

Agribusiness in the St. Louis Economy

**A report prepared for the St. Louis AgriBusiness Club
By Standing Partnership, St. Louis**

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The role of St. Louis as an agricultural hub can be traced back more than 1,000 years. The rich soil surrounding the confluence of three great rivers – the Missouri, Mississippi and Illinois – has long been a bountiful source of food.

Today, half of the nation's crops and livestock are produced within a 500-mile radius of St. Louis, including approximately 80 percent of the nation's corn and soybean acreage.

Considering the abundance of agriculture and the transportation advantages of this key location, it's not surprising that a number of major businesses and organizations that either depend upon or support agribusiness have chosen to locate here.

The St. Louis AgriBusiness Club was formed in 1981 to create a forum for interaction and discussion of important agricultural issues among people in the region. With some 300 members, the club's mission is to promote the welfare of agriculture in the St. Louis area by bringing together the agricultural forces of the area for the purpose of discussing and considering major agricultural challenges and opportunities affecting the future of agriculture in the area.

This report was commissioned by the St. Louis AgriBusiness Club to compile a comprehensive picture of the importance of agribusiness in all its forms to the St. Louis area economy, from farm to fork.

INTRODUCTION

Agriculture and related businesses make a significant economic contribution to the St. Louis area. While the area includes more than 3.1 million acres of farmland, few are aware that the 12,303 farms in the metropolitan area produce more than \$1 billion worth of livestock and crops each year. Adding total farm production expenses of \$842 million, and the direct economic value of farming activities totals nearly \$2 billion. Nearly half of the nation's total agricultural productivity is harvested within a 500-mile radius of St. Louis, and 77 percent of the corn acreage and 81 percent of the soybean acreage is found within this agricultural heartland.

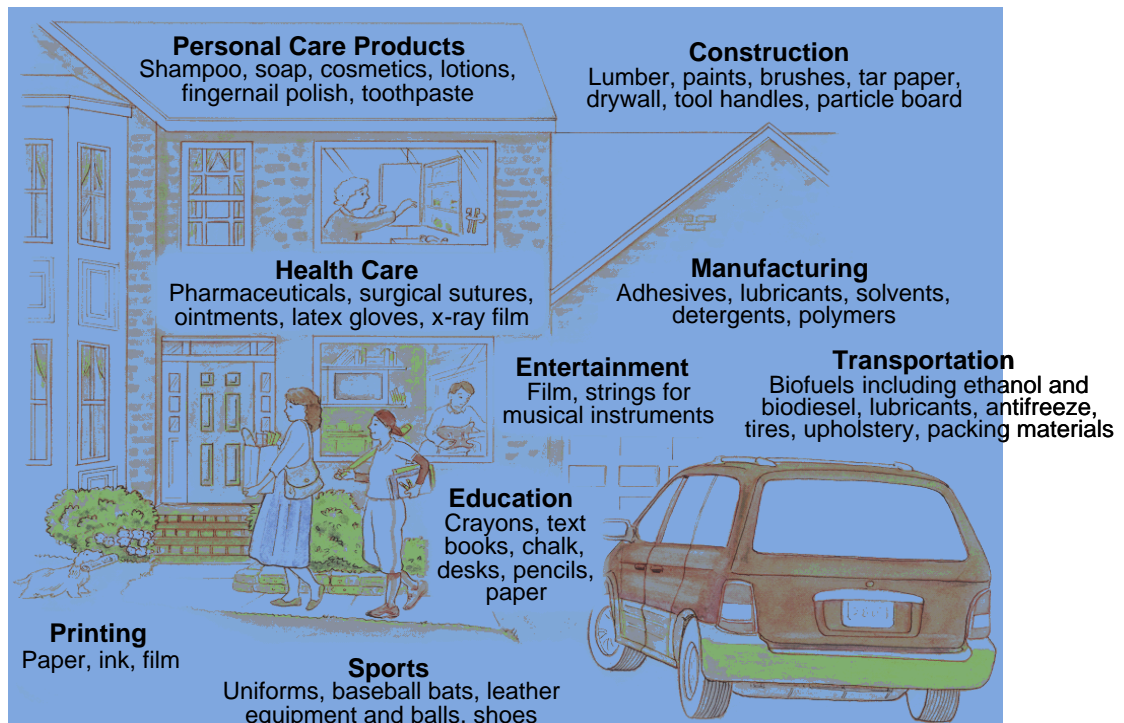
The \$2 billion of economic activity on farms is only a fraction of the total impact of agribusiness in St. Louis. This report identifies economic and employment impacts of agribusiness in St. Louis.



Except where stated otherwise, this report focuses on the St. Louis Metropolitan Area, comprised of seven counties in Missouri and eight in Illinois. The counties are Franklin, Jefferson, Lincoln, St. Charles, St. Louis, Warren and Washington in Missouri and Bond, Calhoun, Clinton, Jersey, Macoupin, Madison, Monroe and St. Clair in Illinois. Since the last edition of this report in 2004, the federal Office of Management and Budget has revised its definition of the metro area by adding Washington County in Missouri, and Bond, Calhoun and Macoupin counties in Illinois. Comparisons between the two reports are “apples to apples,” based on the current definition of the metro area.

As [defined by the national Agribusiness Council](#), agribusiness is a broad term encompassing all aspects of agricultural production, processing and distribution. This includes food, forest and fiber production, their byproduct utilization, agricultural chemicals and pharmaceuticals, agricultural finance and trade, agribusiness/farm management, agro-environmental considerations, and land development; in short, all of the major elements essential to the establishment and operation of efficient agro-food enterprises.

