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Arkansas Specialty Crop Profile: Beekeeping

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Beekeeping, also known as apiculture, involves the maintenance of honey bees and hives. The vast majority of beekeepers are hobbyists who maintain fewer than 50 hives, without relying on beekeeping as their primary source of income.

Although bees are commonly kept for non-commercial purposes, beekeeping allows both farmers and hobbyists the opportunity to capitalize on a variety of bee-related services and products. In addition to honey, beekeepers may sell pollen or produce other beeswax products, such as candles, cosmetics, lotions or soaps. Bees may also be used to provide pollination services for farmers or to produce more bees for other beekeepers (USDA NAL, 2017).

For information about getting started with honey bees in Arkansas, visit https://uaex.edu/bees.

Industry Overview

In 2017, there were 2,334 beekeepers registered with the Arkansas State Plant Board, with around 15 operating commercially[1]. Arkansas beekeepers were reported to maintain 4,883 bee yards across the state, with Pulaski, Washington and Benton counties holding the highest number of registered apiaries (ASPB, 2017).

According to the U.S. Department of Agriculture's National Agricultural Statistics Service, in 2016 Arkansas beekeepers kept over 24,000 honey-producing colonies yielding an average of 69 pounds of honey per colony. This resulted in a total of 1,656,000 pounds of honey. At an average price per pound of $1.84, Arkansas honey production was valued at $3,047,000 for 2016 (USDA NASS, 2017).

The Arkansas Grown™ website lists 130 businesses selling honey or other bee items produced in Arkansas.

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[1]Commercial beekeepers are those whose primary income is obtained through beekeeping activities. These farmers generally maintain greater than 300 hives.

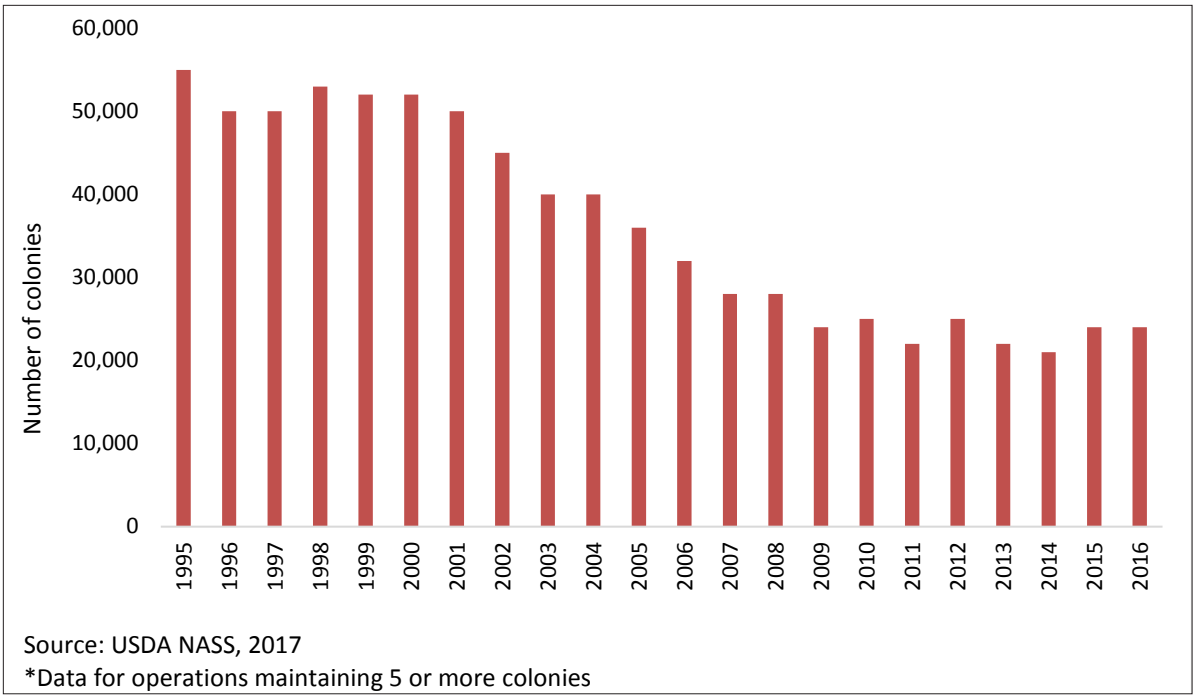
Thirty-nine local businesses are also listed as selling honey through Arkansas MarketMaker™. Arkansas has over 20 local beekeeping associations and hosts more than 19 suppliers of bees and beekeeping equipment.

Industry Trends and Outlook

A phenomenon known as colony collapse disorder has affected U.S. bee colonies for over a decade. While the exact cause is still up for debate, this massive die-off is believed to be the result of a combination of parasites, diseases, poor nutrition, habitat destruction and extensive use of pesticides (McGeeney, 2015).

