the BeeLine

Spring 2015

Newsletter of the Western Cascade Fruit Society

How Sprays and Treatments Protect Fruit Trees

By Kym Pokorny, Special to the Oregonian, Jan. 2015

Face next season's fruit tree disease and pest problems by making a preventative strategy now. Since late winter is a good time to plant bareroot trees, the first line of defense is to choose a resistant variety. Otherwise, look to sanitation and low-toxicity sprays such as dormant oil and copper to keep trees healthy.

First up, be vigilant about removing dropped fruit and leaves that might be harboring pests. Follow that with appropriate sprays to get at those pesky insects, fungi and bacteria that like to make a home in cracks and crevices, said Ross Penhallegon, horticulturist with the Oregon State University Extension Service. Spraying in late fall to early spring is more effective than waiting until the weather warms up and pests become active. Here are Penhallegon's recommendations for the least toxic sprays and treatments for fruit trees:

- **Dormant Oil:** Mix with water as directed and spray on all surfaces of the trunk, branches and twigs. The best time to control mites, aphids and scale is early to mid-March, just before the tree begins to emerge from dormancy. Apply when the temperature is expected to rise during the day; temperatures below 35 degrees can damage the bark. Dormant oil controls aphids, scale, spider mites and many other insects by desiccating or smothering eggs and larvae.
- **Lime-sulfur:** Spray to control fungal and bacterial diseases such as peach leaf curl, pseudomonas and scab. It's important not to apply sulfur sprays to apricots.
- **Fixed copper:** Spray on apples, pears, cherries, peaches and plums to control canker. Allow two weeks between applications of copper and any sprays containing sulfur. Add a spreader-sticker product to help copper adhere to the tree surface.
- **Latex paint:** Coat the trunks of young trees with white exterior latex paint diluted in half with water. The paint reflects strong sunlight and prevents sunburn and winter burn that can cause tissue damage and lead to cracks, a favorite place for pests to overwinter and cause substantial winter damage.

These products are usually available at garden centers. Always follow label directions.

Tree-treatment timelines:

- **Apples:** Spray copper as the leaves are falling, dormant oil once or twice from February through March, copper in January or February (just before buds open), and wettable sulfur just after petal fall.
- **Apricots:** Spray copper before the fall rains, dormant oil in February.
- **Cherries:** Use wettable sulfur or lime-sulfur applied weekly during blooming for brown rot.
- **Pears:** Spray copper before the fall rains. Apply lime-sulfur two to three times between early December and March, beginning in fall, again during winter and, finally, just before buds open in March. Use dormant oil in early spring before buds open and wettable sulfur just after petal fall.

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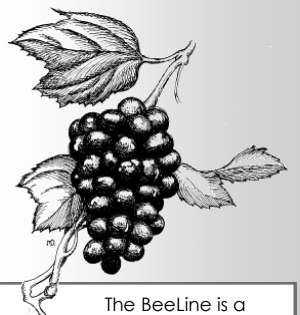

The BeeLine is a quarterly publication of Western Cascade Fruit Society, a non-profit 501(c)3 corporation in the State of Washington.

Sprays and Treatments continued from page 1

- **Peaches:** Spray copper or a good dormant fungicide three to four times between December and bud break, usually once a month starting December 15 and ending March 15. Spray fungicides during a break in fall rains and in early spring just before bud break.

For more information, contact your local extension office.

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WCFS Annual Meeting

WCFS held its Annual Membership meeting March 28, 10am, at the Cedar Valley Grange, Lynnwood. President Ron Weston conducted the meeting. This event was well attended.

The event was hosted by Snohomish County Fruit Society and Seattle Tree Fruit Society. The great scion wood collection that Laure Jansen and Lori Brakken assembled, together with a full assortment of rootstocks from Raintree Nursery, was available for designing your own fruit trees. Experienced grafters were on hand to assist.

Lecturerers included: Jean Williams: Espalier: Building & Training a Belgian Fence & Other Forms

Randy Lee: Fruit Tree Pathogens and Pest

Larry Davis demonstration: Grape & Ribes Propagation

"Kiwibob" Glansman demonstration: Fig & Kiwi Propagation.

Note: We send our best wishes to Joyce Wheeler, WCFS retired Secretary, for a good recovery. Joyce is having some serious health issues.

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About WCFS

Western Cascade Fruit Society (WCFS), formerly Western Cascade Tree Fruit Assocation (WCTFA), was founded in 1980. Its primary objective is to bring together new and experienced fruit growers who will promote the science, cultivation and pleasure of growing fruit bearing trees, vines and berry plants in the home landscape. We provide the public with the knowledge and ability to cultivate their own fruit-bearing trees and plants. Local chapters in geographical areas of Western Washington, disseminate information through education, fruit shows, orchard tours, meetings, workshops, publications, and give financial and other support to fruit research organizations.

