

W. Frank Barton School of Business

# Center for Economic Development and Business Research

## Kansas Manufacturing

Food Manufacturing

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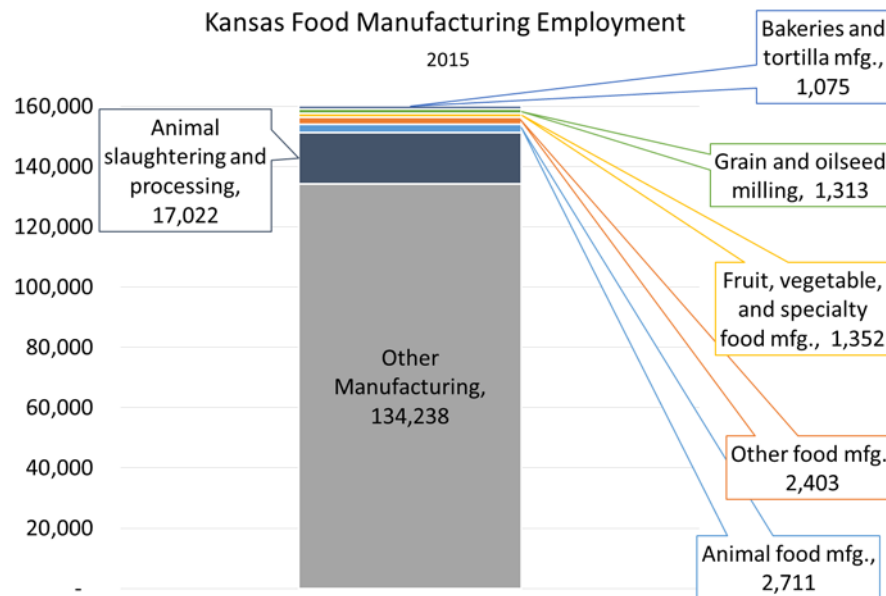
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## Food Manufacturing

Industries in the Food Manufacturing subsector transform livestock and agricultural products into products for consumption. The industry groups are distinguished by the raw materials they process. The food products manufactured in these establishments are typically sold to wholesalers or retailers, but retail bakeries and candy products made on the premises, not for immediate consumption are included. Establishments primarily engaged in manufacturing beverages are not included in this subsector.

In Kansas, food manufacturing is generally a low-wage industry with relatively stable employment. Over the past decade employment in this industry has averaged about 31,000 workers, and in 2015, was less than one percent below 2005 levels. Wages are generally below the state average for manufacturing.<sup>1</sup>

There are six components of food manufacturing in Kansas, totaling sixteen percent of total state manufacturing employment. Animal slaughtering and processing is a major driver in the state economy, providing 11 percent of all manufacturing jobs in the state. Animal food and other food manufacturing each account for about two percent of total state manufacturing employment. Fruit, vegetable, and specialty food manufacturing, grain and oilseed milling, and bakeries and tortilla manufacturing, each account for less than one percent of total state manufacturing employment.



Source: U.S. Census Bureau Annual Survey of Manufacturers 2015

<sup>1</sup> Unless otherwise referenced, all data in this report is from the U.S. Census Bureau Annual Survey of Manufactures 2015

## Animal Slaughtering and Processing

The animal slaughtering and processing industry includes animal slaughtering, meat processed from carcasses, rendering and meat byproduct processing and poultry processing. Nationally, this industry is projected to see annualized growth of less than one percent over the next five years. Consumer demand is expected to be stable due to population growth and export demand. However, unpredictable weather conditions and disease outbreaks bring volatility to the industry.<sup>2</sup>

There is a high concentration of animal slaughtering and processing in Kansas. It is almost two and a half times more concentrated in Kansas than in the United States as a whole.

In this industry, there are four establishments with over 1,000 employees which account for about 70 percent of state employment. There are approximately 50 establishments in this industry in Kansas with fewer than 20 employees.<sup>3</sup> Cargill Meat Solutions, Inc. is the largest employer in this industry in the state. Seaboard Corp., National Beef Packing Co., and Tyson Fresh Meats are also large employers in Kansas.<sup>4</sup>

### Employment

The number of animal slaughtering and processing jobs in Kansas has decreased steadily over the past decade, decreasing an average of 0.7 percent annually since 2005.<sup>5</sup>

Of the 17,022 animal slaughtering and processing employees in Kansas in 2015, 89 percent were production workers and 11 percent were nonproduction workers. This is 0.13 nonproduction workers for each production worker in the state, slightly lower than the national average of 0.15 nonproduction workers for each production worker.

Between 2014 and 2015 animal slaughtering and processing employment decreased in Kansas and increased in the United States. There was a total decrease in Kansas of 154 workers, 149 production workers, and five nonproduction workers.

