The BeeLine

Volume I | Western Cascade Fruit Society | Summer 2003

LETTER TO THE EDITOR...

June 4, 2003
Dear Connie:

Spring 2003 BeeLine

Thank you for undertaking the editorship of the BeeLine. You do a great job; it's very readable, content is accessible and the formatting looks nice. I would like to offer the following comments to this issue:

Page 3, Apple Scab:

The fungicide combination of **Benomyl** and **Captan** was an excellent scab control, however Benomyl is no longer available. For the homeowner, currently available scab control fungicides include Captan, **lime sulfur** (except on **Red Delicious** and **Braeburn** apples) and **Immunox Multi-Purpose Fungicide**. Scab control products are listed at WSU's website http://pep.wsu.edy/hortsense. Click on tree fruit, apple, then apple scab.

Western Washington's cool moist springs are very conducive to infections by scab fungus but once the effects are noticed it's too late for control. The preventive fungicide sprays must be applied prior to fungus exposure. Some apple cultivars such as **Gravenstein, Summerred, Gala, Cox's Orange Pippin** and **Jonamac** are very susceptible to scab.

To avoid having to spray for scab control stick to the many scab resistant cultivars such as **Chehalis, Enterprise, Liberty, Prima, Williams Pride**, etc. Another option is to grow scions on truly dwarfing rootstocks such as **M27 or P22**. Their small size allows one to provide an open-sided rain cover over the trees during our cool wet spring weather. The scab fungus needs free moisture on plant surfaces to cause infection, therefore they should be covered before the buds swell, then kept covered till the leaves have completely unfurled and developed a bit of a waxy coat, about 3 weeks after petal fall. If wind is not a problem, clear poly over a PVC pipe frame works for this.

Timing of scab control sprays is critical. The first spray must go on when the flower buds are at the pink stage – leaves just separating. The second spray is at petal fall (at least 75% of petals have fallen). The third spray is applied 10 to 14 days after complete petal fall. If cool moist weather continues, additional sprays may be required.

Page 4, Apple Maggot Control Requires ....etc

The Food Quality Protection Act (FQPA) became law in 1996. It requires the EPA to review all pesticides for dietary toxic effects, cumulative effects and applicator safety over the 10 year period from that date. Because they are widely used nerve toxins, oganophosphate insecticides, which include **phosmet (Imidian)** and **diazinon**, were the first group to be reviewed. The EPA ruled that phosmet should be excluded from home use products; after June 2002 it was classified for restricted use only which means one must have a Pesticide Applicators License to purchase and use it.

Thus, even though phosmet is one of the most effective chemical controls for apple maggot, it is no longer available to the back yard grower. Also note that after December 31, 2004, diazinon for controlling codling moths will be taken off the market.

In the future spray control options for apple maggot and codling moth may come down to organic sprays: **Surround®**, a kaolin clay spray, and **Spinosad**, a bacterial spray currently sold as **Entrust™ or Bull's Eye™ Bioinsecticide** marketed by Gardens Alive.

I would like to comment on some of the theories behind **apple maggot fly (AMF) trap control**. There are three basic types of apple maggot traps: yellow panels, red balls, and a hybrid sold by Lad Research Industries of Vermont.

The yellow panel traps visually attract AMF looking for food (insect honeydew and bird droppings, yum).

So the theory goes, the fly equates the yellow panes to a large leaf which may contain food. As the proteins in honeydew and bird droppings decay, ammonia is released which attracts AMF. Thus the baiting of yellow panel strips with ammonium carbonate or ammonium acetate.

Baiting is enhanced with the addition of a "Supercharger", a small perforated plastic container filled with ammonium compound attached or hung from the trap. Yellow panel traps are useful for trapping juvenile flies in their first 7 to 10 days of life prior to reaching sexual maturity. *(Continued on next page...**Letter..**)*

(Letter...continued from previous page)

After reaching sexual maturity AMF's interests change to mating and egg-laying. Thus the development of red ball traps to resemble an apple. Actually the color in not important here but shape certainly is. I am not aware of any red ball trap manufacturers which recommend the addition of ammonium compound baits to the **Tangle Trap** coating. We have experimented with adding it to the sticky and found it had no effect in attracting AMF.

Most manufacturers do however urge the usage of an apple volatile lure hung within a few inches of a ball trap. This makes sense considering the AMF is attracted to an apple shaped object solely to lay eggs if females and "to be where the girls are" if male. Neither sex regards the apple shaped object as potential food.

Two modifications of the basic yellow panes and red ball traps are available. The rebel yellow trap from Switzerland, two panels at right angles, is much more effective that a plain yellow panel. It is coated with a **brush-on Tangle Trap** and baited with an ammonium compound. The **Ladd Trap** is a "two-in-one" design incorporating a red hemisphere on each side of a yellow panel. Tangle Trap is applied to the entire trap and an apple volatime lure is hung close by. In almost 10 years of trapping my own trees plus one year of trapping at the Bellevue Master Gardener demo garden, I've found the Ladd trap always outperforms all other designs. It is also the most expensive and hardest to maintain.

An easy low maintenance approach is to use a combination of commercially available disposable yellow panel traps with Supercharger bait ammonium canisters plus red ball made from real apples. Skewer a cheap store bought apple on a hanger and coat with brush-on No apple volatile lure is needed thanks to the use of a real apple. Simply reduce as needed.

Most of these comments come from the 7-page WCFS bulletin "Apple Maggot Flies – Damage and Control" last revised October 2002. See also..... http://pep.wsu.edu/hortsense and click on tree fruit, apple, apple maggot. Bulletin EB 1928 "Protecting Backyard Trees from Apple Maggot" may be downloaded from http://treefruit.yakima.wsu.edu/Apple%maggot.htm or a copy may be ordered from http:://pubs.wsu.edu or 1-800-723-1763.

Page 5, Apple Tree Dieback

This puzzles me! I've never heard of Apple Black Rot in Western Washington. The 2002 Pacific Northwest Disease Management Handbook has no reference to its being found in either Idaho, Oregon or this state. The author, Dave De Cock, is an Extension horticulturist with **North Dakota State University** at Fargo where they probably do have apple black rot. The Compendium of Apple and Pear Diseases has the following: "Black Rot is a common disease of apple and pear and has been reported in Australia, New Zealand, Europe, India, North and South America and Zimbabwe. In the United States it is most severe in the Southeast, but it occurs throughout the eastern apple-growing area (west to the Great Plains area). It is a fungal disease and the leaf spot phase of the disease is known as frogeye leaf spot. The disease results in fruit rot, limb cankers and defoliation from leaf spot."

Has this disease recently been detected here? If so, follow up with the fungus experts at the WSU Puyallup Research Station would be helpful.

Thanks again for stepping in as the BeeLine editor, Connie. Best of luck. It's a big job and I'm not sure my comments make it any easier!

Sincerely,
Dick Tilbury
Seattle WA

Dear Dick,

Let me start by thanking you profusely for reading the newsletter and caring enough to write in and correct the information! I really DO appreciate that – I said from the beginning that my expertise was in putting together a newsletter – not in growing apples!

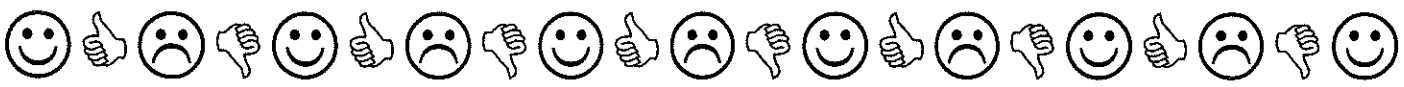
That said, I confess to jumping in "where angels fear to tread" and "surfing the net" for articles relating to the subjects mentioned by friends and colleagues. I moved to WA only recently and did not realize how very different the information would be between N. Dakota and here – that blasé attitude of thinking that because they were both in the NW quadrant of the US, they would have similar conditions and needs! (As if I would ever have lumped AZ and CA into the same pile when I lived in AZ!)

At any rate – mea culpa for the articles on Apple Scab and Apple Tree Dieback, I promise not to do it again! As for the third article, updates and corrections are always welcome and, since Chuck is a member of my BeeLine staff, I'll let him speak for himself if he chooses.

This sort of exchange is what I was hoping for in this newsletter – a dialog between members using the BeeLine as your forum. Thanks again **VERY** much – anyone else? We want to hear from you.

Since rely,
Connie Firehawk, Editor

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



WCFS Board Meeting

June 7, 2003

The meeting was held in Tacoma Library with ten Board members present. Treasurer Patti Gotz gave a financial report that was somewhat incomplete because she said that some checks had not cleared. However , the organization is in good shape financially.

The Spring Fair did not go as well as in the past. There needs to be more promotion of the event. It did net about $225.00.

Patti said that the cost of each BeeLine is about $1.15. Patti is looking into a cheaper way to have it done.

Judi Stewart gave an excellent report on their compost tea project. Each member can purchase a gallon for 50 cents, compared to the store price of five to six dollars. She is brewing it.

The Puyallup Fair will run from Sept 5 to 21. Ed Jones is booking helpers for the show and needs two per shift. Participants get a free pass and parking. The Tahoma group organizes this event and is seeking ideas to include in the booth.

The Fall Fruit Show has not been determined as to where it will be held, but it will be for one day only.

Patti was looking into this item. There will not be a Correll cider press this year, but there will be other prizes. If no Show, the effort will be given to the Peninsula's Fall Show.

The large sign has not been located; so Patti was asked to check on getting a replacement such as a 4' x 10' sign. She was to get three bids.

There is still some concern over the "old" Clallam Bay chapter. Such as "where is the dues money owed" and name problems. Valerie was to check with her father about legal ramifications

Piper Chapter rep was concerned about the few members, but the Board felt it should continue for the present.

The Spring scionwood/rootstock Show will be held March 13. The secretary was to request the Parkland Church for use, as in the past couple of years.

Next board meeting is August 23, somewhere in the Peninsula area.

George Moergeli, Secretary

CALENDAR FOR SUMMER '03

This calendar contains information regarding fun and educational activities, and details regarding the meeting dates, times and locations of our individual chapters. If you know of a future event that you think the members would enjoy please give me a call at (360) 796-4155, or email me identifying the subject matter @ **Baysidegardengal@hotmail.com**

Aside from the ongoing dates for club activities the current calendar contains information about community college classes, farmers markets in our area, upcoming events at the Mount Vernon Research Station, the scoop on a great blueberry patch and a peep into the world of the Northwest Cider Society.

Following is the normal schedule for the chapters of the WCFS. If you would like to attend the meeting of a chapter other than your own I would suggest you give the contact person a call because during the summer some of the groups have alternative plans and may not meeting on the published date or at the normal location.