As a 501(c) (3) Non-Profit organization WCFS is Parent organization to eight affiliated Chapters. The newly formed Bainbridge Island Fruit Club will make nine. WCFS provides 501(c) (3) Non-Profit status to Chapters via IRS group exemption, provides liability insurance for Chapters, maintains financial records, and makes annual reports to IRS. A Board of Officers and Directors manage WCFS.

WCFS publishes a quarterly BeeLine newsletter to inform members of events, tours, articles, and reports; a Web site — http://wcfs.org; and, a digest forum: http://lists.ibiblio.org/mailman/listinfo/wcfs. Members receive automatic membership in WCFS after joining an affiliated Chapter. A portion of chapter dues go to WCFS. Please refer to http://wcfs.org for chapter membership and dues structure.

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The Spring 2014 BeeLine was produced by Gathering Editor Marilyn Couture, with input from membership. Please contribute your articles for our next Summer issue!

Issue Deadlines:
Winter December 15;
Spring February 15;
Summer May 15;
Fall August 30

Email your articles to: **couture222@msn.com**

Plant Patent Law Advice

Ron Weston, President WCFS

I asked Rex Stratton, a VIFC member and patent attorney, the questions raised at our Board meeting about plant patent law. Below are his answers (slightly edited), displayed next to the questions I asked.

As a practical matter Rex did not think it would be worthwhile for a patent holder to pursue our members or Chapters for the small number of violations he assumed we were likely to have. However, I still believe it is worthwhile for the Chapter Guidelines to urge "respect" for patent and trademark law. As approved by the Board at Saturday's meeting I plan to include the paragraph we discussed in the chapter guidelines--also reproduced below.

1) Does it require a sale of a patented variety for it to be considered a violation of the patent? For instance, if I reproduce a variety in my own orchard or swap scion wood with another member, are those violations? ***Answer: "Making, using, selling or offering to sell a grafted tree (or scion wood) infringes a plant patent. So, if you obtain patented bud wood and graft it onto root stock or graft over an existing tree, you are an patent infringer. If you buy a patented tree, plant it and then take scion wood from the tree and use that in grafting, you are an infringer - you were only licensed to have the tree you purchased. If you give scion wood to a friend, that is infringement (remembering that infringement occurs when one makes, uses, sells or offers to sell a patented tree). Giving scion wood away is not a safe harbor."***

2) What is the penalty for violating a patent? (And I suppose the implied further question is whether there is any enforcement effort similar to the music industry's efforts to police pirated songs.) ***Answer: "Now as to damages - the patent owner is entitled to damages in no less than an amount of a reasonable royalty. A patent owner can also claim damages in the account of lost profits. So, what is the royalty on a patented plant? Pretty damn nominal. And bud wood is even lower. The likely royalty would be $1.50 to $2.50 per tree. [And] a patent owner is entitle to injunctive relief. So, you have to push over a tree or two. So, if the Fruit Club were to receive a cease and desist letter accusing it of plant patent infringement, pull up the tree and burn it. "***

3) Lastly, there was some controversy over whether a plant patent extends for 17 years or 20 years...the VIFC policy recites a 17 year period, but a knowledgeable grower insisted it was 20 years. ***Answer: "Finally, the term of a patent is 17 years from the date of issuance or 20 years from the date of filing."***

Addition to Chapter Guidelines--

Many new varieties of fruiting plants are patented and/or trademarked. Federal patent law protects the germ plasm (variety / genotype) from being propagated, sold, used or distributed without the license of the patent holder for 17 years from the issuance of the patent, or 20 years from the date of the filing of the application for a patent. Federal trademark law protects the trademark of the variety in perpetuity. It is important that our Chapters respect patent and trademark laws.

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WCFS NEW MEMBERS

PFC

Sadie Ayers
Ralph Adamson
David Albergine
Tom Armitage & Meg Parisi
Victor Colacurcio
Aruya Davis
Carri Dawn
Desirae Dewees
Chris Di Palma
Chris Domingues
Donna Branch Gilby
Doug Hinchliffe
Robin & Gayle Kundert
Eric & Ann Lee
Ahmis Loving
Greg Mason
Ginger Meta
George & Carolyn Palo
Karel Pruiett
Bernie Reynolds
Matt Rogers
Mark Schuerman
Yuri & Lyuda Semenyuk
Roni & Erin Smith
Cal Spangler

- - - -

BIFC

William Merz

Ron Peltier

Eric & Barbara Weisman

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OOS

Donna & Jim Buck

Tim & Michele Branham

Al Cairo

Janelle Cole & Nick Segner

Hollie & Kevin Kaufman

Ray Morris

Nadine Pinkerton

Toni & Rob Pringle

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Note: Re: Raspberry Shrub Drink, 2015_01_Winter_BeeLine.pub

Update by Patti Gotz

The syrup kept for over 4 months under refrigeration. There was no discernable deterioration after 3 months in the freezer and after thawing.

