

ECONOMIC
Impact
of Arkansas Agriculture
2009

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\$15,186,000,000

Agriculture accounted for \$15.2 billion of value added to the Arkansas economy in 2007.

That's 16 cents of every \$1 of Value Added.*

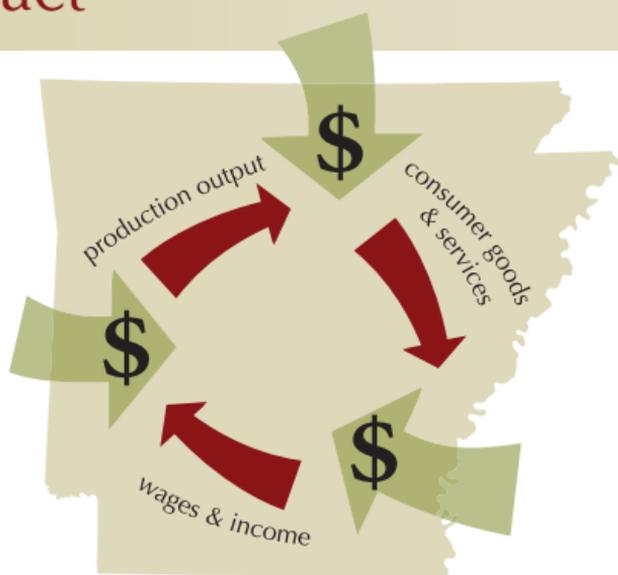
*Value Added is the sum of employee compensation, proprietary income and indirect business taxes.

Source: "Impact of the Agricultural Sector on the Arkansas Economy in 2007," by N. Kemper, J. Popp and W. Miller. Research Report 987. Arkansas Agricultural Experiment Station, University of Arkansas Division of Agriculture, Fayetteville. Forthcoming 2009.

Computed using 2007 Arkansas database from Minnesota Implan Group, Inc. (Latest year for which relevant data were available.)

Total Impact

The total economic impact of the agricultural sector includes three areas of wealth and job generation.



- **Direct Impacts** are generated by farm production and processing of crops, poultry, livestock and forest products.
- **Indirect Impacts** result when agricultural firms purchase materials and services from other Arkansas businesses — a very important part of the economy in many communities.
- **Induced Impacts** result when employees of agricultural firms and their suppliers spend a portion of their income within Arkansas.

These impacts are reported in terms of Employment, Labor Income and Value Added.

- **Employment** includes all wage and salary employees, as well as self-employed workers in a given sector.
- **Labor Income** consists of two parts. First is proprietary income, which includes all income received by self-employed individuals. Second is wages, which includes all payments to workers including benefits.
- **Value-Added** includes labor income plus indirect taxes and other property-type income such as payments for rents, royalties and dividends. Value added and Gross Domestic Product (GDP) are equivalent measures in theory but are estimated using different methods and data sources.

Government payments — payments made directly to some recipients in the farm sector — are included in the impact analysis. The GDP of Food Services and Drinking Places are reported, but the economic activities of these retail establishments are not included as part of the Agriculture Sector in the Value-Added estimates. No input providers (fertilizer, pesticide and equipment manufacturers) or retail locations (restaurants, grocery stores, lawn and garden centers, etc.) are considered as part of the Agriculture Sector in the Value-Added estimates.

Aggregate of value added by the agricultural sector in Arkansas, 2007

Impact Area	Million \$	% Total Impact	% State Total
Production	3,342	22.0	3.6
Processing	4,597	30.3	4.9
Ag-Related	268	1.8	0.3
Total Direct	8,208	54.0	8.8
Indirect	4,097	27.0	4.4
Induced	2,881	19.0	3.1
TOTAL	15,186	100.0	16.3

Agriculture Provides

- 268,617 jobs, which is more than one in every six jobs in Arkansas.
- \$9.16 billion in labor income, or more than 15% of the state's total labor income.



