POCKET FACTS

2019

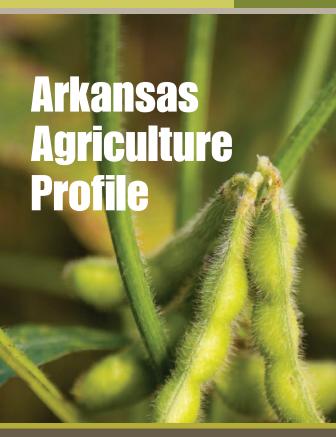




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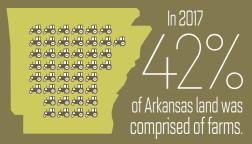
QUICK FACTS

Arkansas Agriculture contributed

16.6% of the state value added

WHICH IS APPROXIMATELY

\$21.0 Billion in value added.



42,500 Farms on 13.9 million acres with an average farm size of 327 acres.

57% of the state is comprised of forests.



Source: IMPLAN, 2018; USCB, 2010; USDA NASS, 2019a; AFRC, 2019 "Value added includes labor income, plus indirect taxes and other property-type income generated by agricultural production, processing, and ag-related activities. Value added does not include government payments and food retail activities.

QUICK FACTS

In 2018, Arkansas **average farm real estate value was \$3,250 per acre.**

- Average pasture land: \$2,600 per acre
- Total farm real estate value: \$45.2 billion

Organic production in Arkansas grew significantly from 2012 to 2017. By 2017, the number of farms selling organically produced commodities had increased from 32 farms to 69. During this time, **sales of organic products increased by almost 3,000 percent**, from \$789,000 in 2012 to over \$24 million in 2017.



Source: USDA NASS, 2019b; USDA NASS, 2019c

In 2017, Arkansas' top commodities

in terms of cash farm receipts^a were:



\$3.802 Million



\$1,564 Million



\$1.004 Million



\$533 Million



\$480 Million



\$415 Million



\$405 Million



\$341 Million



\$322 Million

Source: USDA ERS. 2019a

[&]quot;Cash farm receipt values do not include government payments received by farmers. b'Timber value is listed in terms of stumpage value paid to landowners for standing timber.

Ahead of the Curve

Arkansas consistently ranks in the

top one-third of the nation

for agricultural cash farm receipts.

In 2017, Arkansas ranked

14th in the Nation

WITH

\$8.9 BILLION

for total agricultural cash receipts.

- No. 10 in animals and animal products valued at \$5.3 billion.
- No. 17 in crops, valued at \$3.6 billion.

Source: USDA ERS, 2019a

^aThis estimate represents only crop and animal production, the value of government payments and timber are excluded **Arkansas is in the top 25 states** in the production of the following agricultural commodities: (2018 Production Year)^a

- No. 1 in Rice
- No. 2 in Broilers
- No. 4 in Catfish (foodsize)
- No. 4 in Cotton (upland)
- No. 4 in Cottonseed
- No. 5 in Turkevs
- No. 5 in Sweet Potatoes
- No. 7 in Peanuts
- No. 10 in Chicken Eggs
- No. 11 in Grain Sorghum
- No. 11 in Soybeans
- No. 11 in Beef Cows^b
- No. 17 in Corn for Grain
- · No. 21 in Oats
- · No. 22 in Honey
- No. 24 in Cattle and Calves
- No. 24 in Hogs and Pigs

Note: Beginning in 2016, the USDA stopped reporting values for blueberries, grapes, peaches, pecans, tomatoes and watermelons for Arkansas. Therefore, annual rankings are no longer available for these crops.

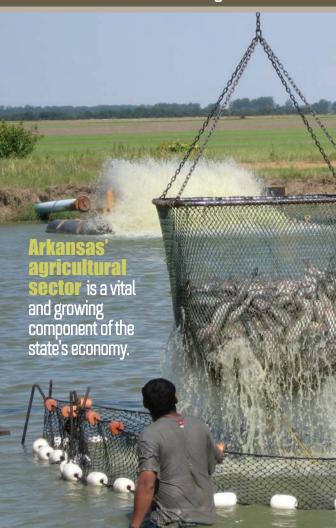
Source: USDA NASS, 2019d.

Data for some states are unavailable due to nondisclosure, especially for livestock and livestock products commodities. As a result, these states are not included in the rankings, which may affect Arkarkas' actual rank.