Kathy Ackerman, NOFC

CHAPTER MEETINGS

CLALLAM FRUIT CLUB

Representative, Erik Simpson, 360 683 6684

Meetings are at 7pm. the 1st Tuesday of each month. They meet at the Clallam County Commissioner's Chambers located at 223 E. 4th St., Port Angeles, WA For more information call **Erik Simpson**, (360) 683-6684 or email him at orchards@olypen.com

TAHOMA CHAPTER

President, Valerie Chapin 253 472 6091

Meets at 7pm. the 1st Thursday of each Month. They meet at the Parkland Christian Church located at 12305 Spanaway Loop Rd., Spanaway, WA. For more information call **Valerie Chapin** (253) 472-6091 or email her at valeriechapin@ssa.gov

*(Continued next page...**Meetings**...)*

*(**Meetings**, continued from previous page)*

NORTH OLYMPIC FRUIT CLUB

President, Judi Stewart 360 379 1103

Meetings are at 7pm. the 1st Tuesday of each month. They meet at the Tri-Area Community Center located at 10 West Valley Rd. Chimacum, Wa. You can contact **Paul Becker,** (360) 437-9085 or email him at phbecker@aol.com

JULY12th: the club will be taking a tour of Clallam County. They will meet at 8am. at the Tri-Area Community Center. They will use the little Jefferson Transit buses to spend the day visiting the **Black Diamond Winery**, **Buddy Brock**'s home, **Nash Huber**'s organic farm, **Graymarsh** for strawberries and raspberries, and lunch at **Petal's** at the **Cedarbrook Herb Farm**. For members from other clubs that would like to join them there is a $5.00 transportation charge.

AUGUST 3rd: is their picnic, which will be held at **Dan and Kathy Ackerman**'s home in Brinnon.

SEPTEMBER 28th: is a trip to **Salt Spring Island** for their orchard tour. Members from other clubs are invited. For more information please contact **Judi Stewart** at, js@olypen.net or **Paul Becker** at (360) 437-9085.

PENINSULA (KITSAP) FRUIT CLUB

President, Mel Armstrong, 360 275 5243

Meetings are at 7pm. the 2nd Thursday of each month. They meet in the Eagle Nest Building of the Kitsap County Fairgrounds. The address is 1200 NW Fairgrounds Rd. Bremerton, WA For more information call **Mel Armstrong**, (360) 275-5243 or email him at mel@hete.com

JULY10th: the club will visit **Scott Thompson**'s orchard. Visitors are welcome.

PIPER ORCHARD CHAPTER

President, Ron Schaevitz 425 745 8844

Work party meetings for orchard restoration are 10am. to 3pm. the 3rd Saturday each Month **except** JULY, AUGUST and DECEMBER. The orchard is in North West Seattle at Carkeek Park, located at 950 NW Carkeek Park Rd. Seattle, WA. For more information contact **Ron Shaevitz** through his email address at ronshave@seanet.com

SEATTLE TREE FRUIT SOCIETY

Marlene Falkenbury. 206 522 2273

Meetings are at 9:30am the last Saturday of each Month **except** December. The meetings take place at the Center for Urban Horticulture located at 3501 NE. 41st St. Seattle, WA.

Plant Repels Dogs and Cats

Felix and Fido may be great companions for you and your family, but they can wreak havoc on your garden. To keep them out of your flowerbeds, many gardeners have turned to fences and repellent sprays with variable success. Fences can be unsightly and intrusive, and repellent sprays often wear off and lose their effectiveness. Now from Germany comes a relative of a familiar garden plant, coleus, which reportedly has a pungent odor that dogs and cats hate.

Coleus canina is a compact (1 - to 2 - foot tall) annual bedding plant with dark green foliage and small blue flowers. Planted as a hedge, with plants spaced 3 feet apart, it has been proven to keep pets away from gardens, landscape areas, sandboxes, and playgrounds. Like ornamental coleus, it doesn't harm people and is safe for the environment.

When animals come in contact with this coleus, their sensitive noses pick up the plant's odor, and choose another place to snoop. This odor is only noticeable to humans if the leaves are rubbed. Sold under the names "Scaredy Cat!" or "Dog's Gone!" in the U.S., it grows best in full sun and warm temperatures, and it's drought tolerant.

This coleus is cultivated only from cuttings, so seed isn't available. For more information on "Scaredy Cat!" or "Dog's Gone!" contact the following Web site; www.millstadtjungplants.com/

by **Charlie Nardozzi**, National Gardening Assoc., www.garden.org, or www.kidsgardening.com

BEELINE EDITOR

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BeeLine Committee

Katherine Ackerman – NOFC 360 796-4155
Patti Gotz - Seattle 206 524-3738
Dolores Haley – NOFC 360 765-3154
Charles Polance – Tahoma 253-588-8288
James Ogden – Peninsula 360-479-2582

Deadline for inclusion in the September BeeLine is August 15th. Write, email, or phone your article, comment, suggestion, question to any one of the staff members listed above. All submissions welcome, some may be edited for length and spelling or grammar.

SUMMER WATERING TECHNIQUES

During the heat of the summer months, over 75% of serious problems with plants are the result of improper watering techniques.

Watering plants sounds simple enough, but it can be one of the trickiest and most deceptive procedures that you can do in your garden! You must water **DEEPLY** twice a week for the first three weeks after planting and at least once a week thereafter for the first growing season to ensure success with your new plants. Many summers have an extended period of severe drought. Be sure to monitor this and be aware of just how much rain has fallen in your yard each week.

The worst thing that you can do is to lightly "sprinkle" the plants and the surface of the soil each day when you get home from work. Although this may feel good psychologically, it isn't doing the plants any favors! Light watering causes all roots to grow up to the surface. Once there, they are apt to dry out much more often as the heat of the sun will simply desiccate them each day ... thus you are caught in a vicious cycle of constantly having to water and having your plants wilt anyway! Watering deeply allows the water to penetrate down into the root zone, at least 6" or more.

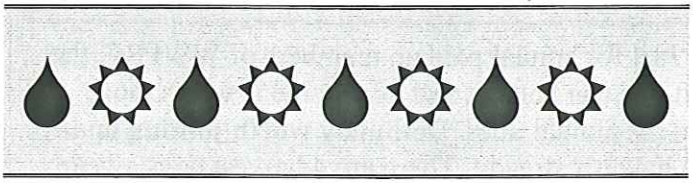
Create a well of soil around each plant or bed so that the water isn't all running away and truly does soak down into the ground. Put the hose at the base of the plant and turn it on to a low trickle. WALK AWAY from the plant and leave the water on for at least one half hour. Use a soil probe or trowel to determine how deeply the water has gone. It should penetrate 6" or more down to the root zone.

Using a sprinkler to cover a large planting bed, may take a long time to really saturate the root systems. If you are on a well and can't run a sprinkler or a hose for more that 15-20 minutes, let the well recover and then turn it back on the same garden or individual plant again until that one garden/plant is deeply watered. The next day, water a different one.

A more efficient way to get water directly to the roots of perennials is to use soaker hoses. These are woven among the plants (a very easy job in early spring when the plants are small, a real challenge in the summer!) and water oozes slowly out of holes or pores in the hose. Water is applied very slowly, 50-70% less water is used than with conventional sprinklers, and no water is wasted. You leave soaker hoses on for at least 2-4 hours. Weave the hose VERY THICKLY amongst the plants, about 12-16" apart. The water just doesn't travel far laterally from the soaker hoses. If laid down too sparingly, entire sections of the garden will remain bone dry.

After a little practice, you will learn how your particular system works with your water pressure. In an extended dry period, the leaves of the plants appear to miss having the water on them that occurs naturally when it rains. I see a lot more cases of spider mites on plants that NEVER receive any water on their foliage during a long drought. Once in a while, it would be good to foliar spray the plants using either liquid seaweed or Roots, a seaweed product. The seaweed helps the plants to withstand the stress of the dry conditions and provides them with trace minerals at the same time.

Finally, consider a little preventative maintenance: enrich your soil each spring with organic compost and then mulch thickly in early summer. Both of these procedures help the soil to hold in moisture (up to 4 times as much!) and are basic organic gardening techniques that we should all be practicing. Water is Life.



CLASSES CALENDAR

Some of our **Community Colleges** offer courses that are part of larger **Horticulture Programs** that may be of interest to club members. Many of the classes are designed for students seeking careers in the landscape & horticulture industry but they are also great for a person interested in learning a body of information in an organized practical way. The people you meet in the classes range from 18 to 75 and come from an amazing range of backgrounds. If you are interested in more information about pruning or propagation than you can learn in a little workshop this may a fun way to do it. The following information is for **South Seattle Community College** and **Edmonds Community College**. Complete listings of classes can be obtained by exploring their

*(Continued on next page... **Classes**)*

(Classes...continued from previous page)

websites or calling for a catalogue. Summer classes begin shortly but open enrollment does not end until July 3. The quarter begins June 30th and ends August 22nd. Now is not too soon to plan for a class in the fall. Enrollment for fall runs from July 24th until October 3rd. The cost per credit is currently $62.75. If you are 60 years old or older you can audit 1 or 2 classes a quarter for $5.00 each if there is space available. There are also a number of other discounts available.

South Seattle Community College's website address is, www.southseattle.edu/, their phone number is (206) 764-5336. A sampling of their summer offerings includes their **basic arboriculture** class from 5 to 9pm. Monday and Wednesday. It covers the current science and practical management of trees in the urban landscape. They also have a **propagation** class 5-8pm. Tuesdays, which will cover the collection of seeds and cuttings, propagation techniques using seeds, cuttings, division and salvage. The class also covers the aftercare, transplanting and field planting.

When I called **Edmonds Community College** for an update on their schedule they were sure I would be interested in a new fall class called **Fruits and Nuts** on Mondays from 6 to 8:30pm. The class will cover the varieties of trees, vines and bushes best suited for the Northwest. They will cover optimal growing conditions, pest management, and integration into the landscape. The school can be reached at (425) 640-1739 or http://hort.edcc.edu

WWFRF Member Harvest Day Schedule for 2003

Just for annual paid up members of WWFRF, the fruit one can harvest and take home is worth more than the annual dues. Definitely **worth joining** up if you haven't already. There are 4 harvest days a year.

Bloom data confirm that this year's season is about 2 weeks earlier than last year (which was unusually late.) Dates for the Harvest Days have been adjusted accordingly.

Variety and quantity of fruit available will depend on fruit set and weather. **PLEASE CHECK THE WEB PAGE BEFORE EACH HARVEST DAY** for updates and information on what is available, varieties and quantity.

http://mtvernon.wsu.edu/frt_hort/fruit_horticulture.htm

Check-in for Harvest Days is 11:00 AM - Wagons leave for the field at **11:30 AM.**

Station staff will direct distribution of fruit. Members please be aware that pets are not allowed in the field at harvest days due to station policies. Also, people arriving late may find limited availability of some fruits.

