

Overview of the U.S. Sheep and Goat Industry

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Sheep

The sheep industry has a long history in the United States. One of the few multi-purpose animals, sheep are still bred for both meat and wool production, while some producers raise sheep for milking. With declining wool demand and production, mainly due to the development and acceptance of man made synthetic fibers, some producers have shifted their efforts to raising hair sheep which require little to no shearing, while still producing high quality carcasses. One important aspect of the sheep industry that often goes without mention is their value in grazing vegetation. Sheep help prevent wildfires by eating grass and brush that fuel these fires. They also help control invasive and noxious weeds on public and private lands throughout the nation.

Sheep numbers have shown a steady decline since peaking at 56.2 million in 1942. There have been many cycles throughout the past 100 years. At the beginning of the 20th century sheep numbers were just above 48 million head. By 1940 those numbers had grown to just over 52 million head. Inventory numbers fell following World War II, declining below 30 million head for the first time in 1950. During the 1950s, sheep numbers generally leveled off before showing some modest growth late in the decade and into 1960. During the 1960s, sheep numbers fell each year and numbers at the end of the decade were just over 21 million head. The 1970s also were a decade of declining sheep numbers. By 1979 inventories had slipped to just over 12 million. The 1980s started off with sheep inventories showing growth in the first three years followed by 4 years of decline. By the end of the 1980s sheep numbers hovered just below 11 million head. The decade of the 1990s was another marked by declining sheep inventory. In 1994 inventory dipped below 10 million head for the first time. From the start of the century to the end of the century sheep numbers were down 85 percent.

Sheep inventory for the past two decades is shown graphically on page 3. The top 10 sheep states as of January 1, 2007 and their percent of the U.S. inventory are shown in Graph 3. In 2005 sheep inventory numbers increased for the first time since 1990 and sheep inventory increased in consecutive years (2005 and 2006) for the first time since 1987 and 1988. The Farm Service Agency's ewe retention program attributed to the modest growth in sheep numbers. Unfortunately, dry conditions in the major sheep states during the time of program limited the number of ewe lambs producers could hold back to help rebuild the breeding flock.

This report also takes a graphical look at the breeding herd, lamb crop, and wool production and prices in Graphs 4-7. Graph 4 illustrates how ewes have maintained a fairly consistent portion of the breeding herd since 1984 and Graph 5 shows the makeup of rams, replacement lambs, and ewes in proportion to all breeding sheep. Graph 6 shows that even as ewe numbers have fallen over the years lambing rates have shown a general upward trend. Sheep and lamb market year average prices (Graph 8) and inventory values (Graph 9) illustrate how much the price and value per head of sheep and lambs has increased during the past 25 years. U.S. lamb prices are nearly \$40.00 per cwt higher than they were in 1984 and since 2003 prices have been higher than anytime in history. The U.S. has been a net exporter of live sheep over the past two decades (Graph 10). A chart of gross income and cash receipts (Graph 11) illustrates fairly constant numbers over the past 20 years. Although sheep numbers have declined, the value per head has increased to hold gross income around 500 million dollars.

Despite the large decreases in inventory over the past 25 years there are some reasons to be optimistic about the future of the sheep industry. Even though sheep numbers have shown a general decline the past two decades, in recent years the declines have been less drastic and there have even been some periods of growth. As mentioned earlier, lamb prices are currently strong compared to any time during the past two decades. Sheep operations (Graph 12) have increased over the past few years indicating the interest in the industry is still there. Sheep are ideal for people with a small acreage looking to raise livestock. Most operations in the U.S. raise less than 100 head (Graph 13) and the growth of the industry will rely on these smaller operations growing and continuing to introduce more people to the industry.

Goats

Goat data are relatively new to NASS with the first ever full scale goat survey (outside of the Agricultural Census) conducted in January 2005. Results from the 2002 Census revealed a 57% increase in meat goat numbers over 1997 results and milk goats were up 53 percent. All goats were up 12 percent. In the short time NASS has conducted the annual survey goat numbers have been growing 3-5% each year. This can be attributed to the rapid growth of the ethnic population in the United States where goat meat is widely consumed. Another reason there has been growth in the industry is after the tobacco buyout program some states offered incentives for farmers to get into other areas of production agriculture. The Southeast where the majority of tobacco is grown has seen the largest growth in goat numbers. Of the top 10 meat goat states 6 are located in the Southeast. Prior to 2005 goat estimates were limited to angora inventory for 3-5 states (AZ, NM, MI, OK and TX) depending on the year and an all goat inventory for TX only.

In Graph 14 the decline of angora inventory since 1989 is evident. With almost two million angora goats in 1989 inventory has fallen to less than 250,000 on January 1, 2007. In that same time period mohair production (Graph 15) has fallen from over 17 million pounds to below 1.4 million pounds. Outside of TX, AZ, and NM there are relatively few angora goats throughout the U.S. and Graph 16 shows the top 5 states in angora inventory.

Graph's 17 and 18 illustrate the top milk and meat goat states, respectively, for January 1, 2007. Both milk goats and meat goats have seen growth in their respective industries since the initial estimates in 2005. Meat goats make up 82 percent of all goats in the U.S. and are showing the fastest growth of the 3 types. Texas is by far the leading goat State in the U.S. where roughly 44% of all the goats reside. Texas ranks first in angora and meat goats and is tied for second in milk goats behind Wisconsin. Graph 19 shows the distribution of goats by type and state.

