

GARDENER PLANT AND INSECT CLINIC

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#### WHAT'S IN THIS ISSUE

- OSU: Garden Tasks for January
- January Calendar
- More Garden Tasks
- What to do and what NOT to do this month
- Pruning fruit trees/bushes: Apple, Pear, Peach, and Cherry trees, Blueberries, Raspberries in January
- Problems to manage in January
- Dormant sprays—what you need to know
- Resource Guide for January topics
- Diagnostic Resources

#### January Tasks

#### Landscape trees and shrubs

- 1. Prune dormant deciduous landscape trees and shrubs, Jan.- early April How to Prune
- 2. Transplant small shrubs/trees/bare-root while dormant--Jan. through early April
- Protect the south facing trunks of young trees from sunscald with trunk wrap white latex
  paint diluted with an equal amount of water.

Fruit trees

- Prune apple, pear, plum, peach trees Jan.-Feb.
- 5. <u>Peach trees--spray fungicide for peach leaf curl 1st and 3rd week of Jan.</u>, then every 3 weeks until the rain stops.
- 6. <u>Apple Anthracnose</u>—Prune properly to open trees and improve air circulation. Remove and burn diseased branches and fallen leaves. Remove any mummified fruit left in the tree.

#### \* Spray Schedule for Fruit Trees

- \* Pruning Videos: Apple/Pear, Plums, Peach
- \* Best fruit tree selections for Western Washington

**Berries** 

7. For Summer-bearing raspberries, while dormant, remove all weak, broken, diseased, and insect-damaged berry canes, leaving the new primocanes that will bear fruit this year.

**Pests** 

8. Azalea--if you've had <u>Azalea Lace Bugs</u>, spray the underside of the leaf <u>mid-rib</u> with dormant oil to suffocate eggs before they hatch.

#### **GARDEN TASKS**

- Oregon State January Garden Calendar
- Pruning Basics- Joe Gardener-podcast
- Pruning Basics—Joe Gardener--article with pictures

## WHAT TO DO—AND WHAT NOT TO DO THIS MONTH

- Prune deciduous landscape trees and shrubs (plants that lose their leaves and go dormant in winter). Here's a great guide of what plants you can prune and when: <a href="https://portlandnursery.com/docs/trees/Pruning\_Calend-ar.pdf">https://portlandnursery.com/docs/trees/Pruning\_Calend-ar.pdf</a>
- WAIT to prune roses until after Forsythia bushes bloom—usually end of Feb.



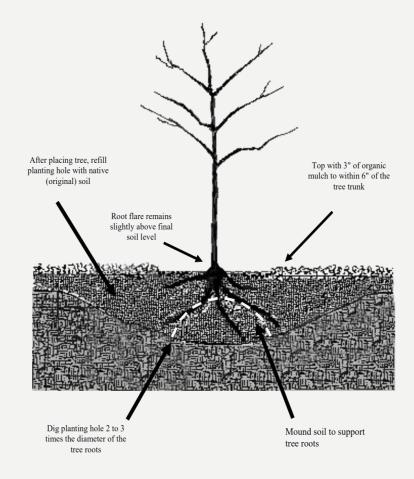
## WHAT TO DO—AND WHAT NOT TO DO THIS MONTH

- Do NOT prune spring flowering shrubs now—you will have significantly fewer flowers this season if you do! Watch for our pruning guidelines in later issues of "Looking Ahead."
- WAIT to prune summer flowering shrubs until next month
- If the weather gets really cold, move potted plants into a sheltered area and protect roots from freezing.

### WHAT TO DO—AND WHAT NOT TO DO THIS MONTH

- Transplant small shrubs and trees during January and February. Great time to plant new bare-root fruit trees—Here's how:
  - https://s3.wp.wsu.edu/uploads/sites/2076/2017/06/C1 08-Planting-Bare-Root-Trees-15a.pdf (See image to the right)
- Protect the south facing trunks of young trees with white latex paint diluted with an equal amount of water. This will help to protect against bark splitting due to fluctuating extremes of temperature from daytime hot sun on trunk to freezing temps at night.

