

INDUSTRY UPDATE 2006: Continued goat population growth and other trends.

By Ken McMillin and Frank Pinkerton

Preface

There have been several recent articles elsewhere on the state of the goat industry and prognostications re future demand for goats and goat meat. This 2006 Industry Update is the latest in our series of such reports dating from 1999.

Complete official data from USDA agencies are not available until March each year, but the inventory of Angora, milk, and meat goats is now available from National Agricultural Statistics Service (NASS) every January. The import/export data for bulk, intermediate, and consumer oriented (BICO) foods and beverages, including goat meat, are available in February from the USDA Foreign Agricultural Service. The data for different species slaughtered under federal inspection are published in March.

Introduction

The breeding goat inventories in the U.S. were 1,853,000 meat and 241,500 Angora on January 1, 2006, up 5% and down 1%, respectively, from the January 1, 2005 breeding inventories of 1,762,700 meat and 243,600 Angora (Table 1). The total numbers of all goats (breeding, market, and kid crop) were 2,826,000, up 4% from the previous year total number of 2,715,000.

The number of meat and Angora goats marketed in 2005 was 443,500 head compared with 423,700 head marketed in 2004, up 4.7%. These numbers reflect formal reporting of goat sales through only established channels such as auctions or to dealers. They do **not** include the unknown/unknowable thousands of goats sold through informal, non-reporting on-farm and “roadside” sales.

The kid crop born in 2005 increased to 1,835,700 from 1,761,000 born in 2004 (4.2% increase). A very rough “national kid crop percentage” of 81.1% may be calculated by dividing the number of kids born in 2005 by the January 1, 2005 combined (meat and Angora) breeding goat inventory of 2,262,800.

The NASS report on Angora numbers indicates a 1% drop from 2005 to 2006; however, TX, AZ and NM (with 88% of the total) reported little or no change. Note that Angora numbers were 436,000 as recently as 2000 and were 1.386 million head in 1995 (in the mid-sixties, TX alone had about 5.5 million Angora goats).

Meat goat supply

The number of head of meat (and *other*) goats (excluding Angora and dairy) as reported for the top 20 states are shown in table 2. In 2006, Texas had 48% of meat/other goats, while TX and the other top nine states in meat goat numbers had, collectively, 76%; the

top 20 states had 89.4%. The table also shows that there was a 5% increase in total meat goat numbers from 2005 with many in the top 20 states showing considerably larger percentage increases. NC and OK had only modest increases this year, but both had substantial increases earlier on; only MS and OH showed a decrease in numbers from 2005. Note that the 5% increase in meat goat numbers during the past year compares to 2% increases in cattle/calves and sheep/lambs, while hog/pig numbers remained constant.

A word of caution here....all of these USDA numbers were derived by surveying a large, representative sample of goat producers. Statistically speaking, there is a 1 in 10 chance the figures might be off by more than 2% due to sampling errors. Nevertheless, these new annual estimates are a much needed improvement over the historical five-year Census figures.

A further word of caution....it is important to remember that these '06 inventory figures refer to live goats in late 05. They do not recognize the sizeable loss of goats during the year. For instance, in **2004**, a USDA nationwide survey of representative goat owners found that a total of 415,200 adults/kids were lost (nearly 15%, from a population of about 2.7 million). Disease claimed 43.4%, predators took 37.3%, and other causes were 19.3%. Losses of kid goats alone were 286,000 (69%) of the total, and of the kid losses, 40% were taken by predators and 42% by disease.

Figure 1 conveniently demonstrates certain industry supply/demand geographical relations. The nation's premier goat meat market continues to be the contiguous metropolitan areas along Interstate 95 from Washington/Baltimore to Philadelphia to New York City, Providence, and Boston. Other regional urban areas of high goat meat consumption are Los Angeles, San Francisco, Houston/Dallas/San Antonio, Atlanta, Cleveland, Detroit, and Chicago. Metropolitan Miami is also an area of very strong demand for goat meat, but nearly all of it is imported from Australia. Miami is the second largest port for imported goat meat behind Philadelphia.

While TX continues to supply thousands of goats to NJ, NY, and PA for slaughter, TN, KY, NC, and GA also increasingly contribute to this market, now thought to total well over 300,000 annually. Note that substantial portions of TX, GA, FL, and CA slaughter goats are consumed in-state. Although CA produces many goats, it must also bring in goats from TX, OK, and elsewhere; moreover, thousands of Australian goat carcasses are imported to meet its ever-growing demand. San Francisco and Los Angeles imported the 3rd and 4th largest amounts of goat meat in 2005.