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Care of Established Blueberry Plants

B. C. Strik, Oregon State Extension, 2008

Growing highbush blueberries can be very rewarding. The fruiting season extends from late June through September, depending on the type of blueberry and cultivar. The fruit on each cultivar ripens over a 2 to 5 week period. Highbush blueberries are perennial, long-lived (40 to 50 years), deciduous shrubs with a mature height of 5 to 9 feet. You can grow plants in beds, rows, hedges, or individually. Dwarf and semi-dwarf cultivars are available for growing in containers.

Blueberries require a sunny location for full production. Avoid areas surrounded by trees. Blueberries have a very specific soil requirement. Plants grow best in well-drained, light, sandy loam soils that are high in organic matter and have a pH between 4.5 and 5.5. An acid soil is considered ideal. If the pH is between 5.7 and 6.5, acidify the soil by adding finely ground elemental sulfur (S) to the soil. Blueberries grow better when mulched. Add mulch as required to maintain a depth of about 6 inches once plants are mature.

Fertilizing – Once established (in the second year), apply 0.25 oz. of N per plant (1.2 oz. of 21-0-0 or 0.55 oz. 46-0-0) in April, May, and June. The total amount of N applied per plant will be 0.75 oz. Spread it evenly around the bush.

In year 3, increase the total fertilizer N applied to 0.8 oz. Divide the total into three equal portions and apply one-third each in April (around bloom time), May, and June. Make sure the N is in the form of ammonium, not nitrate; blueberries do not take up nitrate N.

In year 4, increase to 1 oz. per plant. As the plant ages, slowly increase the total N applied to a maximum of 2.5 oz. N per plant. Split the total into three applications in April, May, and June.

Watering – Plants need a uniform and adequate water supply from blossom time to the end of harvest. Moisture demand is greatest from fruit set to harvest. Fruit bud formation for next year's crop begins from late July to early August so adequate water is also needed at this time. Plants need from 1.5 to 3 inches of water a week. Drip irrigate frequently enough to prevent the soil from becoming too dry.

Pruning – January to early March when the plants are dormant. Prune to promote the growth of strong, new wood and to maintain good fruit production. If you prune too little, plants produce too many small berries and shoot growth is weak. Severe pruning produces fewer, larger berries and more new wood. Blueberries produce fruit on 1 year old wood (last year's growth). Fruit buds are visible during the dormant season. They are the fat buds at the tip of last year's growth. The small, scale-like buds toward the base of the 1 year old wood are vegetative buds; they will produce a shoot with leaves next season. The best berries are produced on 1 year old wood that is from 8 to 12 inches long. Short 1 year old wood (less than 5" long) produces a lot of buds, but fruit quality and vegetative growth are poor. This type of wood is called "twiggy".

When pruning, keep in mind the following principles:

1. Keep the bush fairly open. Open bushes promote better air circulation (less disease) and good light penetration to improve fruit bud set for next year's crop.
2. Mature bushes should have 6 to 12 canes at their base. After pruning, there generally should be an equal number of 1, 2, 3, and 4 year old canes. If you remove the oldest canes, and thin to a few of the best shoots at the base (called "whips"), you will be renewing the bush each year.

The following step-by-step system will make pruning easier

1. Cut out any wood that's dead, damaged, or diseased.
2. Remove whips smaller than pencil size in diameter, leaving larger whips.
3. Cut out old unproductive canes back to the ground.
4. Remove excess whips and weak, twiggy wood.
5. Plants may overbear resulting in very little new growth of wood and small, late maturing berries. If this is an issue remove some of the weakest (thin and short) 1 year old wood. Also tip back some of the remaining long 1 year old wood by cutting off about 1/3 of the flower buds.

Some cultivars do not produce many whips from the base of the plant, but produce from the base of older canes between ground level to knee height. When you prune these bushes, you will have fewer canes at the base of the plant, but more new growth or renewal wood higher up on the bush. Follow the same principles described above.

Pests

Bird damage should be controlled. An effective method is to construct a small wooden or PVC frame over groups of plants to support light plastic netting.

Be alert to possible diseases: *Botrytis* (gray mold that kills blossoms); *Pseudomonas* (bacterial blight that causes 1 year old wood to die back in winter); and Mummy berry, *Anthracnose*, and *Alternaria* fruit rots.

.VIFC at Sunrise Ridge Update

The year is young, but we've had a productive six weeks in the Orchard at Sunrise Ridge. We held our first Field Day Saturday January 24th, when 24 Fruit Club members turned out to perform tasks in the orchard which included fallen branch removal, weeding and ringing our permanent trees with burlap bags and chips. Thanks to Steve Butler for the bags and Bob Dixon for the chips. Bob Norton conducted a hands on pruning demonstration in our young, 3-4 year old almond, peach, apple and pear tree rows.

