

**INDIANA FOOD INDUSTRY:  
SIZE, INCOME, AND  
EMPLOYMENT EFFECTS**

by

Sarah A. Low and Kevin T. McNamara

Staff Paper #03-03

February 2003

**Dept. of Agricultural Economics**

**Purdue University**

*Purdue University is committed to the policy that all persons shall have equal access to its programs and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.*

# **INDIANA FOOD INDUSTRY: SIZE, INCOME AND EMPLOYMENT EFFECTS**

by

Sarah A. Low and Kevin T. McNamara  
Dept. of Agricultural Economics, Purdue University  
West Lafayette, Indiana 47907-1145  
[salow@purdue.edu](mailto:salow@purdue.edu), [mcnamara@purdue.edu](mailto:mcnamara@purdue.edu)

Staff Paper #03-03

February 2003

## **Abstract**

Indiana's food industry economically impacts residents through employment, income, and agriculture, by increasing demand for Indiana-produced agricultural commodities. This paper provides an overview of Indiana's food industry by detailing size, gross state product, employment, income, and average wage associated with the sector. Discussion is also included on Indiana's food industry compared to neighboring states.

Keywords: Indiana food processing, Food and kindred products, Food manufacturing, Agricultural commodity processing

Copyright © by Sarah Low and Kevin McNamara. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.

# INDIANA FOOD INDUSTRY: SIZE, INCOME AND EMPLOYMENT EFFECTS

By  
**Sarah A. Low and Kevin T. McNamara**

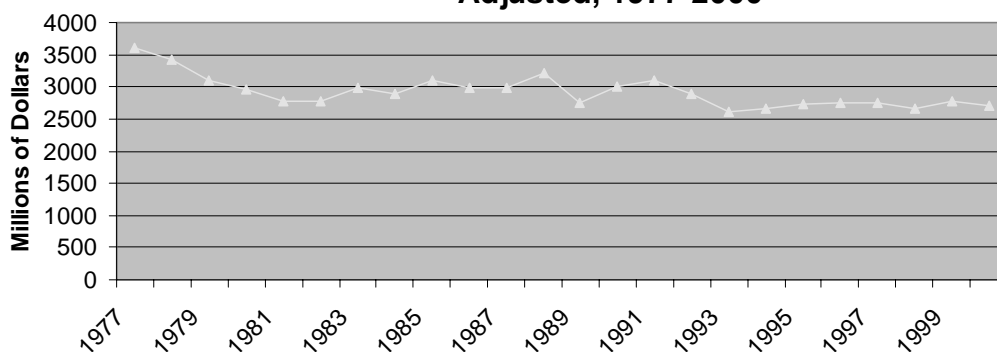
The Food Industry sector contributed \$2.7 billion to Indiana gross state product (GSP) in 2000 and employed over 32,000 workers with an average wage of \$33,000. This paper provides an overview of the Food Industry in Indiana and how it impacts the economic welfare of Indiana residents and agricultural producers.

The industry analysis described in this paper presents data collected using the Standard Industrial Classification (SIC, major group 20) definition of the Food and Kindred Product sector, referred to as the Food Industry sector.<sup>1</sup> The Food Industry sector includes any establishment manufacturing or processing foods and beverages for human consumption and certain related products such as manufactured ice, chewing gum, vegetable and animal fats and oils, prepared feeds for animals and fowls, and meat processing and packing, according to the most recent Standard Industrial Classification Manual, Office of Management and Budget, 1987.

## Gross State Product Contribution

The Food Industry contribution was \$2.716 billion to Indiana GSP in 2000.<sup>2</sup> In 1977 the Food Industry accounted for \$3.607 billion of Indiana GSP and declined for fifteen years, until 1993, dropping by 28% to \$2.601 billion (Figure 1). Since 1993, Food Industry GSP has increased by \$115 million, or 4% (all dollar figures are adjusted to a base year of 2000). As a size comparison, GSP for the Food Industry is higher in Indiana than for the entire state's Communication GSP (\$2.519 billion).