July 12 - cherry
August 9 - plum, peach, nectarine
September 13 – pear/Asian pear, apple
October 11 – Fall Field Day/Open House and Main apple harvest

Volunteer work performed by Foundation members helps the Fruit Horticulture program reduce their labor costs when Foundation members harvest fruit for record and data collection in the fruit trials.

The benefit to WWFRF members is that they get to take home for their personal use part of or all of the fruits harvested at each Special Harvest Day. This year there will be blueberries to harvest. Other fruits that may be harvested this season include blackberries, raspberries, cherries, currants, pears and apples.

If you were on the "Call Out" list last year and your dues are paid up-to-date, you are still on the Special Harvest Day "Call Out" list for this year. **If you would like your name to be on the Special Harvest Day "Call Out" list for this year, please contact Larry Mowrer**, the Special Harvest Day Volunteer Coordinator, in person at any regular Harvest Day, by telephone at (360) 766-8043, or by E-mail at mowrer@earthlink.net.

FARMER'S MARKETS

Farmer's markets are a seasonal treat almost everywhere in the Country these days. The markets listed below are by the day of the week they fall on. I have listed the ones that belong to the Washington Farmers Market Association. If I missed your favorite let me know so we can include it next year. For a complete list of all the member markets in the state you can call the **Director, Zachary Lyons** at (206) 706-5198, or use their site, www.wafarmersmarkets.com

TUESDAYS

Renton Farmers Market 3-7pm. June 10-September 9. S 3rd St. between Logan & Burnett

Peninsula Farmers Market (Silverdale) 11-4pm. April 15- September 23. Bucklin Hill @ the Silverdale Hotel

(Continued on next page...Markets)

(Markets... continued from previous page)

WEDNESDAYS

Downtown Everett Farmers Market 10-2pm May 14- Nov 26 Rockerfeller & Wall St.

Fox Island Farmers Market 2-6:30pm. June 4- September 3. 1017 9th Avenue

Kirkland Wednesday Market 12-7pm. April 30- October 15. Park Lane E. Between 3rd & Main

Port Angeles Farmers Market 1-6pm. June 11- October 1. Laural St. Between Front & First

Pike Place Market Organic Wednesday 10-4pm. June 15- October 29. Pike Place, Seattle

WEDNESDAYS

Port Orchard Farmers Market 11-4pm. May 14- Oct. 8. Waterfront @ Bethel & Harris behind Peninsula Feed Store

Columbia City Farmers Market (Seattle) 3-7pm. May 21- October 22. 4801 Rainier Ave So.@ Edmunds St.

THURSDAYS

Burien Farmers Market 11-6pm. May15- October 2. 4th Ave SW. Between 150th & 152nd.

Olympia Farmers Market 10-3pm. April 3- end of October. 700 North Capital Way

Lake City Farmers Market (Seattle) 3-7pm. May 29- October 23. NE 127th St. & 30th Ave. N.E.

Tacoma Farmers Market 9-2pm. June 5- October 16. Broadway 9th &11th

FRIDAYS

Bridgeport Farmers Market 9-noon. mid June to mid October. Quickie Mart Parking Lot, Jct Hwy. 17 & 173

Port Ludlow Farmers Market 9-2pm. May 30- September 26. Port Ludlow Marina

Olympia Farmers Market 10-3pm. April 3- end of October. 700 North Capital Way

SATURDAYS

Bainbridge Island Farmers Market 9-1pm. April 12- October 18. Market Square @ Madison & Winslow

Port Townsend Farmer's Market 9:30-1:30pm May-Oct, Washington & Madison behind the Historical Museum

FREE COURSES, WORKSHOPS AND OTHER freebies...

Abundant Life Seed Foundation

July 9-11th - "Fundamentals of Plant Improvement for Organic Agriculture," is a 3-day intensive course for seed growers, in Port Townsend. For details... http://www.abundantlifeseed.org/

Raintree Nursery

info@raintreenursery.com - 360.496.6400

Selected Saturdays now thru October!

ALL FREE! Call for exact dates.

Fruit tasting - **12 - 2 p.m.**

"Fruit processing and harvesting" by WSU Master Preservers

Nursery tour - **2:30 p.m.**

July (TBA) Enjoy cherries and some of the early berries and small fruits.

August (TBA) Taste plums and the later berries and unusual fruits.

September (TBA) Try pears and early apples as well as small fruits.

October (TBA) Sample later apples and quinces and apple cider making.

Also at Raintree:

OCTOBER CIDER SATURDAYS - FREE!

Noon to 2:30 p.m.

Each Saturday in October help us make and blend cider from lots of different varieties of apples to see which you like the best. Don't bring fruit. We supply the apples.

NOVEMBER SATURDAYS - FREE!

POTTED FRUIT TREE SALE

Each Saturday in November, Potted fruit trees are on sale! Enjoy a great holiday gift selection!

WCFS Officers & Board Members

President	Valerie Chapin	253-472-6091
Vice President	Roger Eichman	360 379-9566
Secretary	George Moergeli	253 833-4656
Treasurer	Patti Gotz	206 524-3738

Board of Directors		Term Expires
George Moergeli	253 833-4656	2004
Sid Hubbard	360 385-3978	2004
Eric Simpson	360 683-6684	2005
Ed Jones	253 770-3711	2005
Steve Whitcher	253 536-7043	2005
John Curry	425 788-7995	2005
Paul Becker	360 437-9085	2006
Renea Carnay	253 863-7074	2006
Gary Garremans	425 485-6134	2006

BLUEBERRY PARK

Metro Parks of Tacoma on E. D Street between E. 72nd & E. 73rd has acres of **highbush blueberry** plants that the **public is welcome to pick.** This is Tacoma's contribution to North America's designation as the world's largest blueberry producer, accounting for nearly 90% of the world's production. Look at this statistic: 500 metric tons are shipped to Japan each year; even little Iceland gets 100 metric tons! **July is known as national blueberry month**, so I hope I see you at Blueberry Park next month.

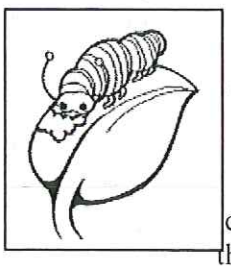
Did you know that the blueberry is one of the few fruits native to North America? For centuries, Native Americans gathered them. Blueberry Park has perfect conditions for nature's top antioxidant fruit to thrive. The acid soil there has a pH between 4 & 5. The bushes get full sun. Plants are well spaced and in an orderly fashion. Volunteers maintain the park and organize regular clean-up days.

Here are some tips on picking the berries if you decide to visit: Ripe blueberries are easily removed from the bush. You can identify them when they have a completely uniform blue color. Don't pick them if they have a red tinge. Avoid picking wet berries, as they are susceptible to decay organisms and often resemble overripe berries leaking juice. Blueberries, even those growing on the same bush don't ripen at the same time. You won't need a ladder at the Park, but a long-sleeved shirt can lessen the scratches to your arms. Now that you know the basics...get out there and have fun!!

Chuck Polance, Tahoma Chapter

Attack of the Gypsy Moths

In 1868 a professor named **Etienne Leopold Trouvelot** returned to America from France clutching a package. Inside were a handful of gypsy moth cater-pillars in a cage, the raw materials for the professor's dream of breeding a hybrid insect to make silk.



His motives were pure; to "build a better silk moth", solve a problem and maybe make a few dollars. Soon thereafter, wind blew open the cage, and the caterpillars escaped.

Within a decade these destructive creatures were chomping a swath through oaks, apples, birch, and other favorite hosts. Millions of acres were infested.

Typically, the insects hide during the daytime, low in the tree, under the leaves or in the crevices of the bark . In the evening, they make their journey up to the foliage and begin to eat. Their droppings can make quite a mess on decks and patios below. The larvae can be so destructive, they can defoliate an entire tree in two weeks. The worst damage is done in the late spring and early summer (when the foliage is most delicate). These are cyclical insects. In the fourth and fifth years of their cycle, the caterpillars are the most destructive.

In the early 1900's, a fungus was introduced to infected areas to help control the damage. The fungus, **Entomophaga maimaiga,** has done a good job when active but is inconsistent. Like the caterpillar itself, the fungus is cyclical and has up years and down years. In the mid 1990's, the gypsy moth caterpillars were again doing extensive damage in the Mid-Atlantic states. Entire forests were being attacked. Even though homeowners and state departments of natural resources launched aggressive spraying programs, entomologist believe the fungus Entomophaga maimaiga either reappeared or was inadvertently reintroduced. The gypsy moth caterpillars nearly vanished in 1996.

If you are unable to find a source for the fungus Entomophaga maimaiga, you will need to attack them with over-the-counter products. The best spray to use is a bacteria spray called BT (Bacillus thuringiensis).

It is effective not only against **gypsy moth** larvae but also **bagworms**, **cabbage loopers, codling moths**, and **tent caterpillar**. You can also band your trees with burlap or gypsy moth tape to stop the critters on their journey to the top of the tree.

Gypsy moths have been around longer than humans so it remains to be seen what the future will hold. Even though the gypsy moth caterpillars may have vanished in your area, if biological history repeats itself, it is very likely they will return someday soon for another feeding frenzy.

Images courtesy of VA Tech U. Entomology Dept.

For a database list of IPM Resources, go to:
http://www.ippc.orst.edu/cicp/tactics/microbcontrol.htm
from Oregon State University, Corvallis.

For more information on the Gypsy Moth and bio-controls go to:
http://ohioline.osu.edu/hyg-fact/2000/2175.html

STFS SUMMER SCHEDULE

STFS meets on the last Saturday of the month at 9:30 AM at the Center for Urban Horticulture.

Saturday, June 28th - Tour of 3 North Seattle gardens.

Saturday, July 26th - Vashon Island Tour.

Saturday, August 23rd - no program details as of newsletter deadline

Call **Marlene Falkenbury** (522-2273) for details.

(The following is a special section on pruning supplied by some of our members for this issue: Ed.)

Summer or Dormant Pruning:

Different Times for Different Reasons.

The time of pruning plays an important part in the physiology of the tree. Trees are commonly pruned during the dormant season of late winter or early spring when they are wide open and easy to work. At this stage, all of the energy reserves of the tree are stored in the roots. When the tree breaks dormancy later in the spring, all of that energy, enough for the tree before pruning, surges to the young shoots and stimulates vegetative growth.

Vigorous trees have no need for the type of growth caused by dormant pruning. To control excessive size in the tree, prune during the active growing season. This prevents the energy of the branch from being stored and decreases shoot growth and overall size of the tree.

Summer also allows the gardener to see exactly how the leafed-out branches shade the lower or inner parts of the tree, facilitating proper pruning for sunlight. Unwanted suckers and sprouts are young, tender, and easily removed during this time. A negative aspect of summer pruning is that it involves more work due to heavy, leafy branches; the inner branches are more difficult to reach, and the overall scaffolding of your trees becomes hard to discern.