Bob Dixon, Anne Woodward, Bob Norton and Gar MacRae

Meanwhile, in the Sunrise Ridge conference room, just off the orchard a team headed by Laure Jansen and Lori Brakken processed our collected scion wood . We had a convivial assembly line of trimming, dipping in a 5% bleach solution, drying, sealing ends in beeswax, logging and label a pile of scion wood, much of which will be part of the WCFS collection that will be available at the Peninsula's Spring Show and the joint STFS and Snohomish Shows at the Cedar Valley Grange. Thanks in particular to Wes and Laura Cherry of Dragonshead Cider for the great cider variety scions.

Head Horticulturist Bob Norton reached out to his longtime friends in the retail nursery business to make some new varieties available to us to trial in our orchard. Sam Benowitz of Raintree Nursery donated a Mt. Vernon Asian pear, a true Imperial Epineuse plum, a Tehranavee cherry, an Illinois Everbearing mulberry and Black Boy and Mary Jane™ peach trees, which are new, leaf curl resistant varieties we added to our leaf-curl resistance trial plot. Jim Gilbert of One Green World succumbed to Bob's gentle pressure to donate a Aromatnaya quince, a Crispie ™ pear, a Maxie ™ Asian pear and Landt and Pacific Pride ™ peaches to round out our leaf-curl trial. We will also be trialing Niwot, a promising new black raspberry from Nourse, developed by Peter Tallman of CO. We learned about the Niwot last August at the NAFEX/HOS/ CRFG convention. Sakuma Brothers is sending along Portola, to round out our Day Neutral strawberry collection.

In March we'll be assisted in the Orchard by a team of 12 young people from Americorps. They will help us grade some uneven terrain, suppress weeds on our fence lines with carpet remnants and chips, and fertilize our trees with alpaca manure tea. In return, they will be instructed in bench grafting techniques, and help us make and plant some Italian Prune plum trees in the adjacent Food Bank garden plot.

The Sunrise Ridge Orchard is also the home of the Adara plum interstem research project. This summer Dr. Bob Norton and his assistant Anne Woodward will be busy collecting data on stem caliper, vigor and precocity for the various stone fruit grafts on the 109 trees in the trial.

Our upcoming projects include putting the finishing touches on our espalier, which will be planted in pear and apple, including an apple Belgian fence, and a UFO (Upright Fruiting Offshoot) cherry unit. Other plans include a tool shed, grape and kiwi arbors and plum thickets, one for European types and one for Japanese style plums.

This Year in Our Demonstration / Research Orchard was submitted by Emily MacRae and Anne Woodward

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Attention WCFS Members

Want to know instantly what's happening in the organization?
Subscribe to the WCFS Forum. It's a benefit of membership. The Forum is private and closed to the public. It keeps us together and on top of what's happening in our chapters. Click on this link and follow the prompts:
http://lists.ibiblio.org/mailman/listinfo/wcfs

Judi Stewart, Forum Administrator

Understanding soil organic matter

Dr Judith Tisdall, soil scientist, and Bas van den Ende tree fruit consultant *Good Fruit Grower, March 2015,*

Don't overlook the soil if you want your orchard to thrive. Organic matter makes up only a small part of a soil (at best 5 percent), yet the organic matter packs a mighty punch in the orchard. When the orchardist builds up organic matter in soil, he or she contributes more in the longterm to healthy soil and trees than does any other resource.

Organic matter in soil affects the growth and production of fruit trees chemically, biologically, and physically in the following ways:

—Directly and indirectly provides nutrients to the trees and cover crops

—Provides nutrients and energy for the many organisms (microorganisms and animals) in soil

—Helps to buffer soil against big swings in pH when chemicals are added to soil

—Improves structure and resilience of soil, and so affects the supply of water and air to roots and microorganisms

—Organic residues act as slow-release fertilizers. Most organic matter is found in the surface soil, where most of the roots are, and so comes mainly from plants and soil biota. Normal, healthy roots continually release organic exudates into soil. Other plant residues, such as leaves and shoots, plus organic mulch or manures added by the orchardist, also contribute to organic matter in soil.

Soil biota in the orchard include roots and beneficial and harmful organisms, ranging from the smallest viruses to bacteria to actinomycetes and fungi to the largest animals, e.g., earthworms. Altogether, the soil biota can weigh up to 8.5 tons per acre.

Soil biota use the organic residues for food and energy and successively decompose complex organic molecules and release other organic compounds, which other biota can use to build into new organic molecules or store in their own bodies. At the same time, the biota release carbon dioxide, energy, water, and inorganic materials, such as nitrogen, phosphorus, and sulfur, and micronutrients that plants and biota can use.

