

the BeeLine

Summer 2013

Newsletter of the Western Cascade Fruit Society



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WCFS Calendar and website update by Bekie Jackson, SCFS

If you haven't been to WCFS.org in awhile or ever, now is a good time to visit. With some recent changes to the site we hope that it will become a place that all fruit growers in the Puget Sound will look to as a tool and hub of information. The work is still in progress so look for additional improvements in the near future. Here's a brief outline of some of the changes that have been made and some that are yet to come:

- ◆ New Tab structure – eliminates duplicate information
- ◆ CALENDAR – NEW! We hope that this will become THE calendar for fruit related events in the Puget Sound area. Add your chapters meetings, fruit seminars and workshops and other fruit related events by using the Calendar Submission Form. In the future we hope to have a member from each chapter with calendar privileges who will be able to add events directly to the calendar for their chapter and region.
- ◆ CHAPTERS – A map of chapter general locations as well as details on each chapter (updated by chapters). There are currently links to 'under construction' pages for each chapter. **If your chapter is interested in creating a whole web page structure, such as SCFS and STFS has, or if you would like to add or expand to the single page that lives on the WCFS webpage, please contact WCFSWebpage@gmail.com ASAP. We are working on this through the summer to make webpages or online information available for each chapter that would like it.
- ◆ NEWS – all those posts about news, events, etc in one place.
- ◆ GRANTS – Keep tabs of one of the ways WCFS is investing your dues - fruit related research in the Puget Sound area.
- ◆ RESOURCES – Look for an improved categorization of these resource links in the future. If you have any link, video, publication or book suggestions, please send it to WCFSWebpage@gmail.com.
- ◆ ARCHIVES – Search through all the old newsletters as well as WCFS history. We are currently in the process of tagging these newsletters with the main topics or titles from each publication so that the newsletters would be searchable by topic.
- ◆ MEMBERS ONLY – Instead of finding the BeeLine on a post and following a trail of links to get to the article, just log in to this area using the same password as before and see all the member relevant information in one place. Find information about the Forum here as well.

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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.

**WCFS Board and WCFS General
Membership Meetings
Vashon Island March 23, 2013**

WCFS Board Meeting

Meeting called to order by President Ron Weston.

Chapter Reports were given.

Minutes and Treasurer's report were approved.

BeeLine Editor's request for reimbursement for publishing software upgrade for BeeLine was approved.

WCFS Board restructuring proposal will be discussed at the WCFS September meeting.

Research Proposals were discussed and decision was made to fund Research Grant Proposal #1 in the amount of \$2200 with reassessment next year: Compatibility and Growth Responses of Various Prunus Species & Cultivars to *Prunus cerasifer* Ehrh. Adara

Research Grant Proposal #2: Trap Design and Bait Longevity Experiments for Managing Spotted Wing Drosophila (SWD) was funded for \$1800.

Life Membership for Mike Shannon PFC
Unanimous agreement.

Proposed Improvements to WCFS Website - Rebekah Jackson.

The next WCFS meeting June 8, 2013, 10:00am, teleconference meeting .

Meeting Adjourned.

WCFS General Membership Meeting

Meeting called to order by President Ron Weston.

Life Membership granted to Mike Shannon, PFC

WCFS Elections:

President: Ron Weston

Vice President is vacante

Secretary Joyce Wheeler

Treasurer: Jerry Gehrke

Director: Steve Vause will fill a vacancy in 2015

Emily McRae will fill a vacancy in 2016

Thank you to Erik and Del Simpson as outgoing directors for their many contributions.

Meeting Adjourned.

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**Suggestions for how to deal with newly
grafted fruit trees** by Erik Simpson OOS

Assuming you have soaked the roots and placed them in a plastic bag with a damp paper towel or planted your grafted trees in a 1-2 gallon pots, keep the newly grafted trees at 70-80 degrees for at least 14 to 21 days until the bud has completely opened up. Peaches and cherries require cooler temperature between 50-60 degrees. Check the trees regularly to make sure they are moist or need a little water.

After two weeks give the grafted trees some light in a north window or heated garage so the tree will start to photosynthesize without direct sunlight. When the bud has completely opened up, the graft has taken and the lower green branches and suckers below the graft can be removed. You should pot your grafted fruit trees if you have not already done so.

If a fruit spur emerges rather than a vegetative bud, simply remove the buds and keep the 4 small leaves surrounding the bud. Within a month a new vegetative bud will emerge.

Then I like to put the grafted trees in the greenhouse with direct diffused sunlight for about two week to allow the grafted trees to grow roots and become healthy.

To harden them off, the grafted trees should be placed outside in the shade with a cool location (40-55 degrees F.) for a week or two. This also allows the roots to grow and catch up with the grafted top of the trees.

Do not put the newly grafted tree outside in the full sun until the roots are established or the fruit tree will likely die.

Do not put the grafted trees outside until the threat of a hard frost is gone since the newly grown cambium tissue contains water that can freeze.

Then I like to move the grafted trees in their pots onto the south porch or to a south facing location with some late afternoon shade where I can watch over them daily if possible. The soil for the fruit tree should be kept moist (not wet), weed free, and any green leaves or suckers removed below the graft.

Do not take off the rubber band or the masking tape until **at least 60 days after the buds have completely opened up** or you may lose the graft. During this time, the graft is very tender and can easily break.

Once the rubber band and tape start to restrict the diameter of the grafted tree, remove the rubber band and the masking tape. I like to remove the rubber bands and masking tape usually in late June or July. If you make two vertical slits down the tape and rubber band on opposite sides of the graft, it should weather off by itself within a month or so.

In the fall I like to plant the grafted trees in their permanent location only after the leaves have fallen.

Erik Simpson

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WCFS awards two fruit research grants for 2013 totaling \$4,050.

