



Stone Fruit IPM for Beginners

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Chapter 2

Setting Up for Success

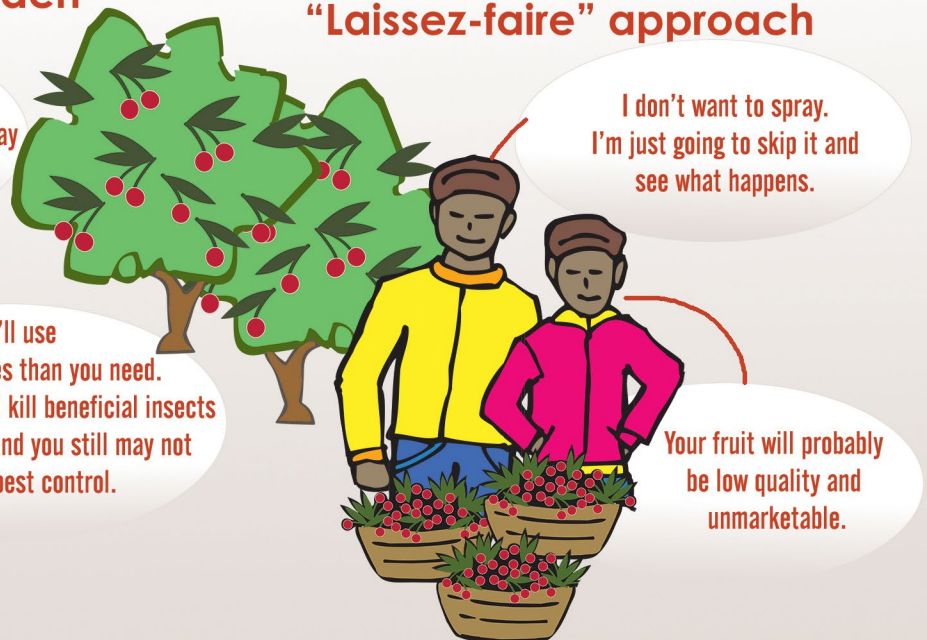
Julianna Wilson, Michigan State University, Department of Entomology

Good orchard pest control is complicated and challenging to learn.

“Intensive spray” approach



“Laissez-faire” approach



Take the sustainable integrated pest management approach

Whether you are growing stone fruit under a conventional or organic system, consult a “Scouting Calendar” to determine what pest issues are present at each developmental stage, and what action to take to prevent damage. Insect and disease pest severity depends on the weather and site. Not all pests listed in this series will be problems in all sites, neither is this an all-inclusive list of pests that can threaten stone fruit in your area.

△ Must Do: Read and follow all required pesticide labels. Again, whether you are using synthetically- or organically-derived materials, it is imperative to follow the label to guide how much to apply, when to apply and what safety equipment is needed while mixing and spraying. The label will list which crops can legally receive applications of a particular pesticide, which pests it is meant to control, the necessary rate and the timing.

In the “Agricultural Use” box on the label, you will find the amount of time needed to wait to re-enter the sprayed area (REI). Under the label’s “Crop Use” section, you will find how long to wait before harvesting the crop after the spray is applied, which is also known as the preharvest interval (PHI) and whether there are special restrictions for use in a U-pick operation.

Recommended tools

- ▶ 10x hand lens or “optivisor” (3x magnifier)
- ▶ Pocket knife
- ▶ Pruners, loppers or other implements for removing diseased limbs
- ▶ Spray bottle of disinfectant to sanitize tools in between cuts
- ▶ Small assorted bags for containing samples (e.g., recloseable plastic and paper)