There is generally a high turnover of biota in soil, which continues to add organic matter. Fine roots and hyphae do not live long in soil, but are fairly quickly replaced by new roots and microorganisms.

The amount of organic matter in soil depends on:

—amount and quality of the organic residues returned to soil

—soil texture, depth, and density

—soil pH

—temperature, water content, and aeration of soil

—microbial-population

Organic residues of high quality, i.e., with a low ratio of carbon to nitrogen (less than 18:1), are decomposed quickly as there is enough nitrogen to stimulate microbial activity; organic residues with a high carbon-to-nitrogen ratio of more than 60:1 are decomposed very slowly. Simple sugars, simple proteins, and starch are easily decomposed, whereas hemicellulose, cellulose, fats, waxes, and resins are slowly decomposed.

There is a limit to the amount of organic matter that can be stored. Organic matter is more quickly decomposed in sandy soils, so they contain less organic matter than do clay soils. The deeper the soil, the more organic matter it can hold. Soils that are less dense are usually better aerated and drained and are warmer, so that plants grow better, releasing more organic residues into soil and supporting more biological activity.Soils in wetter and cooler climates generally contain more organic matter than do soils in drier and warmer climates.

Soil pH also affects the supply and decomposition of organic materials in soil. It is best to aim for a pH of about 5.8 to 6.5 so that the plants grow well and add plenty of organic residues to soil.

There is a significant correlation between the percentage of organic matter in soil and soil fertility. Nutrients come not only from the original plant residues, but some nutrients become attached to humus and are slowly released for plants and other soil biota. The humus provides both negative and positive charges that can hold and exchange nutrients.

Nutrients with positive charges, such as potassium, calcium, and magnesium, adhere to the negative charges on the humus, whereas nutrients with negative charges, such as phosphate and sulphate, adhere to positive charges. In both cases, the nutrients remain available to plants and are not leached down beyond the root zone.

Organic matter controls the stability of soil so that the aggregates do not collapse or erode when wetted quickly. Organic mulch or growing plants protect the soil from heavy rain, so a hard crust does not form when the soil dries. Large aggregates (more than 2 mm) are held together by a fine network of root and fungal hyphae, and fragments of plants and dead microbial cells become encrusted with clay particles to form stable smaller aggregates. The organic matter also encourages soil animals to produce tunnels that enable soil, water, and roots to move through soil.

It is recommended that each year, manage the soil carefully with a cover crop or organic mulch to:

—add organic residues

—protect the surface of the soil from heavy rain

—decrease loss of water by evaporation

—increase storage of water

—increase the activity of beneficial biota in soil

In winter, allow weeds to grow. Throw the green residues of the weeds onto the tree rows when you slash. In spring and summer, use herbicides to kill the weeds in the tree rows so that the weeds do not compete with the trees for water and nutrients. The green and dead weeds on the soil surface protect the soil surface from heavy rain, and the dead roots add organic matter and maintain a soft, stable, and porous surface soil.

Edited by Marilyn Couture

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Backyard Orchard Culture

Dave Wilson Nursery, Hickman, CA
and mrjacksfarm.com/

Families today have less space for fruit trees, less time to take care of them, and less time to process or preserve large crops than in the past. Accordingly, today's family orchards should be planned and managed differently. The objective of Backyard Orchard Culture is the prolonged harvest of tree-ripe fruit from a small space. This means planting close together several or many fruit varieties which ripen at different times, and keeping the trees small by summer pruning.

Not Commercial Orchard Culture. For years, most of the information about growing fruit came from commercial orchard culture; methods that promoted maximum size for maximum yield but required 12-foot ladders for pruning, thinning and picking, and 400 to 600 square feet of land per tree. Tree spacings had to allow for tractors. Most people today do not need or expect commercial results from their backyard fruit trees. A commercial grower would never consider using his methods on a 90 ft. x 100 ft. parcel, so why should a homeowner?

High Density Planting and Successive Ripening. Maximizing the length of the fruit season means planting several fruit varieties with different ripening times. Because of limited space available, this means using one or more of the techniques for close-planting and training fruit trees; two, three or four trees in one hole, espalier, and hedgerow are the most common of these techniques. Four trees instead of one means ten to twelve weeks of fruit instead of only two or three.
Close planting offers the additional advantage of restricting a tree's vigor – a tree won't grow as big when there are competing trees close by. Close-planting works best when rootstocks of similar vigor are planted together. For example, for a four-in-one-hole planting, four trees on Citation rootstock would be easier to maintain than a combination of one on Lovell, one Mazzard, one Citation, and one on M-27.
In many climates, planting more varieties can also mean better cross-pollenization of pears, apples, plums and cherries, which means more consistent production.