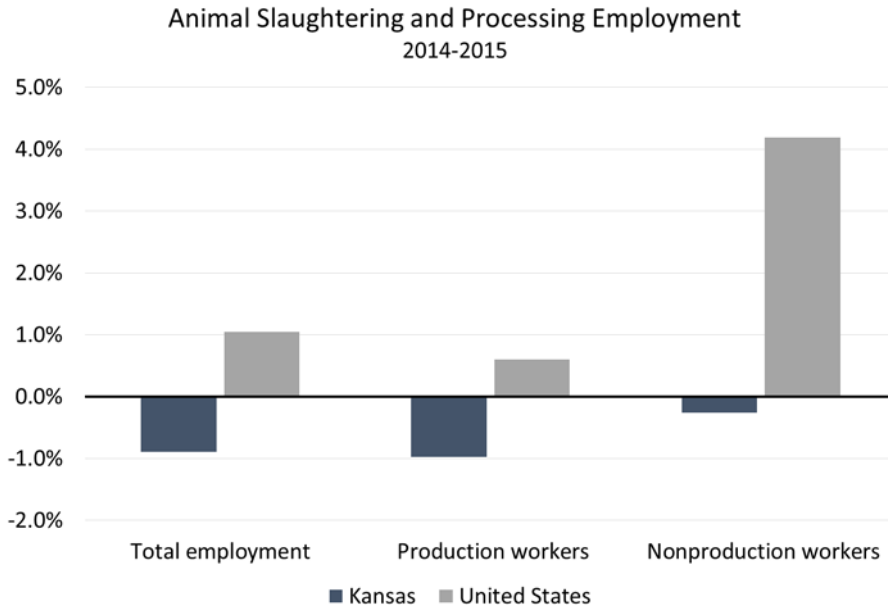
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<sup>2</sup> IBISWorld Meat, Beef & Poultry Processing in the U.S. October 2016

<sup>3</sup> U.S. Census Bureau – County Business Patterns 2014

<sup>4</sup> Infogroup, Inc.

<sup>5</sup> Bureau of Labor Statistics – Quarterly Census of Employment and Wages



Source: U.S. Census Bureau Annual Survey of Manufacturers 2015

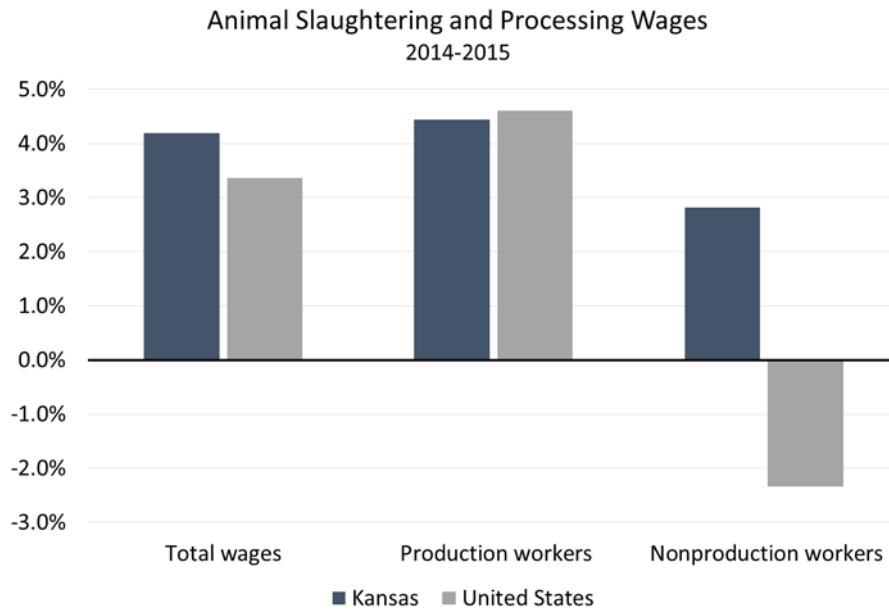
## Wages

Animal slaughtering and processing generally is a low-wage industry. The average wage in 2015 for workers in this industry in Kansas was \$38,149, 32 percent lower than the average wage for manufacturing in the state. At \$35,186 annually, production workers in animal slaughtering and processing earned 26 percent less than the average for production workers in Kansas. At \$61,191 annually, nonproduction workers earned 20 percent less than the average for nonproduction workers in manufacturing in Kansas.

<b>Animal Slaughtering and Processing Employment Annual Wage per Worker 2015</b>	
Total employment	\$38,149
Production workers	\$35,186
Nonproduction workers	\$61,191

Source: U.S. Census Bureau Annual Survey of Manufacturers

Between 2014 and 2015, total wages in animal slaughtering and processing increased in both Kansas and the United States, with the relative increase in Kansas being somewhat larger, at a 4.2 percent gain relative to a 3.4 percent gain. This can be attributed to the increase in wages for both production and nonproduction workers in Kansas. The average annual wage for nonproduction workers decreased in the United States as a whole.



Source: U.S. Census Bureau Annual Survey of Manufacturers 2015 - Inflation adjusted growth rate.

In Kansas, there have been decreases in employment and wages for both production and nonproduction workers in animal slaughtering and processing. This indicates that there is a shortage of available labor to this industry.