How are you connected to agriculture?



American Farm Bureau Federation, Farm Facts

Major sources used in the compilation of data for this report include: the 2007 Census of Agriculture compiled by the U.S. Department of Agriculture (USDA); USDA's National Agricultural Statistics Service; the U.S. Census Bureau's 2002 Economic Census; U.S. Department of Labor Bureau of Labor Statistics; St. Louis Regional Chamber and Growth Association; Renewable Fuels Association; American Farm Bureau Federation; National Corn Growers Association; American Soybean Association; and United

Soybean Board; as well as individual businesses and industry resources. The Missouri Department of Economic Development and Illinois Department of Commerce and Economic Opportunity also were helpful resources.

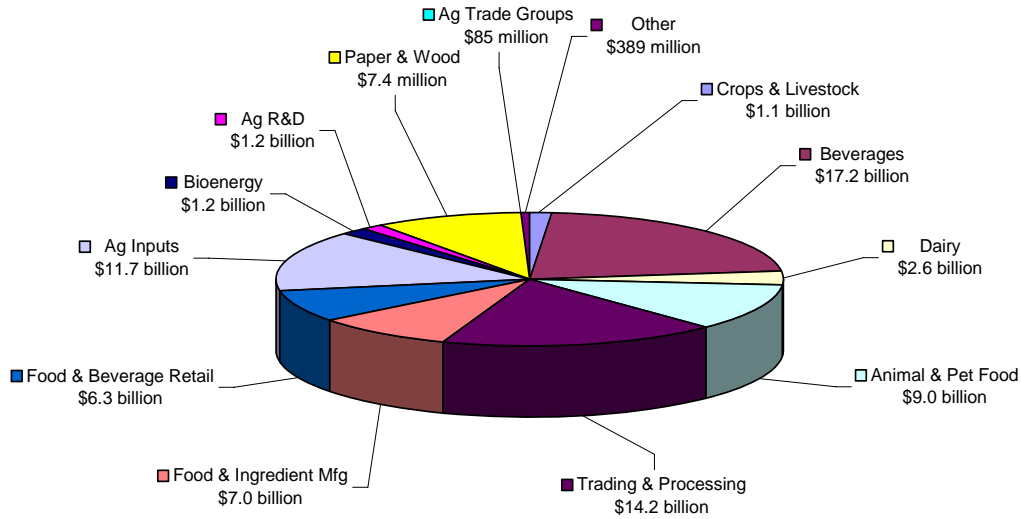
Many different methods and models are used to calculate economic impact. For this report, output is determined by actual or estimated value and sales for farms, factories and processing facilities, wholesalers, retailers and corporate or organization headquarters located in the metropolitan area. Especially at the metro-area level, statistics compiled by the government often withhold data to protect the confidentiality of a small number of operations or to reflect a limited statistical sample. Where these data gaps exist, other sources and industry estimates have been used if available.

DETERMINING THE VALUE OF AGRIBUSINESS

For the St. Louis metropolitan area, the total global value of agribusiness as defined for this study is estimated at more than **\$75 billion**. As with past reports, this figure was determined by adding the actual or estimated output or market value of various segments of the agribusiness economy, within the metropolitan statistical area, or MSA, for local operations and activities as well as the regional or global revenues of organizations headquartered here. The figures used are the most current and accurate available, and as close to the publication year of 2010 as practical. The U.S. Department of Agriculture's Census of Agriculture is conducted every five years, and the most recent census of 2007 was published in 2009. The 2002 Economic Census was used because regional and industry-specific statistics for the 2007 Economic Census will not be available until 2010. Bureau of Labor Statistics databases reflected 2008 data. Actual and pro forma sales figures for specific companies referenced were based on the most recent fiscal year reported at the time research was conducted.

The estimated combined economic impact of \$75 billion would represent 61 percent of the region's gross domestic product, \$128.5 billion. While these figures are not directly comparable because of differing sources and methodology, their relative magnitude demonstrates the importance of agriculture and agribusiness to the region's economic vitality.

St. Louis Area Agribusiness
 Combined Economic Impact: \$75+ billion



MAJOR SEGMENTS OF AGRIBUSINESS

Agriculture includes the production of crops and livestock; processing and milling; beverages; animal feed, food and ingredients; seeds and other agricultural inputs; dairy products, food distribution and retailing; bioenergy, plant science research and development, paper and wood products, farm-related trade groups and other agribusiness-related enterprises.

Beverages

The value of downstream, agriculture-related business activity dwarfs even the region’s multi-billion dollar farm economy. St. Louis is the North American headquarters of Anheuser-Busch InBev, the world’s largest brewer, and remains home to Anheuser-Busch, its U.S. operating unit. Formed through the 2008 acquisition of Anheuser-Busch by the Belgian-based InBev, the combined company reported pro forma North American sales of \$15.6 billion for 2008. Although streamlining efforts before and after the InBev acquisition have reduced employment, A-B InBev still reported 4,100 St. Louis employees in 2009.