Backyard Orchard Culture Means Accepting the Responsibility for Tree Size. Small trees yield crops of manageable size and are much easier to spray, thin, prune, net, and harvest than large trees. And, if trees are kept small, it is possible to plant a greater number of trees, affording the opportunity for more kinds of fruit and a longer fruit season.
Most semi-dwarfing rootstocks do not control fruit tree size as much as people expect. Rootstocks are for soil and climate adaptation, pest and disease resistance, precocity (heavy bearing in early years), tree longevity, and ease of propagation.
To date, no rootstocks have been developed which do all these things, plus fully dwarf the scion.

The only way to keep most fruit trees under 12 feet tall is by Pruning, and the most practical method of pruning is Summer Pruning. In *Backyard Orchard Culture*, tree size is the grower's responsibility. Choose a size and don't let the tree get any bigger. A good height is the height you can reach for thinning and picking while standing on the ground, or while standing on a low stool.
Two other important influences on tree size are irrigation and fertilization practices. Fruit trees should not be grown with lots of nitrogen and lots of water. Some people grow their fruit trees the way they do their lawn, then wonder by the trees are so big and don't have any fruit!

See Diagram on page 8.

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Grafting Quince with Which Pear?

HOS information

Caution: Quince is not compatible as a dwarfing rootstock for all pears. However, it is compatible with the following varieties of pears:

European Types: Anjou, Duchess de Angouleme, Glou Morcveau, Howell, Louise Bonne de Jersey, Tyson, Vicar of Winkfield, and White Doyenne.

Others: Alexander, Beuree, Beurre Dumont, Beurre D'Esperen, Beurre D'Amanlis, Beuree D'Fougueray, Beurre Gifford, Beurre Hardy, Beurre LeBrun, Beurre Superfin, Bloodgood, Comice, Buffum, Covert, Durondeau, Easter, Elizabneth, Flemish Beauty, French BNartlett, Gorham, Kieffer, Lucas, Madeleine, Magness, Maxine (Starking Delicious), Old Home, Osband, Pasee Crassane, Phelps Pitmaston Ducvhess Pound, President Barabe, Pulteney Rostelizer, Rogue Red, Swiss Bartless, Urbaniste, Uvedale St. Germain, and Coleman.

Most other varieties should have an interstem of Beurre Hardy grafted between the quince and the pear scion. Old Home, Pitmaston and Duchess may also be used.

Caution: DO NOT GRAFT DIRECTLY to quince the Seckel varieties, Bosc, Bartlett, Clapps Favorite, Eldorado, Farmingdale, Forelle, Packhams Triumph, or Winter Nellis. Use the interstem.

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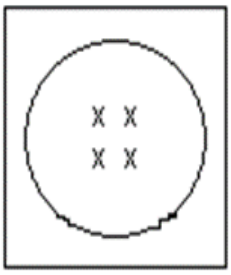
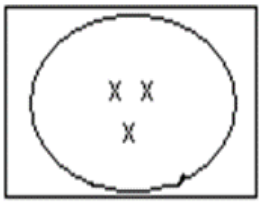
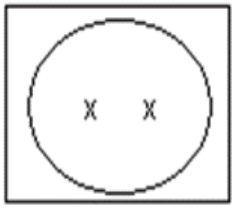


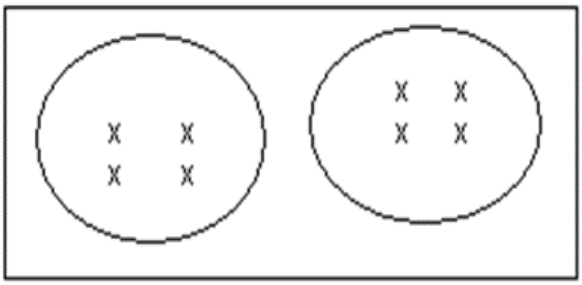
10' x 10' Area. Four trees in one hole. 15" apart.



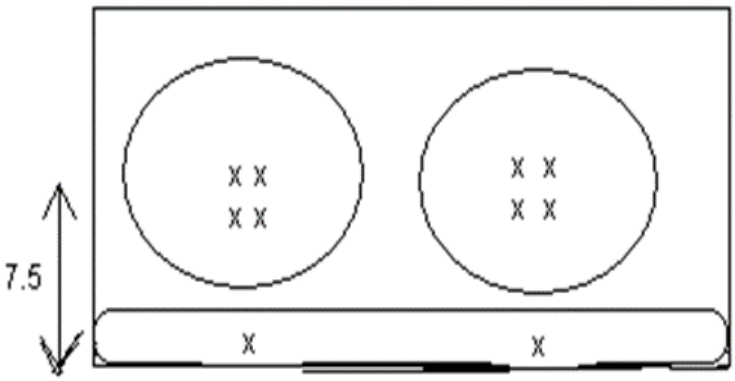
9' x 10' Area. Three trees in one hole. 15" apart.