Goat numbers show no signs of slowing down and with the makeup of the U.S. becoming more and more diverse each year, growth will need to continue to meet domestic demand. Like sheep, goats are appealing to people wanting to raise livestock but have limited acreage. Goats require little startup costs other than fencing and some type of shelter. Ease of handling also makes raising goats appealing to women and children.

Survey Procedures and Methodology

The January and July Sheep and Goat reports are based on probability surveys. A probability survey assumes everyone in the target population has a positive probability of being selected. These probabilities don't have to be equal but they must be known and used in the sample selection and survey estimation process. Because a sample is used in the survey process, sampling errors are associated with the numbers. However, since the probabilities of selection are known, sampling errors can be calculated to determine levels of precision. In other words it allows an objective evaluation of the reliability of a statistic.

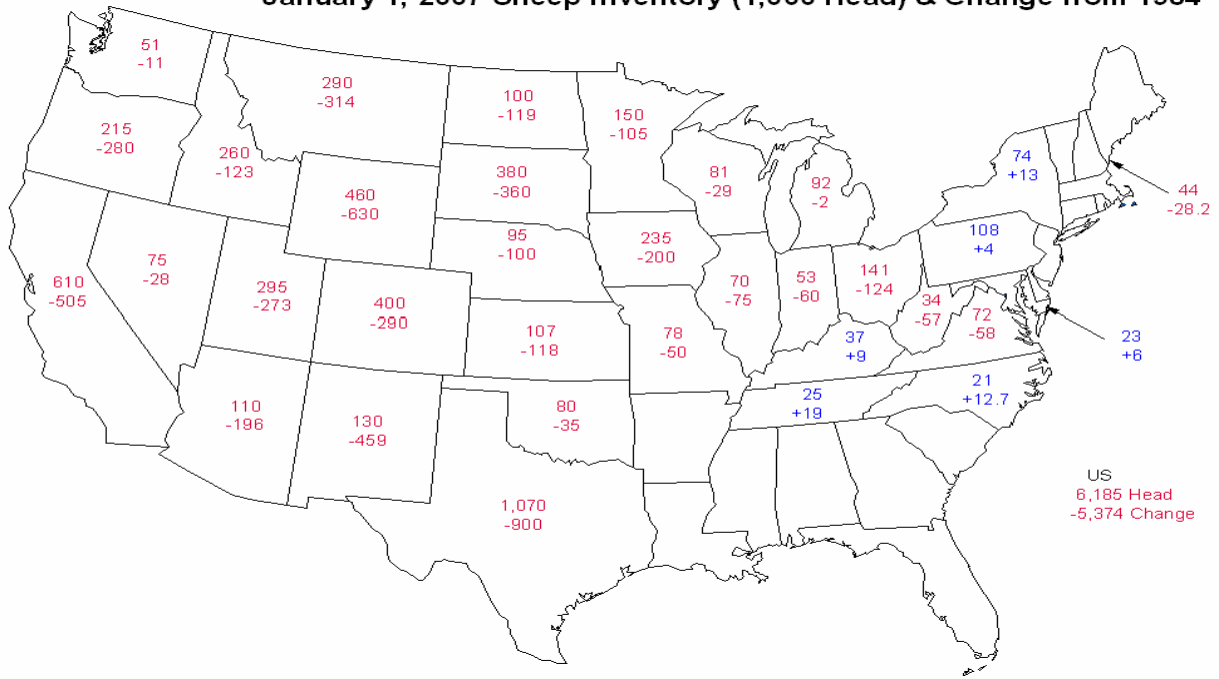
Ideally samples are taken from a complete sheep and goat population. For completeness, the best way to do this would be to select areas of land over the entire United States. The land area of the United States then becomes a sampling frame. Because of the cost of surveying such a huge area, a list of sheep and goat operations is used to supplement the area frame. Although the list is very efficient in targeting operations with sheep and goats, it is never complete since people are constantly going in and out of the sheep or goat business. For this reason both list and area frames are used, the list for efficiency and the area for completeness.

NASS increases the efficiency of the sample by grouping or stratifying operations with a similar number of sheep or goats. This reduces the cost of the survey since stratified samples result in smaller samples with the same precision compared to non-stratified samples.

Although NASS' list of sheep and goat operators is an efficient sampling tool, it lacks the critical element of completeness. For this reason it is supplemented with a sampling frame based on area. Since this area sampling frame covers the complete U.S., and since each of the area units have known probabilities, it is an effective measure of the incompleteness of the list of sheep and goat operations. This multiple frame approach combines both efficiency and completeness for estimating sheep and goat statistics.