As the brewer of the two largest-selling beer brands – Budweiser and Bud Light – and roughly half of all U.S. beer, Anheuser-Busch processes enormous quantities of malted barley, hops and other agricultural products. A-B purchases roughly half the nation's malt barley and is the largest single purchaser of rice in the United States. A-B is also active in agriculture and related research, developing strains of barley and rice and growing and evaluating new strains of hops for company use. A-B distributes preferred malting barley varieties from three seed-processing facilities, owns and operates eight barley elevators and three malt barley processing plants, two rice mills as well as a hops farm on two separate tracts of land in Idaho.

Smaller craft breweries are enjoying a renaissance in St. Louis, with examples including the St. Louis Brewery Inc., brewer of Schlafly beers; Morgan Street Brewery and Tavern, Mattingly Brewing Co., Buffalo Brewing Co., Cathedral Square Brewery and Six Row Brewing Co., all of St. Louis; The Highlands Restaurant and Brewing Co., Kirkwood, Mo.; O'Fallon Brewery, O'Fallon, Mo.; Trailhead Brewing Co., St. Charles, Mo.; and Augusta Brewing Co., Augusta, Mo. Two St. Louis brewpubs also distill spirits – Amalgamated Brewing Co's Stable and Square One.

St. Louis is also home to Luxco Inc., a leading producer, bottler, importer and marketer of beverage alcohol products, including Pearl vodka, Rebel Yell and Ezra Brooks bourbon, Purple Passion, and Everclear.

Soft drinks represent another significant segment of the metropolitan economy. In 2008, Dr Pepper Snapple Group, Inc., the parent company of Dr Pepper and Dr Pepper/Seven Up, Inc., was established following the spinoff of Cadbury Schweppes Americas Beverages from Cadbury Schweppes plc. Dr Pepper Snapple remains one of North America's leading refreshment beverage companies, manufacturing, bottling and distributing more than 50 brands of carbonated soft drinks, juices, teas, mixers, waters and other premium beverages. Almost all of the company's beverage concentrates are produced at its St. Louis plant, and shipped to the company's own bottling facilities as well as third-party bottlers. Net sales of concentrates totaled \$1.4 billion in 2008.

Other major beverage producers in metropolitan St. Louis include Coca-Cola Enterprises, Seven-Up RC Bottling, Vess Beverages and Truesdale Packaging Co.

Vineyards and wine production are a growing industry in both Missouri and Illinois. Data specific to the St. Louis MSA is not yet available on this burgeoning business, although statewide data indicates an impact across both states of nearly \$1 billion.

Missouri ranks eleventh in terms of vineyard acreage among states in the U.S. and today there are 85 wineries, up from 50 in 2005. According to the Missouri Department of Agriculture's Grape and Wine program the economic impact on the state's economy in 2007 was \$701.2 million, based on 1,400 acres in Missouri. St Charles County alone, boasts nine wineries. At least 10 wineries are located in the Missouri counties of the St. Louis metro area.

Illinois is home to 68 wineries with more than 80 percent established in the last 10 years. The number of wineries and vineyards doubled in the last three years. According to the Economic Impact of Wine and Winegrapes in Illinois, 2005, the total economic value of wine, winegrapes and related industries in Illinois was \$253 million.

Dairies and dairy products represent more than \$2.6 billion in local economic activity. The largest local contributor is Carlinville, Ill. based Prairie Farms Dairy with 1,100 local employees. A cooperative owned by some 700 farmer members, Prairie Farms operates 24 plants and is one of the nation's largest dairies. Dean Foods, the largest dairy operation in the United States, also is represented in the area with its Pet dairy in O'Fallon, Illinois.

Agricultural Inputs

One of the largest agribusiness corporations in the world has its headquarters in St. Louis. As the world's largest seed company, Monsanto is a Fortune 500 company which is a leading provider of agricultural products and solutions, including seeds, insect and weed controls, and biotechnology research. Monsanto has two leading seed brands – DeKalb and Asgrow – and the company also makes Roundup, the world's best selling herbicide. Roundup and other Monsanto herbicides can be used with its seeds and biotech traits to offer farmers integrated solutions.

Monsanto reported a record \$11.7 billion in sales in fiscal 2009. Net income increased 4 percent after five consecutive years of 20 percent annual growth. The company's local employment totals 4,100.

Monsanto has also become the leading developer and marketer of vegetable and fruit seeds with its 2005 acquisition of Seminis and the 2007 acquisition of De Ruiters Seeds, a world leader in vegetable seeds. The vegetable business alone has annual sales of approximately \$750 million and offers more than 4,000 seed varieties in 25 different crops.

As the world's leading technology company exclusively focused on agriculture, Monsanto has pledged to double yields in three core crops while helping conserve resources. Specifically, the company plans to double yield in corn, soybeans and cotton by 2030, compared to a base year of 2010; reduce by one-third per unit produced the aggregate amount of key resources, such as land, water and energy, required to grow crops by the year 2030; and help improve the lives of farmers, including an additional 5 million people in resource-poor farm families by 2020, by providing choices for modern agricultural technology.

Among other agricultural input businesses, St. Louis is home to Agrotain International LLC, the world's largest producer of stabilized nitrogen fertilizers, marketed in more than 55 countries worldwide. Using proprietary nitrogen stabilizer technology, these products reduce nitrogen losses and extend plant-available nitrogen for healthier plants and higher yields.

Animal and Pet Food

St. Louis is the North American headquarters of Nestlé Purina PetCare, one of the world's largest manufacturers of pet food, with annual sales of \$7.6 billion in North America. Local employment is about 2,000. Nestlé Purina makes best-selling pet foods such as Friskies and Alpo, and Purina Dog Chow, Puppy Chow and Cat Chow. The company is based in Checkerboard Square in St. Louis where Ralston Purina was

founded in 1894. Today, Nestlé Purina is a wholly owned subsidiary of Nestlé, the world's largest food company.

