

Overview of the U. S. Hog Industry

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Annual Pigs Per Breeding Animal Continues To Increase

The *Overview of the U.S. Hog Industry* report provides an official periodic review of efficiency trends and changes in the structure of the breeding herd. This report will also note changes in hog operation size groups, compare historic hog prices and review live hog imports. This report compares the current 2008 production year data to the 2005 production data released in the *U.S. Breeding Herd Structure* report, published in September 2006.

The efficiency of the U.S. breeding herd continued to increase with the average number of pigs per breeding animal again on the rise. The average number of annual pigs per breeding herd animal (including sows, gilts and boars) was 18.7 in 2008, up from 17.4 in 2005 (Graph 1). This steady increase in the average number of pigs per breeding animal is due to the increase in the number of litters per sow per year and the increase in litter rates. Producers have been able to increase pig crop while decreasing breeding herd as a percent of the total inventory (Graphs 2 and 3).

Operations with more than 5,000 head accounted for 88 percent of the pig crop in 2008 compared to 82 percent in 2005. Conversely, operations with less than 5,000 head accounted for 18 percent of the pig crop in 2005 but only 12 percent in 2008 (Graph 4).

The litter rate for operations with less than 5,000 head averaged 8.93 pigs per litter in 2008, up from 8.66 in 2005. The litter rate for operations with more than 5,000 head increased from 9.10 in 2005 to 9.48 in 2008 (Graph 5).

The hog operation estimates as illustrated in Graphs 6 and 7 show a break in the series from 2006 to 2007. In preparation for the 2007 Census of Agriculture, NASS exerted extensive efforts to build a comprehensive list of producers, which allowed NASS to capture more limited-resource and small farms. The 2007 Census of Agriculture indicated a larger number of hog operations existed than previously estimated with the majority of the increase in operations coming from operations having 1-99 head. The break in the series reflects the fact that newer information for years prior to 2007 was not available to make revisions.

The overall trend for operations with less than 5,000 head continues to show a decrease (Graph 6), while operations with more than 5,000 head continue to increase (Graph 7). Operations with more than 5,000 head accounted for 61.1 percent of the total hog and pig inventory in 2008 (Graph 8). The ten largest hog states account for over 85 percent of the total hog and pig inventory (Graph 9).

All hog market year average prices have been between \$46 and \$51 per cwt since 2005 (Graph 10). However, the corn market year average price has increased from \$2.00 per bushel in 2005 to \$3.90 per bushel in 2008. This has led to a hog to corn ratio of 10.0 in 2008 compared to a ratio of 25.3 in 2005 (Graph 11).

Canadian hog imports continue to be a factor in the U.S. hog industry. Imports of all Canadian hogs for 2008 totaled 9.3 million head, up 14 percent from 2005 (Graph 12). Feeder pig imports in 2008 were up 30 percent from 2005 and accounted for 7.0 million head of the total 2008 imports (Source: Foreign Agricultural Service and Department of Commerce, U.S. Census Bureau). The feeder pig imports accounted for approximately 23 percent of Canada's annual pig crop (Source: Statistics Canada, Agricultural Division).

Survey Procedures and Methodology

The *Quarterly Hogs and Pigs* reports are based on probability surveys. A probability survey assumes everyone in the target population has a positive probability of being selected. These probabilities do not 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.

Hog owners, including contractors, are the target population for the quarterly hog surveys. The sampling universe for the hog estimation program is all hog operations with the capacity to raise breeding or market hogs. A sample of hog operations from the list frame maintained by NASS is supplemented by a sample of area tracts to ensure complete coverage.

A random sample of roughly 12,000 U.S. producers is surveyed to provide data for the December report. A sample size of approximately 9,200 is sampled for each March, June and September survey. Survey procedures ensure that all hog and pig producers, regardless of size, have a chance to be included in the survey. Large producers are sampled more heavily than small operations.

The December *Quarterly Hogs and Pigs* report includes published estimates for each of the 50 states. The *Quarterly Hogs and Pigs* reports in March, June and September include individual published state estimates for the 17 major producing states, combined with 13 non-published states. Estimates from the remaining 20 states, which are only published in December, are carried forward each quarter.

Hog and pig estimates are prepared by the Agricultural Statistics Board after reviewing recommendations and analysis submitted by each field office. National and state survey data are reviewed for reasonableness with each other, with estimates from past years and using a balance sheet. The balance sheet begins with the previous inventory estimate, adds the estimates of births and imports and subtracts the estimates of slaughter, exports and deaths. This indicated ending inventory level is compared to the Agricultural Statistics Board estimate for reasonableness.

Revisions to previous estimates are made to improve quarter to quarter relationships. In December, estimates for all quarters of the current and previous year are reviewed. In March, June and September, estimates for the previous four quarters are subject to revision when the current quarter estimates are made. The reviews are based on slaughter, death loss and current import and export data. Estimates are also reviewed after data from the Department of Agriculture five-year Census of Agriculture are available. No revisions are made after that date.