Never, ever, ever, prune your trees after Labor Day and before around mid-winter when the tree reaches full dormancy. Pruning combined with the active transport of photosynthates and growth factors from the canopy to the roots encourages new vegetative growth. This growth may not have time to harden off before an early freeze and will most likely result in severe winter damage.

James "Oggie" Ogden, Peninsula Fruit Club

The Three D's

Aside from the pruning specifics needed for various types of trees to promote fruit production and ripening, established trees need very little pruning. For these trees, the three "D"s aid in determining when to cut: Dead – Diseased – Dumb.

Dead wood, which leads to decay and houses pathogens, is easily overlooked on dormant, older wood. Look for dead wood during the blooming stage; it is the wood without any buds or growth. Remove it all.

Diseased wood is much more difficult to determine. Systemic viral pathogens can spread through the trees entire vascular system before becoming evident. Bacterial or fungal contamination, insect damage, or mechanical damage from people and pets causes localized problems. Each must be evaluated separately. Remove severely damaged or diseased branches back to healthy wood.

Dumb wood constitutes a wide variety of growth which can become hazardous, destroy symmetry, or shades lower branches to include branches that grow towards the tree's center, cross over or rubs adjacent limbs, or that results in weak forks.

James "Oggie" Ogden, Peninsula Fruit Club
Taken from numerous talks by Chris Smith

Trees Don't Heal!!

Once the decisions on when to cut, and the type of cuts needed for the desired outcome have been made, comes another crucial factor – how to cut. Sharp, scissors-style, hand-shears work well for wood up to 1/2-inch diameter. Anvil-style shears crush the wood, making the wound more susceptible to disease or fungal attack. Use long-handled loppers for branches to one-inch diameter. Thicker branches require the use of a pruning saw with large course teeth. To prevent the branch from stripping the cambium layer from the stem, start all large cuts from the bottom for at least 1/2-inch depth and finishing from the top. This keeps the weight of the branch from falling prematurely and inflicting unnecessary wounds. Another accepted practice is to cut the branch off at least six inches from the stem or trunk then make a second cut to remove the stub.

Trees are not animals. They do not regenerate and heal damaged tissue the way we do. If you cut your finger or scrape your elbow, new and identical types of tissue grow, the wound "heals" and often the new tissue cannot be distinguished from the old. In plants, parenchyma cells in the region of the cut differentiate into another form of tissue called callus tissue, which in turn compresses into wound wood. Two things are critical when removing branches. Do not cut below the collar of the branch and do not leave a stub.

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(**Trees Don't Heal**! continued from previous page)

Around the base of each branch, where it sprouts from the main stem or trunk, there is a visible swelling called the collar: a region of living wood cells, composed of vascular trunk tissue which passes around the branch and up the trunk, in a prominent swelling. If a "flush-cut" – a cut made flat against the branch – is used to remove the branch, the collar is damaged. By breaching the natural protection zone of the tree, parenchyma cells within the region fail to differentiate properly or adequately into **callus tissue** and the area become susceptible to fungus and disease. Wound or callus wood, which does not form a complete and natural ring around the wound leads to stress points at the breaches. These stress points often end in deep cracks that severely weaken the branch or trunk. The cracks, in turn, provide an excellent environment for rot forming organisms and can lead to deep decay pockets. Cracks and rot add up to a hazardous tree, not only to itself but also to property and people. At best, the wound will be larger than necessary and will weaken that area of the tree against future problems.

The **collar region** that remains after cutting is not a stub. A stub is branch wood left behind after cutting. This wood will die, eventually rot, and since it is still in contact with the cambium of the stem or trunk, the rot will continue inward beyond the protection zone or allow other pathogens to enter the tree. Regardless of what you may have heard, wound dressing is bad. Do not paint the wound with any form of sealant which only seals in and protects wood rotting fungus from drying out. Just leave the wound open and let the tree take care of itself.

James "Oggie" Ogden, Peninsula Fruit Club

Pruning the *Prunus*:
The Pitfalls of the Pitted Fruits

Malus and *Pyrus* trees **(apples and pears)** are very similar in their fruiting habits, despite there being over 6000 varieties from about 10 edible species. Once established, they require very little pruning beyond the three "D"s. Occasionally a branch may need pruning to restore balance or to rejuvenate old growth. The fruit of these trees grow on long-lived fruiting spurs, which produce for up to fifteen years. The genus *Prunus*, commonly called the **stonefruits**, is completely different.

Numerous arguments exist to divide *Prunus* into three separate genera, or at least 3 sub-genera. The generally accepted sub-genera are: **Amygdalus** – almonds and peaches – are fruits without stems, and the flower blossoms appear before leaves; Cerasus – cherries – the fruit is always juicy, and the blossoms appear with leaves; **Euprunus** – plums and apricots – the leaves are rolled in the bud. However, problems establishing sub-genera quickly arise. The lines of boundaries are not readily apparent. Cherries are most closely related to plums. They both bear fruit on stems in fascicles of multiple flowers. The others are borne singly or in pairs and usually have minimal stems. Apricots, almonds, and peaches are pubescent and deeply lobbed, while cherries and plums are smooth-skinned, round/oblong and plump. Arguments abound as to whether a specific species is a plum or cherry, an apricot or plum, or any of the main types. In my backyard, I have a heritage **Tlor-Tsiran tree** from Kurdistan. A black apricot also called a **pluot or plumcot,** which is a natural plum and apricot hybrid—or—a separate species depending on whose doing the classification. The issue is further confused since hybridization occurs in almost all of the species, with many hybrids found in a natural environment. My delicious **Shiro Plum**, a Japanese plum, is not a variety but a four way crossbreeding of *Prunus simonii* X *Prunus triflora* X *Prunus cerasifera* X *Prunus munsoniana.* Pending genetic classification of the over 8000 cultivated varieties and hybrids, from over 60 edible species of *Prunus*, the question of phylogenic relationships will probably never be answered.

Fortunately for the home orchardist, with only a few of the many types of *Prunus*, pruning for fruit production can be divided into three main categories based on type. **Peaches** and their cousins, the **nectarines**, only grow on the previous season's shoots. These trees lack a strong apical dominance in order to produce many lateral branches for next year's fruit. An initial structure of strong lateral scaffolds – primary support and structural branches – with an open, vase-like, center must be formed during the first three years. Peaches require heavy annual pruning to prevent scraggly, week trees and to ensure renewal of fruiting wood. Remove weak branches

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that will not bear, and vigorous branches that can take over the structure. If you must take out your frustrations on a tree, peaches are the prime candidates. Removal of 50-65% of the last year's growth and old wood is not uncommon in maintaining peaches. A light hand will soon result in a disorderly tree with very little foliage and fruit only on the extreme tips of branches.

Sour cherries, *Prunus cerasus* being the most common, grow on last year's growth *and* on short-lived (1-5 years) fruiting spurs. The wood of sour cherries is very brittle and narrow crotches must be avoided at all costs. Young trees are pruned to provide only three main scaffold branches. Perform additional pruning to remove unwanted growth and to maintain new shoots along the scaffolds. Mature trees require very little pruning except as needed to invigorate a scaffold. **Sweet cherries** (*Prunus avium*) are very similar to sour cherries except they only produce fruit on short-lived spurs and may tolerate tighter crotch angles.

Apricots, and European, American and Japanese plums all grow on short-lived fruiting spurs. These should be trained to an open centered scaffold shape. European and American plums require almost no pruning once mature. These two types tolerate a much more densely packed scaffold which they will self correct through a process of natural shedding along a trunk protection zone. However, extensive vegetative and suckering growth occurs if the tree loses a main branch to disease, damage or unknowledgeable gardener. Japanese plums grow quite a bit more aggressively and produce abundant quantities of dumb growth back and forth across the tree. A heavy hand is needed to keep these plums in shape and to restrict the amount of vegetative and leafy foliage. Removal of up to 20% of the canopy may be required each year. Apricots require less pruning than Japanese plums yet require a better understanding of the specific variety. Depending on type, apricots fruit from buds at either the tip, the center, or the base of the branch. Tip bearers are not pruned until after fruiting. Center bearers may have the top 1/3 of the branch removed and base bearers up to 1/2. Remove fruiting wood after it has produced for three to four years.

Although *Prunus* provides the greatest pruning challenge to the home orchardist, I still think they are the real Jewels of summer, both to the eye and the palate.

James "Oggie" Ogden, Peninsula Fruit Club

Auxin:
The Affects of Pruning and the Primary Growth Hormone

Nature had already established the foundations of pruning long before early arborists arrived on the scene. After all, what is damage from severe winter freezing, branches breaking in the fury of a summer storm, or the girdling effects of a peach stem borer compared to pruning? Through the millennia, trees have adapted in order to compensate for changes in their environment and damage or loss of their structure. Their genetic makeup codes for a broad array of growth regulators, commonly called hormones, similar to those in animals. These regulators are crucial in controlling the tree's physiology and growth. Of these growth regulators, the home orchardist must be thoroughly familiar with the generation and plant responses associated with auxin.

Auxin, officially known as **indole-3-acetic acid** or **indoleacetic acid**, possesses some unusual and contradictory influences on plant physiology. The most prevalently studied, and least understood of the plant hormones; it controls differentiation of vascular tissue, cell enlargement and elongation, root initiation, tropistic (bending) responses of roots and stems to light and gravity, and delays leaf senescence (death). Auxin simultaneously promotes or delays leaf and fruit setting dependent upon location, while promoting fruit growth and delaying ripening. To ensure that fruit trees have a long, healthy and productive life, the home orchardist must understand the crucial and controllable effects that auxin has on flower production and growth, and it's ability to repress the growth of lateral, or side buds through a process known as apical dominance.

Auxin is transported throughout the plant's system, polarly in one direction. Synthesized from the amino acid tryptophan, it starts in new leaves and in the apical meristem of shoots – the actively growing tips. Driven by concentrations—from areas of high to low—auxin travels through and around individual cells. It enters passively but requires active transportation out of the cell. The active transportation of auxin is, in turn controlled by

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several inhibitors, resulting from cellular metabolic reactions involving auxin. However, recent studies indicate that instead of polar movement from shoot tip to root tip, auxin moves basipetally from these tips to the junction of trunk and root. When auxin reaches the plant base, the mechanisms and routes of transport are poorly understood, but it is believed that excessive auxin may be returned back up the plant. After establishing secondary growth, woody plants primarily use shoot apical produced auxin within the branch where it was generated and very little of the auxin, if any, is transported through other outward branches. Meanwhile, auxin produced by the roots only enters the above ground system when the plant is breaking dormancy or undergoing periods of stress. Removal of the apical meristem—the actively growing tip—through natural causes or purposeful pruning dramatically changes the careful balance of auxin concentrations within the branch.

