



Seen about at grafting and scion exchanges.....



Marilyn
Couture OOS
Jean
Williams PFC



Bill Horn, Tahoma

Lori Bracken
STFS, OOS,
was awarded a
life membership
in WCFS.



Gary Williams, PFC

Inside:

Ft. Vancouver apple	p 2-3
Pierce County Gleaning	4
Triploid Apples	5
Book of Pears Review	5
Fast Track Breeding	6
Marty's Discovery	7
Red-fleshed apples	8
Root-stock mistakes	9
Chill Hours	9
Blueberry Viruses	10
WSU Ext. classes	10
Chapter News	11



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

History of the “Fort Vancouver” apple and tree

Larry I. McGraw, OR Hist. Society Horticulturist, 1971

Probably the oldest living apple tree in North America and possibly of the Western Hemisphere grows on the roadside near the site of old Hudsons Bay Company’s Fort Vancouver now Vancouver, Washington.

The Canadian apple seedling is the remaining vestige of the first orchard of the Oregon Country. The seeds of which were planted by Dr. John McLoughlin.

Accounts of the orchard’s beginning is stated by Dr. J. R. Orndwell (First president of the Oregon Horticultural Society), David McLoughlin (son of Dr. John McLoughlin), and Mrs. Whitman (wife of Marcus Whitman), and others.

“The introduction of the first cultivated fruits in the country in 1824 by employees of the Hudson Bay Company is a pretty story with a touch of romance. At a dinner given in London in 1824 to several young men in the employ of the Hudson Bay Company bound for the far distant Pacific Coast, a young lady at a table, beside on the young gentleman, ate an apple, carefully wrapped the seeds in a paper and placed them in the vest pocket of the young gentleman, with the request that when he arrived in the Oregon Country he should plant them and grow apple trees. The act was noticed and in a spirit of merriment other ladies present from the fruits of the table, put seeds of apple, pears, peach and grape into the vest pockets of all the gentlemen. On their arrival at the Hudson Bay company at Vancouver the young gentlemen gave the seeds to the company’s gardener, James Bruce, who planted them in the spring of 1825. From these seeds came the trees now growing on the grounds of the Vancouver Barracks as transferred to the Government on the disbanding of the company.

The apple and the pear trees, and the grapevines from these seeds are yet annually bearing fruits on the grounds of the government barracks at Fort Vancouver. Not long ago I visited these seedling trees, now 80 years old (1910?) hoary chroniclers of time, yet showing a vigorous growth. Mrs. Gay Hayden of Vancouver informed me she had eaten fruit from these trees for fifty-four years. The fruit is not large, but of fair quality. Fortunately Government does not allow a tree to be removed or destroyed without an order from the department.”

“The present intense interest in the development of the apple growing industry in the Pacific Northwest tends to invest the oldest apple trees of this region with something of a halo. The tender care with which the now historic tree in the reservation at Vancouver, Washington, will be fostered is but an

admirable instance of the connect ---the ever enhancing worth of memorials.

The romantic story associated with the bearing of the seeds for the Vancouver apple trees from London to the Columbia lends a charm to this lone survivor; but if our interest is in the lined ancestry of a great and growing industry ought we not to erect a monument about half a mile north of Milwaukie to the memory of Henderson Luelling where he and his son Alfred planted the seven hundred or more grafted fruit trees known as the “Traveling Nursery,” which they brought across the plains from Henry County, Iowa, in 1847?”

The story of the identification of the Vancouver tree as it appeared in The Morning Oregonian of January 22, 1911 is as follows:

“Vancouver Barracks, Washington, January 21.---The discovery this week of the oldest apple tree in the Northwest, which has borne fruit for more than eighty years, has aroused much interest, and hundreds have visited the past just to see the tree with a remarkable record.