Grant #1

Dr. Robert Norton's proposal, "Compatibility and Growth Responses of Various Prunus Species and Cultivars of Prunus cerasifera Ehrh. Adara (Puenta™) Cultivar," was approved in the amount of \$2,200. The goal of this research is to gain knowledge of the compatibility and growth responses of the Adara interstem with various Prunus species and cultivars. This project proposes to distribute excess healthy plants after 3 to 5 years to members of WCFS and obtain long-term information on growth and compatibility.

Grant #2

Snohomish County Fruit Society's proposal, "Trap Design and Bait Longevity Experiments for Managing Spotted Wing Drosophila (SWD)," was awarded \$1,850. The goal of this research is to identify an effective and practical trap design and bait practices for backyard fruit growers for use in monitoring and potentially for mass trapping of spotted wing *Drosophila* (SWD). This proposal includes two separate experiments, trap design and bait longevity.

You should expect to see periodic updates as the research progresses. These grants would not be possible without your support.

Elizabeth Vogt, Jebson Thurow, Erik Simpson, Dr. Roger Eichman, Judi Stewart
WCFS Fruit Research Grant Committee

The Summer2013 Beeline was produced by Editor Marilyn Couture, with input from membership. Please contribute your articles for our next Fall issue!

Issue Deadlines:

Winter December 15;
Spring February 15;
Summer May 15;
Fall August 30

Email your articles to:
Marilyn Couture: couture222@msn.com
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WELCOME WCFS NEW MEMBERS

Seattle

Stephanie Butow
Arthur De Kleine
Hans Ehlert
Lark Fisher
City Fruit
Hayyim & Elizabeth Grossman
Ron Peltier
Laila Suidan
Scott Woodgate

Olympic

Anita Knapp
Ken Gaine
Mindy Mayfield
David Hicks
Vivian Levy
Dan Dessauer

Peninsula

Maria & Ben Fisher
Marilyn Holt & Cliff Wind
Glenn Huff & Jean Schanen
Mike & Amy Anderson
Robert & Fran Walker
Steve Emmer &
Cody Christensen
Nissa Ferm
Brad Green
Grant & Jodie Holdcroft
Chuck & Debra Holland
Peter Knutsen
Guntis Murins
Ron Peltier
Joe Schneider Jr.
Tony & Heather Schackman
Tamara Smith
Samantha Matz
Jim & Pat Sisson
Miriam Dunn
Gareth & Michelle McMullen
Colleen Gilman-Willoughby
& James Willoughby

14th Annual Salt Spring Island Apple Festival
Sunday, September 29, 2013

www.saltspringapplefestival.org

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Home Orchard Society to Host NAFEX Annual Meeting in 2014

The Home Orchard Society (HOS) has agreed to co-host the North American Fruit Exchange (NAFEX) annual meeting in 2014. It will occur August 5 to August 8, 2014 in Troutdale, Oregon. The main events will be centered around the McMinnamin's Edgefield Manor in Troutdale.

There will be tours on the Thursday and Friday, with speakers at each tour location. There will be banquet at Edgefield Manor, plus a welcoming buffet on Wednesday evening with check-in. The NAFEX conference will end with the Friday activities, but HOS will host an open house at the HOS Arboretum on Saturday morning.

There will be block of rooms reserved at Edgefield Manor in Troutdale, as well as at the Best Western motel five blocks up the street.

The Thursday event will be a tour up the Columbia Gorge, visiting the Experimental Station at Hood River and enjoying a box lunch, with a second tour location in the afternoon. Thursday evening, back at Edgefield to enjoy the banquet in the Blackberry Hall with a really terrific speaker.

Friday morning the group will leave from Edgefield, and head south down I-5 to Corvallis area. They will visit the pear repository in the morning, again have lunch. They may visit a melon grower in the area in the afternoon.

The conference will be 2 1/2 days, not counting the HOS Saturday open house at the Arboretum. And at some point during the week, NAFEX will have their regular member meeting. HOS is soliciting ideas for speaker, tour locations and other entertainment for the NAFEX visit for both Thursday and Friday.

The format is different from the normal NAFEX meeting, because the plans do not include a day of "in house" lectures - instead the lectures will be at the tour locations. Since the Northwest offers so much, it seems folks would like to be out and about - instead of shut indoors.

Please Contact Joanie Cooper, HOS President, pomonas-cion@gmail.com with ideas, concerns or to volunteer for this event.

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Pigeon droppings - a potent fertilizer

Pigeon droppings have been prized as a potent fertilizer since the middle ages, and earlier (they used them in ancient times too). It was like gold, because it contained more nutrients for plants than horse or cow manure.

I've read and researched how to make Pigeon Dropping Tea to water vegetables. 1st lesson: This stuff stinks so be warned! Wear appropriate clothing and gloves and all while handling.

To make Pigeon Dropping Tea, collect a good sized amount of droppings. Make sure they are dry. If they are not dry, allow them to dry (spread them out somewhere to dry). Put them in an old pillow case. Weigh them. Fill a large plastic barrel with a lid with 10 times the weight of water to droppings. Place the closed pillow case in the barrel and let sit 3-4 weeks, stirring regularly.

This forms a concentrate. When using this, dilute the concentrate 1:20 with water. So, 1-cup of concentrated Pigeon Droppings Tea with 19 cups of water. You can then apply to fruit trees and vegetables with this. Be sure not to pour it directly onto the leaves, but rather around them. Once again, remember that while the Pigeon poo will stink to high heaven, it is STILL one of the best natural fertilizers you can get!

Pete Piotrowski
Tahoma Chapter

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Good Fruit Grower Magazine Subscription

All WCFS members, this means all chapter members, are eligible to participate in a group subscription rate to the "GOOD FRUIT GROWER" magazine. You receive 17 issues a year with some months on a twice-monthly schedule. Good Fruit Grower is a grower-owned non profit company owned by the Washington State Fruit Commission. Our reduced group rate is \$20 per member per year. Renewals and new subscriptions with payments, must be sent by deadline June 15 to Jerry Gehrke, WCFS Treasurer, PO Box 2242, Vashon WA 98070. Please make checks payable to Western Cascade Fruit Society. Thank you.