**Figure 1. Food Processing Industry GSP,  
Adjusted, 1977-2000**



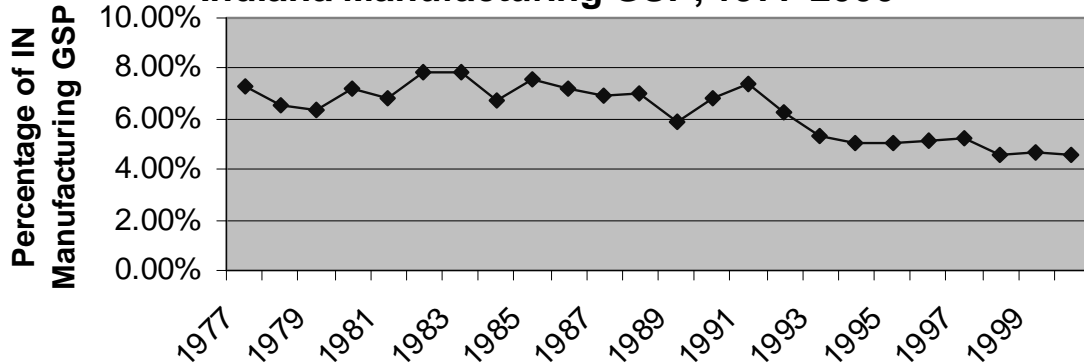
Source: Bureau of Economic Analysis, Regional Accounts Data, U.S. Census, 2000

<sup>1</sup> Standard Industrial Classification was the statistical classification standard for all federal economic statistics classified by industry up to the year 2002, when the North American Industrial Classification System (NAICS) replaced SIC. SIC data is used in this paper, except where noted. NAICS industry 311 was used to define Food Processing where used.

<sup>2</sup> References used in this paper include: Bureau of Economic Analysis, Regional Economic Data; U.S. Census Bureau

The Food Industry composes 5% of Indiana’s manufacturing GSP (Figure 2). The Food Industry percent share of manufacturing GSP has been declining since 1992, when it was 7% of the state manufacturing GSP. The highest level in the period analyzed was 8% in 1984, and the lowest was 5% in 1999. Food Industry GSP as a share of manufacturing is declining due to growth in the manufacturing sector; alone it is stable.

**Figure 2. Food Industry as a Percentage Share of Indiana Manufacturing GSP, 1977-2000**

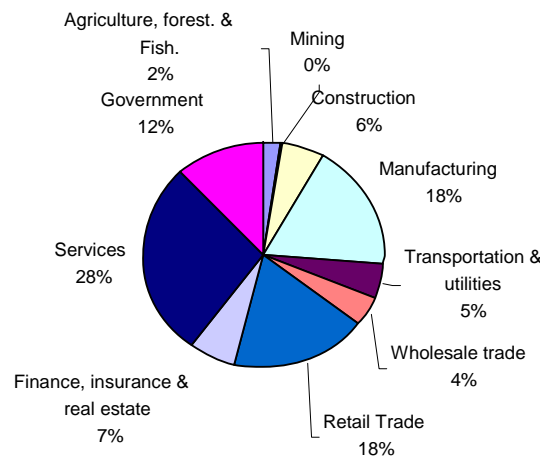


Source: Bureau of Economic Analysis, Regional Accounts Data, U.S. Census, 2001

**Employment Effects**

Indiana employment in 2002 was concentrated in the manufacturing, services and retail trade sectors. Figure 3 shows that 18% of Indiana’s workforce is in the manufacturing sector, which includes Food Industry manufacturers. See Figure 4 for more details about the manufacturing sector.

