

The Economic Impact of New Jersey's Blueberry and Cranberry Industries

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Executive Summary

Blueberries and cranberries are a vital component of New Jersey's agricultural industry, representing approximately two thirds of all fruit industry revenues in the state. In addition, New Jersey blueberries and cranberries represent an important historical, cultural and natural resource to the state and the nation.

In 2008, New Jersey blueberry and cranberry operations produced a total economic impact of almost \$150 million annually, and created more than 2,000 jobs in the state. In addition, New Jersey blueberry and cranberry industries generated an estimated \$19 million annually in tax revenues for federal, state, and municipal governments, of which, more than \$7 million goes to state and local governments.

The Economic Impact of New Jersey's Blueberry and Cranberry Industries

This fact sheet quantifies the economic importance of the New Jersey blueberry and cranberry industries to the state economy and examines the historical trends in land in production, total yields, and prices.

Overview of New Jersey's Blueberry and Cranberry Industries

Cranberries and blueberries are indigenous plant species in New Jersey. Both fruits have long been used by local inhabitants in the New Jersey Pinelands region, where cranberries and blueberries thrive because of distinct soil characteristics. In the early twentieth century, blueberries were first domesticated in Whitesbog, New Jersey. During the same time period, cranberry growers in New Jersey and Massachusetts organized marketing cooperatives which led to the creation of Ocean Spray in 1930.

Today, New Jersey is the 2nd largest blueberry producing state and the 3rd largest cranberry producing state (in terms of total yield) in the nation. Because New Jersey is a leader in blueberry and cranberry production, improvements (e.g., production, harvesting, and marketing advancements) in New Jersey still have a large impact at the national level. Thus, at the national level, the vitality of the blueberry and cranberry industries is a direct result of the scientific research that helped to create the New Jersey industry in the early twentieth century and continues to advance the industry today.

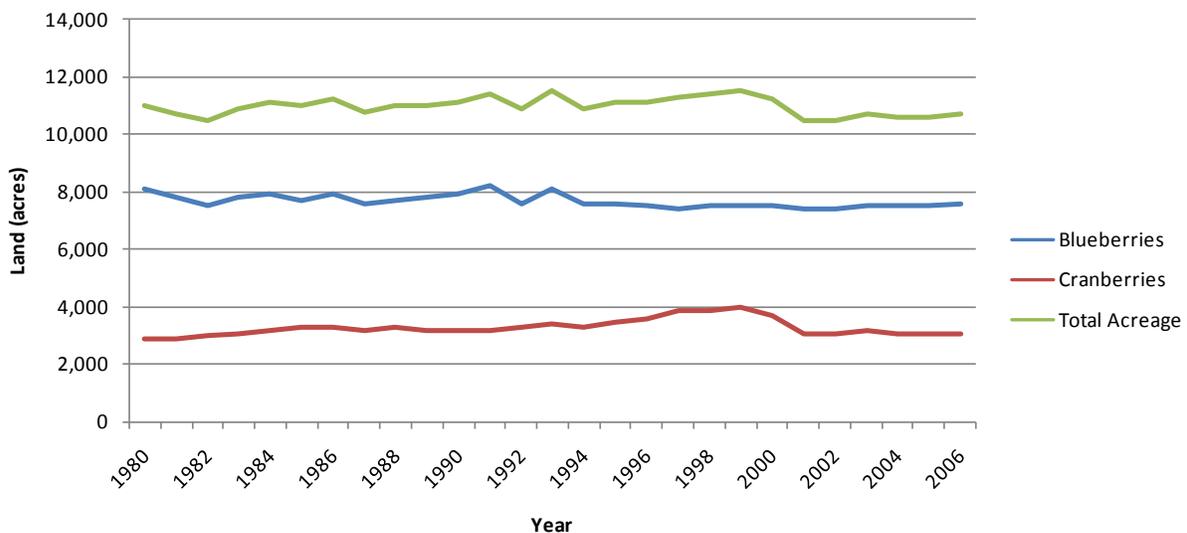
NJAES Investment in Blueberry and Cranberry Research

Research at the Rutgers Philip E. Marucci Blueberry and Cranberry Research and Extension Center has led to technological improvements in plant breeding, pest management practices, harvesting, etc. In fact, the center generated more than \$300,000 in royalties in the past few years from sales of newly released cranberry varieties developed at the center. These funds are used to support additional research on further improvements of blueberries and cranberries. As another example of the importance of research to the industry, the center identified a newly emerged, potentially devastating disease (later named blueberry scorch virus) and its aphid vector. The center's research provided for an effective management strategy for the control of this disease, which is now critical to the health of the blueberry industry. The Marucci Center is funded by federal, state and industry funding. Federal funds include programmatic funding (i.e., Agricultural Experiment Station Hatch/Smith/Lever funding), special appropriations, as well as competitive National Institutes of Health (NIH) and U.S. Department of Agriculture (USDA) grant funds.