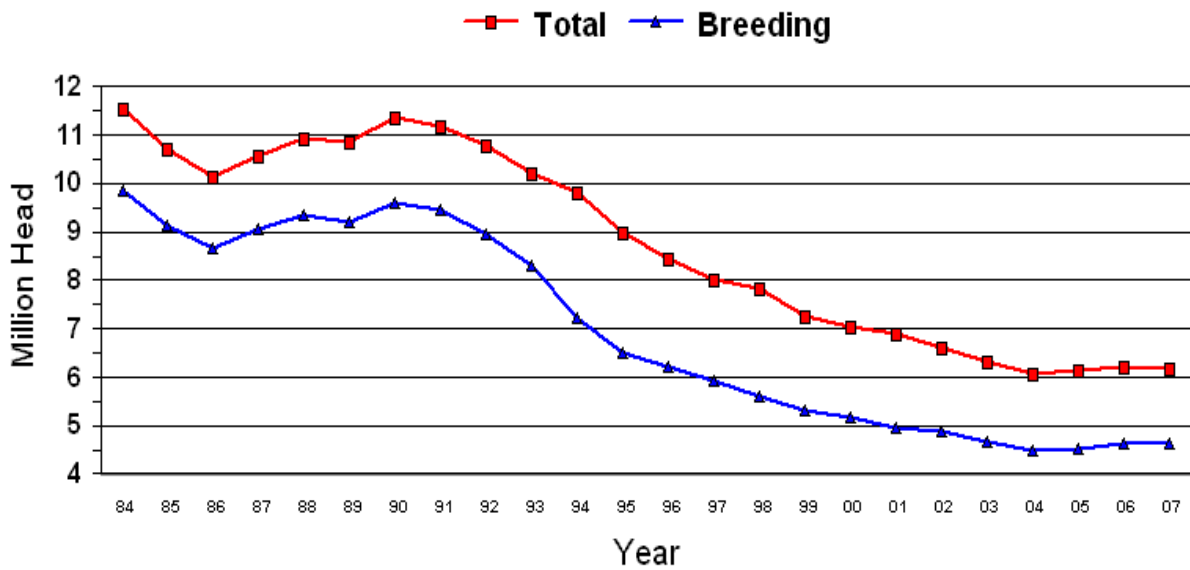
Graph 1

January 1, 2007 Sheep Inventory (1,000 Head) & Change from 1984



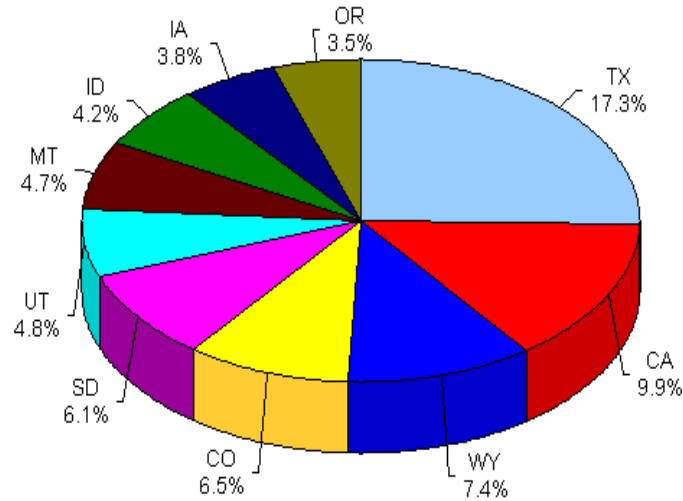
Graph 2

US Sheep and Lamb Inventory 1984-2007



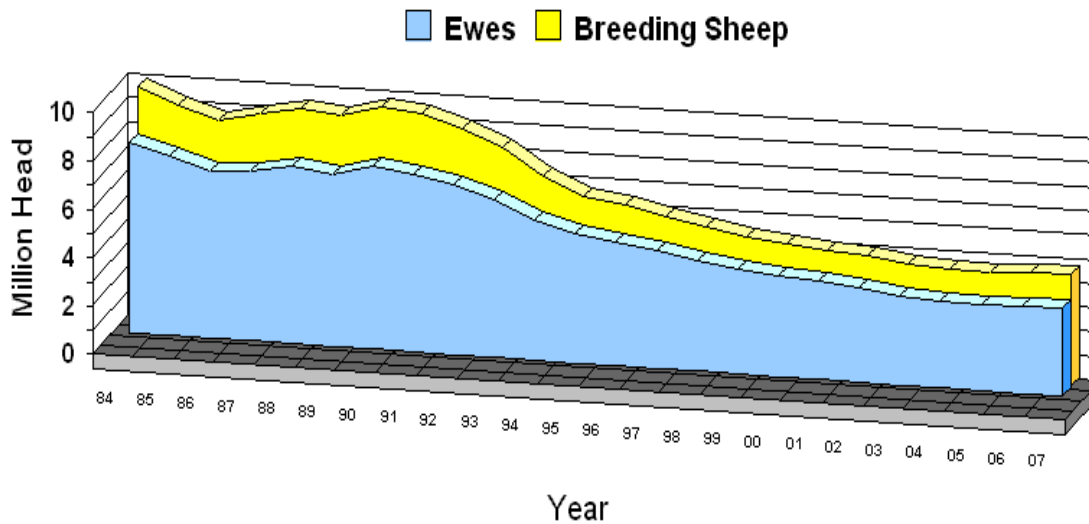
Graph 3

Top 10 Sheep and Lamb States Percent of January 1, 2007 U.S. Inventory



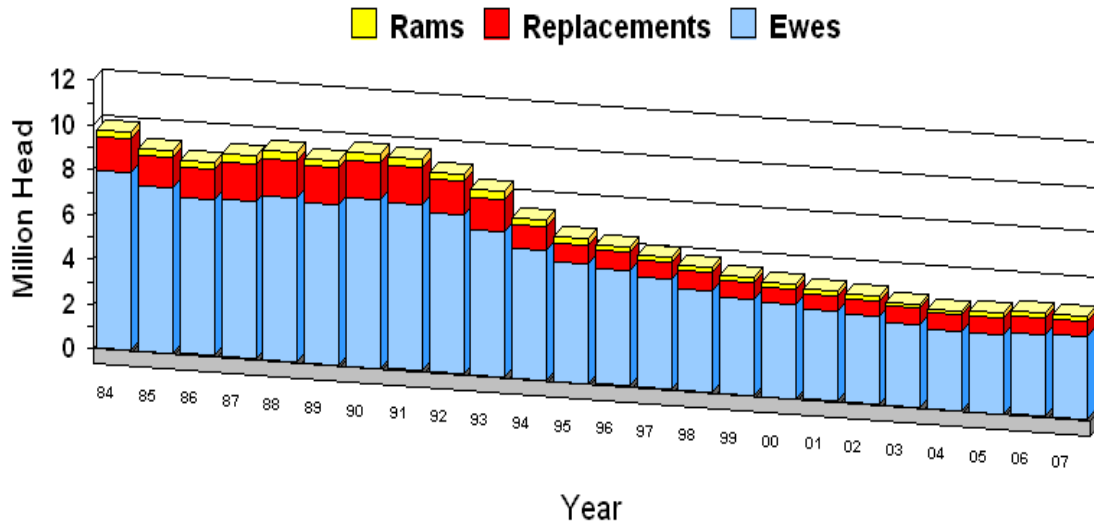
Graph 4

Breeding Sheep and Lambs 1984 - 2007



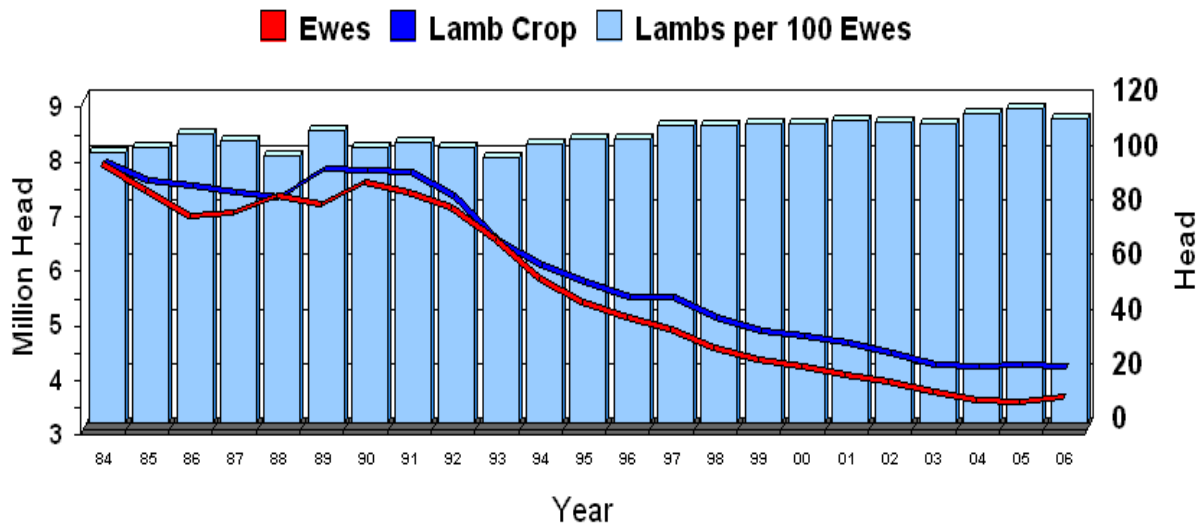
Graph 5

US Breeding Herd Makeup 1984 - 2007



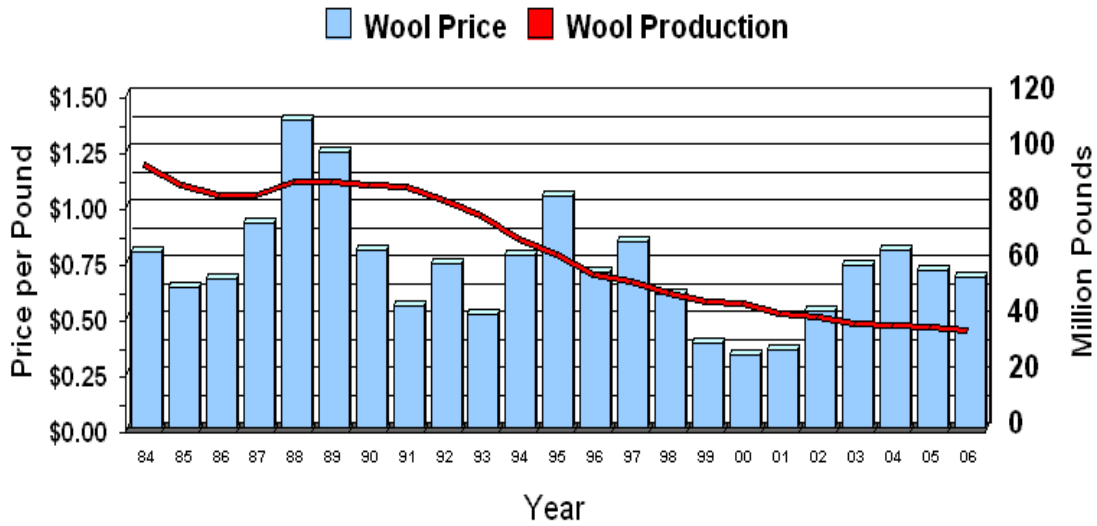
Graph 6

Ewes, Lamb Crop and Lambing Rate 1984 - 2006



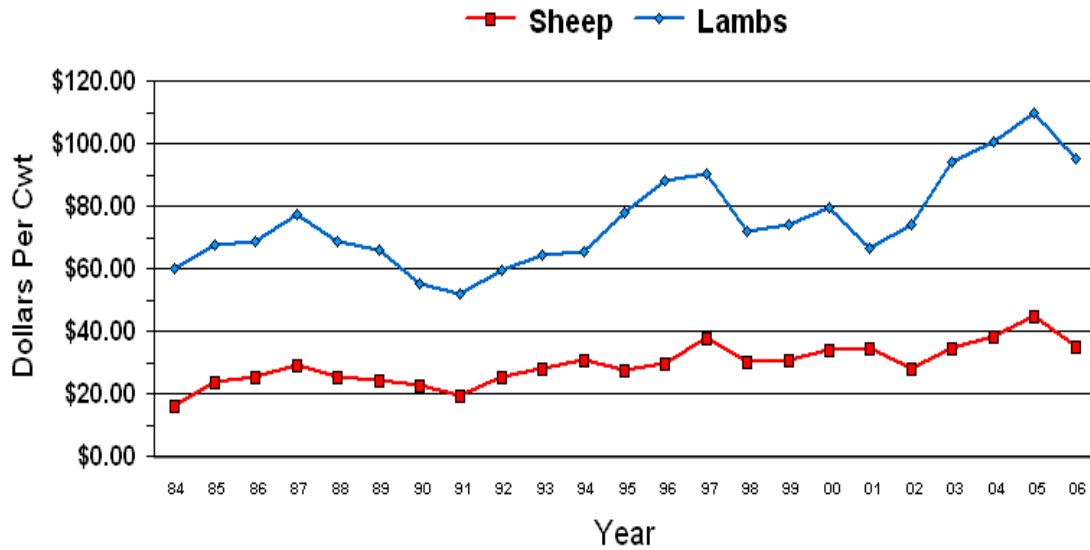