### Productivity

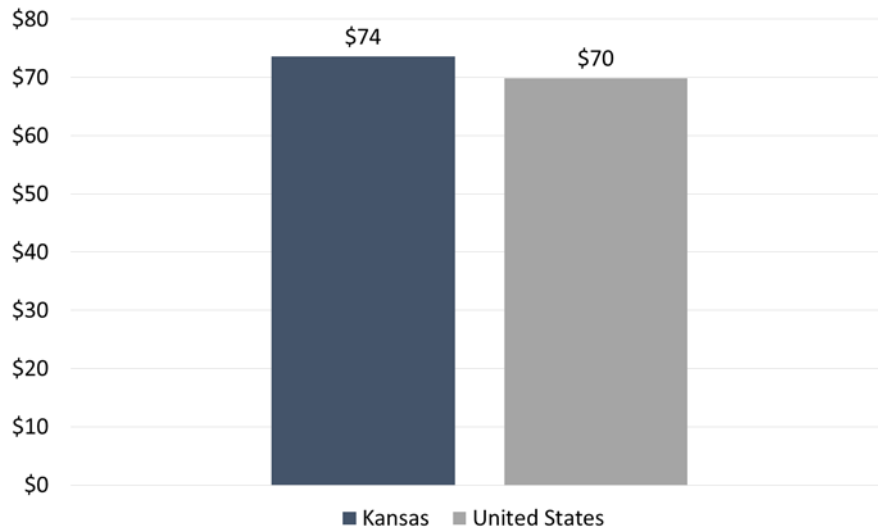
In 2015 animal slaughtering and processing workers in Kansas worked an average of 40.44 hours a week, down 0.4 percent from 2014. This is slightly more than the national average of 39.83 hours a week for animal slaughtering and processing workers, which decreased 0.5 percent from 2014. It is also more than the average for manufacturing in Kansas of 39.06 hours a week.

In the United States the average value added per production worker hour in manufacturing, in general, was \$152 in 2015.<sup>6</sup> In 2015, the average value added per production worker hour for animal slaughtering and processing was \$70. The Kansas average was \$74. This difference in productivity may possibly be attributed to the difference in the specific type of manufacturing done in Kansas, the amount of capital investment by local companies, the skill and experience of local production workers, or other factors.

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<sup>6</sup>Productivity is an average measure of the efficiency of production. It can be measured as the ratio of inputs to outputs. In measuring the efficiency of manufacturing industries, it is common to measure productivity as the ratio of the production hours to the value added from the manufacturing activity. The value added from the manufacturing activity is determined by subtracting the cost of materials and supplies from the value of shipments.

Animal Slaughtering and Processing  
Value Added per Production Worker Hour 2015



Source: U.S. Census Bureau Annual Survey of Manufacturers 2015

## Animal Food Manufacturing

The animal food manufacturing industry includes dog, cat, and other animal food manufacturing. Nationally, this industry is expected to grow moderately over the next five years. Expected increases in disposable income and pet ownership will increase demand. However, exports are expected to decline.<sup>7</sup>

Animal food manufacturing has a high level of concentration of workers in Kansas, over four times more than the United States as a whole. The largest employers in animal food manufacturing in Kansas are Simmons Pet Food Inc. Big Heart Pet Brands, CJ Foods, Inc., Cargill, Inc., Kanza Cooperative, and Triple T’s Foods, each employing over 100 workers.<sup>8</sup> However, there are more than 50 establishments in the state with fewer than 50 employees.<sup>9</sup>

## Employment

Between 2009 and 2015, Kansas employment in animal food manufacturing has grown, adding approximately 825 workers. There was significant growth in 2009 and 2010, increasing 13.9 percent and 12 percent, respectively. The industry employment has grown at an average annual rate of 3.2 percent since 2011.<sup>10</sup>

Of the 2,711 animal food manufacturing workers in Kansas in 2015, 73 percent were production workers and 27 percent were nonproduction workers. This is 0.37 nonproduction workers for each production

