



## ECONOMIC EMERGENCY PROGRAM

# Economic Impact of Lost Poultry Processing Jobs in Faribault, Minnesota

In late winter 2015, avian influenza was discovered in a flock of commercial turkeys in Minnesota. After the first flock was infected, the virus spread rapidly. As of June 11, 2015, the disease had been confirmed at 108 turkey and chicken farms in 23 Minnesota counties, resulting in the direct loss of over 9.0 million birds in the state.<sup>1</sup>

The loss of turkeys translates into fewer birds for processing. While still a relatively small portion of all turkey production in Minnesota (and the United States), the lost production has led to decreases in processing. On May 5, the Jennie-O plant in Faribault, Minnesota announced it would lay off 233 of its employees.

As the community of Faribault absorbs this announcement, city and county leaders will need to consider the future of their community. That future will have an effect on the economy of Faribault and Rice County. In response, University of Minnesota Extension, has prepared this economic emergency report. This report is presented in partnership with EDA Center at the University of Minnesota-Crookston.<sup>2</sup>

## SUMMARY OF FINDINGS

University of Minnesota Extension estimates that 233 lost jobs at a poultry processing plant in Faribault, Minnesota will result in the total loss for Rice County of 363 jobs, \$83.2 million in economic output, and \$18.2 million of labor income. In addition to the direct loss of jobs in the poultry processing industry, the county's industry sectors of trucking (17 jobs), restaurants (10 jobs), and specialized poultry processing (8 jobs) will be most affected by the reductions.

## WHAT IS AN ECONOMIC EMERGENCY?

Communities can face a sudden and unanticipated change in their local economy. A major employer announces it is reducing its workforce, a fire destroys an operating facility, or a flood damages downtown. In these situations, communities often need to make quick, but important, decisions about how to react. They work closely with the local business(es) affected and work to help the business(es) and community recover. The University of Minnesota economic emergency program is designed to provide community leaders with information to assist in making decisions regarding the community's future.

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<sup>1</sup> Source: Minnesota Board of Animal Health, <https://www.bah.state.mn.us/>.

<sup>2</sup> [www.edacenter.org](http://www.edacenter.org)

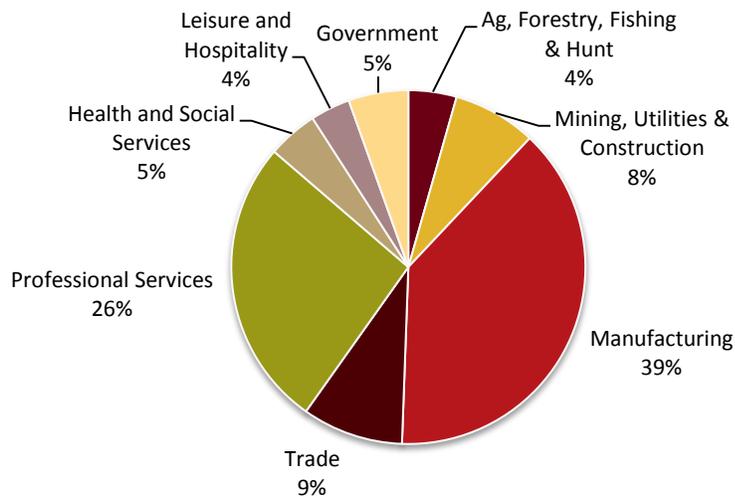
This analysis predicts the impact of a change in the economy of Rice County (data are not available at the city level). Information from the IMPLAN (MIG, Inc.) input-output model is used in this analysis.<sup>3</sup> There are a few important things to note related to this analysis and the tool used. Please see the section on assumptions and terms to understand these factors.

## OVERVIEW OF THE ECONOMY

In 2013, businesses and enterprises in Rice County produced \$4.9 billion of goods and services (measured as output). Manufacturers produced \$1.9 billion (or 39 percent) of the output (chart 1). By far, food processing is the largest sector in the manufacturing industry in Rice County. Food manufacturers created 63 percent of the manufacturing output. Jennie-O, with its poultry processing plant, is one of the key food manufacturers in the county. The 233 lost poultry processing jobs represent 10 percent of all food manufacturing jobs in the county.

Companies in the professional services industry produced \$1.3 billion of Rice County's total output (26 percent). The largest sectors in the professional services industry are educational services (which would include private colleges and universities); professional, scientific, and technical services; finance and insurance; and transportation and warehousing (listed in order of value of output). Sectors such as transportation and warehousing provide critical services to the poultry processing industry in Rice County.

