

F A C T S

2002/2003

pork
checkoff



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HISTORY OF THE PIG AND THE U.S. PORK INDUSTRY

The pig dates back 40 million years to fossils which indicate that wild pig-like animals roamed forests and swamps in Europe and Asia. By 4900 B.C. pigs were domesticated in China, and were being raised in Europe by 1500 B.C.

On the insistence of Queen Isabella, Christopher Columbus took eight pigs on his voyage to Cuba in 1493. But it is Hernando de Soto who could be dubbed "the father of the American pork industry." He landed with America's first 13 pigs at Tampa Bay, Florida in 1539. Native Americans reportedly became very fond of the taste of pork, resulting in some of the worst attacks on the de Soto expedition. By the time of de Soto's death three years later, his pig herd had grown to 700 head, not including the ones his troops had consumed, those that ran away and became wild pigs (and the ancestors of today's feral pigs or razorbacks), and those given to the Native Americans to keep the peace. The pork industry in America had begun. Pig production spread throughout the new colonies. Hernando Cortez introduced hogs to New Mexico in 1600, and Sir Walter Raleigh brought sows to Jamestown Colony in 1607. Semi-wild pigs conducted such rampages in New York colonists' grain fields that every owned pig 14 inches high had to have a ring in its nose. On Manhattan Island, a long solid wall was constructed on the northern edge of the colony to control roaming herds of pigs. This area is now known as Wall Street.

The pig population of Pennsylvania colony numbered in the thousands by 1660. As the seventeenth century closed, the typical farmer owned four or five pigs, supplying salt pork and bacon for his table with surpluses sold as barreled pork. Finishing pigs on Native Americans corn became popular after becoming a common practice in Pennsylvania.

After the Revolutionary war, pioneers began heading west and they took their indispensable pigs with them. A wooden crate filled with young pigs was often hung from the axles of prairie schooners. As western herds grew, the need for pork processing facilities became apparent. Packing plants began to spring up in major cities. Pigs were first commercially slaughtered in Cincinnati, which became known as Porkopolis. More pork was packed there than any other place in the mid-1800s.

Moving pigs to market in the 1850s was no small undertaking. "Drovers" herded their pigs along trails which later developed into railroad routes. Between 40,000 and 70,000 pigs were driven from Ohio to eastern markets in any one year. Drivers, the drover's hired hands, each managed up to 100 hogs. The herds moved five to eight miles a day and covered distances up to 700 miles.

The refrigerated railroad car transformed the meat industry when it was introduced shortly after the Civil War. It enabled slaughtering operations to be centralized nearer points of production instead of near points of consumption. Large "terminal" markets with railroad access developed in major cities such as Chicago, Kansas City, St. Joseph, and Sioux City. Large packing plants were located adjacent to these stockyards. Live pigs were shipped via railroad to the markets and pork was shipped, again mainly by rail, to consumers nationwide.

As a result of these transportation developments, the pork industry relocated to the upper Midwest where ample amounts of feedgrains were produced. The "Corn Belt" became known as the "Hog Belt" as well. In fact, the states of Iowa, Illinois, Minnesota, Nebraska, Indiana and Missouri held the top six spots in state rankings for many years. Iowa is still the largest pork producing state.

The 1980s and 1990s have seen major technological developments in the pork industry, some of which have allowed production to grow dramatically in states not known for pig production. The most notable growth has occurred in North Carolina which is now the second largest pork producing state. Despite inherently more expensive feed, North Carolina producers became cost competitive by using pigs with the genetic capability for higher reproductive efficiency and enhanced lean muscle growth (and resulting better feed efficiency), capturing economies of size, and developing pig raising methods that controlled diseases and, therefore, improved productive efficiency. Many producers in other areas have now adopted these same methods.

Today the United States is one of the world's leading pork-producing countries. The U.S. is the third largest exporter, trailing only long-time world leader Denmark and Canada. U.S. production accounts for about 10 percent of total world supply.



NATIONAL PORK BOARD

A voluntary producer organization began when a group of early leaders organized the National Swine Growers Council (NSGC) in the mid-1950s. The NSGC changed its name in 1964 to the National Pork Producers Council as it took the first steps toward creating the meat-type pig to produce the pork products that consumers desired. Early leaders lobbied hard for Congressional permission to activate a voluntary market deduction (commonly known as a checkoff) to fund pork product promotions. They succeeded in amending the Packers and Stockyards Act to open the door for the voluntary checkoff system.

Producer enthusiasm for a self-help organization spread rapidly when a series of magazine articles, under the general title of "Blueprint for Decision", appeared in the 1966 issues of *National Hog Farmer* magazine. By 1968 sixteen state associations were organized. That same year the "Nickels for Profit" checkoff program began nationwide.

In December 1985, Congress approved a national legislative pork checkoff whose primary purpose is to provide funds for pork promotion, research and consumer information to enhance pork producers' opportunity for success. Under the terms of the Pork Promotion and Research Act of 1985, all pork producers and importers of pork products contribute a portion of all sales. The current checkoff rate is 0.45 percent of value (i.e., 45 cents for every \$100 market value).

The Pork Act created the National Pork Board which is responsible for collecting the checkoff and administering checkoff-funded programs. The National Pork Board is comprised of 15 members who are nominated by producers and appointed by the U.S. Secretary of Agriculture. The Board is headquartered in Des Moines, Iowa.

The pork checkoff funds programs in the following areas:

- Promotion - Centered on Pork The Other White Meat®, one of the best-known advertising lines in history, the Board's primary function is to increase the demand for U.S. pork in the United States and abroad.
- Consumer information - Teaching consumers about the characteristics, versatility, and uses of today's pork products and making them aware of the role that pork plays in a balanced healthy diet is an important part of the board's promotion activities.
- Research - Virtually unique among commodity programs, the Pork Act enables the Board to conduct research on a wide variety of topics ranging from production methods to environmental solutions to product development. National Pork Board education programs complete this activity by making research results available to producers in many formats via a variety of media.

Pork production in the United States is a vital part of the economy. Over 19 billion pounds will be processed from nearly 100 million hogs in 2002. The economic impact of the industry on rural America is immense. Annual farm sales usually exceed \$11 billion, while the retail value of pork sold to consumers will reach \$40 billion in 2002.

The "value-added" nature of pork provides employment well beyond the farm. The U.S. pork industry is responsible for over \$72 billion in total domestic economic activity. The pork industry supports over 575,000 jobs and adds over \$27 billion of value to basic production inputs such as corn and soybeans.

There are approximately 81,130 pork operations today compared to nearly three million in the 1950s. Farms have grown in size; nearly 80 percent of the hogs are grown on farms which produce 5000 or more hogs per year.



PORK PRODUCTION

PORK PRODUCTION OVERVIEW

Production Inputs

Pork production combines many inputs into a complex process of converting feedgrains, high-protein feed ingredients, vitamins, minerals and water into live hogs and eventually pork and pork products. This ultimate goal is attained by three basic production systems:

- Farrow-to-finish farms that involve all stages of production from breeding through finishing to market weights of about 255 pounds.
- Farrowing-nursery farms which sell 40-60 pound feeder pigs to grow-finish farms.
- Farrow-to-wean farms which sell 10-15 pound weaned pigs to nursery-grow-finish farms.

Feed is the major production input to the pork production process. In fact, feed usually accounts for over 65 percent of all production expenses. The average whole-herd feed conversion ratio (pounds of feed required per pound of live weight produced) for the U.S. pork industry is about 3.6 to 3.8 and is improving (getting lower) steadily. This figure includes the feed fed to

the boars and sows. For comparison, consider that beef cattle take 7-10 pounds of feed to produce a pound of live weight and broiler chickens require about 2 pounds of feed per pound of live weight produced. The best U.S. herds have whole-herd feed conversion ratios under 3.0.

A variety of feed ingredients are used in proper proportions to produce “balanced” diets for pigs at each stage of their lives. Corn, barley, milo (grain sorghum), oats and, sometimes, wheat are used to provide dietary energy in the form of carbohydrates and fat. Oilseed meals (mainly soybean meal) are the major source of protein, the building blocks of muscle and other organs. Vitamins and minerals such as calcium and phosphorous are also included in balanced diets. Young pigs usually are fed a diet containing 20-22 percent crude protein. Diets are changed when pigs reach pre-determined weights in order to balance the amounts of nutrients which the pigs consume with what they actually need. This balancing improves growth and performance and reduces the amount of nutrients excreted. Crude protein levels usually drop by increments of 2 percent until pigs are consuming a 13-15 percent crude protein diet at finishing. Concentrations of other nutrients are changed in a similar fashion.

Pig diets are produced in a variety of ways. Many producers have on-farm feed mills and mix their own feed from individual ingredients. Others use home-grown grain and either a commercial protein supplement that contains all of the protein, vitamins and minerals needed or add a protein meal (soybean, canola, peas, etc.) and a premix that contains only vitamins and minerals. Finally, some farms purchase complete rations from feed manufacturers. These diets require no further processing or mixing.

In addition to feed ingredients, the pork industry uses large quantities of lumber, steel, cement, medications and pharmaceuticals and labor.

Genetics and Breeding

Today's pigs are bred and fed to be leaner than the pig of yesteryear. Compared to the pig of 1950s, today's model has slimmed down considerably, with 50 percent less fat. Around World War II, pigs averaged 2.86 inches of backfat compared with less than 0.9 inches now.

Consumers, and consequently packers, prefer lean pork and producers are raising leaner, heavier-muscled pigs to satisfy these demands. This leaner pork is the

GLOSSARY OF PRODUCTION TERMS

Backfat: Amount of fat over a pig's back, an indicator of the overall fat content of the animal; used in selection of breeding stock and in carcass grading.

Barrow: A male hog that has been castrated.

Balanced diet: Feed that has all the nutrients an animal needs to stay healthy and grow normally.

Boar: Male pig used for any breeding purpose.

Crude protein: Chemically analyzed protein in a given feed.

Farrow: To give birth to piglets.

Feed efficiency (or feed conversion ratio): The amount of feed a pig consumes to gain one unit of body weight; the smaller the amount, the more efficient.

Feeder pig: A pig weighing between 30 and 90 pounds.

Finish: To feed a pig until it reaches market weight, 250-260 pounds.

Gestation: Pregnancy; 112 - 114 days for pigs.

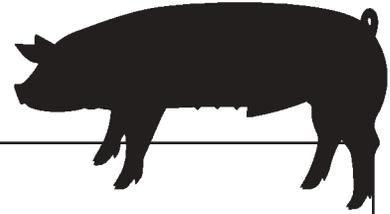
Gilt: Young female that has not farrowed her first litter.

Litter: The group of pigs born to a sow during one farrowing.

Nursing Pig: Any pig not yet weaned.

Sow: Female that has farrowed at least one litter.

Wean: To separate young pigs from the sow.



result of new technology in hog production and superior genetics. Pork producers utilize purebred seedstock of nine major swine breeds (Yorkshire (or Large White), Duroc, Hampshire, Landrace, Berkshire, Spotted, Chester White, Poland China and Pietrain) or synthetic lines derived from these breeds by breeding companies such as PIC, Monsanto Choice Genetics, Newsham Hybrids, Danbred USA, Cotswold USA, Genetipork, Babcock Swine, and Seghers.

Virtually all market pigs are produced by crossing purebred breeds or synthetic lines to take advantage of heterosis or hybrid vigor. Heterosis is a biological phenomenon in which the offspring of a mating of two separate breeds or lines performs better than the average of their parents. Crossbred offspring such as Symbol II grow faster, produce more pigs per litter, have lower mortality rates and convert feed to meat more efficiently.

Rotational breeding systems involve the successive use of boars of different breeds and the retention of gilts which are superior for growth rate, leanness and reproductive potential (as evidenced by their mothers' reproductive record). These systems reduce out-of-pocket breeding stock expenses since all replacement females are home-raised. However, the retention of gilts from all sires means that all sires must be selected for superior genetic potential for carcass (backfat, muscling), production (feed efficiency, growth rate) and reproduction (pigs per litter, milking ability) traits. Boars above average in all three types of traits are not likely to be truly superior in any one area.

Terminal breeding systems involve crossing boar lines selected strictly for carcass and production traits with gilt lines which are selected mainly for reproductive potential. These matings produce offspring which are all marketed (therefore the name "terminal"); no gilts are retained for breeding. Since terminal boars are selected



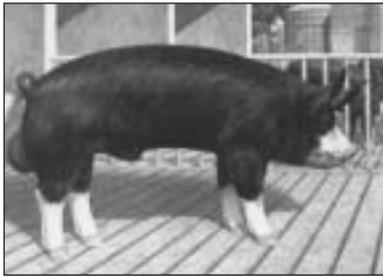
"Symbol II" is a visual image of the ideal pig.

SYMBOL II - *adopted in 1996*

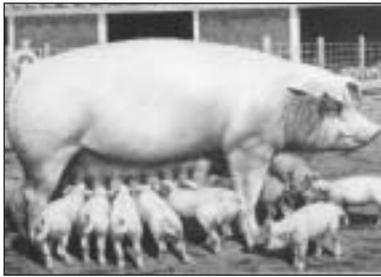
Dramatic improvements in the nation's pigs have resulted in a need to update the description of the ideal market pig named Symbol in 1983. Many of Symbol's original features have been eclipsed by the average pig of 1997. The following represent new targets for the next century.

- 195 lb. carcass
- Desirable muscle quality
- Minimum loin muscle of 6.5 (7.1) sq. in. with appropriate
 - Color
 - Water holding capacity
 - Ultimate pH
- Intramuscular fat level greater than or equal to 2.9 (2.5) percent
- High health production system
- Produced by a producer who has completed NPPC's Environmental Assurance Program and who is certified at LEVEL III of the Pork Quality AssuranceSM (PQA) Program.
- Free of the stress gene
- Result of a terminal crossbreeding program
- From a maternal line capable of weaning 25 pigs per year
- Marketed at 156 (164) days of age
- Performance on a corn/soy equivalent diet from 60 to 260 pounds of weight:
 - Live-weight feed efficiency of 2.40 (2.40)
 - Fat-free lean gain efficiency of 6.4 (5.90)
 - Fat-free lean gain of .78 lbs per day
 - Standard Reference backfat of .8 (.6)
 - Fat-Free Lean Index of 49.8 (52.2)

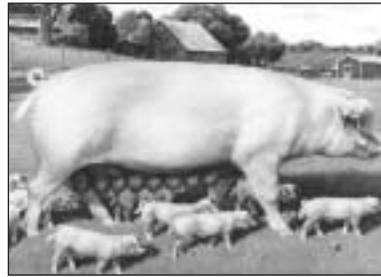
() represent Gilt numbers



Berkshire



Chester White



Landrace



Yorkshire

without concern for reproductive potential (remember that no gilts will be kept from the matings), ones that are truly exceptional for carcass and production traits can be used. The same is true of gilt lines; emphasis can be placed on reproduction with other traits being important but secondary.

Gilt lines used in modern terminal breeding systems involve mainly the white breeds (Yorkshire, Landrace and Chester White) which are generally superior in reproductive traits such as litter size, milk production and docile temperament. Most terminal sire lines use the colored breeds which are generally more durable (ie. can withstand stressful conditions better) and are leaner and heavier muscled.

A major change in the pork industry since 1980 has been the shift from rotational to terminal breeding systems. This change was brought about largely by pig pricing systems which explicitly rewarded leaner hogs and penalized fatter pigs and a more thorough understanding of the economic importance of high reproductive efficiency. Today, the majority of pigs in the U.S. are produced from terminal breeding systems.