<sup>7</sup> IBISWorld – Animal Food Production in the U.S. September 2016

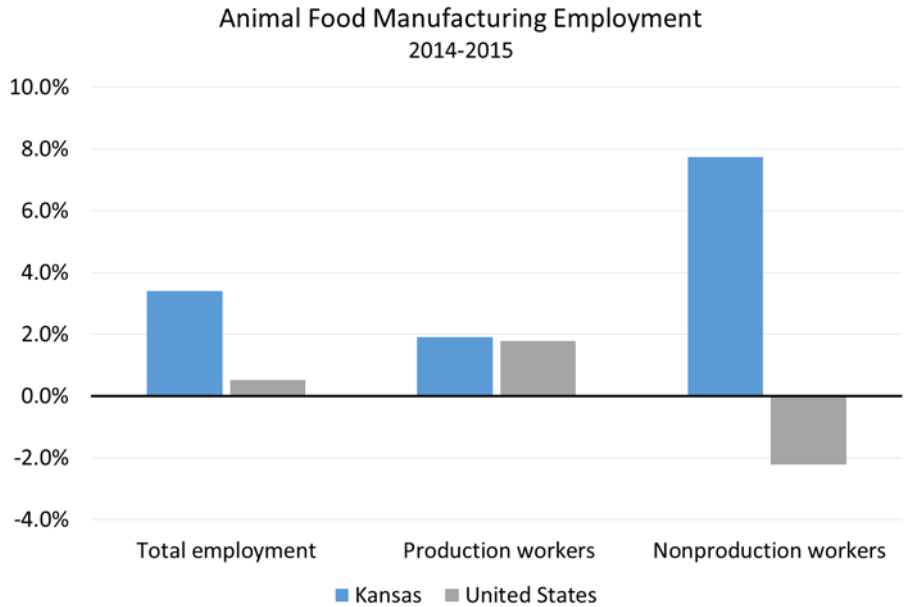
<sup>8</sup> Infogroup, Inc.

<sup>9</sup> U.S. Census Bureau – 2014 County Business Patterns

<sup>10</sup>Bureau of Labor Statistics – Quarterly Census of Employment and Wages

worker in the state, much lower than the national average for animal food manufacturing of 0.44 nonproduction workers for each production worker.

Between 2014 and 2015, total animal food manufacturing employment increased in both Kansas and the United States, with the relative increase in Kansas being larger, a 3.4 percent gain relative to a 0.5 percent gain. There was a total increase in Kansas of 89 workers. This was a result of an increase of 37 production workers and an increase of 52 nonproduction workers. In the United State as a whole, production workers increased and nonproduction workers decreased.



Source: U.S. Census Bureau Annual Survey of Manufacturers 2015

## Wages

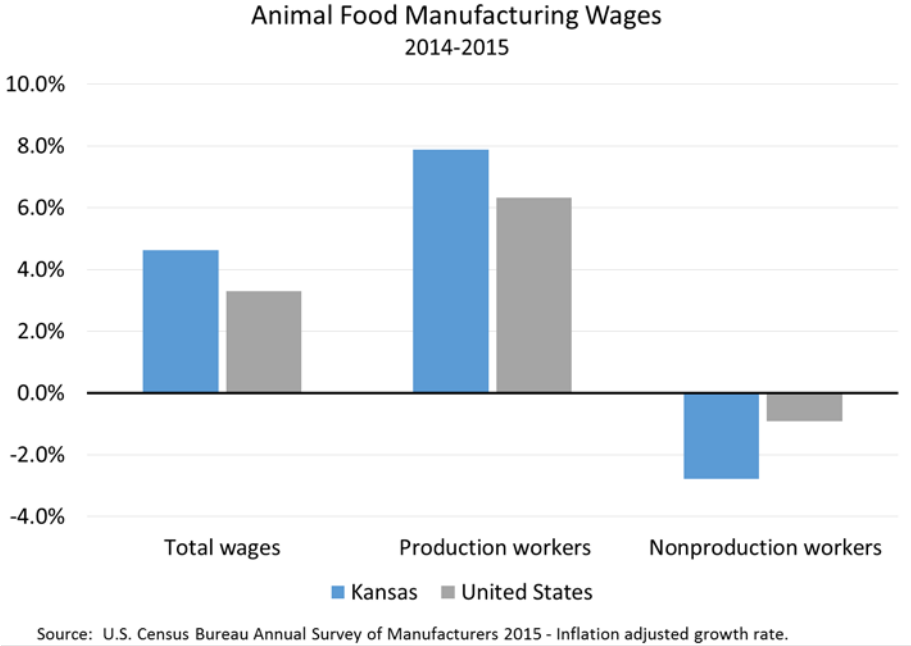
Jobs in animal food manufacturing generally provide a moderate manufacturing wage in Kansas. The average wage in 2015 for this industry in Kansas was \$52,824, 5.3 percent lower than the average wage for manufacturing in the state. At \$48,647 annually, production workers in animal food manufacturing earned 2.2 percent more than the average for production workers in Kansas. At \$64,268 annually, nonproduction workers earned 16 percent less than the average for nonproduction workers in manufacturing in Kansas.

<b>Animal Food Manufacturing Annual Wage per Worker 2015</b>	
Total employment	\$52,824
Production workers	\$48,647
Nonproduction workers	\$64,268

Source: U.S. Census Bureau Annual Survey of Manufacturers



Between 2014 and 2015, wages in animal food manufacturing increased in both Kansas and the United States. The relative increase in Kansas was somewhat larger at a 4.6 percent gain compared to a national gain of 3.3 percent. The majority of the increase can be attributed to increased wages of production workers. These increases were somewhat offset by decreases in the average wage of nonproduction workers.