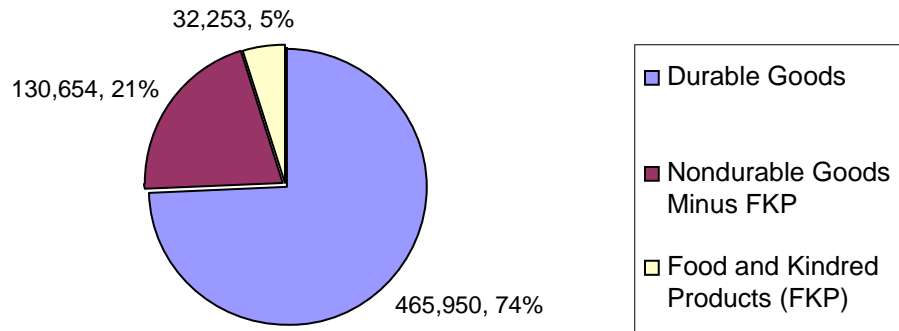
**Figure 3. Indiana Employment, by Sector, 2002**



Source: Bureau of Economic Analysis, Regional Accounts Data, U.S. Census, 2002

Indiana had 32,253 employed in the Food Industry sector in 2001 (the most recent available data), using the North American Industrial Classification System (NAICS); this is 5% of Indiana’s manufacturing sector jobs. Figure 4 shows the breakdown of the manufacturing sector into durable and non-durable goods manufacturing. Figure 4 also illustrates the size of the Food Industry sector in relation to other nondurable goods manufacturers.

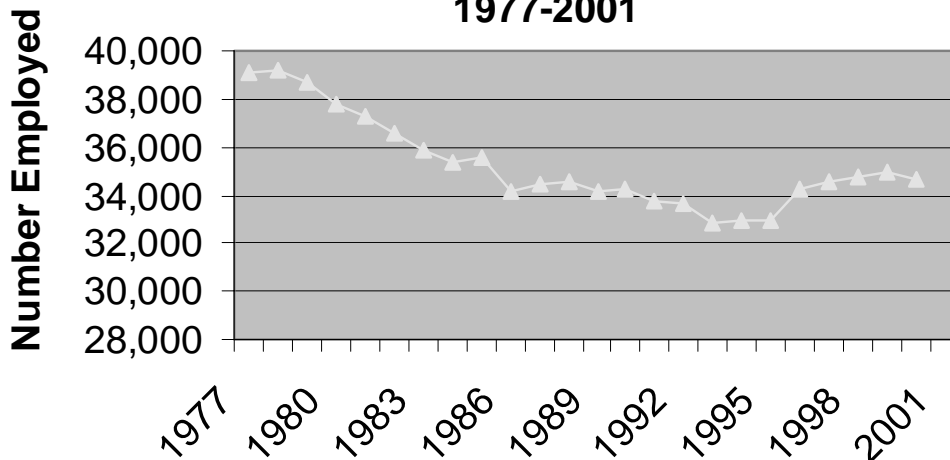
**Figure 4. Indiana Manufacturing Jobs, 2001**  
**Total Manufacturing: 628,857**



Source: Bureau of Economic Analysis, Regional Accounts Data, U.S. Census, 2001

The numbers of Food Industry employees have declined since 1977. At a low level in 1993, employment was at 32,865, a decrease of 16% since 1977. Employment in the sector has increased by 5% since 1993 and is currently at 34,607 with little change since 1997.