#### PLANTING A BARE ROOT TREE



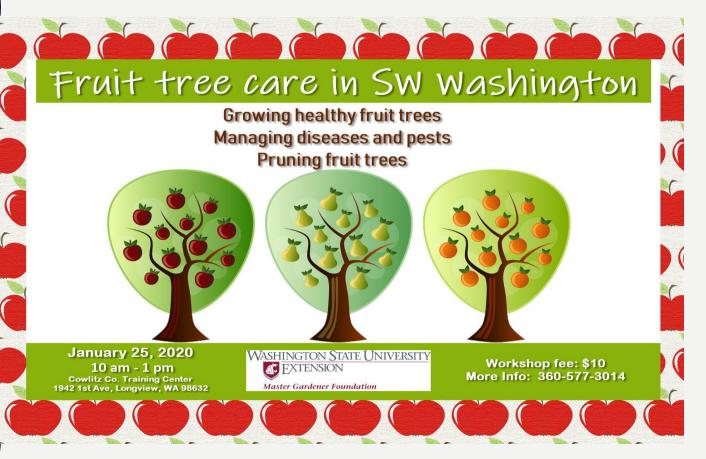
#### BASIC PLANT/TREE CARE

- Now is the time to look for disease and pest resistant fruit tree varieties. Check with local nurseries.
- Get a <u>SOIL TEST</u> so you'll know what soil care your plants will need. It costs \$24, but it will save you a lot of money in the long run.
- <u>Proper pruning</u> will help with better air circulation, better quality fruit, better pesticide coverage
- SANITATION—this is a biggie! Remove and burn diseased branches and leaves. Remove and destroy all old fruit on the ground. Don't use diseased leaves as mulch

#### BASIC PLANT/TREE CARE

- Pest monitoring is crucial!! Learn the pests that will likely attack your trees, and when you should expect them. Get out there and inspect your trees. Stay tuned to our "Looking Ahead" for upcoming problems to watch for.
- Use the *least toxic choices* for pesticides. Insecticidal soaps and oils are effective against a lot of fruit tree pests. BT (*Bacillus thuringiensis*) is another organic option that controls many caterpillars.
- Something frequently overlooked—using as few pesticides as possible, or spot treating, protects beneficial insects that keep the pests at bay!

## LEARN HOW TO TAKE CARE OF FRUIT TREES AT OUR WORKSHOP!



- Are you tired of your apples being ruined by codling moths or apple maggots?
- Do you want to learn more about how and why to prune your trees? Would you like some hands-on pruning instruction? Bring your pruning shears (we'll show you how to sharpen them)
- Join Master Gardeners Alice Slusher, Anne Wolff, Gary Hinderman, and Art Fuller for FREE information-packed morning.
- Do you want to know what you can do NOW to help prepare your fruit trees for a healthy growing season in the spring and summer?
- Learn how to manage codling moth, apple maggots, peach leaf curl apple and pear scab, and other problems?
- Organic options will be discussed, too, and a management calendar will be provided.
- Would you like to know about pruning your trees and have a chance to practice itlf you'd like to try hands-on pruning, please dress warmly and bring garden gloves and pruners.

# GUIDETO JANUARY PRUNING

## PRUNING—JANUARY-FEBRUARY—WHILE DORMANT—NO NEW GROWTH

- Apples and pears—Here's how: <u>Pruning Apple and</u>
   <u>Pear Trees video</u>
- Plums—Here's how: How to Prune Plums video
- Cherry—Wait until August to prune to help avoid bacterial infection.
- Sweet Cherries don't do well in western WA (rain cracking, fungal rots, bacterial canker).
  - See <u>EB 0937 Fruit Handbook for Western</u>
     Washington: Varieties & Culture

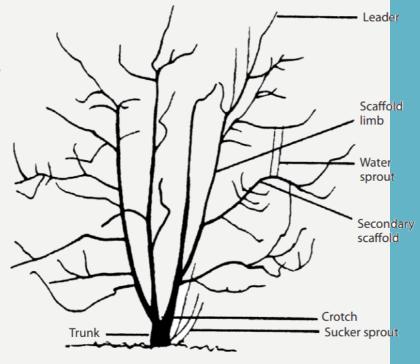


Figure 1. Common terms used in pruning and training fruit trees.

## PRUNING—JANUARY-FEBRUARY— WHILE DORMANT—NO NEW GROWTH

- Peach—Here's how: <u>How to Prune a Mature Peach Tree</u> (includes link to pruning younger peach trees)
- Raspberries (summer bearing- most common)—while plants are dormant, remove all weak, broken, diseased, and insect-damaged canes, leaving healthy primocanes on the hill How to: <u>Video</u>
- Grapes—not yet—late Feb/early March
- Blueberries—Prune after 3rd year after planting. Here's how: <u>Pruning Blueberries video</u>

# PROBLEMS TO MANAGEIN JANUARY

### APPLE ANTHRACNOSE

 Prune properly to open trees and improve air circulation. Remove and burn diseased branches and fallen leaves. Remove any mummified fruit left in the tree.