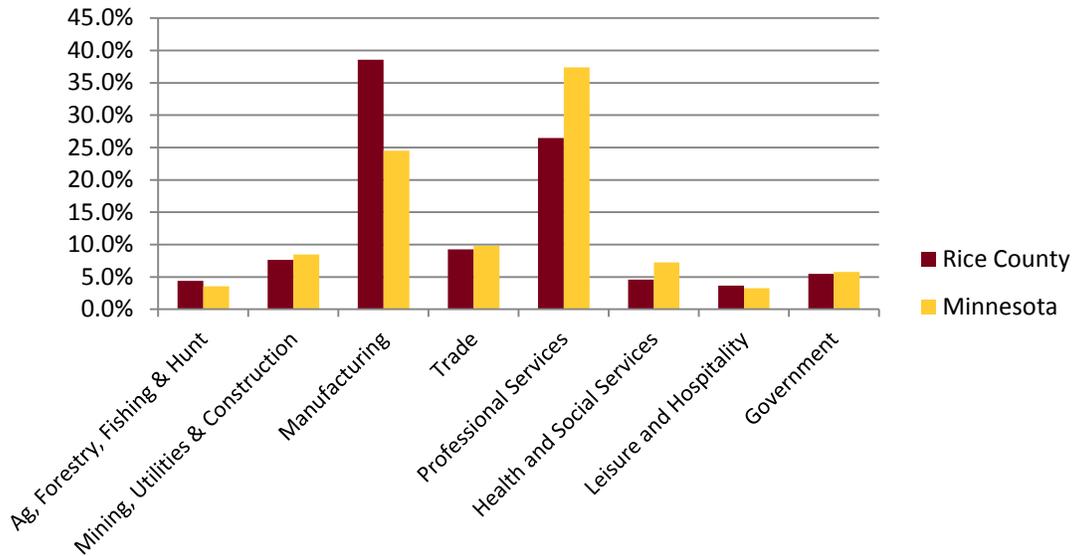
**Chart 1: Output by Industry, Rice County, 2013**



Manufacturing is more important in Rice County as compared to Minnesota (chart 2). In 2013, manufacturing accounted for 39 percent of Rice County's output compared to less than 25 percent for Minnesota. The trade-off is that Rice County has a smaller percentage of its output derived from the professional services industry. In other respects, Rice County closely mirrors the state.

<sup>3</sup> IMPLAN, Inc. [www.implan.com](http://www.implan.com).

**Chart 2: Percent of Output by Industry, Rice County Versus Minnesota**



According to the IMPLAN database, the average wage/salary across all jobs in Rice County is \$44,200, including the value of any benefits provided. The average wage of the manufacturing industry in the county is \$65,400. In Minnesota, the average wage for all jobs is \$55,100, again including any benefits provided. The average wage of the manufacturing industry in Minnesota is \$76,300.

### **ECONOMIC IMPACT OF LOST POULTRY PROCESSING JOBS**

On May 5, Jennie-O announced it would lay off 233 of its employees at its facility in Faribault (Rice County). The Jennie-O facility is a poultry processing facility. While the IMPLAN database does not have specific information regarding the Jennie-O facility, IMPLAN can make predictions about the economic impact of lost poultry processing jobs in Rice County.

The 233 jobs lost at the poultry processing facility are shown in the “direct” column of table 1. According to IMPLAN’s industrywide averages, 233 poultry processing employees will create an estimated \$64.8 million worth of output and generate \$12.7 million in labor income (salaries, wages, and benefits). The \$64.8 million of lost poultry processing output accounts for approximately five percent of Rice County’s food manufacturing output.

Poultry processing generates additional economic activity as a result of the business and its employees making purchases in the local economy. When the business makes purchases of inputs and supplies in the local economy, this creates indirect or business-to-business impacts. When the business’ employees make purchases in the local economy, this creates induced or consumer-to-business impacts. If these purchases decrease, as a result of the business closing or decreasing production, the corresponding local purchases will also decrease, causing a ripple of economic loss in the local community.

When employment at a poultry processing facility in Rice County decreases by 233 jobs, an additional estimated 130 jobs that serve the poultry processing plant and its employees will be affected. In total, 363 jobs in Rice County are predicted to be affected by the layoffs. There are nearly 31,500 jobs in Rice County, thus, the layoffs will affect about 1 percent of the total workforce in the county.