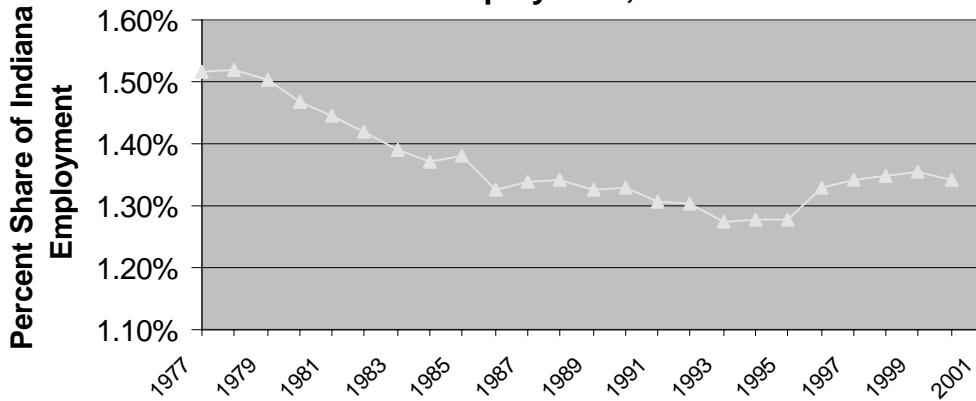
**Figure 5. Indiana Food Industry Employment, 1977-2001**



Source: Bureau of Economic Analysis, Regional Accounts Data, U.S. Census, 2001

In 2000, 1.3% of total Indiana employment was in the Food and Kindred Product processing sector and this percentage been increasing since 1993 (Figure 6). In 1977, the Food and Kindred Product sector employed 1.5% of Indiana workers and this decreased by 16.4%, to a low of 1.3% in 1993. Employment in the sector has been stable since 1996.

**Figure 6. Indiana Food Industry Share of Employment, 1977-2001**

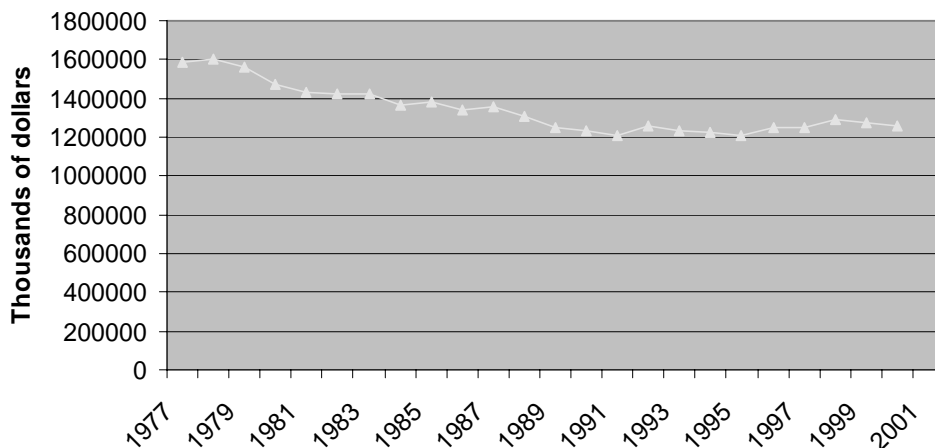


Source: Bureau of Economic Analysis, Regional Accounts Data, U.S. Census, 2001

**Income Effects**

Half, or \$1.3 million, of the Food Industry’s \$2.6 million gross state product was from employee personal income in 2000 (Figure 7). Income in 2000 adjusted dollars has decreased slightly over time, by 20% since 1977.

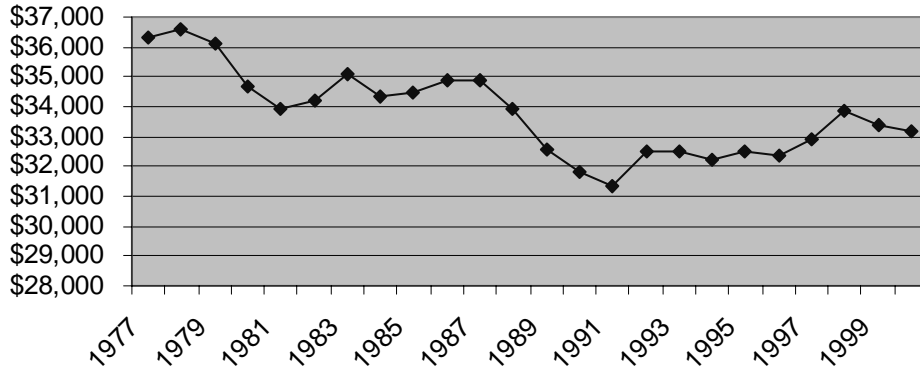
**Figure 7. Food Industry Employee Personal Income, adjusted, 1977-2001**