The presence of **auxin** in various combinations and concentrations with **gibberelin** and **ethylene** controls flower production in the majority of our fruiting plants. A decrease in available auxin therefore causes a decline in flower production and growth, which in turn leads directly to overall fruit loss. While flower production is important, apical dominance is the primary driving force of importance to the orchardist. At each leaf node of a stem, an axillary bud or shoot is awaiting the signal to grow and develop into a new branch. One of the paradoxes of auxin lies in its importance to induce and promote growth while simultaneously inhibiting the growth of these axial buds.

Poorly understood, apical dominance and auxin influence varies from species to species. The current argument for the dominance effect relies on the polarity of auxin, the effect of transport inhibiting compounds and interactions within apical cells; but many questions are still unanswered. Towering sunflowers with no side branches represent strong apical dominance, while weak dominance is shown in the branching and sprawl of tomatoes.

In most plants, the expression of apical dominance ensures extension of plant length or height, increasing the overall area of photosynthesis. With increasing distance from the sources of auxin, the concentration gradient of auxin in the branch declines. The axial buds furthest away are less controlled and more likely to elongate and grow into a new branch. The overall shape results in longer branches at the base, that get shorter near the top, which ensures the maximum exposure of lower branches to sunlight. Axial buds begin to grow prematurely when sources of auxin are removed, such as removal of the apical meristem.

Pruners must make a decision between two basic types of cuts: heading and thinning. Heading cuts occur when the tip of a branch is removed or when the branch is cut between the nodes. This type of cut effectively removes the apical meristem, lessens the effect of auxin on apical dominance, and encourages the growth of lateral shoots from the axial shoots below the cut. If the desired effect is to have a bushy, full tree or to encourage new vegetative growth then this is the cut of choice. New vegetative growth may be necessary to rejuvenate an older tree, to encourage new lateral growth, or to shape young trees; but in general, this growth is detrimental. The new growth places high demands on the roots of the tree for water and minerals that could be used for fruit production.

Fruit of all the ***Prunus*** species, unlike those of ***Malus*** or ***Pyrus***, do not ripen off the tree. They may soften, but the sugars and volatile compounds that provide maximum flavor do not increase. *Prunus* needs adequate sunshine in order to ripen properly; excessive foliage caused by heading cuts will shade the fruit. Contrary to popular belief, photosynthates in the form of sugars do not flow outward from one branch into another. Radioactive studies have shown that many mature branches are completely autonomous and often do not send photosynthates to the main stem from which they originate. The dense thick canopy of small, straight branches, which sprouted out all over after my first pruning effort, provided my first insight into the affects of heading cuts on the mechanics of apical dominance. I spent the remainder of that summer continually on the lookout for suckers that seemed to sprout and grow three feet during a single week. For some reason, I had very little fruit that year and much of that failed to ripen before winter.

However, if your primary purpose for having trees is for fruit, then the thinning cut is preferred. This cut relies upon removing the entire branch back to a lateral branch, scaffold branch, or the main trunk. With the entire branch or shoot removed, no lateral growth from buds on that branch is possible. Thinning cuts open up the interior of a tree to sunlight, control the size and direction of branching, and ensure an adequate amount of auxin is present to

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react with ethylene gas to encourage fruiting wood growth and flowers. Thinning cuts maintain the auxin levels required for apical dominance while removing a sink for minerals and water from the root system.

This provides a boost to fruit wood growth, which in turn leads to increased fruit production.

James "Oggie" Ogden, Peninsula Fruit Club

A FEW IMPORTANT HINTS ABOUT PRUNING

It goes without saying that to prune the proper way requires a basic knowledge of the anatomy, biology and, yes, mechanics of that living being - the tree. Otherwise you will have weakened, diseased and, later on, hazardous, pest infected trees.

TIPPING, means removing the tips all the way around the tree; remember that this also implies removing proteins or the precursors.

TOPPING, as it often is practiced is really mutilation. We starve the roots when we remove the tops, which supply their **FOOD**. This may later lead to root rot.

POLLARDING, means establishing the framework i.e. the size and shape of a tree. This has to be begun when the tree is young and repeated yearly by removing the sprouts without injuring the swollen areas and without leaving a stub. It is not only tree care; it is an art and avoids later improper tipping or topping.

Appropriate **SHAPING** involves removal of crossing branches within the crown and the pruning of V-crotches i.e. removal of the lesser limb of the V and preservation of the dominant one. This avoids later "including of the bark", a site for wound infection.

This leads to the concepts of **DOSE, TIMING** and **NATURAL TARGETS**. Just as one should only add appropriate amounts of water and elements, there is also are there appropriate amounts, a dose, of tree which can safely be removed at a given time. A young tree with its very thin periderm and cortex can be pruned a hundred percent i.e. close to the ground, as is done in nurseries. A sprout from a new site will then grow from the stump. There is no deadwood shedding in a young tree but as the tree matures only the dead wood should be removed. Natural targets such as the branch collars should be left in place without leaving stubs.

The fact that there are three **crowns** to a tree adjusts it to the weather. The innermost crown functions when it is hot, and the outermost when it is cool. And then there is an intermediate zone. Thus one should be aware of the possibility of over-pruning, an all too common cause of problems such as **sunscald, frost cracks**, and subsequent **insect or disease problems.**

PRUNING

No branch should be removed without a reason. When pruning trees, these are the only cuts that should be made:

1. Eliminating branches that rub against each other
2. Removing limbs that interfere with wires
3. Removing dead or weak limbs that pose a hazard or may lead to decay
4. Removing diseased or insect infested limbs
5. Creating better structure to lessen wind resistance and reduce the potential for storm damage
6. Training young trees
7. Removing limbs damaged by adverse weather conditions
8. Thinning or removal of unnecessary branches
9. Improving the shape or silhouette of the tree

REMOVAL

Although tree removal is a last resort, there are circumstances when it is necessary.

Removal is recommended when:

1. The tree is dead or dying
2. The tree is considered irreparably hazardous
3. The tree is causing an obstruction that is impossible to correct through pruning
4. The tree is crowding or causing harm to other trees
5. The tree is to be replaced by a more suitable specimen
6. The tree should be removed to allow for new construction

TO PRUNE OR NOT TO PRUNE ?

Proper pruning is comparable to preventive medicine. In a nutshell, we must not create conditions that predispose to disease caused by pathogens.

A foremost example is the creation of cavities in which pathogens thrive. Cavities result from improper pruning i.e. from cutting flush with the trunk when removing branches. And then the problem is often

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compounded when people "clean" these cavities and remove wet wood, thus facilitating more infection.

In nature, trees usually grow in groups. A single urban tree without symbiotic relationship with others will develop large lower limbs and co-dominant branches at a young age, leaving weak ones that can easily break off. This can be avoided by knowing the correct **DOSE** and **LOCATION** of the branches to be pruned. Other means to enhance the safety is with cables or bolt rods, with round washers and nuts.

Besides pruning for health reasons - removing the dead and decaying branches - it may be done for aesthetic or utilitarian reasons such as fruit production or increasing the value of timber. Legal aspects are e.g. right of way, driveways, power lines, etc.

When calling a professional to work on your trees inquire about credentials, insurance and experience. Remember that wound dressing does not stop rot and may actually increase it. Trees do not heal the way we do. We regenerate, they generate (new limbs) in new places. We have organ systems, in trees they are organized in compartments, a defense against the spread of pathogens.

By **Steve Whitcher**, The Guru-Gardener
www.Guru-Gardener.com

Fruit Thinning Time ... Again

As the thinning season is rapidly approaching, here are a few reminders...

Thin Your Fruit EARLY

Thinning is needed to promote good fruit size and improve the tree's productivity in the year to come. Most fruit trees will set far more fruit than the tree can effectively develop for good quality.

It is important to **thin fruit early**, so that the ones that remain can grow bigger as they mature. Early thinning also promotes the development of fruit buds for the following spring's bloom.

- **Don't be afraid to take off a lot of fruitlets.** It may look scary to see a carpet of marble-sized fruit on the ground when you finish. BUT look again in September when all those fruit you left behind are full size!
- **Remove the smaller fruits and leave the larger ones.** Remove fruit with disease spots, hail damage, or other defects.
- **Keep in mind the size that fruits will be at maturity** and leave enough room so that fruits won't crowd each other along the branch. Aim for an even spacing as much as possible

Apples, pears, and Asian pears almost always need heavy thinning. A good spacing for apples and pears is one fruit per 6" of branch. Asian pears should be spaced at one per 6-8".

Peaches and nectarines should be spaced at one per 6-8", and fruits that are joined together should be removed.

Plums often need thinning when fruit set is heavy. They can be spaced somewhat closer depending on the size of fruit.

Apricots in our area do not need to be thinned in most years. (*Ed. Note: With our weather, ANY apricots are a happy surprise in most years...*)

Cherries don't need thinning.

A full discussion of fruit thinning can be found in the **Spring 2001 Newsletter,** or check our web site under "***FAQ: Fruit Thinning.***"

by **Gary Moulton** & **Jacky King** ,WSU, Mt. Vernon

Pruning Fruit and Nut Trees

When to prune:

Pruning cuts can be made at any season, but trees respond differently at different times, appropriate timing depends on the reason for pruning. In general, prune in late winter to stimulate new growth; prune in summer to control tree size and shape.

Pruning cuts heal faster on actively growing wood so it can be advisable to delay dormant pruning until just before it begins. At this time, pruning wounds heal faster, flower buds can be easily recognized, and injury from low winter temperature is avoided.

Summer pruning may be done to help train young trees to the desired shape, remove water sprouts and other undesirable growth, and maintain smaller tree size. It should be remembered, however, that all pruning has a dwarfing effect.

Most enlightened growers use a combination of summer and winter pruning as each has advantages if done properly. Do not prune without a reason.

Many people believe that trees require fairly heavy pruning during each dormant season but, with only a few exceptions, this is not true. It is also often

(Continued on next page...**Fruits & Nuts)**

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thought that pruning cuts made while the trees were actively growing are harmful to them, which is also not true.

Another false belief that complicates the pruning strategy is that the top of the tree should be cut off, opening the center of the tree to light, resulting in a umbrella-shaped tree that might look neat and attractive after it is pruned but such treatment usually leads to production of watersprouts (and no fruit) by the middle of summer.

Late fall to early winter, as the approaches or enters dormancy, is a particularly poor time to prune, as do so then reduces carbohydrate reserves stored in branches the tree could use during winter and for growth the following year. Also, wounds made at this time will not be able to begin healing until the tree starts to actively grow the following year.

Why to prune:

The general purpose of pruning fruit trees is to regulate growth, improve fruit size and quality, control tree size, reduce disease and insect problems, and reduce production costs. Pruning is necessary to shape the trees for convenience of culture and for repair of damage.