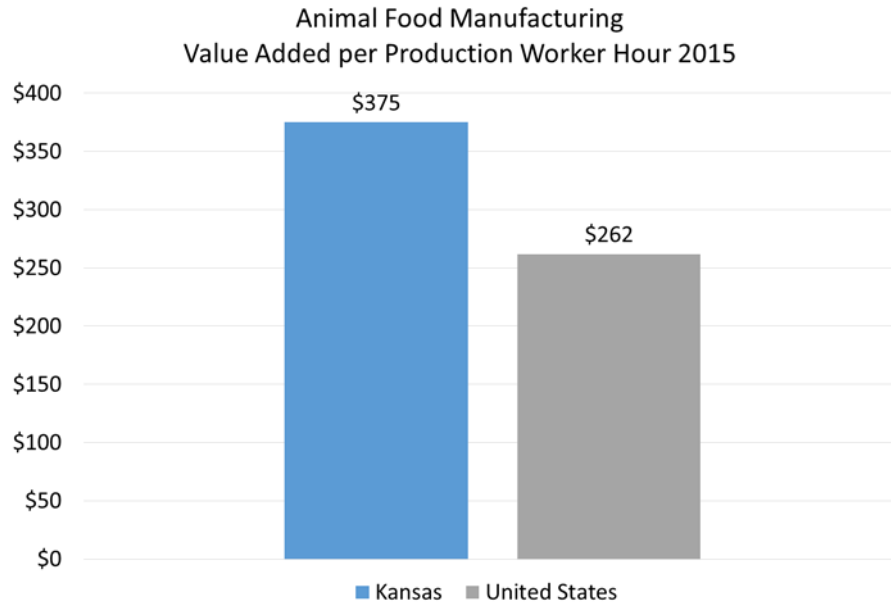


In Kansas, there has been an increase in employment and wages for production workers in animal food manufacturing. This is an indication of an increased demand for these workers. However, there has been an increase in employment and a decrease in wages of nonproduction workers, indicating there is a sufficient supply of higher-skilled workers to this industry.

**Productivity**

In 2015 animal food manufacturing workers in Kansas worked an average of 42.50 hours a week, down 7.6 percent from 2014. This is somewhat more than the national average of 42.08 hours, which decreased 0.8 percent from 2014. It is more than the average for manufacturing in Kansas of 39.06 hours a week.

In the United States, the average value added per production worker hour in manufacturing, in general, was \$152 in 2015. In 2015 the average value added per production worker hour for animal food manufacturing was \$262 in the United States. The Kansas average was \$375. This difference in productivity may possibly be attributed to the difference in the specific type of manufacturing done in Kansas, the amount of capital investment by local companies, the skill and experience of local production workers, or other factors.



Source: U.S. Census Bureau Annual Survey of Manufacturers 2015

## Other Food Manufacturing

The other food manufacturing industry includes producers of snack foods, coffee and tea, flavoring syrup and concentrate, seasoning and dressing, spice and extract, and all other miscellaneous food manufacturing.

This industry accounts for 1.5 percent of total Kansas manufacturing employment, but there is a low concentration of employment in this industry in Kansas relative to the United States as a whole. There are four percent fewer workers in Kansas than there are in the United States in general.

The largest Kansas employers in this industry are all other miscellaneous food producers. These producers include Du Pont Nutrition & Health, Tyson Prepared Foods, Inc., Cereal Ingredients and Tortilla King Inc. These producers each employ over 100 employees.<sup>11</sup> However, the majority of firms in this industry employ fewer than 50 workers.<sup>12</sup>

## Employment

Employment growth in other food manufacturing has generally increased at an average rate of 2.9 percent a year since 2005. However, there were decreases in employment in 2009, 2012 and 2013.

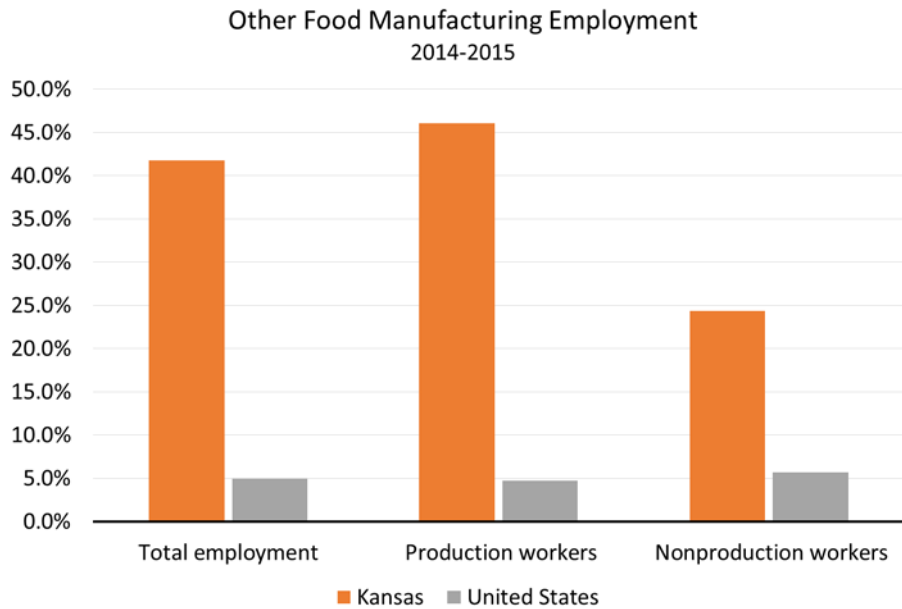
Of the 2,403 other food manufacturing workers in Kansas in 2015, 83 percent were production workers and 17 percent were nonproduction workers. This is 0.21 nonproduction workers for each production

<sup>11</sup> Infogroup, Inc.