Source: Bureau of Economic Analysis, Regional Accounts Data, U.S. Census, 2000

Average wages of Food Industry employees in Indiana were \$33,149 in 2000 (Figure 8). Wages in this sector reached a low in 1991 of \$31,340, and were at a high in the evaluated period in 1978 at \$36,573, a decrease of 14%. Average wages were calculated using wage and salary disbursement and total employment in the Food Industry. All data are in real 2000 dollars.

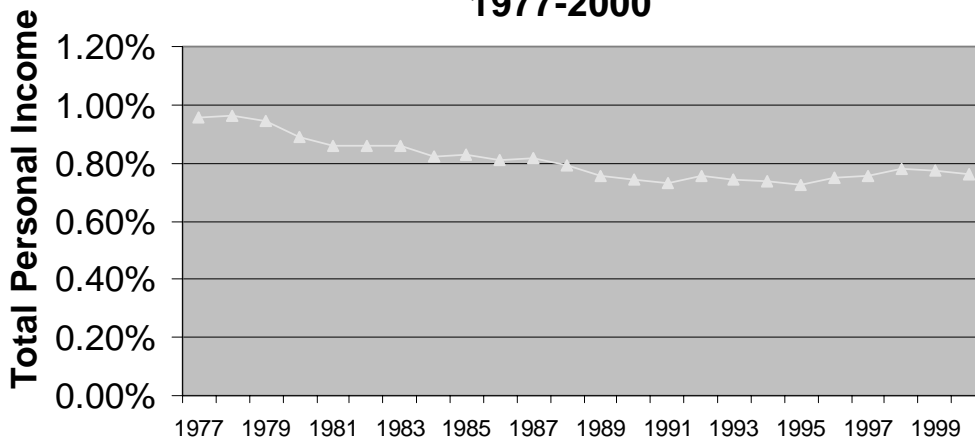
**Figure 8. Food Industry Average Wage in Indiana, adjusted, 1977-2000**



Source: US Census Bureau, 2000 and author's calculations

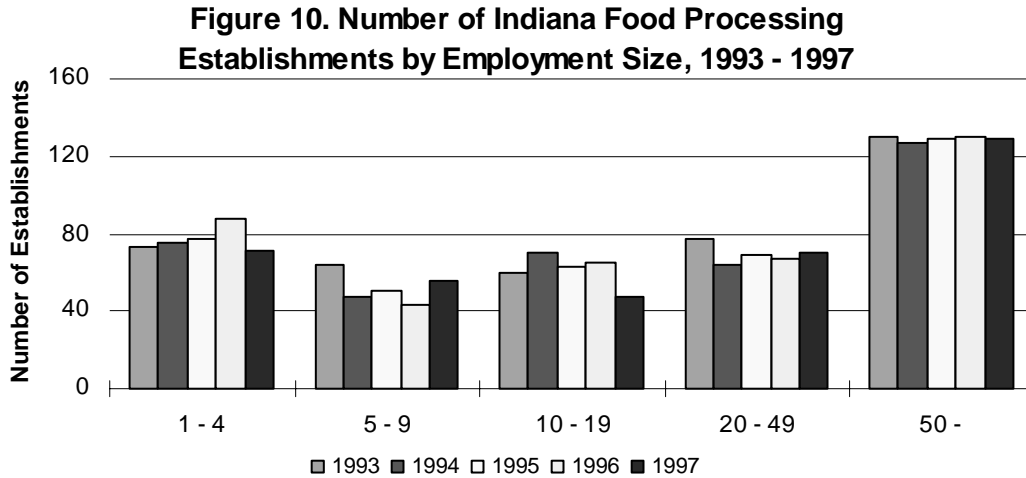
The Food Industry, as a percentage of total personal income in Indiana, has remained close to 0.76% since 1992 (Figure 9). This means that three dollars of every \$400 of Indiana income comes from the Food Industry. This percent share of total personal income has declined by one-fifth of a percent between 1977 and 2000 going from 0.96% to 0.76% respectively.

