Kansas
Department of Agriculture

July 2015

Rice County

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

A total of 16 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Rice County economy.[1] These 16 sectors have a total direct output of approximately $257 million and support 779.0 jobs in Rice County. Running the model for all 16 sectors simultaneously produces the following results:

Agriculture Contribution in Rice 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	779.0	15%	$71,424,632	19%	$256,633,654	70%
Indirect Effect	259.5	5%	$16,808,472	5%	$29,056,991	8%
Induced Effect	120.2	2%	$8,234,868	2%	$14,137,962	4%
Total Effect	1,158.7	22%	$96,467,971	26%	$299,828,607	81%

As shown in the above table, agriculture, food, and food processing supports 1,158.7 jobs, or 22% of the entire workforce in the county. These industries provide a total economic contribution of approximately $300 million, roughly 81% 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 16 agriculture, food, and food processing sectors is approximately $96 million, or 26% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 26% 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 250.9 employees. This table also shows the amount of jobs that are created by the agriculture industry in Rice 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..	250.9	$67,436,733
Grain farming	214.5	$77,883,418
Support activities for agriculture and forestry..	97.1	$4,648,213
All other crop farming...	94.5	$12,439,907
Farm machinery and equipment manufacturing..	83.0	$50,966,984
Wholesale trade..	50.7	$10,958,429
Animal production, except cattle and poultry and eggs..	41.4	$4,348,679
Monetary authorities and depository credit intermediation	28.0	$4,191,884
Landscape and horticultural services	25.6	$2,027,528
Truck transportation...	22.2	$3,137,307

The Grain farming industry directly contributes approximately $78 million to Rice 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
Grain farming	214.5	$77,883,418
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming..	250.9	$67,436,733
Farm machinery and equipment manufacturing..	83.0	$50,966,984
Oilseed farming	9.9	$22,277,606
All other crop farming...	94.5	$12,439,907
Dry pasta, mixes, and dough manufacturing..	19.1	$11,621,335
Wholesale trade..	50.7	$10,958,429
Support activities for agriculture and forestry..	97.1	$4,648,213
Animal production, except cattle and poultry and eggs..	41.4	$4,348,679
Monetary authorities and depository credit intermediation	28.0	$4,191,884

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 Rice County's economy.

Sector Description:	Employment	Output
Oilseed farming	9.9	$22,277,606
Grain farming	214.5	$77,883,418
Greenhouse, nursery, and floriculture production	1.1	$199,925
All other crop farming	94.5	$12,439,907
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	250.9	$67,436,733
Dairy cattle and milk production	1.0	$199,809
Poultry and egg production	4.5	$2,298,128
Animal production, except cattle and poultry and eggs	41.4	$4,348,679
Commercial logging	1.5	$79,049
Bread and bakery product, except frozen, manufacturing	5.5	$528,238
Frozen cakes and other pastries manufacturing	0.4	$48,879
Dry pasta, mixes, and dough manufacturing	19.1	$11,621,335
Spice and extract manufacturing	6.4	$3,252,043
Farm machinery and equipment manufacturing	83.0	$50,966,984
Veterinary services	19.8	$1,025,394
Landscape and horticultural services	25.6	$2,027,528
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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.