Land O'Lakes Purina Feed LLC is North America's leading animal feed company, serving producers, cooperatives and dealers with an extensive line of animal feed, ingredients and services designed to help agricultural producers, dealers and cooperatives compete in the global marketplace. Animal feeds, other than dog and cat food, are sold under Purina, Chow and "Checkerboard" Nine Square brands as well as Land O'Lakes and Lake Country brands. Land O'Lakes feed sales in 2008 totaled nearly \$3.9 billion; the company employs approximately 300 in metropolitan St. Louis.

St. Charles-based Novus International is a leading developer of animal health and nutrition programs for the poultry, pork, beef, dairy, aquaculture and companion animal industries. With sales exceeding \$500 million, Novus has more than 25 locations around the world and clients in over 90 countries. Local employment includes some 200 persons. The company completed a \$20 million headquarters building in 2009. Its best-known brands include Alimet, Santoquin and Oasis animal nutrition products. Alimet celebrated its 25-year anniversary in 2009.

Food Manufacturing and Sales

Among the leading food manufacturers in St. Louis is Ralcorp, the nation's third-largest manufacturer of breakfast cereals, as well as a variety of value brand and store brand foods sold under the individual labels of various grocery, mass merchandise and drugstore retailers, and frozen bakery products sold to in-store bakeries, restaurants and other foodservice customers. During 2008, Ralcorp acquired the Post cereals business with over 100 years of history in the industry. Post includes iconic brands such as Honey Bunches of Oats, Pebbles, Post Selects, Spoon Size Shredded Wheat, Grape-Nuts and Post Raisin Bran. With the acquisition, Ralcorp reported pro forma sales of \$3.8 billion for 2008. The company employs about 350 persons in St. Louis.

Also based in St. Louis is the Solae Company, a joint venture partnership between DuPont and Bunge, to bring more great tasting, nutritious soy-foods to the marketplace. As more and more consumers are discovering the many health benefits of consuming soy, a growing number of food manufacturers have introduced new and innovative products using Solae soy ingredients. The company's products span a full range of soy ingredient products, including textured vegetable proteins, as well as soy protein concentrates and isolates, specialty lecithins, and polymers. Solae Company invests in fundamental research to understand the health benefits of soy protein. Solae soy ingredients have been used in more than 80 percent of all clinical research on soy protein. Annual sales exceed \$1 billion and the company employs some 375 persons locally.

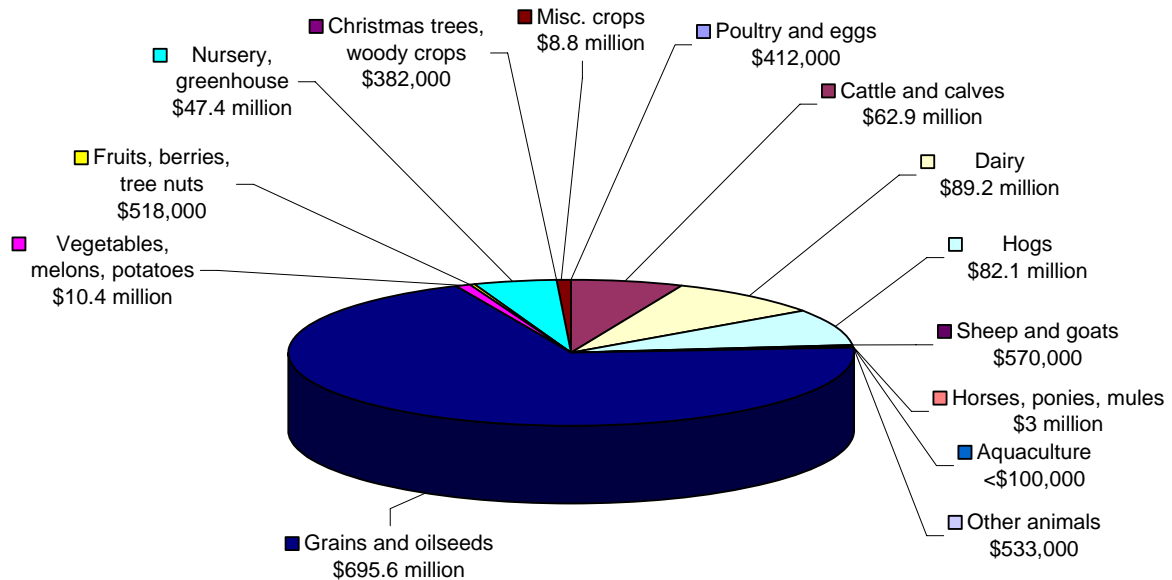
The 2002 Economic Census tallied another 200 food manufacturing establishments generating \$1.9 billion in revenues. Among the variety of companies, 93 produced bread, tortillas, cookies, crackers and pasta (representing both commercial and retail bakeries). There were 36 businesses processing meat, 36 manufacturing food products and 14 businesses making sugar and confectionery products. Among other major companies represented is ConAgra Foods, one of North America's leading food companies with brands in 97 percent of homes in the United States.