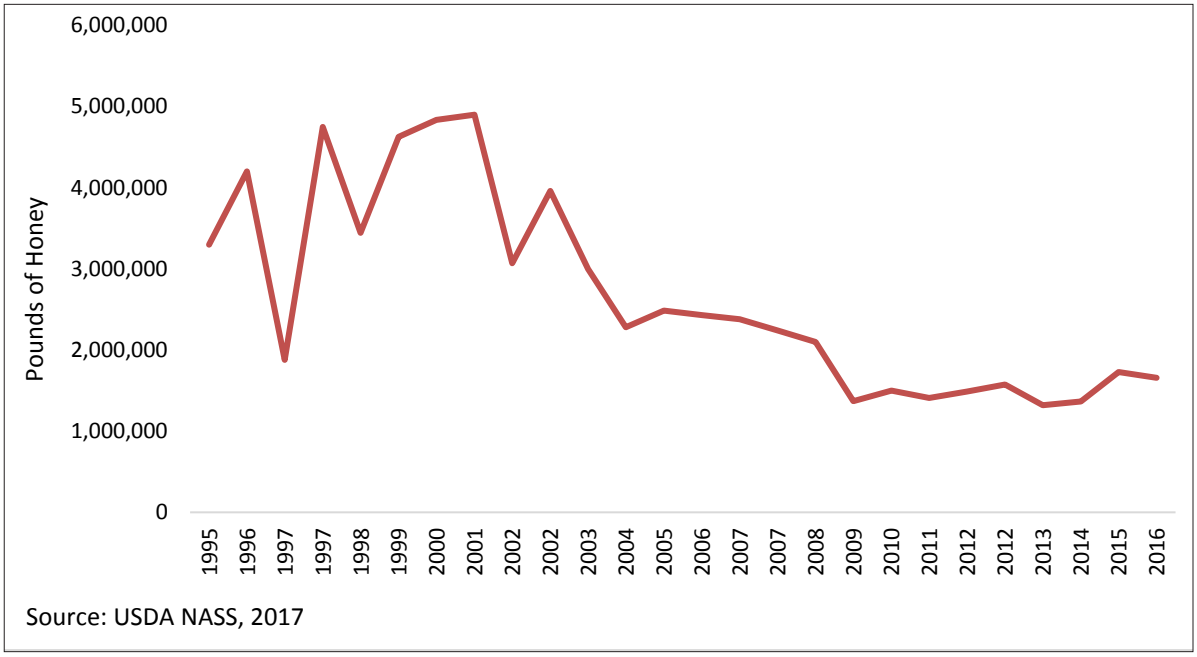
From 1995 to 2016, there was a 56 percent decrease in the number of honey-producing colonies across the state (Figure 1). A reason for this decrease could be the introduction of two major colony stressors: the varroa mite and the small hive beetle. Varroa mites were first documented in Arkansas in the early nineties (Wenner and Bushing, 1996) and

Figure 1. Arkansas Honey-Producing Colonies*, 1995-2016



Source: USDA NASS, 2017
*Data for operations maintaining 5 or more colonies

Figure 2. Arkansas Annual Honey Production, 1995-2016



Source: USDA NASS, 2017

quickly became the number one pest of beekeepers. The small hive beetle was discovered in Florida in 1998 and has since spread to several other states, including Arkansas (Zawislak, 2010).

Although Arkansas has seen an overall decrease in production during the past two decades, honey production over the past seven years has remained fairly steady, averaging around 1.5 million pounds per year (Figure 2).

While overall production of honey has declined since 1995, the value of production has shown an increase of 86 percent between 1995 and 2016 (Figure 3).

An upward trend in the price of honey contributed to the increasing value of honey production during this period. In response to the shrinking domestic supply, honey prices in the U.S. have been rising steadily over the past decade (Gonzalez, 2015). Arkansas is no exception. From 2006 to 2015, the price of honey increased 131 percent from $0.89 to $2.06 before dropping slightly in 2016 to a price of $1.84 (Figure 4).

