

Arkansas Specialty Crop Profile: Turfgrass Industry

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Arkansas' temperate climate allows farmers to grow a wide variety of seasonal specialty crops across the state. In addition to food crops, Arkansas farmers also grow and sell other specialty crop commodities, including turf products such as sod, sprigs and plugs. The turfgrass industry includes all areas involved in the production and maintenance of specialized grasses and other ground covers that are used for beautification, recreation and environmental mitigation.

This fact sheet examines the turfgrass industry in Arkansas, making comparisons to the U.S. industry as a whole. For more information related to turf and lawn care in Arkansas visit:
<https://www.uaex.uada.edu/farm-ranch/crops-commercial-horticulture/horticulture/turf.aspx>

Industry Overview

It has been estimated that the turfgrass industry covers more than 60 million acres across the U.S. Turfgrass use continues to increase as the U.S. population becomes more urbanized. In the 2010 census, almost 90 percent of Americans were living in urban environments that effectively use turfgrasses for erosion control, filtration of pollutants, sports and overall health and fitness. The industry includes sod producers who harvest and sell rolls or pallets of turf through retail and wholesale markets, as well as businesses and municipalities that grow and maintain turf landscapes for



golf courses, athletic fields, commercial lots, parks, city streets and highway roadsides. Residential lots with lawns maintained by homeowners or landscape firms, as well as businesses that supply materials for turfgrass production and maintenance, also contribute significantly to the industry.

Turf grown and maintained by businesses, municipalities and local citizens offers not only environmental and social benefits but also economic benefits. A study analyzing the U.S. turfgrass and lawn care industry showed economic contributions of \$35.1 billion in value added, 822,849 jobs and \$23 billion in labor income for 2002. This includes economic value coming from sod production, lawn equipment manufacturers, lawn care goods retailers and lawn care service businesses. When looking specifically at U.S. sod production alone, the 2002 contribution of this industry was \$1.3 billion in value added and 17,028 jobs (Haydu, Hodges and Hall, 2006).

In 2012, U.S. farmers harvested 321,309 acres of sod from 1,739 farms. Florida, Texas and Alabama were the top three sod-producing states, representing almost 40 percent of U.S.

sod production for 2012. Arkansas produced around 2 percent of sod produced in the U.S. during 2012, putting the state in the top one-third in the nation for acres of sod harvested (USDA NASS, 2014a).

In 2012, Arkansas farmers produced 5,279 acres of sod on 32 farms across the state. The majority of these farms were located in central Arkansas, with Perry County being the largest sod-producing county in the state. In 2012, Perry County had 12 sod farms, representing nearly 38 percent of the state's total sod farms. With three farms each, Pulaski and Saline counties held the second highest number of farms in the state (Figure 1). Farmers in Perry and Saline counties produced a combined 929 acres of sod in 2012, representing around 18 percent of statewide production (USDA NASS, 2014b).

In 2012, sod production in Arkansas generated more than \$10 million in sales, placing the state at 21st in the nation for sod sales during that year (USDA NASS, 2014a).

A recent survey conducted by the University of Arkansas System, Division of Agriculture's

Center for Agricultural and Rural Sustainability (CARS) gathered information from 17 sod producers across the state. Of the businesses surveyed, 33 percent were reported to be limited liability companies, 33 percent were corporations, 20 percent were sole proprietorships, 7 percent were partnerships and 7 percent marked "other."

Half of the businesses reported being in operation for more than 20 years, with the oldest operating for 50 years. In contrast to most other specialty crop industries which reported a significant number of younger businesses, none of the responding sod establishments reported being in business for fewer than 10 years.

In terms of overall sales for 2014, respondents reported 47 percent of sales as being residential, 41 percent commercial, 10 percent municipal and 2 percent going to golf courses. When comparing sales from 2013 to 2014, 47 percent of producers reported an increase in sales between 2013 and 2014, while 40 percent reported a decrease. Thirteen percent reported no change in sales during that time.