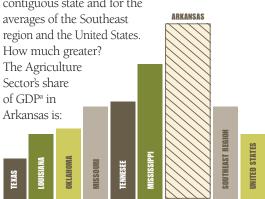
^b Beef cows is a Jan. 1, 2018, inventory comprised of "beef cows that have calved" and "beef cow replacement heifers 500 pounds and over."



Arkansas Counts on Agriculture



The Aggregate Agriculture Sector's share of the state economy is much greater for Arkansas than for any contiguous state and for the



The Agriculture Sector's Share of the State Economy

- 4.4 times greater than in Texas
- 2.7 times greater than in Louisiana
- 2.5 times greater than in Oklahoma
- 1.9 times greater than in Missouri
- 1.8 times greater than in Tennessee
- 1.3 times greater than in Mississippi
- 1.9 times greater than for the Southeast^b region
- 2.7 times greater than for the US as a whole

Source: USDC BEA, 2019; English, Popp, and Miller, 2019a.

*Calculations based on the percent contribution of the Agriculture Sector to state GDP. GDP by state represents the market value of goods and services produced by the labor and property located in a state. GDP does not factor in the impact of subsidies and/or taxes on products, which are captured in value added estimates.

^bThe Southeast is defined by BEA to include the states AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, VA, and WV, and is not the sum of Arkansas's contiguous states listed in the table.

Commodity Production and Value, 2018

Commodity	Acres Harvested	Production (thousands)	Value (thousands)
Broilers ^a	N/A	7,316,400 LBS	\$4,089,868
Soybeans	3,240,000	165,240 BU	\$1,487,160
Rice	1,427,000	107,325 CWT	\$1,159,110
Chicken Eggs ^a	N/A	3,534,700 EGGS	\$527,651
Corn For Grain	645,000	116,745 BU	\$431,957
Cattle & Calves	N/A	528,300 LBS	\$415,498
Timber	N/A	22,675 TONS	\$405,000
Cotton (upland) ^b	480,000	1,150 BALES	\$388,056
Turkeys ^a	N/A	595,350 LBS	\$303,629
Hay	1,203,000	2,168 TONS	\$234,816
Cottonseed ^b	N/A	379 TONS	\$57,987
Hogs & Pigs	N/A	71,103 LBS	\$56,311
Wheat	95,000	5,225 BU	\$25,603
Sweet Potatoes	4,800	1,056 CWT	\$22,915
Peanuts	23,000	115,000 LBS	\$22,195
Catfish (foodsize)	N/A	18,300 LBS	\$18,666
Grain Sorghum	10,000	770 BU	\$2,889
Honey	N/A	1,400 LBS	\$2,618
Oats	7,000	525 BU	\$1,444

Source: USDA NASS 2019d; AFRC, 2019.

^{*}Total Poultry Industry (Broilers, Turkeys, and Chicken Eggs): \$4,921M bTotal Cotton Industry (Upland Cotton and Cottonseed): \$446M

Five-Year Production Highs, 2014-2018

Commodity	Year	Production (thousands)
Beef Cows (inventory) ^a	2017	1,087 HEAD
Blueberries ^b	2015	520 LBS
Broilers	2018	7,316,400 LBS
Catfish (foodsize)	2018	18,300 LBS
Cattle & Calves	2018	528,300 LBS
Chicken Eggs	2017	3,431,000 EGGS
Corn for Grain	2016	127,395 BU
Cotton (upland)	2018	1,150 BALES
Cottonseed	2018	379 TONS
Grain Sorghum	2015	43,120 BU
Grapes ^b	2015	3,000 LBS
Нау	2016	2,614 TONS
Hogs & Pigs	2015	84,750 LBS
Honey	2017	1,972 LBS
Oats	2014	720 BU
Peaches ^b	2015	2,140 LBS
Peanuts	2017	153,700 LBS
Pecans ^b	2014	3,500 LBS
Rice	2014	111,957 CWT
Soybeans	2017	178,500 BU
Sweet Potatoes ^c	2018	1,056 CWT
Timber	2016	23,418 TONS
Tomatoes ^b	2014	153 CWT
Turkeys	2014	612,000 LBS
Watermelons ^b	2015	338 CWT
Wheat	2014	24,885 BU

Sources: USDA NASS 2019d; AFRC, 2019. "Beef cows is a Jan. 1, 2018 inventory comprised of "beef cows that have calved" and "beef cow replacement heifers 500 pounds and over."

^bEstimates discontinued for Arkansas in 2016.

