

Estimating Agriculture's Contribution to the Arkansas Economy Over Time

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ESTIMATING AGRICULTURE'S CONTRIBUTION TO THE ARKANSAS ECONOMY OVER TIME

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INTRODUCTION

Agriculture has been a primary stimulus of economic growth in Arkansas since statehood. While agriculture contributes to the economy through direct agricultural production and value-added processing, it also plays an important role through its interactions with other sectors. The use of non-agricultural goods and services as inputs into the agriculture sector promotes diversified growth in Arkansas' economy.

The diversity of Arkansas' agriculture sector fosters its strength. In the nation, Arkansas is one of the top twenty five states in the production of 24 diverse agricultural products and is currently the leading producer of rice, the third largest producer of catfish, and the fourth largest producer of broilers, turkeys and grain sorghum. Arkansas also has a large percentage of forestland, equal to 57 percent of its total land base, which is processed to produce products such as lumber, paper, and furniture.

OBJECTIVES

To discuss the contribution of agriculture in Arkansas:

- in relation to the state economy,
- as compared (in terms of the relative size) to the agriculture sector in neighboring states, the Southeast region of the United States and the nation as a whole,
- in terms of the direct, indirect and induced contributions, and
- in terms of the contributions of the crop, animal agriculture and forestry sectors to the Arkansas economy.

RESEARCH METHODS

Gross domestic product data by state, for the US and for the Southern US from the Bureau of Economic Analysis (BEA) are used to: 1) present a summary of the Arkansas economy, 2) determine agriculture's contribution to the state economy from 2003 to 2012, 3) and compare the relative size of agriculture elsewhere to the size of agriculture in Arkansas.

Impact Analysis for Planning (IMPLAN) input-output software and state-level data are used to determine the overall impact of Arkansas' agriculture sector from 2003 through 2012. The software and data are also used to derive the corresponding direct, indirect and induced impacts of agriculture in Arkansas as well as to estimate the relative contributions of the crop, animal agriculture and forestry sectors to the state economy.

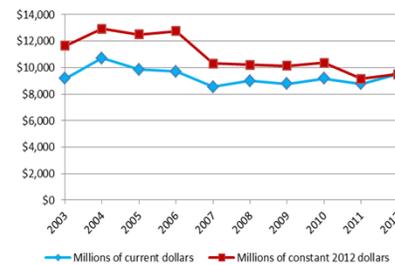


Figure 1: Arkansas' Agriculture and Food Sector GDP, 2003 to 2012.

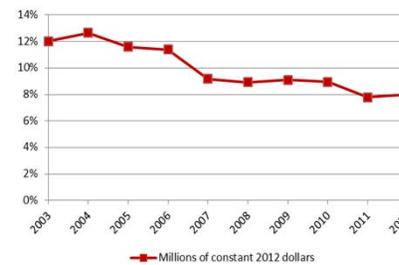


Figure 2: The Agriculture and Food Sector's Share of Arkansas GDP, 2003 to 2012.

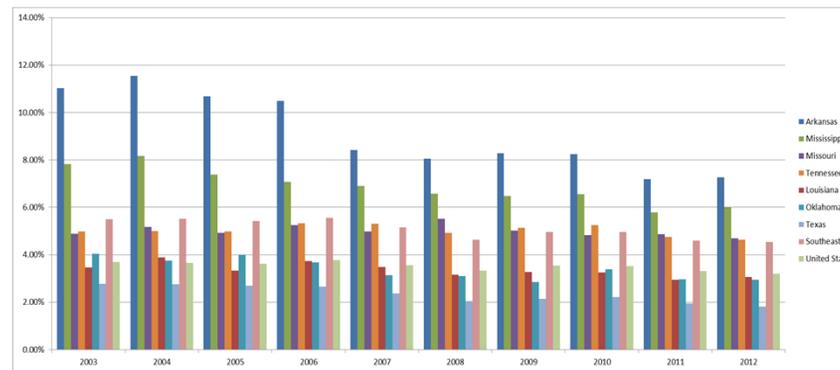


Figure 3: Agricultural Sector's Share of GDP, 2003-2012

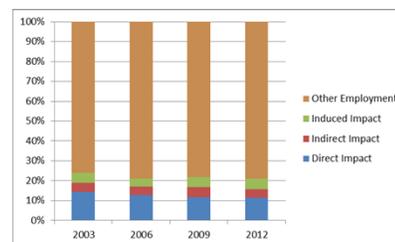


Figure 4: Agriculture Sector's Direct, Indirect and Induced Contributions to Arkansas' Employment

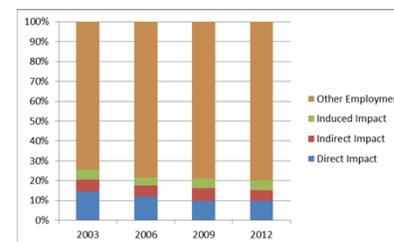


Figure 5: Agriculture Sector's Direct, Indirect and Induced Contributions to Arkansas' Value Added

RESULTS

Since 2003, agricultural production and processing have contributed billions of dollars to the Arkansas economy annually (Fig. 1) representing an annual average of 10% of Arkansas' gross state product (GSP) (Fig. 2). Although these values have experienced a steady decline throughout the past decade, agriculture's percentage of GSP remains greater than that of any surrounding state, the Southeast region or the United States (Fig. 3).

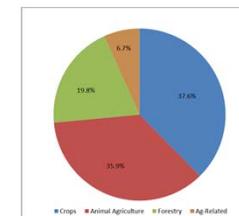


Figure 6: Share of Agricultural Employment by Sector

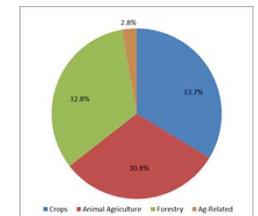


Figure 7: Share of Agricultural Value Added by Sector

Arkansas agriculture is annually responsible for an average of one in every six jobs and \$1 out of every \$6 in value added (Figures 4 & 5).

Within the agricultural sector, the crops sector most often generates the largest number of jobs and highest value added (Figures 6 & 7).

Additionally, many jobs, income and value added accrue in other sectors such as Wholesale and Retail Trade, Transportation and Warehousing, and Manufacturing.

CONCLUSIONS

The economic contribution of the agriculture sector in Arkansas is much more than the direct impact of agricultural production and processing. Results of our study support the argument that agriculture is a vital part of the Arkansas economy. Over the past decade, Arkansas' agriculture sector has continuously shown strength as an important economic base by contributing a significant percentage to the state GSP and value added as well as providing much needed jobs for Arkansas' rural communities.