As you see from the map and in Table 2, goat numbers have grown, and are still increasing, in those states that are closest to the I-95 metro markets described above. A sort of "directional shift" in production capability, from TX to the southeastern states and into the corn-belt states and old dairy states (PA, NY) seems discernible.

Perhaps this shift is being motivated by higher transportation costs from the more remote areas, or by profit-sapping parasite problems in the warm/humid south, or by a pressing need for alternative livestock enterprises above the Mason-Dixon Line. It could also be

that more profitable direct-marketing of goats from growing numbers of northeastern small-holder operations to “local” ethnic consumers is increasing sharply **outside** of these huge urban centers.

Goat slaughter

Comparisons of U.S. meat goat numbers, Angora goat numbers, federal slaughter, and imported goat meat are shown in Figure 2. From 1992 until 2002, meat goat numbers increased sharply, from 591,000 to 1,938,000; however, **the annual rate of increase since 2002 seems to be slowing a bit**. Note that the precipitous decline in Angora numbers, dating from the mid-nineties, has also slowed and, since 2002, seems to be stabilizing; **no appreciable recovery is anticipated**.

Federal slaughter numbers have declined for the second straight year. The 2005 figure of 566,208 is but 92% of the 2004 figure and only 87% of the 2003 figure. **This mini-trend may/may not continue downward**. Note that some of this reported decline may be “statistical” in nature. Over the past two years, two federally-inspected plants in TX ceased operations, but some portion of their annual kill was subsequently done in state-inspected plants. The smaller of these two plants has only recently resumed federally-inspected slaughter (but with very low volume). Contrarily, yet another plant recently opened and is now shipping substantial numbers of federally-inspected carcasses. The 2006 federal slaughter figures may well reflect these events.

The quantity of goat meat imported during 2005 (21.3 million pounds, equivalent to 608,020 35-lb carcasses) increased by 225,165 lbs (6,433 carcass equivalents). This 1% increase from 2004 is sharply lower than the average annual increase of 17% from 2000 to 2004. One may **speculate** that Australia’s national inventory of feral goats available for harvest, processing, and export is stabilizing, or perhaps more of their output (lower quality, lower price?) may be going to closer, burgeoning Asian markets. (We expect to have a more in-depth article on imported goat meat quality, quantity, and competition in a summer ‘06 issue of Goat Rancher).

Note that the **combined** total of federal slaughter and imported goat meat data indicates that there was less goat meat available for U.S. consumption in 2005 than in 2004. However, we believe these figures give an erroneous impression of the actual domestic goat meat available for consumption.

In point of fact, the numbers of goats slaughtered in **state**-inspected facilities are **not** routinely available for review by non-Agency persons; this is, we feel, a source of considerable error. For example, we were told by the TX Department of Health that in-state inspected goat slaughter numbered 59,886 in 2004 and 53,972 in 2005 (from 51 plants).

Also, the number of goats custom-slaughtered for fees in “locker plants” is unknown—yet another source of error. And, as mentioned in the Introduction, there are unknown, but apparently large, numbers of goats being sold (and “informally” slaughtered on-farm

or off-premise, legally or illegally). Pickup, trailer, and even pot-loads of goats are frequently offered to buyers in FL NC, CA, TX, and elsewhere. Workers in orchards, packing plants, poultry processors, etc. are especially targeted by producers, “re-sellers”, and truckers, alike.

These “uncounted” numbers of goats are, we feel, the explanation for the curious divergence of two lines shown in figure 2, namely, the U.S. meat goats inventory curve and the federal slaughter curve. Note that, beginning in 1993, the inventory curve rose much more sharply than the slaughter curve. Assuming the percentage off-take from the annual inventory numbers remained constant (or even increased a bit with improved management), kids and nannies were increasing sharply in real numbers, but they were **not** being federally- slaughtered at the **same** rate as before. Some of the “missing goats” were retained for breeding stock, but the others were being sold and slaughtered “informally”. We make a wild-ass guess (that’s, like, you know... an **estimate**?) that these non-federal/non-state inspected sales may constitute 10% or more of domestic goats (we imagine the IRS to be equally clueless).