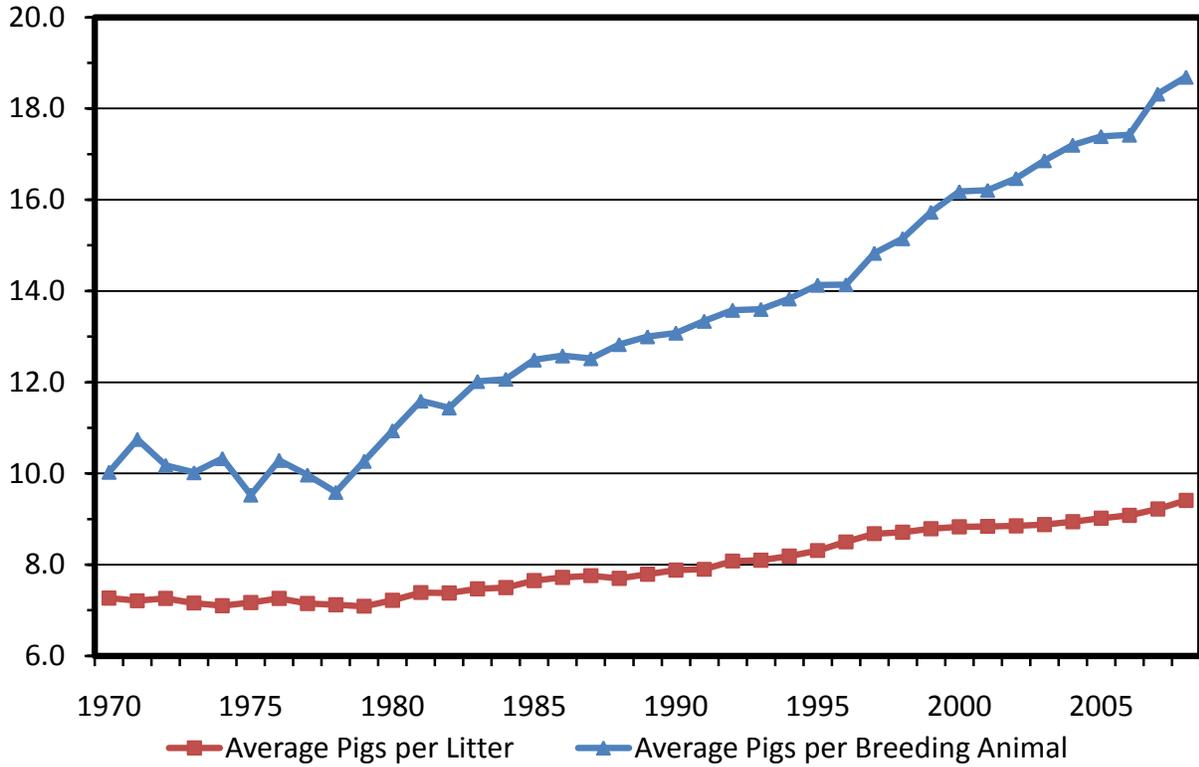
Note

This special release is only available on the NASS website at: www.nass.usda.gov

Graph 1

U.S. Hogs and Pigs

Pigs per Litter

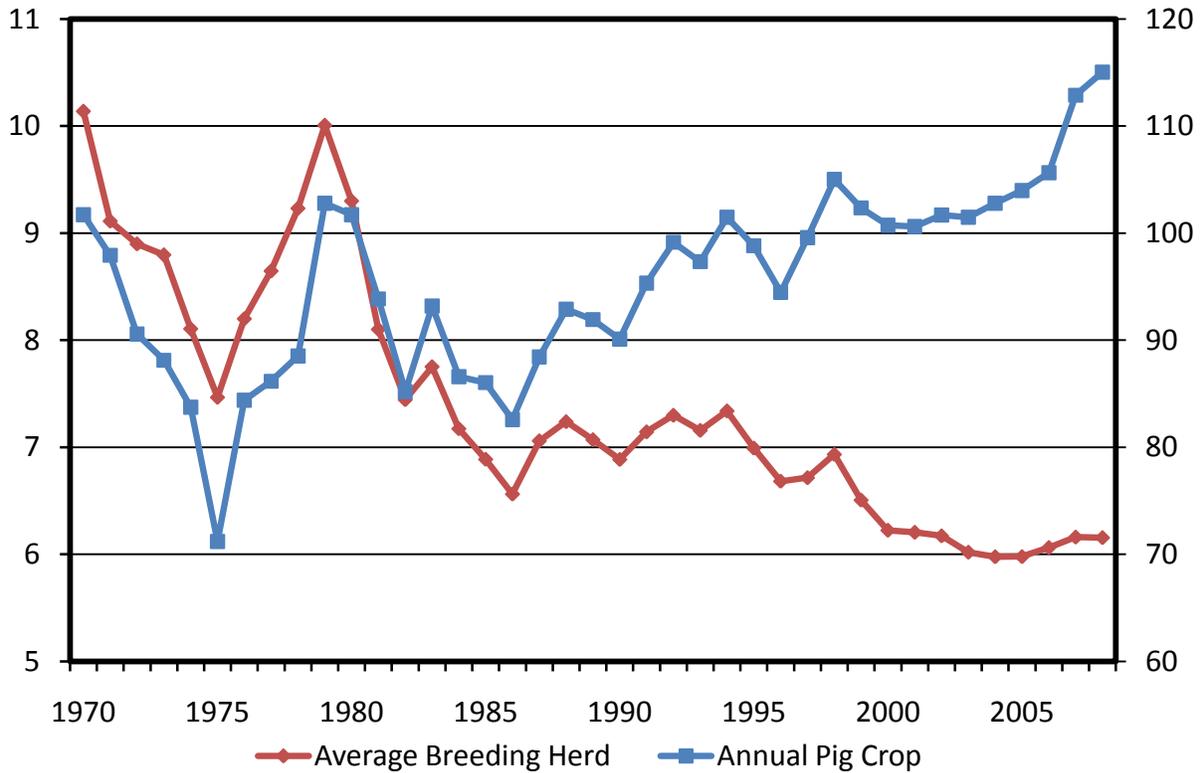


Graph 2

U.S. Hogs and Pigs

Breeding Herd (Millions)