Fruit Tree Soils 2 by Jeb Thurow, SSFS

In the last newsletter we ended with the general concepts of what influences our nutrient cycles. This time we will start to dive into what these nutrients do. Wow, what a great start to spring, we have had temperatures in the high 70's to low 80's and good weather for pollination. Our soil temps are already in the low 60's so many of the nutrient cycles are getting into high gear. None of this is very helpful if you go out and look at your trees and see little fruit set or insect damage, so what happened? Let's start by looking at three of the nutrients important to pollination.

Hugh Lovel wrote a great article in *Acres USA* titled The Biochemical sequence of plant nutrition (Acres USA, June 2009). In this article he explains how many of our nutrients interact with each other starting with Boron. Calcium is often referred to as the train that carries the other nutrients around, but Boron is the conductor. What Lovel puts forth in his article is that Boron activates the silicon which in turn carries the Calcium. Here in the PNW where we are blessed with a rainy winter (I don't have to shovel rain) we find many of our soils are deficient in Boron (a very soluble nutrient) thus causing a calcium deficiency when it is needed the most. Calcium is very important in cell division so even with pollination if there is a calcium deficiency you can get fruit that abort and drop off. Getting a soil test in the fall after harvest can give you a good picture of what your soils might be lacking. Boron is one nutrient that is used in very small amounts. It can be toxic so add only the recommended amounts.

Using the much generalized model of plant growth we know Photosynthesis takes carbon dioxide and water and forms sugars that are transported where needed and converted into more complex carbohydrates that are used to form amino acids that in turn make proteins. In order for this generalized model to work, like a great theater production, it is the stage hands and extras that make it all possible. One of these stage hands is magnesium. Magnesium is part of the chlorophyll molecule and is a nitrogen regulator. In many parts of the Puget Sound Region, magnesium is not an issue, but in disturbed soils such as housing developments you can find deficiencies. Many times people will recommend adding dolomite lime because it is an often repeated recommendation for this area. Without a soil test it is difficult to tell if you have a calcium, phosphate or magnesium problem. By adding dolomite lime without a test you could be making a small problem bigger. Dolomite has one other setback in the fact that it can take a year or two for the microbes to break it down so it can be used by the plants.

There are three elements that make a healthy soil and these are Chemical structure (what nutrients are in your soil) Physical Structure (How much sand, silt, clay and organic

matter) and Biological Activity (The insects and microbes). Your soil test will give you the answers to your Chemical structure just remember that it is a snapshot and will change over time. There are different opinions as to how much of any given nutrient is needed and depending on how you grow your fruit will determine what recommendation you want to follow.

The last element we will look at is calcium. Calcium is king and as we discussed earlier is important in cell division. Here in the Puget Sound Region trying to keep calcium in the soil can be difficult due to the high rainfall and the fact that calcium is soluble. In our native soils with low pH we often see high even toxic levels of aluminum, by adding calcium to the soil this knocks the aluminum off the exchange sites and allows it to be flushed out of the system. In soils that have been disturbed one of the problems that can occur is that your organic matter is depleted and leaves no exchange sites for your calcium to adhere to. We go back to our friend the soil test and you will see either TEC (Total Exchange Capacity) or CEC (Cation exchange capacity) you can think of this number as how big your bucket is, the bigger the number the bigger your bucket for holding nutrients. The CEC is the amount of sites that hold the positive charged nutrients in your soil and there are numerous ways to arrive at this number but for our purposes we will take the number at face value for now. There are two elements that can change your CEC numbers. They are the amount of clay in your soil and Soil Organic Matter (SOM) or to be more precise Humic Compounds. By building up the CEC of your soils you can increase the amount of calcium that can be held in your soils so your trees will have what they need in the spring. There are many nutrient interactions that are occurring in our fruit trees in the spring and looking at how they work allows you as a grower to grow the best nutrient dense fruit that you can. What I hope to accomplish is to pique your interest in what is happening in your soils and trees and see that there is no single nutrient that is more important than the other, they all interact with each other. As a holistic grower, I have had success with following Albrecht's principles and use the book The Ideal Soil: A Handbook for the New Agriculture By Michael Astera This is a great reference that is easy to read and goes in-depth as to how to read a soil test. Their website has many useful links on soils www.SoilMinerals.com

Pollination is only the first of four critical stages in fruit development but it is the stage that is most influenced by nutrient deficiency. Next newsletter we will talk about that wild and crazy nutrient NITROGEN. May your days be filled with hours of fruit thinning! If you have questions or comments you can contact Jeb at CJThurow@hotmail.com

Creating a Better Apple

NAFEX Pomona Spring 2013

As most apple hobbyists know, creating a new and superior variety from seed is a long shot. Any apple seed planted will create a new and unique variety but odds are that it will not be anything special and it will take 4-7 years to find out. Growing chance seedlings almost guarantees failure. Your odds can be increased significantly by hand-pollinating the receiving blossom with pollen from another variety that possess the characteristics you wish to incorporate.

To ensure that cross pollination from an undesirable cultivar does not occur, some effort is required to prevent it. Collect your pollen from blossoms of the desired variety one day before they open thereby insuring that no interloping bee has made a prior visit. Carefully cut away the petals [I use manicure scissors] and clip off and collect the anthers. They will be a pale cream color, as they have not yet released their pollen. To accomplish this, the anthers must undergo a process known as "dehiscing." Place the anthers 12"-15" under an exposed 100-watt light bulb. After 4-6 hours the anthers will have turned brown and released their pollen. Store in a small container such as a 35mm film canister. Pollen collected in this manner can be used immediately or stored in the fridge. It will remain viable for at least two weeks. This can be significant if you desire to cross an early bloomer with a late one. Take care not to use pollen from triploids such as **Spigold**, **Stayman Winesap** or **Mutsu**.