Nearly 2,000 business establishments sell food and beverage products at retail, representing another \$6 billion in sales, according to the 2002 Economic Census. Among the largest are Schnucks, a \$2.5 billion chain based in St. Louis with 15,600 local employees, and Dierberg's, with sales of \$675 million and 4,000 local employees. Save-A-Lot food stores operates a nationwide chain of more than 1,000 stores in 39 states from its St. Louis headquarters. Save-A-Lot has 600 employees and more than 25 stores locally.

Agricultural Production

The total market value of agricultural products produced in the 15-county St. Louis MSA in 2007 was nearly **\$1.1 billion**. This represents a **48 percent increase** over the same counties in 2002. It should be noted that this increase, while substantial, does not reflect 2008's historic spike in agricultural commodity prices.

Crops and Livestock Produced in St. Louis Metropolitan Area
Total Value: \$1.1 billion



USDA 2007 Census of Agriculture

The top commodities produced in the area are grains and oilseeds, that is, corn and soybeans. Total value for those crops in 2007 was \$965.6 million, the vast majority of the \$1.1 billion total for farm production in the area. Here's a summary of the area's agricultural production:

Metro St. Louis Farm Products	Value
Grains and Oilseeds (<i>Corn and Soybeans</i>)	\$695.6 million
Milk and Dairy Products	\$89.2 million
Hogs and pigs	\$82.1 million
Cattle and Calves	\$62.9 million
Nursery and Greenhouse	\$47.4 million
Vegetables, Melons	\$10.4 million
Other Livestock & Products, including Equine, Poultry & Eggs, Sheep, Aquaculture and Miscellaneous	\$57.3 million
Other Crops, including Christmas Trees and Miscellaneous	\$40.0 million
Other Livestock & Products, including Equine, Poultry & Eggs, Sheep, Aquaculture and Miscellaneous	\$57.3 million
Total for 15-County St. Louis MSA	\$1,084,866,000
Compared to 2002	+\$351.9 million
Percentage Change from 2002 to 2007	Up 48 percent

USDA Census of Agriculture 2007

Complete information from the 2007 Census of Agriculture for each county was compiled for this report, including farms and farmers, production value and production expenses.

Trading and Processing

St. Louis is the North American headquarters of Bunge Ltd., a leading global agribusiness and food company operating in the farm-to-consumer food chain. Bunge is a world leading oilseed processing company and a leading seller of packaged vegetable oils worldwide. Operating worldwide, Bunge's agribusiness division is involved in purchase, storage, transport, processing and sale of agricultural commodities and commodity products. The company is also involved in every stage of the fertilizer business and in edible oil products and milling products. U.S. sales totaled \$12.2 billion in 2008, with another \$2 billion in Canada. The North American headquarters in St. Louis employs 600 persons.

Also headquartered in St. Louis is Italgiani USA, one of the country's largest durum wheat millers with annual revenues of \$33 million. The heart of the firm's industrial operations also is located in St. Louis, with a 4-million-bushel grain elevator and one of the world's largest single line durum wheat mills with a daily capacity of 15,600 hundredweight of prime product.

Other major trading and processing companies with a presence in metropolitan St. Louis include Archer-Daniels-Midland Company and Pillsbury.

Agricultural Research & Development

Many agribusiness enterprises devote considerable resources to research and development. In the St. Louis region, the leader in agricultural research is Monsanto Company. In 2008, Monsanto spent \$980 million on research and development, some \$2.7 million per day. The company's local employees include 1,187 researchers. Other sizable research facilities include Solae, with 160 local research employees and Novus with 100, including animal nutritionists and doctors of veterinary medicine. As previously noted, Anheuser-Busch also conducts significant research and development.

The St. Louis metropolitan area is also home to two of the world's leading independent agricultural research institutions.

The Donald Danforth Plant Science Center is the world's largest independent plant science research institute. Founded 10 years ago, the center's mission is to improve the human condition through plant science. More specifically, to feed the hungry and improve human health, preserve and renew our environment and enhance the St. Louis region as a world center for plant science.

The center represents a \$150 million investment, and has an operating budget of \$19 million annually. More than 200 persons work there, supplemented by research partnerships with top-tier institutions including the University of Missouri, University of Illinois, Washington University in St. Louis, Purdue University and the Missouri Botanical Garden. Of the center's staff, some 85 percent are scientists and scientific staff; more than 90 hold doctoral degrees.

Recent research funding highlights include a \$5.4 million grant from the Bill and Melinda Gates Foundation for a five-year project as part of the Grand Challenges in Global Health initiative; more than \$10 million in grant and contract revenue from sources such as USDA and the National Science Foundation as well as private industry; and a \$25 million gift from the Jack Taylor family to establish the Enterprise Rent-A-Car Institute for Renewable Fuels.

This year marks completion of the Bio-Research & Development Growth (BRDG) Park at the Danforth Center, a 110,000-square-foot facility that helps plant and life sciences and other clean-tech companies bridge research, resources and relationships to achieve commercial success. The BRDG Park shares facilities with the Danforth Center, including nearly an acre of greenhouse space and other controlled environment growth chambers, growth rooms and research facilities.

Initial tenants at the BRDG Park include Nidus Center for Scientific Enterprise, an incubator serving entrepreneurs who are preparing new technologies for market, with a focus on plant science, energy, agriculture, food and nutrition. During any given year, the center's clients have created 70 to 90 new jobs. The project will also include an innovative and nationally recognized program initiated by St. Louis Community College to train skilled technical staff.

