Overview

The Kansas Department of Agriculture's Economist creates annual economic contribution reports to estimate the impact of agriculture on the Kansas economy. The purpose of these reports is to provide information to stakeholders, policymakers, and the general public. In this report, the model analyzes the effects of agriculture on the Montgomery County, Kansas, economy. For the estimated current year (2024), 30 agriculture and agriculture-related sectors directly contribute $668 million in output and 1,402 jobs to the Montgomery County, Kansas, economy. Including indirect and induced effects, agriculture and agriculture-related sectors have a total impact of $831 million in output, 2,087 jobs and 13% of the total Gross Regional Product (GRP).

Estimated Economic Contribution of Agriculture.

Methodology and Glossary on final page

Results

In this model, the 30 agriculture and agriculture-related sectors have a total direct output of $668 million and account for 1,402 jobs in Montgomery County, as shown in the following table:

Table 1: Agriculture and Agriculture-Related Sectors' Contribution to the Montgomery County Economy

Contribution Type	Employment	% Employment	Total Value Added	% of Gross Regional Product	Output
Direct Effect	1,402	7%	$223,999,000	10%	$667,742,000
Indirect Effect	397	2%	$50,477,000	2%	$120,111,000
Induced Effect	287	2%	$23,860,000	1%	$42,830,000
Total Effect	2,087	11%	$298,337,000	13%	$830,684,000

Note: Individual effects may not equal the total effect due to rounding.

The agriculture and agriculture-related sectors provide a total estimated impact of $831 million in output. These sectors also support a total of 2,087 jobs, or 11% of the county's entire workforce. Another metric used to calculate the importance of sectors in the economy is their value added as a percentage of the Gross Regional Product. Total value added by the 30 agriculture and agriculture-related sectors is $298 million, or 13% of the Gross Regional Product.

Top Ten Sectors by Output

The table below shows Montgomery County's top ten sectors by output, including direct, indirect and induced effects. The *nitrogenous fertilizer manufacturing* sector is the top contributor in output to the Montgomery County economy, with $363 million in total output.

Table 2: Top Ten Sectors by Output, Montgomery County

Sector	Total Output
Nitrogenous fertilizer manufacturing	$362,970,000
Flour milling	$76,894,000
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	$75,833,000
Grain farming	$38,551,000
Wholesale - Other nondurable goods merchant wholesalers	$33,716,000
Oilseed farming	$33,530,000
Petroleum refineries	$22,352,000
Animal production, except cattle and poultry and eggs	$22,007,000
Coffee and tea manufacturing	$17,278,000
Rail transportation	$12,054,000

Top Ten Sectors by Employment

Of the agriculture and agriculture-related sectors, *beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming* supports the most jobs in the county with 574 jobs. Table 3 illustrates the top ten sectors by total employment, including direct, indirect, and induced effects in Montgomery County.

Table 3: Top Ten Sectors by Employment, Montgomery County

Sector	Total Employment
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	574.94
Animal production, except cattle and poultry and eggs	169.41
Nitrogenous fertilizer manufacturing	144.47
Grain farming	135.22
Wholesale - Other nondurable goods merchant wholesalers	98.50
All other crop farming	58.62
Flour milling	55.99
Other real estate	52.21
Bread and bakery product, except frozen, manufacturing	52.10
Employment services	43.21

All Direct Agriculture Sectors

Table 4 is a summary of agriculture sectors represented with output and employment levels. These values estimate the value of output and the jobs these agriculture sectors support in the Montgomery County economy. Generally, this analysis includes three categories: production, manufacturing or processing, and services. Note, the model does not include ethanol production nor wholesale and retail sales of final products.

Table 4: All Direct Agriculture Sectors, Montgomery County

Sector	Total Output	Total Employment
Nitrogenous fertilizer manufacturing	$362,970,000	144.47
Flour milling	$76,894,000	55.99
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	$75,833,000	574.94
Grain farming	$38,551,000	135.22
Oilseed farming	$33,530,000	33.46
Animal production, except cattle and poultry and eggs	$22,007,000	169.41
Coffee and tea manufacturing	$17,278,000	27.04
Bread and bakery product, except frozen, manufacturing	$11,858,000	52.10
Breweries	$7,043,000	19.65
Landscape and horticultural services	$4,504,000	41.85
Other animal food manufacturing	$3,010,000	2.33
All other crop farming	$2,247,000	58.62
Support activities for agriculture and forestry	$2,182,000	33.34
Sawmills	$1,817,000	3.83
Greenhouse, nursery, and floriculture production	$1,644,000	10.11
Veterinary services	$1,556,000	17.23
Poultry and egg production	$1,167,000	1.56
Frozen cakes and other pastries manufacturing	$1,023,000	9.84
Other snack food manufacturing	$938,000	1.47
Roasted nuts and peanut butter manufacturing	$713,000	1.44
Commercial logging	$190,000	2.37
Animal, except poultry, slaughtering	$123,000	0.17
Forestry, forest products, and timber tract production	$114,000	1.38
Dairy cattle and milk production	$108,000	2.00
Tree nut farming	$108,000	0.66
Meat processed from carcasses	$93,000	0.17
Rendering and meat byproduct processing	$88,000	0.17
Commercial hunting and trapping	$58,000	0.75
Fruit farming	$45,000	0.28
Vegetable and melon farming	$36,000	0.19

Methodology

Using the economic software IMPLAN, the equilibrium displacement model calculates the estimated output and employment of all 546 different economic sectors if the current economy experiences no shocks within the agriculture and agriculture-related industries. IMPLAN sectors are based on North American Industry Classification System (NAICS) codes. The results of this model are broken down into direct, indirect and induced effects, and the IMPLAN framework avoids double counting. All agriculture and agriculture-related sectors represented in this model use the most recent IMPLAN data available (2022), adjusted for 2024 dollars. For this model, key statistics are defined as follows: total employment refers to the annual average of the sum of full and part time jobs held attributed to the 30 agricultural sectors, total gross regional product is the sum of the value added of all industries across the region, and total output is the total annual value of production for an industry or area.

Notes and Glossary

These results are based on estimated production and employment numbers, along with estimated potential sector-, industry- and economy-wide effects. Therefore, these results will differ from actual events.

Due to confidentiality policies that exist within several agencies from which IMPLAN collects their data, some sectors in some regions may not have all data available.

The model provides results in relation to the agriculture and agriculture-related sectors. These results are not equal to the total effects of all 546 sectors but rather the total effects relative to agriculture.

The following terms are used throughout this report:

- *Direct effect:* the contribution from agricultural and food products
- *Indirect effect:* the contribution from farms and agricultural businesses purchasing inputs and services from supporting industries within the region.
- *Induced effect:* the contribution from employees of farms, agricultural businesses, and supporting industries spending their wages on goods and services within the region.
- *Value added* = labor income + indirect business taxes + other property type income
- *Gross Regional Product* = final demand of households + government expenditures + capital + exports – imports – institutional sales
- *Output* = intermediate inputs + value added
- *Employment:* full-time/part-time annual average, i.e., 1 job lasting 12 months = 2 jobs lasting 6 months each = 3 jobs lasting 4 months each. A job is neither full-time nor part-time.

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