To pollinate the receiving blossom, again remove the petals one day prior to opening. Remove all other blossoms in the cluster leaving only the king bloom. Next carefully cut away the anthers thereby eliminating the possibility of self-pollination. The remaining stigmas are now ready to receive your introduced pollen. Using a small brush [I use a calligraphy brush] lightly touch the stigmas a number of times. After pollination is complete, it is necessary to protect the bloom from cross contamination. For this purpose I use a piece of panty hose secured above and below the blossom with a clothespin or piece of string. After fruit has set this can be removed. Use a piece of string or pvc tape tied at the base of the fruit so you won't forget which one you pollinated. When this apple ripens, you can be assured that the resulting seeds contain the genetics you are trying to introduce. The hoped for results, i.e. that the best qualities of both parents in the resulting fruit, is far from assured. Undesirable hidden genes have a way of manifesting themselves.

After you have collected and stratified your seeds in damp medium, they may be started indoors. Contrary to popular belief, it is not necessary to subject the seeds to below-freezing temperatures. By mid-February they

should have begun to germinate. I then start them in peat pots filled with garden soil and lined with foil to prevent rootlets that penetrate the peat from dehydration. In mid-April on warm sunny days I begin the hardening off process by exposing the seedlings to progressively more direct UV light. After all risk of frost has passed they may be planted out in their permanent location by removing the foil and planting the whole pot. It goes without saying that during the first few years they need a lot of TLC. Protection from rabbits and deer is mandatory.

When your seedlings produce their first blossoms they are unlikely to set fruit that first year. You can enhance the possibility by hand pollinating with strong pollen from another variety. **Dolgo** and **Snowdrift** crab are both excellent.

By using the above techniques, I was rewarded with a great, although small hybrid [**Suncrisp x Melrose**], which I named **Dave's Delight** and described in a previous *Pomona* [Spring 2009 *Pomona*, p. 7]. I would be interested in getting an appraisal from those of you who received scionwood from this variety and have fruited it. Some years ago I crossed **Dave's Delight** with **Honeycrisp**. I got my first six apples this fall. At the risk of sounding immodest, if I ever make it into the apple breeders' hall of fame, this as-yet-unnamed variety will be my entry. Remember, sooner or later somebody hits the super lotto. It could be you.

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(740) 965-5233

Dave's Delight

(Photo provided to Editor Couture by D. Orndorf)





Heat Units Discussion WCFS forum

John G. Bellow wrote an article sometime ago on heat units.

Degree Days: Heating, Cooling and Growing, Clyde W. Fraisse, John Bellow and Charles Brown

<http://edis.ifas.ufl.edu/ae428>

Heating and Cooling Degree-Days

People often discuss how hot or cold it is. Usually, it is a question of comfort, and it is simple enough to measure the temperature. But in some industries, it is not enough to know the temperature; it is important to find a way of measuring the impact of the temperature.. Understanding *heating and cooling degree-days* allows engineers do their jobs more effectively and make good decisions about resources. Heating degree-days (HDD) are normally used by power companies to estimate the amount of energy required for residential or commercial space heating during the cold season. Cooling degree-days (CDD) are used to estimate the amount of air conditioning usage during the warm season.

There are different ways of measuring heating and cooling degree-days. In the simplest way to do this is, use a base temperature of 65 degrees Fahrenheit* for calculating both HDD and CDD. We assume that if the current air temperature is below 65°F, energy will be used for heating, and if it is above 65°F, energy will be needed for air conditioning. Therefore, a day with an average temperature of 55°F will correspond to 10 HDD, and a day with an average temperature of 75°F will correspond to 10 CDD.

Growing Degree Days or Heat Units

Because the growth rate of many organisms is controlled by temperature, growers use a concept related to degree-days called *growing degree-days* (GDD), sometimes called *heat units*. GDD are used to relate plant growth, development, and maturity to air temperature. This idea was introduced in 1730, by the French scientist Rene A. F. de Réaumur. Since that time, GDD has been used as a means to predict the growth stages of many living things. GDD is based on the idea that the development of a plant will occur only when the temperature exceeds a specific base temperature for a certain number of days. Each type of plant is adapted to grow best over its own specific base temperature, called T_{base} . Even cultivars of the same plant species sometimes have different T_{base} . Growth does not increase constantly with temperature. Just as there is a minimum, or base temperature for growth, there is also a maximum temperature at which growth shuts down.

WSC has a limited list of comparative heat units by location for Washington. <http://extension.wsu.edu/>

Check out AgWeatherNet (AWN)

provides access to current and historical weather data from Washington State University's automated weather station network along with a range of models and decision aids. The weather data, advisories, weather data products and decision support systems provided by AgWeatherNet and WSU can help improve production and product quality, optimize resource use and reduce environmental impact.

AWN includes 146 automated weather stations located mostly in the irrigated regions of eastern Washington state.

AgWeatherNet has chill hours available. In order to access all their tools and models, you will need to create a userID and Password at weather.wsu.edu. Chilling hours can then be accessed from the main page.

<http://weather.wsu.edu/awn.php>

See Also:

www.wunderground.com Use their search to find a weather station near you. Once you set it up, scroll down to History and it will give you the heat units for that day.

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Soil Food Web

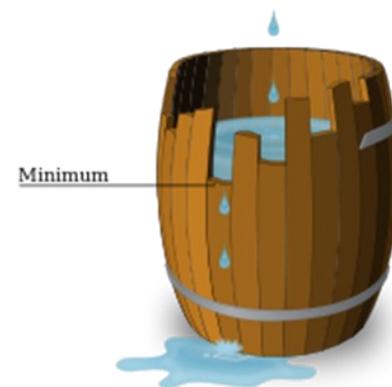
If you missed this topic on Nature on PBS, PBS has enabled watching it on their website at:

<http://www.pbs.org/wnet/nature/episodes/what-plants-talk-about/video-full-episode/8243/>

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The Law of the Minimum – Liebig's Law

This concept was originally applied to plant or crop growth, where it was found that increasing the amount of plentiful nutrients did not increase plant growth. Only by increasing the amount of the most scarce nutrient was the growth of a plant or crop improved. This principle can be summed up in the aphorism, "The availability of the most abundant nutrient in the soil is only as good as the availability of the least abundant nutrient in the soil."