'Estimates undisclosed for Arkansas in 2016 and 2017. Release of the 2017 Census of Agriculture provides the opportunity to highlight additional crops where annual reporting is limited. The most recent Census indicates that Arkansas ranks in the top 25 states by value for the following 16 commodities.^a

Commodity	Value (thousands)	Rank
Baitfish	\$26,530	1
Sport or Game Fish	\$15,947	1
Greenhouse Fruits & Berries	\$245	3
Rabbits, Live	\$226	9
Other Aquaculture ^b	\$122	10
Mules, Burros, Donkeys	\$236	14
Other Livestock ^b	\$544	17
Meat Goats	\$1,921	18
Flower Seeds	\$15	19
Sod Harvested	\$15,918	20
Trout	\$2,717	20
Goats (All)	\$2,271	22
Other Floriculture & Bedding Crops	\$350	22
Other Food Fish ^b	\$10	22
Bulbs, Corms, Rhizomes, & Tubers	\$57	25
Foliage Plants, Indoor	\$1,017	25

Additionally, the most recent Census of Agriculture indicates that Arkansas ranks in the top 25 states in acres harvested for the following 28 commodities.^a

on the census report within their respective categories.

Source: USDA, NASS, 2019c

[&]quot;Rankings were estimated from values disclosed in the 2017 Census of Agriculture.

Non-disclosure of values for some states may affect the ranking values shown in this table.

"Commodities denoted as "other" refer to an aggregation of products not having a specific code

Commodity	Acres Harvested	Rank
Sorghum for Syrup	43	4
Turnip Greens	734	4
Blackberries & Dewberries	501	6
Pecans	15,736	6
Fescue Seed	78	7
Green Southern Blackeyed Peas	284	11
Short Rotation Woody Crops	137	11
Okra	82	11
Figs	8	14
Watermelons	1,822	14
Hazelnuts	31	15
Mustard Greens	68	15
Tomatoes	952	15
Almonds	1	16
Other Non-Citrus Fruitb	26	16
Summer Squash	578	17
Forage	1,343,033	18
Other Nuts ^b	42	19
Persimmons	16	19
Collards	32	20
Grapes	956	21
English Walnuts	33	21
Squash, All	660	22
Peaches	669	23
Sorghum for Silage	1,021	23
Beans, Green Lima	6	24
Sweet Cherries	20	24
Blueberries	356	25

Arkansas Agriculture Snapshot

Arkansas' diverse portfolio of livestock products and crops supports the value of the Agriculture Sector year in and year out.

In 2017, there were 42,600 farms in Arkansas (USDA NASS, 2019a). These farms generated a net farm income of \$1.6 billion, up 87% from 2016 (USDA ERS, 2019a). For 2017, Arkansas ranked 16th in total agricultural exports with a value of \$3.2 billion (USDA ERS, 2019a). Soybeans generated the highest export value for the state, bringing in \$889 million in 2017. That same year, Arkansas ranked in the top ten in the nation for exports of four commodities:

- No. 1 in rice (valued at \$715 million)
- No. 2 in broilers (valued at \$396 million)
- **No. 5 in cotton** (valued at \$283 million)
- No. 5 in other poultry (valued at \$130 million)





2017-2018

In 2017, Arkansas ranked 34th in overall GDP at \$128.1 billion. However, when looking at the share of GDP generated by agriculture, forestry, fishing, and hunting, Arkansas ranked 9th overall in the nation (USDC BEA, 2019). In terms of agricultural cash receipts in 2017, Arkansas ranked 14th with a value of \$8.9 billion, contributing 2.4% to the U.S. total cash farm receipts at \$3.6 billion and 10th in total livestock cash receipts at \$5.3 billion (USDA ERS, 2019a).

Bringing in over \$3.8 billion, broiler production represented 42.6% of all agricultural cash receipts in the state. At over \$1.6 billion, soybeans contributed almost 18% to total Arkansas cash receipts in 2017. Rice also had a large contribution with 11.3% of total agricultural cash receipts (\$1.0 billion) for Arkansas.





*This estimate represents only crop and animal production, the value of government payments and timber are excluded

Arkansas Agriculture Snapshot

On the national-level, Arkansas continues to rank number 1 in rice and number 2 in broilers in the country, with cash receipts comprising almost 42% and 13% of the U.S. total cash receipts for these commodities in 2017.