Colonel George R. McGunnegle, commander of the post, as soon as he was convinced by A. A. Quarnberg, district fruit inspector, that this tree was planted eight-five years ago, gave orders to have it preserved. A suitable fence around the base of the tree will be built, and a stone monument, with a short history of its remarkable record, will be placed in the enclosure. Relic hunters who desire a piece of the tree will be severely punished if caught marring the oldest inhabitant of any apple orchard in the Northwest.

The fact that this tree, after eighty years of bearing, should bear fruit each year, is regarded as of utmost importance to the apple-raising industry in the Northwest. This tree is located in the southeast corner of the reservation, in front of the chief commissary’s office. So little was thought of the scrubby-looking relic of bygone days that it was used to anchor a guy wire to. This has been removed. The tree is sixteen inches in diameter and about twenty feet high.”

“J. I. Townsend, an American naturalist, arrived at Fort Vancouver September 16, 1836, and after looking over the farm and examining its products, says: ‘The greatest curiosity, however, is the apple, which grows on small trees, the branches of which would be broken without the support of props. So profuse is the quantity of fruit that the limbs are covered with it, and it is actually packed together precisely in the same manner that onions are attached to ropes, when they are exposed for sale in our markets.’

cont. p. 3



Cont. Fort Vancouver Apple Tree

“On December 6, 1835, Dr. Samuel Parker, who arrived at Fort Vancouver several weeks before that date says: ‘Fruit of various kinds, such as apples, peaches, grapes and strawberries, for the time they have been introduced, flourish, and prove that the climate and soil are well adapted to the purposes of horticulture.’”

The Oregonian – January 7, 1970, “Vancouver, Wash. (Special) – Vancouver officially retained the care and feeding of the state’s oldest apple tree Tuesday when the City Council approved a lease agreement with the U. S. Government.

Two Vancouver men, C. J. Moss and A. A. Quarnberg, found a reference to the planting in an old diary in a London Museum and in 1917 located the original tree as described in the diary.

In the following years Quarnberg enlisted the aid of Sen. McNary to save the tree when the Army proposed to clear the land. Quarnberg, a pioneer horticulturist of the Vancouver area, finally won the fight during which he opposed the Army and several high ranking government officials. Through his continued efforts and those the Fort Vancouver Historical Society, the tree has been preserved and last fall bore fruit as it has for more than 140 years.”

The Oregon Journal – Feb. 1, 1971—Plans for a new interchange at the juncture of Interstate Highway 5 and State Highway 14 in lower Vancouver, near the Interstate Bridge, called for acquisition of seven-tenths of an acre of land from the property of the Fort Vancouver Historic Site –including the Old Apple Tree site.

That local watchdog of historical preservations, the Clark County Historical Society, along with the National Park Service advisory council on historical preservation, responded with appeals for a revision of routing that would save the tree.

State and Federal highway officials made further studies and agreed that alternate plans could be used. No small factor in the saga of the tree was the loving watchful care of C. J Moss, an 84-year old Vancouver man who long functioned as the tree’s unofficial but faithful custodian. Moss recently turned this trust over to Harley Mayes a Vancouver nurseryman.”

The Columbian-Feb. 10, 1970, stated, with information provided by this writer—“The variety of apple tree which is represented by the aged tree standing near the site of old Fort Vancouver is to be included in a pioneer orchard being developed at Sauvies Island, under the sponsorship of the Oregon Historical Society.

McGraw believes the tree still surviving at Vancouver may be the oldest apple tree in North America. (Search for older varieties has been conducted for several years nation-wide with no response. Past records of old fruit trees in the east have exceeded the Fort Vancouver variety age but at this time trees of an older age cannot be substantiated).” This writer is of the opinion that the Fort Vancouver apple variety indicates parents of either “Yellow Belle Fleur” or Calville blanc d’hiver” and of English sorts.

Tree measurements on November 10, 1971 are measured from the ground at a four feet in height level. The tree’s circumference at that measurement is six feet and 3 inch in circumference or 23.87 inches in diameter - A growth of about eight inches in diameter since 1911.