How to prune:

There are two main types of cuts: thinning cuts to remove unwanted branches and heading cuts where a branch or leader is cut back or shortened. Make removal cuts on the outer edge of the collar or raised area where the unwanted branch joins the trunk or branch it grows out from. Make heading cuts immediately beyond a side branch or bud that points in the direction desired for new growth to occur. If cuts are made in larger diameter wood, with a saw, it helps healing if the edges of the cut are beveled with a sharp knife. Do not put pruning paint or sealants on cuts, as research has shown no benefit from them. In fact they can actually retard healing, or promote disease by holding in moisture.

What to prune:

As previously stated, do not prune without a reason! What should be pruned depends on the result desired. Tree shape will be discussed in more detail when dealing with pruning the individual types of fruit and nut trees but once the tree shape is decided upon, what to prune will be one of the methods to acquire the desired shape. On all trees, remove any branches that are dead or diseased, those that grow toward the center of the tree, one branch of pairs that that rub against each other or compete with for the same light,

Understanding "Apical Dominance":

The **apex bud** is the top bud on any leader or branch. The apex bud exerts a great amount of control over the growth responses of the subordinate buds below it by sending hormone signals downward. To properly prune or train a tree, it is essential that the grower understand the principle involved in apical dominance.

Probably the most vivid example of apical dominance in action is the previously mentioned result of pruning off the top of a tree during the dormant season. Apple trees pruned in this manner can probably be found in most neighborhoods. When the apex bud is removed during the winter, many of the remaining buds awaken in the spring to find that no signal is coming down from the top. These buds respond by immediately making strong vegetative growth upward, each striving to form a new top to the tree and then to grow the new apex bud. The result, as we have all observed, is a tree with many watersprouts. In many instances, the watersprouts are again removed the following winter and the whole process repeats with even more vegetative growth the next spring.

If the apple tree had been allowed to grow in its natural shape with one central leader and one true apex bud, the tree would not have required much pruning and would have had more fruiting wood.

Another example of how apical dominance works is the result that is obtained by cutting off a young tree "whip" with no side branches. The cut is made close above a bud and the apex bud is gone along with the top of the tree. The buds below the cut no longer receive apex signals so they start growing. One of the new shoots, usually the one coming from the bud closest to the cut, will shortly establish apical dominance and become the new treetop. Because the other buds had already started vegetative growth, they will continue to grow but now the growth no longer needs to go up to be a top so it goes out to start a new branch.

This principle can be used to cut a notch above a bud and the notch cuts off apex signals long enough to cause the bud to start growing even though the apex bud is still in place and the notch soon heals allowing signals through again and the new growth becomes a branch; this is referred to as "scoring" to get branches

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to grow where they are wanted.

What to prune with:

Use sharp, clean tools! The appropriate tool for a particular cut depends on the size of material being removed, and where it is located. Proper tools are essential for satisfactory pruning. The choice of which tool to use depends largely on the size of branches to be pruned and the amount of pruning to be done. If possible, test a tool before you buy it to ensure it suits your specific needs. As with most things, higher quality often (but not always) equates to higher cost.

Generally speaking, the smaller a branch is when pruned, the sooner the wound created will seal. Hand pruners are used to prune small branches (under 1 inch in diameter) and many different kinds are available. Hand pruners can be grouped into **by-pass or anvil styles** based on the blade configuration. Anvil style pruners have a straight blade that cuts the branch against a small anvil or block as the handles are squeezed. By-pass pruners use a curved cutting blade that slides past a broader lower blade, much like a scissors. To prevent unnecessary tearing or crushing of tissues, it is best to use a by-pass style pruner. Left- or right-handed types can be purchased.

Slightly larger branches that cannot be cut with a hand pruner may be cut by **lopping shears** (up to about 21/2 inches diameter) that have larger cutting surfaces and greater leverage. Lopping shears are also available in by-pass and anvil styles.

For branches too large to be cut with a hand pruner or lopping shears, **pruning saws** must be used. Pruning saws differ greatly in handle styles, the length and shape of the blade, and the layout and type of teeth. Most have tempered metal blades that retain their sharpness for many pruning cuts. Unlike most other saws, pruning saws are often designed to cut on the "pull-stroke."

Chain saws are preferred when pruning branches larger than about 10 cm. Chainsaws should be used only by qualified individuals. To avoid the need to cut branches greater than 10 cm diameter, prune when branches are small.

Pole pruners must be used to cut branches beyond reach. Generally, pruning heads can cut branches up to 2 inches in diameter and are available in both by-pass and anvil styles. Again, the by-pass type is much preferred. For cutting larger branches, saw blades can be fastened directly to the pruning head, or a separate saw head could be purchased. Because of the danger of electrocution, pole pruners should not be used near utility lines except by qualified utility line clearance personnel.

To ensure that satisfactory cuts are made and to reduce fatigue, keep your pruning tools sharp and in good working condition. Hand pruners, lopping shears, and pole pruners should be periodically sharpened with a **sharpening stone**. Replacement blades are available for many styles. Pruning saws should be professionally sharpened or periodically replaced. To reduce cost, many styles have replaceable blades.

Tools should be **clean and sanitized** as well as sharp. Although sanitizing tools may be inconvenient and seldom practiced, doing so may prevent the spread of disease from infected to healthy trees on contaminated tools. Tools become contaminated when they come into contact with fungi, bacteria, viruses and other microorganisms that cause disease in trees. Most pathogens need some way of entering the tree to cause disease, and fresh wounds are perfect places for infections to begin. Microorganisms on tool surfaces are easily introduced into susceptible trees when subsequent cuts are made. The need for sanitizing tools can be greatly reduced by pruning during the dormant season.

If sanitizing is necessary it should be practiced as follows: Before each branch is cut, sanitize pruning tools with either 70% denatured alcohol, or with liquid household bleach diluted 1 to 9 with water (1 part bleach, 9 parts water). Tools should be immersed in the solution, preferably for 1-2 minutes, and wood particles should be wiped from all cutting surfaces. Bleach is corrosive to metal surfaces, so tools should be thoroughly cleaned with soap and water after each use.

Choose a system:

It is not likely that you will end up with a satisfactory tree if you don't have a goal in mind when you start training and pruning a young tree. To get you off to a good start, we will discuss some of the training systems for apple trees. Bear in mind that if you are working with your own trees, you can do what you want with them. You may want to create your own system.

Nearly all apple trees are now grown on some sort of size controlling rootstock. Those that are grafted on to full size seedling roots are often varieties that have a dwarfing (spur) growth habit. The

*(Continued on next page, **Choose a System...**)*

(Choose a System...continued from previous page

combination of the rootstock and the variety, along with the training system, help to determine the eventual size of the trees.

The present trend is to grow small trees that start bearing within a year or two after planting. These little trees usually fall over if they do not have some type of support. For this reason the "slender spindle" and other support systems have been developed. Most systems involve either a permanent stake along side the tree or a trellis to hold the tree and support the branches with their load of fruit. Trees on semi-dwarf rootstock or larger may survive without staking but most will do best with some amount of support. Most non-commercial growers will not be planting enough apple trees to warrant a trellis system and some staking or slender spindle system will suffice.

Tree growth response:

As discussed before, apical buds send hormonal signals down tree branch that influence the growth of buds below it. Another concept that you need to understand involves the angle from vertical that the branch forms. The more vertical or upright, the faster the growth and the more vegetative the growth tends to be. As the angle from vertical approaches ninety degrees, the growth tends to slow and the branch enters the fruiting stage of growth more rapidly. Wide angled nearly horizontal branches produce more fruit buds or spurs.

Remember, late winter pruning induces more vegetative growth while pruning during the growing season, referred to as summer pruning, causes less regrowth and aids in size control.

Pruning Other Fruit Trees

Pear

Pear trees are trained along the same general lines as those recommended for apples. Heading back is undesirable because of the tendency of the tree to throw out soft terminal shoots, which are highly susceptible to fire blight. It is best to limit pruning to thinning-out cuts.

Cherry

Sweet cherry trees are trained to the modified leader system recommended for the apple. Special attention should be given to the selection of scaffold limbs because sweet cherry is subject to winter injury and splitting at the point where the limbs join the main stem of the tree. It is essential that the crotch angles be as wide as possible to ensure a strong framework.

A **sour cherry** tree with no strong branches at the time of planting should be headed to about 24 inches above the ground. Selection of laterals can be made at the beginning of the second year's growth. If it has some good laterals when planted, remove those lower than 16 inches from the ground.

Select about three permanent lateral or scaffold limbs along the leader, 4 to 6 inches apart and not directly over one another. Do not head them back, since this tends to stunt terminal growth.

In the following years, select side branches from the leader until there are a total of 5 or 6 scaffold limbs well distributed above the lowest branch along 3 or 4 feet of the main stem. The leader is then usually modified by cutting to an outward-growing lateral. After fruiting begins, pruning consists mainly of thinning out excessive and crowded growth each year to allow sunlight to filter through the tree.

Plum

The plum may also be pruned in a manner similar to the apple. European and prune types generally develop into well-shaped trees, even if little pruning is done. Thinning out excessive growth constitutes the bulk of pruning after heading back to 30 to 36 inches at the time of planting. Varieties of the Japanese type are usually a little more vigorous, and may need some heading back as well as thinning of excessive growth after they come into bearing.

Peach

Peach trees are usually trained to the open-center system. Newly planted trees should be headed to about 30 inches in height, just above a lateral branch or bud. If the tree is branched when it comes from the nursery, select 3 or 4 laterals that are well spaced up and around the trunk for the permanent scaffold limbs. The lowest limb should be about 15 inches and the highest about 30 inches from the ground. Cut these back to two buds each, and remove all other laterals.

*(Continued on next page...**Pruning...Try it**)*

(Pruning...Try it, continued from previous page)

Now try it:

If you are starting with a new tree, avoid much action the first year. Plant it, feed it, water it, support it and observe it the first growing season. Prune only if corrective work must be attempted.

As the second spring approaches, bend down any limbs that are growing too upright and vigorously. Do this with spreaders, by tying down, or with weights. If a branch is below horizontal or is growing too slow, it may be tied more toward vertical. Allow the tree to start bearing and the fruit load will take over and bring most branches down in subsequent years. Pruning the first few years should be limited to removing a minimal amount of unwanted growth.

When the tree approaches the desired height, the upright growth may be limited by letting the central leader set fruit, by bending down the leader, by heading back to a weak side branch and making it the new leader, by summer pruning the leader or some combination of these efforts.

Always observe the result of any action taken and adjust future training and pruning accordingly. Each variety is different and only through observation will you know how the tree responds. Have fun!

By **Steve Whitcher**, The Guru-Gardener
www.Guru-Gardener.com

HAVE YOU READ THESE?

Do you agree with these reviews? Did you find them useful or not? Why?