Arkansas' total cash receipt value increased 7.1% between 2016 and 2017a. The largest increase was seen in the animals and animal products sector, which gained almost 11% of its value from 2016 to 2017. The crops sector also experienced a gain in value of over 2% during this time.

On the crop side, peanut production saw the greatest gain with cash receipt value increasing over 944% between 2016 and 2017. Oats, cotton, sweet potatoes, and cottonseed also showed significant





"Percentage comparisons between 2016 and 2017 values are based on real 2019 dollars. That is, our numbers are adjusted for inflation, which allows for a true "apples to apples" comparison.

2017-2018

increases in value, growing by 93.7%, 53.8%, 34.8%, and 13.3%, respectively. More modest gains were found in corn (2.2%), wheat (1.4%), and mushrooms (1.0%). Sorghum showed the greatest overall loss, with cash receipt value dropping 90%. This was followed by hay which dropped by almost 13%, soybeans (-3.4%), and rice (-1.3%).

On the animal production side, honey sales saw the greatest gain at 36.6%. This was followed by broilers (19.0%), cattle and calves (6.9%), and catfish (5.9%). All other animal sectors showed a decline in cash receipt value from 2016 to 2017. This includes: farm chickens (-45.4%), turkeys (-23.0%), hogs (-13.1%), wool (-8.3%), mohair (-7.7%), and chicken eggs (-3.0%).





Economic Contribution of Ag

The total economic contribution of the Aggregate Agriculture Sector includes three areas of wealth and job generation.

- **Direct Contributions** are generated by production and processing of crops, poultry, livestock and forest products.
- Indirect Contributions result when agricultural firms purchase materials and services from other Arkansas businesses

 a very important part of the economy in many communities.
- Induced Contributions result when employees of agricultural firms and their suppliers spend a portion of their salaries and wages within Arkansas.

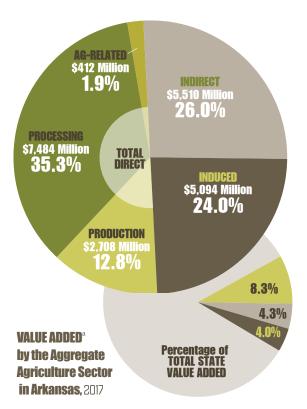
Government payments — payments made directly to some recipients in the farm sector — are included in the contribution analysis. Input providers (fertilizer, pesticide and equipment manufacturers) and retail locations (restaurants, grocery stores, lawn

and garden centers, etc.) are not considered part of the Aggregate Agriculture Sector, but some of the economic activity of these industries and other retail stores and input providers is picked up as indirect and induced effects and included in the total contribution

These contributions are reported in terms of Jobs, Labor Income, and Value Added.

- Jobs includes all wage and salary employees, as well as self-employed workers in a given sector.
- Labor Income consists of proprietary income which includes all income received by self-employed individuals and 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.

Economic Contribution of Ag

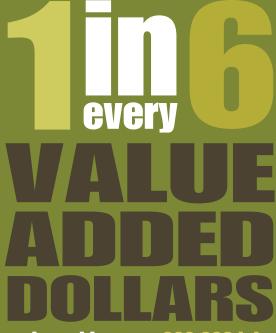


Source: IMPLAN, 2018; English,

Popp, and Miller, 2019b. Note: Presented in 2017 \$5.

[&]quot;Value added is the sum of employee compensation, proprietary income, other property type income and indirect business taxes. This includes contributions generated by agricultural production and processing, but excludes retail sales.

Agriculture contributes more than \$21 Billion in value addedWhich is approximately



and provides over 269,000 jobs

Economic Contribution of Ag

Agriculture and associated agricultural activities are major contributors to the Arkansas economy. The total economic contribution of Arkansas' Aggregate Agriculture Sector includes all direct, indirect, and induced effects generated through agricultural production, processing, and agriculture- related activities within the state.

Total Contribution of Arkansas Agriculture, 2017

- **269,556 Jobs** –1 out of 6 Arkansas jobs
- \$10,334 Million in Wages 15.2% of the state total
- \$12,588 Million in Labor Income 16.4% of the state total

• \$21,208 Million in Value Added –

\$1 out of \$6 in Arkansas

Source: IMPLAN, 2018; English, Popp, and Miller. 2019b.



Value Added Contributions

Value Added By the Aggregate Agricultural Sector in AR, 2017				
Contribution Area	Value (Millions)	% of Total Contribution	% of State Total	
Direct	\$10,604	50	8.3	
Indirect	\$5,510	26	4.3	
Induced	\$5,094	24	4.0	
TOTAL	\$21,208	100	16.6	

The far-reaching contributions of agriculture are seen in the distribution of Value Addeda throughout the economy.