The Orchards of Capitol Reef N. P., Utah

by Lori Brakken STFS

I got to visit the orchards in the Fruita district of Capitol Reef on May 20th this year, 2013. I had heard of them by reading up on Susan Dolan's book on Orchard Preservation in the National Parks. There are 19 orchards from original homesteads now in the park and they are maintained at the original style of pruning (multi-trunk, open vase shape) and furrow-ditch type irrigation. The types of fruit grown for self-sufficiency and income were: almond, apple, apricot, cherry, grape, mulberry, nectarine, peach, pear, pecan, plum, and walnut. These homesteads were from a Mormon settlement dating to the late 1800s. If you'd like to see my photos of this trip go to: <http://southwesttravels2013.shutterfly.com/>.

I walked the orchards and took photos. I was unable to locate the ranger in charge of maintaining the orchards (on such short notice) but intend to email him with my questions and will get back to you. There were many bee boxes hanging in the orchards and they appeared to be the Mason Bee type tubes. There were no blossoms in the orchards, no bee activity at the boxes, and I did not see any mud filled tubes from egg laying activities. I was told that there was a very cold freeze at the wrong time for the blossoms so they are assuming that there will be a small fruit crop this year. I saw no apples, plums, or cherries setting fruit. I did see lots of set fruit on the pears, peaches, and a few apricots. It appeared that the apricots with the most fruit set were those near a road or in parking lots. The public is welcome to come and harvest fruit free of charge when the park is open. If you want to take more than you can eat in the orchard, a 'nominal' fee is charged. The park service also provides orchard ladders – which surprised me as I am more familiar with public agencies not wanting to be liable for anyone getting hurt. I spoke with at least 5 local people that love the orchards and go to pick every year.

Here is a list of the fruit varieties that I was able to get hold of...

Apples – Lodi, Winter Pearmain, Jonathan, Red Delicious, Rome Beauty, Golden Delicious, Candy Stripe, Crab, 16 oz. Cooking, Yellow Transparent, Unknown, Winter Banana Yellow, Greening,
 Apricots – Chinese, Unknown, Morpark, Sour,
 Cherries – Unknown, Bing, Lambert, Van,
 Peaches – Elberta, Red Haven, Unknown, Garnet, Rosa, J.H.Hale,
 Peachcots – Unknown
 Pears – Anjou, Bartlett, Flemish Beauty, Winter, Unknown,
 Pecans- Unknown

Plumcots -Unknown
 Plums – Duarte, Santa Rosa, Unknown, Stanley, Potawattami,
 Nectarines - Unknown
 Almonds - Unknown
 Quinces - Unknown
 Walnuts – English, Black (Brigham Young Tree),

This is the information that I have for now. I'll stay in touch with another article when I get my questions answered from the maintenance ranger. If you have any questions please let me know and I'll include them in my questions to the ranger.

Happy Trails! Lori lorineb@mindspring.com



Capitol Reef N. P. orchards

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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

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Why Your Supermarket Only Sells 5 Kinds of Apples - And one man's quest to bring hundreds more back. By Rowan Jacobsen Mother Jones/March/April 2013 Issue 158

Every fall at Maine's Common Ground Country Fair, John Bunker sets out a display of eccentric apples. Last September, once again, they covered every possible size, shape, and color in the wide world of apples. There was a gnarled little yellow thing called a Westfield Seek-No-Further; a purplish plum impostor called a Black Oxford; a massive, red-streaked Wolf River; and one of Thomas Jefferson's go-to fruits, the Esopus Spitzenburg. Bunker is known in Maine as "The Apple Whisperer," or simply "The Apple Guy," and, after laboring for years in semi-obscurity, he has never been in more demand. Through the catalog of Fedco Trees, a mail-order company he founded in Maine 30 years ago, Bunker has sown the seeds of a grassroots apple revolution.

In the mid 1800s, there were thousands of unique varieties of apples in the United States, some of the most astounding diversity ever developed in a food crop. Then industrial agriculture crushed that world. The apple industry settled on a handful of varieties to promote worldwide, and the rest were forgotten. They became commercially extinct – but not quite biologically extinct.

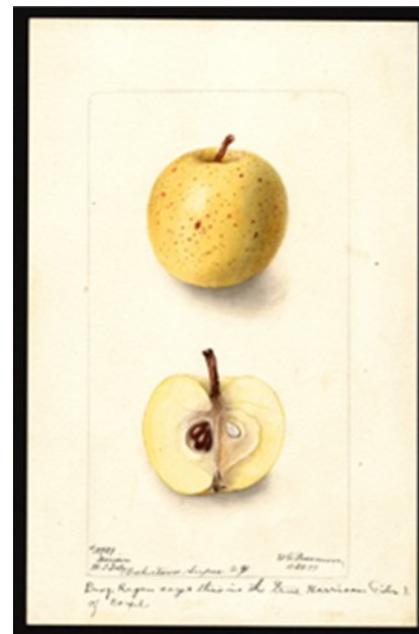
Baldwin, one of the most popular apples in the US until freakish winter weather in 1933-34 knocked it into obscurity; *Black Oxford*, a 200 year old Hallowell, Maine, tree still bears fruit every winter; *Blue Pearmain*, once popular due to its hardiness in New England winters, this apple unfortunately isn't so great for eating; *Cox's Orange Pippin*, an excellent dessert apple, meaning one that is to be eaten raw; *Wolf River*, a massive red-streaked apple prized for its beauty; *Harrison*, Tom Burford revived this cider apple from a single tree in a defunct New Jersey cider mill; *Granny Smith*, this popular apple was discovered by Maria Ann Smith in her Australian compost pile in the mid-1800s; *Esopus Spitzenburg*, one of Thomas Jefferson's favorites – he had 32 of these planted at his estate in Monticello; *McIntosh*, John McIntosh discovered the first McIntosh seedling on his Ontario farm in 1811; and, *Snow*, named for its snow white flesh (also known as *Fameuse*), is the mother of *McIntosh*.