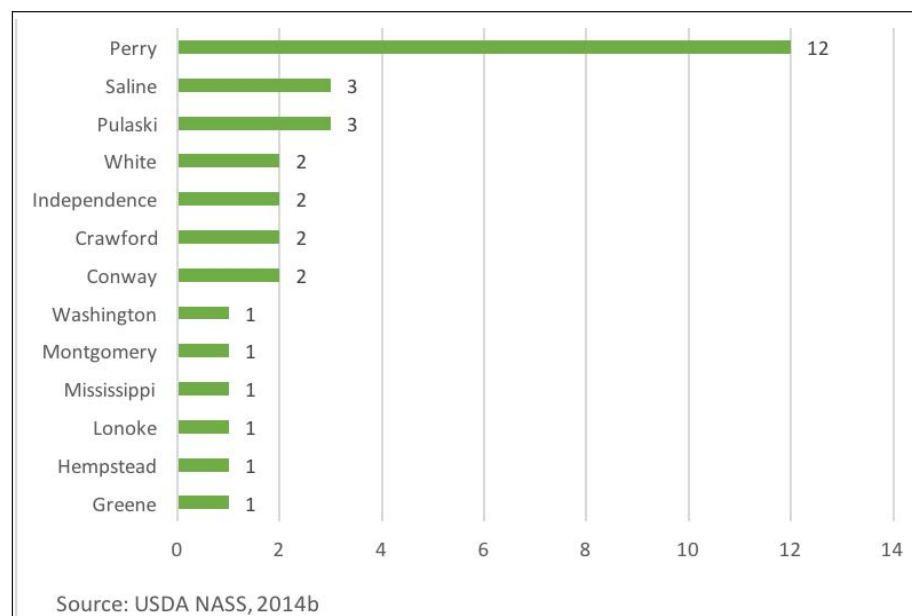
Seventy-nine percent of responding firms employed at least one full-time worker during 2014, resulting in an average of six full-time jobs per firm. Forty-three percent of responding firms employed at least one part-time worker, with these businesses averaging around three part-time employees each. The surveyed businesses reported paying a total of more than \$2.7 million in wages and salaries for 2014. Total wage and salary costs per firm ranged from \$500 to \$1,000,000, with the median value being \$75,000.

Industry Trends and Outlook

Although consistent data are unavailable for the turfgrass industry as a whole, trends in sod production can be used to gauge changes in the overall industry. When looking at U.S. sod production from the early 1980s until the late 2000s, the sod industry experienced steady growth. In 1982, U.S. farmers harvested 124,588 acres of sod. Within 25 years, U.S. sod acreage increased by almost 230 percent, with farmers harvesting a total of 409,440 acres in 2007. Sod production saw an overall increase of 158 percent from 1982 to 2012. However, following a period high in 2007, U.S. sod production fell 22 percent by 2012 (Figure 2).

This drop is likely the result of a combination of factors. As a large percentage of sod sales go to the residential sector, the 2007-2009 collapse of the U.S. housing market resulted in home losses and fewer home purchases, meaning less lawn maintenance and lower sales for sod producers (Campbell et al., 2017). Between 2005 and 2009, the number of new housing starts in the U.S. fell 73 percent. In Arkansas, the number of new housing permits issued fell almost 61 percent during this period, with overall trends showing a drop from

Figure 1. Number of Arkansas Sod Farms Per County, 2012



2005 to 2009 followed by a stagnant period from 2009 to 2013 then slow growth from 2014 forward (Figure 3).

Another reason for the decrease could have been the extended drought conditions and high temperatures experienced throughout the central U.S. during 2012 and the preceding years (Bigelow et al., 2012; NDMC, 2018). Legislation such as bans on landscape irrigation and general lawn watering restrictions likely played a role in the drop as well (Hall, 2016).

While U.S. sod production expanded throughout the 1980s, 1990s and into the 2000s, Arkansas' sod production saw even greater growth during this period (Figure 4). From 1982 to 2002, acreage of sod harvested in Arkansas grew by almost 1,600 percent, rising from 538 acres in 1982 to 8,276 in 2002. Similar to the overall U.S. trend, following the early 2000s Arkansas sod production began to drop. From 2002 to 2007, there was a slight decline of 8 percent. By 2012, sod production had declined by 41 percent from the period high of 8,998 acres in 2002 to 5,279 acres in 2012. Like the rest of the U.S., the Arkansas economy saw a downturn during the Great Recession of 2007-2009, coupled with extreme temperatures and drought during 2012, resulting in lower turf production and sales (Campbell et al., 2017).

