



UW-Madison - Center for Integrated Agricultural Systems

OVERVIEW OF ORGANIC CRANBERRY PRODUCTION

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The production of fruit without the use of manufactured fertilizers or chemical pesticides was once considered virtually impossible for cranberries in the modern era. However, there are now many organic cranberry growers spread across the continent, including over 30 acres each in Oregon and Massachusetts, over 100 acres in Wisconsin and perhaps 400 acres in Quebec. A small amount of organic cranberries is also produced in Maine. Organic cranberry products include fresh and frozen berries, juice and juice concentrate, sauce, sweetened-dried cranberries and cranberry powders. Organic products return a higher price than conventional, the amount depending on the product. The market for organic cranberries has been growing, but production and price can be obstacles to successful organic operations.

Certification

All organic production must be certified. Certifying organizations include: Garantie Bio/Ecocert (Quebec), Maine Organic Farmers and Gardeners Association, Midwest Organic Services Association, Northeast Organic Farming Association, and Oregon Tilth.



Transitioning

In most cases, existing beds have been transitioned to organic – typically a three year time period where non-organic practices are abandoned before the crop can be certified organic. Older beds also carry problems that can be magnified during transition to organic. In some cases new plantings are started conventionally to facilitate bed establishment, then transitioned immediately thereafter. The advantage of this is that all steps in the establishment can be focused towards the end goal of organic production. In Quebec, beds are often started organic without transitioning to yield a certified crop earlier.

Challenges

The major problems facing organic cranberry growers include weeds, insect pests (especially black headed fireworm and fruitworm), fruit rot and other fruit quality issues; but most significant is a 50% or more reduction in yield compared to conventional production. Most organic growers have been able to maintain reasonable levels of weed control by various methods ranging from hand-pulling to vinegar injection (see picture to the right for an example of a sedge killed by vinegar injection to the base). Late floods or pre-



bloom re-flooding has been effective in reducing insect populations, but weather conditions and timing can be important factors in minimizing detrimental effects on the crop. There are a number of organic-certified products available to control insect pests; these have been effective to varying degrees. Frequent applications are often required. Growers in areas not accustomed to black headed fireworm have seen crop failures due to sudden outbreaks that are difficult to manage once out of control.

Field rot is primarily a problem only in Massachusetts. Fresh keeping quality can be a problem in all areas and often nitrogen fertilizers are restricted to enhance keeping quality and improve fruit color by reducing the leaf canopy. Fertilization may in fact be the greatest problem for organic cranberry growers, because all organic fertilizers have a slow release component that is dependent on microflora, temperature and rainfall/irrigation. Some types of organic fertilizers are faster-acting than others, and additions such as “compost tea” (to boost bacterial action) have been employed, but none give the rapid response that is anticipated from conventional fertilizers. This may explain the yield drop expected for organic production compared to conventional. While yields as high as 250 barrels/acre have been reported, typical organic yields range from 60 to 120 barrels/acre (considerably less than the Wisconsin average which exceeds 200 barrels per acre). The pictures below illustrate a good organic bed and detail of the fruit in mid-summer.



Future

There is room for the organic market to expand, yet many growers who have tried it have given up because the price could not make up for the yield loss and costs associated with organic production. Two research areas could dramatically change the opportunities to overcome the yield drop and improve the economic feasibility of organic production:

1. Research into improved fertilization techniques, particularly systems that feed cranberries and not weeds, are vital to increase both crop yields and flower bud set.
2. Research into improved varieties more suited to organic production, incorporating:
 - Rapid establishment to restrict weeds
 - Improved response to slow release fertilizers
 - Tolerance or resistance to fruitworm and other pests
 - Improved fruit quality (size, color and keeping quality)
 - High flower bud set under organic fertilizer regimes

The organic markets for most commodities have been growing. Cranberry, which is already perceived as a healthy part of the diet, is a good candidate for further expansion in the health-conscious organic market if these production obstacles can be overcome.