Land in Production

Historically, land devoted to blueberry and cranberry production has remained relatively stable at approximately 11,000 acres (see Figure 1). Blueberry and cranberry production is highly concentrated in the New Jersey Pinelands region. Blueberry production is primarily located in Atlantic county with some production in Burlington and Camden counties, while cranberry production is primarily located in Burlington county with some production in Ocean and Atlantic counties. Because of the highly concentrated nature of the industry, cranberry and blueberry production is very important to the Pinelands region, not only for its economic impacts, but for its ecological, historical and cultural significance as well.

Figure 1 - New Jersey Blueberry and Cranberry Acreage

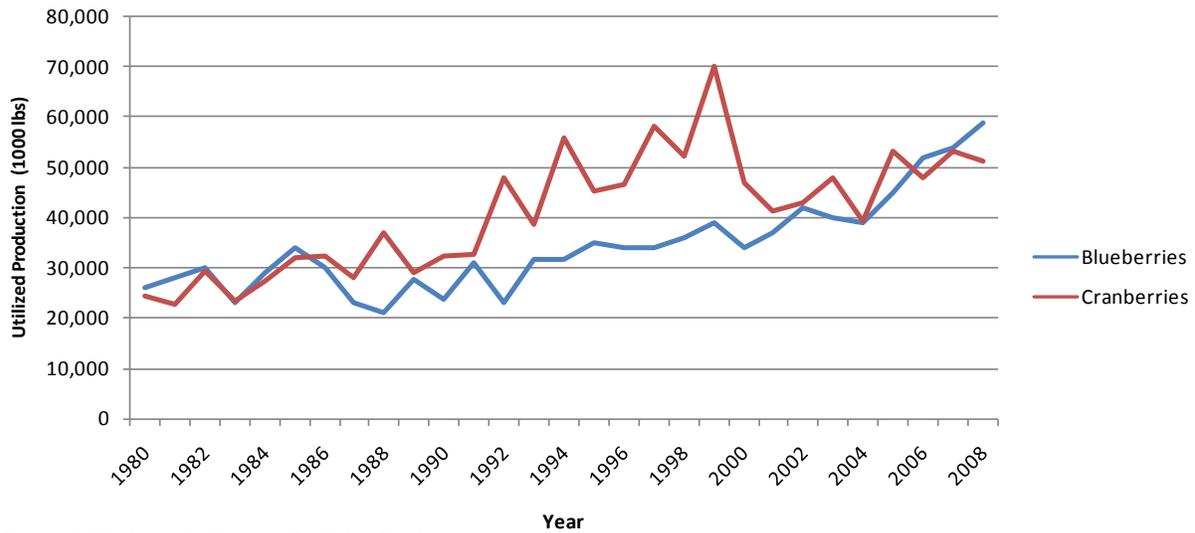


Source: NJ National Agricultural Statistics Service

Production and Prices

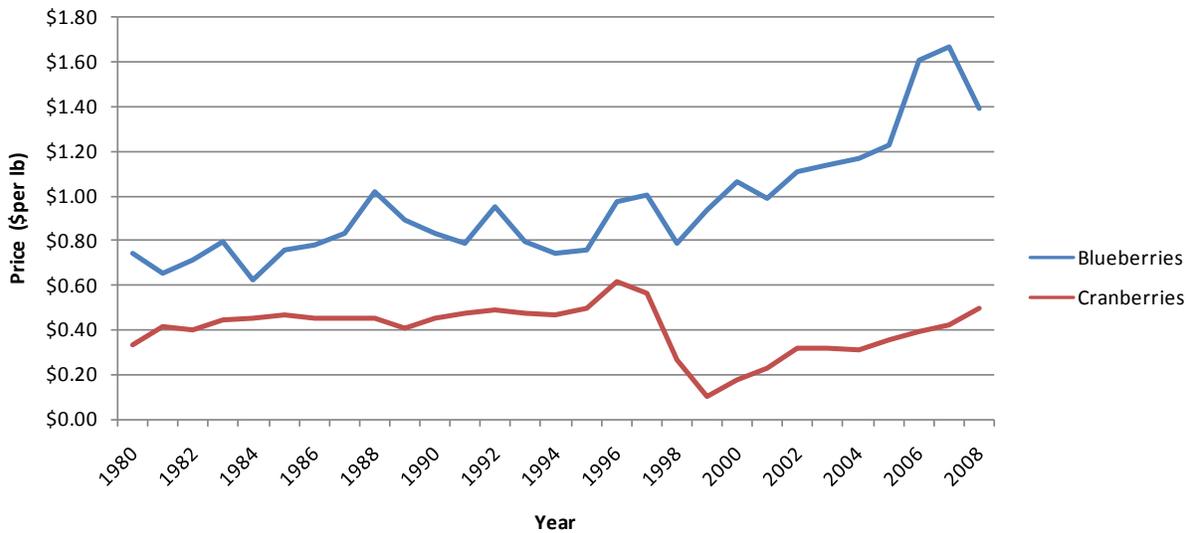
In 2008, blueberry production reached 59 million pounds, up 51% in the past 10 years (see Figure 2). In the past 5 years, cranberry production has generally increased, reaching 512,000 barrels (more than 5 million pounds) in 1998; however cranberry production is still down 27% from its peak in 1999. That peak was precipitated by high cranberry prices (\$61 per barrel in 1996) followed by a sharp drop to \$10 per barrel in 1999 due to over-supply (see Figure 3). Cranberry production increased by 109% from 1980 to 2008 while Blueberry production increased by 127% over the same time period. Most of the gains in yield have come from improved crop management, including better weed control, better fertility management, improved irrigation systems, and improved harvesting.