Identifying superior boars has become easier with the use of Expected Progeny Differences (EPDs) for each trait on each boar. An EPD is the expected amount by which a given boar's offspring will differ from the average of all animals in the population for a certain trait. So, the larger the EPD, the more superior the boar for that trait. Both purebred breeders and breeding stock companies use Best Linear Unbiased Predictor (BLUP) genetic evaluation software to identify the boars with the highest EPDs. BLUP software uses data from up to 300,000 relatives of a given animal to increase the probability that a selected boar truly possesses genes superior to those of other boars in the population. The use of BLUP software and EPDs has contributed greatly to the rapid genetic improvement of the U.S. swine herd over the last decade.

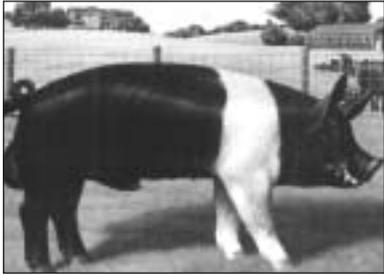
Swine Production Systems

Whether pigs are raised in pastures or in totally enclosed barns, systems approaches are beginning to dominate pork production. Repeatable methods and specialization characterize the modern pork producer regardless of the type of facilities he or she uses. The choice of facility type is mainly a balancing of capital investment, labor requirement and management expertise. Animal and worker welfare are primary concerns to producers, regardless of the type of facilities chosen. The key to good swine care rests more on the producer's ability to properly manage housing than it does on the specific type of housing provided.

Controlled-environment buildings (described below) require much higher investment but lower labor per unit of output. These facilities make handling hogs easier, provide for more direct observation of animals, allow greater control of the production process, protect both animals and workers from the heat, cold, rain and snow and usually result in faster growth to market weight and better feed efficiency. Most controlled-environment facilities are operated in "all-in, all-out" fashion where pigs are moved in groups with buildings thoroughly cleaned and disinfected between groups. Controlled-environment facilities take little land and thus leave more available for grain production.

Pasture or outdoor production systems involve more acres of land and more labor per unit of output. They require generally lower capital investment, especially when marginal land can be used, but usually give lower productivity in terms of output per unit of land or labor or feed. Interest in outdoor or pasture facilities has increased in recent years as "systems" ideas have been imported from Europe and as some niche markets have developed for meat from pasture-raised pigs. Well-run pasture systems can be cost competitive with controlled-environment operations.

Regardless of the type of facilities used, the objective is the same: To provide the proper environment to maximize the welfare and productivity of both animal and worker.



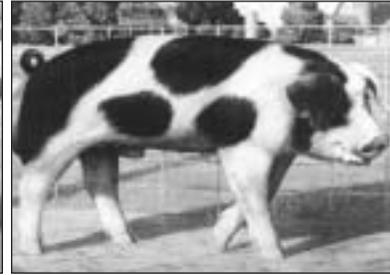
Hampshire



Duroc



Poland China



Spot

Breeding and Gestation

The design of breeding facilities depends largely upon the type of mating system used.

Pen mating (where one or more boars are placed with a group of sows) is frequently used in pasture systems. This approach requires little labor but provides little information about when or even if a sow is actually bred.

Hand mating predominates in controlled-environment facilities and can be used in outdoor facilities. This method involves placing one boar with one sow and observing to make sure that a mating occurs. This takes more labor but results in very accurate information upon which to base future management decisions.

Artificial insemination (AI) is becoming more and more common on farms of all sizes. AI allows improved genetic material to be introduced faster and minimizes the risk of disease transmission. AI's greatest value is in controlled-environment facilities where breeding efficiency is a major factor affecting profitability. AI involves no boar on site and requires the highest level of management expertise and labor of all the alternative mating systems. Many commercial boar studs have been started in the past few years to meet the demand for semen from genetically superior boars.

Sows can be housed in groups on pasture, in groups in controlled-environment buildings or individually in controlled-environment buildings during breeding and their 114-day gestation (pregnancy). Boars are usually housed in the same way as sows. Every effort is made to keep both boars and sows comfortable since stress from a variety of sources can reduce litter size and piglet livability.

Farrowing

Farrowing facilities range from pasture systems with small, individual sow huts to enclosed farrowing houses which are part of either partial or total controlled-environment operations. Farrowing houses contain

individual farrowing pens or stalls designed to provide a comfortable place for the sow to farrow and to protect both newborn pigs and workers. These facilities minimize newborn pigs being crushed by sows (which sometimes accidentally lay on them) and prevent injury to the pigs or the workers if the sow's protective instincts cause aggressive behavior. Farrowing buildings are thoroughly cleaned before sows enter and farrowing pastures are rotated in order to control disease.

Farrowings average 9-10 pigs per litter (with a practical range of 6 to 13). The number of pigs weaned averaged about 8.8 pigs per litter in 2001.

Baby pigs are carefully observed to keep mortality to a minimum and insure rapid early growth and development. The highest death losses of the entire pork production process occur within three or four days of birth and these losses are costly. It may cost a producer \$380 - \$400 a year to keep a sow. If she raises 16 pigs during that year, the cost per pig is \$23 - \$25. However, if she raises 20 pigs per, the cost per pig falls to \$19 - \$20.

With this in mind, a producer follows many steps to insure the survival of each pig. Newborn piglets need special attention because they are born with little stored energy, have little ability to regulate their own body temperature and can easily be injured by the sow. After birth, several procedures may be performed on piglets to improve their survival chances and/or to prevent future problems. These procedures include disinfecting navels to prevent infections, clipping needle teeth to prevent injuries to other pigs or the sow, giving supplemental iron to improve the blood's oxygen carrying capacity, docking tails to prevent future injury and castrating boars to prevent off-flavored meat.

Nursery

Pigs are generally weaned at 3-4 weeks of age when they weigh 10-15 pounds. At this time, they are moved to either a nursery, a grower, or, in a new development in pork production technology, directly to a finishing build-



ing modified to meet the needs of young pigs. Most housing for newly-weaned pigs has totally slotted floors which allow the pigs' wastes to fall through into a holding pit or gutter. This keeps floors drier and cleaner, and makes it easier to provide the correct environment to keep pigs comfortable and productive. The slotted floors are made of easily cleaned, easily maintained and comfortable materials.

Complex diets consisting of grain, plant proteins, milk products and animal proteins are fed to newly weaned pigs. As many as five unique diets may be fed to a pig before it is moved out of the nursery facility at 8-10 weeks of age and 40-60 pounds. Pigs which were originally moved to wean-market buildings are simply changed to growing diets at this point.

Growing and Finishing

Growing and finishing were once thought of as distinct phases in the pork production process. The difference in terminology dates back to the time when fat was more valuable and "finishing" pigs meant feeding them to a sufficient degree of fatness. In fact, separate pens and even separate buildings were used for growing pigs (up to 120 pounds) and finishing pigs (120 pounds to market weight).

Today, pigs are seldom moved at 120 pounds and the "grow-finish" phase is actually comprised of two to nine phases in which unique diets are fed which closely match the pigs' nutritional requirements. In addition, barrows and gilts are frequently fed separately during the grow-finish phase because their nutritional requirements are significantly different. "Split-sex" feeding results in leaner, meatier animals from fewer pounds of feed.

Either pasture or controlled-environment facilities could be used for the grow-finish phase. There are five general types of buildings which are used:

- Totally enclosed, controlled-environment -- usually the most costly but provides the greatest control over temperature and humidity. Electric fans provide ventilation.
- Open front with outside apron -- cost less to construct than other types but, because one side (usually the south) is always open, pigs are exposed to temperature variation that may reduce comfort and performance.
- Modified open front -- so-named because one side, generally the south, may be opened for summer ventilation and completely closed during the winter. This type of building depends upon the air's convective currents for natural ventilation.

- Double-curtain buildings -- have automatically-controlled curtains on both sidewalls and are usually placed perpendicular to prevailing winds. They use a combination of mechanical and natural ventilation to maintain proper temperatures and provide fresh air. These buildings have been a major technological development. To be cost-competitive, these buildings must usually hold at least 800 pigs per all-in, all-out group.
- Hoop buildings -- have wooden or concrete sidewalls 3-4 feet high upon which are mounted hoops which support covers made of specially treated fabric or plastic. Straw or cornstalks are used for bedding over dirt floors. Research shows that these buildings can provide cost-competitive all-in, all-out finishing facilities for as few as 200 pigs per group.

Marketing

When pigs reach approximately 250 pounds, producers sell them on either a live-weight basis at terminal markets or auctions, or on a live-weight or carcass-weight basis direct to packers. In addition, some producers use livestock exchanges or producer-owned marketing networks for price negotiation and transportation.

As was noted earlier, terminal markets developed in the late 1800s near slaughtering plants in major metropolitan areas. These markets played a major role in the development of the U.S. livestock industry but have declined in importance in recent years as communications systems have improved. Today, less than one percent of all pigs are sold through terminal markets.

Auction markets were organized in many rural communities to provide a point of sale for small lots of livestock from relatively small geographic areas. Like terminal markets, these markets are less numerous and handle fewer pigs today. However, they still provide needed price discovery and livestock assembly services in some areas, especially those distant from packing plants or terminal markets.

Producers also have the option of selling their pigs directly to packers and delivering them to the plant or to buying stations. This type of marketing has increased over the years and is now used for the vast majority of the pigs produced.

Over seventy percent of the pigs produced in the U.S. are now sold on "carcass merit" pricing systems in which a portion of the price is determined by certain characteristics of the animal. Current systems pay premiums for pigs with low amounts of fat and high amounts of muscle. Advanced measurement systems which soon will allow premiums to be paid for carcasses

with better flavored, juicier and more tender meat are being researched by producers and processors.

The marketing chain for pigs is made up of a wide variety of businesses that include packers, processors, purveyors, retailers and foodservice operators. All play an important role in adding value to pigs by producing pork products that meet the needs and desires of consumers worldwide.

Prices for Pigs

No matter what marketing system is used, price is generally determined by supply and demand. There have historically been no government subsidies to support low prices (some direct government payments were made to smaller producers in 1999). If supplies are low and/or demand is high, prices will be high. If supplies are high and/or demand is low, prices will be low.

Pig prices vary cyclically and seasonally. Cyclical variation is caused by the time lags inherent to biological production. When prices are high, more sows are bred and more pigs are produced. But these pigs will not reach market for about a year after they are conceived. When they do, supplies increase and prices fall thus causing a price cycle. Seasonal variation is caused by changes in production efficiency due to weather variation and by different demand levels (eg. higher demand during summer months due to people grilling outside).

Producers can manage the prices they receive by hedging hogs with futures or options contracts or by forward contracting hogs with a packer. Futures and options are traded on the Chicago Mercantile Exchange (Lean Hogs and Pork Bellies contracts) and the Mid-American Exchange (Lean Hogs).

Co-Products of Pork Production

There is more than just meat produced when a pig is raised. Many of the co-products of the pork industry save lives (replacement heart valves, skin grafts for burn victims) or allow people to lead normal lives in spite of illness (insulin). Others are used in making many food and industrial products such as gelatin, plywood adhesive, glue, plastics and cosmetics.

By far the largest volume co-product of pig production is manure, an effective, low-cost source of nutrients for crops and pastures. In fact, decisions regarding the type of buildings to construct frequently depend on the producer's need for and ability to efficiently use the nutrients found in pig manure. Open front and hoop buildings usually involve handling manure as a solid. Other types of buildings usually have pits or holding tanks in which manure is stored as a liquid. This liquid is periodically applied to cropland or pastures. Both systems provide organic matter, nitrogen and phosphorous to growing vegetation. When properly handled and applied, manure can be an asset to pig operations and provide extra income to the operators by reducing the need to purchase fertilizer.



MEAT CONSUMPTION

PER CAPITA CONSUMPTION OF MEAT, POULTRY & FISH, BONELESS WEIGHT EQUIVALENT								
Year	Beef	Veal	Pork	Lamb	Chicken	Turkey	Fish	Total
(pounds)								
1970	79.6	2.0	48.6	2.1	25.2	6.4	11.8	175.7
1971	79.0	1.9	53.0	2.1	25.1	6.6	11.5	179.2
1972	80.7	1.6	48.1	2.2	26.2	7.1	12.5	178.4
1973	75.9	1.2	43.4	1.7	25.3	6.7	12.8	167.0
1974	80.6	1.6	47.1	1.5	25.2	6.9	12.1	175.0
1975	83.0	2.8	38.5	1.3	24.9	6.5	12.2	169.2
1976	88.9	2.7	41.0	1.2	27.2	7.0	12.9	180.9
1977	86.2	2.6	42.6	1.1	27.6	7.2	12.7	180.0
1978	82.3	2.0	42.8	1.0	29.2	6.9	13.4	177.6
1979	73.5	1.4	49.1	1.0	31.6	7.3	13.0	176.9
1980	72.1	1.3	52.6	1.0	31.5	8.1	12.8	179.4
1981	72.7	1.3	50.4	1.0	32.2	8.4	12.9	178.9
1982	72.4	1.4	45.3	1.1	32.4	8.4	12.3	173.3
1983	73.8	1.4	47.7	1.1	32.7	8.7	13.1	178.5
1984	73.6	1.5	47.5	1.1	34.0	8.7	13.7	180.1
1985	74.3	1.5	47.9	1.1	35.2	9.2	14.4	183.6
1986	74.1	1.6	45.4	1.0	36.0	10.2	14.7	183.0
1987	69.2	1.3	45.8	1.0	38.1	11.6	15.4	182.4
1988	68.6	1.1	48.9	1.0	38.3	12.4	15.1	185.4
1989	65.4	1.0	48.4	1.1	39.8	13.1	15.6	184.4
1990	63.9	0.9	46.4	1.0	41.4	13.9	15.0	182.5
1991	63.3	0.8	47.3	1.1	43.3	14.2	14.8	184.8
1992	63.0	0.8	49.9	1.1	45.5	14.1	14.8	189.2
1993	61.6	0.8	49.2	1.0	47.8	14.1	15.0	189.5
1994	63.9	0.8	49.9	0.9	48.8	14.0	15.1	193.4
1995	64.3	0.8	49.3	0.9	48.2	14.2	15.1	192.7
1996	65.2	1.0	46.1	0.9	50.0	14.6	15.1	192.9
1997	63.6	0.8	45.8	0.8	50.3	13.9	14.5	189.7
1998	64.8	0.7	49.4	0.9	51.3	14.3	14.5	195.9
1999	66.0	0.6	50.6	0.9	53.9	14.2	14.5	200.7
2000	66.4	0.6	49.3	0.8	53.9	14.1	14.5	199.6
2001	65.0	0.5	48.5	0.9	53.9	14.3	14.5	197.6

