

The OrganicA Project: An Integrated Apple Research, Education, and Extension Project

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Abstract

Apples are an important component of New England's diversified agriculture. Although there is strong interest in organic apple production, there are very few certified organic orchards because of insect and horticultural challenges plus disease challenges associated with the predominant cultivar grown in the New England region (i.e., 'McIntosh'). However, recent shifts in consumer preference for newer cultivars have led to the planting of different apple cultivars which have different disease susceptibility. Also, research has identified potential alternatives for insect and horticultural management in organic apple production in the region. Research knowledge is at a point where it needs to be integrated into organic production systems and evaluated holistically, including an economic analysis of potential costs, returns, and risks associated with the systems. A new multi-disciplinary, multi-state research project was initiated in 2006, to examine two major production methods (i.e., top-grafting or planting new trees) growers would use in changing to new cultivars and organic production. The research project has a closely integrated organic apple extension program to disseminate research findings, information, and insights and an academic component which involves undergraduate and graduate students. The OrganicA project is envisioned to span 6-9 years.

Objectives

Objective 1. Incorporate and evaluate "new" apple cultivars and research-generated knowledge of apple ecosystem dynamics into organic production systems to determine sustainability and profitability.

Objective 2. Collaboratively develop and implement with stakeholders a multi-dimensional extension program that addresses their priorities and needs and improves the competitiveness of organic apple producers.

Objective 3. Collaboratively develop a course on organic fruit production that effectively integrates classroom and experiential learning and that includes principles, practical aspects, and complexities of organic production.

2006 Research Progress

• Organic practices initiated in two orchards (Orchards 1 & 2)

Orchard 1. This orchard is a **new planting** with young, nursery trees. The previous orchard was removed in 2003 and soil was prepared prior to planting the new trees in 2006. For research purposes, the orchard is planted in a completely randomized design with replications of 5 cultivars ('Ginger Gold', 'Honeycrisp', 'Liberty', 'Macoun', and 'Zestar!').



Orchard 2. This orchard is a **top-grafted** orchard. Trees in an existing orchard were cut back to a trunk and "nurse" limb prior to grafting of scions in 2006. For research purposes, the orchard is grafted in a randomized complete block design with replications of 5 cultivars ('Ginger Gold', 'Honeycrisp', 'Liberty', 'Macoun', and 'Zestar!').



- Data Collected:** Labor and material costs of orchard establishment and management; arthropod and disease incidence among cultivars; survival rate of grafted scions of different cultivars.



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