

# Economic Contribution of Agriculture to the Arkansas Economy in 2010

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Agriculture is critical to Arkansas' economy, generating almost 17% of the state's value added, 17% of employment and 16% of labor income. Nationally, Arkansas ranked 21st in net farm income in 2010, with a value of \$1.34 billion.<sup>1</sup> In 2011, Arkansas was in the top 25 states in the production of 24 agricultural commodities and was in the top three states for five commodities: rice, broilers, upland cotton, turkeys and catfish. In real dollars, 2010 agricultural cash receipts for all commodities were valued at \$7.7 billion, down from \$7.8 billion in 2009. This fact sheet summarizes the findings of a recent study undertaken to analyze the economic contribution – in terms of jobs, income and value added<sup>2</sup> – of Arkansas' Agriculture sector in 2010.

## Measuring Economic Activity of Arkansas' Agriculture Sector

The economic contribution of agriculture includes not just the economic activity in the industries that make up the Agriculture sector (Crop, Livestock and Forestry production and processing industries and the Agriculture-Related sector) but

also the indirect and induced contributions. The direct contributions of agriculture are measured by production and processing of crops, poultry, livestock and forestry products and services performed by the Agriculture-Related sector, such as commercial hunting and trapping. Indirect contributions occur when the agriculture industries purchase goods and services from other Arkansas businesses, such as when the poultry and egg producers purchase concrete and steel and secure financing to build new poultry houses. Agriculture's induced contributions are measured through increases in personal consumption of employees working in agriculture industries and agricultural-supplying firms. The sum of these direct, indirect and induced contributions provides a measure of the total economic contribution of agriculture. These contributions are measured in terms of jobs, labor income and value added.

## Agriculture's Contributions

Agriculture accounted for \$16.0 billion<sup>3</sup> of value added to the Arkansas economy in 2010. That's almost 17 cents of every \$1 of value

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<sup>1</sup> Net farm income and agricultural cash receipts are reported in real 2010 dollars, which are calculated by adjusting nominal dollars with annual average prices received indices (base year 2010) published by USDA NASS. Nominal 2009 Arkansas agricultural cash receipts were \$7.3B.

<sup>2</sup> Value added is the sum of employee compensation, proprietary income, other property type income and indirect business taxes. The sum of value added for all industries is a measure of the size of the state economy.

<sup>3</sup> Contributions are reported in nominal 2010 dollars.

added in the state. It also provided 256,244 jobs, which was more than one in every six jobs in Arkansas, and \$9.8 billion in labor income, or 16% of the state's total labor income.

Arkansas agriculture affects other sectors of the economy through direct, indirect and induced contributions to employment and value added. The sector generated jobs and value added in all 20 industries in the North American Industry Classification System (NAICS) used for economic analysis.

## Elements of the Agriculture Sector

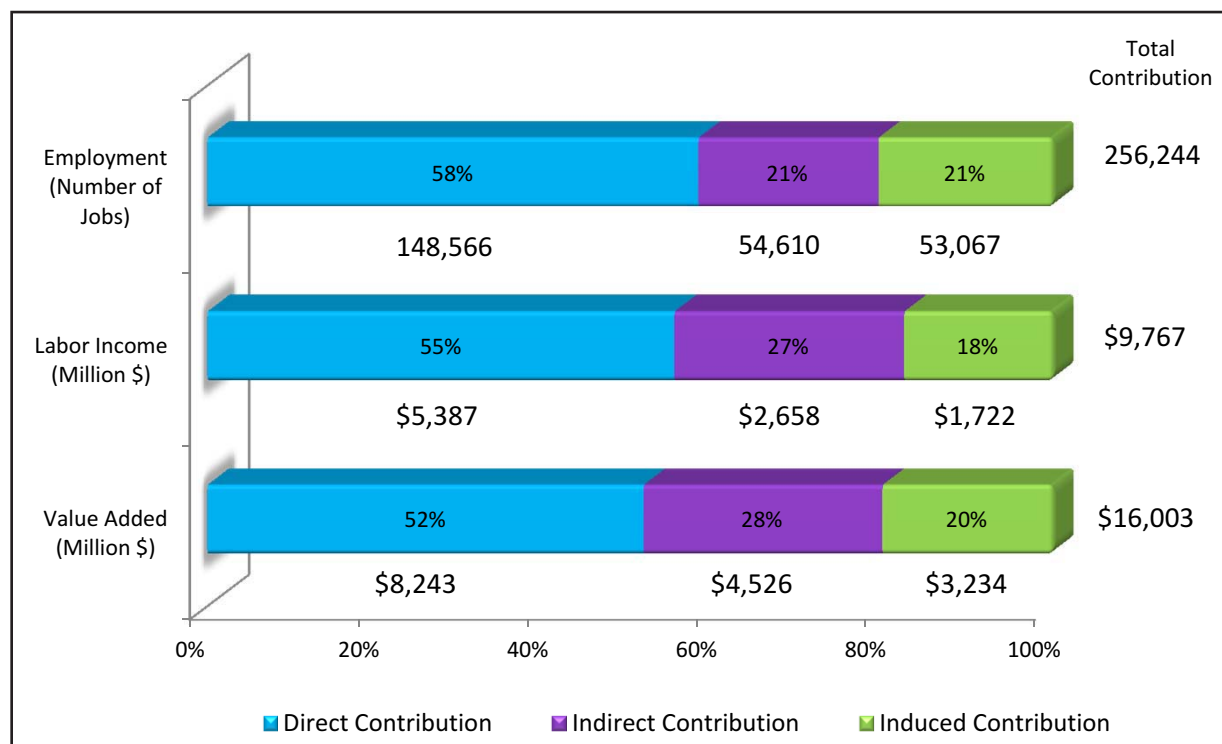
The total contribution of the Agriculture sector to the state economy comprises direct, indirect and induced effects. Employment, labor income and value added are measures of the three types of effects. Direct effects constituted the majority of the effects of employment (58%), labor income (55%) and value added (52%) generated by agriculture (Figure 1).