Source: USDA

PER CAPITA CONSUMPTION OF MEAT, POULTRY & FISH, RETAIL WEIGHT								
Year	Beef	Veal	Pork	Lamb	Chicken	Turkey	Fish	Total
(pounds)								
1970	84.6	2.4	56.0	2.9	36.9	8.1	11.7	202.6
1971	83.9	2.2	60.6	2.8	36.8	8.4	11.5	206.2
1972	85.7	1.9	54.7	2.9	38.4	9.0	12.5	205.1
1973	80.7	1.5	49.0	2.4	37.4	8.5	12.7	192.2
1974	85.6	1.9	52.8	2.0	37.4	8.8	12.1	200.6
1975	88.2	3.3	43.0	1.8	37.1	8.5	12.1	194.0
1976	94.5	3.2	45.5	1.6	40.2	9.1	12.9	207.0
1977	91.6	3.1	47.0	1.5	41.4	9.1	12.6	206.3
1978	87.4	2.3	47.0	1.4	44.1	9.2	13.4	204.8
1979	78.1	1.6	53.7	1.3	46.7	9.9	13.0	204.3
1980	76.6	1.5	57.3	1.4	46.6	10.5	13.4	207.3
1981	77.2	1.5	54.7	1.4	47.6	10.8	12.7	205.9
1982	76.9	1.6	49.1	1.5	47.9	10.8	12.1	199.9
1983	78.3	1.5	51.6	1.5	48.2	11.2	12.9	205.2
1984	78.2	1.7	51.3	1.5	50.3	11.4	13.4	207.8
1985	78.9	1.8	51.7	1.4	52.1	12.1	14.3	212.3
1986	78.5	1.8	48.8	1.4	53.2	14.4	14.5	212.6
1987	73.5	1.5	49.0	1.3	56.3	15.2	15.5	212.3
1988	72.3	1.4	52.2	1.4	56.4	15.9	15.0	214.7
1989	69.4	1.2	51.7	1.5	58.7	17.1	15.6	215.2
1990	67.4	1.1	49.8	1.5	60.9	18.4	15.0	214.1
1991	66.8	1.0	50.4	1.5	65.6	18.0	18.8	217.1
1992	66.5	1.0	53.1	1.4	68.2	18.0	14.8	223.0
1993	65.1	0.9	52.3	1.3	70.5	17.8	15.0	222.9
1994	67.0	0.9	53.1	1.2	71.4	17.8	15.1	226.5
1995	67.4	1.2	49.1	1.2	71.9	18.0	15.1	223.9
1996	68.2	1.2	49.1	1.1	71.7	18.5	15.1	224.9
1997	66.9	1.0	48.7	1.1	72.7	17.6	14.5	222.5
1998	68.1	0.8	52.6	1.2	72.6	18.1	14.5	227.9
1999	69.1	0.7	53.9	1.2	77.0	18.0	14.5	234.4
2000	69.4	0.7	52.5	1.1	76.9	17.8	14.5	232.9
2001	68.0	0.6	51.6	1.2	76.9	18.0	14.5	230.8

Source: USDA

2001 PER CAPITA PORK CONSUMPTION SELECTED COUNTRIES	
(Pounds, Carcass Wt.)	
Czech Republic.....	130.9
Taiwan	88.8
Poland	84.3
Hungary	83.4
European Union.....	78.6
Canada.....	76.4
China.....	72.3
United States	64.9
Korea	52.5
Australia	39.7
Japan.....	39.3
Russian Federation	31.8
Mexico.....	28.9
Brazil	24.2
Singapore	22.7

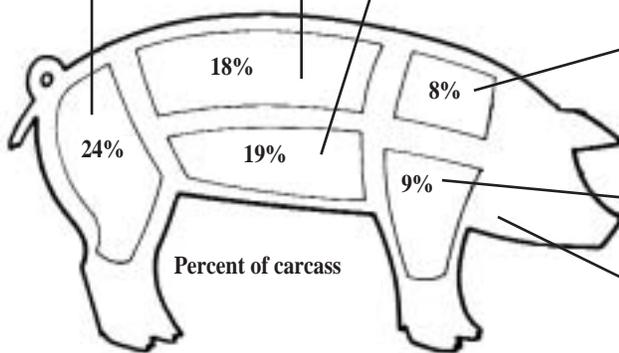
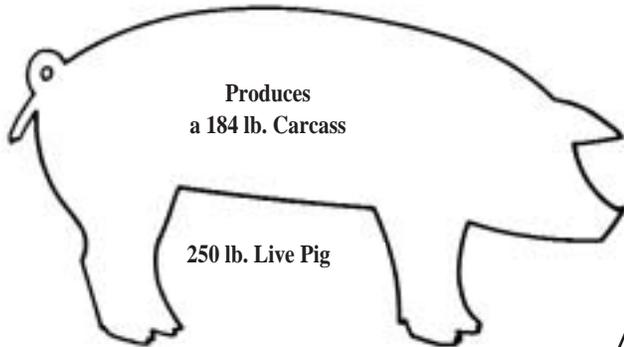
Sources: Consumption data—USDA, Foreign Ag Service; Population data from Stefan Helder's www.world-gazetteer.com



TODAY'S PORK

Typical Market Pig

Live weight (pounds)	250
Carcass weight (pounds).....	184
Backfat, 10th rib (inches)	0.9
Loin-eye area (square inches).....	5.2
Fat-Free Lean Index (pct.).....	48.0
Pounds of lean meat	88.6



Figures are averages taken from actual cutting tests. Carcass data vary, depending on cutting method and type of pig.

CARCASS BREAKDOWN

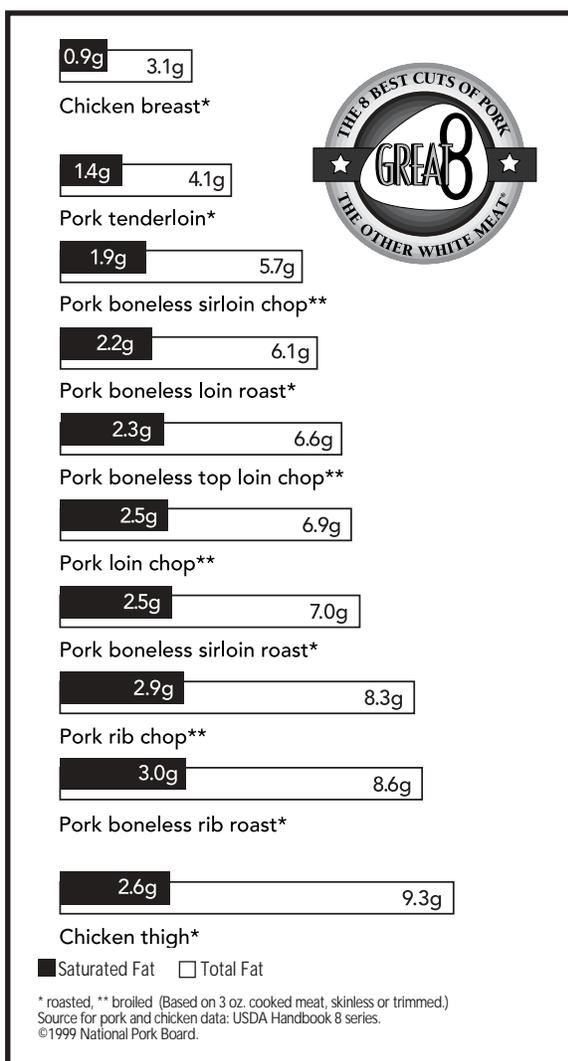
	Retail Pork*	Other Products	Carcass Total
		(pounds)	
Ham (45.0 lbs)			
Cured ham	25.5		
Fresh ham	2.3		
Trimmings	5.8		
Skin, fat, bone		11.4	
Total	33.6	11.4	45.0
Loin (33.8 lbs)			
Backribs	3.2		
Boneless loin	10.7		
Country style ribs	7.6		
Sirloin roast	5.7		
Tenderloin	1.6		
Trimmings	1.6		
Fat & bone		3.4	
Total	30.4	3.4	33.8
Side (34.9 lbs)			
Cured bacon	19.0		
Spareribs	5.8		
Trimmings	9.1		
Fat		1.0	
Total	33.9	1.0	34.9
Boston Butt (14.7 lbs)			
Blade steaks	4.4		
Blade roast	7.8		
Trimmings	1.7		
Fat		0.8	
Total	13.9	0.8	14.7
Picnic (16.6 lbs)			
Boneless Picnic Meat	12.6		
Skin, fat, bone		4.0	
Total	12.6	4.0	16.6
Miscellaneous (39.2 lbs)			
Jowls, feet, tail, neckbones, etc	15.4		
Fat, skin, bone		22.0	
Shrink and loss		1.8	
Total	15.4	23.8	39.2
Total	139.8	44.4	184.2

*Retail cuts on semi-boneless basis. Fully boneless would show lower retail weights.
Source: NPPC, Purdue University and Texas A & M University, 1994



FRESH PORK'S SLIM STORY

The pork industry has responded to the consumer's desire for lean pork products. Through efforts in feeding and management practices by pork producers, fresh pork's slim profile now shows that it's on average **31% lower in fat** and **29% lower in saturated fat** than it was just 20 years ago.



SODIUM

Like other fresh meat, fresh pork is naturally low in sodium. A 3-ounce serving has only about 60 mg of sodium. A processed food is considered to be low-sodium if the sodium content is 140 mg or less per serving.

COOKING TODAY'S PORK

Chops (3/4-inch thick)	Sauté or grill for 6 to 8 minutes.
Thick Chop (1 1/2-inch thick)	Sauté or grill for 15 to 20 minutes.
Roast	Roast in 350° F oven or grill over indirect heat for 20 minutes per pound (until 160° F on meat thermometer). Allow roast to rest 10 minutes before carving.
Tenderloin	Roast at 425° F for 20 to 30 minutes. Grill for 15 to 25 minutes.

Do not overcook lean pork. Cook until 160° F internal temperature for juicy, tender pork. Pork cooked to 160° F will be slightly pink inside.

CALORIES AND CHOLESTEROL

Pork is a healthful meal option, with 14% fewer calories and 10% less cholesterol than 20 years ago. A 3-ounce pork chop has about 170 calories and 65 grams of cholesterol.

- ### KEEPING YOUR PORK MEALS LEAN
- Trim any visible fat before cooking.
 - Practice portion control: 3 ounces is about the size of a deck of cards.
 - Use low-fat preparation techniques: broil, grill, roast on a rack, or stir-fry in minimal fat.
 - Marinate lean pork cuts for extra flavor.
 - Use non-fat, low-sodium herbs and spices to season instead of high-fat sauces.



The Other White Meat.®



INDUSTRY STRUCTURE & LOCATION

PRODUCER AND PRODUCTION PROFILE (2000)			
SIZE	PIGS MARKETED	PERCENT OF PRODUCERS	PERCENT OF PIGS PRODUCED
(Head Marketed Per Year)	(Million Head)		
1,000 & less	1.7	68.2	1.8
1,001-2,000	6.5	13.0	6.8
2,001-3000	4.9	5.3	5.1
3,001-5000	6.4	4.3	6.7
5,001-10,000	9.3	3.4	9.7
10,001-50,000	17.7	3.2	18.4
50,001 Plus	49.3	0.2	51.3
TOTAL	96.0	100	100

Source: 2000 Pork Industry Structure Study (by John Lawrence, Iowa State University and Glenn Grimes, University of Missouri. Sponsored also by the National Pork Board, PIC, Inc., DeKalb Choice Genetics, Farmland/Land'O Lakes, PORK Magazine, Research Institute of Livestock Pricing) Note: This is the most recent data available.

NUMBER OF FARMS SELLING PIGS		
YEAR	NUMBER OF HEAD MARKETED	
	< 1,000	1000+
1969	597,600	6,600
1978	454,700	15,800
1982	293,400	21,700
1987	215,000	24,000
1992	160,400	27,750
1997	80,346	21,760
1969-97 % Change	-86%	+230%

Source: U.S. Census of Agriculture
Note: This is the most recent data available

NUMBER OF U.S. PIG OPERATIONS			
1969	873,840	1986	348,000
1970	871,200	1987	331,620
1971	869,000	1988	326,600
1972	778,200	1989	306,210
1973	735,700	1990	275,440
1974	733,100	1991	253,890
1975	661,700	1992	248,700
1976	658,300	1993	225,210
1977	647,000	1994	207,980
1978	635,300	1995	181,750
1979	653,600	1996	156,250
1980	670,350	1997	122,160
1981	580,060	1998	113,830
1982	482,190	1999	98,610
1983	462,110	2000	86,360
1984	429,580	2001	81,130
1985	391,000		

Source: USDA, Hogs and Pigs, December of each year

CHANGE IN MARKET SHARE BY PRODUCER SIZE					
	1988	1991	1994	1997	2000
1,000 & less	32	23	17	5	2
1001-2000	19	20	17	12	7
2001-3000	11	13	12	10	5
3001-5000	10	12	12	10	7
5001-10000	9	10	12	10	10
10001-50000	12	13	13	16	18
50001 plus	7	9	17	37	51

Source: 2000 Pork Industry Structure Study (by John Lawrence, Iowa State University and Glenn Grimes, University of Missouri. Sponsored also by the National Pork Board, PIC, Inc., DeKalb Choice Genetics, Farmland/Land'O Lakes, PORK Magazine, Research Institute of Livestock Pricing) Note: This is the most recent data available.



INDUSTRY STRUCTURE & LOCATION (Cont'd)

AMERICA'S TOP 100 PIG COUNTIES							
RANK		COUNTY & STATE	1997 INVENTORY	RANK		COUNTY & STATE	1997 INVENTORY
1997	1992			1997	1992		
1	1	Duplin, NC	2,034,349	51	78	Palo Alto, IA	199,116
2	2	Sampson, NC	1,775,702	52	53	Franklin, IA	198,056
3	797	Texas, OK	907,046	53	40	Buchanan, IA	191,642
4	3	Sioux, IA	762,294	54	65	Freeborn, MN	188,125
5	28	Bladen, NC	758,701	55	75	Fairbault, MN	187,067
6	736	Sullivan, MO	(D)	56	87	Rice, MN	185,748
7	36	Wayne, NC	529,439	57	39	Platte, NE	182,148
8	16	Martin, MN	489,024	58	49	Clinton, IN	181,579
9	5	Plymouth, IA	460,965	59	330	Ringgold, IA	181,241
10	32	Hamilton, IA	448,312	60	21	Jasper, IA	180,743
11	8	Washington, IA	436,353	61	45	Crawford, IA	179,383
12	4	Delaware, IA	401,729	62	52	Jackson, MN	179,189
13	114	Mercer, MO	(D)	63	27	Butler, IA	178,682
14	34	Hardin, IA	395,359	64	1888	Morton, KS	(D)
15	11	Greene, NC	391,672	65	86	Lyon, MN	176,015
16	9	Carroll, IA	372,598	66	55	Hancock, IA	174,621
17	182	Wright, IA	358,616	67	1490	Woodward, OK	(D)
18	25	Sac, IA	350,473	68	19	Cass, MI	172,740
19	6	Lancaster, PA	349,774	69	56	Black Hawk, IA	171,797
20	77	Robeson, NC	327,559	70	82	Calhoun, IA	171,427
21	43	Blue Earth, MN	325,829	71	315	Edgecombe, NC	168,909
22	22	Lyon, IA	325,619	72	81	Audubon, IA	168,217
23	23	Kossuth, IA	323,029	73	231	Pipestone, MN	166,604
24	100	Lenoir, NC	315,588	74	61	Mower, MN	164,745
25	133	Pitt, NC	303,393	75	85	Mercer, OH	160,494
26	29	Buena Vista, IA	298,220	76	41	Cedar, NE	157,738
27	14	O'Brien, IA	283,000	77	70	Grundy, IA	156,834
28	256	Pender, NC	269,766	78	200	Greene, IA	154,717
29	46	Mitchell, IA	265,686	79	63	Daviess, IN	154,715
30	1904	Beaver, UT	263,047	80	47	DeKalb, IL	154,403
31	74	Renville, MN	258,970	81	160	Greene, IL	153,927
32	7	Dubuque, IA	258,568	82	88	Livingston, IL	153,638
33	366	Columbus, NC	257,920	83	26	Cedar, IA	151,936
34	24	Carroll, IN	255,176	84	111	Webster, IA	149,935
35	401	Jones, NC	252,715	85	68	Rock, MN	149,178
36	17	Mahaska, IA	247,819	86	197	Waseca, MN	149,158
37	20	Fayette, IA	242,628	87	80	Decatur, IN	147,844
38	13	Clayton, IA	242,580	88	15	Jones, IA	147,204
39	62	Redwood, MN	230,496	89	201	Vernon, MO	145,219
40	73	Brown, MN	227,511	90	90	Onslow, NC	144,591
41	10	Henry, IL	224,082	91	30	Keokuk, IA	144,412
42	35	Nobles, MN	224,050	92	184	Watonwan, MN	142,713
43	37	Cherokee, IA	222,808	93	106	Fillmore, MN	140,188
44	60	Nicollet, MN	218,318	94	118	Darke, OH	140,105
45	89	Osceola, IA	216,701	95	42	Adams, IL	139,781
46	18	Cuming, NE	210,346	96	31	Weld, CO	139,775
47	148	Johnston, NC	206,291	97	347	Phillips, CO	(D)
48	776	Yuma, CO	205,823	98	416	Gentry, MO	139,106
49	1361	Dallam, TX	(D)	99	142	Cottonwood, MN	138,938
50	12	Holt, NE	199,974	100	33	Johnson, IA	137,946

(D) Not published by USDA since doing so would reveal individual operations.

