Brown County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors
6/11/2018

Using the most recent IMPLAN data available (2016) adjusted for 2018, 21 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Brown County economy.[1]

These 21 sectors have a total direct output of approximately **$683.4 million** and support **1,030 jobs** in Brown County. Running the model for all 21 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Brown 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	1030.3	14.76%	$136,405,155	25.18%	$683,377,234	126.17%
Indirect Effect	410.8	5.88%	$34,128,123	6.30%	$70,864,760	13.08%
Induced Effect	183.6	2.63%	$13,734,568	2.54%	$25,397,339	4.69%
Total Effect	1624.6	23.27%	$184,267,846	34.02%	$779,639,334	143.94%

As shown in the above table, agriculture, food, and food processing sectors support **1,625 jobs**, or **23.27%** of the entire workforce in the county. These sectors provide a total economic contribution of approximately **$779.6 million, roughly 143.94% 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 21 agriculture, food, and food processing sectors is approximately **$184.3 million**, or **34.02% of the GRP**. This indicates that personal income, business income, and taxes generated by these sectors account for **34.02% of the total economy**.

The following tables document the top industries affected by employment and output, as well as 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 dog and cat food manufacturing sector is the top employer with **218 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Brown County.

Top Ten Agriculture, Food, and Food Processing Sectors by Employment		
Sector	Total Employment	Total Output
Dog and cat food manufacturing	217.8	$306,372,502
Grain farming	173.0	$64,740,411
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	172.8	$21,555,369
Food product machinery manufacturing	130.3	$41,800,259
Wholesale trade	101.8	$23,390,558
Other animal food manufacturing	93.4	$123,331,041
Oilseed farming	80.9	$83,259,645
Farm machinery and equipment manufacturing	69.9	$34,196,223
Other local government enterprises	56.8	$16,130,848
Landscape and horticultural services	34.6	$1,994,243

The dog and cat manufacturing sector directly contributes approximately **$306.4 million** to the Brown 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
Dog and cat food manufacturing	217.8	$306,372,502
Other animal food manufacturing	93.4	$123,331,041
Oilseed farming	80.9	$83,259,645
Grain farming	173.0	$64,740,411
Food product machinery manufacturing	130.3	$41,800,259
Farm machinery and equipment manufacturing	69.9	$34,196,223
Wholesale trade	101.8	$23,390,558
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	172.8	$21,555,369
Other local government enterprises	56.8	$16,130,848
Monetary authorities and depository credit intermediation	32.2	$5,836,611

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 Brown County economy.

All Agriculture, Food, and Food Processing Sectors		
Sector	**Total Employment**	**Total Output**
Oilseed farming	80.9	$83,259,644.94
Grain farming	173.0	$64,740,410.93
Vegetable and melon farming	0.5	$63,880.24
Fruit farming	1.2	$68,073.86
Tree nut farming	0.0	$28.54
Greenhouse, nursery, and floriculture production	6.9	$593,614.41
All other crop farming	17.5	$1,330,339.57
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	172.8	$21,555,369.42
Dairy cattle and milk production	3.7	$1,001,750.87
Poultry and egg production	0.8	$441,878.52
Animal production, except cattle and poultry and eggs	8.8	$1,018,961.95
Commercial logging	1.7	$73,853.21
Commercial hunting and trapping	3.4	$69,338.06
Dog and cat food manufacturing	217.8	$306,372,501.64
Other animal food manufacturing	93.4	$123,331,041.07
Bread and bakery product, except frozen, manufacturing	5.5	$717,773.91
Frozen cakes and other pastries manufacturing	0.3	$55,626.97
Farm machinery and equipment manufacturing	69.9	$34,196,223.47
Food product machinery manufacturing	130.3	$41,800,258.95
Veterinary services	7.2	$692,420.40
Landscape and horticultural services	34.6	$1,994,243.20

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 Brown County, the retail sector was omitted.