

Chapter 6

Community and Economic Impacts of the Iowa Hog Industry

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The production and processing of hogs is a major agricultural industry in Iowa with strong internal linkages to many parts of the economy. Statewide, an estimated 89,000 Iowa jobs are directly or indirectly related to the hog industry. These jobs include those directly involved in hog production and processing, as well as jobs generated by the indirect linkages to feed grain production and other inputs. It also includes the effects of Main Street spending by farmers and workers in the hog industry.

Measured in terms of income, an estimated \$700 million of income is earned by farmers and workers directly employed in hog production and processing, while an additional \$1.4 billion of personal income is indirectly linked to Iowa's hog industry. The importance of this industry has raised awareness of economic, social and environmental issues associated with changes in the hog industry.

Economic Impacts

The economic stakes are quite substantial because the hog industry builds on a cumulative chain of value-added activity that is largely concentrated in the state of Iowa. This chain begins with production of the feed grain inputs, through the farrowing and feeding activities, and ends with the slaughtering and processing activities.

As newer, more efficient technology replaces existing production, these employment relationships may change, although income earned within the hog industry remain constant. As potential offsets to these economic benefits, the changing scale and mode of hog production also affects methods of waste disposal and environmental impacts which need to be considered in

the overall impacts of the hog industry on rural areas.

At the local level, many of the same dynamics occurring at the state and national level are at work. New hog facilities add considerable value to rural areas. Many of the new facilities are large-scale integrated facilities operating alongside traditional mixed-enterprise farms.

Although the new facilities typically use less labor to produce the same number of hogs as smaller-scale producers, new facilities in a region do not necessarily displace existing producers.

Since 1980, the number of Iowa farms with hogs has declined dramatically, although total hog numbers in the state have remained fairly constant. The shift in Iowa towards hog production being dominated by fewer large-scale operations reflects the pattern occurring at the national level as industrial change and global competition influence many smaller and part-time operations to drop out of hog production. As a result, the capacity added by the new hog facilities can be viewed as new gains to the state and local economy rather than a displacement of existing capacity.

New facilities can be seen as adding new jobs and income as well as supporting local tax bases and school enrollments. Tables 1 and 2 illustrate the potential impacts that new facilities ranging in size from 150 to 3,400 sow farrow-to-finish operations can contribute to a local economy.

A new 3,400 sow, farrow-to-finish facility employs 21 new workers directly, provides 19 additional indirect jobs, and generates nearly \$1 million of new income for workers and proprietors in the region. If the facility is locally owned and financed, all of the impact is retained locally.

These impacts are similar to the effects generated by manufacturing firms locating in rural areas and paying wages comparable to the state average. Based on composite averages for non-metropolitan county demographics, the employment base change of 19 jobs from a new 3,400 sow facility implies 10 additional school age children.

Construction of these hog facilities adds to the local tax base. The new agricultural buildings and residential housing associated with the workforce change results in an estimated \$27,000 of additional property tax revenues. Based on the personal income gains associated with a 3,400 sow facility, state tax revenues are expected to increase by \$65,000. Because of the different labor intensities and the off-site economic benefits, it takes about nine 300 sow facilities to generate the same local tax benefits as a single 3,400 sow facility.

Salaries and Benefits

As pork production has become increasingly concentrated in extremely large operations, these operations hire employees rather than relying exclusively on labor provided by members of the owner's family. This move has led to fears that large farm operators will create pockets of low-skill, poorly paid workers in rural areas.

A national survey of pork farm employees shows these fears may be unfounded. Large scale operations use new technologies much more extensively than small operations. As a consequence, these operations use more skilled and specialized labor than do smaller operations.

In fact, more than one-third of employees in the pork industry hold college degrees compared to only 22 percent of the general public. Because of increased productivity of specialized labor in larger units, these large operations offer higher salaries and benefits than

their competitors.

The move toward greater utilization of skilled employees is reflected in rapid salary growth for pork production employees. Between 1990 and 1995, salaries rose nearly 27 percent for pork production employees compared to a 14 percent increase in wages nationwide and a 13 percent wage increase for agriculture. Still, average salaries for pork production employees nationally averaged \$24,721, below the \$28,700 median income for someone with a high school degree. So salaries in the pork industry are still below parity with the rest of the economy when controlling for skills.

In addition, salaries for pork employees in the Midwest lag behind those in the Southwest (\$23,598 vs. \$28,278). The salary difference is only partially explained by differences in technology and scale of operation, so Midwest farms may face rising labor costs if they are to compete with other regions for skilled workers.

Health Issues

A national survey of employees in the pork industry found that 81 percent of employees rated their work environment as good or excellent. Over time, pork employees have been giving improved ratings of dust and gas levels in the facilities in which they work.