Since this variety was the first apple variety in the Oregon Country it is thus the number one tree in the Pioneer Orchard of the Oregon Country located at Sauvies Island in the Powell Territorial Park under the sponsorship of Multnomah County and the Oregon Historical Society.

Editor’s Note:

In 1979 Larry learned that the Burlington-Northern Railroad and the Washington State Highway Department had suggested making way for tracks and roads by moving the 130-year-old Fort Vancouver Apple tree—the last remaining vestige of the fort’s original orchard. Its seeds, along with the original settlers, had been carried there by sailing ship. Convinced that such disturbance would kill the ancient tree, Larry traveled to Portland to recruit the Home Orchard Society board to oppose that proposal. The state’s decision-making process took some three years, during which time Board Secretary Marian Dunlap wrote letters to Washington’s Governor Evans and Senator Jackson, who proved a loyal supporter; and at every Fort Vancouver Park Bureau hearing, Marian argued for the tree’s preservation, ultimately converting others to that opinion. The eventual result was that all transportation was diverted around a small park—complete with memorial plaque and enclosing fence—protecting one of the oldest living apple trees in America!

Marian Dunlap was Editor Marilyn Couture’s mother.

* * * * *

Highlights of WCFS Board and General Meeting March 19, 2016

1. Fruit Grant proposals – Revised time line, new funding cycle and limits approved.
2. Election of Officers – New Secretary Kari Seybolt-Murphy
3. Next meeting – Teleconference June 18, 10:00am
4. Election of Directors: Jackie Furrey, PFC – 2019 and Randy Lee, Snohomish – 2019
5. WCFS By-Laws Amendment Accepted – No more than nine Directors; Annual audit performed by 3 members, one of whom is a Board member.
6. Lori Brakken made a permanent life member.

* * * * *

The Gleaning Project of Pierce County...has made me A LAZY GARDENER!!
Charles Polance, Tahoma

Can you blame me? You be the judge. Here's my story and I'm sticking to it:

August was here. I needed APPLES! Lots and lots of them!! My big, powerful cider press was itching to start squeezing some juice. I advertised on Craigslist hoping to score some early varieties being grown in Pierce County. Let's see, according to the Raintree catalog, early ripening cultivars are William's Pride, Pristine, Zestar, Akane and a few others. My energy level was high. Let's get picking!

After a week on Craigslist I finally received my first reply! A helpful guy saw my "Wanted" ad and suggested that I was looking for apples "in all the wrong places." HUH? "Why don't you join the Gleaning Project?" Well, I did and BAM! An immediate return E-mail welcomed me: "Thank you for registering as a volunteer with Pierce County Gleaning Project.

You will find all that you need to know about how to sign up for harvests and how they work on our web pages. Start at the home page, Pierce County Gleaning Project, and click on the Volunteer button. On that page you will find information and other resources." WOW! Is that all there is to it?!? I was off and running.

The next day I was given the opportunity to sign-up for several picking projects; two (2) days later I was on a ladder harvesting figs from 2-large trees in my area. I was pleasantly surprised! Soon I was harvesting Italian plums, then apples...

LOTS OF THEM! The program coordinators provide all the ladders and baskets to the team for the agricultural bounty.

Where does the produce go? At least 50% of the food from fruit tree harvests is donated, with the other 50% divided between the volunteer harvesters and the homeowner (25% for each). At my first excursion, fig tree owner didn't want any more figs (that's why he called the Project) and the Gleaners found the figs too perishable to take to food banks. Thus, the team members were allowed to keep all they picked!

As the months progressed, I began to learn who some of the big donors were in Pierce County. Gleaner teams

journeyed to Picha Farms to pick raspberries, pumpkins and corn. Duris Cucumber Farm donated thousands upon thousands of pounds of (you guessed it) cucumbers over the last several seasons. Scholz Farms always has surplus rhubarb to harvest, etc. These major contributors along with the numerous small backyard fruit growers receive a tax deductible donor receipt.

