

**DEMAND FOR
GOAT MEAT IN
THE UNITED
STATES**

by

Terry A. Gipson, Ph.D.



**E (Kika) de la Garza Institute for Goat
Research**

**Agricultural Research and Extension
Program**

**Langston University
Langston, OK 73050**

Demand for Goat Meat in the United States

**Terry A. Gipson, Ph.D.
Interim Goat Extension Leader
Langston University**

Introduction

Since 1990, several major international, national and regional meat goat production symposia have taken place in the Southern United States. In addition, several publications on improving meat goat production in that same geographical location have been written and distributed. Many goat experts view the South as ripe for the expanding meat goat industry. Why? The answer is simple: demand. If one were to look at a balance sheet state-by-state of goat production versus goat meat consumption, only one state would have a large positive balance on the side of goat production and that state is Texas (Pinkerton et al., 1994). Over half of the remaining 49 states would have a zero balance mainly because both production and consumption are low. The rest of the states would have a fairly large negative balance on the side of goat meat consumption because their goat production is low while consumption is high. Thus, these states need to import live goats or goat meat in order to meet demand. California, Florida and the states of the urban Northeast are in this latter category. The Southern United States is well positioned geographically to supply goats to these areas of high demand. The objective of this paper is to examine demand for goat products and the factors that influence demand.

Goat Meat Demand

In this section, we will examine two indirect indicators of goat meat demand, National Agricultural Statistical Service slaughter data and Foreign Agricultural Service import/export data. We will also investigate seasonal trends in goat meat consumption and who are the consumers of goat meat.

Domestic Slaughter

The demand for goat meat has continued to increase dramatically over the last two decades. In 1977, the first year that USDA began keeping statistics on goats slaughtered at federally inspected plants, approximately 35,000 goats were slaughtered nationwide (Figure 1; NASS, 1999). Before 1977, USDA tallied goat numbers with

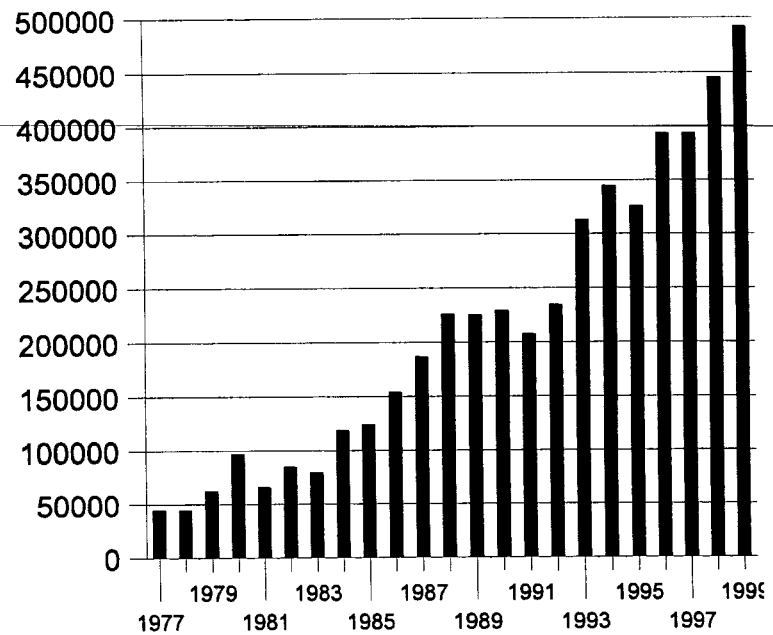


Figure 1. Number of goats slaughtered at USDA-inspected slaughter facilities.