Arkansas Counts on Agriculture

The contribution of the agricultural sector as a percentage of the Gross Domestic Product (GDP) by State in Arkansas is greater than in any contiguous state as well as the averages for the Southeast region and the United States.

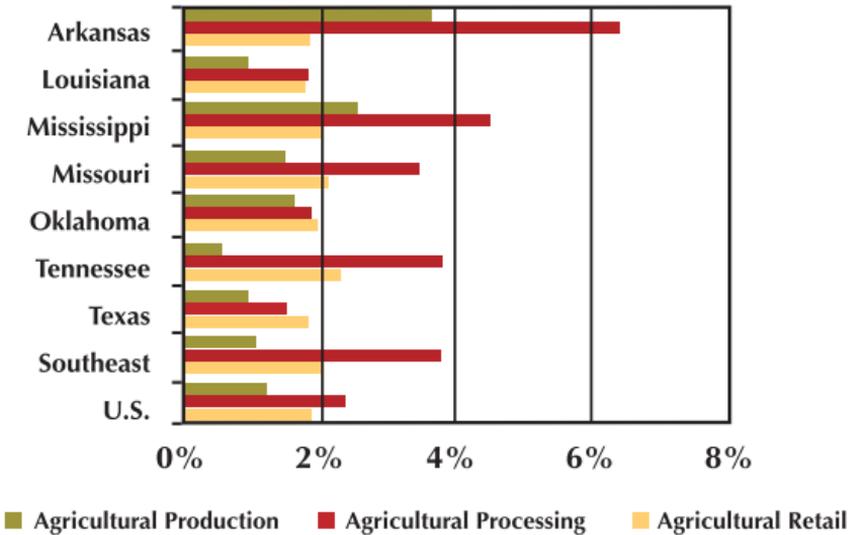
Agricultural Sector as a percentage of Gross Domestic Product by State, 2007

State/Region	Percent of GDP by State
Arkansas	12.03
Louisiana	4.55
Mississippi	9.19
Missouri	7.09
Oklahoma	5.46
Tennessee	6.68
Texas	4.28
Southeast	6.94
U.S.	5.50

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Accounts Data, 2009

Agricultural sector includes production, processing and retail.

Agricultural Production, Processing and Retail as a percentage of Gross Domestic Product by State, 2007



Source: USDC, BEA, 2009

For comparison among states, only the direct impacts of agricultural production, processing and retail are used as a percentage of Gross Domestic Product (GDP) by State and GDP for the United States.

GDP and value added are similar measures of wealth created by an economy; however, different data sources and methodologies are used to calculate these measures.

Total Impact

The Natural State

Agriculture and forestry are vital to the diverse, interactive economy of Arkansas as well as to our very identity as “The Natural State.”

National Ranking

- **No. 13 in total farm receipts**, with 49,300 farms on 13,700,000 acres. (USDA: NASS, 2009)
- **No. 5 in softwood lumber**, with about 18,200,000 acres of timber land representing approximately 54% of the total land base. (Arkansas Forest Resources Center, 2009)



Arkansas is in the top 25 states in the production of 20 agricultural commodities.

- **No. 1 in Rice**
- **No. 2 in Broilers**
- **No. 3 in Cotton**
- **No. 3 in Cottonseed**
- **No. 3 in Catfish (foodsize)**
- **No. 4 in Turkeys**
- **No. 5 in Grain Sorghum**
- **No. 8 in Chicken Eggs**
- **No. 9 in Soybeans**
- **No. 11 in Beef Cows**
- **No. 13 in Grapes**
- **No. 13 in Pecans**
- **No. 14 in Tomatoes**
- **No. 14 in Wheat**
- **No. 15 in Watermelons**
- **No. 18 in Hay**
- **No. 19 in Peaches**
- **No. 20 in Hogs**
- **No. 21 in Corn**
- **No. 22 in Cattle and Calves**

