal weaning and sales production pressures); however, Ramadan will be earlier in the calendar year (beginning on August 11 in 2010 and moving earlier due to the lunar calendar).

The movement of Ramadan toward summer and spring months (due to the lunar calendar) may improve the prices of kids sold during this period. This may warrant producers to target breeding and weaning for this earlier Ramadan market. Undoubtedly, Ramadan in the autumn months has improved the "bottom" prices for kids

that were sold in September through November (when kid prices should seasonally drop due to weaning and oversupply pressures). The Festival of Sacrifice (Eid al Adha) is a Muslim market for blemish-free yearlings, preferably uncastrated bucks. Large kids weighing 60 to 100 pounds may be acceptable. Unless unavailable or with special exception, all goats are to be slaughtered under Halal procedures.

Hindus celebrate the Dassi holiday with market wether kids preferred; the carcass size depends on the number of people being served (Geisler, 2009).

Traditional American consumers are beginning to increase their consumption of goat products because of these factors:

- Americans' increasing familiarity with goat meat and goat products;
- the rapid expansion of ethnic restaurants and foods; and
- the low-fat health aspects of goat meat (Goat meat is 50%-65% lower in fat than similarly prepared beef, but has a similar protein content and saturated fat in cooked goat meat is 40% less than that of chicken, even with the skin removed, USDA Hanbook #8, 1989).

What do these factors mean for producers? This should expand the market for goat meat products, particularly for: 1) fresh products that are sized for individual or family portions, and 2) pre-packaged and processed products, with family- or individual-sized portions that follow the trends for low-fat, convenience, or easy-to-prepare foods.

Because many American consumers prefer naturally grown, organically certified, grass-fed, locally grown, or humanely raised and handled animals, these labels can be used as marketing tools to distinguish a producer's products. Around the traditional and Western Easter, many Christians, particularly Catholics, prefer lamb or goat meat. Around the Eastern or Orthodox Easter, many Greeks prefer goat meat.

### **The Demand for Goat Meat Is Inelastic**

The general demand for meat goats in the United States is inelastic. U.S.-produced market meat goats are sold primarily in the U.S. domestic market with a percentage exported (primarily to Mexico and Canada). The population demographics show an expanding U.S. market for goat meat as noted earlier. First, there is a steady consumption of goat meat by traditional goat consumers, with the Hispanic population being the primary consumers in the United States. Special days, such as holidays, festivals, and birthdays, make fresh goat meat in high demand by these traditional goat consumers. As that population increases, so does domestic consumption.

Secondly, goat consumption also increases significantly around religious holidays, such as Easter, Christmas, and Ramadan. The most significant increases in goat consumption occur during the two weeks prior to the traditional or Western Easter.

Thirdly, the health aspects of goat meat and rapid expansion of ethnic cuisine have increased the demand among traditional Americans. With an inelastic demand, increases in the population of consumers who eat goat meat will lead to an increased market demand for goat meat, and the price will have little impact on the amount of the meat consumed or purchased.

In earlier research, Pinkerton and McMillin noted that ethnic consumers tend to equate small carcass weights and lighter lean meat color with more tender meat from younger animals. However, on ethnic consumer sensory taste panels, the panelists could not significantly distinguish between the tastes of the meat between breeds, between male or female kids, between light (under 50 pounds) or heavy (over 50 pounds) kids, or among kids that graded prime, choice, or grade (now graded as Selection #1, #2, or #3). They noted that the grade yearling wethers (Selection #3 yearling wethers) were less tender but not significantly. The consumers stated their preferences for carcasses that are “meaty” with thick, plump muscling, minimal fat, and “youthful” or light in color. They preferred carcasses to be well muscled or “meaty” in the rear quarters and frontal areas with the live goats appearing to be wide, deep, and thick in those areas.

Although the consumers state that they prefer fresh meat, they did not show taste preferences for fresh over frozen (Pinkerton and McMillin, 2010). Gipson (1999) noted that Hispanics prefer young goats (25 pound carcasses or 50 pound kids, live-weight); Muslims prefer 35 pound carcasses (70 pound kids, live-weight), and Caribbean peoples prefer mature bucks. When looking at the restaurant trade, restaurants preferred larger carcasses of about 40 to 45 pounds.

Trencher and Parks (2005) found that Somalian immigrants eat goat meat one or two times daily. They prefer fresh, not frozen meat, but normally purchase 69% frozen and 31% fresh goat meat. They prefer grass-fed goat meat. They could tell the difference between grain-fed and grass-fed goat meat by the smell as well as by the “greasier texture of grain-finished” meat. They noted that frozen New Zealand and Australian goat meat was leaner and totally grass-fed, which they prefer. They indicated that as long as the price difference between fresh and frozen goat meat was reasonable, they would buy fresh.

The top factors that made Somalian immigrants to purchase goat meat difficult were:

- the lack of availability of fresh meat (94%),

- the lack of information about where to purchase goat meat (80% for women and 70% for men),
- poor quality of the meat (26%),
- the meat was not processed by Halal procedures (12%),
- they did not have transportation to the source of goat meat or grocery stores (11%),
- they were uncomfortable going directly to farms (6%), and
- the price (1%).