Figure 3. Value of Arkansas Honey Production*, 1995-2016

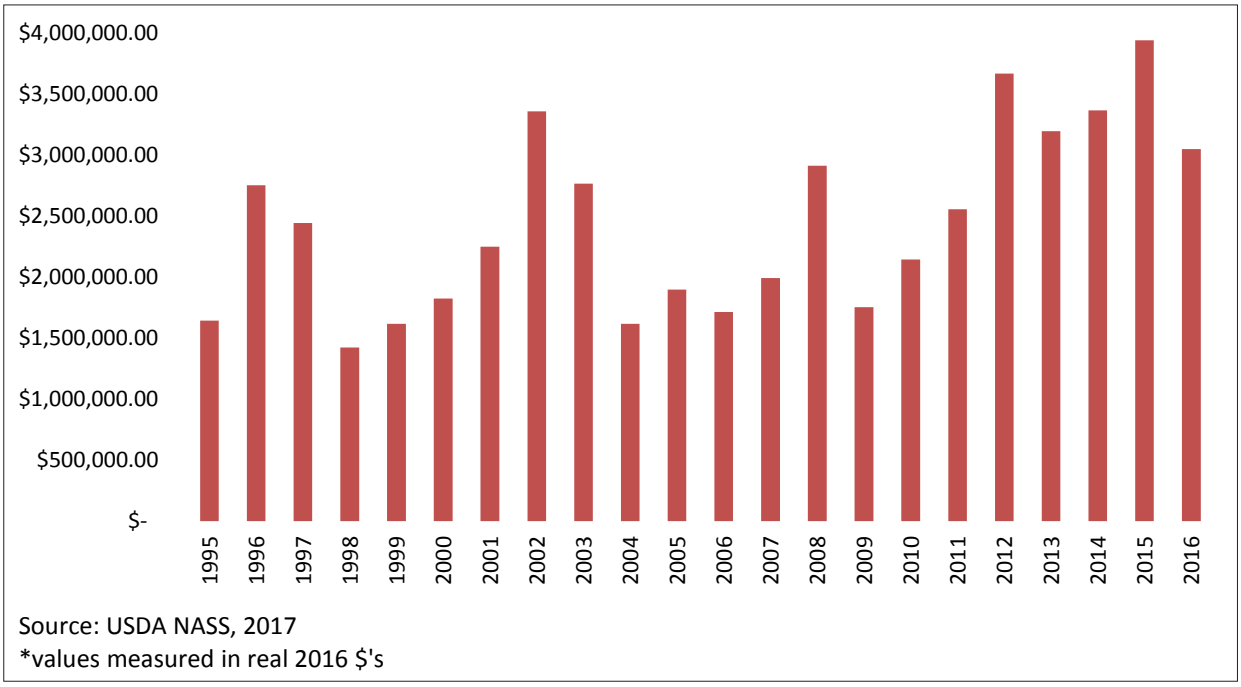


Figure 4. Average Price Received for Arkansas Honey, 1995-2016

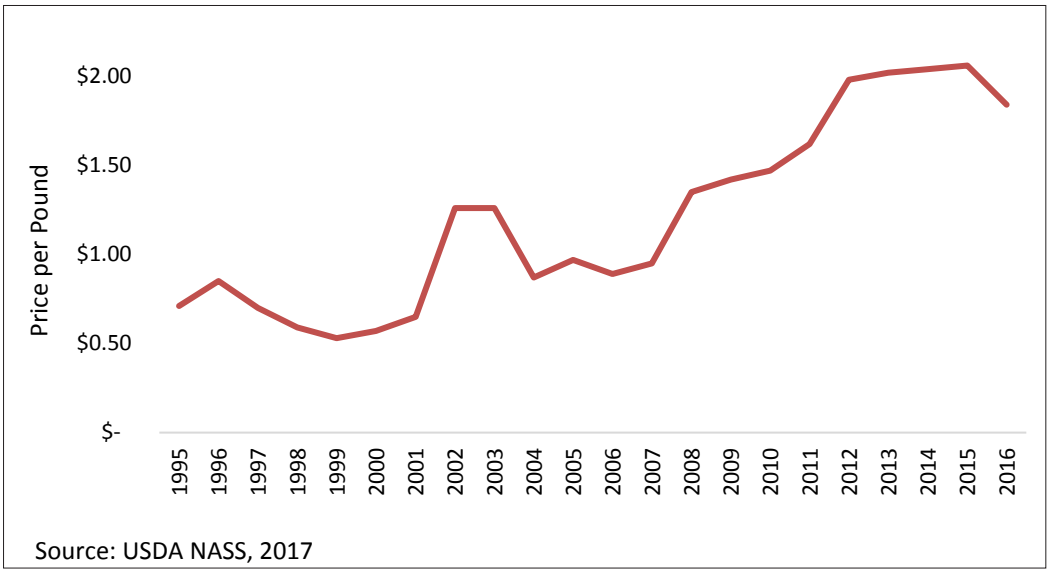
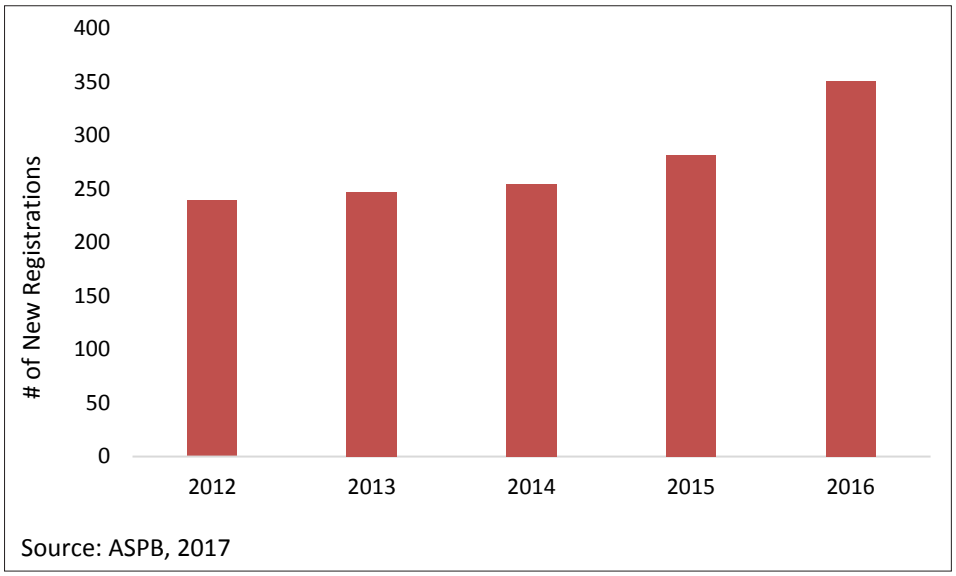


