

The State of Iowa's Pork Industry
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Iowa has been the nation's leading hog producing state for more than 100 years. Pork production is a major value-added industry in Iowa and an important enterprise on thousands of farms. In 1995, Iowa marketed 24.1 million hogs for cash receipts of \$2.55 billion—30 percent of all agricultural receipts and more than 50 percent of all livestock receipts.

The total economic impact of Iowa's pork industry extends well beyond the more than 20,000 farms with hogs. When the direct and indirect linkages are included, pork production and processing annually contributes \$3.1 billion of gross state product, 89,000 jobs and \$2.87 billion of personal income to Iowa's economy. While processing jobs and payrolls are concentrated near the dozen or so communities with pork packing plants, income and employment associated with hog production and input suppliers can be found in every county in the state.

Hogs are the single largest consumers of Iowa's corn and soybeans, eating an estimated 266.3 million bushels of corn valued at \$639 million in 1995. An estimated \$639 million worth of feed supplements, largely soybean meal, was also fed to Iowa hogs in 1995. Depending on the size of the harvest, 20-30 percent of Iowa's corn production is consumed by hogs in the state.

Hogs have traditionally been referred to as mortgage-lifters on Iowa farms. They add value to grain produced on the farm, make use of available labor and improve cash flow. But in spite of the importance of the hog enterprise, the number of farms with hogs in Iowa has been declining.

Who is quitting, and why?

A total of 850 Iowa farms that have stopped raising hogs since 1991 were surveyed during the summer of 1997. The average age of these producers was 50 years with most producers falling in the

36 to 65 year age range (Table 1). Half of the producers who quit had raised hogs for 20 years or more. More than 50 percent of these farms marketed 500 head or less during their last full year of production. Ninety percent marketed less than 1,500 head a year. More than a third of the farms received 25 percent or less of their gross farm income from hogs while 20 percent received more than half of their gross farm income from hogs. Less than six percent of those surveyed said they quit farming all together.

Table 1. Age distribution of farmers that quit raising hogs since 1991.

Age	Percent
35 or less	10.3
36-45	28.7
46-55	27.3
56-65	21.6
Over 65	12.2

Personal reasons were often given for leaving the hog business. Operator age and health was rated as somewhat important by 40 percent and very important by 60 percent of those surveyed. More than 30 percent noted that the next generation not coming back to the farm was somewhat important or a very important reason for quitting.

Economic forces also influenced the decision to quit raising hogs. A majority listed low hog prices or high corn prices as important reasons. The largest number of farmers decided to quit in early 1995 following the fourth quarter of 1994 which had the lowest hog prices in more than 20 years. A relatively high number decided to quit between the third quarter of 1995 and third quarter of 1996 when corn prices were escalating toward record levels.

Fifty-eight percent said that not having returns high enough relative to labor and investment was a somewhat important or very important reason for quitting. In spite of the high importance placed on economic returns, 82 percent of those surveyed did not know their cost of production during their last year of production.

The majority of the farmers who stopped raising hogs had relatively little invested in hog facilities. More than 87 percent of the breeding and gestation facilities were open-front buildings with concrete lots, open lots with shelters or pastures. Over half (53.5 percent) of the finishing facilities were open-front buildings with concrete lots. Another 29 percent of the finishing spaces were open lots and pastures. Approximately 17 percent of the finishing facilities were confinement buildings.

Only 8 percent said they plan to use their facilities again to raise hogs and 12 percent thought they would rent them to a neighbor. However, less than 3 percent said they would contract with another producer. Forty percent agreed or strongly agreed that they would not raise hogs again under any circumstances.

As these producers quit raising hogs, Iowa's share of the US hog inventory in December 1996 fell to 22 percent, the lowest level since 1954. The share of the breeding herd was 19 percent and the market inventory figure was 22 percent. The number of farms with hogs in Iowa has declined by 14,000, or 40 percent, since 1992, and totaled 21,000 at the end of 1996.

Aggregate statistics indicated that approximately 84 percent of the decline in Iowa farms with hogs since 1991 was accounted for by farms with less than 500 head of hogs, or annual marketings of less than 1000 head (Figure 1). These farms represent approximately two-thirds of Iowa operations and control about one-fifth of the state's hogs (Table 2).

