

An Inheritance of Blue: Transitioning to Organic Blueberry Production

First Fruits

As one of only four crops native to North America, the “wild” blueberries of Maine have earned a special role in our state’s cultural and ecological heritage. The low-sweet (*Vaccinium augustifolium*) and sour leaf / velvet-top (*Vaccinium myrtilloides*) were among the first plants to settle the acidic, nutrient-poor soils encompassing the place we call Maine, which were sculpted by glacial outwash and frequent fire disturbances. Since humans began sharing this habitat with blueberries, our relationship has expanded in scale and complexity. Although the commercial management of blueberries began in the 1840s, it was only within the last century that chemicals became commonly used to enhance productivity. While this enabled vast increases in quantity of blueberries produced, chemical applications have created significant concerns for the quality of natural ecosystems and human economies. From an assumption that sustainability will “meet human needs without depriving ecosystems of their health,” organic blueberry production can promise one way to nourish life in present and future generations.¹

Wild AND Organic

The designation of “wild” berries has become more of a marketing term for Maine’s celebrated lowbush varieties than a descriptor of their management. Like any other crop, wild blueberry growers must choose how pests and soil fertility will be maintained. Although organic methods had been the standard for centuries, a formal distinction emerged only when synthetic chemicals were applied to “conventional” farming practices after World War II. Whereas conventional practices use manufactured, chemical techniques to eliminate farm pests, organic practices integrate naturally occurring, biological responses to cope with agricultural challenges.

Becoming an organic blueberry grower does not require expansion onto “virgin” ground. In fact, the greatest opportunity for organic cultivation may be found on fields that were once managed conventionally. Increasing awareness of plant, soil, and animal relation-



Organic Blueberries for Economy

-According to a 2006 survey, 77 percent of Maine blueberry growers reported that it is important to use safer insecticides, which result in minimal residue on their crop. 49 percent of the surveyed growers in Maine believe that consumers will pay 1 to 10 percent more for “reduced-risk” blueberries.⁴

- Many organic growers achieve a price premium through value added processing of their berries, while more than 78 percent of organic growers enhance local value through direct sales at pick-your-own farms and farmer’s markets, which can strengthen community sense-of-place and food security.³

- Maine’s organic farms account for about seven percent of the state’s total agricultural acreage, assets, and gross revenue, they contribute eight percent more jobs than conventional producers.⁵



Wild AND Organic, continued

ships now enables growers to manage weeds and pests using effective biological methods. By reducing the financial and environmental costs of chemicals in a precautionary approach, organic blueberry producers can produce fruit of a far greater value.

Maine’s wild blueberry acreage accounts for 97 percent of America’s total. However, only one percent of Maine’s total blueberry acreage is now managed organically. Although a few large growers control the largest acreages in Maine, 80 percent of commercial growers operate less than 50 acres, a scale most appropriate for local, organic farms.² Existing growers seeking greater returns on small acreages are particularly equipped to reap the benefits of an organic production. Blueberries have played an important role in the surge of organic farming across the state. From 1988 to 2008, the total number of all organic farms increased from 41 to 337, representing a growth rate of more than 800 percent.³

FIGURE 1: Growth in Maine Certified Organic Farms, 1988–2008

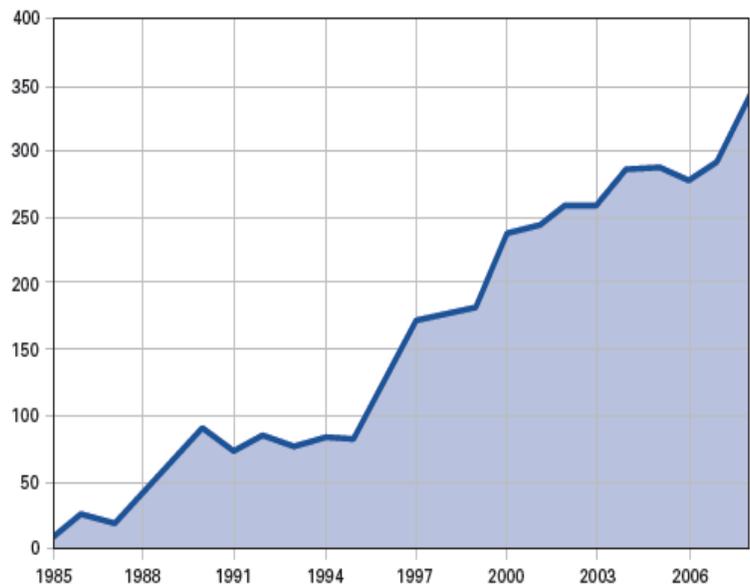


Figure 1 and Figure 2 are taken from Jed Beach’s “Economic Impact of Organic Farming in Maine.” Because organic agriculture relies more on natural fertility and human labor than manufactured inputs, it has a greater margin of financial and community value than conventional agriculture.