National Agricultural Statistics Service, data for 2008

Highlights of Arkansas' Agriculture 2003-2008

	Year	Production (thousands)
Rice	2005	108,792 cwt.
Broilers	2008	6,380,000 lbs.
Cotton	2006	2,525 bales
Cottonseed	2006	861 tons
Catfish – foodsize	2005	104,000 lbs.
Turkeys	2008	610,700 lbs.
Grain Sorghum	2007	20,640 bushels
Chicken eggs	2003	3,590,000 eggs
Soybeans	2008	123,500 bushels
Beef Cows	2005	984 head
Grapes	2004	5,400 lbs.
Pecans	2003	3,800 lbs.
Tomatoes	2005	414 cwt.
Wheat	2008	55,860 bushels
Watermelons	2007	418 cwt.
Hay	2004	3,570 tons
Peaches	2005	9,300 lbs.
Hogs	2008	140,555 lbs.
Corn	2007	99,710 bushels
Cattle and calves	2003	580,979 lbs.

Highest commodity production levels for the years 2003-2008.
National Agricultural Statistics Service, various dates.



Direct Impact

Crops Sector

The crops sector includes all enterprises engaged in the production and processing of cotton, food and feed grains, oil bearing crops, fruits, nuts, vegetables, and hay and pasture.

Direct impact of crops

Employment 59,314 jobs

Wages \$920.14 Million

Labor Income \$1.65 Billion

Value Added \$2.84 Billion



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Arkansas cash receipts from all commodities totaled \$7.14 billion for the 2007 calendar year, up \$1.14 billion from 2006. **This is the largest cash receipts total in Arkansas history** and ranked 13th in the nation in agricultural cash receipts.

U.S. net farm income set a new record in 2007 at \$86.8 billion, up \$28.3 billion from 2006 and over \$29 billion above its 10-year average of \$57.5 billion. The values of both crop and livestock production (at \$150.8 billion and \$138.1 billion, respectively) were at record levels.

The boost in farm income was primarily the result of higher commodity prices, due to strong demand from foreign buyers and from the domestic biofuels industry. Corn was the prime beneficiary with soybeans also benefitting.

Riding the record high levels of production, food manufacturing GDP in Arkansas was up 18.5% in 2007. However, the five other major categories of agricultural and forestry manufacturing sectors experienced declines in income and gross domestic product in 2007.

This manufacturing contraction is evident in the impact analysis by lower indirect and induced impacts. Manufacturing firms purchased fewer materials and services from other businesses and less income from their employees was spent in local economies. (USDA ERS, 2009; USDA NASS, 2009; and BEA, 2009)

Strength in Diversity

Soybeans, rice, wheat, corn, grain sorghum and cotton accounted for 51% of value added, 63% of jobs and 42% of labor income in the crops sector in 2007.

The other 49% of value added was from a variety of locally important crops. This diversity is a major asset in weathering downturns in a given commodity. Other crops are hay and forage, melons, fruits, vegetables, pecans, turfgrass and ornamental plants.



2008 Commodity Production

Commodity	Acres Harvested (thousands)	Production (thousands)	Value (thousand \$)
Rice	1,395	92,938 cwt.	1,459,127
Cotton	615	1,310 bales	348,984
Cottonseed		456 tons	108,072
Soybeans	3,250	123,500 bushels	1,092,975
Hay	1,405	3,111 tons	273,466
Wheat	980	55,860 bushels	326,781
Corn	430	66,650 bushels	289,928
Grain Sorghum	115	10,120 bushels	39,104
Broilers		6,380,000 lbs.	2,807,200
Chicken eggs		3,139,000 eggs	418,062
Turkeys		610,700 lbs.	348,099
Cattle and calves		508,412 lbs.	406,786
Catfish – foodsize		83,700 lbs.	62,775
Hogs		140,555 lbs.	88,924
Timber		20,682 tons	442,147
Total	8,190		8,512,430

Source: National Agricultural Statistics Service, 2009; Arkansas Forestry Commission, 2009; Arkansas Forest Resources Center, 2009



Animal Agriculture Sector

The animal agriculture sector includes production and processing of poultry, eggs, beef and dairy products, hogs and pigs and other animals.

Beef cattle and poultry are companion enterprises on many farms, with poultry providing cash flow and fertilizer for pastures.

