

Dormant Care

This bulletin dated 2/10/2012 mostly applies to fruit trees that were planted as part of the "1,000 fruit trees for Lamorinda" project. For service of your existing fruit trees, please contact a local tree service

Fruit Tree Bulletin

February 2012

Things to do

It's early February but it feels more like April with warm spring days and sporadic rain fall. Fortunately we had a relatively cold November and December and the recent night temperatures are sufficiently low to keep fruit trees in dormancy. As the

days begin to lengthen, the dormancy period will end and the "bloom season" will begin. This is your last chance to take care of the following:

- 1- dormant spray of some trees
- 2- winter pruning as needed
- 3- Mineralization of the soil

This document is divided into three sections:

Section 1 - is general information and describes the purpose of the above tasks.

Section 2 - describes a service for fee package that we have put together to accomplish the above tasks on a communal basis (more later)

Section 3 - is for homeowners that want to do the work themselves.

Section One

Raising a fruit tree is like raising a child. They need care and direction, more in the earlier years and less as they mature. If you want to grow a healthy, productive and strong tree, that produces high quality fruit, the tasks listed in this document, are required.

Overview

The goal of our program is to help homeowners, whether novice or expert, to grow high quality fruits on strong trees.

While some of you are comfortable carrying out the tasks listed here, others may be learning, need some

assistance, or unable to carry out the tasks and need complete care of their trees. No matter where you are on this spectrum, we'd like to help you succeed with your trees.

We view all fruit trees, no matter where they grow, as a community resource. The higher the volume of food grown in backyards, the higher the capacity of our local food shed, resulting in higher resiliency for the community.

Dormant sprays

The overall objective of dormant spray program is to provide acceptable levels of disease control, with minimal

pesticide (albeit natural) use.

One of the best ways to control diseases and insect pests is, to prevent them from getting established in your home orchard.

The first step is to remove all dropped leaves and mummified fruits that may harbor pests and diseases.



Mummified fig covered with unknown fungi



Pest larvae emerging from mummified Asian Pear shown above

The second step is to apply dormant spray, which help reduce over-wintering pests and disease organisms. Waiting until the weather warms and pests become active turns a simple task into a major battle, requiring harsh chemical intervention. Fruit trees require two types of spray:

Dormant oil spray

Also known as horticultural oil, narrow-range oil or superior oil, is a highly refined oil that is effective against a broad spectrum of insects such as aphids, scales, spider mites and whiteflies. It works by smothering the eggs and larvae in a thin coat of oil.

Applying dormant spray to fruit trees during the cool season, significantly reduces the population of pests that take up residence in the cracks and crevices of the tree. Besides dealing with pests, we must limit the damage caused by diseases.

Fungicide spray

In order to control fungal diseases (i.e., peach leaf curl, brown rot, powdery mildew. etc.) and bacterial diseases (i.e., fireblight, bacterial canker, blossom blast, etc.) the trees must be sprayed with a fungicide such as copper sulfate or lime sulfur.

The general recommendation is to spray all fruit trees three times a year, around Thanksgiving, Christmas and Valentines Day. General advice like this, while useful as a reminder, is often an over simplification of a task that requires some thoughtfulness, resulting in extra work and excess use of chemicals with minimal benefits. For example peach trees are highly susceptible to peach leaf curl. PLC is best treated with an application of lime or copper. If you were a peach farmer and your livelihood depended on complete eradication of PLC, then 3 application of lime or copper per

year would make sense. In a backyard orchard we are better off intervening when necessary with the lightest possible footprint.

For example many organic farmers have found that they can eradicate PLC with a single application of *carefully timed* dormant spray.

Pruning

In our climate you can prune almost any time of the year. The two common periods of pruning are dormant pruning and summer pruning. Trees respond very differently to dormant and summer pruning. Dormant pruning is an invigorating process. During summer growing season, fruit trees store energy (primarily in the trunk and root system) for the next growing season (spring of the following year.)

When a portion of a fruit tree's branch structure is removed during the dormancy, the total amount of energy stored by the tree remains unchanged. In the spring, when the trees begin to grow, that stored energy is applied to available branches above the ground. It follows that if some portion of the branch structure is removed the stored energy is then directed to the remaining portion of the tree causing a period of vigorous growth.