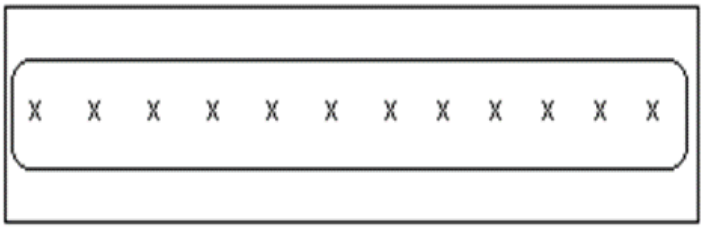
8' x 9' Area. Two trees in one hole. 15" apart.



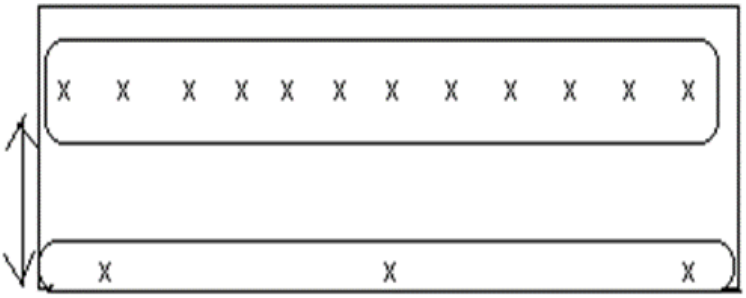
10' x 20' Area. Two sets of four trees in one hole. In each set, trees 15' apart.



15' x 20 Area. Two sets of four trees in one hole, plus two espaliered trees.



10' x 35' Area. 12 trees in a hedgerow. 36" apart. (or plant three sets of four trees in one hole.)



15' x 36' Area. 12 trees in a hedgerow. 36" apart, plus three espaliered trees.

10' x 15' informal. Six trees in one hole.

Use your imagination.

Mt. Vernon School of Hard Cider Trains Brewers

The Oregonian, Dec. 24, 2014

As cider explodes in popularity across the country and around the Northwest, cider production classes organized by the Mount Vernon-based Northwest Agriculture Business Center have helped hobby cider makers from around the world move into business and refine their products.

Practicing one of the last steps in the cider-making process, the 24 students carefully combined sour-tasting base ciders – simple fermented apple juice from either dessert or cider-specific apples – with sugar, juice concentrates, water, honey, spices and acid to complete the assignment. They had less than an hour, and results were judged. "It's not something I can stand up and tell them what to do. It's fairly simple. You just mix stuff together to figure out what tastes good, right?" said Mitchell, who flew in from the United Kingdom to teach the weeklong course at the WSU Northwestern Washington Research and Extension Center in Mount Vernon.

Mitchell said the "principles and practices" course is designed to give students a complete overview of cider production. The first two days covered cider's history, the current market for hard cider and a lot of taste-testing to develop student palettes. "We do a lot of taste-testing to get people to experience a whole range of ciders and perry, which is made from pears," Mitchell said. "It's one of the most important skills they have to develop." Then Mitchell leads students through the production process; from apple selection to processing, pressing, fermentation, blending and packaging, "From apple to glass, as they say."

Between 2005 and 2012, hard cider production in the U.S. tripled to 688,000 barrels. In 2014 production was 70 percent greater than in 2013. "It's growing hugely across the U.S." NW Ag Business Center account executive, Karen Mauden, reported that the "principles and practices" class has expanded from two to four courses a year since the business center took over organization in 2006 and still has months-long wait lists to get in.

"It's the fastest-growing alcoholic beverage in the U.S., Mauden said. A Business of Hard Cider course focused on state tax laws, licensing requirements and operations drew in 50 students in December. She said one of the only restraints on the industry – a lack of available cider-specific apples – is being addressed in an orchard management course. According to Mitchell, "There are not enough bittersweet, bittersharp and heirloom apples to support the artisan part of the industry."

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OOS

OOS conducted a pruning workshop at Steve Johnson's Lazy J. Farm in Sequim Feb. 7. Gordon Clark of Clark Horticultural directed the pruning.

On March 21 there was a Grafting workshop and scion exchange at Steve Johnson's Lazy J. Farm. It was well attended. This was followed by a Sequim High School Grafting workshop to the Ag class on March 24. Grafters continued grafting throughout the week in preparation for the Fall Fruit Show. Jim House managed to squeeze in an Irrigation workshop at his home.

Mark your calendar for OOS meeting Tuesday, April 14th, 7pm, Commissioner's Quarters at Clallam Courthouse. The agenda will include a panel discussion led by Jim House.

