Rice County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors
6/28/2017

Using the most recent IMPLAN data available (2015) adjusted for 2017, 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 **$297.4 million** and support **998.1 jobs** in Rice County. Running the model for all 16 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Anderson County Economy						
Impact Type[2]	Employment	% Employment	Total Value Added[3]	Total Value Added % of Gross Regional Product[4]	Output[5]	Output % of Gross Regional Product
Direct Effect	998.1	17.96%	$66,214,667	18.74%	$297,387,851	84.16%
Indirect Effect	275.3	4.95%	$22,286,962	6.31%	$40,500,429	11.46%
Induced Effect	186.4	3.35%	$12,190,791	3.45%	$22,385,102	6.33%
Total Effect	1,459.7	26.26%	$100,692,421	28.49%	$360,273,382	101.95%

As shown in the above table, agriculture, food, and food processing sectors support **1,459.7 jobs**, or **26.26%** of the entire workforce in the county. These sectors provide a total economic contribution of approximately **$360.3 million, roughly 101.95% 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 16 agriculture, food, and food processing sectors is approximately **$100.7 million**, or **28.49% of the GRP**. This indicates that personal income, business income, and taxes generated by these sectors account for **28.49% 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:
http://www.implan.com/index.php?option=com_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70

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 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 **457.5 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Rice County.

Top Ten Agriculture, Food, and Food Processing Sectors by Employment		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	457.5	$77,854,023
Grain farming	145.5	$65,055,757
Farm machinery and equipment manufacturing	133.0	$72,338,797
All other crop farming	78.7	$7,398,817
Wholesale trade	67.2	$15,375,281
Spice and extract manufacturing	56.1	$30,256,141
Truck transportation	39.9	$6,204,075
Support activities for agriculture and forestry	39.3	$5,253,493
Monetary authorities and depository credit intermediation	30.7	$4,856,748
Animal production, except cattle and poultry and eggs	27.7	$3,534,729

The beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector directly contributes approximately **$77.9 million** to the Rice County economy. The table below also shows the amount of revenue that is generated in other industries by having a strong agriculture industry.

Top Ten Agriculture, Food, and Food Processing Sectors by Output		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	457.5	$77,854,023
Farm machinery and equipment manufacturing	133.0	$72,338,797
Grain farming	145.5	$65,055,757
Spice and extract manufacturing	56.1	$30,256,141
Oilseed farming	11.5	$17,220,879
Dry pasta, mixes, and dough manufacturing	26.4	$15,744,290
Wholesale trade	67.2	$15,375,281
All other crop farming	78.7	$7,398,817
Owner-occupied dwellings	0.0	$6,521,164
Truck transportation	39.9	$6,204,075

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 Rice County economy.

All Agriculture, Food, and Food Processing Sectors		
Sector	Total Employment	Total Output
Oilseed farming	11.5	$17,220,878.60
Grain farming	145.5	$65,055,755.62
Greenhouse, nursery, and floriculture production	3.5	$233,023.52
All other crop farming	78.7	$7,398,816.59
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	457.5	$77,854,019.17
Dairy cattle and milk production	1.3	$254,367.23
Poultry and egg production	8.4	$3,973,691.46
Animal production, except cattle and poultry and eggs	27.7	$3,534,728.77
Commercial logging	0.5	$25,853.46
Bread and bakery product, except frozen, manufacturing	5.4	$574,962.08
Frozen cakes and other pastries manufacturing	0.4	$50,290.96
Dry pasta, mixes, and dough manufacturing	26.4	$15,744,290.35
Spice and extract manufacturing	56.1	$30,256,139.76
Farm machinery and equipment manufacturing	133.0	$72,338,798.52
Veterinary services	19.6	$1,451,839.45
Landscape and horticultural services	22.4	$1,420,389.77

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 Rice County, the retail sector was omitted.