sheep numbers and knowing exactly how many goats were slaughtered at these plants is impossible. By 1999, slaughter numbers had risen to nearly 500,000, a 1000% increase over the 20-year period. The largest single yearly increase occurred in 1993, which was the first year of the three-year phase-out of the Wool and Mohair Incentive program. With the loss of the incentive program, Texas mohair producers sent marginally productive Angoras to market (Pinkerton and Harwell, 1994). After the August/September 1994 shearing season in Texas, the number of goats slaughtered in federally inspected facilities surpassed 10,000/week for the first time ever (see Figure 6). Texas Angora producers have continued to send large numbers of Angora goats to market due to the stagnant mohair market. Texas Angora goat numbers have dropped from 2.1 million in 1989 (Pinkerton, 1991) to 600,000 today (Livestock Weekly, 1999). In fact, there are now more meat-type goats than Angora goats in Texas (Livestock Weekly, 1999).

These goat slaughter numbers pale in comparison to the slaughter numbers of the other red meat species, cattle and sheep. In 1999, nearly 500,000 goats, 3.7 million lambs and 36.3 million cattle were slaughtered. The number of goats slaughtered in 1999 represents ~13% of the lambs slaughtered and ~1% of the cattle slaughtered. In other words, there were as many cattle slaughtered in five days and lambs slaughtered in seven weeks as there were goats slaughtered in one year, assuming a constant rate of slaughter. However, of the three red meat species only goat numbers have significantly increased over the last two decades. The other two, lamb and cattle, have decreased or remained steady.

The regional distribution of the number of goats slaughtered is not uniform. NASS data for the number of goats slaughtered and the number of USDA-inspected facilities for each state was available from 1980 through 1991. Presently, that information is no longer available due to disclosure issues. The state NASS data was statistically clustered into three categories: high, medium and low states for the total number of goats slaughtered over the 12-year period, which was 1.8 million goats. Two states, Texas and New Jersey, were clustered into the high group and accounted for 52.5% of the goats slaughtered at USDA-inspected facilities during that time period, with nearly an equal split between the two states. Only one state, Connecticut, was clustered into the medium group and it accounted for 15% of the goats slaughtered. The other 47 states were clustered into the low group and accounted for 32.5% or approximately 0.7% of the goats slaughtered for each state. The number of USDA-inspected facilities for Texas, New Jersey and Connecticut remained stable over that 12-year period with Texas averaging 17 facilities, New Jersey 15 and Connecticut 11. The number of goats slaughtered increased significantly in those three states, therefore, the existing USDA-inspected facilities were increasing production but no new facilities came into production. These three states may have

been the leaders in terms of the number of goats slaughtered but not in the number of USDA-inspected facilities. Using the same NASS state dataset, states were clustered into high, medium and low groups concerning the 12-year average of the USDA-inspected slaughter facilities. One state, Pennsylvania, was clustered into the high group with an average of 83 USDA-inspected facilities that slaughtered goats from 1980 through 1991. Two states, New York and Missouri, were clustered into the medium group with an average of 50 facilities and the remaining 47 states averaged seven USDA-inspected facilities over the 12-year period.

It should be noted that goats, more so than lambs and cattle, also pass through other slaughter channels, e.g., state-inspected slaughter facilities and on-farm slaughter. Data on these other slaughter channels are unavailable or nonexistent. Therefore, knowing exactly how many goats are slaughtered in the United States annually is not possible.

Import/Export

Even with this significant increase in domestic slaughter, the United States is a net importer of goat meat (Figure 2; FAS, 1999). Since 1989, importation of chilled/frozen goat meat has continued to increase linearly while exportation of goat meat has decreased quadratically. Goat meat that was once exported to Canada, Mexico and the Caribbean is now being diverted to satisfy