The BRDG Park was developed by Wexford Science + Technology, a Maryland-based company that specializes in development of complex research projects for non-profit clients. Other Wexford facilities are located in Baltimore, Philadelphia, Norfolk, Va., Hershey, Pa. and Chicago.

The Missouri Botanical Garden is primarily considered a civic resource by the 750,000 persons who visit each year, but it also is an internationally renowned research enterprise. Founded in 1859, the Missouri Botanical Garden is the nation's oldest botanical garden in continuous operation and a National Historic Landmark. The garden marked its 150th anniversary in 2009.

As a center for botanical research and science education, the garden's dozens of researchers work to strengthen scientific expertise in developing countries to protect and manage biodiversity before it's too late. Close to half the world's plants face extinction, yet fewer than one in six has been studied for potential benefits. With an operating budget of \$35.5 million, the garden has 121 local research employees among 467 worldwide. Among other resources, the garden operates [TROPICOS](#), the world's largest database of plant information, containing fully Web-searchable records for over 900,000 plant names and nearly 2 million specimens.

Agricultural Trade Groups

St. Louis is also home to a number of large national agricultural organizations, including the United Soybean Board, American Soybean Association and National Corn Growers Association. The aggregate budgets of these three organizations total nearly \$86 million.

In 2008, the United Soybean Board (USB) alone was responsible for some \$56.8 million. Like other producers of agricultural commodities, soybean farmers collectively invest a portion of their end-of-season profits to fund research and promotion efforts. This collective investment is called a checkoff, and the program is directed by USB, composed of 68 volunteer farmer-leaders nominated by state organizations. The efforts help facilitate market growth and creation by funding and directing marketing, research and commercialization programs. By building demand both at home and abroad, the soybean checkoff helps ensure a strong and profitable future for U.S. soybean farmers.

For more than 85 years, the American Soybean Association (ASA) has served as the collective voice of 22,000 U.S. soybean producers, primarily focused on policy development and implementation. ASA reported revenues of \$20.4 million in fiscal 2006.

National Corn Growers Association (NCGA) represents more than 32,000 corn farmers from 48 states as well as more than 300,000 farmers who contribute to corn checkoff programs and 26 affiliated state corn organizations across the country. The mission of

NCGA is to create and increase opportunities for corn growers and to enhance corn's profitability and use. The national group's budget totals \$8.5 million annually.

St. Louis also is home to the World Agricultural Forum (WAF), the foremost global agricultural platform that initiates dialogue between those who can impact agriculture. The WAF is focused on sustaining the lives and livelihood of the world's population by meeting the growing needs for food, fuel and fiber. On a global stage, the WAF produces one of the largest biennial gatherings of leaders ready to implement innovation and positive changes addressing the world's growing population and respective agriculture shortages in both developed and developing nations. In 2009, the WAF conducted its most successful World Congress to date. More than 400 world leaders gathered for the 10th Anniversary of the WAF, to focus on Creating Prosperity through Investments in Agriculture. With more than 30 nations represented, the WAF was able to highlight more key outcomes poised to empower agriculture than in years past.

Bioenergy

The St. Louis metropolitan area was an early adopter of ethanol fuel, taking advantage of its contributions to air quality. In fact, St. Louis hosted the first-ever Fuel Ethanol Workshop in 1984, with some 40 participants attending from an industry that was producing less than 500 million gallons annually. Conference participation has grown more than tenfold, and 2008 production of ethanol fuel totaled 9 billion gallons, according to the Washington-based Renewable Fuels Association, which also has a St. Louis office. The ethanol industry added 2.9 billion gallons of new production capacity during 2008 alone.

The St. Louis suburb of Chesterfield, Mo., is home to Abengoa Bioenergy, a \$1.2 billion enterprise operating in more than 70 countries. Abengoa is the only bioenergy company operating in the world's three key markets, the United States, Europe and Brazil. Abengoa is completing the largest of the three ethanol plants in the St. Louis metro area. The company has 125 local employees.

St. Louis Area Bioenergy Plants

Company	Location	Fuel	Annual Capacity
Center Ethanol Co.	Sauget, Ill.	Ethanol	54 million gallons
POET Biorefining	Ladsonia, Mo.	Ethanol	50 million gallons
Abengoa Bioenergy	Madison, Ill.	Ethanol	88 million gallons (under construction)
Midwest Biodiesel Products	South Roxanna, Ill.	Biodiesel	30 million gallons

Renewable Fuels Association, National Biodiesel Board

The largest ethanol fuel producer in the United States, POET of Sioux Falls, Iowa, also is represented in the metropolitan area with a 50 million gallon plant in Ladsonia, Mo. POET is a leader in biorefining through its efficient, vertically integrated approach to production. The 20-plus year old company produces more than 1.54 billion gallons of ethanol annually from 26 production facilities nationwide.

A study prepared for the Renewable Fuels Association determined that a typical 75-million-gallon ethanol plant contributes \$343.7 million to the economy and generates 1,397 jobs. Growth in renewable fuels is expected to continue. The Renewable Fuel Standard of the federal Energy Independence and Security Act requires that 36 billion gallons of renewable fuels be included in the nation's motor fuel supply by 2022, triple the 10.5 billion gallons required this year. Because of limits on corn starch ethanol and biodiesel use, some 20 billion gallons are expected to come from cellulose and other advance biofuel feedstocks.

