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The Contribution of Agriculture to the Arkansas Economy in 2011

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ABSTRACT

Poster Abstract: Agriculture is responsible for approximately 17% of jobs, labor income and value added in the state of Arkansas. More than half of the contributions accrue in nonagricultural sectors. Continued strength of agriculture is of paramount importance to maintain the social and economic fabric of rural Arkansas communities.

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INTRODUCTION

Agriculture is an engine of economic growth in Arkansas. While it 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. Arkansas' varied climate and terrain allows for row crops in the east, livestock in the west, and forestry in the south. Arkansas was one of the top 25 states in the production of 24 commodities in 2012 (NASS, 2013). Nationwide, Arkansas ranks 1st in production of rice, 2nd in broilers, and 3rd in cotton and catfish.

OBJECTIVE

To evaluate the economic contributions of the agriculture sector in Arkansas for production year 2011.

METHODS

Contributions are modeled using the Impact Analysis for Planning (IMPLAN) System V3. IMPLAN is computerized database and software used to construct input-output (I-O) models (MIG, 2000). The IMPLAN model uses a 440 sector I-O transactions table.

These contributions are measured three ways.

Direct Contributions are the sum of the contributions of farm production and processing of farm products.

Indirect Contributions result when agricultural firms purchase raw materials and services from other Arkansas businesses to produce their products.

Induced Contributions result when employees of agricultural firms and employees of the raw material and service firms spend a portion of their income on local purchases.

Contributions of the aggregate agriculture sector (crop, livestock, forestry and other agriculturally-related enterprises) are offered. IMPLAN (MIG, 2012) Arkansas data for 2011 (modified with finalized USDA (2012) production data for 2011) were used to calculate all contributions. Direct employment, income and value added contributions for each aggregated sector are summarized. All income and value added figures are reported in 2011 dollars, unless otherwise noted.

Table 1. The Direct, Indirect and Induced Contribution of Aggregate Agriculture on the Arkansas Economy

	Jobs	Income (millions \$)	Value Added (millions \$)
Ag Production	69,433	1,489	2,643
Ag Processing	71,719	3,805	6,173
Ag-Related	9,267	234	193
Ag Indirect	60,552	2,965	4,980
Ag Induced	48,272	1,656	3,058
Total	259,243	10,148	17,046

Figure 1: Distribution of the Contributions of Agriculture to Jobs, Income and Value Added in Arkansas

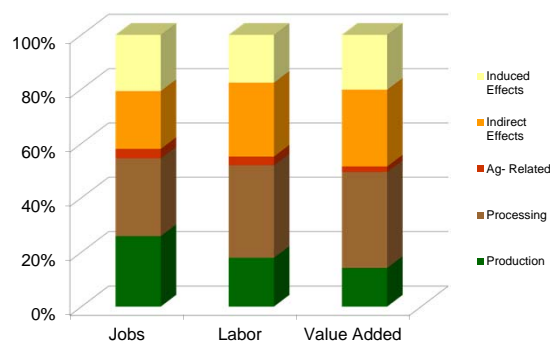


Table 2. Direct Contribution of the Major Agricultural Sectors to Ag Production and Processing

	Jobs	Income (millions \$)	Value Added (millions \$)
Crop Production	47,639	887	1,595
Crop Processing	15,279	753	1,467
Animal Production	17,597	481	923
Animal Processing	34,403	1,200	1,932
Forestry Production	4,197	121	125
Forestry Processing	22,037	1,851	2,774
Total	141,152	5,293	8,815

RESULTS

In 2011, the total contribution of the agriculture sector was 259,243 jobs, or more than one in six jobs in Arkansas (Table 1), \$10.15 billion (B), or 15% of income and \$17.05B, or 17% of the state's value added.

Nearly 75% of all jobs accrued in : (1) Agriculture, Forestry, Fishing and Hunting; (2) Manufacturing; (3) Transportation and Warehousing; (4) Health and Social Services; and (5) Retail Trade. Direct agricultural production and processing provide 58% of all ag-generated jobs. Nearly 74% of all value added accrued in : (1) Manufacturing; (2) Agriculture, Forestry, Fishing and Hunting; (3) Real Estate and Rental; (4) Wholesale Trade; and (5) Transportation and Warehousing. It's important to note that nearly half (47%) of that value added accrued in sectors outside of agriculture.

The Crop Sector includes all enterprises engaged in the production and processing of crops. It accounted for 62,918 jobs or 4.0% of state jobs, \$1.6B (or 2.5%) of income and \$3.1B (or 3.0%) in state value added (Table 2). *Oilseed Farming*, *Rice Farming*, and *Cotton Farming* add the largest amount of value by the Crop Sector. The Animal Sector, includes all enterprises engaged in the production/processing of animals. It accounted for 52,000 jobs (3.3% of state jobs), \$1.7B (or 2.5%) in labor income and \$2.9B (or 2.8%) in value added. The Forestry Sector is primarily comprised of commercial logging, forest products, furniture and wood and paper processing. It contributed 26,234 jobs (1.7% of state jobs) \$2.0B (or 3.0%) in labor income, and \$2.9B (or 2.8%) of value added. *Paper Mills*, *Sawmills and Wood Preservation*, *Veneer and Plywood Manufacturing*, *Sanitary Paper Product Manufacturing*, and *Paperboard Container Manufacturing* comprised 52% of forestry jobs, and 63% and 69% of forestry income and value added, respectively.

CONCLUSIONS

Results support that agriculture is a vital part of the Arkansas economy. Continued strength of the vibrant agricultural sector is needed if the social and economic fabric of the rural communities is to be retained.

References

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Economic Contribution Pocket Guide <http://arkansasagnews.uark.edu/EconomicContributionArkAg2013.pdf>

Economic Contribution Research Report #992 <http://arkansasagnews.uark.edu/992.pdf>