**Table 1: Economic Impact of Lost Poultry Processing Jobs: Rice County, Minnesota**

	Direct	Indirect	Induced	Total
Output (millions)	-\$64.8	-\$11.5	-\$6.9	-\$83.2
Employment	-233	-70	-60	-363
Labor Income (millions)	-\$12.7	-\$3.5	-\$2.0	-\$18.2

Estimates by University of Minnesota Extension

In addition to lost jobs, layoffs at a poultry processing facility will also affect output and labor income in the county. The poultry processing company itself will produce an estimated \$64.8 million less in output, which will contribute to a total loss of an estimated \$83.2 million in output (sales) in the county. This lost output equates to approximately 2 percent of output in the county.

Labor income will also drop in Rice County. Lost jobs at the processing plant will directly cause an estimated decrease in labor income of \$12.7 million for employees at the facility.<sup>4</sup> The combination of lost spending of employee wages and declines in spending by the processing facility for supplies, will decrease total labor income in the county by a total of \$18.2 million.

Note: at this time, Jennie-O has not announced plans for the future of the poultry processing facility. If the facility resumes operations, the impacts of the loss will dissipate.

### Top Industries Impacted

The IMPLAN model can also provide estimates of the sectors in Rice County that will feel the largest magnitude of impacts from the loss of poultry processing jobs. In terms of employment, the largest indirect and induced impacts will be in the trucking and specialized poultry processing sectors (chart 3). The IMPLAN model estimates the industries affected based on the inputs an industry purchases. Since poultry production is a major input into poultry processing, the IMPLAN model is estimating losses in the sector. However, in this case, it is the shortage of supply that is driving the decline in poultry processing, therefore, job losses in the production sector may be fewer than predicted, as they have already occurred.

<sup>4</sup> Note: Labor income is estimated by the model for an average poultry processing facility. Jennie-O's actual payments for labor may differ.

**Chart 3: Top Industries Impacted by Lost Poultry Processing Jobs, Rice County**

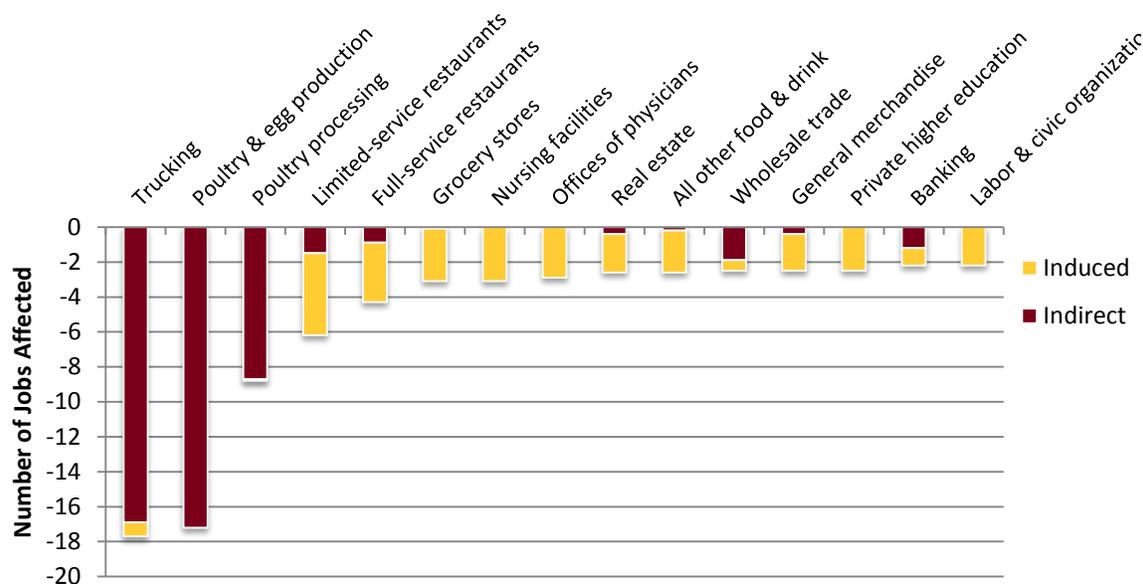


Chart 3 can help decision makers understand the other sectors in Rice County that will be affected by the poultry processing job losses. Of the predicted 130 jobs affected in sectors beyond poultry processing, an estimated 17 jobs will be affected in Rice County’s trucking sector and 9 jobs will be affected in Rice County’s specialized poultry processing sector.

### Focusing on Faribault

The input-output model, IMPLAN, only allows analysis on a county-level. Therefore, the results above detail the impacts on Rice County. There is a modest adjustment that can be made to the model to tailor the results more towards the situation in the City of Faribault. Specifically, one-third of the poultry processing facility employees live in Faribault. Thus, the model was modified to reflect that only one-third of employee income is spent in the local economy.