Value Added Generated by Ag in Top Five NAICS Industries		
Industry	Value (Millions)	
Manufacturing	\$7,638	
Agriculture, Forestry, Fishing, and Hunting	\$3,120	
Wholesale Trade	\$1,917	
Real Estate Rental and Leasing	\$1,364	
Public Administration	\$921	
Top Five Total	\$14,959	
(71% of all Value Added generated by Agriculture)		

Source: IMPLAN, 2018; English, Popp, and Miller, 2019b.

Classification System (NAICS) aggregation.

^aValue added is the sum of employee compensation, proprietary income, other property type income and indirect business taxes. This includes contributions generated by agricultural production and processing, but excludes retail sales.

^bGroupings based on the U.S. Census Bureau's 2-digit North American Industry

Economic Contribution of Ag

Employment Contributions

Employment By the Aggregate Agricultural Sector in AR, 2017				
Contribution Area	Johs	% of Total Contribution	% of State Total	
Direct	142,319	52.8	8.7	
Indirect	54,799	20.3	3.3	
Induced	72,439	26.9	4.4	
TOTAL	269,556	100	16.4	

Arkansas' Aggregate Agriculture Sector generates employment in all 20 industries in the North American Industry Classification System (NAICS) used for economic analysis.

Jobs Generated by Ag in Top Five NAICS Industries		
Industry	Johs	
Manufacturing	78,812	
Agriculture, Forestry, Fishing, and Hunting	64,385	
Health Care and Social Assistance	13,778	
Public Administration	13,460	
Wholesale Trade	11,511	
Top Five Total	181,946	
(68% of all Jobs generated by agriculture)		

Source: IMPLAN, 2018; English, Popp, and Miller, 2019b.
*Groupings based on the U.S. Census Bureau's 2-digit North American Industry

Classification System (NAICS) aggregation.

Labor Income Contributions

Labor Income By the Aggregate Agricultural Sector in AR, 2017				
Contribution Area	Value (Millions)	% of Total Contribution	% of State Total	
Direct	\$6,431	51.1	8.4	
Indirect	\$3,159	25.1	4.1	
Induced	\$2,999	23.8	3.9	
TOTAL	\$12,588	100	16.4	

Value is further spread throughout the economy by the spending of labor income by individuals whose jobs are upheld by agriculture.

Labor Income Generated by Ag in Top Five NAICS Industries ^a		
Industry	Value (Millions)	
Manufacturing	\$4,225	
Agriculture, Forestry, Fishing, and Hunting	\$2,261	
Wholesale Trade	\$850	
Public Administration	\$747	
Health Care and Social Assistance	\$746	
Top Five Total	\$8,830	
(70% of all Labor Income generated by Agriculture)		

Source: IMPLAN, 2018; English, Popp, and Miller, 2019b

"Groupings based on the U.S. Census Bureau's 2-digit North American Industry

Classification System (NAICS) aggregation.

Promoting Agricultural and Rural

Sustainability in cattle production

Arkansas' livestock producers understand tough times. In 2012-2013 they suffered through the toughest drought in three decades. Many sold off their herds, others hung in, but barely. The economic impact of that event was estimated to be \$128 million by University of Arkansas System Division of Agriculture economists (Kemper et al., 2012). In 2015, many weathered flooding. Some producers saw their pastures swallowed by rising rivers and heavy rain made for a less than ideal haying year.

These are no small impacts in a state ranked 11th nationally in beef cattle.

Those were years when many hard lessons were learned – lessons that have been translated in to best practices for building resiliency and sustainability into a cattle operation.

One of the outgrowths of the 2012 drought was Drought Management and Recovery Systems for Livestock (Beck et al., 2014). Among the recommended practices for resilience during drought include rotational and limited grazing to preserve high-quality forage.

As the Arkansas River rose from its banks to historically high flood levels, many growers again

Sustainability



saw their pastures buried under many feet of water. Research done by Division of Agriculture animal science faculty helped producers better understand the recovery mechanisms for various forages; to enable them to plan for the rest of the season and the winter beyond.

Sustainability goes beyond disaster recovery. Division animal science researchers have also developed methods to enable cattle producers to graze their lands up to 300 days a year, allowing them to conserve hay for times when they really need it.