When looking at historical sales for Arkansas sod, the value of total sales appears to follow trends seen in harvested acreage. From 1982 to 1992, there was a slight increase in total sod sales across Arkansas followed by a more drastic increase from 1992 to 2007 before a significant drop in 2012 (Figure 5).

Figure 2. U.S. Sod Production Trends, 1982-2012

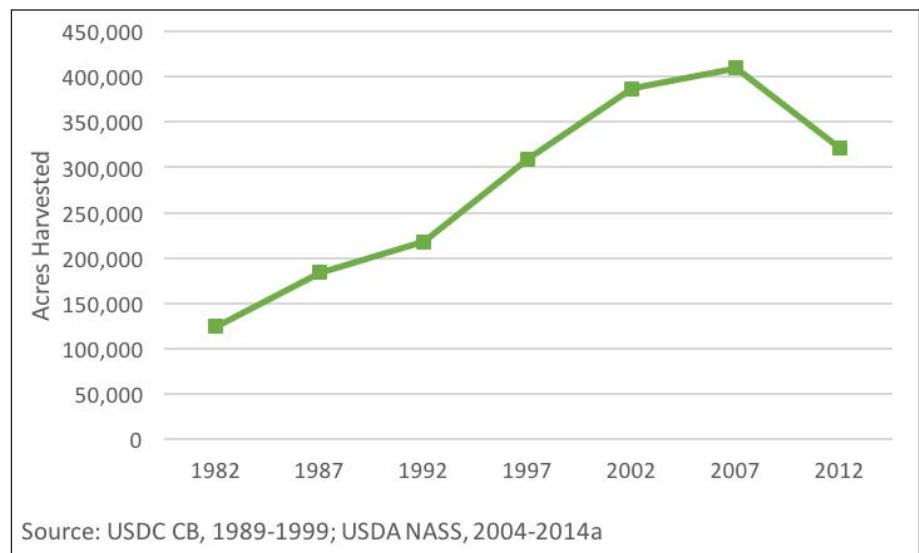


Figure 3. Arkansas New Housing Permits Issued, 2000-2017

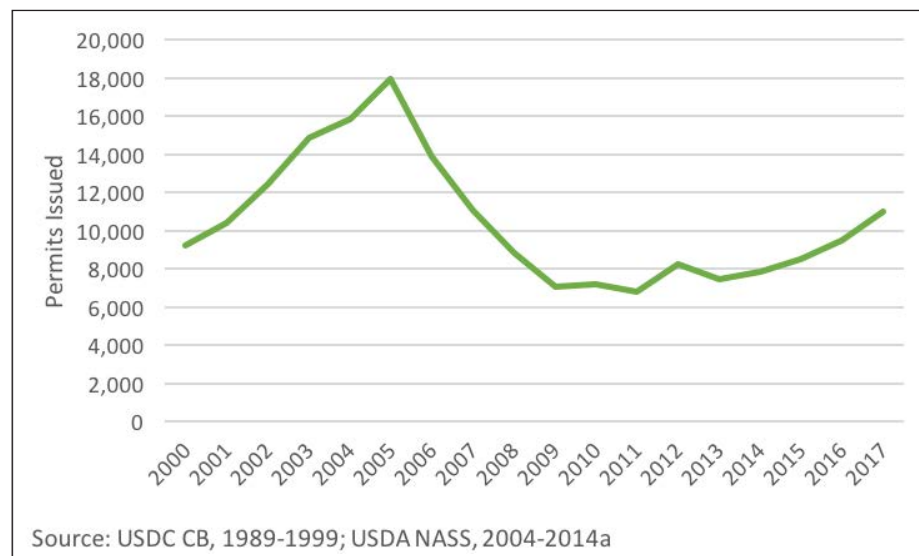
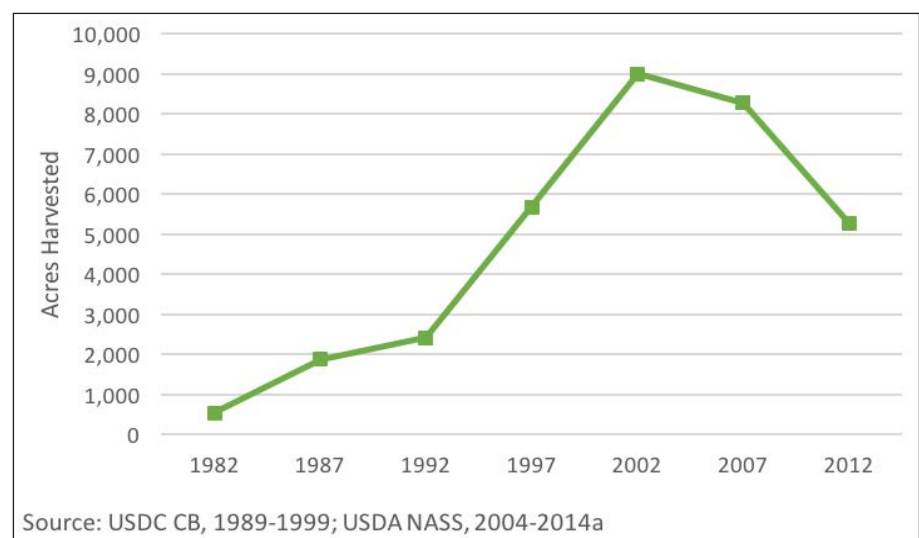