Pig Crop (Millions)

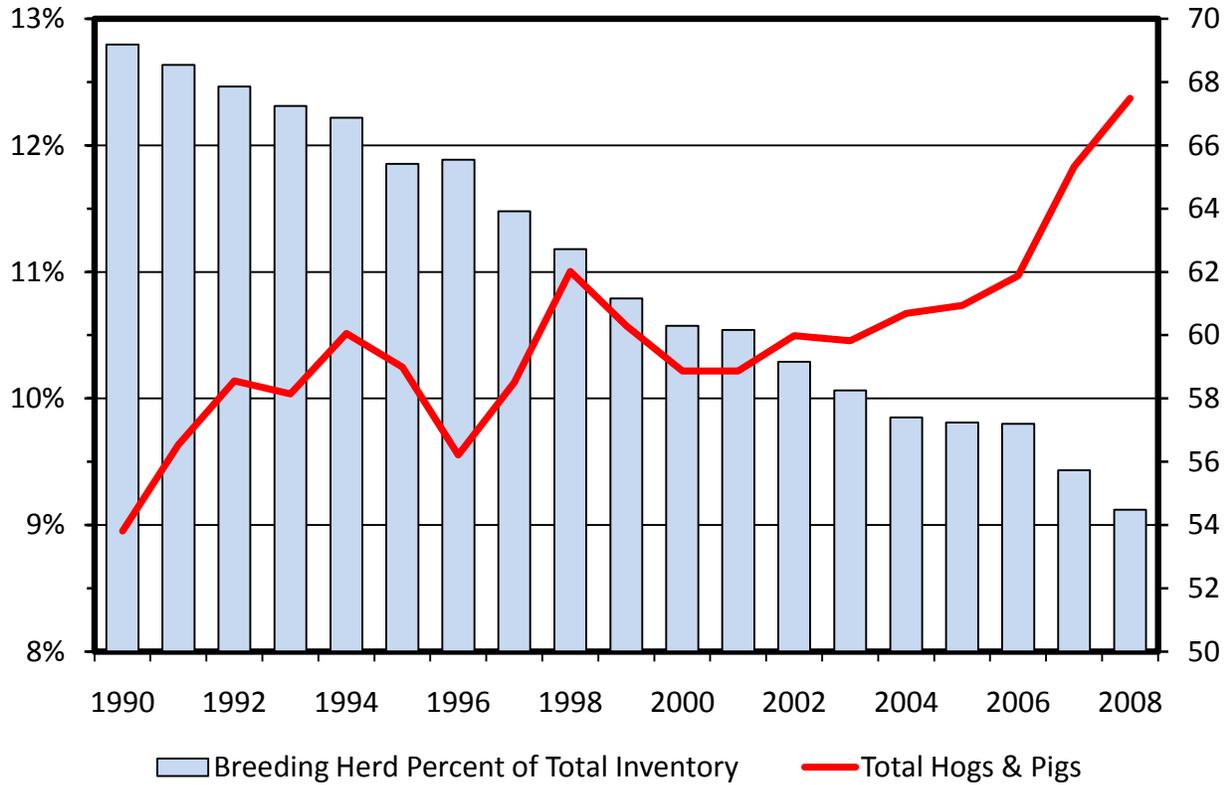


Graph 3

U.S. Hogs and Pigs

Percent of Total

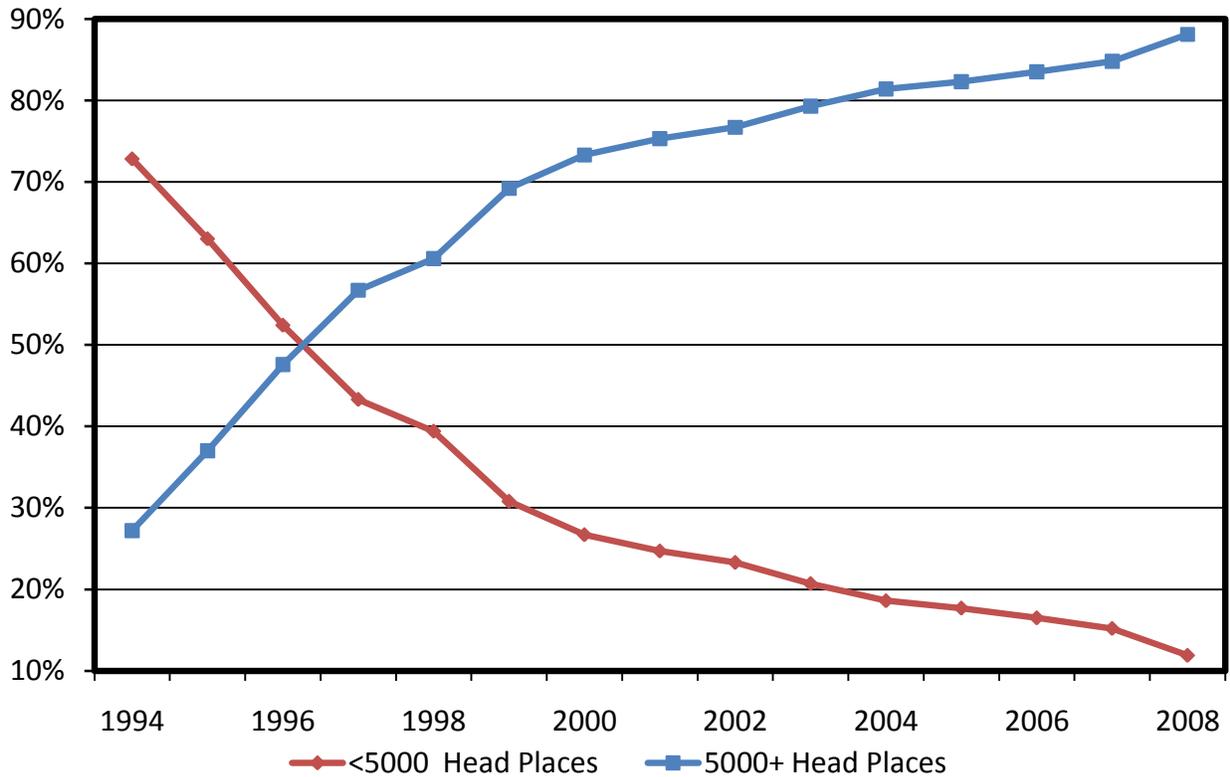
Total Inventory (Millions)