Graph 7

US Wool Price Per Pound and Production 1984 - 2006



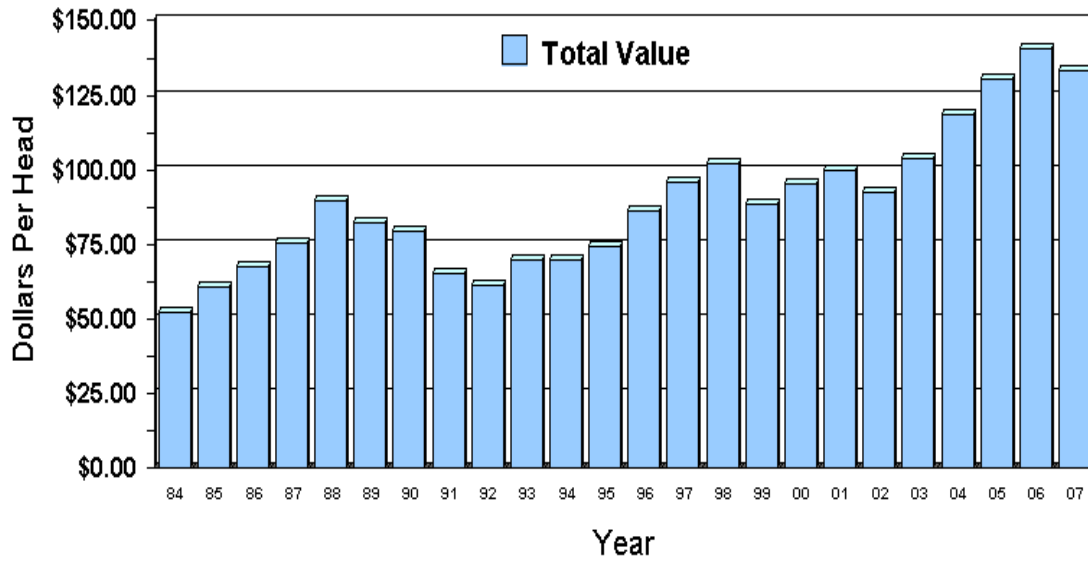
Graph 8

US Sheep and Lamb MYA Prices 1984 - 2006



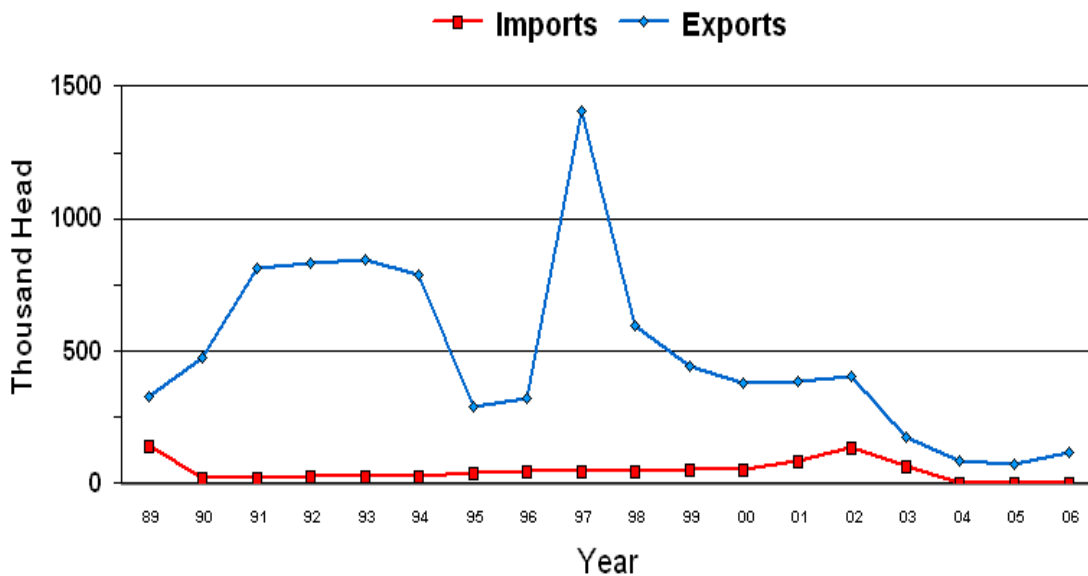
Graph 9

US Sheep and Lamb Inventory Value 1984-2007



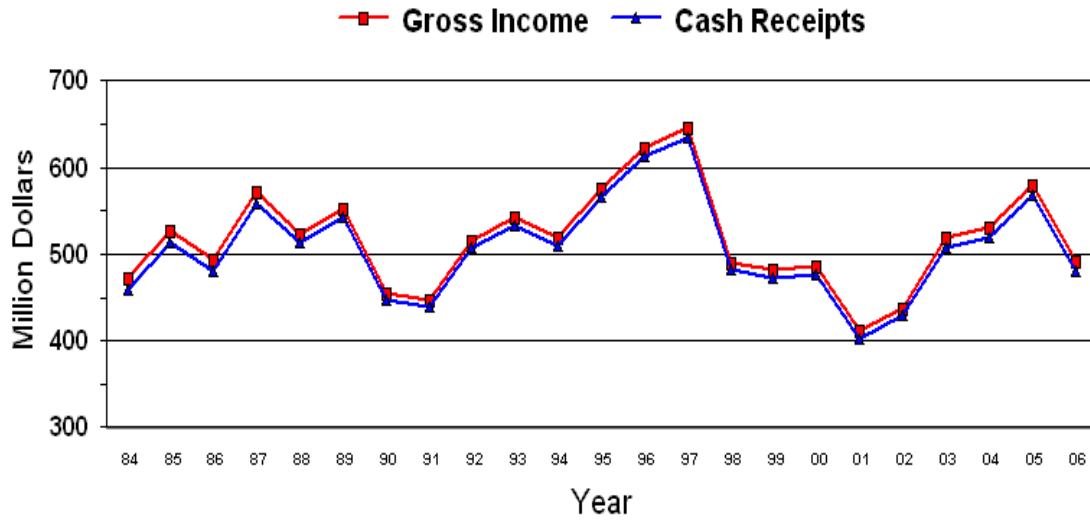
Graph 10

US Sheep and Lamb Imports and Exports 1989 - 2006



Graph 11

Gross Income and Cash Receipts from Sheep 1984 - 2006



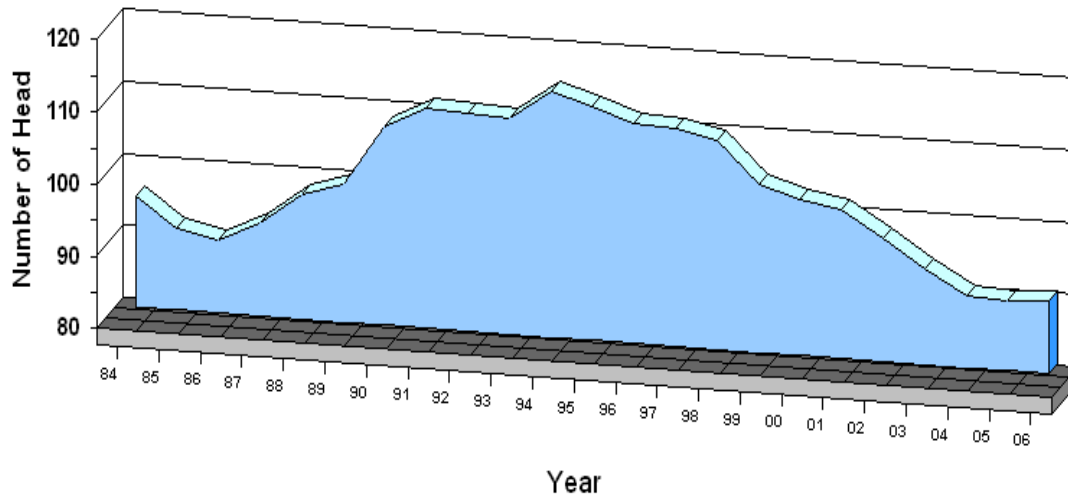
Graph 12

Sheep Operations 1984 - 2006



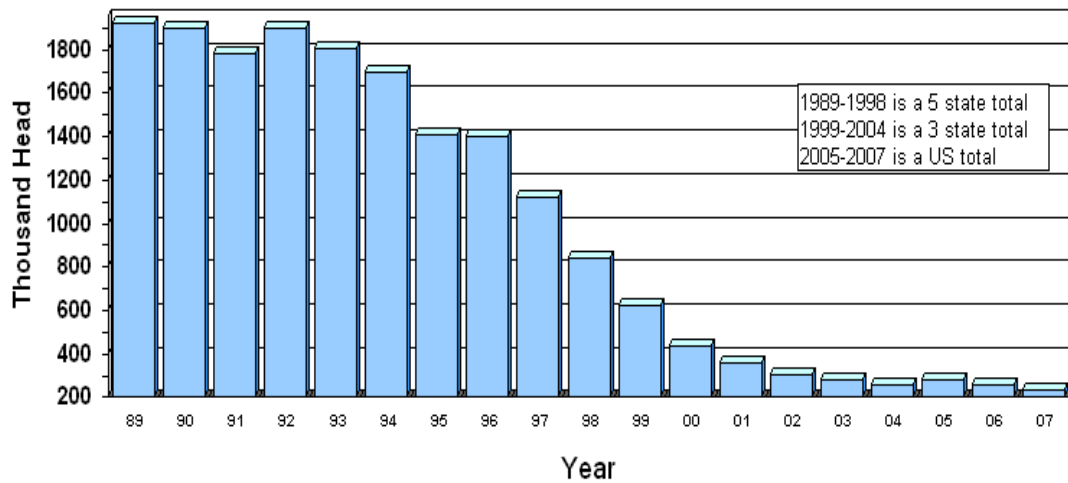
Graph 13

Average Head Per Sheep Operation 1984-2006



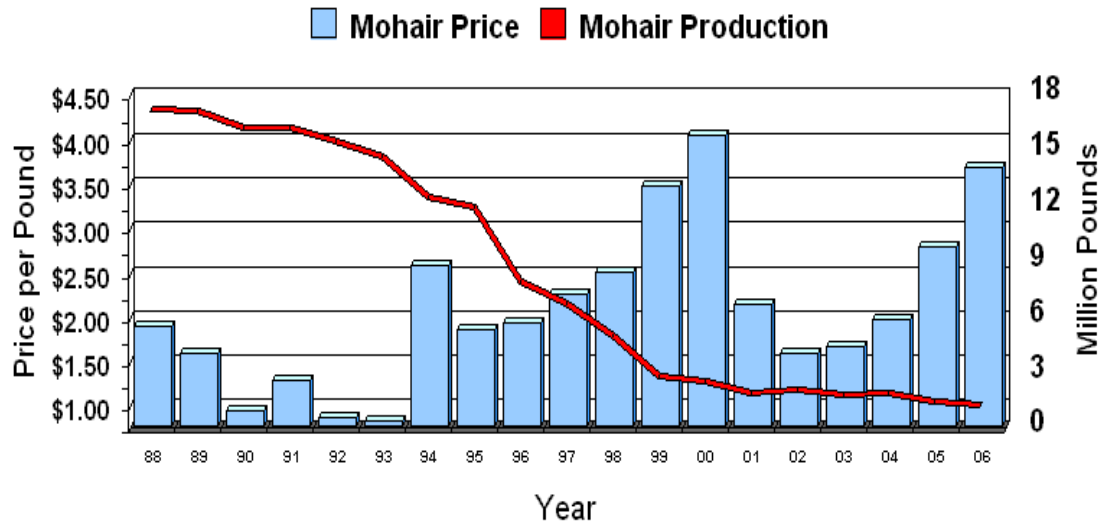