Figure 2 - New Jersey Blueberry and Cranberry Production



Source: NJ National Agricultural Statistics Service

Figure 3 - Blueberry and Cranberry Prices



Source: NJ National Agricultural Statistics Service

Economic Impacts

Economic systems are built upon inter-industry dependencies. Changes in the output of one industry reverberate throughout the economic system. The blueberry and cranberry industries are integrally linked to a number of supporting industries including a wide range of businesses (e.g., agricultural support services, wholesalers, financial services, etc.) Changes in the volume

of sales for berry growers will impact these, as well as other linked industries. These impacts are often referred to as “indirect effects.”

The blueberry and cranberry industries also impact other businesses through increased household spending. Wages paid by growers are spent and re-spent throughout the economy. Thus, the industry induces consumer spending on goods and services ranging from dental and medical care to real estate to restaurant meals. These “induced effects” ripple throughout the economy as these other industry sectors, in turn, expand sales and purchases and hire more workers. Known as “multiplier effects”, the indirect and induced impacts of the New Jersey blueberry and cranberry industries were generated using IMPLAN Professional® Version 2.0, a widely used input-output modeling system.^{1, 2} The analysis was performed for the 2008 production year, therefore, the resulting estimated impacts are on an annual basis.

Considering indirect and induced effects, blueberry and cranberry operations in New Jersey produced an economic impact of almost \$150 million in 2008 (See Table 1). More than \$107 million was generated directly from sales of the fruit, while the remainder (more than \$42 million) was generated through multiplier effects.

Table 1 – 2008 Economic Impacts of New Jersey’s Blueberry and Cranberry Industries

Commodity	Direct Impact (\$ millions)	Indirect & Induced Impact (\$ millions)	Total Output Impact (\$ millions)
Cranberries	25.4	10.1	35.5
Blueberries	82.0	32.4	114.4
Total	107.4	42.5	149.9

The economic analysis also shows that New Jersey blueberry and cranberry operations were responsible for generating more than 2,000 jobs in the state in 1998 (see table 2). This estimate does not include contract labor, which accounts for hundreds more jobs during the harvest seasons.

¹ Minnesota IMPLAN Group, Inc., IMPLAN System (data and software), 1725 Tower Drive West, Suite 140, Stillwater, MN 55082 <http://www.implan.com>.

² The underlying data used to “drive” the Implan model is 2008 annual value of production provided in “2008 Blueberry Statistics” and “Cranberry Highlights” reports, USDA New Jersey National Agricultural Statistics Service, Trenton, NJ 08625. www.nass.usda.gov.

Table 2 – 2008 Employment Impacts of New Jersey’s Blueberry and Cranberry Industries

Commodity	Direct Impact (jobs)	Indirect & Induced Impact (jobs)	Total Impact (jobs)
Cranberries	409	77	486
Blueberries	1,316	250	1,566
Total	1,725	327	2,052

Our economic model is also able to estimate the tax impacts of the blueberry and cranberry industries. Estimated tax impacts include federal, state, and local taxes generated from the direct, indirect, and induced impacts of the blueberry and cranberry industries. Included are estimates of corporate profits tax, personal taxes, Social Security taxes, and property taxes. The analysis showed in 2008, the New Jersey blueberry and cranberry industries generated an estimated \$19 million in tax revenues for the federal, state, and municipal governments. More than \$7 million went to state and local authorities in the form of corporate, personal, and property taxes, while almost \$12 million was generated in federal tax revenues (see Table 3).

Table 3 – 2008 Tax Impacts of New Jersey’s Blueberry and Cranberry Industries

Commodity	State & Local Taxes (\$ millions)	Federal Taxes (\$ millions)	Total Tax Impact (\$ millions)
Cranberries	1.7	2.8	4.5
Blueberries	5.6	8.9	14.5
Total	7.3	11.7	19.0

Summary

The New Jersey blueberry and cranberry industries provide numerous benefits to the state. Because production is highly concentrated in a small ecologically significant region of the state, these benefits may be even more important. In addition to the economic benefits outlined in this report, the blueberry and cranberry industries are important for their ecological, historical and cultural significance. Further, the industries represent a significant segment of national blueberry and cranberry production.