Graph 4

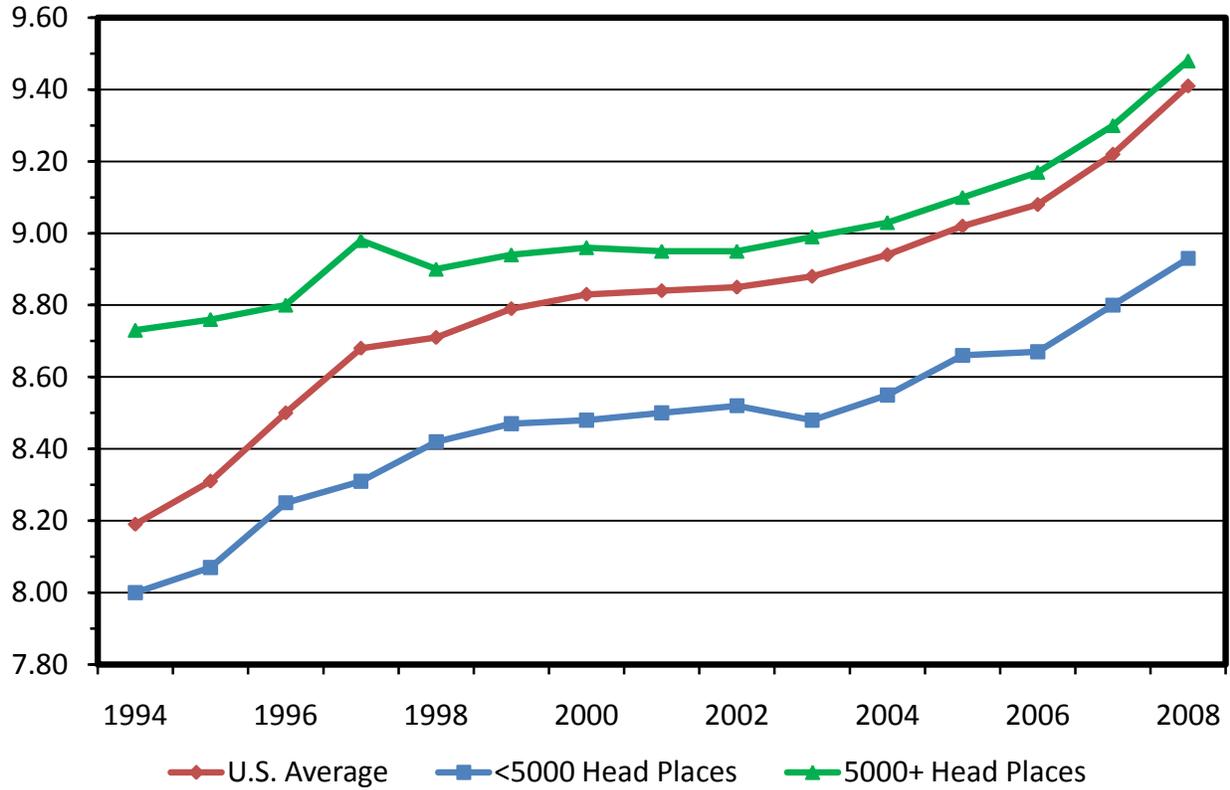
U.S. Annual Pig Crop Distribution

Percent



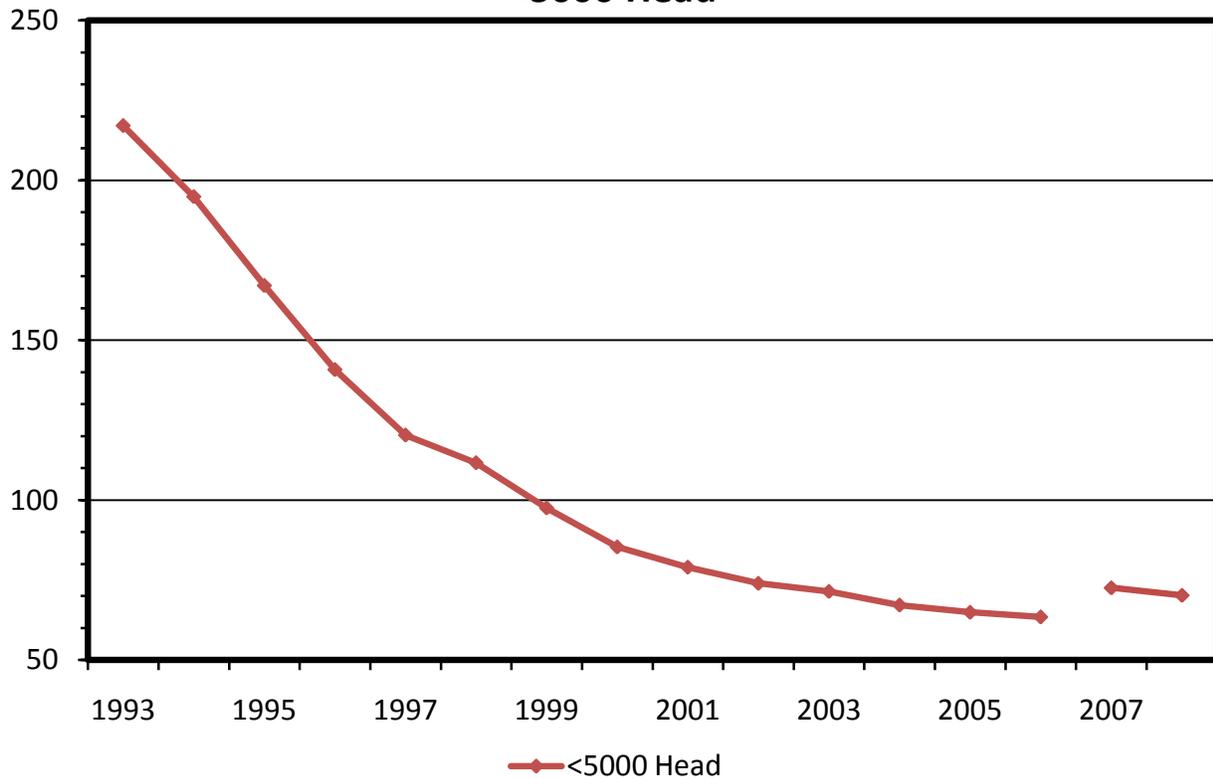
Graph 5
Number

U.S. Annual Litter Rate



