

Missouri Agriculture & Economy



Executive Summary

There are different ways to measure the economic impact of an industry in a state, including state value-added, total output, jobs created, and more.

Highlights

- When measuring the total value-added, which is the total sales taking place in Missouri, agriculture ranks 4th, after Services (1st), Government (2nd), and Manufacturing (3rd).
- When measuring the total output, which is the total value of all production or sales of the industry within an area, Agriculture comes 3rd after the sectors of Manufacturing and Services.
- Missouri ranks 12th in the nation for cash receipts on all commodities coming from agriculture, with \$97 million in revenue. This accounts for 2.7% of all U.S. receipts for all commodities in agriculture. In 2021, agriculture, forestry and related industries in Missouri employed about 456,618 people, about 13% higher than the national average.
- Several global plant-science companies have Missouri as their global or North American headquarters. The Bioscience Industry in Missouri comprises over 3,500 companies employing nearly 50,000 Missourians.

Research Background

Measuring Economic Output

Some of the ways that are used to measure the economic impact of an industry in a state include state value-added, revenue, jobs created, and Gross Domestic Product (GDP).

State Value-Added

Total value-added refers to the portion of total sales that create additional value from the economic activity in an area and/or industry, and is an accurate indicator of the ability of an industry to improve economic prospects in a given area. Total value-added for an industry represents the value of the industry's total sales minus the value of any inputs used in the production process from other industries. Key components of value added are employee compensation (hired labor) and proprietor's income (self-employed), which is collectively known as 'household income'.¹

Figure 1 shows Missouri's total value added broken out by industry. The agriculture and forestry industries and related economic activity contribute significantly to the Missouri

*MOST Policy Initiative, Inc. is a nonprofit organization that provides nonpartisan information to Missouri's decision makers. All legislative Science Notes are written only upon request by members of the General Assembly. **This Science Note was published in February 2022 by Dr. Elena Bickell, Agriculture, Natural Resources, and Conservation Policy Fellow – eleni@mostpolicyinitiative.org.***

economy with \$34.911 billion in value added, which is 10% of the state’s total. Agriculture ranks 4th behind Services (\$78.4 billion), Manufacturing (\$71.5 billion), and Government (\$56.8 billion). The agriculture and forestry industry is larger in terms of value added than industries such as Construction (\$32.9 billion), Transportation (\$9.1 billion), and Mining (\$2.1 billion).¹

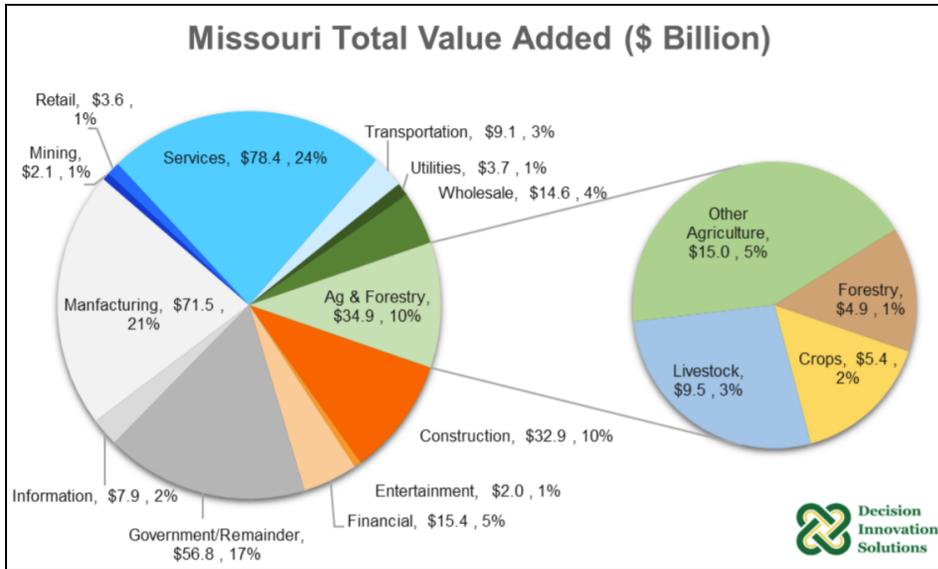


Figure 1. Missouri Value-Added by Industry and by specific sectors within Agriculture, 2021.¹

Total Output

Total output (sales) refers to the total value of all production or sales of an industry within an area (e.g., within the state). This is a total number that does not make deductions for the cost or origination of inputs that were used in the production process, which means that there is some double counting that occurs with this measure of economic activity. As shown in Figure 2, the Agriculture and related industries contribute \$93.7 billion a year; only manufacturing (\$186.6 billion) and services (\$131.9 billion) contribute more in terms of output.¹