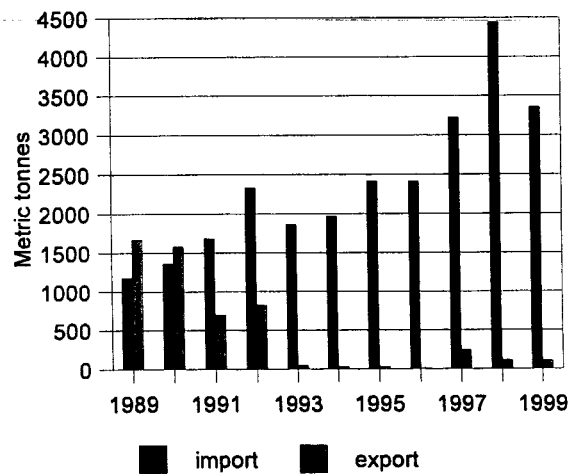


Figure 2. Importation and exportation of chilled/frozen goat meat

domestic demand. In 1991, imports surpassed exports and the United States became a net importer of goat meat. Last year the United states exported approximately 150 metric tons but imported nearly 4,500 metric tons. On a live goat equivalent, the United states imported nearly

250,000 goat-equivalents in 1998, based on a 30 lbs. carcass, to satisfy demand. If this is coupled with the 1999 NASS data, then over three-quarter million goats were slaughtered last year to satisfy domestic demand with nearly 33% being derived from imports. In 1989, the United States imported 1,200 metric tons of frozen or chilled goat meat valued at \$1.7 million (Figure 3; FAS, 1998). In 1998, imports rose to 4,500 metric tons valued at \$11 million. That is an average annual rate of increase of over 600,000 lbs. of goat meat per year and an average annual increase of 7¢ per lbs.

Where does this large quantity of imported goat meat originate? Basically, only two countries are net exporters of goat meat worldwide and they are Australia and New Zealand. Both countries have large populations of feral goats and periodically these goats are rounded-up and harvested for export. New Zealand's share of the importation averages about 9% of the total importation and peaked in 1993 at 25%. This peak has been attributed to a devastating drought in Australia in the early 1990's from which it has since recovered (Pinkerton, 1995).

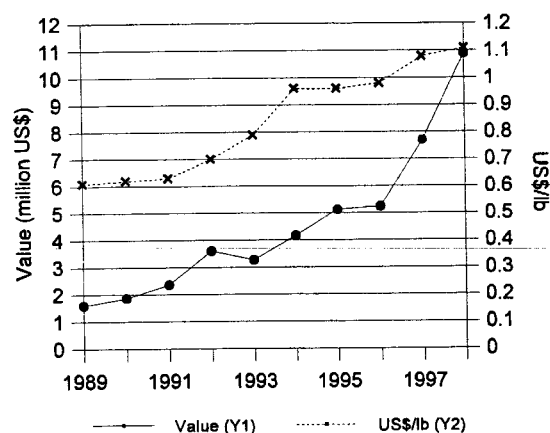


Figure 3. Total and per pound value of imported chilled/frozen goat meat

1993 at 25%. This peak has been attributed to a devastating drought in Australia in the early 1990's from which it has since recovered (Pinkerton, 1995).

The importation of goat meat is not uniform across the United States. In 1998, three seaports, Philadelphia, San Francisco and Miami, accounted for 83% of the goat meat imported into the United States (Table 1). In this decade, these three ports accounted for 73% of the imported goat meat. The port with the greatest increase in import was Miami, FL with an annual rate of 101.6 metric tons.

Table 1. Ports of entry for chilled/frozen goat meat into the United States.

| Port | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | Total |
|-------------------|------|------|------|------|------|------|-------|------|-------|-------|
| Los Angeles, CA | 30 | 35 | 56 | 64 | 51 | 8 | 56 | 267 | 358 | 925 |
| Miami, FL | 222 | 11 | 265 | 295 | 573 | 776 | 614 | 886 | 795 | 4,437 |
| Philadelphia, PA | 213 | 483 | 448 | 238 | 397 | 639 | 514 | 909 | 1,580 | 5,421 |
| San Francisco, CA | 157 | 293 | 513 | 432 | 630 | 823 | 1,063 | 863 | 1,280 | 6,054 |
| San Juan, PR | 497 | 239 | 393 | 255 | 89 | 176 | 138 | 219 | 119 | 2,125 |
| Tampa, FL | 189 | 577 | 650 | 578 | 152 | 0 | 25 | 85 | 140 | 2,396 |
| Others | 53 | 46 | 35 | 6 | 77 | 3 | 7 | 0 | 174* | 401 |

