



## Economic Value of Commercial Beekeeping

Agriculture is a major industry in the United States with a direct connection to one in every twelve jobs. Since the early twentieth century, ‘migratory’ beekeepers have provided a critical service to U.S. agriculture by moving their hives seasonally to pollinate a wide variety of crops. Commercial beekeeping adds between \$15 and \$20 billion in economic value to agriculture each year. Without the yield increases made possible by commercial pollination services, food prices would rise, our farm sector rapidly become less competitive globally, and the security and variety of our food supply would diminish. With the wild insect pollinator populations already in serious decline, commercial, migratory beekeeping is more than ever a vital piece of our agricultural economy. This industry faces collapse for reasons having little to do with the great recession – their bees are dying.

The media has focused on the “mystery” behind these bee deaths, and largely overlooked the economic story. We are witnessing the rapid decline of an extraordinarily resilient and productive community, run primarily by family businesses whose members traverse the country to provide irreplaceable services.

### Economic Value

Honey bees are the most economically valuable pollinator worldwide, and many high-value crops such as almonds and broccoli are entirely reliant upon pollination services by commercial beekeepers. Globally, 9.5% of the total economic value of agricultural production for human consumption comes from insect pollination – in 2005, this amounted to just under \$200 billion.

The value of crops pollinated by bees in the U.S. alone was estimated at \$14.6 billion in 2000 – that figure has since grown.

### Role of Honey Bees in Agriculture

- One in three bites of food we eat is dependent on honey bees for pollination.
- Of the 100 crops that provide 90 percent of the world's food, over 70 are pollinated by bees.
- In North America, honey bees pollinate nearly 95 kinds of fruits such as almonds, avocados, cranberries and apples.

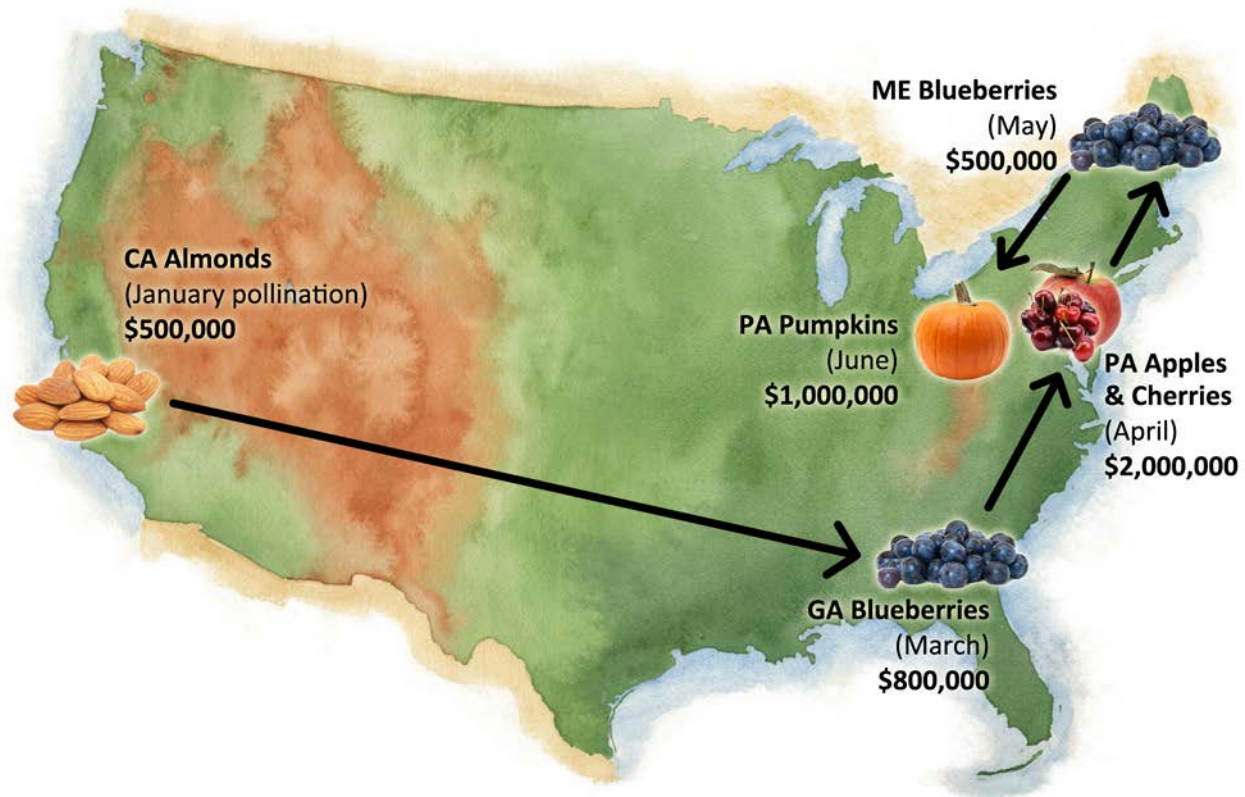
U.S. Crops	Crop reliance on bees as pollinators	Approximate crop value	Economic value of bees
Almond	100%	\$2.84 billion (2010/11)	\$2 billion
Apple	90%	\$2.2 billion (2010)	\$1.98 billion
Blueberries	90%	\$381 million (2005)	\$343 million

- More than three times as many colonies of honey bees are rented for the pollination of almonds than are used for the pollination of the next most important crop (apples).
  - California is responsible for more than half the world’s production of almonds.
  - Estimates for numbers of honey bee colonies rented for almond pollination range between 1.3 million and 1.5 million.
- The number of colonies rented for apple crops is estimated to be more than 275,000.

## Pollinator decline & Colony Collapse Disorder

- Losses of honey bee colonies since 2004 has left North America with fewer managed pollinators than at any time in the last 50 years.
- Each year since 2006, commercial beekeepers have reported annual losses of 29% - 36%. Such losses are unprecedented, and more than double what is considered normal.

## Economic Loss from a Single Bee Kill Incident



**Bee Kills and the U.S. Agricultural Economy.** In September 2010, a beekeeper experienced a complete loss of 200 honey bee colonies to pesticides. The graphic above illustrates how these bees would have provided almost \$5 million to the U.S. agricultural economy.

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