- ▶ Insect monitoring traps and pheromone lures as per specific target pest
- ▶ Accurate minimum/maximum thermometer protected from direct sun or shade
- ▶ Rain gauge or weather station (depending on the size and topography of your operation, you may want more than one)
- ▶ Sprayer that can provide good spray coverage throughout the tree
 - Orchard spray materials
 - Learn how to safely apply pesticides in an orchard by training to become a pesticide applicator.
 - If you plan to use restricted use pesticides (RUPs), you will need to take a test to become a certified pesticide applicator; each state or province has their own requirements for becoming licensed to apply RUPs.
 - Learn where to find current pesticides labels for the products you intend to use and keep them handy, either by printing them out and putting them in a folder that is easy to access or by keeping digital files in a folder on your virtual desktop.
- ▶ Personal protective equipment to spray pesticides available from grower supply companies, your pesticide supplier or a local hardware store.
- ▶ A computer or mobile device with Wi-Fi access to monitor weather and use online tools related to disease prediction, insect pest development and irrigation recommendations (see Section 4 for more details).
 - In Michigan and Door County Wisconsin, www.enviroweather.msu.edu is the place to find weather-based pest management tools.
 - In Connecticut, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Vermont and Virginia, locate a NEWA weather station near you at <http://newa.cornell.edu> and use it for weather-based pest management tools.



Resources for keeping current on orchard IPM

- ▶ Attend spring and summer field meetings, winter fruit schools, conferences and trade shows that provide crop-specific sessions on current topics related to growing and marketing stone fruit.
 - For more information on programs in Michigan, visit <http://msue.anr.msu.edu/topic/info/fruit>.
 - For more information on programs in New York, visit: <https://nysipm.cornell.edu/agriculture/fruits/cce-programs>.
- ▶ Subscribe to your state Extension fruit newsletter or blog for daily and weekly time-sensitive updates from specialists and Extension educators in your region.
 - In Michigan, the MSU Extension “Fruits and Nuts” newsletter at <http://msue.anr.msu.edu/topic/info/fruit> offers a regular news digest delivered to your email inbox when you sign up for free, including weekly regional reports during the season.
 - In New York, Cornell Cooperative Extension fruit programs offer daily or weekly time-sensitive updates through the Lake Ontario Fruit Program at <https://lof.cce.cornell.edu> or Eastern New York Commercial Horticulture Program at <https://enych.cce.cornell.edu>. Also, “Scaffolds” Fruit Newsletter at <http://www.scaffolds.entomology.cornell.edu> provides weekly updates on crop and pest development, along with background biological information and management guidelines.
- ▶ Subscribe to trade journals such as the Fruit Quarterly, Fruit Grower News and Good Fruit Grower.
- ▶ Apps for keeping spray records
 - Trac Cherry, Trac Stone Fruit Apps
 - Fruit Tracker in Ontario
 - Orchard Max app
- ▶ Publications
 - Airblast 101 <https://sprayers101.com/airblast101/>
 - Common Tree Fruit Pests (NCR063) – A.H. Howitt. Search at <http://shop.msu.edu>

- Tree Fruit Field Guide – A. Agnello et al.
http://palspublishing.cals.cornell.edu/nra_order.taf?_function=detail&pr_id=158
- Compendium of Stone Fruit Diseases - J.M. Ogawa et al.
<https://my.apsnet.org/ItemDetail?iProductCode=41744>
- Michigan Fruit Management Guide (E0154) - MSU Extension. Search at <http://shop.msu.edu>
- Fruit Crop Ecology and Management (E2759) Search at <http://shop.msu.edu>
- IPM in Practice – M. L. Flint.
<http://anrcatalog.ucanr.edu/Details.aspx?item-No=3418>

Where to find help

- ▶ [Find contact information for local Extension offices](#) and fruit Extension staff that can provide support services and guidance on educational opportunities—and keep it handy.
 - In Michigan, use the “Find an Expert” tool on the MSU Extension Fruit and Nuts page to find the fruit Extension educator nearest you (<http://msue.anr.msu.edu/topic/experts/fruit>).
 - In New York, use <http://cce.cornell.edu/localoffices> to locate your nearest fruit Extension person.

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