*140 metric tonnes imported through Savannah, GA

Seasonal Trends

The demand for goat meat appears seasonal. Many goat producers have cited Easter, Muslim holidays, 4th of July and Christmas as periods of peak demand for goat meat. However, only Easter is substantiated as a peak demand using the NASS weekly data (Figure 6). The number of goats slaughtered doubles the two weeks before Easter. The increased demand for goat meat at Easter is predominately attributed to the "Easter kid" market. This market is driven by the Greek and Italian ethnic populations residing in the urban Northeast. Except for the cabrito market of Mexico, there might not be a year-round market for kids. The 4th of July, Christmas, Eid al-Fitr and Eid al-Adha do not significantly affect the baseline number of goats slaughtered (see Table 2 for Islamic holidays and explanation). A possible explanation for the nonsignificant effect of the Muslim holidays on goat slaughter is that the goat meat market is largely an ethnic market. The author has visited several slaughter facilities in the Northeast that cater to the Muslim (halal) slaughter trade. These wholesalers/retailers see only a slight increase in goat slaughter volume preceding the two Muslim holidays. They feel that the Muslim clientele is the group that bought goat meat last week and will be the ones buying goat meat next week. Another possible

explanation for the nonsignificant effect of the two Muslim holidays is that culturally Muslim prefer to slaughter the small ruminants themselves for these holidays. It is possible that for these holidays, Muslims are purchasing animals and slaughtering them on-farm. Unfortunately as was stated earlier, statistics for on-farm slaughter are nonexistent, therefore this hypothesis is untestable.

Table 2. Approximate Islamic Dates (Hijra 1421-1425)

| | New Year | Ashura | Mawlid | Ramadan | al-Fitr | al-Adha |
|------|-----------------|---------------|---------------|----------------|----------------|----------------|
| 1421 | 4/6/00 | 4/15/00 | 6/14/00 | 11/27/00 | 12/27/00 | 3/5/01 |
| 1422 | 3/27/01 | 4/5/01 | 6/5/01 | 11/17/01 | 12/16/01 | 2/23/02 |
| 1423 | 3/16/02 | 3/25/02 | 5/25/02 | 11/6/02 | 12/6/02 | 2/12/03 |
| 1424 | 3/5/03 | 3/14/03 | 5/14/03 | 10/27/03 | 11/25/03 | 2/1/04 |
| 1425 | 2/22/04 | 3/2/04 | 5/2/04 | 10/16/04 | 11/14/04 | 1/21/05 |

The Islamic calendar is a lunar calendar and the beginning of each month is the day after a new moon when a thin crescent can be seen. Eid al-Fitr and Eid al-Adha are two major Islamic festivals in which sheep and goat meat play an important role. Eid al-Fitr is the festival of the breaking of the month-long fast of Ramadan. Muslims are required to fast from sunrise until sunset during the ninth month (Ramadan) of their calendar year. Fasting requirements vary from sect to sect but generally a Muslim may not eat, drink or even swallow their own spittle during daylight hours. After sunset, food and drink are allowed but the observer is generally so dehydrated and exhausted that the only things they care to do are drink water and sleep. The breaking (al-Fitr) of the month-long fast is indeed cause for celebration and a lavish feast of beef, mutton and goat meat is prepared. The preference is for dishes prepared with mutton and goat. Eid al-Adha is a festival in celebration of God's deliverance of Abraham's son, Ismail (Ishmeal),

from the sacrificial altar. In the Koran as in the Bible, a ram was substituted for Ismail/Isaac. On this feast day, every male head-of-household is required to slaughter a fatted ram but a goat may be substituted for the ram. Ashura is a celebration in remembrance of the martyrdom of the prophet Mohammed's grandsons. Mawlid is celebrated in honor of the prophet Mohammed's birthday