Graph 14

Angora Goat Inventory 1989-2007



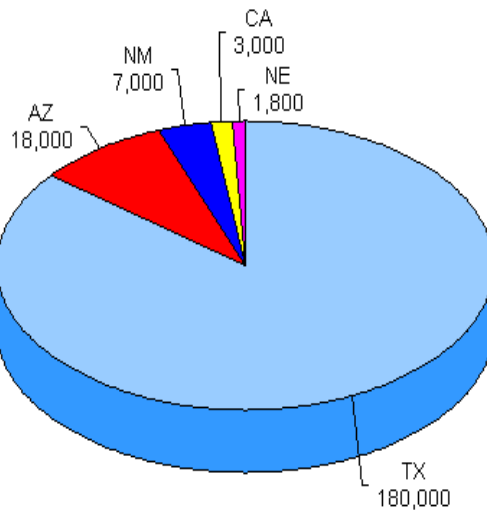
Graph 15

US Mohair Price Per Pound and Production 1988 - 2006



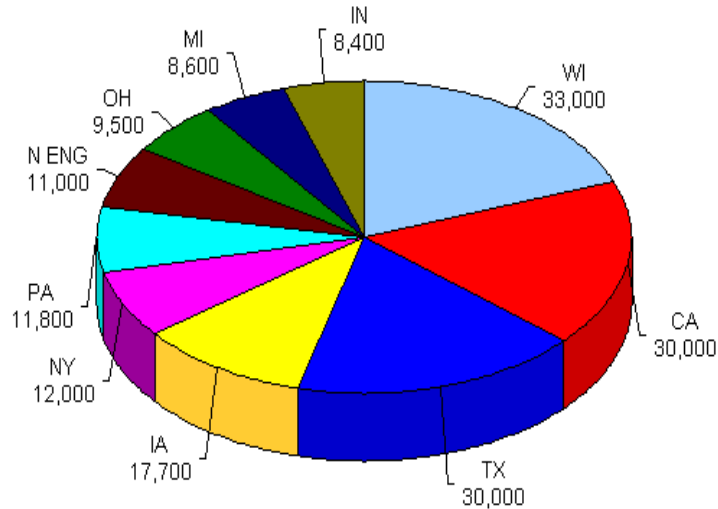
Graph 16

Top 5 Angora Goat States January 1, 2007 Inventory



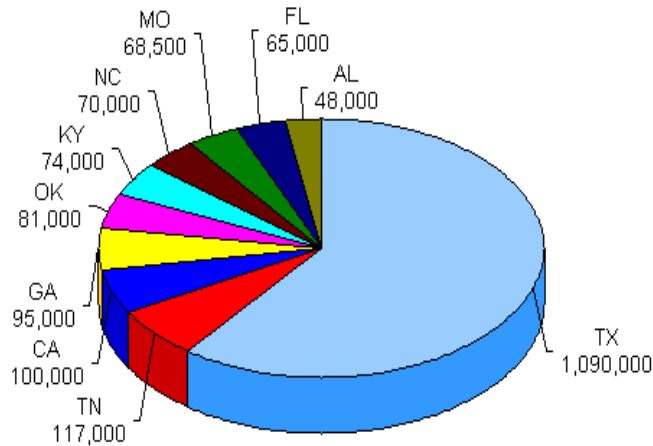
Graph 17

Top 10 Milk Goat States January 1, 2007 Inventory



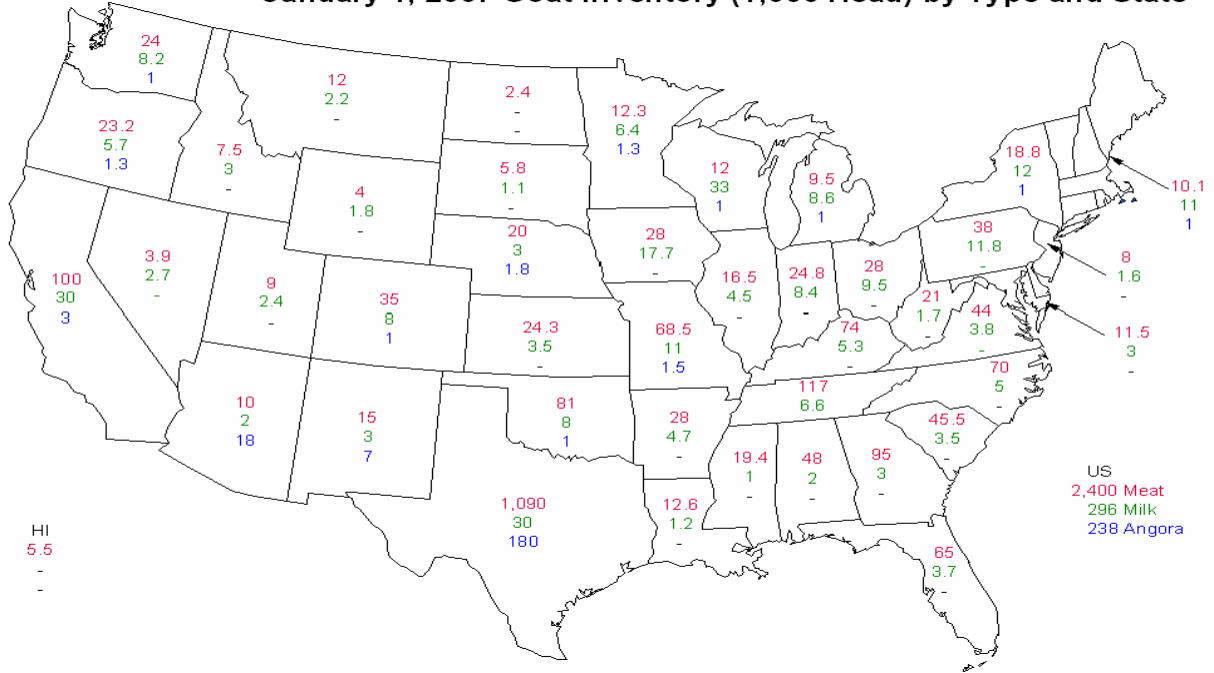
Graph 18

Top 10 Meat Goat States January 1, 2007 Inventory



Graph 19

January 1, 2007 Goat Inventory (1,000 Head) by Type and State



Information Contacts

Listed below are the commodity specialists in the Livestock Branch of the National Agricultural Statistics Service to contact for additional information.

