



Whether you are an accomplished home orchardist, a newbie, or a wannabe – some interesting pests will cross your path on the quest to grow quality fruit. As your abilities grow and develop, so will the care plan that works in your individual space and with your chosen fruits. Each season of each year brings challenges and tasks that need constant monitoring, evaluation, and adjustment. Right now is the time to be evaluating the successes and challenges of the past growing season.

One of the greatest challenges facing any orchard is the insect pests. Some years can present the unusual infestations - last year it was *Magicicada septendecim* (the 17 year Cicada). Some pests arrive like clockwork - case in point – *Popillia japonica* (Japanese Beetles). They hit every year in varying degrees of severity – and are usually at their most annoying when the fruit is luscious and ripening. But, there are some common fruit crop pests that have a quiet presence, only reaching a treatable stage when the populations are at relatively high levels. And if not monitored regularly, treatment is often reactive rather than proactive.

Unfortunately, the options for treatment are more limited when reacting - treatment can go from low toxicity, low residual proactive to “Get out the gas mask Martha – I’m going in!” A way to avoid a bit of that is to plan for a dormant oil application to nip some of those critter populations in the bud – so to speak. Starting the season off with a dormant spray is a low toxicity method of lowering growing season pest maintenance. Aphids (many species), *Cacopsylla pyricola* (Pear psylla), *Panonychus ulmi* (European Red Mite), and *Quadraspidiotus pericosus* (San Jose Scale) are some of the common fruit crop pests that can be reigned in with an appropriately timed oil application. Do keep in mind that each plant has particular pests that love it. Understanding the life cycle of each pest will help you to find the most vulnerable point in that critters life - which is often the best time to treat. Successful treatment includes choosing the appropriate formulation based on plant type, insect pest, and time of the year.

What type of oil is best to use? There are a few different brands that can be found at most major stores. As long as they are horticultural products that are formulated for your

particular crop (e.g. apples), pest (e.g. San Jose Scale), and timing of application (e.g. late winter) the choice is up to you. **READ THE LABEL CAREFULLY.** It will tell you everything you need to know and then some.

What is in a dormant oil product? The components are relatively common – refined mineral oil, soap, and water. Do not consider that a recipe. I DO NOT recommend this as a DIY project. The oils and soaps used in commercial horticultural products have been specially formulated for safe plant use and consistency. This ensures that the products you purchase will work the same way every time and when used appropriately will result in minimal damage from sun exposure or suffocation. Using household products may be good for the house but will spell trouble, or death, for plant material.

How does dormant oil work? Depending on the pest, the oil when applied well, will either suffocate it or render the feeding mechanisms useless. Seems heartless but that’s life and death in the plant world.

When and how is dormant oil applied? You should be planning now to be ready. The treatment time is optimal as temperatures get to and stay above about 40 degrees F. and below 70 degrees F. There will be days that reach 40 and drop back down but be patient and wait for a true warm up. Warm spring weather brings the over-wintering pests out of dormancy. Once they are respirating, suffocation via oil coverage will be much easier. Avoid applications after the new buds open beyond a ¼” of green – this has the potential for bud damage and subsequent fruit loss. In order to get very good coverage, especially in larger trees, a pressure sprayer should be used. This is not a piece of equipment that most backyard orchardists have on hand. Be smart, don’t try to rig ladders and hoses and chairs and masks and gloves and belts and whatever else together to make your small sprayer do the job. There are licensed applicators out there that will gladly do the application for you. (Please, a hospital stay is much more expensive than the sprayer dude or dudette.)