- Jim will discuss blossom blast of pears.
- Erik Simpson will speak on after care of grafted trees and young plants.
- The panel will announce the results of the Fall Fruit Show Grafting and the Sequim High School Grafting workshop.
- Paul Gleeson, Marilyn Couture, Erik Simpson, and Jim House will address the Heritage Orchard Tree Program.

The panel will conduct an Open Forum and Members are invited to contribute on any fruit growing concerns.

Also, mark your calendar for Tuesday, May 12, 7:00pm. OOS will meet at Peninsula Nursery, 1060 Sequim-Dungeness Way, Sequim. The owner Roger Fell will conduct a tour of the nursery small fruits and edibles.

It's not too early to mark your calendar for October 31. The Fall Fruit Show will be on Halloween this year. Your OOS Board is already planning a superior event with a keynote speaker, apple I.D. personnel, loads of displayed fruit, and grafted trees.

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Chapter News WCFS

BIFC

Over the last 6 months, the BIFC has been very busy with enrolling new members (currently around 25), holding meetings on such topics as: Micro-Farming, Spotted Wing Drosophila (SWD), Physical Therapy for Backyard Gardeners, Scionwood Collection/Preparation, and Fruit Tree Grafting. During our last meeting we were fortunate to have Lori Brakken and Laure Janzen (Seattle Tree Fruit Society) come and help prepare/organize our scionwood for the upcoming Peninsula Fruit Club (PFC) Spring Grafting show on March 14th. Overall, we hope to donate nearly 1,000 pieces of scionwood to the PFC. On February 22nd, a trio of BIFC members (see photo) visited Perennial Vintners on Bainbridge Island to learn about pruning wine grapes. After an extensive tour of the local vineyard—led by Mike Lempriere (owner/grower & vintner)—the group spent about an hour pruning several rows of grapes as well as sampling some wonderful local wines. Next up is a walking tour of the Johnson Farm on February 28th. The farm, with a large historic orchard of old fruit trees, is in need of some TLC. The BIFC is exploring the possibility of helping restore portions of the orchard as well as creating opportunities for the club to grow scionwood, conduct fruit research, and develop an educational garden for the public. Go team!

Submitted by Darren Murphy, President

Andy Maron, JoAnn Schuh, and Darren Murphy enjoy grape pruning at Perennial Vinteners

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Vashon Island	Carolina Nurik carolinanurik@comcast.net

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Links
Here is a list of sites on the web that may be of interest to you.

Related Organizations
Backyard Fruit Growers
www.sas.upenn.edu/~dailey/byfg.html
California Rare Fruit Growers
www.crfg.org
East of England Apples and Orchards Project
www.applesandorchards.org.uk
Indiana Nut Growers Association
www.nutgrowers.org
Midwest Fruit Explorers
www.midfex.org
North American Fruit Explorers
www.nafex.org
Northern Nut Growers Association
www.northernnutgrowers.org
Oregon Sustainable Agriculture Land Trust
www.osalt.org
Western Cascade Fruit Society
www.wcfs.org
Western Washington Fruit Research Foundation
www.wwfrf.org
Home Orchard Society
www.homeorchardsociety.org/
Seattle Tree Fruit Society
www.seattletreefruitsociety.com/
Seattle Tree Fruit Society—Apple ID program
www.seattletreefruitsociety.com/appleid.php

Fruit Research
National Clonal Germplasm Repository
www.ars-grin.gov/cor
Tree Fruit Research and Extension Center, Washington State.
www.tfrec.wsu.edu
Northwest Berry and Grape Infonet.
berrygrape.oregonstate.edu
Pedigree: A Genetic Resource Inventory System
www.pgris.com

Oregon Department of Agriculture
www.oda.state.or.us

Goverment Sites
US Dept. of Agriculture
www.usda.gov
USDA Agricultural Research Service
www.ars.usda.gov

Helpful Sites
Orange Pippin
www.orangepippin.com
Kiyokawa Family Orchards
www.mthoodfruit.com
Red Pig Tools
www.redpigtools.com
Friends of Trees
www.friendsoftrees.org
Cornell Gardening Resources
www.gardening.cornell.edu
http://www.fruit.cornell.edu/tree_fruit/GPGeneral.html
The National Arbor Day Foundation
www.arborday.org
UBC Botanical Garden
www.ubcbotanicalgarden.org
The Reckless Gardener
www.recklessgardener.co.uk
Farm & Garden
www.farm-garden.com
SeeMeGarden.com
www.seemegarden.com
GardenGuides.com
www.gardenguides.com
VitiSearch: Helpful Resources about Grapes
www.vitisearch.com
Avant-Gardening: Creative Organic Gardening
www.avant-gardening.com
The Hardy Plant Society of Oregon
www.hardyplantsociety.org
Ask the Berry Man
www.asktheberryman.com
BackyardGardener.com
www.backyardgardener.com
Tom Brown's website
www.applesearch.org

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