The \$20 million National Corn-to-Ethanol Research Center (NCERC) is located at University Park on the campus of Southern Illinois University in Edwardsville. The only plant of its kind in the world, the facility is seeking to significantly reduce the cost of producing ethanol for use as a renewable transportation fuel and for other high-value products. As noted above, a major renewable fuel program is also part of the research under way at the Donald Danforth Plant Science Center.

Paper, Wood and Lumber

Although silviculture is a lesser factor in St. Louis area agriculture, its downstream paper, wood and lumber products represents yet another sizable industry group with its roots in the land and forests. The \$7 billion Smurfit-Stone Container Corporation, with headquarters in Creve Coeur, Mo., as well as Chicago, is a leading manufacturer of paperboard and paper-based packaging with a North American market share of 18 percent in containerboard and corrugated containers.

Transportation

About 60 percent of all U.S. grain exports, a total of more than 1 billion bushels, move to export markets via the inland waterway system each year. This represents \$8.5 billion in agricultural exports shipped via the Mississippi and Illinois rivers. Agriculture-related shipments through the Port of St. Louis and Chain of Rocks Lock total 40 million tons annually, 43 percent of the total tonnage.

The Port of Metropolitan St. Louis is the third-busiest inland river port and the nation's 25th busiest overall. According to the U.S. Army Corps of Engineers, a total of 32.1 million short tons were shipped through the Port of Metropolitan St. Louis in 2007. Of that total, food and farm products made up 25 percent of the total. Fertilizers and forest products bring the total to 8.9 million tons. The Port of Metropolitan St. Louis extends 70 miles along both banks of the Mississippi, from the southern boundary of Jefferson County to the northern boundary of Madison County. A total of 134 piers, wharves and docks, are located within the port, 76 on the Missouri side and 58 on the Illinois side. There are more than 55 fleeting areas, allowing barges to be tied up while awaiting movement opportunities.

From St. Louis south to the Gulf of Mexico, the Mississippi River flows free without the navigational lock and dam system found upstream. This allows larger barge tows to move conveniently; as a result, St. Louis and points south are major loading points for agricultural commodities bound for downstream export facilities. Two of America's

largest grain exporters – Archer Daniels Midland and Cargill – operate major terminal elevators in the metro area, ADM in St. Louis and Sauget and Cargill in East St. Louis.

Other major terminals in the metro area include Conagra, Alton; Consolidated Grain and Barge, East St. Louis; Tate & Lyle, Granite City; CHS, St. Louis; Bulk Services, East St. Louis; and American Milling, Cahokia.

The 60.7 million tons of barge cargo shipped through the Chain of Rocks Lock on the Mississippi River in 2009, included nearly 27.8 million tons of grain moving in both directions. Of the downstream traffic, 27.3 million tons of grain represented 66 percent of the total cargo. Fertilizer and forest products bring total traffic to 31 million tons, more than half the total for the southernmost lock on the Mississippi, just north of St. Louis.

Other Agribusiness Segments

The category of “other” agribusiness includes a variety of companies, organizations, and services. The \$389 million estimate captured in this report includes data from industry and the 2002 Economic Census. It includes machinery and equipment dealers, distributors, and retailers, florists and landscapers and local and long-haul trucking of agricultural products.

Finally, there are a variety of ag service businesses which are not normally captured in economic statistics related to agriculture. These include companies providing services and advice in advertising, communications, law, accounting, finance and real estate.

While the legal and accounting professions do not typically report revenues by industry sector, data is available in the marketing and communication industries. According to Agri Marketing magazine’s annual listing of the largest marketing communication agencies, a St. Louis advertising agency, Osborn & Barr Communications, is the largest North American ad agency with \$17.5 million in income from agribusinesses and producer-funded accounts. Another St. Louis-based agency, Brighton, ranks fifth in Web-based/electronic marketing with \$362,000 in agribusiness income.

Standing Partnership of St. Louis is ranked as the nation’s eighth largest firm specializing in agriculture public relations by O’Dwyer’s Public Relations News with nearly \$508,000 in ag revenues in 2008. For the second time, Standing Partnership was named to the *Inc.* 5000 list of the nation’s fastest-growing private companies.

GATEWAY TO AMERICAN AGRICULTURE

Half of the nation’s total agricultural productivity is harvested within a 500-mile radius of St. Louis, and the vast majority of corn and soybean acres are found here.

Based on the latest Census of Agriculture data, the USDA’s National Agricultural Statistics Service has determined that the market value of all crops and livestock within this 500-mile radius totals \$131.2 billion. This represents more than 44 percent of the nation’s \$297 billion total value of all crops and livestock. Aside from California’s \$33.9 billion farm production, 49.9 percent of the nation’s crops and livestock are produced within the radius.

More than 50 percent of the nation's crop value was harvested within 500 miles of St. Louis, apart from California. Crops alone represent \$62.6 billion of the agricultural value generated within the 500-mile radius. This also represents 44 percent of the \$143.7 billion in crops harvested nationally in 2007. Absent California's \$22.9 billion in crop value, this represents nearly 52 percent of the 49-state total of \$120.8 billion.

The USDA data also demonstrated that 66.2 million acres of corn was harvested within 500 miles of St. Louis. This represents 76.7 percent of the 86.2 million acres of corn harvested in 2007. Soybean acres harvested in this same radius totaled 51.6 million, which is 80.7 percent of the 63.9 million acres of soy harvested in the United States.