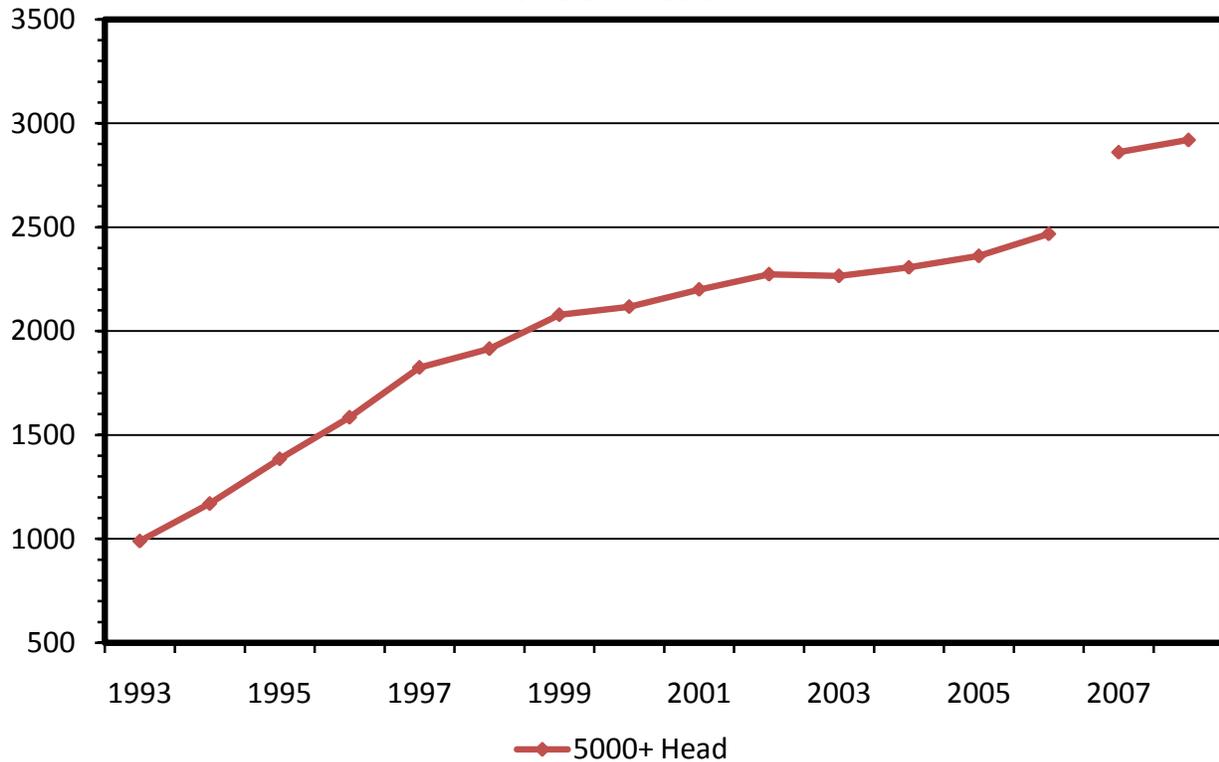
Graph 6
Thousands

U.S. Hog Operations <5000 Head



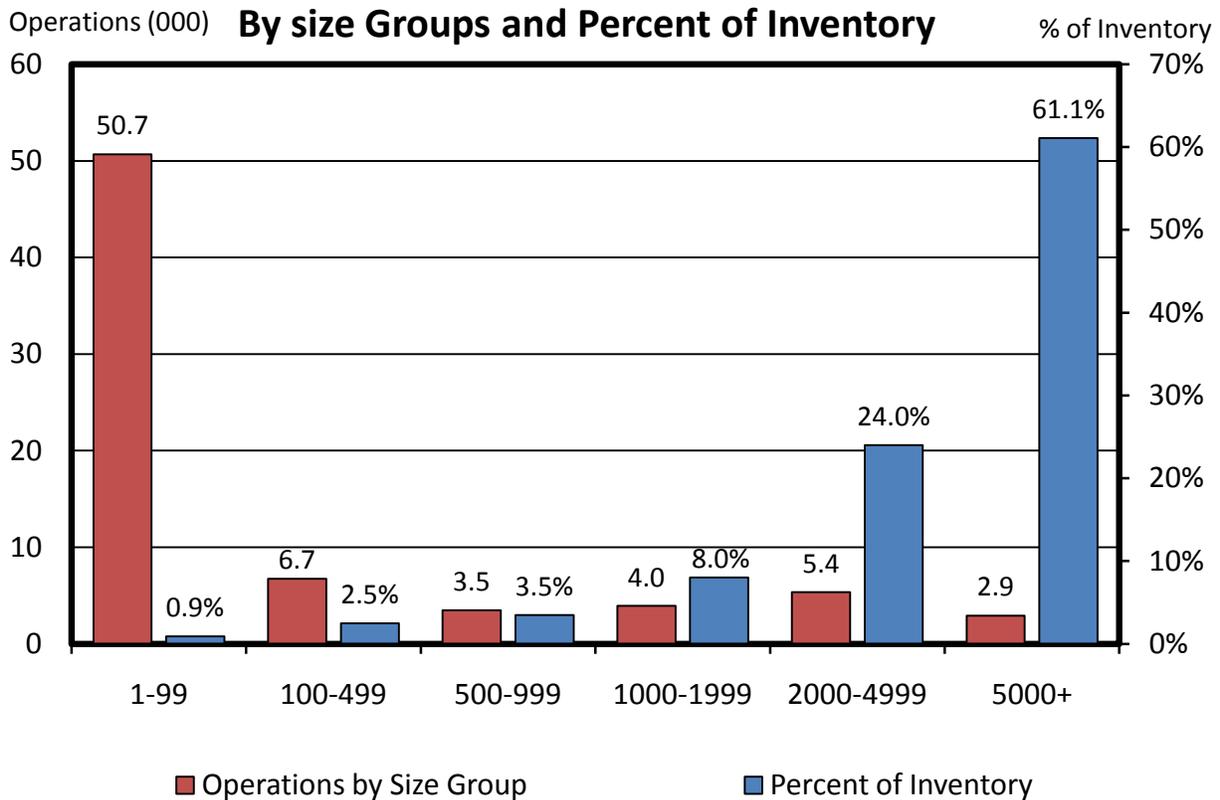
Graph 7
Number

U.S. Hog Operations 5000+ Head



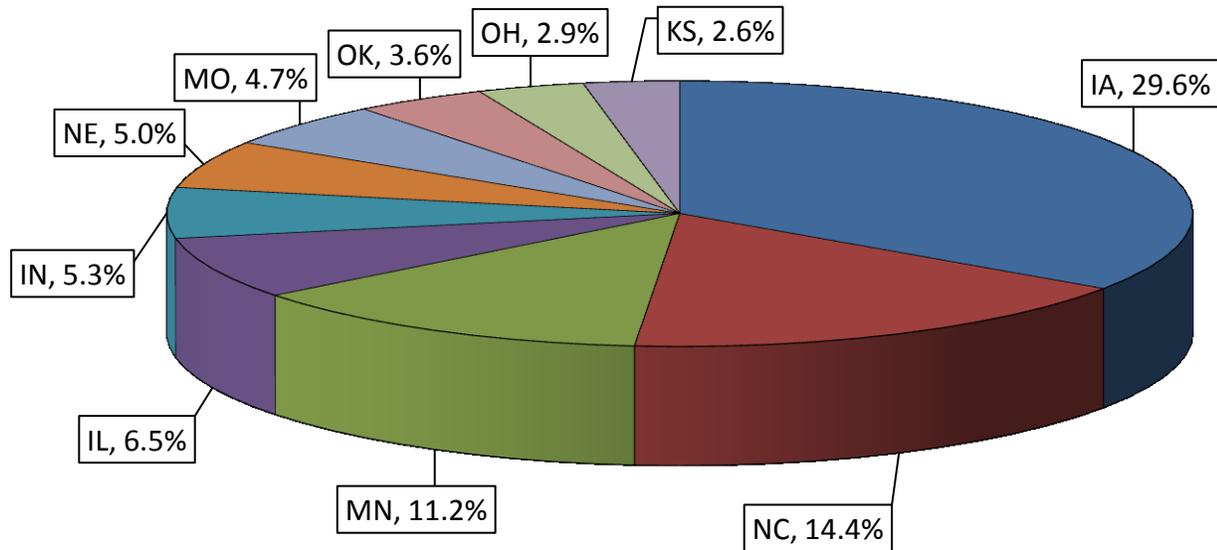