**Figure 9. Food Industry Share of Indiana Income, 1977-2000**



Source: Bureau of Economic Analysis, Regional Accounts Data, U.S. Census, 2000

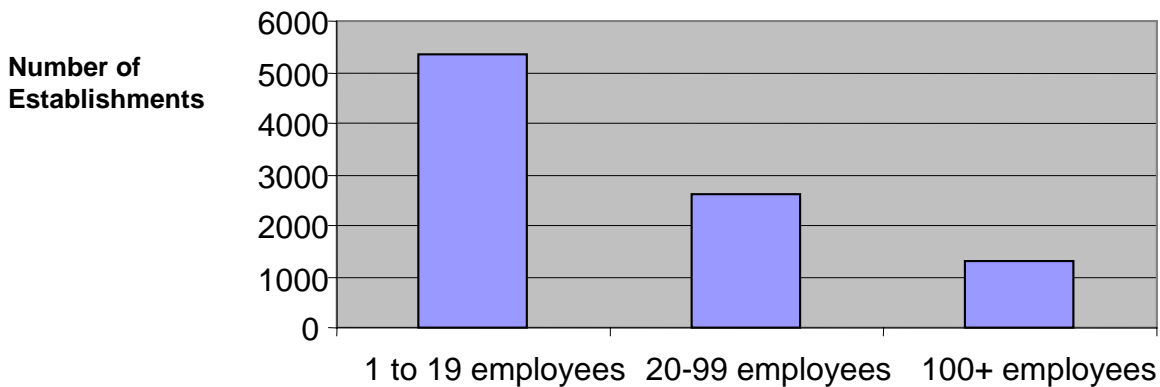
There were approximately 350 Indiana food processing establishments in 1997, the most recent available data (Figure 10). The majority of Food Industry employers have over 50 employees. The graph below shows the number of processing establishments each year data was available (1993-1997), in five size categories, based upon number of employees.



Source: U.S. Census Bureau, 1997

In 1997 there were 9249 manufacturing establishments in Indiana, of which 4% were Food Industry manufacturers (Figure 11). Food Industry manufacturing establishments that employed less than 20 people accounted for 88% of all such establishments, while 73% of manufacturing establishments in the state employed less than 20 people.