“Source: USDA-NASS, 1997 Census of Agriculture”

**NUMBER OF OPERATIONS,
INVENTORY AND MARKETINGS BY STATE AND UNITED STATES
2000 & 2001***

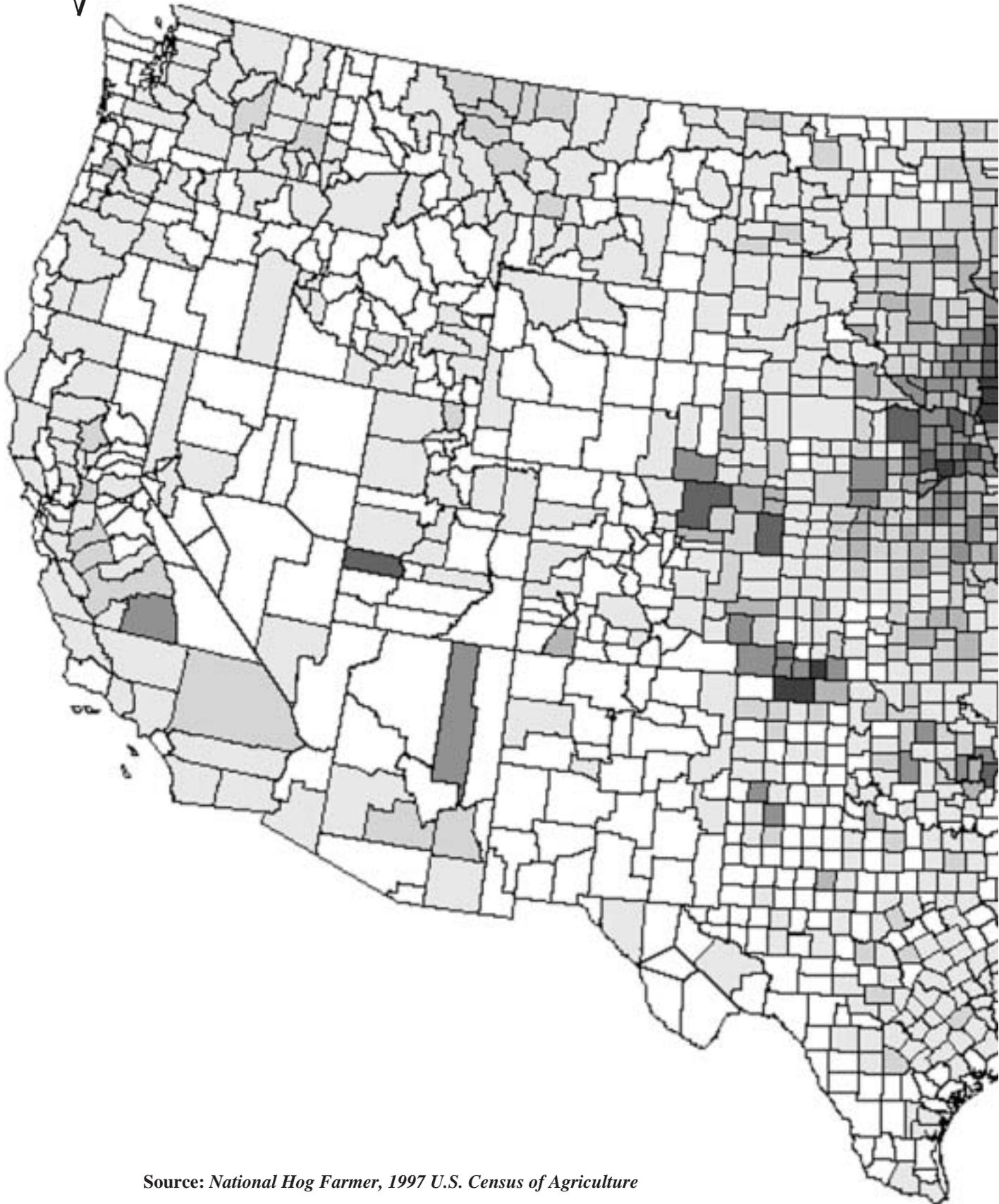
	NUMBER OF OPERATIONS		INVENTORY, DEC. 1				MARKETINGS			
			NUMBER		VALUE		NUMBER		CASH RECEIPTS	
State	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001
			(1,000 HD)		(\$1,000)		(1,000 HD)		(\$1,000)	
IA	12,300	10,500	15,100	15,100	1,268,400	1,268,400	26,655	26,253	3,072,456	3,131,682
NC	3,600	3,400	9,300	9,600	576,600	604,800	17,792	17,652	1,671,606	1,709,794
MN	7,300	6,500	5,800	5,700	527,800	513,000	11,581	13,009	1,207,465	1,416,925
IL	5,100	5,300	4,150	4,250	311,250	335,750	8,266	8,339	825,933	920,218
MO	3,600	3,100	2,900	3,000	194,300	204,000	7,726	7,350	588,080	586,436
OK	2,700	2,700	2,310	2,470	161,700	160,550	6,443	6,443	472,834	520,257
IN	4,400	4,000	3,550	3,150	268,000	248,850	6,054	6,054	591,906	693,444
NE	4,000	3,400	3,050	2,900	240,950	243,600	5,964	5,964	682,204	711,323
SD	1,900	1,600	1,320	1,280	106,920	107,520	2,882	3,117	284,663	320,303
OH	5,200	4,900	1,490	1,420	117,710	113,600	3,113	3,111	331,155	350,125
KS	1,600	1,500	1,520	1,560	103,400	113,880	3,005	2,863	340,572	322,124
CO	500	400	840	780	72,240	76,440	2,999	2,686	288,665	263,659
AR	1,100	1,200	685	570	47,265	35,910	2,010	2,111	129,794	142,253
MI	2,500	3,000	950	960	79,800	81,600	1,937	1,919	200,485	211,337
PA	3,000	2,900	1,030	1,060	72,100	73,140	1,715	1,875	155,188	179,860
WI	2,700	2,700	610	540	42,700	37,800	1,116	1,230	110,089	126,921
TX	4,300	4,000	920	900	62,560	63,900	1,314	1,210	113,497	102,455
GA	1,200	900	380	310	26,980	21,390	1,026	939	103,676	88,182
UT	500	500	550	610	45,650	51,240	891	926	98,042	106,338
KY	1,300	1,300	430	405	26,660	25,515	884	885	89,614	94,321
MS	1,500	1,600	315	285	25,830	23,655	539	615	53,500	63,850
ND	700	700	185	154	14,800	12,474	537	520	47,891	47,917
TN	1,500	1,500	230	225	15,180	15,075	660	511	61,255	45,929
SC	700	700	290	320	18,270	20,800	465	483	37,827	41,033
VA	1,200	1,100	425	410	26,350	25,010	482	472	48,431	49,760
AL	400	300	165	195	12,540	15,015	486	390	39,095	31,221
MT	650	550	155	170	12,400	13,770	311	344	30,527	35,689
WY	200	150	108	117	9,828	10,764	280	300	28,034	32,428
CA	900	850	150	110	15,000	11,000	374	288	35,563	27,863
NY	1,000	1,200	80	75	6,080	5,775	84	136	6,266	10,777
AZ	230	200	9	133	747	11,172	335	124	36,874	14,453
FL	1,400	1,500	40	35	3,200	2,835	115	106	7,167	7,365
MD	550	520	58	52	4,408	4,004	66	74	5,780	6,833
DE	130	130	29	26	2,146	1,950	70	63	7,893	7,203
OR	1,000	1,000	32	29	2,656	2,436	49	55	5,633	6,393
WA	750	700	27	24	2,457	2,208	59	50	5,665	4,970
ID	400	400	24	24	1,872	1,896	54	48	6,216	6,505
LA	600	600	29	26	2,407	2,184	40	46	2,878	3,526
HI	230	230	26	27	3,640	3,780	31	31	4,425	4,546
MA	450	400	20	18	1,660	1,512	26	30	2,464	2,969
ME	400	400	6	6	540	546	13	13	1,238	1,308
NJ	400	400	14	13	1,274	1,196	17	12	580	410
NH	250	250	4	3	364	322	6	12	600	727
WV	1,000	1,000	10	11	800	891	15	10	1,272	889
NV	100	100	7	7	750	700	17	9	1,524	849
CT	200	200	4	3	400	350	8	8	681	813
VT	250	250	3	2	300	250	7	6	520	535
NM	400	300	3	3	249	252	10	5	687	423
RI	50	50	3	2	240	203	5	5	423	503
AK	50	50	0	1	120	160	1	1	213	146
US	86,360	81,130	59,137	59,073	4,542,493	4,573,070	118,540	119,557	11,817,046	12,455,790

Source: USDA Hogs and Pigs Report, December; USDA Meat Animals Production Disposition and Income, 2002 Summary