## Direct Effects by Sector and Relative Importance of Commodities

Direct effects of Agriculture can be further differentiated by the sectors from which they arise: Crops, Animal Agriculture, Forestry and Agriculture-Related. This analysis only compares direct effects; indirect and induced effects are excluded. Of the four sector categories, the Crops sector created the most jobs and highest value added in 2010. Animal Agriculture accounted for the largest share of labor income. The Agriculture-Related sector (e.g., support activities for agriculture and forestry) was the smallest contributor to the direct effects (Table 1).

The Crops sector directly contributed 60,431 jobs and \$2.8B in value added (Table 1). The Crops sector includes all production and processing of cotton, food and feed grains, hay and pasture, fruits, nuts, vegetables and oil-bearing crops. The rice industry (rice farming and milling) accounted for \$548M of value

**Figure 1. The Aggregate Agriculture Sector's Contribution to the Arkansas Economy in 2010**



**Table 1. The Direct Contributions of the Agriculture Sector in 2010**

	Employment (Number of Jobs)	Labor Income (Million \$)	Value Added (Million \$)
Crops	60,431	\$1,731	\$2,788
Animal	52,050	\$1,844	\$2,565
Forestry	27,081	\$1,494	\$2,559
Agriculture-Related	9,004	\$319	\$332
Total	148,566	\$5,387	\$8,243

added (20%) and 9,540 jobs (16%) in the Crops sector in 2010. In terms of value added, soybean production is the number one crop production industry in Arkansas with a direct contribution of \$520M to the Crops sector (19%).

Arkansas is a leading producer, processor and marketer of protein products. The Animal Agriculture sector includes production and processing of poultry, eggs, beef and dairy products, hogs and pigs, catfish and other animals. This sector directly contributed 52,050 jobs and \$2.6B in value added (Table 1). The poultry industry (composed of poultry and egg production and poultry processing) is the leading industry in the Animal Agriculture sector. It had direct impacts of 72% of Animal Agriculture jobs and \$3 of \$4 of Animal Agriculture value added (Figure 2). Furthermore, the poultry industry accounted for one out of every four agricultural jobs and \$2 in \$9 of agricultural value added.

Forestry is the leading employer in south Arkansas, which is one of the nation's leading timber-producing regions. The Forestry sector includes forest products, furniture and wood and paper processing. It directly contributed 27,081 jobs and \$2.6B in value added (Table 1). The top five forestry industries – paper mills, sanitary paper product manufacturing,