In any case, if this estimate is more or less correct, this means that about 50 % of our consumption is federal/state-inspected domestic goat meat, while another 40% or so of our consumption is from (inspected) Australia/New Zealand facilities; the other 10% or so of our consumption remains, as it were, beneath the bureaucratic radar.

Goat meat demand

Most major indicators are the demand for goat meat will continue to increase, but readers should be aware that reliable estimates of demand are very difficult to determine. Conversations with industry players indicate that the current, aggregate supply of domestic and imported goat meat is sometimes inadequate to meet consumer needs.

Supply and demand curves can be very complicated to interpret because many factors influence prices of goat meat. Be that as it may, in past years traditional consumers have been willing to pay ever increasing prices for goat meat (as reflected by increased live-goat prices in those markets doing price reporting). However, the threshold (ceiling) price above which most consumers will resist paying more for goat meat, though real, is **not** predictable **before** it is reached.

However, there is no reason to expect that consumers of goat meat would not, at some point (price), begin to switch to other meats out of economic choice (similar consumer price responses/shifts among beef, chicken, and pork are well demonstrated). Contrarily, the demand for goat meat (and lamb) is heavily influenced by traditional, religion-based behavior which could militate against any precipitous shift

Producers should also be aware of yet another factor which might adversely affect future demand for goat meat. This is known as “generational shift” in demand, which occurs when younger people decide not to follow the eating patterns of their elders. Consumption of goat meat in the U.S. is concentrated among ethnic population groups

whose children would seem particularly vulnerable to non-ethnic peer pressures. To illustrate, we were told, in 2000, by the biggest distributor of goat meat (and pork) in NYC-Chinatown that McDonald burgers and fast foods in general were already serious threats to traditional Chinese dishes among the second and third generation of immigrants.

Furthermore, a recent national market assessment of Latino buying habits substantiates that their rather rapid acculturation into “mainstream” eating habits (away from traditional fare) is sharply changing their selection of basic foodstuffs in the supermarkets. This finding must, we feel, be acknowledged and considered by those who are predicting “ever-increasing” demand for goat meat based, for the most part, on burgeoning numbers of current and newly-arriving Latinos. The influence of religious holidays in the Muslim culture will likely cause a slower rate of any generational changes in goat meat consumption.

Goat prices

Figure 3 documents the prices paid producers for the three grades of slaughter goats sold, and also the monthly throughput numbers, at the San Angelo, TX auction, 2002/05. The seasonality of supplies offered and price responses thereto are readily apparent; this pattern is repeated throughout TX and, with small variations, at public auctions in other states. But do note that the peak winter prices for '05 did not increase appreciably over those paid in '04. This is a break from the pattern of recent years. This may reflect many factors- drought-induced moderate sales mid-05, more truckload sales by ranchers directly to non-auction channels, or a possible approach of the “threshold/ceiling prices” discussed earlier.

We are told by industry players that this on-going seasonal supply pattern is **not adequately attuned** to processor/consumer needs; consequently, some consumers may not get sufficient quantities of the most desirable size or quality of goat meat when they want it. These supply/demand/price relationships could possibly **warrant serious producer consideration for altering traditional kidding dates**--a target-marketing strategy to realize higher gross income (but, as always, cost-benefit calculations must be made as part of management decision-making).

Also, unusual trends are apparent in the current price pattern as compared to earlier findings. For example, the price differentials between the top and second grades and between the second and third grades of kid goats were about 10 cents/lb in the mid-late nineties. Around 2000, the differential between the Selections 1 and 2 began to narrow to about 5 cents while the differential between Selection 2 and 3 increased to 11-12 cents/lb. During 2005 these differentials changed to just under 2 cents/lb between Selection 1 and 2 while Selection 3 prices were almost 14 cents below Selection 2.

These changing price responses suggest that the better goats are now heavier muscled with higher conformation scores while the poor quality goats are relatively less desirable to San Angelo buyers. Overall, the demand for, and buyer expectation of, higher quality

goats seems to be increasing. Indeed, the Market Report for San Angelo now quotes prices in four, rather than three, grade categories: Selection 1, Selection 1 and 2 (low 1s and high 2s), Selection 2, and, only sporadically, for Selection 3. As in the past, goats over 70 lb seem to sell somewhat cheaper/lb regardless of grade category (see weekly figures every Wednesday from www.ams.usda.gov/mnreports/sa_ls320.txt).