Graph 8

U.S. Hog Operations



Graph 9

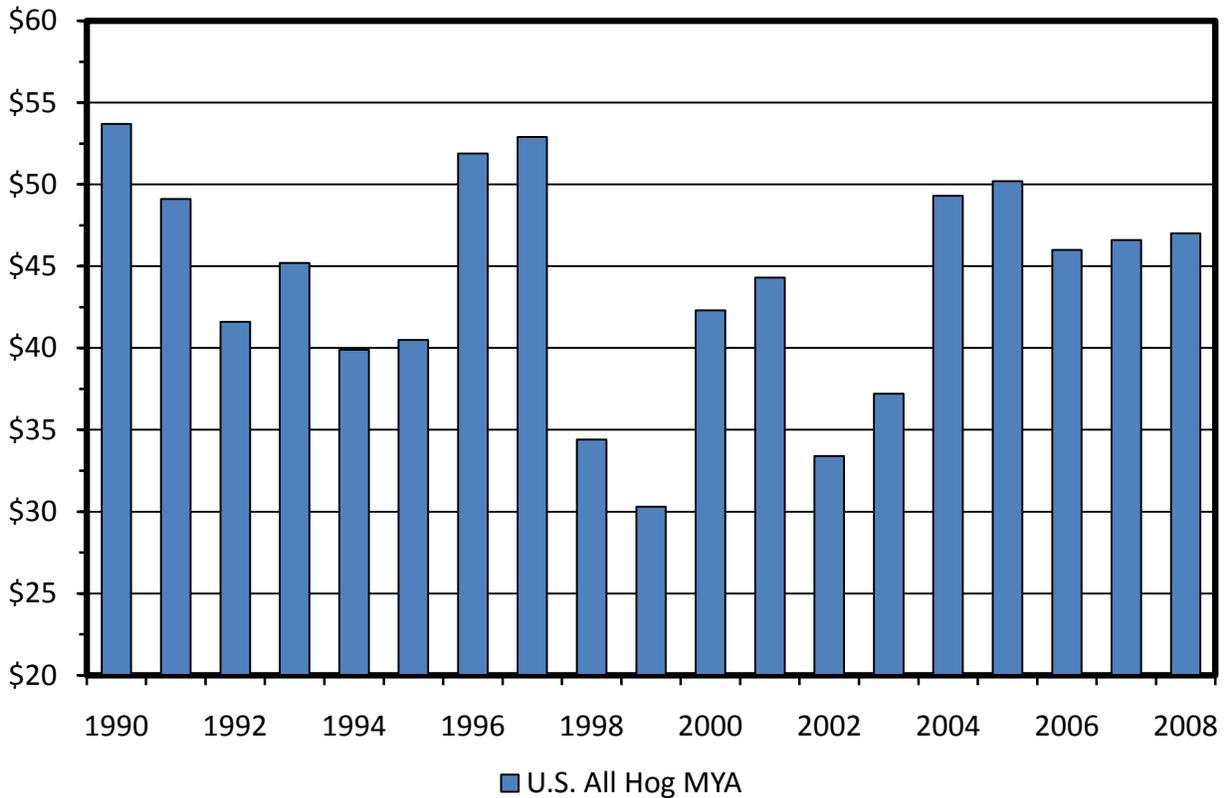
Top 10 Hog and Pig States Percent of December 1, 2008 U.S. Inventory



Graph 10

Dollars per Cwt.