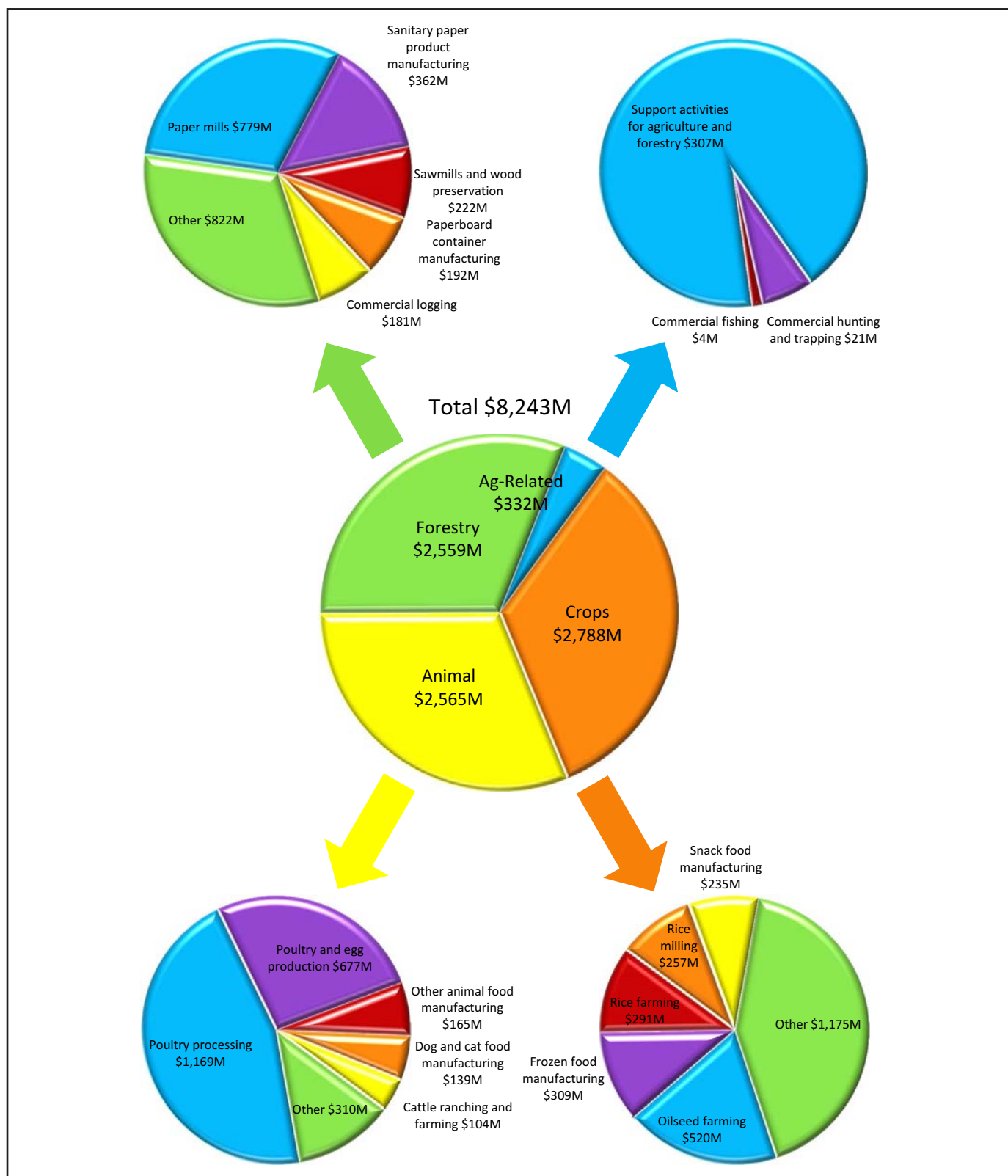
sawmills and wood preservation, paperboard container manufacturing and paperboard mills, and commercial logging – contributed 68% of value added (Figure 2).

The Agriculture-Related sector comprises those industries that support the Crops, Animal Agriculture and Forestry sectors. Industries in this sector include commercial fishing, hunting and trapping and support activities for agriculture and forestry. The Agriculture-Related sector directly contributed 9,004 jobs in 2010 and \$332M in value added in 2010 (Table 1). Support activities for agriculture and forestry contributed 92% of direct value added in the Agriculture-Related sector (Figure 2).

## Conclusion

Agriculture contributes significantly to Arkansas job creation, income and value added throughout the state's economy. As has been the case for many years, Agriculture contributes a higher proportion of state GDP in Arkansas than it does in any of the surrounding six states. Continued strength of agriculture is of paramount importance to the social and economic fabric of Arkansas communities and to the infrastructure and services that translate into quality of life for residents.

**Figure 2. Direct Value Added by Industry of the Agriculture Sector in 2010**



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