

## Atchison County

### Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

6/8/2018

Using the most recent IMPLAN data available (2016) adjusted for 2018, 21 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Atchison County economy.<sup>1</sup>

These 21 sectors have a total direct output of approximately **\$459.0 million** and support **1,061 jobs** in Atchison County. Running the model for all 21 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Atchison County Economy						
Impact Type <sup>2</sup>	Employment	% Employment	Total Value Added <sup>3</sup>	Total Value Added % of Gross Regional Product <sup>4</sup>	Output <sup>5</sup>	Output % of Gross Regional Product
<b>Direct Effect</b>	1061.1	12.83%	\$113,261,310	20.14%	\$459,034,112	81.62%
<b>Indirect Effect</b>	362.8	4.38%	\$31,400,340	5.58%	\$59,158,849	10.52%
<b>Induced Effect</b>	252.2	3.05%	\$16,622,751	2.96%	\$30,607,175	5.44%
<b>Total Effect</b>	1676.0	20.26%	\$161,284,401	28.68%	\$548,800,136	97.58%

As shown in the above table, agriculture, food, and food processing sectors support **1,676 jobs**, or **20.26%** of the entire workforce in the county. These sectors provide a total economic contribution of approximately **\$548.8 million**, roughly **97.58% of the economy**.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 21 agriculture, food, and food processing sectors is approximately **\$161.3 million**, or **28.68% of the GRP**. This indicates that personal income, business income, and taxes generated by these sectors account for **28.68% of the total economy**.

The following tables document the top industries affected by employment and output, as well as a listing of all industries that were analyzed.

<sup>1</sup> Article on building a contribution analysis in IMPLAN that avoids double counting:

[http://www.implan.com/index.php?option=com\\_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70](http://www.implan.com/index.php?option=com_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70)

<sup>2</sup> Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

<sup>3</sup> Value added = labor income + indirect business taxes + other property type income.

<sup>4</sup> GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

<sup>5</sup> Output = intermediate inputs + value added.

In the top ten agriculture, food, and food processing sectors by employment, the beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector is the top employer with **410 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Atchison County.

<b>Top Ten Agriculture, Food, and Food Processing Sectors by Employment</b>		
<b>Sector</b>	<b>Total Employment</b>	<b>Total Output</b>
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	409.9	\$29,549,394
Flour milling	120.3	\$188,409,581
Other snack food manufacturing	111.3	\$76,548,657
Grain farming	94.5	\$21,231,966
Wholesale trade	74.1	\$14,399,679
Support activities for agriculture and forestry	58.2	\$2,394,090
Landscape and horticultural services	56.8	\$2,287,895
Oilseed farming	51.2	\$32,341,748
Nonchocolate confectionery manufacturing	50.3	\$22,434,351
Bottled and canned soft drinks & water	46.0	\$36,454,782

The flour milling sector directly contributes approximately **\$188.4 million** to the Atchison County economy. The table below also shows the amount of revenue that is generated in other industries by having a strong agriculture industry.

<b>Top Ten Agriculture, Food, and Food Processing Sectors by Output</b>		
<b>Sector</b>	<b>Total Employment</b>	<b>Total Output</b>
Flour milling	120.3	\$188,409,581
Other snack food manufacturing	111.3	\$76,548,657
Other animal food manufacturing	25.5	\$40,107,213
Bottled and canned soft drinks & water	46.0	\$36,454,782
Oilseed farming	51.2	\$32,341,748
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	409.9	\$29,549,394
Nonchocolate confectionery manufacturing	50.3	\$22,434,351
Grain farming	94.5	\$21,231,966
Wholesale trade	74.1	\$14,399,679
Rail transportation	27.0	\$12,706,002

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture, food, and food processing sector and the output they contributed to the Atchison County economy.

<b>All Agriculture, Food, and Food Processing Sectors</b>		
<b>Sector</b>	<b>Total Employment</b>	<b>Total Output</b>
Oilseed farming	51.2	\$32,341,747.82
Grain farming	94.5	\$21,231,966.37
Vegetable and melon farming	2.2	\$255,520.97
Fruit farming	0.9	\$46,340.19
Tree nut farming	0.0	\$21.74
Greenhouse, nursery, and floriculture production	8.8	\$709,926.50
All other crop farming	24.2	\$1,122,735.88
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	409.9	\$29,549,394.07
Dairy cattle and milk production	4.4	\$1,060,223.03
Poultry and egg production	3.2	\$1,551,984.86
Animal production, except cattle and poultry and eggs	9.8	\$741,293.52
Other animal food manufacturing	25.5	\$40,107,212.60
Flour milling	120.3	\$188,409,580.96
Nonchocolate confectionery manufacturing	50.3	\$22,434,350.89
Bread and bakery product, except frozen, manufacturing	6.4	\$772,681.95
Frozen cakes and other pastries manufacturing	0.4	\$61,949.46
Other snack food manufacturing	111.3	\$76,548,656.88
Bottled and canned soft drinks & water	46.0	\$36,454,782.42
Sawmills	0.4	\$105,091.95
Veterinary services	34.5	\$3,240,755.24
Landscape and horticultural services	56.8	\$2,287,894.55

All 105 counties in Kansas have an IMPLAN model and an agriculture, food, and food processing contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Atchison County, the retail sector was omitted.