<sup>12</sup> U.S. Census Bureau – County Business Patterns 2014

worker in the state, much lower than the national average for other food manufacturing of 0.37 nonproduction workers for each production worker.

Between 2014 and 2015, total other food manufacturing increased in both Kansas and the United States, with the relative increase in Kansas being much larger, a 41.8 percent gain relative to a 5 percent gain. There was a total increase in Kansas of 708 workers. This was a result of an increase of 627 production workers and 81 nonproduction workers. In the United States as a whole, production and nonproduction workers also increased.



Source: U.S. Census Bureau Annual Survey of Manufacturers 2015

## Wages

Wages for jobs in other food manufacturing are generally low for production workers, but very high for nonproduction workers. The average wage in 2015 for this industry in Kansas was \$47,921, 14.1 percent lower than the average wage for manufacturing in the state. At \$36,564 annually, production workers in animal food manufacturing earned 23.1 percent less than the average for production workers in Kansas. At \$102,481 annually, nonproduction workers earned 34 percent more than the average for nonproduction workers in manufacturing in Kansas. This could be due to the fact that 73 percent of the establishments in this industry are S-corporations, individual proprietorships, or partnerships.<sup>13</sup> Many of the nonproduction workers could be owners of the company.

<sup>13</sup> U.S. Census Bureau – County Business Patterns 2014

Other Food Manufacturing Annual Wage per Worker 2015	
Total employment	\$47,921
Production workers	\$36,564
Nonproduction workers	\$102,481

Source: U.S. Census Bureau Annual Survey of Manufacturers

Between 2014 and 2015, total average wages in Kansas in other food manufacturing decreased by 4 percent and remained unchanged at the national level. This can be attributed to increases in the average wage of production workers that were more than offset by decreases in the average wage of nonproduction workers.



Source: U.S. Census Bureau Annual Survey of Manufacturers 2015 - Inflation adjusted growth rate.

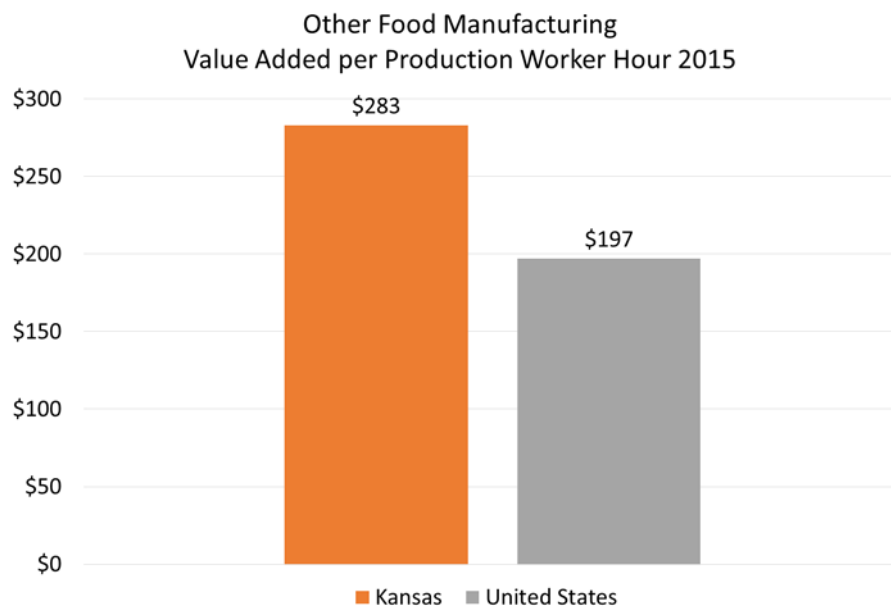
In Kansas, there has been an increase in employment and wages for production workers in other food manufacturing. This is an indication of an increased demand for these workers. However, there has been an increase in employment and a decrease in wages of nonproduction workers, indicating there is a sufficient supply of higher-skilled workers to this industry.

### Productivity

In 2015, other food manufacturing workers in Kansas worked an average of 41.82 hours a week, up 5.2 percent from 2014. This is somewhat more than the national average of 40.45 hours, which decreased 0.1 percent from 2014. It is more than the average for manufacturing in Kansas of 39.06 hours a week.

In the United States, the average value added per production worker hour in manufacturing, in general, was \$152 in 2015. In 2015 the average value added per production worker hour for animal food manufacturing was \$197 in the United States. The Kansas average was \$283. This difference in

productivity may possibly be attributed to the difference in the specific type of manufacturing done in Kansas, the amount of capital investment by local companies, the skill and experience of local production workers, or other factors.