Aquaculture is a major enterprise and is often a companion to row crop farming in the Delta region.



Direct impact of animal agriculture

Employment	57,610 jobs
Wages	\$1.43 Billion
Labor Income	\$1.62 Billion
Value Added	\$2.28 Billion



Protein Power

Arkansas is a leading producer, processor and marketer of protein products.

Poultry and egg production and processing is the leading industry, with direct impacts of:

- 1 in 4 agricultural jobs; and
- \$1 in every \$4 of agricultural wages and income.

Cattle are raised in every county, with a January 1, 2009, inventory of 1,800,000 head. The swine inventory for December 1, 2008, was 280,000 hogs and pigs. Arkansas foodsize catfish numbered 44,890,000 on January 1, 2009.

(National Agricultural Statistics Service, 2008-2009)





Direct impact of poultry

Employment	40,707 jobs
Wages	\$1.12 Billion
Labor Income	\$1.29 Billion
Value Added	\$1.69 Billion

Direct Impact

Forestry Sector

The forestry sector includes forest products, furniture and wood and paper processing.

Forest species include about 27% pine, 17% mixed hardwood and pine, 39% upland oak-hickory forests and 16% bottomland species including oak, cypress, cottonwood and elm. (U.S. Forest Service, 2005)





Direct impact of forestry

Employment	33,259 jobs
Wages	\$1.46 Billion
Labor Income	\$1.60 Billion
Value Added	\$2.83 Billion

Economic Engine

Forestry is the leading employer in South Arkansas — one of the nation's leading timber-producing regions.

Sawmills, logging, paper and paperboard mills contribute:

- 46% of forestry jobs;
- half of wages and income; and
- 55% of value added.

A Multifaceted Resource

Forest-based tourism, recreation, watershed protection, wildlife habitat and aesthetic values are vital to the economy, environmental health, culture and identity of Arkansas.





Direct impact of sawmills, logging, paper and paperboard mills

Employment	15,258 jobs
Wages	\$689 Million
Labor Income	\$798 Million
Value Added	\$1.56 Billion

Across the Board

Arkansas agriculture generates jobs in all 20 industries in the North American Industry Classification System (NAICS) used for economic analysis.

Employment generated by agriculture in top five NAICS industries

Manufacturing	86,577 jobs
Agriculture, Forestry, Fishing and Hunting	78,449 jobs
Retail Trade	12,806 jobs
Health and Social Services	11,951 jobs
Transportation and Warehousing	10,206 jobs
Top Five Total	199,989 jobs
(74% of all jobs generated by agriculture)	

Based on 2-Digit NAICS Aggregation (U.S. Census Bureau, 2006)



The far-reaching impacts of agriculture are seen in the distribution of value added throughout the economy.

Value added generated by agriculture in top five NAICS industries

Manufacturing	\$4.95 Billion
Agriculture, Forestry, Fishing and Hunting	\$3.61 Billion
Real Estate and Rental	\$1.01 Billion
Wholesale Trade	\$991.62 Million
Transportation and Warehousing	\$679.30 Million
Top Five Total	\$11.24 Billion
(74% of all value added generated by agriculture)	

Based on 2-Digit NAICS Aggregation (U.S. Census Bureau, 2006)

Promoting Sustainable Farming Systems

Discovery Farm

Privately owned farms have partnered with scientists, industry leaders and natural resource experts in on-farm research to demonstrate the benefits of conservation measures in real-world settings. The program will help increase the visibility of farming as being proactive in addressing environmental issues and help build trust and confidence among stakeholders.

The goal of **Discovery Farm** is to promote and document sustainable and viable farming systems that remain cost-effective in an environmentally sound manner through:

- Assessing the need for and effectiveness of best management practices.
- Providing on-farm verification and documentation of practices.
- Developing and delivering educational programs for farmers in support of sustainable farming in Arkansas.

Working in partnership to assure a healthy environment and a healthy farm economy in Arkansas.