Note that the price of goat meat, for Somalian immigrants, was the least significant factor related to their difficulty in purchasing goat meat.

Ajuzie (2002) found the demand for goat meat to be inelastic. For traditional consumers of goat meat (i.e., the Hispanic and Mexican population), goat meat is a regular part of their diet. The amount of goat meat they consume stays relatively constant. It is not significantly affected by the price. For example, an increase in the price of goats or goat meat does not result in a significant decrease in the amount of goat meat demanded or purchased. Likewise, a decrease in the price of goats or goat meat does not result in a significant increase in the amount of goat meat demanded or purchased. Unlike most traditional American meat products which are elastic (where consumers chose between beef, poultry, and pork based on the price), goat meat is a staple in their diet and they rarely change to other meats.

With this inelastic demand, we can expect the amount of goat meat consumed to remain about the same on a per person/family basis and to increase proportionally as the goat-consuming population increases. What does this inelasticity mean to producers? With an inelastic demand, producers have an economic incentive to increase the price of goat meat.

## **Marketing Options**

There are many good marketing options, such as:

- **Direct marketing**, including direct sales to consumers of live goats or goat meat,
- Goat meat sales at **farmers' markets**, and
- **On-farm sales** of live or processed (under state regulations). Keep in mind that immigrant women may need special introductions, transportation, or interpreters when they buy directly from producers.
- **Restaurant trade.**

- **Traditional markets** including livestock auctions, order-buyers, tele-auctions, packers, and shipper trade. These should be good options particularly for those who produce Selection #1 and Selection #2 market kids.

- **Cooperatives** for marketing or purchasing inputs may be good options.

Marketing strategies that may be beneficial for local producers include:

- developing a relationship with Halal processors for direct sales of live or processed goats to consumers.
- contacting local Mexican grocery stores, particularly larger stores that service broad areas, about the availability of local goats for sale.
- contacting Catholic churches in areas with large Mexican populations for direct sales of live or processed goats.

### **The Supply of Goat Meat Is Elastic**

Ajuzie (2002) found goat production to be elastic. Producers react to changes in prices, both changes in prices that they receive for their goats and changes in the costs of inputs. Falling sales prices or rising costs of inputs put producers in a “cost-price” squeeze, and they will cut back on production. Rising sales prices or falling input costs will cause producers to increase production. Breeding and production cycles, weather, and drought also influence production and sales decisions. Because of the biology and length of the goat production cycle (two to three years for a doe to come into production), producers cannot immediately move into, or out of, the marketplace. This, coupled with changing weather conditions such as droughts, often results in annual changes in the supplies of goat meat and the resulting price fluctuations.

When international trade and U.S. imports and exports of goat meat (USDA ERS) are considered, the United States was a net exporter of goat meat until the late 1980s. In 1990, the United States exported about 3.5 million pounds of goat meat. But as the U.S. population changed, the United States became net importers of goat meat during the early 1990s. The United States continues to export some goat meat each year, mainly to Mexico and Canada, but the amounts are relatively small compared to the goat meat sold in the U.S. domestic market. In 2007, the United States imported nearly 23 million pounds of goat meat, with more than 90% coming from Australia. Some 41,000 pounds were imported from Mexico. Over 80% of the imported frozen (chilled) goat meat enters the United States through these ports of entry: Los Angeles, Philadelphia, and Miami.

### **Balancing Goat Meat Supply and Demand**

How does the supply of goat meat and demand for the products affect the marketplace? Table I summarizes the USDA ERS data for goat imports and exports, and Table II summarizes the U.S. goat slaughter and annual changes in the availability

of domestic product. With the demand being relatively inelastic and consumers wanting their staple goat meat diet, shortages or excesses in domestic (and imported) supplies will drive the prices up or down, with imports absorbing the differences in the volumes needed. Even though consumers state their preferences are for fresh goat meat, frozen imported products can readily substitute for the higher-priced U.S. fresh products because taste tests do not show a preference for fresh goat meat over frozen. Prices tend to fluctuate annually based on the total availability of goat meat (including the imported frozen and the domestic fresh products).

Fresh products are a must for special days including holidays, birthdays, and religious periods. Frozen products can substitute for daily meals, even though fresh is preferred. When looking at the general annual price fluctuations, prices tend to respond to the availability (supplies) of goat meat to meet the relatively inelastic demand. So why are 2010 prices so high? The availability of goat meat, both domestic and imported, is down by 2%. Since the beginning of 2009, goat meat supplies in the United States have been down by 1 to 2% under 2008 supplies, while the demand and the number of consumers continue to expand rapidly. Imports are down due to a 100-year drought in Australia. Domestic production is down due to adverse weather conditions; a Texas drought; lower prices in 2007-2008 which resulted in production cutbacks because the prices did not meet producers' expectations; and problems associated with overgrazing, parasites, and higher production costs (due in part to 2008's record costs associated with energy, fuel, and feedstuffs).