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Livestock Section

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- Bruce Boess - Hogs and Pigs (202) 720-3106
- Vacant - Dairy Products (202) 690-3236
- Jason Hardegree - Milk Production and Milk Cows (202) 720-3278
- Scott Hollis - Sheep & Lambs, Goats & Kids (202) 720-4751
- Mike Miller - Cattle, Cattle on Feed (202) 720-3040
- Benita Hodge - Livestock Slaughter (515) 284-4340
- Charmaine Wilson - Dairy Products Prices (202) 690-2168

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USDA Data Users' Meeting

October 29, 2007

Crowne Plaza Chicago O'Hare

Rosemont, Illinois

(847) 671-6350

The USDA's National Agricultural Statistics Service will be organizing an open forum for data users. The purpose will be to provide updates on pending changes in the various statistical and information programs and seek comments and input from data users. Other USDA agencies to be represented will include the Agricultural Marketing Service, the Economic Research Service, the Foreign Agricultural Service, and World Agricultural Outlook Board. The Foreign Trade Division from the Census Bureau will also be included in the meeting.

For registration details or additional information for the Data Users' Meeting, see the NASS homepage at www.nass.usda.gov/forum/ or contact Marjorie Taylor (NASS) at (202) 690-8141 or at marjorie_taylor@nass.usda.gov.

This Data Users' Meeting precedes an Industry Outlook meeting that will be held at the same location on October 30, 2007. The Outlook meeting brings together analysts from various commodity sectors to discuss the outlook situation. For registration details or additional information for the Industry Outlook Meeting see the Livestock and Marketing Information Center (LMIC) homepage at www.lmic.info or contact Jim Robb at (720) 544-2941 or at robb@lmic.info.