The Arkansas 300 Days Grazing program has helped many producers improve their forage systems. The program includes eight different management practices to help reduce hay feeding

Promoting Agricultural and Rural

and to extend the grazing season. With John Jennings, professor-forages, more than 146 demonstrations were conducted on farms in 50 counties. Direct savings to those producers totaled over \$283,000. Demonstrations included as few as five head and as many as 500 head for a single



farm. This emphasizes that the program fits small and large operations. Successful demonstrations were also conducted for horses and small ruminants confirming that the program fits well for all segments of the livestock industry.

Producers may not always achieve a grazing season of 300 days during their first year, but each practice adopted helps them get closer to that goal.

Another way the Division of Agriculture is helping maintain sustainability is the Natural State Preconditioned Calf Program – better known as "GoGreen." GoGreen, a project spearheaded by Shane Gadberry, professor-ruminant nutrition, encourages practices such as dehorning, castration,

Sustainability

vaccination and keeping calves at least 45 days after weaning. Calves that go through this program get a special green ear tag, a sign to buyers that they are bidding on a high-quality, healthy calf.

A third means of helping Arkansas' cattle producers sustain their business is through artificial insemination, or AI. Dr. Charles Looney, a world-renowned expert in cattle genetics, joined the Division of Agriculture team in late 2018 and began holding AI workshops the following spring. Among the many benefits of AI include being able to select the best genes from cattle anywhere in the world and not having to maintain a bull on the property, relieving producers of the need to manage bulls, which can be difficult to handle or destructive in some cases.



Promoting Agricultural and Rural

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 five major focus areas:

- Sustainability Indices measure key impact areas and trends over time, foster productive dialogue and promote progress toward sustainability.
- Contribution of Agriculture evaluate the annual contribution of agricultural production and processing sectors to the Arkansas economy.
- Regional Food Program conduct research, education and outreach to support and promote the value chain of Arkansas grown and raised foods from the farm to consumer levels.
- **Life Cycle Analysis** quantify the environmental and social impacts of a product by measuring the inputs and outputs associated with its supply chain.
- Wastes Reduction and Reuse Program support
 the sustainable agricultural production in Arkansas
 by developing cost effective technologies to convert
 production wastes into energy and/or value-added
 products through research, education and outreach.

Sustainability

CARS faculty and staff are currently leading a nationwide effort to examine and improve methods for determining the economic contribution of agriculture. They are internationally recognized leaders in the science of sustainable agriculture and have constructed a portfolio of life cycle assessments (LCAs) for various agricultural crops including cotton, cocoa, corn, dairy products, peanuts and pork which provide the baseline data necessary for agricultural sector-level strategies for increasing the safety, security and stability of U.S. products. Researchers continue working toward the goal of expanding access to high quality, locally produced food to Arkansans.



Center for Agricultural and Rural Sustainability

Promoting Agricultural and Rural

Agriculture's Contribution Across the U.S.

Economic impact and contribution analyses are an increasingly popular method for illustrating the importance of food, fiber, and forestry to state and local economies. In 2015, CARS researchers conducted a survey of agricultural economists which showed vast differences in methods used to conduct contribution studies. The survey results suggested a need for further discussion, as well as the development of additional resources to aid researchers in conducting these types of studies.

CARS researchers have taken the lead in opening this discussion and are working to develop resources for enhancing the consistency and clarity of contribution of agriculture research. To provide a central location for ongoing discussion and research, they have launched a website called The Economic Contributions and Impacts of U.S. Food, Fiber, and Forest Industries.

The website contains a list of known contribution and impact studies involving the food, fiber, and forest industries in the U.S. There are also several resources for researchers to

Sustainability

reference, as well as a forum for the discussion of various topics. It can be found by visiting http://cars.uark.edu/.

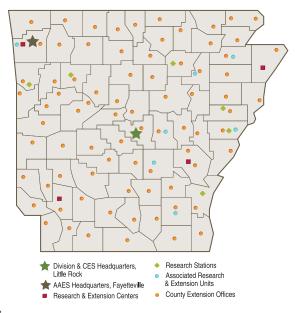
To have your study listed on the website, or to join the discussion regarding the development of common methodologies for agricultural contribution studies, send us an email to cars@uark.edu.



Arkansas Is Our Campus

The U of A 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 and Agricultural Experiment Station scientists, extension specialists and support personnel on five university campuses and at four research and extension centers and six research stations and two extension centers.



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