**Figure 11. Number of Indiana Manufacturing Establishments by Employment Size, 1997**

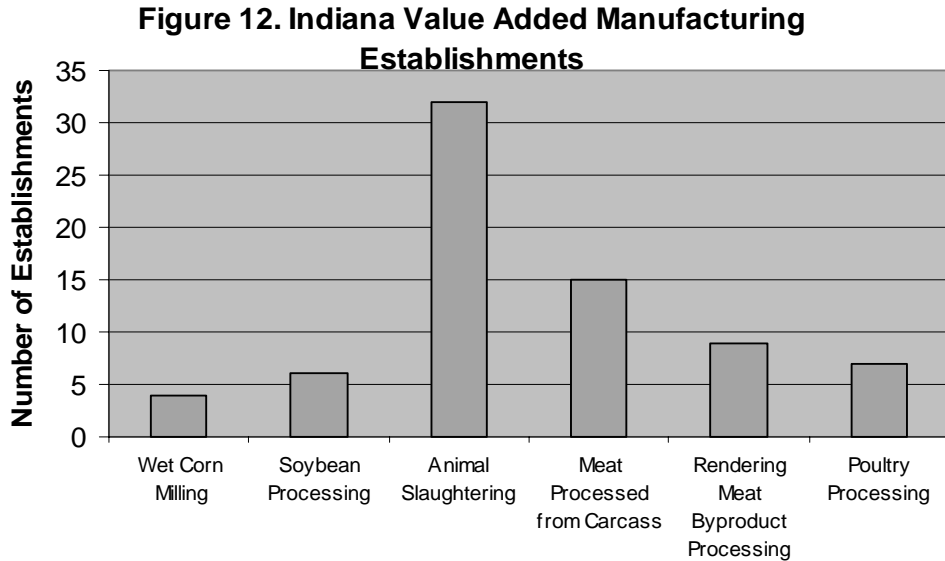


Source: U.S. Census Bureau, 1997



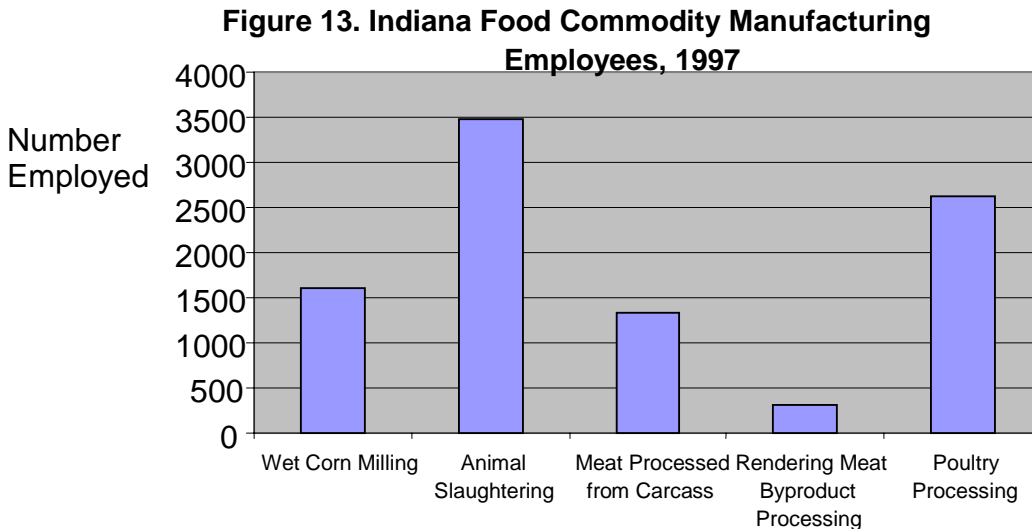
## Indiana Commodity Processing

Indiana's Food Industry increases value and demand for agricultural commodities produced in Indiana. Producers located near processing facilities save transportation costs and may receive contractual premiums for growing certain crops or raising certain livestock. There are 73 processing establishments in Indiana which process commodities, listed in Figure 12.



Source: U.S. Census Bureau, Manufacturing Industry Series, 1997

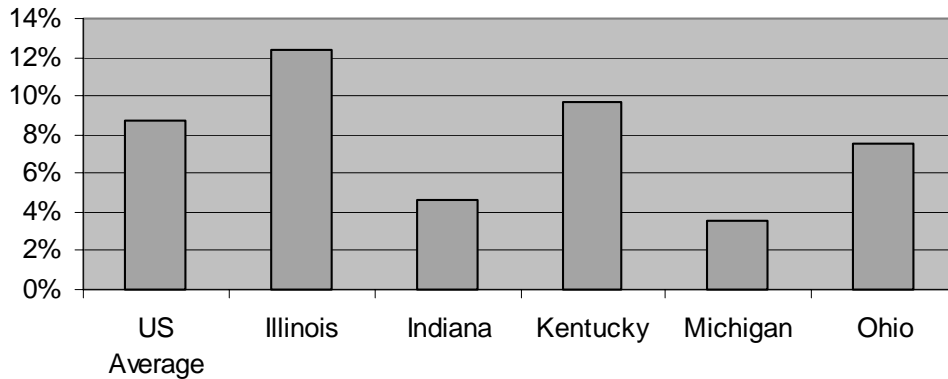
Commodity processing in Indiana employs over 9,340 workers, 4% of total Indiana manufacturing employment. Figure 13 shows employment in certain commodity processing sectors. Data are not available for soybean processing due to protecting the privacy of individual plants.