Figure 1 Figure 2 (Photos J. King, WSU) https://s3.wp.wsu.edu/uploads/sites/2109/2014/12/AppleAntracnose20121.pdf

- Do not cut cankers (tree wounds) until dry weather occurs.
- No fungicide spray until just after harvest--before fall rain starts.
- · If planting new trees, plant far away from diseased trees
- Great article:

https://s3.wp.wsu.edu/uploads/sites/2109/2014/12/AppleAntracnose20121.pdf

#### PEACH LEAF CURL

- Plant resistant varieties—not much available for cold rainy springs in Western WA.
  - Avalon, Frost, Indian Free, Mary Jane, Salish
- Consider growing a peach tree in a moveable pot, and keeping out of the rain.
- Apply fungicide first and third week of January, and at 3 week intervals after that while cool and rainy..
  - Examples: Bonide Fung-onil Multi-purpose Fungicide
  - GardenTech Daconil Fungicide
  - Monterey Liqui-Cop Fungicidal Spray



Jay W. Pscheidt, 2013.

https://pnwhandbooks.org/plantdisease/host-disease/peach-prunus-persica-leaf-curl

### BEGIN CONTROL OF AZALEA LACE BUG

- If your azaleas suffered from Azalea Lace Bug last year, you may want to spray the along the mid-rib of undersides of the leaves (where the eggs have been laid) with **dormant oil.**
- This will suffocate the eggs.
- We'll talk about more control options later in the season.

http://hortsense.cahnrs.wsu.edu/Search/MainMenuWithFactSheet.aspx?CategoryId=I&SubCatId=4&PlantDefId=3&ProblemId=782



Top surface of the leaf with lace bug damage



underside of leafe with fecal pellets (Courtesy Robin Rosetta/Oregon State University)

- Apples, peaches, almonds and many other kinds of deciduous fruit trees are vulnerable to diseases and insects that can affect both their health and the quality of the crop.
- Many of these insect pests lay their eggs in the late fall that will winter over and hatch out in the spring.
- These problems can be difficult to manage during the warm season after the eggs hatch out.
- It really helps to remove all of the fallen leaves where many viruses reside and where many adult insects lay their eggs prior to leaf drop in the fall

- .What does "dormant" mean? The trees have lost their leaves and are resting—waiting to put out new growth in spring.
- Dormant oils and sprays are designed to kill eggs and scab fungi left on the tree during the dormant period of winter. A properly timed dormant spray will prevent, and kill more insects and diseases, than most other sprays during the year.
- Because these treatments can damage trees during the growing season, it's extremely important to limit spray application to the right season and apply only during favorable weather.

- Sprays meant for use during the dormant season can be divided into two groups: dormant and delayed-dormant.
- **Dormant sprays** must be used before the trees experience any spring growth.
- Delayed-dormant sprays are designed for use just after the buds begin to swell, but before the trees leaf out or flower. This usually occurs in late February to early March.
- Dormant oils must never be used when the tree is in flower, since they can be deadly to pollinators.

### **EXAMPLES OF DORMANT SPRAYS**







- Horticultural oil, when mixed with water and sprayed on trees, will smother overwintering insects and their eggs. It targets mites, aphids, leaf hoppers, mealy bugs, leaf miners and more. The products containing copper can be used in conjunction with the oil if they are not already contained in the product you use. Late winter is when they are usually used.
- Copper is a fungicide and bactericide that controls diseases like bacterial blight, fire blight, Nectria canker, apple and pear scab, and peach leaf curl. It kills bacteria and fungal spores left in the trees.
- Copper can be used in rotation with other products containing pyrethrins, sulfur, neem oil, rosemary, thyme, peppermint, and linseed oil; potassium bicarbonate

- By rotating these pesticides, in conjunction with good hygiene and pruning practices most fruit tree problems can be nipped in the bud.
- The aforementioned pesticides, which can be used in organic gardens, fit snuggly into the realm of IPM or integrated pest management to minimize risks to humans, animals and the environment.
- NOTE:
- Some fungicides, such as the sulfur and copper-based products, can be used for growing organic produce. Others, such as captan, tebuconazole, and chlorothalonil, are synthetically produced and not used for organic gardening.