In addition to stimulating shoot growth, during dormant pruning we can opens tree's canopy to air circulation and sunshine.

During dormancy when the trees are devoid of leaves, it is easy to

see the structure of the branches, allowing us to plan for a strong scaffolding structure to support future fruit bearing limbs.

It is easier to spot dead or diseased wood and locate crossing, or touching, branches at this time of the year than when there are leaves on the trees.

Pruning is the main tool for controlling the size and shape of the tree, and instrumental for improving the quality of the fruit. Properly trained and pruned trees will yield high quality fruit much earlier in their lives and live significantly longer.

Summer pruning eliminates an energy or food producing portion of the tree and results in reduced tree growth. More in a summer bulletin.

Repainting the Trunk

In an earlier bulletin, we discussed the need to paint the trunk of most young fruit trees. This is a preventive measure that protects the bark of bare-root trees (which lack a strong canopy) from cracking due to sun exposure.

The decision to paint your tree or not requires a bit of judgement. If your tree has a canopy that throws shadow on the trunk, you don't need to paint it again.

If your canopy is not fully developed (extending three feet or more all around the tree) It's a good idea to paint the tree.

All sweet cherry trees must be painted for three to five years.

Mineralize the Soil

As your tree grows, it takes up minerals stored in the soil and delivers the minerals to you in the fruit. It follows that to grow healthy fruit, you need to replace the depleted minerals. The best way to return nutrients back to the soil are by 1) application of compost and 2) application of [Azomite](#)

Section Two

A person new to growing fruit trees may feel how exciting, I have new things to learn or wow! I have to invest in equipment, buy chemicals, develop skills and spend time ... I need help!

Introduction

The question we consistently ask is, what's the most effective way to accomplish the tasks associated with The Urban Farmers project? By effective we mean in a way that creates the least amount of work, at lowest cost with least impact on the environment.

This is a tall order which is not possible to achieve at all times. However we developed a plan and did a study with a group of Saint Mary's College students last year that is well worth your attention.

Communal Service Package

We are pleased to offer you the following service package that applies only to:

1) fruit trees that were purchased through The Urban Farmers

project. This offer does not apply to other mature or existing trees

2) for homes within close vicinity of Lamorinda area.

The package includes on-site inspection of your tree(s) dormant pruning, application of dormant sprays and Azomite. The service is based on weather conditions and will be delivered during the week of 2/20/2012

This offer is available on a **communal basis only**

Fee Schedule

The service is only available for The Urban Farmers members, the fee is \$25 for the first tree and \$15 for each subsequent tree.

To become a member, please visit the [Membership page](#) on our website.

Note and Disclaimer

For our service package offer, we intend to monitor the condition and spray the trees at the right time using minimum levels of chemicals. When conditions are ideal, we must act quickly, as such your cooperation in giving us access to the trees on short notice (1 may be 2 days) is essential and is appreciated. The nature of the work performed, including the timing of it, will be at sole discretion of The Urban Farmers.

To understand how *Communal Service Package*, works watch:

Communal Service Concept

Section Three

Listed below is general advice for those who wish to learn and do the above tasks themselves. There is much written about dormant care of fruit trees and it is not possible to repeat that here.

My favorite book on this subject is [The Home Orchard](#) by University of California, Agriculture & Natural Resources (ANR)

Also visit [this section](#) of ANR website where you will find many specific e-book available for download at no cost.

For now the guidelines below should give you a fast start.

Pests in the cracks

When fruit trees are dormant, the movement of sap in the trunks and branches slows down significantly. When sap stops moving the insect pests and disease organisms that are targeting the fruit tree also go into a dormant state, known as overwintering. They hide and lay eggs in cracks and crevices of the tree. When spring arrives and trees become active, the pests and disease organisms become active.

Dormant oil is considered a "contact insecticide", which means that only the insects present at the time of application will be killed by the spray. Insects that migrate to a treated plant at a later time will not be affected by oil residues. This is good news for beneficial insects such as lady bugs which generally overwinter as adults in clusters, in leaf litter or other sheltered areas. Keep your spray

focused on the tree branches and avoid over spraying.

If you have close neighbors that have fruit trees, coordinate your spraying (and if they are not spraying their fruit trees, offer to do it for them.) Airborne pest and diseases don't respect fences.

