

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

A total of 17 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Leavenworth County economy.<sup>1</sup> These 17 sectors have a total direct output of approximately \$183 million and support 1,555.4 jobs in Leavenworth County. Running the model for all 17 sectors simultaneously produces the following results:

**Agriculture Contribution in Leavenworth County**

Impact Type <sup>2</sup>	Employment	% of Total Employment	Total Value Added <sup>3</sup>	% of Gross	
				Regional Product <sup>4</sup>	Output <sup>5</sup>
Direct Effect	1,555.4	4%	\$63,091,856	2%	\$183,295,841
Indirect Effect	223.0	1%	\$14,829,504	1%	\$26,684,008
Induced Effect	166.2	0%	\$10,247,666	0%	\$20,273,219
<b>Total Effect</b>	<b>1,944.6</b>	<b>5%</b>	<b>\$88,169,026</b>	<b>3%</b>	<b>\$230,253,068</b>

As shown in the above table, agriculture, food, and food processing supports 1,944.6 jobs, or 5% of the entire workforce in the county. These industries provide a total economic contribution of approximately \$230 million, roughly 8% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

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 17 agriculture, food, and food processing sectors is approximately \$88 million, or 3% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 3% of the total economy.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

<sup>1</sup> Article on building a contribution analysis in IMPLAN that avoids double counting:  
[https://implan.com/index.php?option=com\\_content&view=category&id=19](https://implan.com/index.php?option=com_content&view=category&id=19)

<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 by employment, All other crop farming is the top employer in the agriculture industry with 333.4 employees. This table also shows the amount of jobs that are created by the agriculture industry in Leavenworth County.

**Top 10 Industries Affected by Employment**

Sector Description:	Total Employment	Total Output
All other crop farming.....	333.4	\$11,071,346
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming .....	287.9	\$19,524,146
All other food manufacturing .....	268.9	\$94,144,276
Landscape and horticultural services .....	185.1	\$11,027,267
Veterinary services .....	99.5	\$5,813,439
Greenhouse, nursery, and floriculture production .....	97.4	\$4,499,295
Grain farming .....	77.4	\$7,094,237
Support activities for agriculture and forestry .....	76.4	\$4,638,565
Dairy cattle and milk production.....	54.5	\$2,655,637
Animal production, except cattle and poultry and eggs.....	41.7	\$1,106,196

The All other food manufacturing industry directly contributes approximately \$94 million to Leavenworth County’s economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

**Top 10 Industries Affected by Output**

Sector Description:	Total Employment	Total Output
All other food manufacturing .....	268.9	\$94,144,276
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming .....	287.9	\$19,524,146
Oilseed farming .....	28.2	\$15,954,073
All other crop farming.....	333.4	\$11,071,346
Landscape and horticultural services .....	185.1	\$11,027,267
Grain farming .....	77.4	\$7,094,237
Veterinary services .....	99.5	\$5,813,439
Wholesale trade.....	26.6	\$4,690,310
Support activities for agriculture and forestry .....	76.4	\$4,638,565
Greenhouse, nursery, and floriculture production .....	97.4	\$4,499,295

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 sector and the output they contributed to Leavenworth County’s economy.

Sector Description:	Employment	Output
Oilseed farming .....	28.2	\$15,954,073
Grain farming.....	77.4	\$7,094,237
Vegetable and melon farming.....	8.7	\$439,846
Tree nut farming.....	7.2	\$674,825
Greenhouse, nursery, and floriculture production.....	97.4	\$4,499,295
All other crop farming.....	333.4	\$11,071,346
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming.....	287.9	\$19,524,146
Dairy cattle and milk production .....	54.5	\$2,655,637
Poultry and egg production .....	5.6	\$731,324
Animal production, except cattle and poultry and eggs .....	41.7	\$1,106,196
Commercial logging .....	4.6	\$260,983
Bread and bakery product, except frozen, manufacturing.....	36.6	\$3,896,921
Frozen cakes and other pastries manufacturing.....	2.0	\$283,776
All other food manufacturing.....	268.9	\$94,144,276
All other industrial machinery manufacturing.....	16.7	\$4,118,253
Veterinary services.....	99.5	\$5,813,439
Landscape and horticultural services.....	185.1	\$11,027,267
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All 105 counties in Kansas have IMPLAN models with an agriculture 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 Kansas, the retail sector was omitted.