Organic Blueberries for Ecology

- **Clean Soil...**70 percent of the mass of a blueberry plant is underground. Blueberries grow in thin, glacially deposited, nutrient-poor soils that can easily leach chemicals. Organic blueberries help to stabilize these soils and initiate the conditions for greater plant productivity.

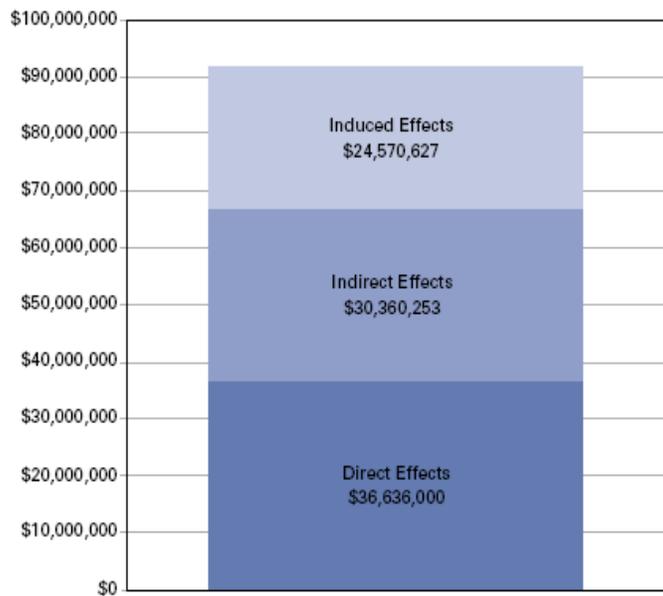
- **Clean Water...** The aquifers beneath Maine's blueberry lands provide clean water for trout, salmon and other wildlife, as well as clean drinking water for humans. The long term persistence and interactions of blueberry chemicals in aquatic ecosystems is poorly understood, and may compromise the water quality of many food chains and future generations. Hexazinone is an herbicide particularly vulnerable to aquatic leaching, and has shown up in streams, rivers and groundwater near blueberry fields.⁶

- **Clean Air...**Blueberry chemicals are commonly applied as spray treatments, which significantly increases the "toxic drift" which spreads and deposits chemicals to unintended sites.

-**Healthy Pollinators...**Without pollination, wild blueberries would not exist. Because they co-evolved together in Maine, native wild bees are particularly effective blueberry pollinators. For example, native bumblebees facilitate cross-pollination, work faster, and forage in colder, wetter conditions than honeybees. Over the last several decades however, populations of both wild bees and domestic honeybees have severely declined. Pesticide exposure may be a factor in their collapse, and organic practices can help create the healthy forage and habitat conditions for these essential pollinators to endure.

- **Enhanced Biodiversity...**Blueberry barrens have historically flourished in close association with lichens and nearby forest habitats.⁷ Encouraging these relationships may enhance the native, beneficial organisms that allow blueberries to thrive without chemicals.

FIGURE 2: Economic Impact of Maine's Organic Sector



Growing Together

To ensure a healthy future for Maine's wild blueberries, the landscapes where they are grown and the people that cherish them, it will be increasingly important to embrace opportunities for organic management. By starting with the soil in mind, organic practices can enhance the vitality of local communities and the ecosystems where the blueberry thrives. Maine growers are fortunate to have an engaged organic agricultural support network, including the efforts of the Maine Organic Farmers and Gardeners Association (MOFGA), and land trusts such as Maine Coast Heritage Trust, and the Downeast Rivers Land Trust, a project of the Downeast Salmon Federation. DRLT blueberry lands are among some the largest organic acreages in the state. These non-governmental organizations are eager to offer technical resources and collaboration to guide transitioning growers.

Eleven state laws and five federal laws facilitate organic agriculture in Maine, which has the second highest percentage of organic producers nationwide.⁸ Most notably, the Environmental Quality Incentives Program (EQIP) through the USDA – NRCS offers practical support and financial aid for transitioning growers. This program sponsors the Conservation Plan Supporting Organic Transition, which hires a MOFGA representative to help growers register for organic certification. Together they determine the best organic pest and weed control methods to match the landscape. New growers can become certified only 36 months after the last application of a non-organic substance.

Resources



USDA - NRCS – Washington County Office
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Next Steps

- Contact MOFGA Organic Transitions Team with any initial questions on how to start the process.
- Visit the USDA - NRCS Office in Machias to sign up for your Conservation Plan Supporting Organic Transition.



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www.slowtrav.com; www.fooducopia.com ; www.hubbardrakes.com