The key thing to understand about apple varieties is that apples do not come true from seed. An apple fruit is a disposable womb of the mother tree, but the seeds it encloses are new individuals, each containing a unique combination of genes from the mother tree and the mystery dad, whose contribution arrived in a pollen packet inadvertently carried by a bee. If that seed grows into a tree, its apples will not

resemble its parents'. Often they will be sour little green things, because qualities like bigness, redness, and sweetness require very unusual alignments of genes that may not recur by chance. Such seedling trees line the dirt roads and cellar holes of rural America. If you want more apples of a particular tree, you have to clone it. Snip off a shoot from the original tree, graft it onto a living rootstock, and let it grow. Every McIntosh is a graft of the original tree that John McIntosh discovered on his Ontario farm in 1811, or a graft of a graft.

The fine points of apple sex were lost on most U. S. colonists who planted millions of apple seeds as they settled farms and traveled west. Leading the way was John Chapman, a.k.a. Johnny Appleseed, who single-handedly planted hundreds of thousands of seeds in the many frontier nurseries he started in anticipation of the approaching settlers who were required to plant 50 apple or pear trees as part of their land grants. Some of the frontier apples were grown for fresh eating, but more fed the hogs or the fermentation barrel.

Every now and then one of those seedling trees produced something special. As the art of grafting spread, those special trees were cloned and named, often for the discoverer. By the 1800s, America possessed more varieties of apples than any other country in the world, each adapted to the local climate and needs. Some came ripe in July, some in November. Some could last six months in the root cellar. Some were best for baking or sauce, and many were too tannic to eat fresh but made exceptional hard cider, the default buzz of agrarian America.



Harrison

Cont. from page 11

This period has been referred to as the Great American Agricultural Revolution. Bunk said, "When this all happened, there was no USDA, no land grant colleges, no pomological societies. This was just grassroots. Farmers being breeders." As farms industrialized orchards got bigger and bigger. State agricultural extension services encouraged orchardists to focus on the handful of varieties that produced big crops of shiny red fruit that could withstand extensive shipping, often at the expense of flavor. Today, thousands of unique apples have been lost, while a mere handful dominate the market.

When Bunk lays out his dazzling apple displays, it's a reminder that our sense of the apple has increasingly narrowed, that we are asking less and less from this most versatile of fruits – and that we are running out of time to change course. Exhibit A: The Harrison apple, the pride of Newark, New Jersey, renowned in the early 1800s for making a golden, champagne-like cider that just might have been the finest in the world. But the Harrison, like most of the high-tannin varieties that make good hard cider, disappeared after Prohibition. A single old Harrison tree on the grounds of a defunct cider mill in Livingston, New Jersey, was grafted, and now a new generation of Harrison trees is just beginning to bear fruit.

The usual argument for preserving agricultural biodiversity is that monocrops are at risk for monolithic wipeouts from pests and disease. And, indeed, some of the old apples have genes for resistance to apple scab and other scourges of the modern orchard that are proving useful. (Apples require more pesticides than any other crop, and it's exceedingly difficult to grow modern apple varieties organically.)

Bunk founded Fedco Trees, which every year takes a selection of rare heirloom apples and attempts to make them less rare. When he finds one of these missing links, he grafts it onto rootstocks at the Fedco nursery and begins selling the trees a few years later. Bunk estimates that over the past 30 years he has saved anywhere from 80 to 100 varieties from oblivion. His forensic methods involve everything from studying the depth of the cavity around the stem, to checking the trunk for grafting scars, to poring over old nursery catalogs and historical records. He hangs "Wanted" posters at corner stores in the towns where the apples originated, hands them out at historical society meetings. Beneath a drawing and description of the apple, is the plea, "If You Know the Whereabouts of This Apple Please Contact Fedco." He dreams of finding once-adored apples that haven't been heard from in a century, like the Fairbanks and the Naked Limbed Greening. His current Holy Grail is the Blake, a richly flavored yellow apple so tasty it is said to have been exported to England in the 1870s. According to old catalogs and horticulture books, the Blake, with flesh

that was "fine, firm, crisp, subacid," was widely distributed in Maine in the mid-1800s. Blake trees had a distinctive habit of holding onto their apples after most others had dropped theirs. The quest for the Blake continues.

One of Bunk's best finds was the Fletcher Sweet which his research indicated had originated in the Lincolnville area in northern New England. In 2002, he met a group from the Lincolnville Historical Society who referred him to an area called Fletcher Town which had since been reclaimed by the forest. An old timer named Clarence Thurlow said, "I've never heard of a Fletcher, but I know where there's a Fletcher Sweet."

Thurlow led Bunk to the abandoned intersection that had once been the heart of Fletcher Town, pointed to an ancient, gnarled tree, and said, "That's the tree I used to eat apples from when I was a child." The tree was almost entirely dead. It had lost all its bark except for a two-inch-wide strip of living tissue that rose up the trunk and led to a single living branch about 18 feet off the ground. There was no fruit, but Bunk was interested. A few months later he returned, took a handful of shoots, and grafted them to rootstock at his farm. A year later, both Thurlow and the tree died, but the grafts thrived, and a few years later, they bore the first juicy, green Fletcher Sweet apples the world had seen in years. "It's a great apple," Bunk says. "It has a super-duper distinctive flavor." Today, Bunk has returned young Fletcher Sweet trees to Lincolnville.

This is the magic of apples. Today, I can take a bite out of a Fletcher Sweet and know exactly what Thurlow was experiencing as a boy Pippin and understand what Thomas Jefferson was lamenting in Paris when he wrote to a friend that "they have no apples here to compare with our Newtown Pippin." "It's about apples and it's not about apples," Bunk says of his work. "I talk about the history of apples, but what I'm giving is a highly political talk, because it's about our agricultural heritage." And that heritage is in jeopardy. Not only has the industrial food system confined us to a meager handful of apple varieties, but many of the new apples being released, like the SweeTango, are "club apples"—intellectual property of those who bred them. Growers must sign a contract that specifies how the trees will be grown and where they can be sold, and they must pay annual royalties on every apple. The days of farmers controlling their own apples may be numbered, and the idea of breaking that chain of knowledge bothers Bunk.

