July 2015

Barber County

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

A total of 13 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Barber County economy.[1] These 13 sectors have a total direct output of approximately $107 million and support 417.1 jobs in Barber County. Running the model for all 13 sectors simultaneously produces the following results:

Agriculture Contribution in Barber 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	417.1	13%	$33,208,308	14%	$106,641,373	46%
Indirect Effect	177.7	5%	$11,947,806	5%	$22,686,038	10%
Induced Effect	43.3	1%	$3,506,978	1%	$6,151,031	3%
Total Effect	638.1	19%	$48,663,093	21%	$135,478,441	58%

As shown in the above table, agriculture, food, and food processing supports 638.1 jobs, or 19% of the entire workforce in the county. These industries provide a total economic contribution of approximately $135 million, roughly 58% 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 13 agriculture, food, and food processing sectors is approximately $49 million, or 21% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 21% 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 177.8 employees. This table also shows the amount of jobs that are created by the agriculture industry in Barber 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	177.8	$44,828,773
Support activities for agriculture and forestry	108.7	$6,869,892
All other crop farming	100.1	$12,357,463
Grain farming	99.2	$33,773,681
Wholesale trade	22.6	$4,112,901
Veterinary services	10.0	$885,798
Extraction of natural gas and crude petroleum	9.4	$1,744,228
Monetary authorities and depository credit intermediation	9.4	$1,391,416
Animal, except poultry, slaughtering	8.1	$5,022,082
Dairy cattle and milk production	7.0	$1,273,931

The Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming industry directly contributes approximately $45 million to Barber 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
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	177.8	$44,828,773
Grain farming	99.2	$33,773,681
All other crop farming	100.1	$12,357,463
Support activities for agriculture and forestry	108.7	$6,869,892
Oilseed farming	2.5	$5,291,692
Petroleum refineries	0.5	$5,027,831
Animal, except poultry, slaughtering	8.1	$5,022,082
Wholesale trade	22.6	$4,112,901
Owner-occupied dwellings	0.0	$1,795,379
Extraction of natural gas and crude petroleum	9.4	$1,744,228

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 Barber County's economy.

Sector Description:	Employment	Output
Oilseed farming	2.5	$5,291,692
Grain farming	99.2	$33,773,681
Cotton farming	1.4	$354,405
All other crop farming	100.1	$12,357,463
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	177.8	$44,828,773
Dairy cattle and milk production	7.0	$1,273,931
Poultry and egg production	2.6	$1,240,864
Animal production, except cattle and poultry and eggs	3.2	$319,352
Animal, except poultry, slaughtering	8.1	$5,022,082
Bread and bakery product, except frozen, manufacturing	3.6	$438,379
Frozen cakes and other pastries manufacturing	0.2	$37,287
Farm machinery and equipment manufacturing	1.3	$817,667
Veterinary services	10.0	$885,798
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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.