*Ranked by 2001 Marketings

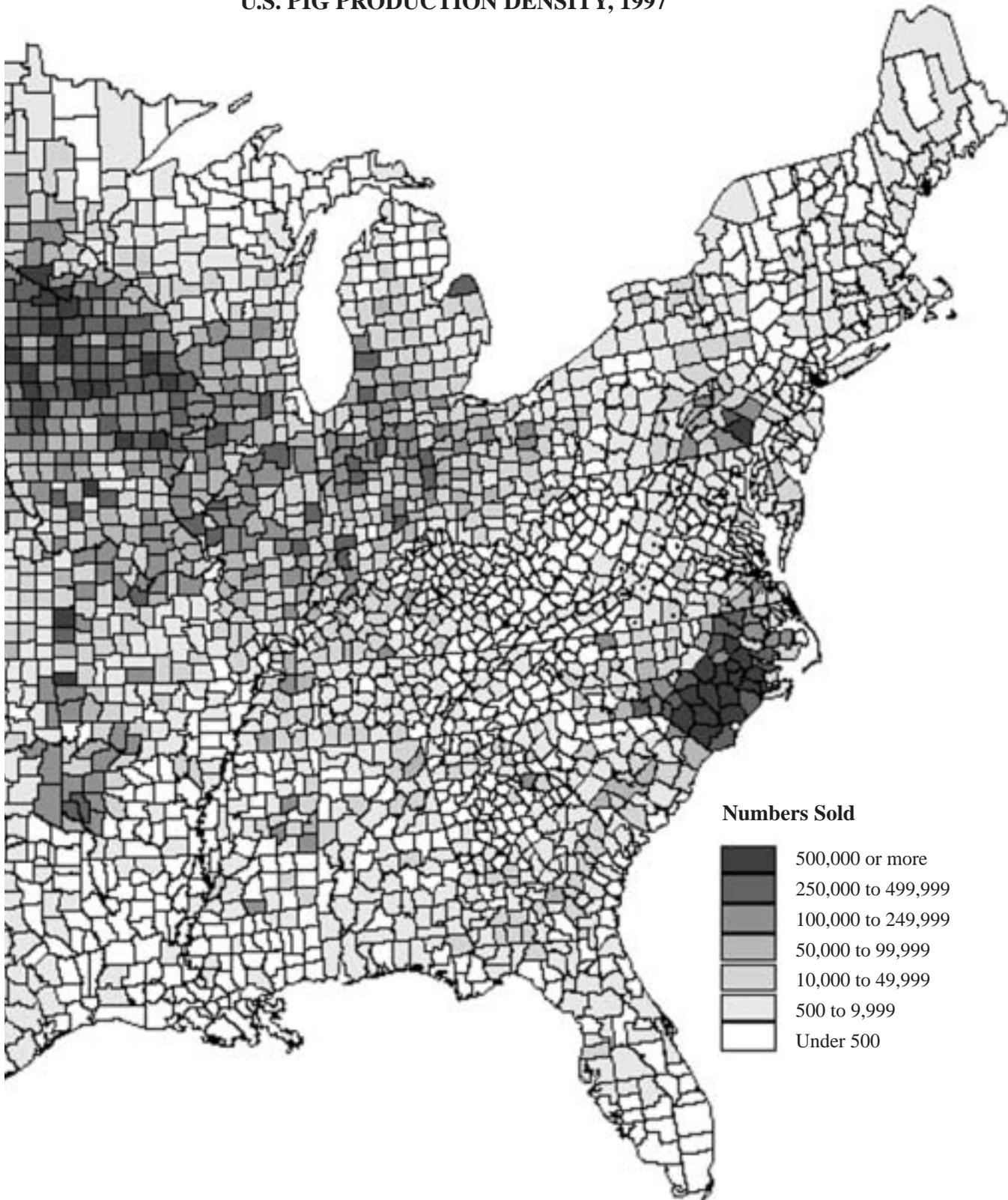


INDUSTRY STRUCTURE & LOCATION *(Cont'd)*

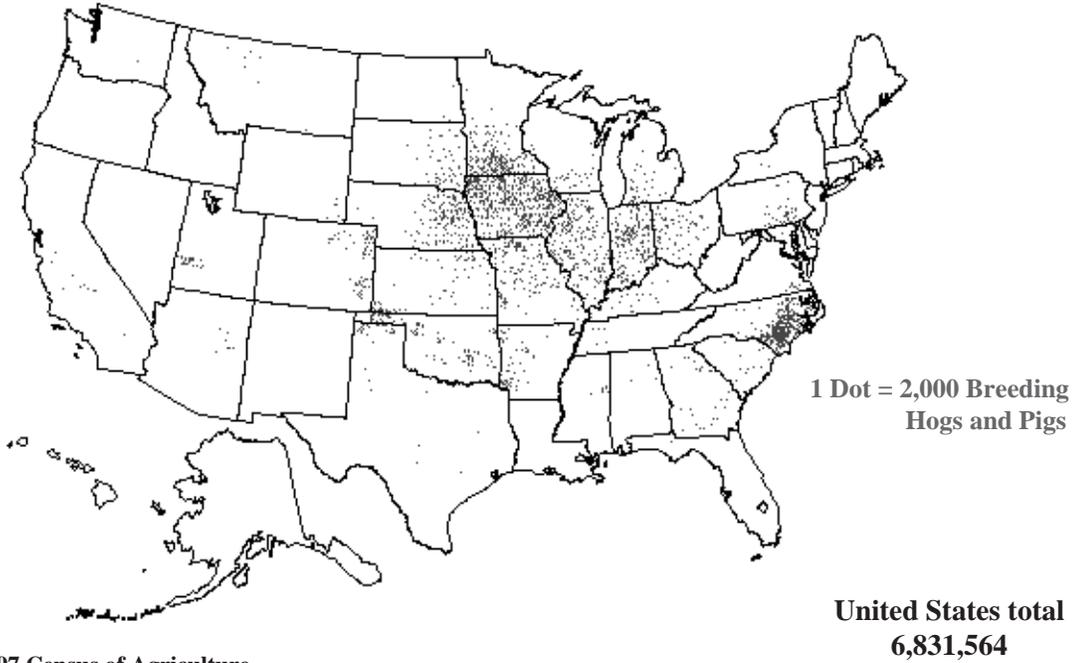


Source: *National Hog Farmer, 1997 U.S. Census of Agriculture*

U.S. PIG PRODUCTION DENSITY, 1997

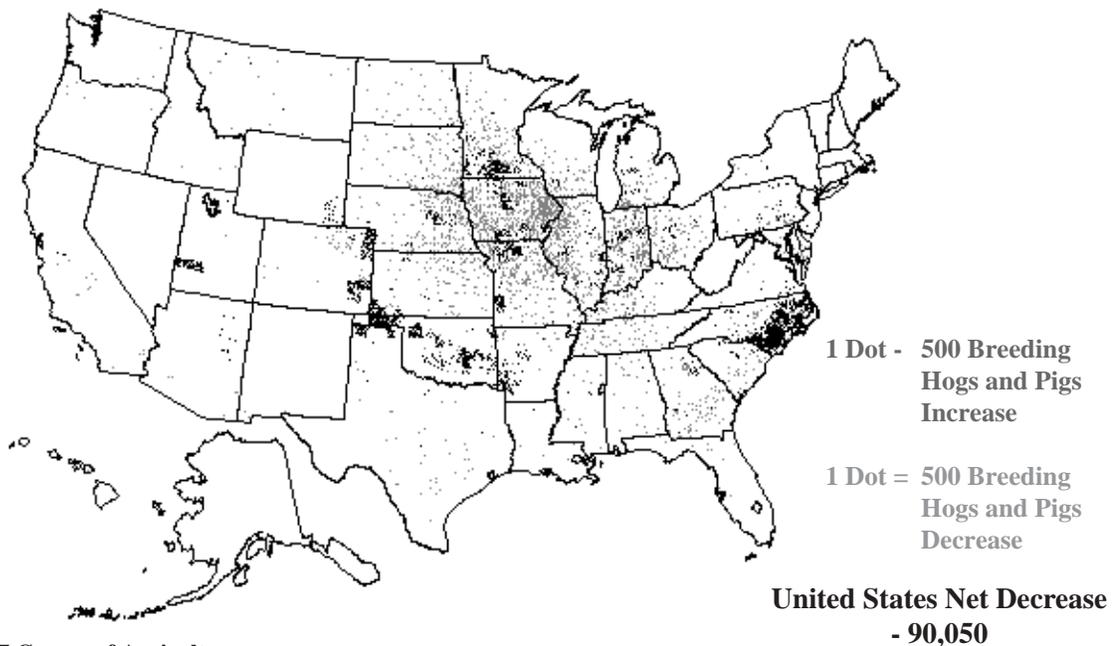


HOGS AND PIGS USED OR TO BE USED FOR BREEDING - INVENTORY: 1997



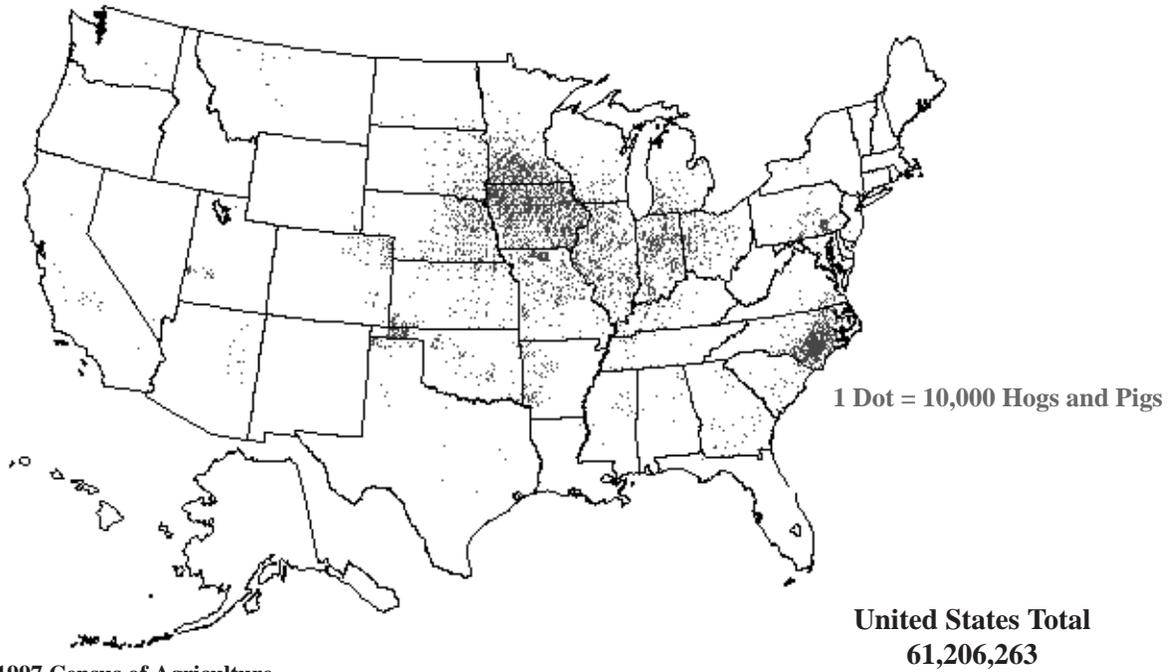
Source: 1997 Census of Agriculture

HOGS AND PIGS USED OR TO BE USED FOR BREEDING - CHANGE IN INVENTORY: 1992 TO 1997



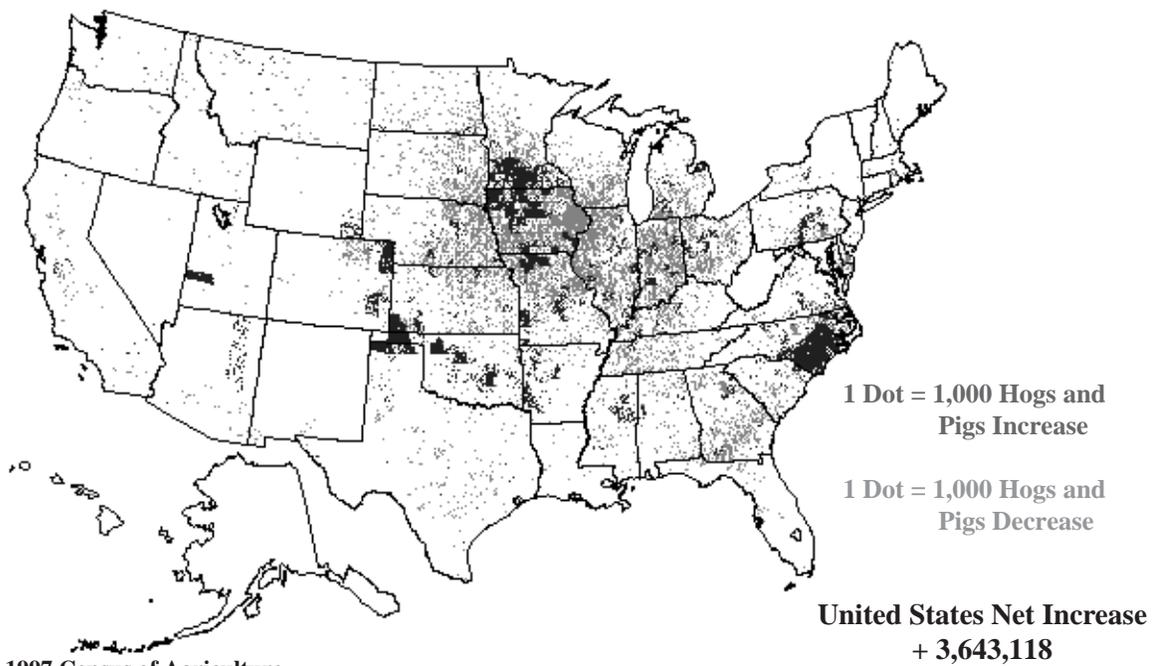
Source: 1997 Census of Agriculture

HOGS AND PIGS - INVENTORY: 1997



Source: 1997 Census of Agriculture

HOGS AND PIGS - CHANGE IN INVENTORY: 1992 TO 1997



Source: 1997 Census of Agriculture



INDUSTRY STRUCTURE & LOCATION (Cont'd)

NUMBER OF PIG OPERATIONS BY INVENTORY SIZE GROUPS SELECTED STATES AND UNITED STATES* 2000 & 2001

STATE	1 - 99 HEAD		100 - 499 HEAD		500 - 999 HEAD		1,000 - 1,999 HEAD		2,000 - 4,999 HEAD		5,000 + HEAD	
	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001
AR	680	790	100	100	90	85	90	90	100	100	40	35
CO	410	317	35	35	15	15	15	12	5	4	20	17
IL	1,800	2,000	1,400	1,400	700	670	660	670	430	450	110	110
IN	1,700	1,500	1,200	1,100	600	520	450	435	365	350	85	95
IA	1,900	1,500	4,000	3,200	2,500	2,300	2,200	1,800	1,300	1,200	400	500
KS	880	820	340	320	180	160	85	80	75	80	40	40
MI	1,700	2,200	390	430	110	90	140	110	120	130	40	40
MN	2,000	1,700	2,500	2,100	1,200	1,100	750	700	610	650	240	250
MO	1,800	1,700	1,200	700	250	330	130	110	140	180	80	80
NE	1,400	1,100	1,400	1,000	580	630	300	380	230	200	90	90
NC	1,800	1,600	150	140	100	100	200	200	710	720	640	640
OH	3,000	2,900	1,400	1,200	450	360	200	300	120	115	30	25
OK	2,400	2,400	120	120	40	40	50	50	50	50	40	40
PA	2,100	2,000	390	400	200	200	125	110	140	155	45	35
SD	800	600	600	500	220	220	130	130	90	90	60	60
TX	4,190	3,895	70	60	15	16	5	7	5	5	15	17
WI	1,900	1,900	510	510	120	120	110	110	50	50	10	10
Other States**	17,750	17,090	1,950	2,100	260	270	210	200	285	250	105	120
US	48,210	46,012	17,755	15,415	7,630	7,226	5,850	5,494	4,825	4,779	2,090	2,204

* An operation is any place having one or more head of hogs and pigs on hand at any time during the year.

** Individual State estimates not available for the 33 other states.

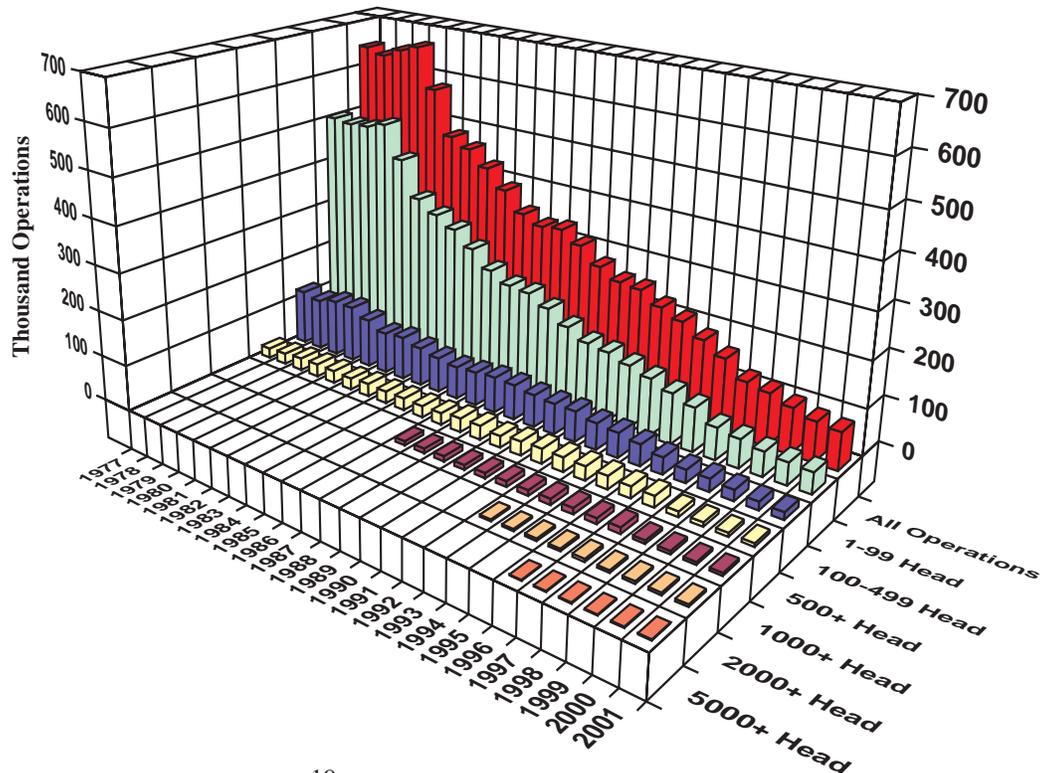
NUMBER OF PIG OPERATIONS BY INVENTORY SIZE

Source: USDA Hogs and Pigs Report, December of each year

Notes:

1) Categories for 500 head or more are cumulative (i.e. the 500+ column includes the 1000+ column which includes the 2000+ etc.)

2) An operation is any place having one or more hogs and pigs on hand any time during the year.