Furthermore, the **range of prices within grade** has increased appreciably in the 2000s. In 2002, the difference between high and low prices in both Selection 1 and 2 during the year was 20 cent/lb. In 2005, the difference between highest/lowest prices within Selection 1 across the months was 33 cents/lb; within Selection 2 the high/low difference was just under 30 cents/lb; for Selection 3 the figure was 28 cents/lb. We **speculate** that these wide price ranges within grade may reflect seasonal shortages in supply or possibly fluctuation occasioned by holiday demands of short duration.

From frequent discussions with owners, we are aware that fluctuations in price level received for goats of similar sizes and grades by producers in various geographical areas across time are thought to occur. However, the precise prices paid in certain regional markets and their relationship to each other and to the largest market, San Angelo, TX have not been reviewed and reported. (We are now collecting, collating, and analyzing such figures as are available; if all goes well, Goat Rancher will have the results to you by late summer).

Recent media articles have focused much interest in the meat goat industry, perhaps a function of increased publicity by various associations or local media using local interest stories. The potential for increased goat production in California and Alabama has been substantiated in reports by Sandra Solaiman. The California study can be accessed at sfc.ucdavis.edu/goatmeatpub.pdf and Dr. Solaiman may be contacted at ssolaim@tusk.edu.

Implications for Industry

- 1) The supply of goats does not meet aggregate consumer demand and has not done so for over a decade.
- 2) Imports of goat meat are necessary to supply deficit needs and to aid in maintaining consumer demand for this product. Contrary to what some say, we did not “lose” our market for goats to Australian competition—we voluntarily vacated it when we elected not to increase our meat goat supply fast enough as Angora goat numbers declined in the face of rising consumer demand.
- 3) Demand for carcasses of higher quality is increasing; this is reflected in the price differentials being paid for live Selections 1 and 2 as compared to Selection 3.
- 4) Seasonal variation in supplies of domestic goats does not accord closely with volumes/qualities of goat meat demand; imports do not always “fit” these deficit demands either.

- 5) Increasing the number kids weaned per doe exposed is more important, economically, for improving net enterprise returns than increasing sale weight which is, in turn, more important than improving conformation selection grade.

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Table 1. Goat numbers by class in the United States, January 1, 2005 and 2006.

Goat class	2006 Head	2005 Head	% change, 2005 to 2006
All goats	2,826,000	2,715,000	4.09
Angora goats, total	278,000	280,000	-0.71
Milk goats, total	288,000	285,000	1.05
Meat goats, total	2,260,000	2,150,000	5.12
Meat goats, breeding	1,853,000	1,762,700	5.12
Meat goats, market	407,000	387,300	5.09
Kid crop, total	1,835,700	1,761,000	4.24
Kid crop, meat goats	1,488,100	Not available	Not available

From Sheep and Goats report, January, 2006, National Agriculture Statistics Service, USDA

Table 2. Meat and Other Goats, Number of Head by State, Jan. 1, 2005 and 2006.

State	Head in 2005	Head in 2006	% change
Texas	1,030,000	1,080,000	4.85
Tennessee	98,000	103,000	5.10
Georgia	88,500	95,000	7.34
California	75,000	80,000	6.67
Oklahoma	73,000	74,000	1.37
Kentucky	63,500	68,000	7.09
Missouri	60,000	64,000	6.67
North Carolina	59,000	60,000	1.69
Florida	51,500	55,000	6.80
South Carolina	41,000	44,000	7.32
Alabama	40,000	43,000	7.50
Virginia	38,000	41,000	7.89
Pennsylvania	35,200	37,000	5.11
Arkansas	27,000	29,000	7.41
Ohio	29,000	28,000	-3.45
Indiana	23,800	25,000	5.04
Colorado	22,000	24,000	9.09
Mississippi	24,500	24,000	-2.04
Kansas	22,000	23,000	4.55
Washington	21,000	23,000	9.52
All other states	228,000	240,000	5.26
U.S. total	2,150,000	2,260,000	5.12