Source: U.S. Census Bureau, Manufacturing Industry Series, 1997

The average U.S. state's Food Industry constituted 9% of manufacturing GSP in 2000 (Figure 14). Half of Indiana's neighboring states, Illinois and Kentucky, had a higher than average Food Industry GSP. Only Michigan had a lower percentage of manufacturing in the Food Industry than Indiana, with 4% and 5%, respectively. Indiana's percent of Food Industry manufacturing is lower due to Indiana's large durable good manufacturing industry.

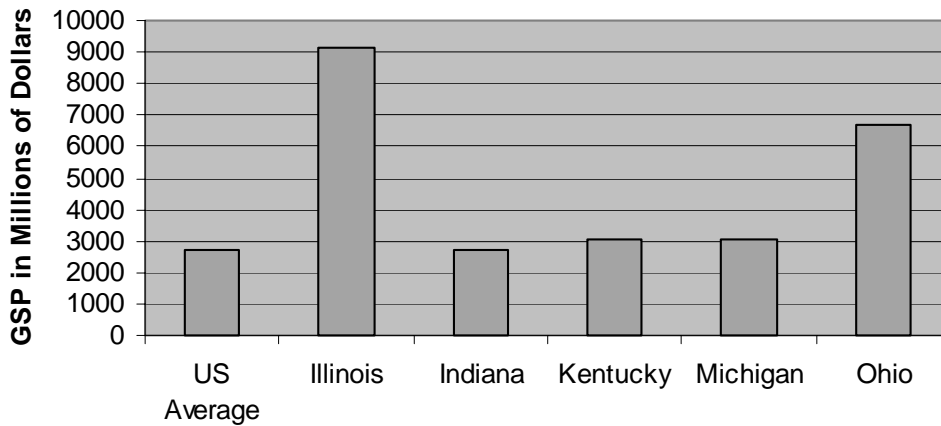
**Figure 14. Food Industry as a Percentage of Manufacturing GSP, 2000**



Source: Bureau of Economic Analysis, Regional Accounts Data, U.S. Census, 2000

Indiana's Food Industry GSP is similar to those of Kentucky, Michigan, and the U.S. average. Indiana's population is approximately half of Illinois and Ohio's, partially explaining the high Food Industry GSP these states have. Figure 15 shows that Indiana and neighboring states all have average or above average GSP in the food industry.

**Figure 15. Food Industry Gross State Product, 2000**



Source: Bureau of Economic Analysis, Regional Accounts Data, U.S. Census, 2000

### **Implications for Indiana's Economy**

Indiana's economy is constantly changing, but the Food Industry has remained an important sector, tying Indiana's production agriculture industry to the state's manufacturing sector. The Food Industry has contributed over \$2.7 billion to gross state product annually since 1995, and has proven to be stable economically.

Many Indiana workers are employed in the manufacturing sector; Food Industry employees account for 5% of the state's manufacturing sector employees, over 34,000 jobs. Indiana is a nationwide leader in durable goods manufacturing, but the Food Industry accounts for 20% of the state's nondurable good manufacturing.

The Food Industry sector contributes \$1.3 billion annually to GSP in employee personal income. This accounts for 0.76% of Indiana personal income, and the average wage in the Food Industry is over \$33,000.

The Food Industry increases demand for Indiana commodities and provides income and employment within the state. Adding value to Indiana commodities is important to producers and those working in the Food Industry. This is an important industry, contributing to gross state product, steady employment and personal income in Indiana.