INDUSTRY PRODUCTIVITY

PRODUCTIVITY MEASURES OF U.S. PIG HERD

YEAR	PIGS PER LITTERS	PER BREEDING ANIMAL		
		LITTER	SLAUGHTER	PORK PRODUCTION
			(head)	(pounds)
1970	7.27	1.52	9.34	1442
1971	7.21	1.41	9.79	1514
1972	7.26	1.47	9.99	1588
1973	7.16	1.42	8.88	1454
1974	7.10	1.37	9.50	1579
1975	7.17	1.34	9.30	1531
1976	7.26	1.53	9.74	1613
1977	7.14	1.50	9.65	1629
1978	7.11	1.42	8.82	1507
1979	7.08	1.51	9.30	1593
1980	7.22	1.46	9.96	1704
1981	7.38	1.39	10.04	1724
1982	7.37	1.47	10.48	1800
1983	7.47	1.67	11.72	2023
1984	7.50	1.56	11.52	1992
1985	7.66	1.62	12.17	2120
1986	7.72	1.57	11.74	2065
1987	7.77	1.70	12.12	2139
1988	7.69	1.70	12.40	2207
1989	7.79	1.67	12.57	2234
1990	7.87	1.67	12.41	2230
1991	7.90	1.76	12.83	2322
1992	8.08	1.69	13.02	2369
1993	8.13	1.68	12.89	2395
1994	8.19	1.73	13.23	2353
1995	8.32	1.68	13.51	2478
1996	8.50	1.64	13.24	2448
1997	8.66	1.75	13.78	2531
1998	8.71	1.74	13.43	2617
1999	8.80	1.79	14.92	2768
2000	8.81	1.83	15.01	2895
2001	8.80	1.82	14.77	2886

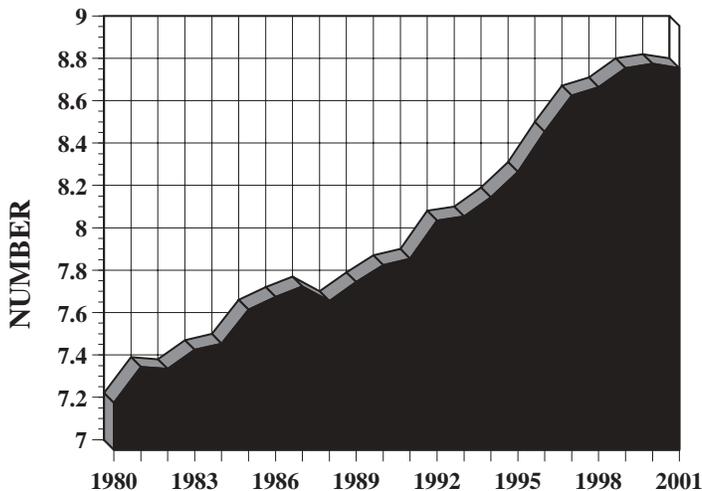
Source: University of Missouri

LIVE TO RETAIL WEIGHTS

Year	Live Weight	Dressing Percent	Dressed Weight	Lard Yield	Retail Meat	Pct. Retail Meat
	(lbs/hog)		(lbs/hog)	(lbs/hog)	(lbs/hog)	
1960	236	69.5	164	32.2	124	52.5
1965	238	70.1	167	27.9	127	53.4
1970	240	70.3	169	22.8	129	53.8
1975	240	70.6	169	14.8	130	54.2
1976	238	71.4	170	14.4	131	55.0
1977	237	71.7	170	13.5	131	55.3
1978	240	71.3	171	13.0	132	55.0
1979	242	71.1	172	13.0	133	55.0
1980	242	71.7	172	12.8	133	55.0
1981	243	71.2	173	12.9	134	55.1
1982	243	71.2	173	11.2	134	55.1
1983	243	71.2	173	11.2	135	55.6
1984	243	71.2	173	11.0	135	55.6
1985	245	71.4	175	11.0	136	55.5
1986	246	72.0	177	11.0	138	56.1
1987	247	71.5	177	10.6	137	55.5
1988	249	71.4	178	10.6	138	55.4
1989	248	71.6	178	--	138	55.6
1990	249	72.7	181	--	140.6	56.5
1991	252	72.2	182	--	141.3	56.1
1992	253	71.5	181	--	140.6	55.8
1993	254	72.0	183	--	142.1	55.9
1994	256	71.8	184	--	143.0	56.1
1995	257	72.0	185	--	143.6	56.1
1996	255	72.5	185	--	143.6	55.9
1997	256	73.4	188	--	145.4	55.9
1998	257	73.2	188	--	146.7	56.0
1999	259	73.4	190	--	148.2	56.8
2000	262	73.9	193.2	--	150.8	57.6
2001	264	74.0	195.4	--	151.6	57.4

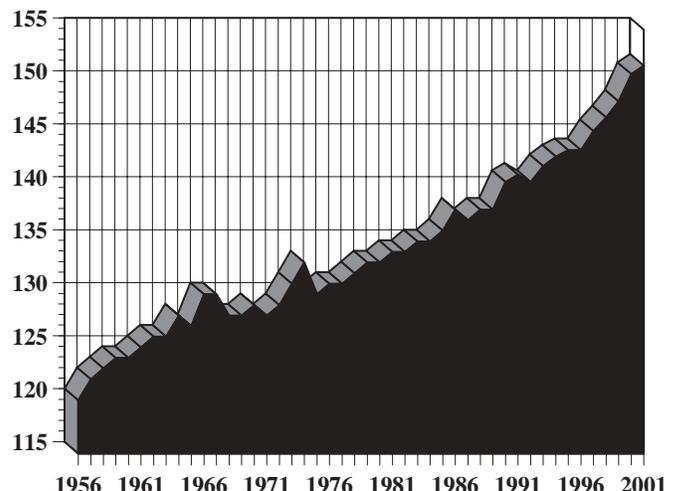
Source: USDA

PIGS WEANED PER LITTER



Source: USDA

RETAIL MEAT PER PIG



Source: USDA



SLAUGHTER & PRODUCTION

LIVESTOCK SLAUGHTER AND MEAT PRODUCTION

YEAR	SLAUGHTER					MEAT PRODUCTION					
	CHICKEN	CATTLE	CALVES	SHEEP & LAMBS	HOGS	CHICKEN	BEEF	VEAL	LAMB & MUTTON	PORK	TOTAL RED MEAT
	(Thousand Head)					(Million Pounds)					
1960	1,644,026	26,029	8,615	16,240	84,150	5,143	14,753	1,109	768	11,607	28,237
1961	1,845,059	26,471	8,080	17,537	81,970	5,749	15,327	1,044	832	11,408	28,611
1962	1,884,675	26,911	7,857	17,168	83,424	5,789	15,324	1,015	808	11,827	28,974
1963	1,963,922	28,070	7,204	16,147	87,117	6,022	16,456	929	770	12,427	30,582
1964	2,050,830	31,678	7,632	14,895	86,284	6,194	18,456	1,013	715	12,513	32,697
1965	2,192,378	33,171	7,788	13,300	76,458	6,617	18,727	1,020	651	11,141	31,539
1966	2,392,582	34,173	6,863	13,004	75,382	7,197	19,726	910	650	11,339	32,625
1967	2,489,593	34,297	6,110	13,035	83,420	7,378	20,219	792	646	12,581	34,238
1968	2,487,153	35,418	5,616	12,120	86,417	7,422	20,880	734	602	13,064	35,280
1969	2,670,054	35,573	5,011	10,923	84,968	7,907	21,148	637	550	12,955	35,326
1970	2,946,292	35,356	4,203	10,801	87,052	8,464	21,652	588	551	13,426	36,217
1971	2,962,165	35,905	3,825	10,965	95,648	8,515	21,868	546	555	14,783	37,752
1972	3,121,973	36,134	3,201	10,525	85,865	8,887	22,381	458	543	13,617	36,999
1973	3,097,233	34,102	2,404	9,799	77,890	8,686	21,377	357	514	12,751	34,899
1974	3,093,753	37,353	3,175	9,064	83,083	8,757	23,138	486	465	13,805	37,894
1975	3,097,430	41,464	5,406	8,047	69,880	8,621	23,976	873	410	11,503	36,762
1976	3,432,883	43,199	5,527	6,911	74,959	9,655	25,969	853	371	12,415	39,608
1977	3,526,947	42,381	5,692	6,555	78,442	9,903	25,279	834	351	13,247	39,711
1978	3,707,278	39,970	4,302	5,543	78,417	10,475	24,242	632	309	13,393	38,576
1979	4,044,336	34,005	2,927	5,189	90,179	11,535	21,446	434	293	15,450	37,623
1980	4,132,177	34,116	2,679	5,742	97,174	11,859	21,644	400	318	16,615	38,977
1981	4,277,894	35,265	2,886	6,197	92,475	12,599	22,389	436	338	15,875	39,038
1982	4,269,959	36,158	3,106	6,643	82,844	12,707	22,536	448	365	14,229	37,578
1983	4,310,695	36,974	3,162	6,792	81,422	12,971	23,241	454	376	15,202	39,272
1984	4,459,000	37,892	3,367	6,900	85,641	13,564	23,596	495	380	14,812	39,283
1985	4,617,103	36,593	3,455	6,300	84,938	14,124	23,728	514	357	14,805	39,404
1986	4,833,665	37,568	3,478	5,762	79,956	14,838	24,371	524	337	14,063	39,296
1987	5,169,395	35,890	2,902	5,312	88,136	16,097	23,566	429	316	14,374	38,682
1988	5,351,040	35,324	2,565	5,392	81,422	16,693	23,590	335	335	15,684	40,004
1989	5,681,082	34,106	2,223	5,559	89,006	17,897	23,088	355	348	15,811	39,602
1990	6,022,449	33,439	1,838	5,750	85,431	19,108	22,743	327	362	15,353	38,785
1991	6,313,654	32,885	1,484	5,813	88,445	20,268	22,917	306	362	16,000	39,584
1992	6,602,337	33,069	1,420	5,585	95,157	21,611	23,086	311	349	17,233	40,979
1993	6,856,901	33,504	1,242	5,259	93,296	22,731	23,000	286	337	17,100	40,723
1994	7,239,595	34,376	1,315	5,014	95,905	24,397	24,396	293	310	17,697	42,696
1995	7,530,847	35,817	1,477	4,631	96,517	25,560	25,222	319	287	17,849	43,677
1996	7,451,815	36,583	1,768	4,184	92,394	26,864	25,421	368	265	17,084	43,138
1997	7,681,702	36,318	1,575	3,907	91,960	27,816	25,384	323	257	17,245	43,209
1998	7,702,273	35,464	1,458	3,804	101,029	27,863	25,653	251	249	18,981	45,134
1999	8,111,656	36,150	1,282	3,701	101,544	30,293	26,385	224	243	19,278	46,130
2000	8,261,114	36,246	1,132	3,460	97,976	31,025	26,777	215	230	18,901	46,132
2001	8,406,313	34,771	1,007	3,222	97,962	31,782	26,107	195	223	19,138	45,763

Source: USDA



FINANCIAL DATA

PIG/CORN PRICE RATIO

YEAR	RATIO	YEAR	RATIO
1930	11.4	1974	11.3
1935	11.6	1975	16.9
1940	9.2	1976	16.5
1945	12.8	1977	20.2
1950	13.7	1978	22.9
1951	12.4	1979	18.1
1952	11.0	1980	14.6
1953	15.0	1981	15.0
1954	15.0	1982	22.1
1955	11.8	1983	15.7
1956	11.2	1984	15.4
1957	15.5	1985	17.7
1958	18.6	1986	26.1
1959	13.2	1987	33.6
1960	15.1	1988	19.9
1961	16.5	1989	17.3
1962	16.0	1990	23.6
1963	13.4	1991	20.7
1964	13.1	1992	20.3
1965	17.7	1993	20.5
1966	18.5	1994	16.4
1967	16.3	1995	16.4
1968	17.9	1996	14.8
1969	19.8	1997	20.4
1970	19.1	1998	13.2
1971	14.0	1999	15.9
1972	20.6	2000	23.1
1973	19.3	2001	22.5

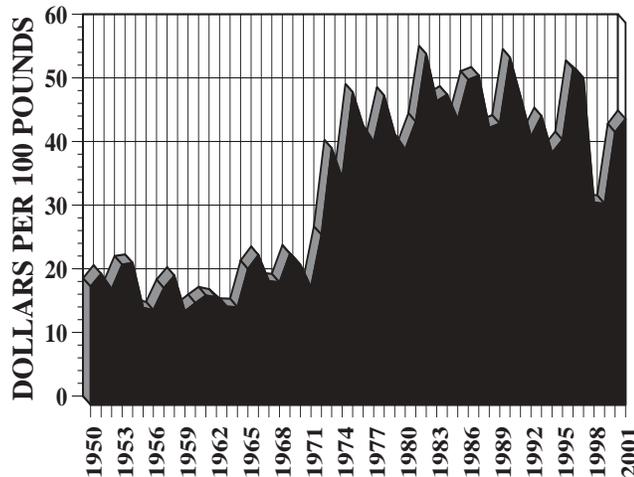
The pig/corn ratio is a general indicator of profitability and, therefore, future changes in pork production. It is computed by dividing the price received for live pigs per hundredweight by the price for corn per bushel at that time. For example if:

$$\left. \begin{array}{l} \text{Price of Pigs} = \$45/\text{cwt} \\ \text{Price of Corn} = \$2.25/\text{bu} \end{array} \right\} \text{pig/corn ratio} = 20$$

Corn is the primary ingredient of the pig's diet in the majority of feeding areas in the U.S. and feed constitutes 60-65 percent of the total costs of pig production. Therefore, when corn is cheap relative to pig prices, pig production is profitable and production expands. So, a high hog/corn ratio suggests expanded production 12-24 months hence. Low pig/corn ratios suggest contraction 12-24 months hence.

Source: USDA

PIG PRICES RECEIVED BY FARMERS U.S. AVERAGE FOR ALL GRADES



PIG PRICES RECEIVED BY FARMERS

TERMINAL MARKET AVERAGES FOR ALL GRADES OF BARROWS AND GILTS

YEAR	PRICE	YEAR	PRICE
	(\$/cwt.)		(\$/cwt.)
1940	5.68	1975	49.08
1945	14.60	1976	43.85
1950	18.52	1977	41.27
1951	20.56	1978	48.55
1952	18.13	1979	42.52
1953	21.99	1980	40.08
1954	22.25	1981	44.45
1955	15.19	1982	55.07
1956	14.82	1983	47.71
1957	18.29	1984	48.69
1958	20.25	1985	44.84
1959	14.64	1986	51.05
1960	15.96	1987	51.71
1961	17.16	1988	43.47
1962	16.82	1989	44.14
1963	15.38	1990	54.55
1964	15.31	1991	48.46
1965	21.30	1992	42.11
1966	23.49	1993	45.32
1967	19.37	1994	39.53
1968	19.19	1995	41.57
1969	23.71	1996	52.77
1970	21.95	1997	51.30
1971	18.45	1998	31.73
1972	26.67	1999	31.54
1973	40.27	2000	42.80
1974	35.60	2001	44.90

Source: USDA



FINANCIAL DATA (Cont'd)

CASH RECEIPTS FROM ANIMAL COMMODITIES AND TOTAL FARM INCOME

YEAR	POULTRY	BEEF	DAIRY	SWINE	SHEEP	TOTAL ANIMAL RECEIPTS	TOTAL FARM INCOME
(Billion Dollars)							
1974	6.4	17.8	9.7	6.9	0.45	41.5	92.4
1975	6.8	17.5	10.2	7.9	0.45	43.3	88.9
1976	7.2	19.3	11.8	7.5	0.49	46.4	95.4
1977	7.2	20.2	11.8	7.3	0.48	47.5	96.2
1978	8.0	28.2	12.7	8.8	0.56	59.0	112.9
1979	8.7	34.4	14.7	9.0	0.61	68.1	133.8
1980	8.9	31.5	16.6	8.9	0.59	67.8	142.0
1981	9.9	29.6	18.1	9.8	0.55	63.3	144.1
1982	9.5	29.9	18.2	10.6	0.54	70.3	147.1
1983	10.0	28.7	18.8	9.8	0.52	69.4	141.1
1984	12.2	30.6	17.9	9.7	0.47	72.9	150.7
1985	11.2	29.0	18.1	9.0	0.50	69.8	151.9
1986	12.7	28.9	17.8	9.7	0.50	71.0	147.0
1987	11.5	33.6	17.7	10.3	0.60	76.0	141.8
1988	12.9	36.8	17.6	9.2	0.50	79.4	161.1
1989	15.4	36.9	19.4	9.5	0.50	84.1	160.9
1990	15.2	39.9	20.2	11.6	0.40	89.9	169.9
1991	15.1	39.6	18.0	11.1	0.40	86.7	168.7
1992	15.5	37.3	19.7	10.0	0.50	85.6	171.3
1993	17.3	39.4	19.2	10.9	0.60	90.2	177.6
1994	18.4	36.4	19.9	9.9	0.50	88.2	181.2
1995	19.1	34.0	19.9	10.3	0.60	87.0	188.1
1996	22.3	31.1	22.8	12.7	0.60	93.0	199.6
1997	22.2	36.0	20.9	13.1	0.60	96.5	207.6
1998	22.8	33.9	23.9	8.7	0.50	93.4	196.6
1999	22.9	36.5	23.2	8.6	0.47	91.7	188.6
2000	21.8	41.1	20.6	11.8	0.47	95.5	193.6
2001	23.7	40.4	24.4	12.5	0.48	101.5	201.4

Source: USDA

PIG PRICES, COSTS AND PROFIT/LOSS MARGINS FOR FINISHING FEEDER PIGS*

	Market Pig Price	Feeder Pig Cost	Total Feed Cost	Break-even	Profit/Loss Margin		Market Pig Price	Feeder Pig Cost	Total Feed Cost	Break-even	Profit/Loss Margin
2000	(\$/cwt.)	(\$/hd)	(\$/hd)	(\$/cwt.)	(\$/hd.)	2001	(\$/cwt.)	(\$/hd)	(\$/hd)	(\$/cwt.)	(\$/hd.)
January	36.03	40.58	37.98	38.35	-5.80	January	37.20	39.04	39.94	38.25	-4.97
February	39.18	40.39	38.92	38.68	1.26	February	40.75	39.08	40.38	38.46	3.82
March	41.03	40.25	40.12	39.18	4.63	March	45.99	39.13	40.22	38.43	17.88
April	47.94	40.17	41.13	39.51	21.08	April	46.50	39.20	39.79	38.29	19.08
May	48.84	40.14	42.15	39.87	22.43	May	50.97	39.33	38.90	37.99	31.85
June	49.72	40.36	42.49	40.16	23.91	June	52.37	39.34	38.23	37.72	36.70
July	48.10	40.63	41.39	39.78	20.80	July	54.55	39.41	38.10	37.69	42.42
August	43.51	41.03	39.58	39.15	10.91	August	49.35	39.35	38.51	37.83	28.50
September	41.10	41.35	38.15	38.69	6.03	September	45.03	39.35	38.89	37.95	16.64
October	41.47	41.57	37.78	38.64	7.07	October	38.93	39.36	38.67	37.88	0.81
November	36.60	41.56	38.55	38.96	-5.91	November	32.78	39.39	38.24	37.71	-15.10
December	39.65	41.25	39.95	39.47	0.44	December	33.83	39.34	38.18	37.67	-13.09

*Represents feeding 50 lb. feeder pigs to a 250 lb. market weight.