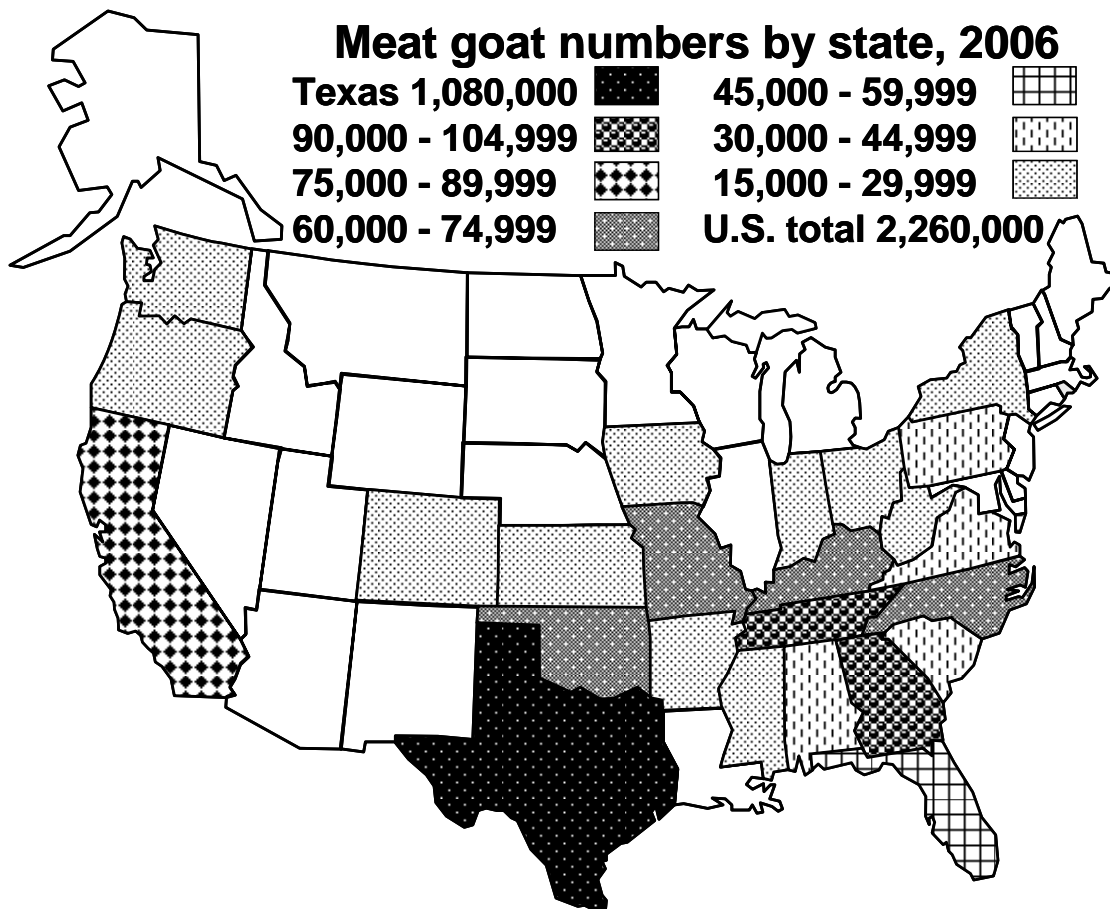


Figure 1. Meat and other goat (excluding Angora and dairy) numbers by state, January 1, 2006.