Fifteen percent of the decline in Iowa numbers was from operations with 500 to 999 head inventories. The number of farms with at least a 1,000 head inventory declined only 1 percent, or about 150 farms. Farms of this size in Iowa numbered 3,000 and controlled 56 percent of the state's hogs. The other leading hog states have a higher percentage of production in this category. At the national level, operations of this size number approximately 12,000 and control 67 percent of the inventory.

Figure 1 **Number of Iowa Farms with Hogs by Inventory Size**

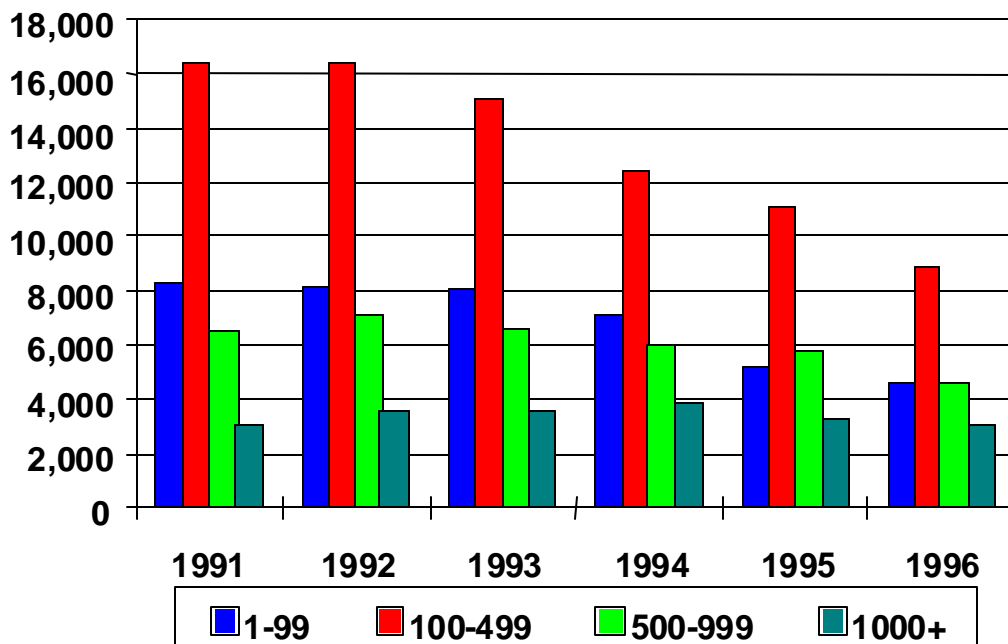


Table 2. Percent of Hog Operations and Inventory by Size of Operation in Iowa, the U.S. and Leading Hog States, 1996.

Inventory (Head)	Percent of Operations (Opr) and Inventory (Inv) By Size of Farm							
	Under 500		500 - 999		1000-1999		2000 & up	
	Opr	Inv	Opr	Inv	Opr	Inv	Opr	Inv
United States	84	18	8	15	4	16	3	51
Iowa	64	19	22	25	10	23	4	33
N Carolina	72	2	3	2	5	5	20	92
Minnesota	75	18	13	18	7	22	5	42
Illinois	70	20	15	18	9	21	5	41
Indiana	78	19	12	17	6	18	5	46
Nebraska	76	26	14	20	7	19	3	35
Missouri	84	14	10	12	4	9	2	65

In addition to the shift to larger farms, there has also been a shift in production between states. Figure 2 is a map of states that had at least 80,000 hogs in 1996. The map shows larger than average decreases in hog inventories in Corn Belt states that have traditionally been major hog producing states, and an increase in states further south and west. With the exception of Minnesota and Missouri, Midwest states from South Dakota to Ohio have lost approximately 20 percent of their hog inventory.