Source: Iowa State University, Department of Economics

COST OF FINISHING MARKET PIGS FROM 50 LBS. TO 260 LBS., (JANUARY 2002)	
(per head)	
Corn	\$17.63
Supplement	20.62
Non-feed costs (including labor)	8.41
Fixed Costs	12.05
Total finishing costs	\$58.71
Cost per cwt. produced	\$37.68
<p>Note: Many producers have different costs depending on labor, capital and management.</p> <p>Source: Iowa State University</p>	

AVERAGE COSTS OF PRODUCING 50 LB. FEEDER PIGS (JANUARY 2002)	
(per litter)	
Corn	\$45.32
Supplement	60.90
Non-feed costs (including labor)	139.27
Fixed Costs	100.06
Total cost per litter	\$345.55
Cost per 50 lb. pig	\$ 39.27
<p>Note: Many producers have different costs depending on labor, capital and management.</p> <p>Source: Iowa State University</p>	

ESTIMATED COSTS AND RETURNS FOR IOWA SWINE PRODUCTION ENTERPRISES											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
For 50# Feeder Pigs:											
Cost of production (\$/hd.)	42.85	42.62	42.56	42.98	43.22	48.13	45.21	42.03	40.59	40.36	39.28
Selling Price (\$/hd.)	44.24	35.76	45.47	40.71	35.40	45.33	50.77	26.74	40.69	52.41	51.85
Profit (loss) (\$/hd.)	1.40	-6.86	2.90	-2.27	-7.82	-2.80	5.56	-15.29	0.09	11.27	10.66
For Market Weight Slaughter Hogs from Farrow-to-Finish Operations:											
Cost of production (\$/hundred lbs. live)	42.54	42.52	41.87	43.42	42.19	50.77	47.59	42.67	38.63	38.27	37.99
Average Selling Price (\$/hundred lbs. live)	49.92	43.24	45.72	39.53	41.85	52.89	51.29	31.68	32.01	42.76	44.02
Profit (loss) (\$/hundred lbs. live)	7.38	0.71	3.86	-3.89	-0.34	2.12	3.70	-10.99	-6.62	4.49	6.03
Total Profit (loss) per head*	17.83	2.38	10.11	-9.36	-0.11	6.18	9.25	-26.88	-16.11	12.53	13.71
<p>*Includes an adjustment for the change in the value of the breeding herd. Source: Estimated Costs and Returns for Iowa Farrow-to-Finish Swine Production, Iowa State University Department of Agricultural Economics, Ames, Iowa</p>											

RETAIL MEAT PRICES AND PORK PRICE SPREADS												
Item	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
(Cents Per Pound of Retail Weight)												
Loin Chops	327	327	315	324	322	329	341	348	323	317	337	325.5
Sliced Bacon	213	222	192	193	199	217	247	268	254	255	303	352.1
Ham, boneless		291	275	273	261	254	270	279	281	286	279	274.0
Sausage	235	241	220	211	198	191	201	215	237	242	263	278.0
Beef, Choice Grade	281.0	288.3	284.6	293.4	282.9	284.3	280.2	279.5	277.1	287.8	306.4	337.7
Pork Retail Value	212.6	211.9	198.0	197.6	198.1	194.8	220.9	231.5	242.7	241.5	258.2	269.4
Pork Wholesale Value	118.3	108.9	98.9	102.8	99.0	98.8	117.2	110.2	97.3	99.0	114.5	117.8
Pork Farm Value	87.2	74.5	67.8	72.5	63.0	66.7	84.6	81.1	61.2	60.4	79.5	81.2
Wholesale-Retail Spread	94.3	103.0	99.1	94.8	99.1	96.0	103.7	121.3	145.4	142.5	143.7	151.6
Farm-Wholesale Spread	31.1	34.4	31.1	30.3	27.0	32.1	32.6	36.0	36.1	38.6	35.0	36.6
Consumer Price Index (1982-84=100)	130.7	136.2	140.3	144.5	148.2	152.4	156.9	160.5	163.0	166.6	172.3	177.1
Source: USDA and Bureau of Labor Statistics												



PORK PACKING SECTOR

ESTIMATED DAILY SLAUGHTER CAPACITY

Company	Plant	Fall 2000		Spring 2001		Fall 2001		Spring 2002		Fall 2002	
		Plant	Co. Total	Plant	Co. Total	Plant	Co. Total	Plant	Co. Total	Plant	Co. Total
Smithfield	Tar Heel, NC	32,000		32,000		32,000		32,000		32,000	
	Smithfield, VA	9,500		9,500		9,500		9,500		9,500	
	Gwaltney, VA	8,800		8,800		8,800		8,800		8,800	
Morrell Sioux City, IA	Sioux Falls, SD	15,000		15,000		15,000		15,000		15,000	
		15,000	80,300	15,000	80,300	15,000	80,300	15,000	80,300	15,000	80,300
IBP	Waterloo, IA	18,000		19,000		19,000		19,000		19,000	
	Logansport, IN	13,400		14,000		14,000		14,000		14,000	
	Storm Lake, IA	13,400		14,000		14,000		14,000		14,000	
	Col. Junction, IA	12,800		9,800		9,800		9,800		9,800	
	Madison, NE	7,500		7,500		7,500		7,500		7,500	
	Council Bluffs, IA	Closed		Closed		Closed		Closed		Closed	
	Perry, IA	6,700	71,800	6,700	71,000	6,700	71,000	6,700	71,000	6,700	71,000
Swift	Worthington, MN	15,700		17,000		17,000		17,000		17,000	
	Marshalltown, IA	15,700		17,500		17,500		17,500		17,500	
	Louisville, KY	8,000	39,400	8,500	43,000	8,500	43,000	8,500	43,000	8,500	43,000
Excel	Beardstown, IL	16,000		16,000		16,000		16,000		16,000	
	Ottumwa, IA	14,500		16,000		16,000		16,000		16,000	
Tyson Foods	Marshall, MO	8,200	38,700	Closed	32,000	Closed	32,000	Closed	32,000	Closed	32,000
Hormel	Austin, MN	16,000		17,000		17,000		17,000		17,000	
	Fremont, NE	8,500		9,000		9,000		9,000		9,000	
	Rochelle, IL	7,100	31,600	4,500	30,500	4,500	30,500	4,500	30,500	Closed	26,000
Farmland	Crete, NE	11,300		10,000		10,000		10,000		10,000	
	Denison, IA	7,500		7,500		7,500		7,500		7,500	
	Monmouth, IL	7,000		8,000		8,000		8,000		8,000	
FDL Foods	Dubuque, IA	Closed	25,800	Closed	25,500	Closed	25,500	Closed	25,500	Closed	25,500
Thorn Apple Valley	Detroit, MI	Closed		Closed		Closed		Closed		Closed	
	Hyrum, UT	Closed		Closed		Closed		Closed		Closed	
Seaboard	Guymon, OK	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000
Prem. Std.	Milan, MO	7,000		7,100		7,100		7,100		7,100	
	Clinton, NC	6,500	13,500	6,500	13,600	6,500	13,600	10,000	17,100	10,000	17,100
Indiana Pack	Delphi, IN	11,000	11,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Dakota Pork	Huron, SD	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Pinnacle Foods	Des Moines, IA	6,000		6,000		6,000		6,000		6,000	
	Chicago (Ampac)	2,000	8,000	3,600		3,600		Closed		Closed	
	Falcon, NC			600	10,200	600	10,200	600	6,600	600	6,600
Sara Lee	West Point, MS	6,500		6,500		6,500		6,500		6,500	
	Newburn, TN	2,500	9,000	2,500	9,000	2,500	9,000	2,500	9,000	2,500	9,000
Hatfield	Hatfield, PA	7,000	7,000	7,800	7,800	7,800	7,800	7,800	7,800	7,800	7,800
Clougherty	Vernon, CA	6,000	6,000	6,800	6,800	6,800	6,800	6,800	6,800	6,800	6,800
Worth'on Pack	Worthington, IN	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Premium Pork	Moultrie, GA	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
J.H. Routh	Sandusky, OH	3,700	3,700	4,200	4,200	4,200	4,200	4,200	4,200	4,200	4,200
Fisher	Louisville, KY	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Greenwood	Greenwood, SC	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Sioux-Preme	Sioux Center, IA	2,650	2,650	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900
Southside Pork	Hazleton, PA	Closed		Closed		Closed		Closed		Closed	
	Shamokin, PA	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Johnsonville**	Watertown, WI	1,000		550		550		550		550	
	Momence, IL	1,500	2,500	1,250	1,800	1,250	1,800	1,250	1,800	1,250	1,800
Pork Packers Int'l	Downs, KS	1,600	1,600	1,600	1,600	1,700	1,700	1,700	1,700	1,700	1,700
Bob Evans Farms	Bidwell, OH	150		150		150		150		150	
	Xenia, OH	300		300		300		300		300	
	Hillsdale, MI	500		500		500		500		500	
	Galva, IL	500	1,450	500	1,450	500	1,450	500	1,450	500	1,450
Field Packing	Owensboro, KY	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Yosemite Meat	Modesto, CA	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
Cloverdale Foods	Minot, ND	920	920	920	920	920	920	920	920	920	920
Ohio Packing Co.	Columbus, OH	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Leidy's	Souderton, PA	800	800	800	800	800	800	800	800	800	800
Owens Sausage	Richardson, TX	800	800	800	800	800	800	800	800	800	800
Odom's	Little Rock, AR	750	750	750	750	750	750	750	750	750	750
Abbeyland Foods	Curtiss, WI	700	700	700	700	700	700	700	700	700	700
Independent Meat	Twin Falls, ID	650	650	650	650	650	650	650	650	650	650
Brown Packing	Little Rock, AR	600	600	600	600	600	600	600	600	600	600
Fineberg Packing	Memphis, TN	500	500	500	500	500	500	500	500	500	500
Reeves Packing	Ada, OK	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Lowell Packing	Fitzgerald, GA	350	350	350	350	350	350	350	350	350	350
Masami Meat Co.	Klamath Falls, OR	300	300	300	300	300	300	300	300	300	300
Simeus Food	Forest City, NC	300	300	300	300	300	300	300	300	300	300
Carleton Packing	Carleton, OR	250	250	250	250	250	250	250	250	250	250
Metzger Foods	Paducah, KY	250	250	250	250	250	250	250	250	250	250
TOTAL CAPACITY			381,370		381,020		381,120		381,020		376,520

*Includes all plants operating at the time shown in the column heading. This number may not be the sum of the numbers above it.



IMPORT/EXPORT

U.S. PORK EXPORTS, IMPORTS AND NET EXPORTS 1987-2001*

(Metric tons, carcass wt.)

Year	Exports	Imports	Net Exports (Imports)
1987	49,578	542,007	(492,429)
1988	88,540	515,751	(427,210)
1989	121,735	406,190	(284,456)
1990	110,540	407,203	(296,662)
1991	131,423	351,367	(219,944)
1992	190,415	292,747	(102,332)
1993	202,464	335,689	(133,225)
1994	248,771	337,312	(88,541)
1995	357,127	301,117	56,010
1996	439,867	281,057	158,810
1997	473,295	287,555	185,740
1998	557,879	319,906	237,974
1999	579,447	375,279	204,164
2000	583,785	438,562	145,223
2001	707,558	431,372	276,186

*Excluding variety meats
Source: USDA Foreign Agricultural Service

TOP 10 PORK EXPORTING COUNTRIES 2001*

(Metric tons, carcass wt.)

1.	European Union	1,235,000
2.	Canada	727,000
3.	United States	709,000
4.	Brazil	337,000
5.	China	139,000
6.	Hungary	120,000
7.	Poland	102,000
8.	Australia	66,000
9.	Mexico	61,000
10.	Korea, Republic of	43,000

* Excluding trade within the European Union
Source: USDA Foreign Agricultural Service

TOP 10 U.S. PORK EXPORT MARKETS 2001*

Country	Volume	Value
	(1,000 Metric tons, product wt.)	(\$1,000)
1.	Japan	829,847
2.	Mexico	174,297
3.	Canada	103,196
4.	Russian Federation	39,613
5.	Korea, Republic of	17,962
6.	Taiwan	12,989
7.	Hong Kong	12,939
8.	China, Peoples Republic	10,114
9.	Colombia	3,840
10.	Honduras	5,444
TOTAL	475,268	1,248,434

Source: USDA Foreign Agricultural Service
* Excluding variety meats

TOP 15 PORK PRODUCING COUNTRIES 2001

Country	Production	Slaughter	Inventory
	(1000 MT CWE)	Total Slaughter (1000 HEAD)	Ending Inventories (1000 HEAD)
1.	China; Peoples Republic of	553,818	455,000
2.	European Union	202,100	123,012
3.	United States	97,963	58,774
4.	Brazil	26,475	32,710
5.	Canada	20,679	13,060
6.	Poland	20,950	17,400
7.	Russian Federation	27,690	16,070
8.	Japan	16,346	9,940
9.	Korea; Republic of	14,100	7,751
10.	Mexico	13,765	10,519
11.	Philippines	19,000	11,816
12.	Taiwan	10,130	7,165
13.	Czech Republic	4,600	3,700
14.	Ukraine	5,500	7,900
15.	Hungary	5,886	4,850

Source: USDA Foreign Agricultural Service

TOP PORK IMPORTING COUNTRIES 2001*

(Metric tons, carcass wt.)