The Center for Agricultural and Rural Sustainability

The mission of the Division of Agriculture's **Center for Agricultural and Rural Sustainability (CARS)** is to increase prosperity for rural Arkansas through sustainable practices. The Center has identified three major focus areas:

- **Sustainability Indices** — measure key impact areas and trends over time, foster productive dialogue and promote progress toward sustainability.
- **Life Cycle Assessment** — quantify the environmental and social impacts of a product by measuring the inputs and outputs associated with its supply chain.
- **Food Industry Program** — research, education and outreach focused on strengthening farm to retailer connections and promoting locally produced foods.

The Center hosted the first **Sustainable Agriculture and Rural Prosperity Workshop** which convened a diverse group to discuss the opportunities and challenges of using biotechnology as a means to alleviate hunger. A forthcoming book chronicles the discussion in detail.

Arkansas is Our Campus

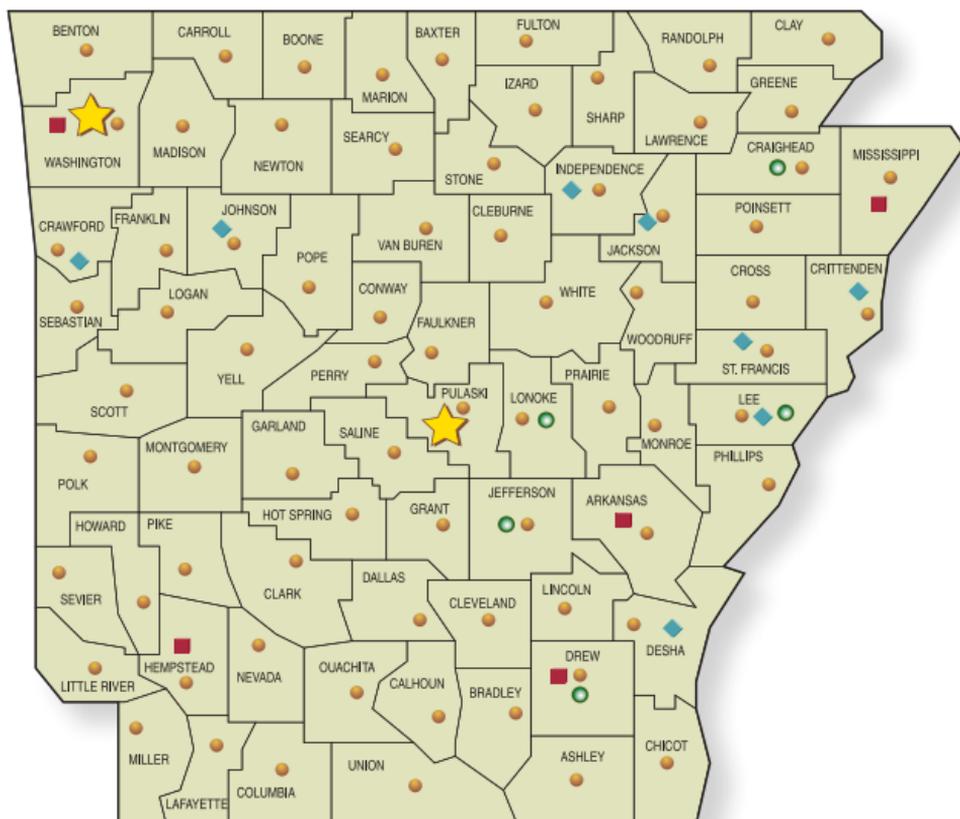
The University of Arkansas System's Division of Agriculture conducts research and extension programs to support Arkansas agriculture in its broadest definition.

Our employees include Cooperative Extension Service faculty in all 75 counties, Agricultural Experiment Station scientists and Extension specialists on five university campuses and at five research and extension centers, and support personnel at eight research stations and five other units.



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Locations



-  Division & CES Headquarters, Little Rock
AAES Headquarters, Fayetteville
-  Research & Extension Centers
-  Research Stations
-  Other Locations
-  County Extension Offices



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