Figure 2



Breeding herds in these states have declined even further. Iowa's hog inventory in December 1996 was 18 percent smaller than December 1992 and the breeding herd was 26 percent smaller. Across the United States during this same period, the hog inventory declined 3 percent and the breeding herd declined 6 percent. North Carolina doubled their inventory in the last five years. Oklahoma, Utah

and Wyoming also posted large increases as large-scale producers moved to previously hog-sparse regions. Midwest states that did increase did so primarily due to growth of a few larger firms.

The expansion in corn-deficient regions goes against the traditional view that hogs must be produced near large grain supplies. Technologically advanced production systems, high speed feed mills, and unit train purchases of grain have allowed producers in these regions to have an average feed cost per pound of pork that is competitive with the average Iowa hog farmer.

Pigs farrowed in these states are often sent to Iowa and other Corn Belt states for finishing by the companies that own them. Approximately 10 percent of the necessary feed to produce a market hog is consumed by the breeding herd, 10 percent in the nursery, and 80 percent to finish the hogs to slaughter weight. Iowa is a preferred finishing state because the corn is cheaper and hog prices are higher due to excess packer capacity. It's cheaper to ship a feeder pig to Iowa for finishing than it is to ship the corn to the hog and the hog to the packer.

There are also shifts in production between counties within Iowa. Figure 3 shows the relative change in hog inventories within the state from 1992 to 1996. Only 17 counties reported increases while 72 counties reported declines. The increases totaled one million head while the declines totaled more than three million head. Ten counties accounted for a third of the decline. The loss in these 10 counties is equivalent to the entire hog inventory of Michigan, the twelfth largest hog state in the United States.

Many of the Iowa counties that reported growth in hog inventories have large hog operations. Wright, Hardin, Hamilton, Webster and Ringgold have seen the expansion of one or more large operations.

Money to be made

Pork production has been a profitable farm enterprise, which makes it more difficult to understand why so many producers have exited the industry. Historically, farms with hogs have been more profitable than other types of farms.

Return to operator inputs (family labor, management, and capital) for ISU Swine Enterprise Records cooperators has averaged \$30 per head over the last 10 years and \$25 per head for the last five years. Farrow-to-finish operations received the highest net farm income and return on owner equity for the ten years from 1986 to 1995 among various types of operations in the Iowa Farm Business Association.

However, not all operations are large enough to generate the total returns needed to support the operator. Table 3 estimates annual marketings and returns to the operator based on the 10-year average of Iowa State University Swine Enterprise Records by inventory size.

Table 3. Return to Unpaid Family Labor and Management by Herd Size Based on Iowa State University Swine Enterprise Records 10 Year Average Returns

Hog Inventory	Estimated Marketings	Annual Returns
1-99	53	\$888
100-499	499	\$8,355
500-999	1,326	\$22,199
1,000+	4,555	\$76,245

Pork Processing in Iowa

Iowa has 11 packing plants that process at least 2,500 hogs per day and the combined capacity of these plants is approximately 95,000 head daily. Pork processing employs approximately 15,000 people in the state representing 7 percent of the state's manufacturing employment.

In spite of the dominance in hog production, Iowa has excess packer capacity and in 1996 imported from other states more than 25 percent of the hogs slaughtered in the state's packing plants.

In addition to this eight million head imported directly to slaughter plants, another 4.5 million feeder and weaned pigs were farrowed in other states and finished in Iowa. These 12.5 million imported hogs and pigs were nearly half of the 26 million hogs slaughtered in Iowa packing plants in 1996.

In 1997, the tight supply of hogs resulted in the temporary closing of one shift each in Sioux City and the Columbus Junction processing plants, idling 1300 workers, and the permanent closing of a Council Bluffs plant laying off 650 workers. A continued decline in Iowa's hog numbers will further pressure the state's processors.

Searching for answers

Changes occurring in the pork industry threaten more than Iowa's bragging rights of being the nation's largest pork producing state. Fewer hogs raised in Iowa result in fewer inputs purchased, fewer hogs slaughtered, fewer people employed, and fewer dollars earned and spent in Iowa's rural communities and cities.

The pork industry has been an integral part of Iowa's economy for decades, but it currently faces important challenges from both internal and external forces. Because the trade-offs between challenges and opportunities impact more than just pork producers, it is important to have an informed debate.