Barton County

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 Barton County economy.[1] These 17 sectors have a total direct output of approximately $854 million and support 1,475.6 jobs in Barton County. Running the model for all 17 sectors simultaneously produces the following results:

Agriculture Contribution in Barton County

Impact Type[2]	Employment	% of Total Employment	Total Value Added[3]	% of Gross Regional Product[4]	Output[5]	% of Gross Regional Product
Direct Effect	1,475.6	7%	$211,551,648	13%	$854,429,923	52%
Indirect Effect	968.7	5%	$81,551,744	5%	$142,018,007	9%
Induced Effect	441.6	2%	$30,703,891	2%	$52,949,845	3%
Total Effect	2,885.9	14%	$323,807,282	20%	$1,049,397,775	64%

As shown in the above table, agriculture, food, and food processing supports 2,885.9 jobs, or 14% of the entire workforce in the county. These industries provide a total economic contribution of approximately $1049 million, roughly 64% 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 $324 million, or 20% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 20% 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.

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1 Article on building a contribution analysis in IMPLAN that avoids double counting:
https://implan.com/index.php?option=com_content&view=category&id=19

2 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.

3 Value Added = Labor Income + Indirect Business Taxes + Other Property Type Income

4 GRP = Final Demand of Households + Governments Expenditures + Capital + Exports - Imports - Institutional Sales

5 Output = Intermediate Inputs + Value Added

In the top ten by employment, Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming is the top employer in the agriculture industry with 412.4 employees. This table also shows the amount of jobs that are created by the agriculture industry in Barton County.

Top 10 Industries Affected by Employment

Sector Description:	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	412.4	$159,577,535
Dog and cat food manufacturing	378.8	$471,120,034
Support activities for agriculture and forestry	196.8	$7,080,874
Wholesale trade	188.6	$41,484,819
Animal production, except cattle and poultry and eggs	147.6	$22,330,207
Grain farming	144.2	$75,388,299
All other crop farming	119.8	$22,708,948
Truck transportation	108.1	$17,430,759
Real estate	84.5	$13,051,751
Landscape and horticultural services	83.2	$4,793,910

The Dog and cat food manufacturing industry directly contributes approximately $471 million to Barton 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
Dog and cat food manufacturing	378.8	$471,120,034
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	412.4	$159,577,535
Grain farming	144.2	$75,388,299
Wholesale trade	188.6	$41,484,819
Other animal food manufacturing	28.1	$41,368,035
Animal, except poultry, slaughtering	46.5	$27,422,917
All other crop farming	119.8	$22,708,948
Animal production, except cattle and poultry and eggs	147.6	$22,330,207
Truck transportation	108.1	$17,430,759
Oilseed farming	5.2	$16,714,845

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 Barton County's economy.

Sector Description:	Employment	Output
Oilseed farming	5.2	$16,714,845
Grain farming	144.2	$75,388,299
Vegetable and melon farming	0.2	$47,326
Greenhouse, nursery, and floriculture production	0.8	$201,198
All other crop farming	119.8	$22,708,948
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	412.4	$159,577,535
Dairy cattle and milk production	21.8	$6,060,507
Poultry and egg production	0.7	$504,063
Animal production, except cattle and poultry and eggs	147.6	$22,330,207
Commercial logging	2.0	$112,044
Dog and cat food manufacturing	378.8	$471,120,034
Other animal food manufacturing	28.1	$41,368,035
Animal, except poultry, slaughtering	46.5	$27,422,917
Bread and bakery product, except frozen, manufacturing	17.3	$1,848,422
Frozen cakes and other pastries manufacturing	1.2	$165,579
Veterinary services	66.0	$4,066,054
Landscape and horticultural services	83.2	$4,793,910
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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.