Figure 4. Arkansas Sod Production Trends, 1982-2012



Industry Issues

In Arkansas, 92 percent of turf businesses responding to the 2015 CARS survey found net returns/profit margin and business operating expenses to be either important or somewhat important challenges to their business. These producers also ranked chemical/fertilizer expenses, transportation expenses and business competition/changing market structure as important challenges.

Turfgrass, like other green industries, can be greatly affected by economic fluctuations. In comparison to the specialty food crop industries, demand for lawn care and landscaping is elastic, meaning that spending on turf and lawn care products declines by a larger percentage than income in the event of an economic downturn. Similarly, changes in the housing market can greatly affect the turf industry as fewer homeowners means a decrease in demand for residential lawn care products and services (Campbell et al., 2017).

Although turfgrasses can offer several environmental and social benefits, extensive irrigation and use of chemical fertilizers, herbicides and pesticides have caused concern among environmentalists

and resource management officials. Bans on chemicals such as the herbicide monosodium methanearsonate (MSMA) have increased the cost of turf production and maintenance across the U.S. (Brosnan, Breeden and Patton, 2010). At the same time, increasing average temperatures and drought conditions across the country have led state and local lawmakers to pass water conservation legislation (Hall, 2016).

Economic and societal trends have had similar effects on the golf industry, which is a large contributor to the overall turfgrass sector. In the recent CARS survey, 98 percent of Arkansas golf course managers found chemical/fertilizer expenses to be either important or somewhat important. These producers also ranked supply/quality of turf, input costs, net returns/profit margin, employee training, government regulations and issues related to acquiring/retaining labor as important challenges.

From 2003 to 2016 the number of golfers in the U.S. decreased by more than 24 percent to 23.8 million golfers per year (NGF, 2017). While the golf course industry in Arkansas showed strong growth



throughout the 1960s and 1990s, growth has slowed since the turn of the century (Figure 6).

The National Golf Foundation (NGF) releases an annual report on golf participation. In their 2017 release, NGF began adding off-course participation numbers for players using driving ranges, Topgolf facilities and golf simulators to their traditionally published on-course participation numbers. The survey found a 1.2 percent decline in on-course participation from 2015 to 2016 but noted an 11 percent increase in off-course participation during that time (NGF, 2017). Although on-course participation has experienced a slight decline, off-course activities are introducing new players to the game. It is believed that this increase in interest will ultimately result in overall growth in “green grass” players.