Figure 5. New Beekeepers Registered in Arkansas Annually, 2012-2016



Although the overall production of honey appears to be in decline, general interest in beekeeping is growing across the state. The Arkansas State Plant Board reports a growing number of new beekeepers registering annually in the state (Figure 5).

Each year, the University of Arkansas System Division of Agriculture's Cooperative Extension Service hosts beginning beekeeping classes throughout the state. Each class generally attracts between 50 and 300 participants from Arkansas and neighboring states.

A recent survey of class participants showed that most had either recently started beekeeping (16 percent) or were planning to begin keeping bees within the next year (70 percent). Attendees were primarily interested in producing bee products for personal use or to be given away as gifts. Many were also motivated to keep bees for pollination purposes. Although their primary motivators were not economic, over half of those surveyed reported that they would consider selling honey or other bee products, either through farmers' markets or on-farm sales. While most participants were planning hobby-level operations, around 5 percent reported plans for entry into larger sales markets.

Industry Issues

Honey bees are known to pollinate more than 90 commercially grown crops in North America. Because of this, bees play an integral role in maintaining food security, both in the United States and around the world (WH, 2014). In 2010, the value of honey bee pollination to the U.S. economy was estimated at over $19 billion (Calderone, 2012). In recent years, honey bee populations have been in decline. This decline has already impacted the cost of commercial pollination and is a growing concern for both beekeepers and farmers alike.

Several factors are known to affect honey bee colony health. Varroa mites currently represent the largest threat to bees and the beekeeping industry. They are also the most prevalent pest found in Arkansas bee colonies, affecting over 70 percent of all colonies in the state. Other colony stressors, such as tracheal mites, nosema, small hive beetles and wax moths, can be found in over 63 percent of Arkansas colonies. Diseases such as foulbrood, stonebrood and deformed wing affect up to 7 percent of colonies (USDA NASS, 2016).

Bees are also experiencing problems related to habitat destruction. As land is converted for urban, agricultural or recreational use, this leaves less suitable plant life available for bees to forage. Poor nutrition leads to compromised immune systems, making the bees more susceptible to various pathogens. Exposure to pollution and pesticides can also affect a bee's immune response.

Industry Spotlight

Larger Arkansas honey producers, such as Coy's Honey Farm (Craighead County), Richard's Apiaries (Saline County), Culp's Honey Farm (Craighead County), Crooked Creek Bee Company (Craighead County) and Bemis Honey Bee Farm (Pulaski County), specialize in the sale of honey or bee-related products and supplies. Other farms, such as Drewry Farm and Orchards (Pope County), have recognized the benefit of adding bees to their existing specialty crop operations.

Drewry Farm and Orchards was established in 1998. It is a family owned and operated farm located near Dover, Arkansas, that produces peaches, apples, blackberries, honey and beef cattle. Although peaches are their primary focus, the Drewrys began keeping bees in 2002 to aid in orchard pollination. They currently maintain around 50 colonies and harvest between 1,200 and 2,000 pounds of honey each year. Their honey is sold on the farm and at the Russellville Farmers' Market. In addition to honey production, the Drewrys also sell bee swarms and established colonies.

On the processing side, Arkansas is home to Fischer Honey Company, the oldest and largest honey processing and packing plant in Arkansas.

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