EMPLOYMENT

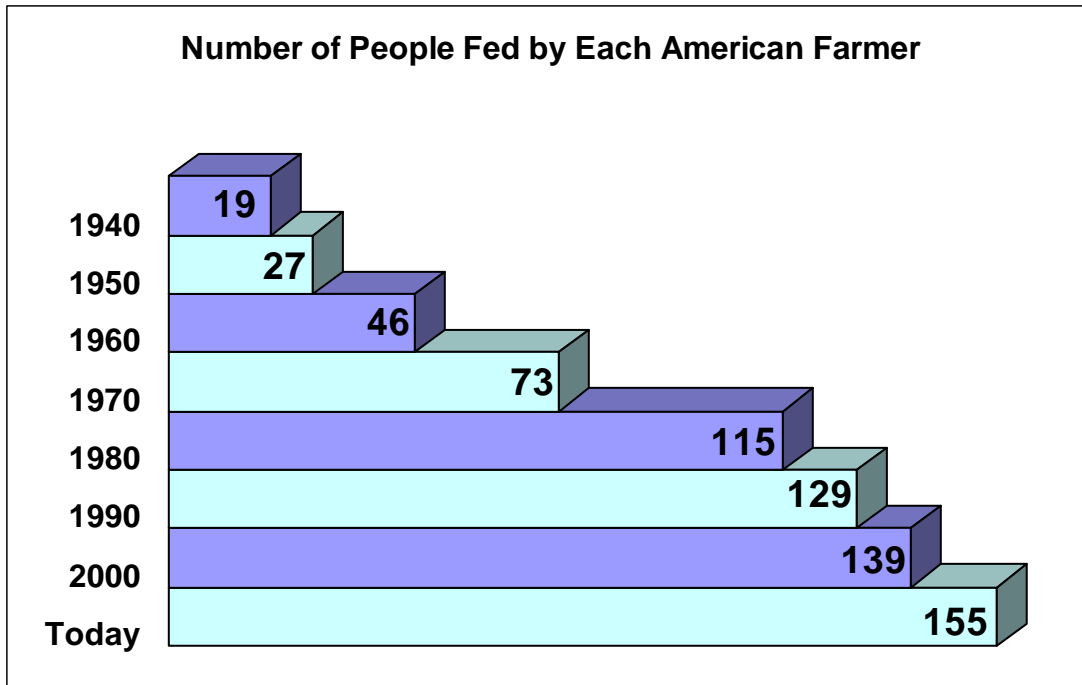
According to the 2007 Census of Agriculture, there were 18,830 principal farm operators in the St. Louis MSA. Those operators reported hired farm labor for the year at 7,706. This gives a total of 26,536 employees in the farm production sector for the year 2007.

Bureau of Labor Statistics Data for the metropolitan area identified an additional 150,000 persons engaged in occupations related to agribusiness as defined above for this report. Data from the 2002 Economic Census, industry reports and individual companies identify nearly 91,000 employees in the agribusiness industry, including employees whose responsibilities are not unique to agribusiness. Combined with the on-farm workers, this identifies a total of 265,000 employees, representing 20 percent of the region's workforce of 1.3 million.

Spending by farm and agribusiness employees for other goods and services supports additional economic activity and employment in the broader economy, but the analysis needed to quantify these impacts is beyond the scope of this study. Still, the available data clearly indicates that an often-quoted figure of one in five jobs related to agriculture is a reasonable rule of thumb.

It is important to note that the broadly defined agribusiness industry as a whole in St. Louis is essentially independent of the number of on-farm workers within the region. Rather, the industry is supported by crop production and, in many cases, customers and consumers across the nation and around the world.

As farmers become more efficient, the population fed by each individual farmer continues to grow. In 1940, the average U.S. farmer produced enough food to feed 19 persons. Today, the average farmer produces food and fiber for 155 persons around the world, according to the USDA.



Sources: American Farm Bureau Federation; National Agricultural Statistics Service

ADDITIONAL DATA

Agricultural Land and Production Expenses

According to the 2007 Census of Agriculture, **the land area devoted to farming and ranching in these 15 (MSA) counties totaled 3,075,775 acres**, or nearly 56 percent of the total land area of the counties (some 5.5 million acres). The estimated market value of farmland and farm buildings in the region was **nearly \$10.7 billion**. Total property taxes paid by farmers amounted to **\$26.7 million**.

As noted above, all production expenses for agricultural operations, including property taxes, in 2007 **totaled \$842.1 million**. This total includes inputs such as fertilizer, seed, feed, fuel, utilities, labor, cash rent, and interest.

Farming remains an individual occupation, as demonstrated by data compiled by the Farm Bureau. Only 2 percent of the nation's 2.2 million farms are owned by non-family corporations; the remaining 98 percent are family farms owned by individuals, families, family partnerships and family corporations.

CONCLUSION

It is evident that the agricultural production and agribusiness industry sectors of the St. Louis metropolitan area contribute significantly to the economy in terms of purchasing, production and employment, as well as food, clothing and shelter. Agriculture also contributes significantly to the quality of life in the St. Louis region,

providing green space, and conserving land and water resources. Furthermore, the crops, livestock and products of the St. Louis agribusiness industry helps feed the rest of the country and the world.

Supporting \$75 billion in goods and services, and 235,000 jobs, agribusiness is vitally important to the St. Louis economy.

PRINCIPAL SOURCES OF DATA AND INFORMATION

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Variations in sources and methods will affect comparability of individual statistics.