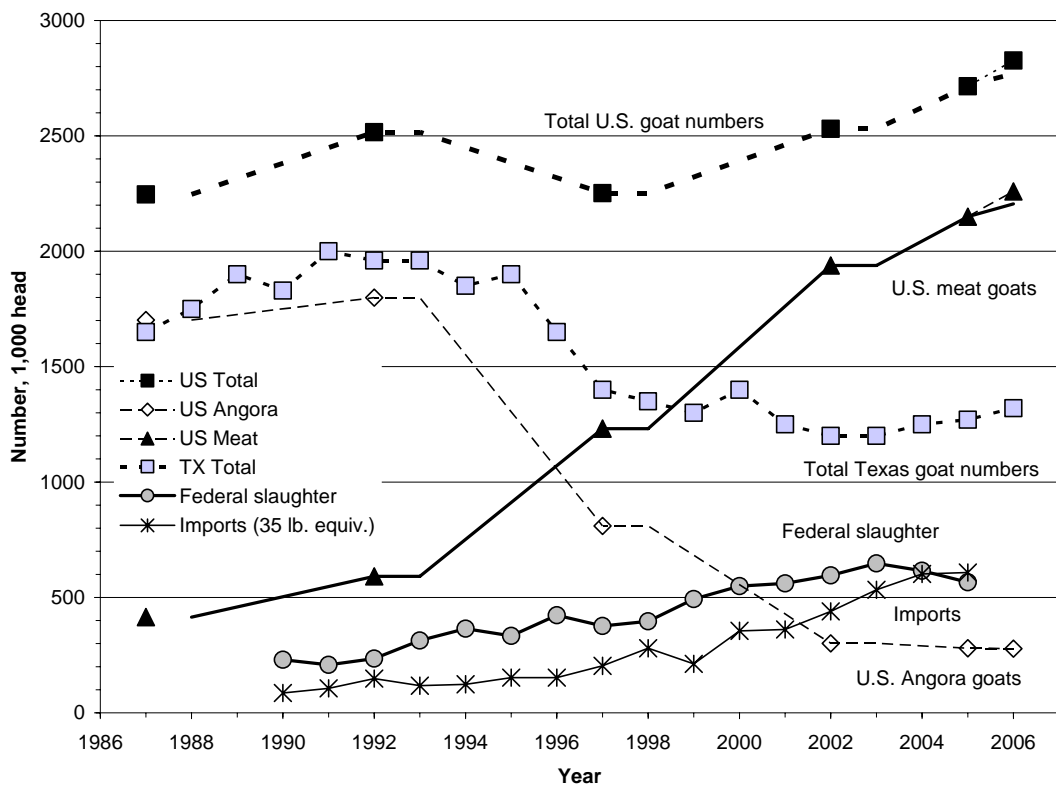


Figure 2. Numbers of total goats, meat goats and Angora goats in the U.S., total goats in Texas, federal slaughter, and goat meat imports (as 35 pound carcass equivalents).

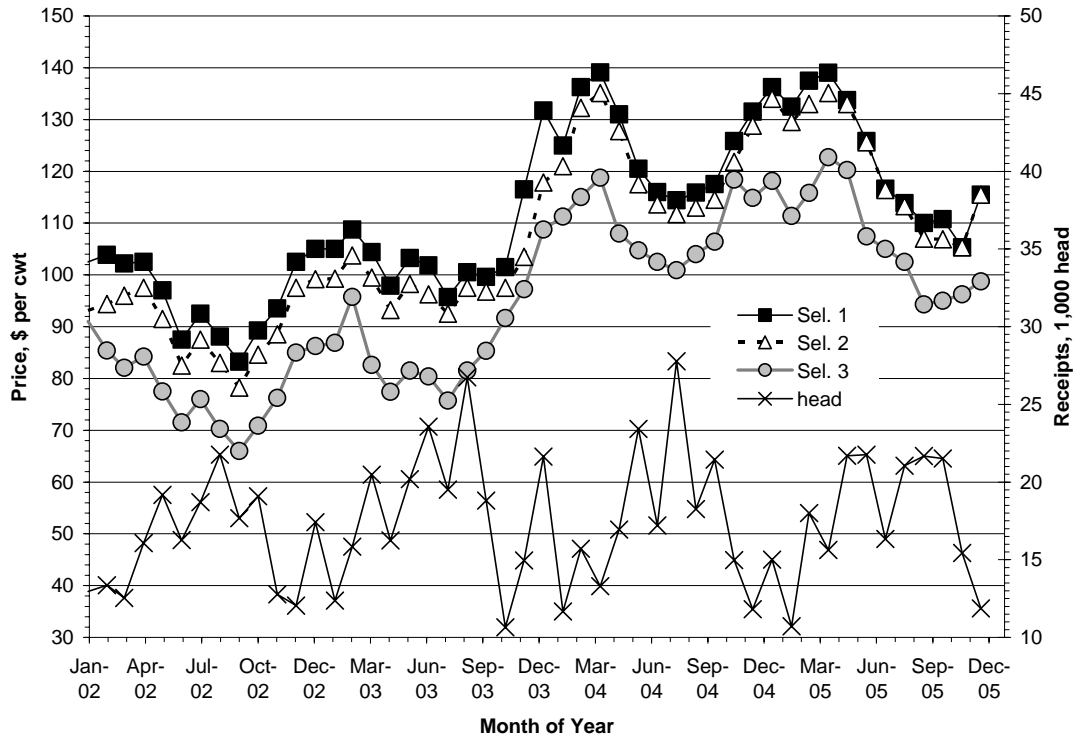


Figure 3. Average monthly price per hundredweight for 40 to 60 pound kid goats from Selection 1, 2, and 3 classifications and total monthly goat receipts, San Angelo, Texas, Producers Auction. Source: USDA Agricultural Marketing Service, Livestock and Seed Market Reporting Service, 2006.