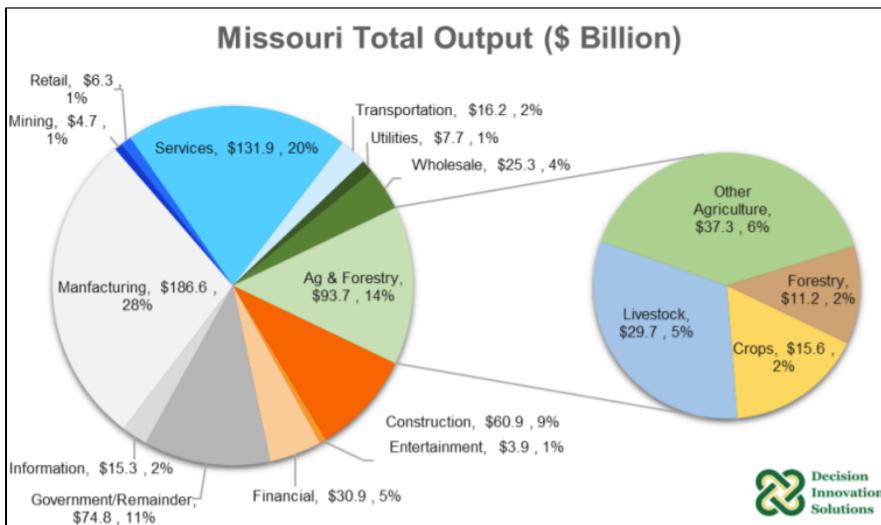


Figure 2. Missouri’s Total Output by Industry and by specific sectors within Agriculture, 2021.¹

Contributions to Jobs

Missouri is the 4th most diverse economy in the nation and is strong at attracting a highly-skilled and educated workforce and companies. Missouri’s economy rests chiefly on industry, which includes the sectors of Automotive Suppliers, Biosciences, Advanced Manufacturing, Financial & Professional Services, Health Sciences & Services, Information Technology, and Transportation & Logistics, food products, chemicals, printing and publishing, machinery, fabricated metals, and electrical equipment sectors.²

Agriculture

Missouri has over 100,000 farms, which is second only to Texas. Missouri ranks 12th in the nation for cash receipts on all commodities coming from agriculture, with \$97 million in revenue. This accounts for 2.7% of all U.S. receipts for commodities in agriculture.

The sector of Agriculture, Forestry, Fishing, and Hunting employs more than 456,000 people in Missouri. Although that is 12%, this number is 13.3% higher than the national average.^{1,3}

Figure 3 shows the relative number of Missourians who are employed in the Agriculture Industry in Missouri, and their median income per metropolitan area of Missouri.