Ethnic Populations and Immigration Patterns

The portion of the American population that has a taste for goat meat appears to be increasing. According to the United States Census Bureau, 87,172 persons per month immigrated to the United States from 1990 through 1995. Pinkerton and coworkers (1995) estimated that a majority of these immigrants are goat meat consumers. The majority of these immigrants

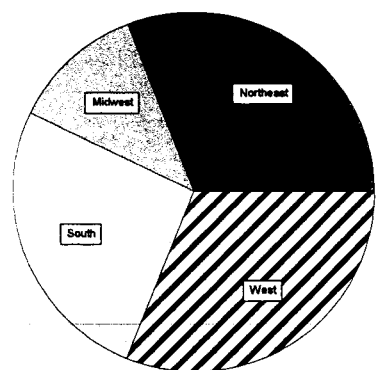


Figure 4. Regional immigration patterns from 1990 through 1995

settled in the northeastern and western states, which received 62% (31% each region) of the immigrants, while only 12% of the immigrants settled in Midwestern states (Figure 4). However, within regions the immigration pattern is not uniform. Five states account for nearly two-thirds of the immigrants during the first half of this decade. California was the most popular destination with 23% of the immigrants settling there. New York accounted for 18%, Florida 9%, Texas 7% and New Jersey 6% of the immigrants.

At the turn of this century, the majority of the immigrants to the United States were from Europe. After World War II, immigration patterns shifted and now the majority of the immigrants to the United States come from Latin America, Asia, India and Africa. The three largest goat consuming ethnic populations in the United States are Hispanics, Muslims and the peoples from the Caribbean. According to the most recent census information, Hispanics

number more than 19 million, Muslims 14 million and peoples from the Caribbean slightly less than two million. Hispanics settled predominately in Texas, California and the Southwestern United States; however, sizable populations live in New York City and other cities of the urban Northeast. The US Census Bureau projects that from 1995 to 2050 Hispanics will account for 57% of the immigration into the United States. Hispanics are the fastest growing ethnic group in the United States and the Census Bureau projects that the percentage of the US population that is Hispanic will increase from 10% in 1995 to 25% by 2050. The vast majority of the Muslims in the United States reside in the urban belt stretching from Washington, D.C. to Boston, MA. Two cities in the United States account for a majority of the Caribbean immigrants, Miami and New York City (Pinkerton, 1995).

Each of these three ethnic groups have different preferences as to the type and weight of the carcass purchased. Hispanics prefer either young kids, cabrito, weighing 15-25 lbs. live weight or young goats that yield a 25 lbs. carcass (approximately 50 lbs. live weight). Muslims prefer a slightly heavier carcass in the 35 lbs. range (approximately 70 lbs. live weight). Muslims also prefer a lean carcass and will discriminate against an overly fat carcass because they think that the retailer is trying to slip them a sheep carcass in place of a goat. Animals destined for the Muslim market must be slaughtered in halal fashion with specific rituals and personnel prescribed by the Koran. Muslims prefer to purchase a carcass with its head on, so that they know that it has been slaughter in the halal style. This presents no problem for sheep which are typically hornless but is a problem for goats which are naturally horned. Federal inspection regulations require that horns be taken off the carcass at the time of slaughter. If the horns are not taken off properly, the carcass can be contaminated and therefore condemned. Processors feel that dehorning a carcass does not warrant the time and effort required and generally will take

off the heads of goats. Peoples from the Caribbean, especially Haitians and Jamaicans, prefer mature bucks from which they prepare goat's head soup and other dishes that are reported to have aphrodisiac qualities (Pinkerton, 1995). Goat curry, a popular goat dish for Jamaicans and Haitians, requires "cubed" bone-in pieces of meat which can be and is often derived from older, poor-conditioned goats.