The Backyard Orchardist: A Complete Guide to Growing Fruit Trees in the Home Garden
by Stella Otto, January, 1995, Otto Graphics
ISBN: 0963452037
Review #1 - A helpful guide for anyone with an orchard...has helped my husband and I correctly plant and maintain our peach and apricot trees. It's easy to follow and has many helpful hints for the novice orchardist.
Review #2 - The backyard orchardist-- a near miss From the reviews I had expected much more from this book. I regret spending to money to buy it. ... found the book to be a bit short on specifics. I was able to find the much more comprehensive information I needed (not only on pruning, but on pest management, fertilization, irrigation, etc.) from various state agricultural extension services--on line.

The Backyard Berry Book: A Hands-On Guide to Growing Berries, Brambles, and Vine Fruit in the Home Garden, by Stella Otto, April, 1995, Otto Graphics, ISBN: 0963452061
Review #1 - not the best bang for your buck!
Review #2 - A Good Addition to Your Gardening Library
Review #3 - THE BERRIEST!

American Horticultural Society Plant Propagation: The Fully Illustrated Plant-by-Plant Manual of Practical Techniques, by American Horticultural Society, Peter Anderson Alan, Toogood Dorling
DK Publishing, April, 1999 ISBN: 0789441160
Review #1: Holy Cow! If you have a garden full of veggies, or a yard with trees, shrubs, and rose bushes, this book really is a must for you!
Review #2: Absolutely Excell...ah..nnnnt! With this book you have the knowledge to start just about any plant you can think of.
Review #3: You Must Have This Book. I have to say this is the best Garden book out of all my Garden books ... all the pictures and details... you must have if you love to garden.

The American Wine Society Presents Growing Wine Grapes, by J. Loenholdt T., Zabadal A. Hunt, H. Amberg, J. R. McGrew, September, 1994, G.W. Kent, ISBN: 0961907207
Review #1: Western States Beware.....
Review #2: Wine and Cuisine
Review #3: If you're gonna plant a few grapes, read this book!

Share your ratings and recommendations for good source-books for fruit growers.
These are from www.book-reviews.info/.

Websites to See

Lorette System of Pruning:
http://home.earthlink.net/~piper3/fruit.html
Backyard Fruit Growers – PA:
http://www.sas.upenn.edu/~dailey/byfg.html
Best Resources for Backyard Fruit Growers:
http://www.sas.upenn.edu/~dailey/toplist.html

"BIRD BLOOD"
alias BERRY SYRUP

What does one do with leftover packages of frozen raspberries, blueberries and Cascadeberries? Some forty years ago I discovered that one could make deli-cious syrup by juicing all of the berries together. It was done the MCP pectin method--cooking facial tissue with the berries and then placing the mixture in a muslin bag and squeezing the juice from it.

MCP pectin is in a box along with Certo, etc. in every grocery store. The company used to make other pro-ducts but now I believe sell only Slim-Set and the regular pectin for jam/jelly making.

I learned of doing this about 1957 as I visited one of our home economics classes where I was a principal. Believe me, I have received many skeptical eyes when I shared this method. It makes me wonder - Do I have any of those kits left?

(At this point, I just had to ask him about the facial tissues & MCP pectin ... Editor)

Many years ago the Mutual Citrus Products came out with a method to remove juice from berries by first boiling about ten unscented tissues with water for a few minutes. Then one drained it in a sieve, mixed it with about six cups of crushed berries, brought this to a simmer and then put that mixture in a muslin bag, which the company furnished in the kit-along with a couple of tools that held the bag open [it had several grommets in the top] and another that held the top of the bag as one twisted it. Some might wonder how one pressed the muslin bag filled with the hot berry mixture. I put in a colander with a receptacle to hold the juice and then pressed the bag with a potato masher

The cellulose allowed the juice to flow thru and kept berry particles from clogging the muslin. One could twist the ball bone-dry, throw out the pulp and do another batch. When thru, one just laundered the muslin bag. It looked purple and ugly, but really it did work. As I remember the kit cost about $1.50 -- maybe had to send in some tops too--don't remember that part.

Nowadays it is much easier using a steamer*. It makes a wonderful syrup for hotcakes, waffles and over ice cream, or dribbled over an empty plate on which one places chocolate cake. The first time we used it the kids, then in grade school, for some reason named it "bird blood", maybe because of the color. Today, in their fifties, they still expect their Christmas incomplete without a jar of "bird blood". It also makes a great gift to friends along with homemade cookies and apple-walnut cake. Lately I have added it to the making of smoothies.

The syrup can be made thinner or thicker by using less or more lemon juice. And of course the dominant berries have some bearing too.

Boil together:

Six cups of juice
Juice of half a lemon
Half a cup of corn syrup
One pkg MCP pectin

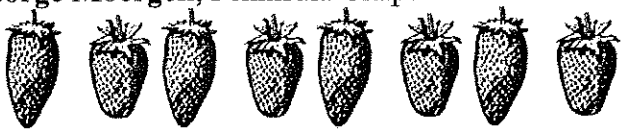
Bring to a rolling boil for one minute and add five cups of sugar. Bring to a slow boil for two more minutes.

PS: If one has too much juice, it can be canned or frozen for use later.

PPS: My wife was one of the doubters, but she did see it work many times and made jelly from it.

PPPS:*The steamer is much simpler but I have another story about that. One day while the juice was running down the tube on the juicer, the plastic tubing came off and hot, red juice ran onto the kitchen floor--just before my wife came home. I now use the portable propane heater outside.

George Moergeli, Peninsula Chapter



SUMMER BERRY-CARE

Cut all raspberry canes that bore fruit this summer back to the ground. The new canes growing this year will fruit next season in the case of summer bearer. Everbearers will fruit on the tops of new growth this fall and on the bottoms next season. Leave about 7 to 10 strong new canes per plant. Cut out all weak, skinny ones and don't let them come up between the rows.

Some folks have reported more mummyberry disease than usual on blueberries this year. The most obvious time to observe it is as berries approach maturity. Infected fruit become a reddish buff or tan while the healthy ones are waxy green. By the time the good berries are ready for harvest, many of the diseased

*(Continued on next page..**Berry Care**)*

(Berry Care continued from previous page)

ones will have fallen. Mature mummified berries are gray and hard. Next spring these will produce spores that will infect healthy shoots and fruit.

Cultural control is very simple. Pick and destroy any mummified fruit that you can. Cultivate the soil under your plants in the fall before leaf drop and again in the spring around bud break to bury mummies. Add a fresh layer of mulch after the spring cultivation.

Don't forget to sketch your garden and jot down information for next year. We all think that we will remember. I guarantee you that next spring, when you are figuring out your rotation layout, you will be glad that you wrote out notes.

Mary Robson, WSU Area Extension Agent
Regional Garden Column Sept 1, 2002

How to repair what tent caterpillars munched asunder

While less of an issue for native trees, more at risk are ornamentals and edibles, especially fruit trees, garden roses, raspberries and other cane fruits, and blueberries.

Young or recently transplanted trees and shrubs are also at risk, since they don't have intact, established root systems. To help any of these plants recover, here's what they need:

- Water
- Compost
- Mycorrhizal treatments

No fertilizer till refoliation's complete and then nothing stronger than a 5-5-5, and choose one that includes beneficial bacteria and mycorrhizae.

Affected plants should be watered through the summer and to keep soil moist and suppress competitive weeds, mulch with mature compost. **Do not** use bark or wood chips on stressed plants.

To assist the root system in refurbishing the plant, use a **mycorrhizal treatment**, such as tablets or powdered soil drench, allowing roots to take up as much as 100 times more water and nutrients from the soil. For mature fruit trees, try spacing the mycorrhizal tablets about 3 feet apart. This is less than the recommended dose (10 per caliper inch), but has proved effective with older fruit trees in my experience.

By now, it's too late to use Bacillus thuringiensis **(Bt)** on tent caterpillars, since they are ready to perform their final molt and turn into moths. Products such as **spinosad** (a natural bacteria) and **pyrethrins** will kill tent caterpillars on contact, preventing them from turning into moths that will lay eggs. Use these products with caution, spraying when bees are not present (early and late in the day) and keeping children and pets away from the garden.

By **Ann Lovejoy,** Special to the Post-Intelligencer
Highlights from the Thursday, June 5, 2003 column:

Insects Thrive on GM "pest-killing" crops

Two papers on this important topic:

1) "Insects thrive on GM 'pest-killing' crops"
By Geoffrey Lean, Environment Editor Independent on Sunday, 30 March 2003

Genetically modified crops specially engineered to kill pests in fact nourish them, startling new research has revealed. The research – which has taken even the most ardent opponents of GM crops by surprise - radically undermines one of the key benefits claimed for them. And it suggests that they may be an even greater threat to organic farming than has been envisaged. It strikes at the heart of one of the main lines of current genetic engineering in agriculture: breeding crops that come equipped with their own pesticide. .....**AND...**

2) "Could Bt transgenic crops have nutritionally favorable effects on resistant insects?"
By Ali H. Sayyed 1, Hugo Cerda and Denis J. Wright, Dept. of Biological Sciences, Imperial College London; U. Simon Rodriguez, Caracas, Venezuela

We present an idea that larvae of some Bacillus thuringiensis (Bt) resistant populations of the diamondback moth, Plutella xylostella (L.), may be able to use Cry1Ac toxin derived from Bt as a supplementary food protein. Bt transgenic crops could therefore have unanticipated nutritionally favorable effects, increasing the fitness of resistant populations. This idea is discussed in the context of the evolution of resistance to Bt transgenic crops.

See also:
http://millennium-debate.org/indsun30mar03.htm
http://www.mindfully.org/GE/2003/Insects-Thrive- On-Bt30mar03.htm

!!! DISEASE ALERT !!!

Officials from WSDA, APHIS and the Oregon Department of Agriculture have been working since mid-May to determine if any infected plant material was shipped from the Oregon nursery into Washington. At this time, they believe six nursery and landscape businesses received plants in the last seven months. WSDA is in the process of tracking and testing suspect plant material at the other businesses.

The serious plant disease caused by a fungus-like organism and known as **"sudden oak death"** has been confirmed in four rhododendrons at **Furney's Nursery in south King County**. All four plants were shipped to the nursery from its Portland-area affiliate, where the disease was detected last month. Sudden oak death attacks 20 types of plants that are common to the Pacific Northwest, such as Douglas fir, big leaf maple, **huckleberry**, and rhododendron, are susceptible, but are not likely to die. For more information go to the WSDA Web site at http://agr.wa.gov/

Cheryl Hagelganz, Secretary
Department of Plant Pathology, WSU

Puget Sound Regional Fig Test

The Puget Sound Regional Fig Variety Test is continuing with two participants reporting several figs having set on their trees which should ripen this year. We now have seven varieties included in the test with more to be added in the next few years. First reasonable results are expected this year and some reliable information for selecting fig varieties starting in about 2005.