Producers need about two to three years to gear up for production, so with the 2010 goat meat shortage, prices reached record highs. What does this mean for producers? Producers can expect domestic production, and imports, to increase within the next two to three years in an attempt to readjust the supply to the demand. Because the demand continues to grow fairly rapidly, higher-than-normal prices can be expected to hold for the next two to three years, probably longer.

Goats exhibit seasonal price and production patterns that trace back to data that has been recorded since the 1940s. Within each year, seasonable prices usually cause a 25% price difference, with the highest being in March-April and the lowest in October. The biology of goat production leads to most kids being born in late winter to early spring and weaned in the late summer or fall. This creates a market kid (hence fresh goat meat) shortage during the late winter-early spring months and gluts the market during late summer and fall. Coupled with that, Easter (the Western or traditional Easter) has the strongest goat meat demand in the United States. This forces market kid and goat meat prices to reach their peak just before the Western Easter (March-April), drop significantly during June, continue trending downward through October-November, then begin rising toward the Christmas season (December). Fresh goat meat shortages force the prices to continue upward until they peak again during the Easter season (March-April).

Prices tend to rebound (increase) or stabilize during Ramadan. However, Ramadan will move earlier in the upcoming years. This means that producers may want to breed for fall-early winter kidding to take advantage of the improved late winter-early spring market. They may also want to breed to sell market kids during the Ramadan season, particularly in the upcoming years as Ramadan moves to months that are earlier in the calendar year when market kid prices are historically higher.

## Kentucky Market Data

Figure 1 shows the 2005-2006 Kentucky monthly market data for market kids (high and low price ranges; Andries, 2007). Note that local producers vying for the Easter market caused a local glut during April which rebounded slightly during May. Also note that the kid market generally peaks two weeks prior to the Western Easter in Kentucky, possibly due to the fact that most of the Kentucky market kids are shipped live to Pennsylvania to meet both the Eastern and Western Easter markets. Note that the Easter dates for those years were: Western or traditional Easter = 3/27/05 and 4/16/06, and Eastern Easter = 5/1/05 and 4/23/06. Nationally, April is the highest month due to the (Western and Eastern) Easter markets coupled with shortages of fresh goat meat. Note that the Western and Eastern Easters will coincide on 4/20/14, which should strengthen the markets for two weeks prior to that date.

## Other Economic Factors

Has the economic recession affected the goat industry? With 2010 and late 2009 prices, it appears that it did not affect consumers of goat meat as much as it affected traditional American consumers who base their meat purchases on price. However, preliminary data from a Kentucky goat meat marketplace study of Hispanic grocery stores (Andries, Hutchens, et al., 2010) show a definite impact of the general economy and the high goat prices on goat meat consumption in Central Kentucky. Frozen goat meat cuts were distributed to local and larger meat goat retailers in Central Kentucky (from Kentucky-raised goats). The results were interesting. The larger markets showed continuing purchases of goat meat throughout the test period. However, the smaller markets showed movement from the purchases of goat meat to chicken and less costly meat products during the fall (exhibiting an elastic demand). It can be noted that goat prices in Kentucky began climbing earlier and higher than expected during November and December. Furthermore, during the last quarter of 2009, the smaller markets showed a complete shift of their customers from meat purchases to non-meat sources of protein. This showed a strong elastic demand, or total inability to purchase more costly meat products due to the economic recession. Given this was during the holiday season when goat meat purchases were expected to climb, it was most likely due to the economic recession and the lack of expendable income.

## **Conclusions**

The United States has an expanding market for goat meat, particularly among new immigrants, religious groups, and the rapidly expanding population of Hispanics, Latinos, and Mexicans who consume goat meat as a regular part of their diet. American consumers are increasing their consumption of goat meat as a result of their exposure to ethnic foods and the low-fat health aspects of goat meat. Because the demand for goat meat is relatively inelastic among its traditional consumers, price changes do not significantly influence the consumers' decisions to buy goat meat.

Producers can target their production to follow the economic data and trends. There is generally a 25% seasonal price adjustment (drop or increase) between the high months of March-April and the low month of October. Producers can plan their sales to target holidays, festivals, and the observance of religious holidays and time periods. As producers plan for production and marketing, they may want to target sales and the size and age (maturity) of their goats for Christmas, New Year's, Easter (Western and Eastern), Ramadan, Cinco de Mayo, and other festivals or special days. Producers may want to target religious groups such as Muslims, keeping in mind that Ramadan follows the lunar year and Halal slaughter is preferred. The largest numbers of this group tends to be in metropolitan areas. Or producers may want to target new immigrants, such as Mexicans who reside across the United States in rural and metropolitan areas. These factors are important when working with new immigrants:

- Understanding their cultures, sometimes assuring a method of transportation, particularly for women.
- Recognizing their holidays and special days.
- Understanding their language (an interpreter may be needed).

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