It is often proposed that the meat goat industry concentrate on increasing goat meat consumption among the non-traditional consumers, i.e., Americans of European ancestry. This is usually proposed in conjunction with a marketing emphasis on developing packaged retail cuts of goat meat which can be sold in supermarket chains. It has been noted by several authorities on marketing that this is an uphill battle (Pinkerton et al., 1994; Degner, 1996). This section of the population consumes very little goat meat and is predicted to remain at this low level in the foreseeable future. However, if the low fat aspect of goat meat was promoted the health-conscious segment of the American population regardless of ethnic origin might be an important avenue for marketing.

Dietary preference is not hereditary and second generation immigrants are as likely to eat pizza and hamburgers as they are to eat ethnic dishes. The percentage of the US population that is foreign-born has increased since the 1970's, when it was at the lowest point of the 20th century (Figure 5).

California leads the states with 25.1% of its population being foreign-born. Other states with a

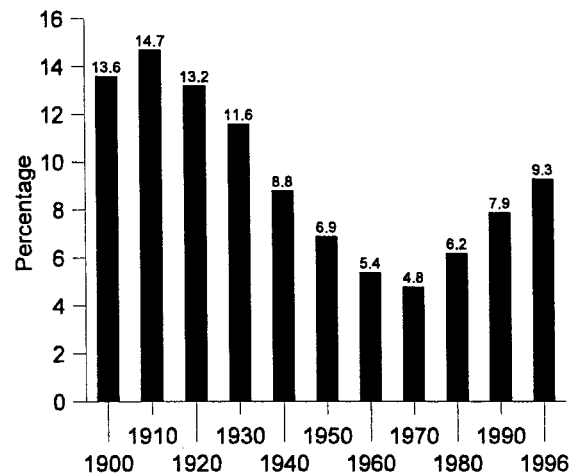


Figure 5. Percentage of US population that is foreign-born.

foreign-born percentage greater than 10% are New York with 17.7%, Hawaii with 16.6%, Florida

with 15.2%, New Jersey with 14.6%, Nevada with 11.4%, Texas with 11.1%, Arizona with 10.9% and Rhode Island with 10.4%.

Conclusions

As can be deduced from National Agricultural Statistical Service and from Foreign Agriculture Service data, the demand for goat meat is increasing significantly. Domestic slaughter and imports continue to rise annually. However demand can be seasonal with Easter influencing significantly the number and type of goats slaughtered. The ethnic populations that fuel this demand are also increasing with regional concentration in the Northeast and West. Therefore, the prospects for the meat goat industry are promising. However, is the ethnic market enough to sustain the meat goat industry? The answer is yes and no. Yes, because an increasing ethnic population means increasing demand for goat meat, especially in the Northeast, California, Florida and Texas. No, because there is little or no emphasis placed upon product quality within many of the ethnic groups. If the price of fresh goat meat is too expensive relative to fresh lamb many ethnic consumers will switch to fresh lamb. Also, if the price of fresh domestic product is high compared to imported frozen goat or lamb many ethnic consumers will switch to imported product, be it goat or lamb. Therefore, the goat producer servicing the ethnic market must adopt management skills that will optimize the profit of their operation.

Bibliography

Degner, R.L. 1996. Marketing goat meat: A persistent challenge. Proc. Southeast Reg. Meat Goat Prod. Symp.1-3.

Foreign Agricultural Service. 1999. Personal communication.

Livestock Weekly. 1999. Texas goat numbers now same as sheep. Feb. 4, 1999, p. 25.

National Agricultural Statistical Service. 1999. Personal communication.

Pinkerton, F. 1991. Mohair pricing and marketing. Fact Sheet No. A-01. Langston University.

Pinkerton, F., Escobar, E.N., Harwell, L. and Drinkwater, W. 1994. A survey of prevalent production and marketing practices in meat goats of southern origin. 182:1-47.

Pinkerton, F. 1995. Meat Goat Marketing in Greater New York City. 1-48.