Apple image from *The Apples of New York*, [Volume 1](#) and [Volume 2](#) and [U.S. Department of Agriculture Pomological Watercolor Collection](#). Rare and Special Collections, National Agricultural Library, Beltsville, MD 20705



Tent Caterpillars Ravage North Olympic Peninsula—Peninsula Daily News, May 2013

Foamy caterpillar “tents” have infested trees and plants on the North Olympic Peninsula as the vegetation has been attacked with what look like webs of giant spiders. Clallam County Master Gardeners, which is part of the Washington State University Extension office, issued a tent-caterpillar alert last week. It called the infestation moderate to severe.

Tent-caterpillar outbreaks are a normal phenomenon and rarely cause permanent damage to trees and shrubs. But heavy infestation can reduce a tree's fruit harvest. This year's infestation was caused by the combination of a mild winter and natural predator-prey cycles. Removing the frothy egg masses during winter pruning is the best way to prevent a spring infestation. Once hatched, the nests can be pruned or sprayed with chemicals. You can use a glove to squish the insects by hand.

-- Prune out affected branches and smash the tents or dip them in a bucket of soapy water to kill the larvae. It's best to do this in the early morning or evening because foraging larvae tend to return at night.

-- Spray the caterpillar blobs with insecticides or an organic spray containing *Bacillus thuringiensis* sp. *Kurstaki*, or BT.

Generally, the tan-colored caterpillars stop eating in June and turn into moths in July and August. Tent caterpillars can attack alder, ash, birch and cottonwood trees; roses; and cherry, apple and other kinds of fruit trees. More information about tent caterpillars can be obtained at weekly Master Gardener clinics at the Clallam County Courthouse, 223 E. Fourth St., Port Angeles, on Thursdays from 9 a.m. to 1 p.m. or at the Master Gardener Demonstration Garden at 2711 Woodcock Road near Sequim on Saturdays from 9 a.m. to 1 p.m. For the Jefferson County Extension office, phone 360- 379 - 5610

Budding Workshop Aug 24th

Lori Brakken is coordinating the Workshop, and Bob Norton is the instructor. Lori has rootstocks in 1 gallon pots 21 Pear (OHF333), 39 Apple (EMLA27), and 10 Plum (Marianna) for people to reserve. \$5 each for the rooted 1 gallon rootstock at the time of the workshop. Materials needed are ... buds (bring your own or ask for a specific variety), parafilm (enough for workshop will be available). Bring your own grafting knife or a few will be available to share at the event. Location will be given at the time of Reservation (Lake Forest Park) unless we need a bigger venue. From the Kingston ferry drive thru Edmonds to Lake Forest Park. Reservations Lori (206)715-4149 lorineb@mindspring.com

New York Integrated Fruit Production Protocol for Apples Bulletin #158

Site, Rootstock, Cultivars and Planting Systems Cultivar, rootstock and plant spacing should be selected with the objective of generating a compact yet open tree canopy volume to maximize light interception and fruit production. Starting with quality trees appropriate for the planting system and an appropriate plant spacing will minimize the need for severe pruning or chemical growth control. The entire volume of the tree must produce high quality fruit. An open canopy minimizes microclimatic conditions that favor insect infestation and disease development. The orchard system should be planted in single rows to minimize the weed suppression area requiring herbicide treatment and provide for optimum spray deposition in the canopy.

http://www.fruit.cornell.edu/tree_fruit/GPGeneral.html

A high-density orchard planting system with individual tree stakes, planted with grass ground cover in the row middles.



Tahoma Chapter News

It was the FINAL day of the Spring Fair in Puyallup. The inevitable FINAL shift of the day. Look out, folks!! The tide was coming in...FAST!!

April and Beverly were met with wave after wave of Fair-goers in the final hours of the 4-day event. They were prepared for the surge. One trait stood out about these newest members of the Tahoma Chapter: They love to share. This was their chance to do just that! They shared their experience on:

- how to prune neglected trees,
- how and why to apply footies,
- how to graft to improve pollination and variety, etc.

As the sun started to set and the waves began to recede, April and Beverly closed the booth and drifted out with the tide. The Spring Fair had come to a close. Now, they are looking forward to when another rising tide will come in again soon after Labor Day and make even a bigger splash!!

Hats off to ALL the Chapter members who volunteered to staff the WCFS booth during this annual ritual.



April and Bev

Attention ALL WCFS Chapters! Please mark your calendars for the 17-Day fall Washington State Fair. Volunteer to staff our booth. We'd really appreciate your support and the Society benefits from the proceeds that the cider press raffle generates. Thank you!!

-Chuck Polance

* * * * *

Excited in Tacoma

My fruit trees are doing better than they ever have. I have been thinning my Hollywood plum this morning and believe I removed more plums than she produced last year. Mine is a testimonial to joining the Tahoma Fruit Society and actually listening to those who know so much more than I ever will. I do not know how to thank you guys. Beverly Bowen-Bennett

Chapter News

Olympic Orchard Society

In April Ji Douglas, Manager and Buyer of Sunny Farms Farm Store Nursery spoke on rare and unusual fruit trees and fruiting shrubs for the landscape. In May Erik Simpson and Master Gardener Balraj Sukkappa presented Local Pear varieties, culture and care, successfully starting and growing pears. A power point DVD is available to Chapters.

In June we are visiting McComb Gardens with a pizza/salad party and a tour of Seasonal Gardens. July 27 is Annual barbecue potluck and orchard/garden tour at home of Board Director Jim House and Treasurer Carol House. August program will be on Bees.

Erik Simpson is making available to WCFS Chapters his recent Power Point presentation on

Erik's Favorite Pears.