After adjusting for employee commuting patterns, the total economic loss related 233 poultry processing plant employee layoffs will be \$78.5 million, including \$16.9 million in lost labor income (table 2). The lost 233 jobs will result in a total of 328 jobs being affected in the economy.

**Table 2: Economic Impact of Lost Poultry Processing Jobs: Focus on Faribault**

	Direct	Indirect	Induced	Total
Output (millions)	-\$64.8	-\$11.5	-\$2.2	-\$78.5
Employment	-233	-70	-25	-328
Labor Income (millions)	-\$12.7	-\$3.5	-\$0.7	-\$16.9

Estimates by University of Minnesota Extension

## **Impacts on Rest of Minnesota**

The IMPLAN model can also provide estimates of the impact of lost poultry processing jobs in Rice County on the rest of Minnesota. In addition to the lost jobs in Rice County, the IMPLAN model estimates 230 jobs will be lost across Minnesota. The sectors with the largest job losses are poultry and egg production (again, these losses precede the poultry processing declines), wholesale trade, and the management of companies and enterprises.

## **PREPARED BY UNIVERSITY OF MINNESOTA EXTENSION**

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## **ASSUMPTIONS AND TERMS**

Economic impact analysis is based on several critical assumptions. An understanding of the assumptions ensures the results are interpreted properly. Here are the key assumptions made in this analysis.

- One job is one job in the IMPLAN database, regardless if the job is full-time, part-time, or seasonal. The jobs considered here are not full-time equivalents. Therefore, it isn't unusual for industries with high levels of part-time employment to experience higher employment impacts.
- The model is linear. Changes in output or employment can be modeled in a linear fashion. For example, if only half of the employees are permanently laid off, the economic impact numbers can be divided in half.
- The database is built on data available publicly. When data is not available for a specific industry, say due to data disclosure issues, econometric models are used to create estimates for the industry.

## **KEY TERMS**

The following are a few key terms used in economic impact analysis.

### **Output**

Output is measured in dollars and is equivalent to total sales. The output measure can include significant double counting. For example, think of corn. The value of the corn is counted when it is sold to the mill, again when it is sold to the dairy farmer, again as part of the price of fluid milk, and then yet again when it is sold as cheese. The value of the corn is built into the price of each of these items, and then the sales of each of these items are added up to get total sales (or output).

### **Employment**

Employment includes full- and part-time workers and is measured in annual average jobs. Total wage and salaried employees as well as the self-employed are included in employment estimates in IMPLAN. Because employment is measured in jobs and not in dollar values, it tends to be a very stable metric.

In the model, one job is one job, regardless if the job is full-time, part-time, and seasonal.

### **Labor Income**

Labor income measures the value that is added to the product by the labor component. For example, in the corn example, when the corn is sold, a certain percentage of the sale goes to the farmer for his/her labor. Then when the mill sells the corn as feed to the dairy farmer, it includes in the price some markup for its labor costs. When the dairy farmer sells the milk to the cheese manufacturer, he/she includes a value for his/her labor. These individual value increments for labor can be measured. This is labor income. Labor income does not include double counting.

Labor income is comprised of employee compensation (wages, salaries, and benefits) and proprietor income. Proprietor income includes income for the self-employed, which is how many agricultural producers register their income.

### **Direct Impact**

The direct impact is equivalent to the initial change in the economy.

### **Indirect Impact**

The indirect impact is the summation of changes in the local economy that occur due to **spending for inputs** (goods and services) by the industry or industries directly impacted. For instance, if employment in a manufacturing plant increases by 100 jobs, this implies a corresponding increase in output by the plant. As the plant increases output, it must also purchase more of its inputs, such as electricity, steel, and equipment. As it increases its purchase of these items, its suppliers must also increase its production, and so forth. As these ripples move through the economy, they can be captured and measured. Ripples related to the purchase of goods and services are indirect impacts.

### **Induced Impact**

The induced impact is the summation of changes in the local economy that occur due to **spending by labor** -- employees in the industry or industries directly impacted. For instance, if employment in a manufacturing plant increases by 100 jobs, the new employees will have more money to spend to purchase housing, buy groceries, and go out to dinner. As they spend their new income, more activity occurs in the local economy. This can be quantified and is called the induced impact.

### **Total Impact**

The total impact is the summation of the direct, indirect and induced impacts.