We started the test in 2000 with participants in Sequim, San Juan Island, Sedro Woolley, Bonney Lake, Roy, and Suquamish. Some of those have been dropped from the test already for the sin of failing to plant the trees they were given or failing to report progress once yearly. I am interested in "pushing the envelope" by replacing former participants and adding participants in Lynden, Darrington, Enumclaw, Eatonville, and Olympia if such volunteers are willing. If you would like to join the Fig Test, please contact me at kiwibob@scn.org Visit my Website: http://www.geocities.com/kiwibobg/kiwifruitsalad.html

Kiwibob Glanzman

Modern Wojape

Wojape (Wo-zha-pee) A pudding, a dessert.....
a classic Plains Indian dish that predates most of us living now.

5 lb. bag of berries (blueberry, raspberry, cherry or a mix), fresh or frozen if necessary
8 cups of water 2 cups of sugar cornstarch

To a 5 quart pot (enamel or stainless steel) add all the berries and smash them with a potato masher. (If you are fortunate enough to have a food processor this would work fine also. However, stop just short of puree, you want fine pieces throughout.)

To the smashed berries add the water and sugar. Boil (lightly) this mixture (Approximately 15 to 20 minutes) until everything is cooked. Thicken to desired thickness with cornstarch that has been dissolved in cold water.

Serve warm and eat with Indian Fry Bread. Dip the bread into the Wojape and eat in this manner.

Many thanks for this recipe go to: Ms. **Stacy Winter** of Rapid City, South Dakota.

Peanut Butter, the Healthy Way

The healthiest peanut butter contains only ground peanuts. The main problem with natural peanut butter is that the solids will eventually settle out as the peanut oil rises to the top. Natural peanut butter becomes hard in the bottom of the container after a month or so.

Conventional manufacturers take advantage of this problem by removing the peanut oil (a valuable oil) and replacing it with hydrogenated oils. This process keeps the peanut butter creamy smooth forever. The main problem is that hydrogenated oils are not good for people and should be avoided. Most junk food contains hydrogenated oils. The negative health effects of hydrogenated oils include obesity and heart disease.

But a solution to this problem is easy.

1. Buy peanut butter containing only peanuts. I love the real oily peanut butter
2. When it starts to get hard, just add some olive oil and stir. Voila, the peanut butter is smooth and creamy again. As an additional health bonus, the body gets a little extra olive oil, something that is good for your body.

Harry & Debbie Burton of Apple Luscious Organic Orchard, Salt Spring Island, BC

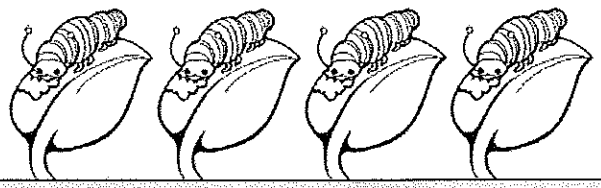
My Garden Disaster...

When my husband and I purchased our Port Angeles acreage, it came with a garden and orchard, both of which were overgrown and hadn't been pruned in years. Because we had small children at the time, we were limited in the number of days we could spend there and the amount of work we could do but we approached all of our tasks with enthusiasm. We also appreciated all the wildlife we saw, especially the mother deer and their fawns in the spring. They would leisurely browse through the overgrown orchard and raspberry and boysenberry canes but there was enough for everyone so we could only half-heartedly chase them away when we saw them.

After the first year had passed and I'd pulled nettles and other weeds from the patch, we decided that a good spring vacation plan would be to renovate the berry patch. We had purchased a Troybilt tiller and with all the enthusiasm born of misplaced knowledge, we set out to make the patch better. We dug up every cane, keeping the best ones to replant. We then rototilled composted manure into the rows and replanted the canes 18" on center – just like the books say to do. What a sense of satisfaction came of seeing the newly planted rows after a week's worth of labor! We are not talking small berry patch here – it was eight 75 foot rows of berries that we renovated. We left for our Seattle house assured of the knowledge that come summer we would have berries galore and a patch that wouldn't need any further work on it for years to come..

We came back a week later to disaster. The deer can browse with impunity when there's lush growth at the ends of the rows. But when there's only one cane every 18 inches, they will take a bite from every new cane and kill it. We lost <u>all</u> of the raspberries to deer and felt like a couple of city slickers. The patch never again bore fruit for us. And Bambi and his mom? – well, they no longer looked as cute when they came to visit and my husband started referring to them as rats with hooves. Now, we do things on a smaller scale and we'll wait until we move to our property before we try to establish another berry patch.

Patti Gotz, Seattle Chapter



TENT CATERPILLAR WARS

The current crop of tent caterpillars began in mid-July, 2002, with large tan moths performing their mating dance under the streetlight. They are identifiable by a broad-stroke V on their wings when at rest. The July 13th Bremerton Sun had the following letter, "...put out a tub of water with a light clipped on the side and add about a tablespoon of oil to the water, we put out our first tub last night and there were hundreds of dead moths in the morning."

I put out two traps. Results: In two weeks, 1327 tent caterpillars were drowned. Moths and motor oil are a gooey mess. Moths can fly away from plain water. Soapsuds obscure the reflection of the light. This July, I'll try wetting agents, like window cleaner, in the water.

Tent caterpillar eggs are pads and bracelets of grey Styrofoam-like material on deciduous trees. On fruit trees, some of these can be found and removed. On tall trees, the eggs are safe from all but natural predators.

Trichogamma wasps are 1/32" long wasps that lay their eggs in tent caterpillar eggs. Gardens Alive and Gurney's Seed Company sell trichogamma wasp eggs. In the fall of 2002 I set out $22.85 worth of the wasp eggs in my yard. In April, the tent caterpillars hatched with the following results: Out of 94 caterpillar egg cases: 47 (50%) all hatched, 9 (10%) none hatched. 38 (40%) some hatched.

Nests of small caterpillars can be tossed aside and they won't find their way back. They will climb the nearest wood post so, the artistic among us can use them to decorate a fence post or mail box.

This article lists some methods of attacking tent caterpillars. It does not include tachinid flies or Bacillus thuringiensis (bt). Sparing hornets nests also helps. Good luck.

Jim Bailey, Peninsula Fruit Club

Harvesting & Storing Apples

Many home gardeners have a good crop of apples on their trees. If your apple trees are overcrowded with fruit, it would be wise to brace the branches to prevent serious damage to your trees in the event of high winds. Branches may be "propped" from the ground with notched boards. Use cloth, burlap or rubber between the branch and the prop, to reduce tree injury.

Apples are ready to harvest when the seeds turn brown. You can also determine maturity by tasting the flavor of the fruit. **Delaying harvest** after the seeds have turned brown may result in a deterioration of the fruit mealiness of the apple. This is an indication of over maturity. **Picking** your apples **too early** results in a reduced quality (less sugars). If you are using the fruit for making jelly, premature harvest may be desirable.

If your apples have a "bumpy" appearance with brown streaks running through the fruits, they have been infected with **apple maggots**. These tiny maggots tunnel through the flesh; later these tunnels turn brown. Spraying during late June and July is necessary to prevent this problem. However, you can reduce the build up of this insect problem by picking up all fallen apples immediately. This sanitary practice goes a long way in controlling apple maggots.

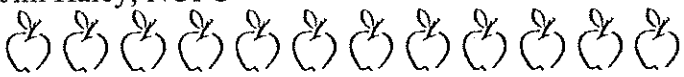
To get **maximum storage life** from your apples, pick them when they are fully mature, don't bruise the fruits, cool them rapidly and store at the recommended temperature and humidity. Reducing the temperature is the major factor in retarding spoilage. The closer you keep your apple to 30 degrees, the longer they will keep.

Apples remain alive after they are picked and continue to respire or "breathe". The higher the storage temperature, the more rapid the respiration and the more rapidly the apples will spoil. For ideal storage, maintain a humidity of 85-90 percent. If you have trouble finding a spot with this type of humidity, you may store small quantities of fruit in plastic bags. As a general rule, early ripening varieties don't store as well as late maturing varieties such as **Haralson**. Light frosts are not harmful to apples while still on the tree .

SURE-FIRE APPLE STORAGE TIP

Learned from a friend in Wenatchee: store apples in their cartons slipped into large plastic garbage bags and sealed shut with a twist-tie. Keep cool. Keep the apples cool too. Get out what apples you plan to use for a week at a time and close it back up snugly – they'll last all winter, unless you eat them all!

Jim Haley, NOFC



WESTERN CASCADE FRUIT SOCIETY MEMBERSHIP APPLICATION

NAME_____ NEW ADDRESS? ☐

_____ NEW ☐

STREET ADDRESS_____ RENEWAL ☐

CITY_____ STATE_____ ZIP_____

E-MAIL_____ PHONE_(____)_____

(Check or circle which Chapter you're joining...)

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☐ North Olympic ☐ Peninsula-Kitsap ☐ Piper Orchard ☐ Tahoma $15.00 Annual Dues

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☐ Donation for Western Washington Fruit Research Foundation/ Mt. Vernon Amount $____ Gift

WHAT ARE YOU - OR WOULD YOU LIKE TO BE - GROWING? **$_____ TOTAL**

Circle which ones:

Apples Pears Peaches Plums Cherries Kiwis Nuts Berries Other _____

How long have you been gardening/growing? _____; Special interests:_____

Make checks payable to **WESTERN CASCADE FRUIT SOCIETY** and mail to:
WCFS Treasurer, 1007 NE 71st Street, Seattle WA 98115

Washington State University
Skagit Display Gardens

"GARDEN DAZE"

Saturday, July 26, 2003
10:00 a.m. to 2:00 p.m.
Barbecue lunch at noon!
Donation:$ 5.00; includes lunch
Free for children under 12

Featured Activities:
Guided Tours of the Garden
Hands - on activities
Fruit tree budding demos
Espalier lecture
Children's activities
Variety & Cultural trials
vegetables
Door prizes
Featured speakers

Participating Gardens:
WWFRF Fruit Demonstration Garden
Master Gardener Discovery Garden
Skagit Valley Rose Society
Skagit Vegetable Trials
Washington Native Plant Garden
Skagit Valley Rose Society

Sponsored by:
Skagit Vegetable Trials
Washington Native Plant Society, Salal Chapter
Washington State University
Western Washington Fruit Research Foundation
WSU Cooperative Extension Master Gardeners

Washington State University, Mount Vernon Research & Extension Unit
16650 State Route 536, Mount Vernon, WA 98273
For additional information call Andy Anderson at (360) 391-0713

Our goal: to promote public interest in the Washington State University Skagit Display Gardens and the public support of Skagit County agriculture and agriculture in general.

Western Cascade Fruit Society
1007 NE 71st Street
Seattle WA 98115-5636

Address Service Requested

Non-Profit Org.
U.S.Postage
PAID
Bellevue, WA
Permit # 369

Dec 2003

Hildegard Hendrickson
2559 NE 96th
Seattle WA 98115-2406

Check your label. If the renewal date is highlighted in yellow, this is your last newsletter.