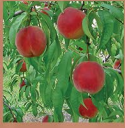




Stone Fruit IPM for Beginners

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Chapter 1

Introduction

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What does it take to grow stone fruit?

Growing stone fruit can be very rewarding, but also expensive and time consuming. There are many things that must be done in a timely manner to produce edible, attractive and marketable fruit. This series of fact sheets will focus on overcoming pests that challenge stone fruit growers in their new orchards, but many of the same principles and practices apply in established orchards. The intended audience for these fact sheets is new stone fruit growers or people training to become an orchard scout in stone fruit orchards.

Throughout the series, critical practices—“**Must Do's**”—are highlighted. If these critical practices are not done in a timely manner, there will be very little useable fruit despite your best efforts. Look for the **△** symbol throughout this series for the essential management practices required for successful stone fruit production. This introduction contains a brief summary of what it takes to produce stone fruit for sale.

△ Must Do: Determine your market. Will you sell direct to consumers through a farm stand on your property or at local farmers markets? Will you have a U-pick operation? Will you sell to a regional processor or packer/shipper? Different cultivars are more or less suitable for different markets. The MSU Product Center can help develop a business and marketing plan (<http://www.canr.msu.edu/productcenter/>).

△ Must Do: Identify, acquire and prepare an appropriate site. Identify your dominant soil type. Stone fruit need a well-drained site. Seasonal high water tables in spring and fall can kill trees outright. To check this, dig a few holes about 2 feet deep. Gray mottling in the soil profile indicates seasonal water logging. Test the soil to determine pre-plant fertilizers for correct pH, lime, calcium, phosphorus and magnesium. Use an appropriate cover crop to break up compacted soil, add green manure and suppress suspected soil-borne pathogens or nematodes, especially when planting back into old orchard rows. Controlling patches

of noxious perennial weeds before planting the new orchard will save a lot of headaches in the future.

Also, select a site that allows cold air to drain away from the orchard—sloping sites are generally preferred for this reason. Stone fruit are some of the earliest blooming of the tree fruit in spring and can be susceptible to frost and cold injury. Peaches in particular can be injured by extreme cold events and are generally considered to be short-lived orchards in the Great Lakes Region. For high value cultivars, consider investing in frost fans to aide in mixing inversion layers and minimizing damage from cold snaps in spring.

△ Must Do: Choose the appropriate stone fruit suitable for your region, site and available market. Choosing which varieties to grow might be based in some part on personal taste, but in reality, the focus should be on what your target market will buy. Disease-resistant cultivars will be essential in organic production systems.

△ Must Do: Purchase the necessary equipment to maintain your orchards. The proper equipment and training will be needed for applying pesticides (whether you are using synthetic or naturally-derived), pruning, harvesting and other orchard maintenance. Determine the labor that will be needed to accomplish all of these tasks and whether there will be enough of it when needed.

△ Must Do: Learn as much as you can about the horticultural requirements of your stone fruit orchard. Different kinds of stone fruit will have different requirements for planting depth, irrigation and nutrient management, practices to maximize crop load and fruit size (e.g., pruning/training systems, fruit thinning), harvesting (e.g., hand harvested versus mechanical), post-harvest handling and storage, and other horticultural practices. Stressed trees are more prone to infection and invasion by pests.

△ **Must Do: Protect the crop from pests, including wildlife.** This series focuses on insects and diseases, but you will also have competition from wildlife and weeds.

Deer will severely stunt growth in fruit trees by eating buds and rubbing bark with their antlers. If you have deer in your neighborhood, protect new plantings by using repellents or an 8-foot fence, which is most effective. If deer find the trees before repellents are applied, you will have a constant battle to protect against stunted trees and reduced yields.

Voles and *rabbits* also chew bark, girdling trees, especially under the cover of snow in winter or in tall weeds during the growing season. To deter small rodents, apply wire mesh guards around young trees, but do not allow the guards to collect leaf debris as these favor trunk-boring insects. Keeping tree trunks free from weed growth also reduces habitat for these small pests.

Birds can be a significant pest of cherries as they begin to ripen, particularly in a dry season. There are a variety of different deterrents available to use including noise canons, pre-recorded bird calls of birds in distress or predatory birds. Some growers install nesting boxes for birds of prey to encourage natural predation of fruit-feeding birds and rodents.

Weeds provide cover for pests and can compete with young trees for water and nutrients when they are directly under the crop canopy. Weeds may also act as carriers of viruses that can be transmitted through insect vectors like leafhoppers when they feed on the crop after feeding on an infected weed host. On the other hand, carefully using cover crops in drive rows will help retain soil, prevent run-off and even increase soil fertility over time.



William Shane, MSU Extension

A peach pecked by birds.

Acknowledgements: This information was adapted with permission from “Apple IPM for Beginners,” edited by Deborah I. Breth, Cornell Cooperative Extension Lake Ontario Fruit Program.