Norton County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors
10/8/14

8 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Norton County economy.[1]

These 8 sectors have a total direct output of approximately $167 million and support 476.8 jobs in Norton County. Running the model for all 8 sectors simultaneously produces the following results:

Agriculture Contribution in Norton Co						
Impact Type[2]	Employment	% Employment	Total Value Added[3]	% of Gross Regional Product[4]	Output[5]	% of Gross Regional Product
Direct Effect	476.8	11%	61,060,931.1	21%	167,233,437.3	57%
Indirect Effect	93.8	2%	11,190,239.7	4%	18,413,316.1	6%
Induced Effect	157.5	4%	10,786,659.2	4%	17,500,129.8	6%
Total Effect	728.1	17%	83,037,830.1	28%	203,146,883.2	69%

As shown in the above table, agriculture, food, and food processing supports 728.1 jobs, or 17% of the entire workforce in the county. These industries provide a total economic contribution of approximately $203 million, roughly 69% 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 8 agriculture, food, and food processing sectors is approximately $83 million, or 28% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 28% of the total economy.

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.

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.

In the top ten by employment, Animal production, except cattle and poultry and eggs is the top employer in the agriculture industry with 214.6 employees. This table also shows the amount of jobs that are created by the agriculture industry in Norton County.

Description	Total Employment	Total Output
Animal production, except cattle and poultry and eggs	214.6	57,065,604.9
Grain farming	186.2	56,785,693.3
Cattle ranching and farming	50.8	41,734,145.9
Monetary authorities and depository credit intermediation activities	30.7	10,659,972.5
Food services and drinking places	26.1	1,385,609.9
Civic, social, professional, and similar organizations	16.6	355,183.3
Support activities for agriculture and forestry	16.0	26,727.3
Wholesale trade businesses	14.6	2,652,914.7
Private hospitals	11.9	1,593,217.5
Securities, commodity contracts, investments, and related activities	11.3	1,272,309.1

The Animal production, except cattle and poultry and eggs industry directly contributes approximately $57 million to Norton County's economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

Description	Total Employment	Total Output
Animal production, except cattle and poultry and eggs	214.6	57,065,604.9
Grain farming	186.2	56,785,693.3
Cattle ranching and farming	50.8	41,734,145.9
Monetary authorities and depository credit intermediation activities	30.7	10,659,972.5
All other crop farming	3.2	6,106,911.5
Oilseed farming	5.0	4,257,740.4
Imputed rental activity for owner-occupied dwellings	0.0	4,048,362.1
Wholesale trade businesses	14.6	2,652,914.7
Electric power generation, transmission, and distribution	3.4	2,391,290.1
Private hospitals	11.9	1,593,217.5

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 Norton County's economy.

Description	Employment	Output
Oilseed farming	5.11	4,200,982.09
Grain farming	188.68	56,028,705.60
Greenhouse, nursery, and floriculture production	0.15	363,059.67
All other crop farming	3.23	6,025,502.68
Cattle ranching and farming	51.47	41,176,738.74
Dairy cattle and milk production	0.85	876,780.27
Animal production, except cattle and poultry and eggs	217.54	56,303,428.65
Support activities for agriculture and forestry	16.71	25,646.48
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All 105 counties in Kansas have Implan models and 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.