It would be appropriate to share at a Chapter meeting. Contact couture222@msn.com for a copy.

Marilyn Couture, Secretary

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WCFS

North Olympic Fruit Club

Denny McGaughy from Elma had the Dan's Pride fig tested at UC Davis. Denny will be the NOFC featured speaker at our June 4th meeting in Chimacum. He'll talk about the Dan's Pride fig, possible updated results from DNA re-testing which is currently underway and where this fig originated per the test results. Denny's especially adept at answering all 'figgy' questions.

A search of Denny McGaughy's name might persuade you to come to the meeting.

Judi Stewart



Double Chocolate Cherry Muffins

A good use for an overabundance of Bing cherries

- 2 1/3 cups all-purpose flour
- 1 1/4 cups white sugar
- 1/3 cup unsweetened cocoa powder
- 2 teaspoons baking powder
- 1 teaspoon baking soda
- 1/2 teaspoon salt
- 1 cup sour cream
- 1/2 cup milk
- 1/3 cup vegetable oil
- 2 eggs, beaten
- 1 teaspoon almond extract
- 1 1/2 cups fresh dark sweet cherries, pitted and chopped
- 1 cup miniature semisweet chocolate chips

Preheat an oven to 400 degrees F. Grease 12 jumbo (3 1/2-inch) muffin cups or line with paper baking cups.

Stir together the flour, sugar, cocoa powder, baking powder, baking soda, and salt in a separate large bowl, and make a well in the center; set aside. Whisk together the sour cream, milk, vegetable oil, eggs, and almond extract in a bowl until evenly blended. Pour the sour cream mixture into the well, then stir in the flour mixture until just combined. Fold in the cherries and chocolate chips. Spoon into prepared muffin cups, filling half full.

Bake until a toothpick inserted into centers comes out clean, about 20 to 25 minutes. Cool in pan on wire rack 5 minutes. Remove from pan and cool completely on wire rack. Store tightly covered at room temperature.

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Peninsula Fruit Club Chapter News

Peninsula Fruit Club held a very successful Spring Grafting Show on March 9. The turnout from the public is getting better every year, and we really enjoy being able to teach them about all the wonderful fruit that can grow here. It's also fun to amaze the public with the huge array of scion wood. Our March meeting featured Denny McGaughey talking about his passion—figs. He told us about the plasticity of fig DNA and about how many different names there are for some figs that have been identified by genetic testing at UC Davis. Denny will be speaking at NOFC in Chimacum on June 4 if you'd like to catch his lecture. We also taught grafting at Klahowya Middle School and to 4-H kids and Girl Scouts in March. The frenetic pace of March activities slows a bit in April and May to give us time to work in our gardens and orchards. Lowell Cordas visited us at our April meeting to teach us about selecting and caring for our garden tools. Lowell brought along excellent tools that we were able to buy at the meeting. At the May meeting Chris Smith, Kitsap County retired Extension Agent and long-time member, founder, and advocate for PFC, gave us a lecture on growing tomatoes along with a selection of varieties that do well here. Following that, we held our yearly member plant sale. In the coming months we will be teaching budding to the new members, holding a summer pruning workshop, having our annual BBQ/picnic and member orchard tours, and staffing booths at the Manette Garden Tour and the Kitsap County Fair.

Jean Williams, President

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South Sound Fruit Society

June 4, 2013, Lowell Cordas Organic Methods for the home orchard. Share what works for you to attract beneficial insects, deal with diseases, promote fruit production and anything else that works to promote a healthy orchard and garden.

July 2, 2013 – Jeb Thurow will speak about what he has learned about Orchard soils after his studies and paper on the Evergreen Organic Farm soils.

August 3, 2013 Pruning an older fruit tree. A special Saturday class in the field to restore an older tree. No Tuesday lecture will be held this month.

September 3, 2013 -Raffle and Elections

Francesca Ritson, President

Snohomish County Fruit Society

SCFS held our first pruning and grafting workshop this spring which was well attended. Our thanks to Bill Davis and Greg Giuliani for sharing their expertise and Jack and Kristi Haines for allowing us to practice our skills in their orchard.

After three great presentations this past spring by Lori Brakken on her Belgian Fence, Dave Pehling on pests management, and Monica Van der Vieren on native berries, we will be rounding out the year with presentations on fruit preservation, fruit storage, specific fruits such as peaches, blueberries, and figs, and another workshop in the fall on making cider. While we have enjoyed the facility at the Snohomish Library, for a variety of reasons we will be trying out a new facility for our June meeting right across the parking lot in Snohomish at the Snohomish Boys & Girls Club. Same time, 7pm the second Thursday of the month. A summary of each meeting and relevant links can be found on the "[Meetings](#)" tab of our website.

Outside of presentations the club has been very busy with several projects. Darlene Granberg is spearheading our first appearance at the [Celebration of Food Festival](#) at the Lynnwood Convention Center on Sunday, May 19th. SCFS will be selling our SWD traps and STFS will join us with their maggot barriers. We'll also be gearing up to join the ag community at the Evergreen State Fair in Monroe on Aug 22nd-Sept 1. As a result of this event last year we added over 200 people to our mailing list and have had new members trickling in all year.

The SWD Trap fundraiser has gone well and we have had to make additional traps. In addition to selling these traps, SCFS will be conducting a research project this summer on SWD trap design and bait longevity funded by the WCFS grant we received in March. The research team has met, supplies are ordered, and collection and counting kits are being made. Training is set for the end of May and the study itself starts the second week of July and runs for 8 weeks. A few local highschool FFA students are joining the study as part of a supervised agriscience project. Our thanks to the WCFS Grant committee and WCFS members for giving us the opportunity to conduct this research.

Stop by sometime and see what we are up to: <http://snohomishcfs.wordpress.com/>

Bekie Jackson, SCFS President

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Vashon Island	Elizabeth Vogt eavogt@comcast.net



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.wwfirf.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

Government 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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