But there is some evidence that work in the pork sector involves greater health risks than other types of farming. Analysis of health indicators obtained from attendees at the 1996 National Pork Expo showed that pork producers had a higher incidence of lost hand strength and a higher probability of nagging cough, sinus problems, or sore throat. Confinement operators also were more likely to report that family members were adversely affected.

More research is needed on the seriousness of respiratory problems and other health

problems in confined pork production relative to other agricultural production. It is important to emphasize that farming itself is one of the more dangerous occupations, and some ailments reported by hog farmers, such as flu symptoms, lost hand strength, and hearing loss, are also reported by farmers who do not have hog operations.

Processing Plant Impacts

Local and state governments have made a conscious effort to attract, expand or retain meat packing capacity in Iowa. How important are meat packing plants to local economic growth? The answer is mixed. For example, the only county with a new pork processing facility is Louisa County (Black Hawk County lost one facility and gained another).

Employment in Louisa County grew 41 percent since 1979 with almost all of the growth occurring after the processing plant was built. In addition, aggregate labor earnings grew more than 200 percent over the period, double the state average earnings growth per county. However, the employment growth did not lead to population growth in Louisa, suggesting that many of those getting jobs in Louisa County commute from surrounding counties.

Counties that retained pork processing plants since 1980 also had greater employment and earnings growth than the state average, although the differences are modest. Counties that lost pork processing plants faced a 4 percent decline in employment, aggregate earnings growth which lagged state averages, and an average 10 percent decline in population since 1979. This comparison of county economic growth suggests that counties that gained or maintained pork processing plants were more successful than the state as a whole, while those that lost plants were less successful.

Research in Iowa on employment patterns in the meat and poultry processing industry

indicates considerable restructuring in the industry and declining real wage rates. Real compensation of production workers is 40 percent lower than its peak in 1980 and has fallen relative to compensation in manufacturing in general. In spite of these declining real wages, employment opportunities in the meat packing industry have been appealing to recent Hispanic and Asian immigrants.

In 1990, 16 percent of the Hispanic workforce, nine percent of the Asian-origin and 6 percent of the black workforce in Iowa were employed in this industry. These ethnic groups comprised 9.8 percent of the food and kindred products workforce in 1990, compared to 4.7 percent in 1980.

These jobs provided full-time year-round work for these immigrants significantly above the minimum wage and made regular schooling and home ownership possible. Historically, the meat packing industry has been a relatively heavy employer of immigrant labor, so its workforce would be expected to reflect the ethnicity of recent waves of immigrants.

Numerous complaints have been registered regarding increases in criminal activity in areas that have meat packing plants. Incidence of violent crime rose 56 percent in Louisa County between 1980 and 1990. However, this is only a marginally greater increase in criminal activity than the statewide increase of 49 percent during the same period.

More telling, violent crime rates rose an average of 168 percent in the seven counties that lost meat packing plants. So if meat packing is to be associated with increased criminal activity, it is the loss of the industry rather than its expansion that is to blame.

Table 1.
Employment and Earnings Summary with No Change in Local Feed Grain Production

	Size of Operation			
	150 Sows	300 Sows	1,200 Sows	3,400 Sows
Without Corn				
Primary Employment (jobs)	1.4	3	10	21
Employee Income	\$40,750	\$87,100	\$294,686	\$709,097
Earnings/Worker	\$29,107	\$29,033	\$29,469	\$33,767
Secondary Employment (jobs)	1.3	2.7	9	19
Employee Income	\$21,598	\$46,163	\$156,183	\$375,821
Earnings/Worker	\$16,614	\$17,097	\$17,354	\$19,780
Total Employment (jobs)	2.7	5.7	19	40
Employee Income	\$62,348	\$133,263	\$450,869	\$1,084,918
Earnings/Worker	\$23,092	\$23,379	\$23,730	\$27,123

Table 2.
Fiscal Impact Summary of New Hog Facilities with No Change in Local Feed Grain Production

Without Corn	Size of Operation			
	150 Sows	300 Sows	1,200 Sows	3,400 Sows
County Revenues	\$1,474	\$3,435	\$13,032	\$30,522
County Expenditures	998	2,108	7,024	14,414
City Revenues	1,964	4,168	13,891	32,028
City Expenditures	1,344	2,792	9,301	18,592
All Revenues to Local Schools	3,062	6,732	24,021	50,353
Total Local Revenue	6,501	14,336	50,944	112,902
Total Local Expenditure	5,405	11,631	40,346	83,358
Net Benefit	1,096	2,704	10,598	29,544
Net Revenues to State Government*	2,401	5,157	17,512	43,720
Estimated Local Property Taxes Paid by Operators**	\$1,327	\$2,806	\$12,516	\$27,972

* After transfers to local governments.

** Taxes paid by operators are included in the local government revenue totals.

Note: Model assumes that all incremental school revenues are spent.

(Source: Otto, Swenson and Lawrence -- 1996)