Source: U.S. Census Bureau Annual Survey of Manufacturers 2015

## Grain and Oilseed Milling

The grain and oilseed milling industry includes flour milling, rice milling, malt manufacturing, wet corn milling, soybean and other oilseed processing, fats and oils refining, and breakfast cereal manufacturing. This industry only accounts for 0.8 percent of Kansas manufacturing employment, but it is 71 percent more concentrated in Kansas than in the United States as a whole. The two subsectors of this industry with a presence in Kansas are flour milling and soybean and other oilseed processing.

In Kansas, there are about 16 establishments in flour milling. The two largest are ADM Milling Co. and Bartlett Milling Co, each with about 50 employees.<sup>14</sup> Over the next five years, this industry is projected to grow slowly due to the increases in the price of wheat and corn, enabling industry operators to command higher prices for their goods.<sup>15</sup>

There are about five establishments in soybean and other oilseed processing in Kansas. The largest is Bunge Oilseed Processing, with approximately 200 employees statewide.<sup>16</sup> Over the next five years, this industry is projected to experience minimal growth as consumers shift to healthier options.<sup>17</sup>

<sup>14</sup> Infogroup, Inc.

<sup>15</sup> IBIS World – Flour Milling in the U.S. – February 2017

<sup>16</sup> Infogroup, Inc.

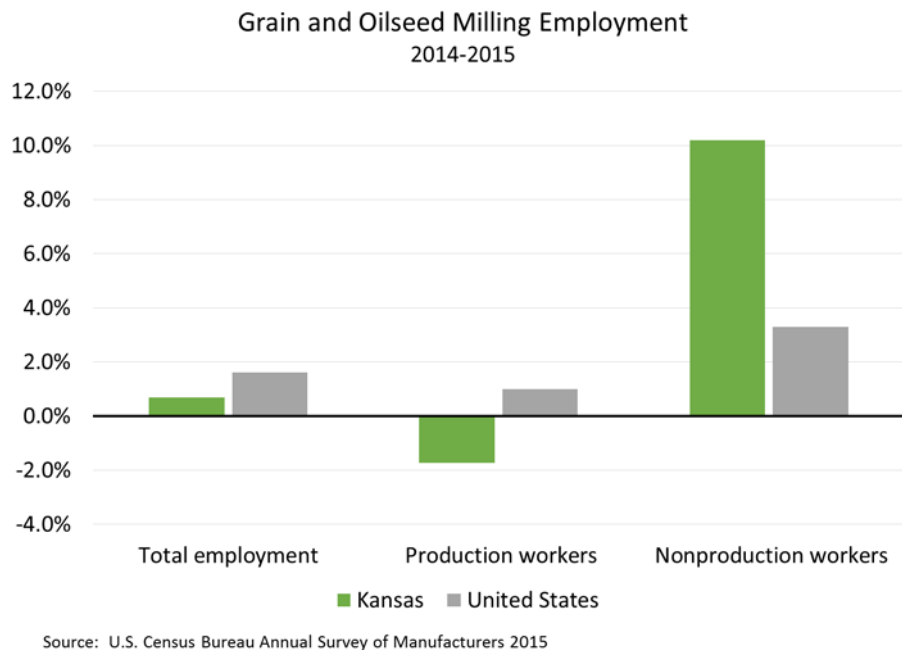
<sup>17</sup> IBIS World – Margarine and Cooking Oil Processing in the U.S. – August 2016

## Employment

Over the past decade, grain and oilseed milling employment in Kansas has averaged about 1,500 workers annually. The level of employment decreased each year between 2005 and 2011. However, employment had increased since 2012.

Of the 1,313 grain and oilseed milling workers in Kansas in 2015, 78 percent were production workers and 22 percent were nonproduction workers. This is 0.29 nonproduction workers for each production worker in the state, lower than the national average for grain and oilseed milling 0.39 nonproduction workers for each production worker.

Between 2014 and 2015 total employment in grain and oilseed milling increased in both Kansas and the United States, with the relative increase in the United States being larger, a 1.6 percent gain relative to a 0.7 percent gain. There was a total increase in Kansas of nine workers. This was a result of a decrease of 18 production workers and an increase of 27 nonproduction workers. In the United States as a whole production and nonproduction workers both increased.