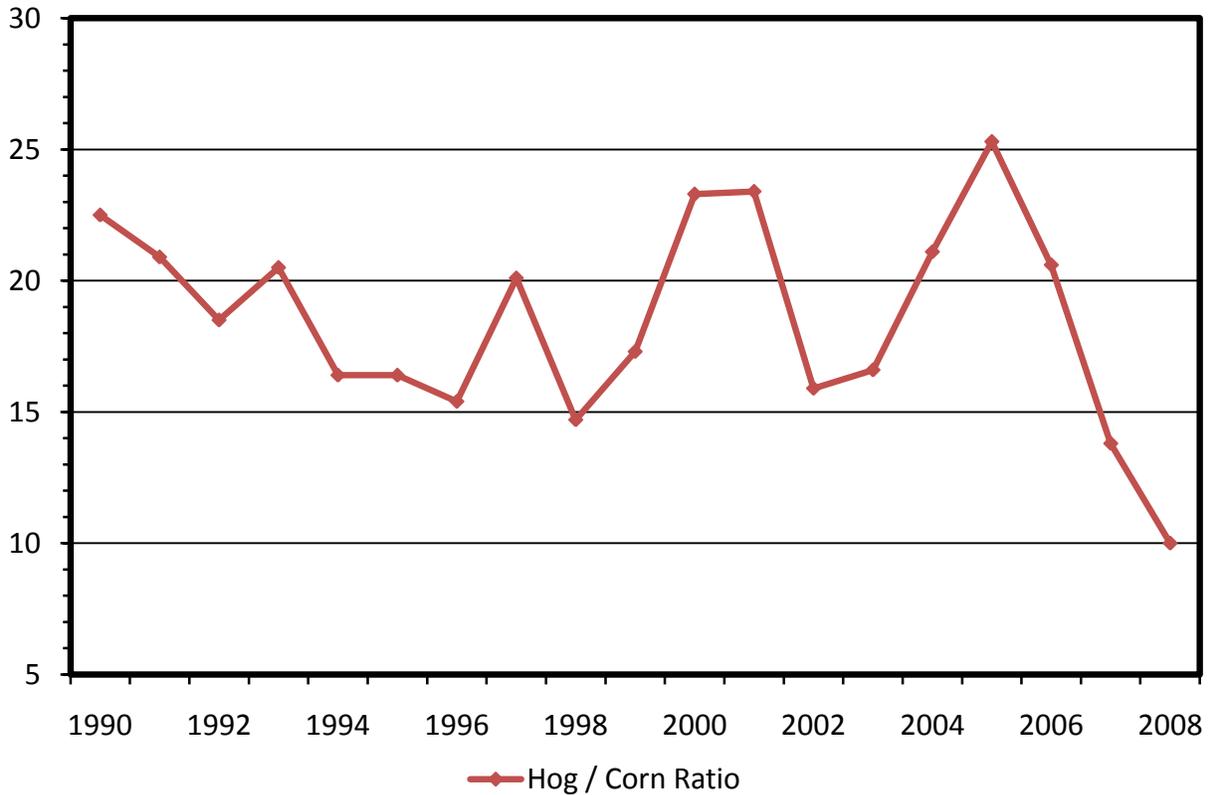
U.S. All Hog MYA Price



Graph 11

U.S. Hog to Corn Ratio

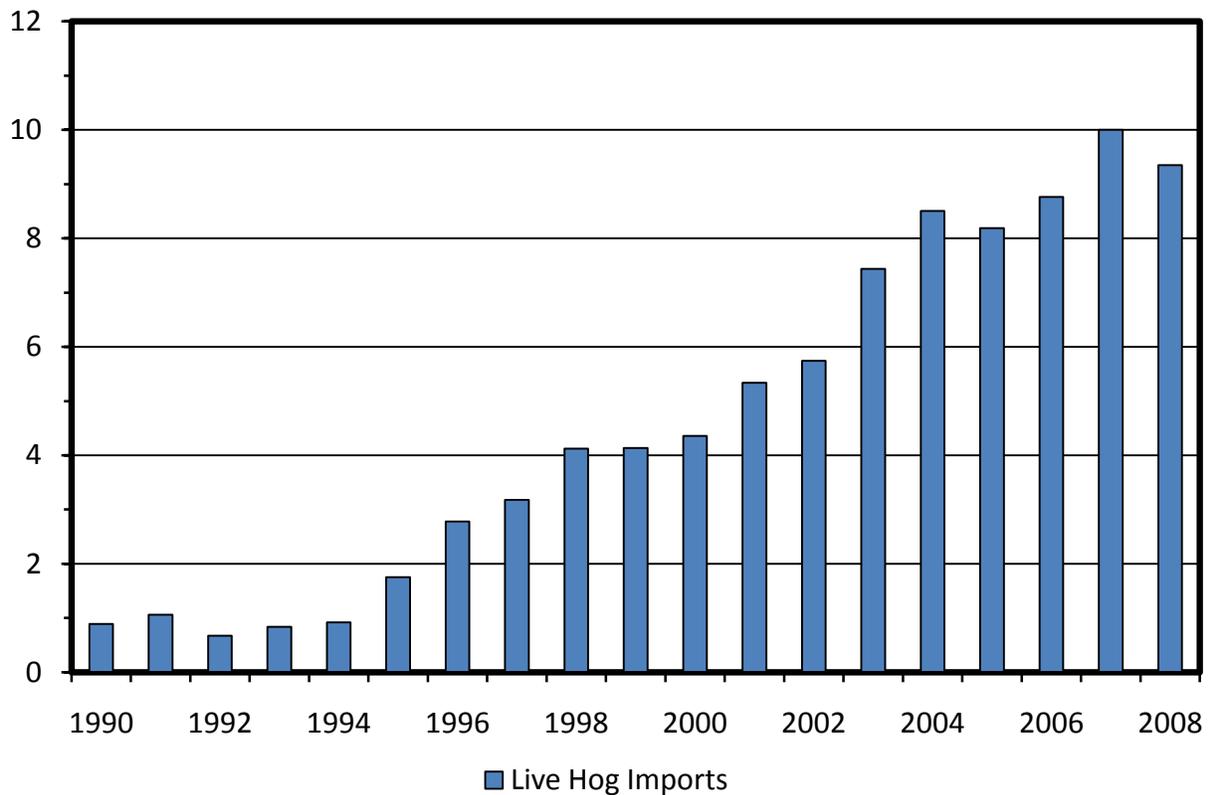
Number



Graph 12

U.S. Live Hog and Pig Imports

Million Head



Terms and Definitions

Boar: A male hog, usually kept for breeding purposes.

Bred: A pregnant female animal.

Breeding herd: Animals used for reproduction, including sows, gilts, and boars.

Farrowing: The process of giving birth in hogs.

Feeder Pig: A young pig, usually recently weaned and at least 8 weeks old or 40-100 pounds in weight, to be fed for slaughter.

Gestation Period: The time during embryo and fetus development, from conception to birth. 112-115 days for swine (approximately 3 months, 3 weeks, 3 days for hogs).

Gilt: A female pig that has never farrowed.

Herd: A group of animals (especially cattle, horses, swine), collectively, considered as a unit in farming or grazing practice.

Hog Operation Types:

1. **Nursery:** A swine facility where weaned pigs are raised until they reach the size of feeder pigs.

2. **Farrow-to-Wean:** A swine facility that includes breeding stock and new born pigs that are not yet weaned. The weaned pigs are sold to other producers to raise until they are sold for feeder pigs (see “Nursery”) or are raised until they are marketed for slaughter (see “Finish”).

3. **Farrow-to-Feeder:** A swine facility that includes breeding stock and pigs ranging from newborn to feeder pig size. The feeder pigs are sold to the producers (see “Finish”) to raise until they are marketed for slaughter.

4. **Farrow-to-Finish:** A swine facility that includes breeding stock pigs and are raised from birth until sold for slaughter.

5. **Finish:** A swine facility that includes market hogs, but not breeding stock, that are fed until they are sold for slaughter.

Hog Places: An operation having one or more hog or pig on hand at any time during the year.

Imports: The goods and products that a country buys from foreign countries.

Litter: A group of pigs farrowed by a sow in one farrowing.

Litter Rate: Number of pigs saved per farrowing, normal 6-12, range 0-16 pigs, average 8-10.

Operation: Establishments primarily engaged in production of crops or plants, vines and trees (excluding forestry operation) and/or the keeping, grazing or feeding of livestock or poultry for animal products, for animal increase or value increase.

Pig: A young hog weighing less than 120 pounds.

Pig Crop: The number of pigs produced by a given number of sows, usually expressed as the percent of pigs weaned to sows bred.

Sow: Female pig that has farrowed at least once.

Swine: A hog or a pig.

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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