1.	Japan	1,068,000
2.	Russia	550,000
3.	United States	431,000
4.	Mexico	294,000
5.	Hong Kong	260,000
6.	Korea	122,000
7.	Canada	91,000
8.	European Union	55,000
9.	Romania	37,000
10.	Singapore	25,000

Source: USDA Foreign Agricultural Service
* Excluding variety meats



Hogs are powerful medicine: all told, pigs are a source of nearly 40 drugs and pharmaceuticals.

Adrenal Glands

Corticosteroids
Cortisone
Epinephrine
Norepinephrine

Blood

Blood Fibrin
Fetal Pig Plasma
Plasmin

Pancreas Gland

Insulin
Glucagon
Lipase
Pancreatin
Trypsin
Chymotrypsin

Skin

Porcine Burn Dressings
Gelatin

Spleen

Splenin Fluid

Stomach

Pepsin
Mucin
Intrinsic Factor

Thyroid Gland

Thyroxin
Calcitonin
Thyrogloblin

Pineal Gland

Melatonin

Pituitary Gland

ACTH-Adrenocorticotropic Hormone
ADH-Antidiuretic Hormone
Oxytocin
Prolactin
TSH-Thyroid Stimulating Hormone

Brain

Cholesterol
Hypothalamus

Gall Bladder

Chenodeoxycholic Acid

Heart

Heart Valves

Intestines

Enterogastrone
Heparin
Secretin

Liver

Desiccated Liver

Ovaries

Estrogens
Progesterone
Relaxin

Specially selected and treated pig skin, because of its similarity to human skin, is used in treating massive burns in humans, injuries that have removed large areas of skin and in healing persistent skin ulcers.

Pig pancreas glands are an important source of insulin hormone used to treat diabetics. Pig insulin is especially important because its chemical structure most nearly resembles that of humans.

Industrial By-Products

Hogs also make a very significant contribution to the world of industrial and consumer products. Hog by-products are sources of chemicals used in the manufacture of a wide range of products which cannot be duplicated by syntheses. And of course, pigskin is used extensively as high quality leather for clothing, shoes, handbags, sporting goods, upholstery...the list goes on and on.

Blood

Sticking Agent
Leather Treating Agents
Plywood Adhesive
Protein source in Feeds
Fabric Printing & Dyeing

Brains

Cholesterol

Bones & Skin

Glue
Pigskin Garments, Gloves & Shoes

Dried Bones

Buttons
Bone China

Fatty Acids & Glycerine

Insecticides
Weed Killers
Lubricants
Oil Polishes
Rubber
Cosmetics
Antifreeze
Nitroglycerine
Matches
Plastics
Putty
Plasticizers
Paper Sizing
Printing Rollers
Insulation
Cellophane
Linoleum
Floor Waxes
Water-Proofing Agents
Cement
Fiber Softeners
Crayons
Chalk
Phonograph Records

Bone Meal

Mineral Source in Feed
Fertilizer
Porcelain Enamel
Glass
Water Filters

Gall Stones

Ornaments

Hair

Artist Brushes
Insulation
Upholstery

Meat Scraps

Commercial Feeds
Feeds for Pets

Pig heart valves, specially preserved and treated, are surgically implanted in humans to replace heart valves weakened by disease or injury. Since the first operation in 1971, tens of thousands of pig heart valves have been successfully implanted in human recipients of all ages.

• **Where did Wall Street get its name?**

Free-roaming hogs were notorious for rampaging through the precious grain fields of colonial New York City farmers. The Manhattan Island residents chose to limit the forays of these riotous hogs by erecting a long, permanent wall on the northern edge of what is now Lower Manhattan. A street came to border this wall-aptly enough named, Wall Street.

• **How did "Uncle Sam" come to represent the U.S. Government?**

During the War of 1812, a New York pork packer named Uncle Sam Wilson shipped a boatload of several hundred barrels of pork to U.S. troops. Each barrel was stamped "U.S." on the docks, it quickly became bantered about that the "U.S." stood for "Uncle Sam", whose large pork shipment looked to be enough to feed the entire army. Thus did "Uncle Sam" come to represent the U.S. Government itself.

• **Where did the saying "living high on the hog" come from?**

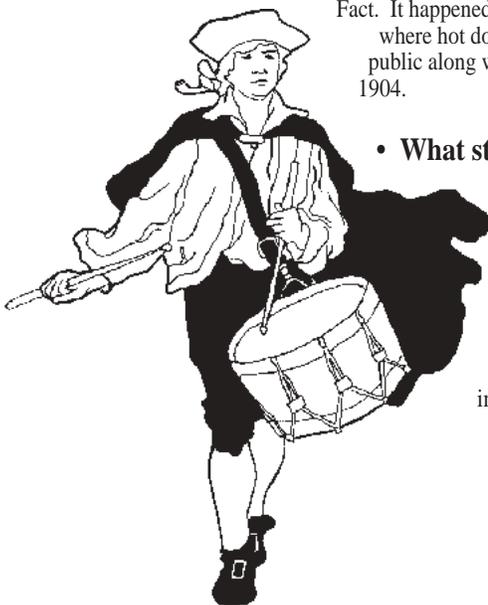
It originated among army enlisted men who received shoulder and leg cuts while officers received the top loin cuts.

• **Fact or Hogwash? When hot dogs were first sold, street vendors called them "red hots", and they didn't come on a bun. Instead, a pair of white cotton gloves came with each one to keep fingers cool while eating.**

Fact. It happened at the St. Louis World's Fair, where hot dogs were first introduced to the public along with the ice cream cone in 1904.

• **What staple food was provided to Washington's troops at Valley Forge?**

Salt pork from New Jersey was shipped behind British lines to Valley Forge to feed the hungry Continental Army in the winter of 1776-77.

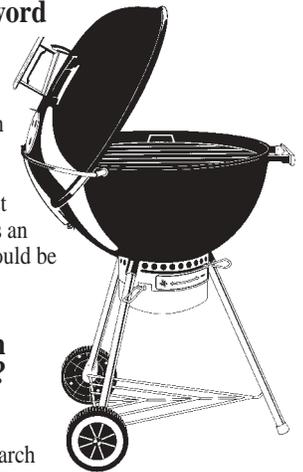


• **What's the origin of the saying "a pig in a poke?"**

The reference is to a common trick of 17th Century England of trying to palm off a cat on an unsuspecting "greenhorn" for a suckling-pig. When he opened the poke (sack) he "let the cat out of the bag", and the trick was disclosed.

• **What's the origin of the word "barbecue?"**

It's derived from French-speaking pirates, who called this Caribbean pork feast "de barbe et queue", which translates "from beard to tail". In other words, the pig roast reflected the fact that the hog was an eminently versatile animal that could be consumed from head to toe.



• **What's the highest known price ever paid for a hog?**

\$105,000 is the highest price ever known to be paid for a hog, on March 5, 1998 at the Houston Livestock Show. The Grand Champion barrow exhibited by Brittany Muery, a 4H member from Bastings, Texas, sold to a group of Houston businesses.

• **What's the heaviest hog ever recorded?**

A Poland China hog named "Big Bill" weighing 2,552 pounds and measuring 9 feet long with a belly that dragged the ground, owned by Burford Butler of Jackson, Tennessee in 1933.

• **Fact or Hogwash? The longest single sausage was over a mile long.**

Fact. A single sausage measuring 5,917 feet in length was cooked in Barcelona, Spain on September 22, 1986.

• **What did President Harry Truman have to say about hogs?**

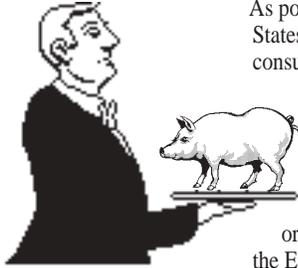
"No man should be allowed to be President who does not understand hogs".

• **Did you know that...**

The ancient Chinese were so loath to be separated from fresh pork that the departed were sometimes accompanied to the grave with their herd of hogs.

• **Did you know that...**

As popular as pork is in America, it is not the United States, but China, which is the number one producer and consumer of fresh pork in the world.



• **Did you know that...**

In ancient China fresh pork enjoyed royal status. Around 4000 B.C., the Chinese people were ordered to raise and breed hogs-by a royal decree from the Emperor of China.

• **What's the origin of the saying "pork barrel politics?"**

The phrase is derived from the pre-Civil War practice of distributing salt pork to the slaves from huge barrels. By the 1870s, congressmen were referring to regularly dipping into the "pork barrel" to obtain funds for popular projects in their home districts.

• **What's the origin of the saying to "go whole hog?"**

The expression came from the 18th Century when the English shilling was at one time called a "hog". Thus, a spendthrift, one willing to spend an entire shilling on the entertainment of a friend in a pub, was willing to "go whole hog".

• **Did you know that...**

Pork is the world's most widely-eaten meat.

Everything but the Oink!

No other animal provides society with a wider range of products than the hog.

Hogs are, of course, the source of high quality animal protein in the form of the widest and most varied range of food products available from any animal.

By-products from hogs play a vital though less visible role in maintaining and improving the quality of human life. And new and different by-products from hogs are constantly being developed.

Hog heart valves are used to replace damaged or diseased human heart valves.

The amazing utility of the hog has motivated the saying, "We use everything but the oink".

A viable animal agriculture not only provides an abundant supply of vital nutrients found in meat, but is also a ready source of essential and useful by-products that humanity depends on so extensively.

On page 27 are some of the important medical and industrial products we get from hogs.



Pharmaceutical By-Products

Pharmaceuticals rank second only to meat itself in the important contributions hogs make to society. Rapidly advancing science and technology are continually adding to the list of life-supporting and life-saving products derived from the incredible hog.



STATE & NATIONAL PORK ASSOCIATIONS

The Pork Act requires that a percentage of the checkoff funds collected each year be returned to the state pork producer associations. On average, about 20 percent of producer and importer checkoff receipts is returned to states and used for state and local projects. The 44 state pork associations can be a quick, local contact for individual pork producers. State and national pork industry staff can be contacted via the following addresses and telephone numbers.

Alabama Pork Producers Association
PO Box 11000
Montgomery, AL 36191-0001
(334) 613-4217

Arizona Pork Council
1102 E Avenida Grande
Casa Grande, AZ 85222-1004
(520) 836-0050

Arkansas Pork Producers Association
PO Box 1417
Russellville, AR 72811
(877) 444-7675

California Pork Producers Association
1225 H St - Ste #106
Sacramento, CA 95814
(916) 447-8950

Colorado Pork Producers Council
PO Box 928
Brighton, CO 80601-0928
(303) 637-9200

Connecticut Pork Producers Association
University of Connecticut
139 Wolf Den Rd
Brooklyn, CT 06234
(860) 774-9600

Delaware Pork Producers Association
27701 James Rd
Laurel, DE 19956
(302) 875-9079

Florida Pork Improvement Group
PO Box 147030
Gainesville, FL 32614-7030
(352) 374-1542

Georgia Pork Producers Association
100 Miller St
Camilla, GA 31730
(229) 336-7700

Hawaii Pork Industry Association
87-1550 Kanahale Rd
Waianae, HI 96792
(808) 676-9100

Idaho Pork Producers Association
3650 N 1500 E
Buhl, ID 83316
(208) 543-4412

Illinois Pork Producers Association
6411 S 6th Street Rd
Springfield, IL 62707-8642
(217) 529-3100

Indiana Pork Producers Association
8902 Vincennes Circle Ste F
Indianapolis, IN 46268-3036
(317) 872-7500

Iowa Pork Producers Assn
1636 NW 114th St
Clive, IA 50325-0009
(515) 225-7675

Kansas Pork Association
2601 Farm Bureau Rd
Manhattan, KS 66502-3031
(785) 776-0442

Kentucky Pork Producers Association
1110 Hawkins Dr
Elizabethtown, KY 42701-0607
(270) 737-5665

Louisiana Pork Producers
361 L Sullivan Rd
Winnfield, LA 71483-6444
(318) 628-5151

Maine Pork Producers Association
1204 Main Rd
Bradford, ME 04410
(207) 327-1398

Maryland Pork Producers Association
53 Slama Rd.
Edgewater, MD 21037-1423
(410) 956-5771

Michigan Pork Producers Association
4801 Willoughby Rd Ste 5
Holt, MI 48842-1000
(517) 699-2145

Minnesota Pork Producers
360 Pierce Ave
Ste 106
North Mankato, MN 56003-2208
(507) 345-8814

Mississippi Pork Producers Association
Box 9815
Mississippi State, MS 39762-9815
(662) 325-1689

Missouri Pork Producers Association
6235 W Cunningham Dr
Columbia, MO 65202-9162
(573) 445-8375

Montana Pork Producers Council
Montana State University
Bozeman, MT 59717-0058
(406) 994-3595

**Nebraska Pork Producers Association**

PO Box 830909
Lincoln, NE 68583-0909
(402) 472-0492

Nevada Pork Producers

PO Box 493
Winnemucca, NV 89446
(775) 623-4414

New Hampshire Pork Producers Council

47 Dunlap Rd
Danbury, NH 03230
(603) 768-3194

New York Pork Producers Cooperative, Inc.

12 N. Park St
Seneca Falls, NY 13148
(315) 568-2750

North Carolina Pork Council

2300 Rexwood Dr Ste 340
Raleigh, NC 27607-3361
(919) 781-0361

North Dakota Pork Producers

RR 1 Box 77
Regent, ND 58650
(701) 563-4513

Ohio Pork Producers Council

5930 Sharon Woods Blvd Ste 101
Columbus, OH 43229-2666
(614) 882-5887

Oklahoma Pork Council

2501 Exchange, Ste 146
Oklahoma City, OK 73108-2447
(405) 232-3781

Oregon Pork Producers Association

PO Box 549
Newberg, OR 97132-0142
(503) 538-7380

Pennsylvania Pork Producers Council

1631 Grim Rd
Kutztown, PA 19530-9051
(610) 285-6519

South Carolina Pork Board

PO Box 11280
Columbia, SC 29211-1280
(803) 734-2218

South Dakota Pork Producers Council

1404 W Russell
Sioux Falls, SD 57104-1328
(605) 332-1600

Tennessee Pork Producers Association

125 Peyton Rd
Lebanon, TN 37087
(615) 453-2585

Texas Pork Producers Association

PO Box 10168
Austin, TX 78757-7799
(512) 453-0615

Utah Pork Producers Association

55 E 200 N
Providence, UT 84322

Virginia Pork Industry Association

1012 Washington Bldg
1100 Bank St. Ste 106
Richmond, VA 23219-3642
(804) 786-7092

Washington Pork Producers

2001 VanTine Rd
Garfield, WA 99130
(509) 397-2694

West Virginia Pork Producers

802 Honeysuckle Dr
Martinsburg, WV 25401-9223

Wisconsin Pork Producers Association

PO Box 327
Lancaster, WI 53813
(608) 723-7551

Wyoming Pork Producers

45 Greenhouse Rd
Newcastle, WY 82701-9432
(307) 746-4278

National Pork Board

1776 NW 114th St
Clive, IA 50325
(515) 223-2600

National Pork Producers Council

Des Moines Office
7733 Douglas Ave
Urbandale, IA 50322
(515) 278-8012

Washington DC Office

122 C Street NW Suite 875
Washington, DC 20001
(202) 347-3600

National Swine Registry

1769 US 52 W
PO Box 2417
West Lafayette, IN 47996-2417
(765) 463-3594



For more information:



National Pork Board

P.O. Box 9114
Des Moines, IA 50306 USA

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