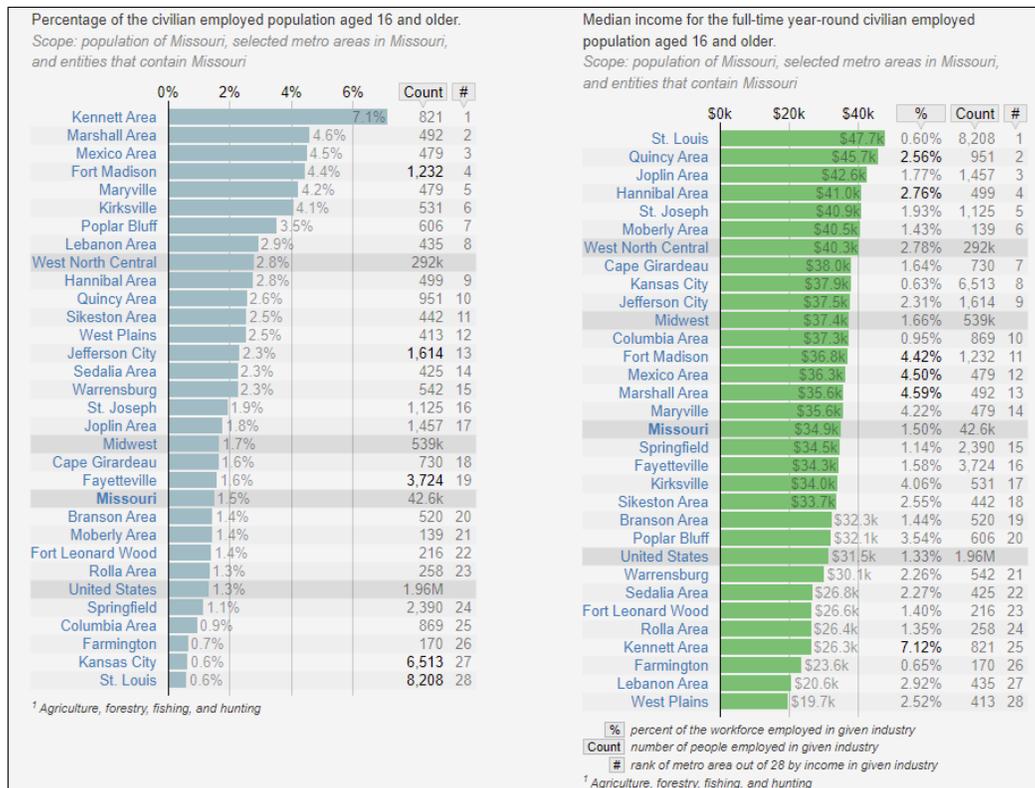


Figure 3. Percentage of Missourians aged 16 and over who are employed in Agriculture by metropolitan area (left) and by their median income (right). The first column represents the percentage of each area as compared to all people employed in Agriculture in the state, the second shows the number of people, and the last column on the right shows the ranking between the metropolitan areas.³

Plant Sciences and Life Sciences

Missouri is a hub for plant and life-science companies and some of the top agricultural associations. Companies like Bayer, Boehringer Ingelheim Vermedica, and Sigma-Aldrich have Missouri as their headquarters. Overall, the Bioscience Industry in Missouri includes over 3,500 companies employing nearly 50,000 Missourians.

Agricultural Associations, such as the National Corn Growers Association, American Soybean Association (ASA), American Angus Association, National Center for Soybean Biotechnology have their headquarters in Missouri.⁴

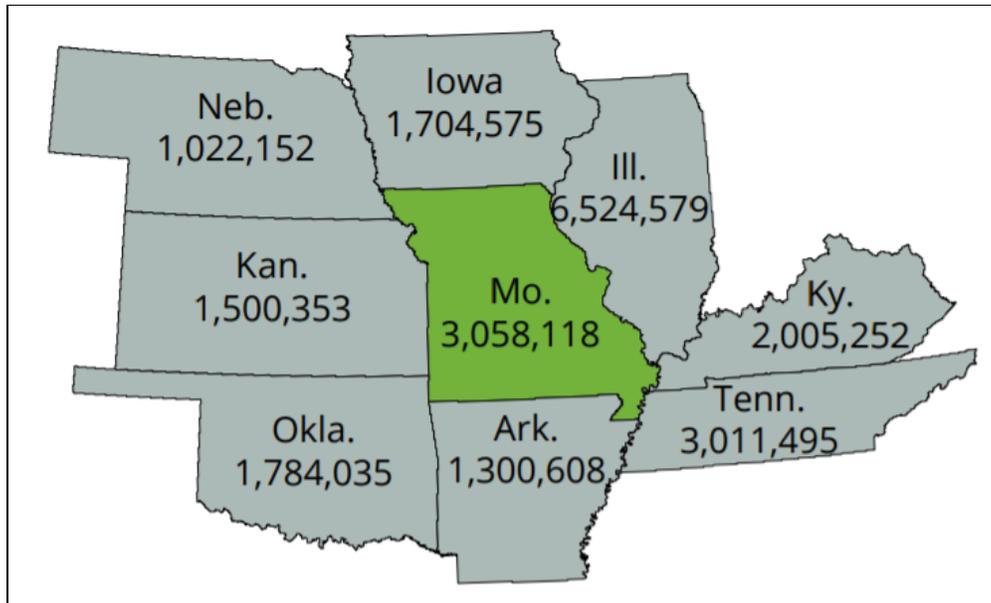


Figure 4. Total workforce size for all industries in Missouri as compared to its bordering states.⁴

The state is home to 14 specialized plant science incubator facilities and research centers located throughout the state, such as T.E. Fisher Delta Research Center, Lee Greenley Jr. Memorial Research Center, Donald Danforth Plant Science Center, and more.⁴

Missouri has 22 colleges and universities offering degrees in agriculture, and 40 colleges and universities offering bachelor's degrees or higher in Biological or Biomedical Sciences.⁴

References

1. 2021 Economic Contribution Study of Missouri in Agriculture and Forestry, <https://agriculture.mo.gov/economicimpact/county-pdf/MissouriAgForestryEconomicContributionStudy.pdf>
2. Missouri Department of Economic Development, Missouri's Target Industries, <https://ded.mo.gov/target-industries>
3. Industries in Missouri (State), Statisticatlas.com, Data from U.S. Census Bureau, <https://statisticalatlas.com/state/Missouri/Industries>
4. Missouri Partnership, Missouri advantages for the plant science industry, <http://www.missouripartnership.com/wp-content/uploads/2016/08/Plant-Sciences-2.pdf>