Figure 5. Sales Trends for Arkansas Sod, 1982-2012*

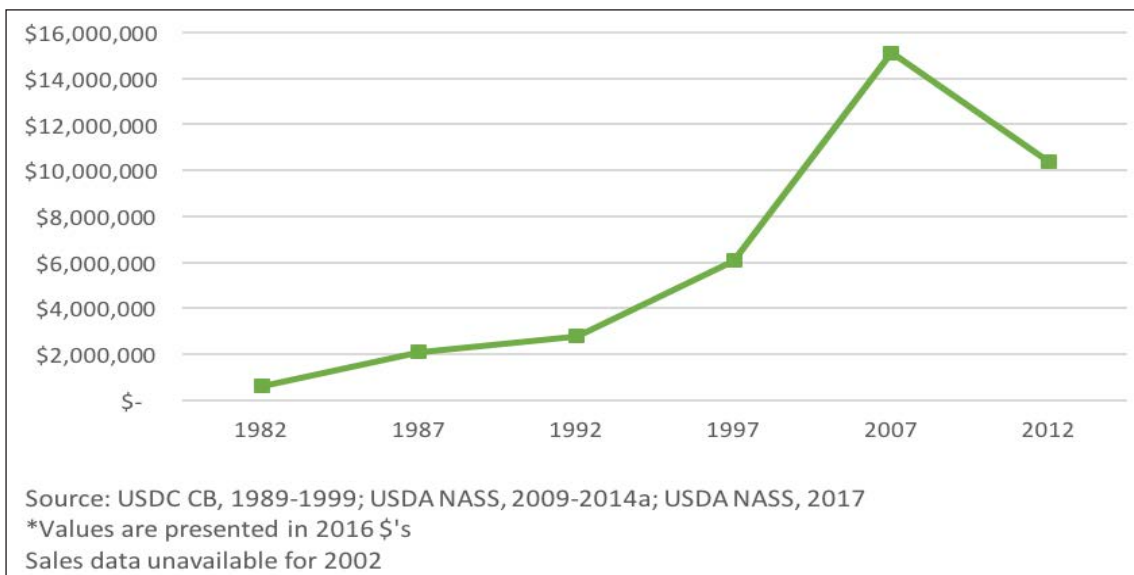
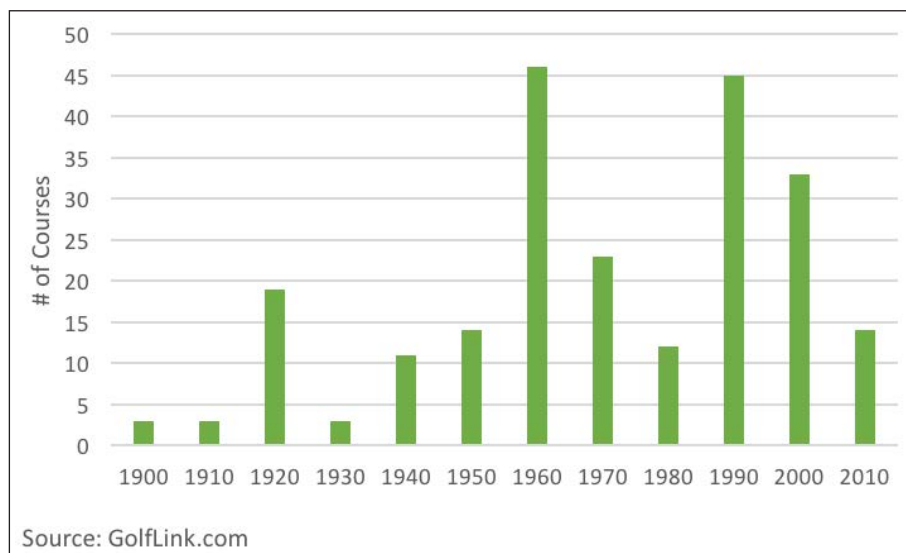


Figure 6. Arkansas Golf Course Openings by Decade, 1900s-2010s



Industry Spotlight

Located on the banks of the Red River in southwest Arkansas, Fulton Grass Company has been growing high quality, sand-based

sod for more than 30 years. Prior to getting into the sod business, owners Henry and Kathy Struckman worked with row crops, growing soybeans, milo and wheat. In the early 1980s, they decided to

shift their focus from row crops to sod. In doing so, their family business has grown from just 40 acres of sod in 1985 to over 1,000 acres by 2018. The farm is truly a family business, with the majority of labor coming from family members and their spouses. In addition to running the farm in Fulton, the Struckmans also invest in two retail stores in Bossier City and Shreveport, Louisiana, that are owned and managed by their son Hal and his wife Debbie. The majority of the grass grown in Fulton is sold through their retail stores, with some also being sold wholesale or by the pallet off the farm. Although the turfgrass industry was affected by The Great Recession of the late 2000s, the Struckmans are optimistic about future growth and see the potential to expand production in the coming years.

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