## Wages

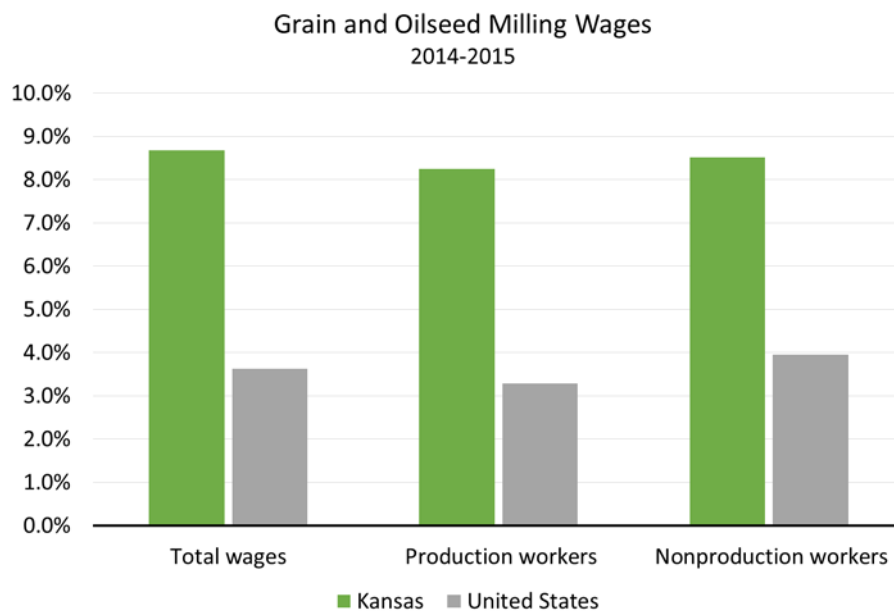
Jobs in grain and oilseed milling pay average wages for production workers, but below average wages for nonproduction workers. The average wage in 2015 for this industry in Kansas was \$50,662, 9.2 percent lower than the average wage for manufacturing in the state. At \$48,677 annually, production workers in grain and oilseed milling earned 2.3 percent more than the average for production workers in

Kansas. At \$57,603 annually, nonproduction workers earned 24.7 percent less than the average for nonproduction workers in manufacturing in Kansas.

Grain and Oilseed Milling Annual Wage per Worker 2015	
Total employment	\$50,662
Production workers	\$48,677
Nonproduction workers	\$57,603

Source: U.S. Census Bureau Annual Survey of Manufacturers

Between 2014 and 2015 total average wages in Kansas in grain and oilseed milling increased by 8.7 percent, considerably more than the national average of 3.6 percent. This can be attributed to increases in the average wage of production and nonproduction workers in Kansas



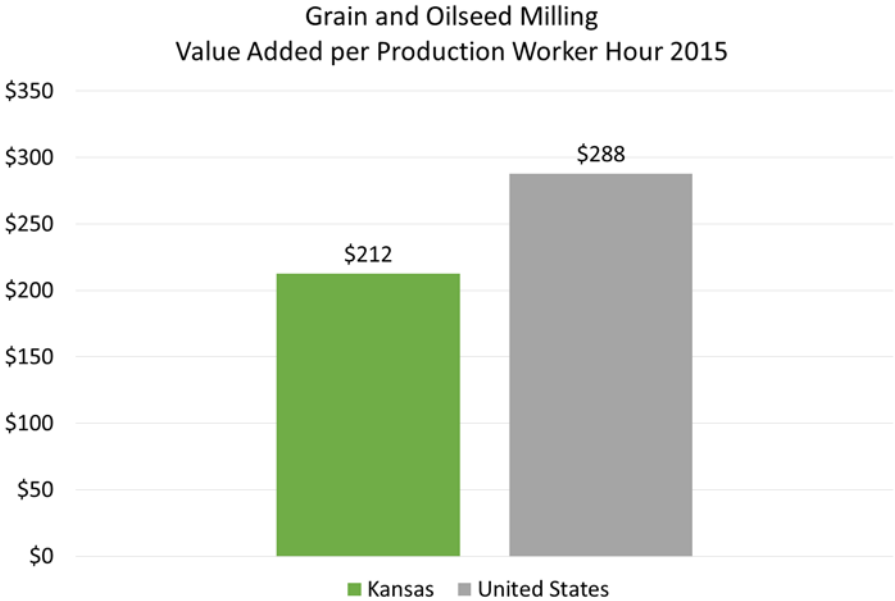
Source: U.S. Census Bureau Annual Survey of Manufacturers 2015 - Inflation adjusted growth rate.

In Kansas, there has been a decrease in employment and an increase in wages of production workers in grain and oilseed milling. This is an indication there is a shortage of low-skilled workers available to this industry. At the same time, there has been increased employment and increased wages of high-skilled workers indicating an increased demand for high-skilled workers in this industry.

## Productivity

In 2015 grain and oilseed milling workers in Kansas worked an average of 38.73 hours a week, down 0.7 percent from 2014. This is less than the national average of 42.36 hours, which increased 2.7 percent from 2014. It is less than the average for manufacturing in Kansas of 39.06 hours a week.

In the United States, the average value added per production worker hour in manufacturing, in general, was \$152 in 2015. In 2015 the average value added per production worker hour for grain and oilseed milling was \$288 in the United States. The Kansas average was \$212. This difference in productivity may possibly be attributed to the difference in the specific type of manufacturing done in Kansas, the amount of capital investment by local companies, the skill and experience of local production workers, or other factors.



Source: U.S. Census Bureau Annual Survey of Manufacturers 2015