Speaking of spraying, invest in a heavy duty pump sprayer where the manufacturer offers replaceable parts. You will spray your fruit trees for years to come and the cheap sprayers breakdown quickly. Besides replaceable parts, I'd use two other criteria in choose a sprayer, 1) Be sure the sprayer has good means of controlling the rate and spread of the application through the nozzle and 2) Your sprayer should have enough compression power to spray the mist all the way to the top of your future tree.

Hose sprayers are cheap, convenient and difficult to control-avoid them.

This is the model (Solo 425) that I use.



Copper sulfate

Also known as fixed copper, is a commonly recommended fungicide dormant sprays. The product works well, however keep

in mind copper sulfate application vary by product and by fruit type. Too much copper can injure your trees. Follow the directions on the product carefully. This solution is toxic to people and accumulates in the soil around the tree. Just because a product is natural it does not mean it's safe for human contact (i.e., you would not consume lead which is natural) Invest in a good set of protective equipment, including gloves and goggles.

Lime sulfur

Environmentally this is a safer fungicides that also works well. Lime sulfur is effective in controlling peach leaf curl, powdery mildew, blight as well as scales and fruit borers and aphids. Copper sulfate is a superior solution for dealing with peach leaf curl.

While lime sulfur is superior to copper sulfate, there are two significant problems with the products, 1) starting this year, State of California requires an agricultural license to buy lime sulfur and 2) it is sold in large quantities (2+ gallon jars) and the product does not store well. Look on-line and see if you can find a source for small quantities of lime sulfur. We use lime sulfur only.

If using Copper consider covering the base of the tree with a tarp before applying the solution.

An excellent book (along with a website) that will help you better understand how to organically manage insects and diseases is the [Cornell University's Resource](#)



[Guide for Organic Insect and Disease Management.](#)

We follow Integrated Pest Management (IPM) program developed by University of California, which you can access at [UC IPM Online](#)

When to spray?

The ideal time to spray your trees should be one where there is little wind, no forecast of rain for two or three days, and temperatures are expected to stay above above 35°.

Spray the trunk of the tree generously (that's where the insects hide,) then go through and spray the branches.

Products to consider using:

[Saf-T-Side \(dormant spray oil\)](#)

[Liqui-Cop \(copper fungicide\)](#)

Pruning

You need four good tools. Buy them only when you need them. A word of advice on buying tools, buy the best one you can afford. You will be pruning trees for years to come. If you buy a high quality set of tools, they will last for years and will be a pleasure to use them. Cheap tools breakdown quickly and are no fun to handle.

Hand pruner is the tool that you will use this year to remove small

branches and twigs. Buy a tool with replaceable parts that can be sharpened with a stone. I use [Felco line of pruners](#) which is the gold standard in the orchard. This year I bought a Felco #8 and highly recommend [Felco #2](#).

The next tool that you will need soon (this year or next,) is a saw which is useful when pruning limbs larger than 3" in diameter. Many people use folding saws, I prefer the fixed blade saws. The best saws are Japanese and the finest one have action while pulling and pushing. An unsharp saw is hard to use and can injure the tree. I use [an old version of this saw](#).

To take good care of saws and pruners, it's best to apply a fine oil made for the saw on the blade after each use. Also before pruning any tree be sure to sterilize you tools with alcohol (91%) or diluted bleach mix. If you use alcohol, make sure your blades are dry before cutting twigs or branches. Alcohol is poisonous to trees. If you use bleach, clean your tools after use to avoid rust.

Pruning Guidelines

Pruning is a craft that is difficult to master without some help.

We prune fruit trees in order to 1) establish a strong frame-work, 2) thin out secondary growth, 3) let in more light to the center of the tree, 4) increase fruiting spurs, 5) thin out vertical branches (which grow leaves) and 6) encourage horizontal branches (which produce fruit). A good way to train yourself is to ask "why am I making this cut?" The above six categories will give you a good starting place.

Whatever you do, don't make the mistake of being so intimidated by the process of pruning that you avoid it at all costs.

If you are new to pruning, limit yourself to learning and using [these two basic pruning cuts](#) and watch [this useful video](#) on dormant pruning.

Trees are strong, forgiving and good communicators. You can learn a lot by watching your trees' reactions to what you do.

Local Workshop

We will hold several fruit tree management workshops for members during summer and winter.