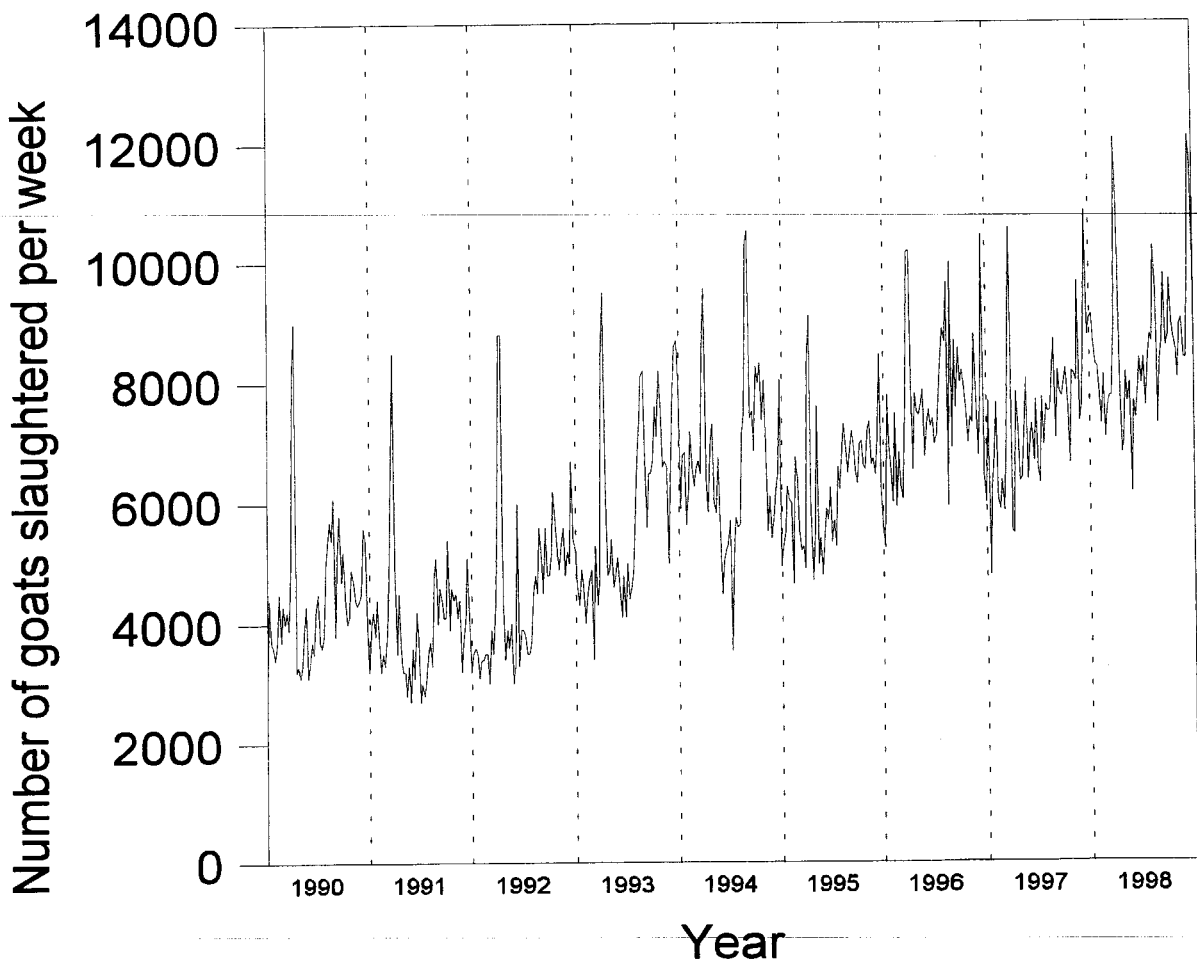


Figure 6. Time line of the number of goats slaughtered by week from 1990 through 1998.