

## Implementation

### Michigan Organic Apple Production

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*Abstract:* A 5-yr-old Michigan State University Experiment Station apple orchard at Clarksville was certified organic by OCIA in 2003. The three varieties and replicated plot design provided data on organic apple yield, pest control practices, rootstock by scion interaction and ground cover/diversity strips. Insect and disease control strategies included a range of practices including pheromone disruption, codling moth virus, kaolin clay, Bt, pyrethrum, neem treatments, sulfur, oil and lime sulfur. Three ground cover strategies were also compared including the Swiss Sandwich, Michigan Compost and blown inter-row compost with propane flaming. Plant diversity strips designed to provide pollen and nectar reward to predators and parasites were also incorporated into the system in 2003. Overall damage from insects was below 20% at harvest. The yield and damage data were compared across the replicates and with other organic apple sites throughout the state. Disease management included several strategies for fire blight and scab. Fire blight conditions at this site were not severe in 2003 and very low damage was observed. Scab injury was significant in some varieties and the variety by disease-management-strategy interaction was significant ( $P < 0.05$ ). Ground cover systems were evaluated for weed growth and density within the drive row and under the trees. The Michigan Compost System was most effective and economical compared to the Swiss Sandwich System and the blown drive row clipping compost together with flaming system.