- .The ideal temperature for application is between 40° and 70° F., preferably temperatures should remain over 40° F. for at least twenty four hours in order to get the oil to spread out over the tree and cover all the crevices.
- Lastly, dormant sprays are designed for "deciduous" trees. Use on conifers (especially "blue" varieties) can cause problems with phytotoxicity depending on product and temperature. As with all sprays it is imperative that the instructions be read, understood and followed for the safety of you, your plants, and beneficial insects.

### What's the bottom line for using horticultural oils as pesticides?

#### DO

- Know the life history of a pest and choose the correct seasonal oil.
- Choose oils with the highest percent UR (unsulfonated residues).
- Follow label directions to the letter.
- Use the lowest possible concentration (e.g., 1-2% in summer; 3-4% in winter).
- Keep your oil mixture agitated at all times to prevent separation.
- Apply summer oils to plants with fully hydrated, but dry-surfaced leaves.
- · Only apply oils when target pests are present.
- Be sure to cover the target insect completely; the oil will only work if the insect is completely enveloped.
- Be aware of beneficial insects and avoid spraying when they are actively feeding on pests.
- Test spray only a portion of a plant or groupings of plants if concerned about phytotoxicity.

#### DON'T

- Overuse oils. Like any other pesticide, natural or synthetic, overuse can damage nontarget species and ecosystems.
- Use oils on unregistered insects, arachnids, or diseases.
- Use unregistered vegetable or petroleum-based oils for pest control.
- · Use oils as soil drenches.
- Mix with sulfur-containing pesticides. This effectively decreases the UR number and can cause phytotoxicity.
- Apply oils to wilted plants.
- Use oils on seedlings or other tender plant tissues.
- Use oils on conifers or other species with a waxy, bluish cast to their foliage.
- Apply when rain is expected, or when humidity is high (over 90% RH).
- Let oil drift onto water surfaces; it will inhibit oxygen transfer and possibly harm aquatic organisms.

#### **MORE FRUIT TREE RESOURCES**

- <u>Grow a Little Fruit Tree</u> by Ann Ralph-If you're planning to get new trees, READ THIS FIRST! You'll be able to grow healthy, manageable trees with bountiful fruit that you can reach without a ladder--HIGHLY RECOMMEND!
- <u>Guide to Pruning: What, When, Where, and How to Prune for a More Beautiful Garden</u> by Cass Turnbull. If you're going to buy one book for **EVERYTHING** you need to prune, this is it. The bible of pruning!
- Pruning and Pruning Resources: <a href="http://treefruit.wsu.edu/web-article/pruning-training-resources/">http://treefruit.wsu.edu/web-article/pruning-training-resources/</a>
- Managing Pests and Diseases in Home Orchards
   https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/ec63 I\_0.pdf

#### **MORE FRUIT TREE RESOURCES**

- Raintree Nursery Plant Owner's Guide: <a href="https://raintreenursery.com/info/RT\_Plant\_Guide.pdf">https://raintreenursery.com/info/RT\_Plant\_Guide.pdf</a>
- Best fruits for western Washington

  https://www.cityfruit.org/sites/default/files/file-uploads/bestfruitvarieties.pdf and
  http://nwfruit.org/recommended-fruit-trees/
- Training and Pruning your Home Orchard
   https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/pnw400
   .pdf
- Plant Amnesty's Guide to Pruning:
   <a href="https://www.plantamnesty.org/assets/docs/guide-pnw-2011.pdf">https://www.plantamnesty.org/assets/docs/guide-pnw-2011.pdf</a>

#### DIAGNOSTIC RESOURCES

- Hortsense: <a href="http://hortsense.cahn">http://hortsense.cahn</a>

   rs.wsu.edu/Home/HortsenseHome
   .aspx
- Pestsense: <a href="http://pestsense.cahnr">http://pestsense.cahnr</a>
   s.wsu.edu/Home/PestsenseHome.a
   spx
- PNW Handbooks:
- Insect
   Management https://pnwhandbook
   s.org/insect
- Plant Disease Management
   Handbook: <a href="https://pnwhandbooks.">https://pnwhandbooks.</a>
   org/plantdisease

- Weed Management
   Handbook: <a href="https://pnwhandbooks.org/">https://pnwhandbooks.org/</a>
   weed
- WSU Plant & Pest Diagnositc e-Network: <a href="http://www.dddi.org/wsu">http://www.dddi.org/wsu</a>
- WSU Plant Pest Diagnostic
   Clinics:
- CAHNRS Plant Pest Diagnostic Clinic,
   Pullman
- WSU Puyallup Plant & Insect
   Diagnostic Laboratory