A monthly newsletter keeps us well-informed of all developments. I find it interesting to share that from June to November, 102 Harvest Pierce County volunteers attended 96 harvests with the Gleaning Project. The overall harvest this past year included everything from beets, squash, beans and strawberries...even kiwi!

My gardening plans and outlook have changed forever. I plan to spend LESS time and effort planting, fertilizing, watering, etc., and MORE time and energy PICKING! This lazy gardener is having a restful winter and can hardly wait to reconnect with the Gleaning Project come spring.

-Chuck Polance,
Tahoma Chapter

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2016 NAFEX ANNUAL MEETING

July 28-30, 2016

Lancaster County, Pennsylvania

CALL FOR PRESENTERS: We have 20-minute and 30-minute time slots for presentations. In a survey a few years ago, many members said they desire home grower reports as well as professional. Members are looking for experienced growers of fruits and berries. Your contribution as a speaker is solicited.

Contact any of the following program co-chairs:

- Tom Knaust, Program Chair, at tknaust@gmail.com •
- Justin Holt, justinveazeyholt@gmail.com •
- Taylor Yowell, tyowell@yahoo.com •
- Taylor Malone, malonets@goldmail.etsu.edu Pomona

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Triploid apple varieties

<http://www.orangepippintrees.com/articles/fruit-tree-advice/triploid-apple-varieties>

Most animals have two sets of chromosomes, inherited from the mother and father respectively, and are known as "diploid". This is true of many plants too, including the majority of apple varieties. However several important apple varieties have three sets of chromosomes rather than two, and are known as **triploids**.

Triploid apple varieties have a couple of important characteristics which need to be considered when growing them:

- Their pollen is effectively sterile and cannot be used to pollinate other apple trees.
- They are usually not self-fertile, and therefore need another compatible apple variety nearby to pollinate them. (Some triploid varieties have a degree of partial self-fertility).

In short, if you are planting triploid varieties, it is best to make sure you have the necessary pollinator trees nearby. You will need either one self-fertile apple variety (or crab-apple) or two other varieties which can cross-pollinate each other as well as the triploid variety.

Although the pollination requirements might be inconvenient, triploid varieties have several advantages which make them desirable for the home or community orchard:

- They usually produce vigorous trees, which can support large crops.
- The apples are often quite large.
- They usually display a good degree of natural disease resistance.
- They can often survive in difficult conditions.

It is perhaps no coincidence that many well-known heritage apple varieties are triploids, because our ancestors would have found their large size and productivity very useful. Some of the best-known triploid varieties are:

- Ashmead's Kernel
- Belle de Boskoop
- Blenheim Orange
- Bramley's Seedling
- Gravenstein
- Jonagold
- Crispin / Mutsu
- Ribston Pippin
- Newtown Pippin
- Roxbury Russet
- Winesap
- Zabergau Reinette

* * * * *

Book Review: *The Book of Pears*

Author Joan Morgan.

Joseph Postman, Plant Pathologist/Germplasm Curator, USDA Agricultural Research Service, Corvallis, Oregon. joseph.postman@ars.usda.gov.

Interest in growing heirloom fruit and vegetable varieties has surged in recent decades. The diverse flavors and textures and shapes and colors available to those of us who grow our own eclipses what is available in commercial markets. This renaissance in heirloom fruit interest has also produced a wealth of colorful books enticing us with lovely illustrations and delicious descriptions of apples, and apples, and apples, and apples...

Finally, however, a magnificent book of pears has joined the shelves of available fruit references. Joan Morgan's just-published *Book of Pears* is more than a mere collection of detailed descriptions, "how-to-grow" instructions, and magnificent illustrations. Indeed, it is all of these things, but *The Book of Pears* is so much more. This masterpiece, written by a world-renowned pomologist, is an eloquent journey through centuries and across continents. In Morgan's book, we follow the wild relatives of today's shapely, luscious pear from ancient forests to royal courtyards, from farmer's pantries to regal kitchens and bakeries, and from ancient Greece and Rome to the New World.

Not since the days of Bunyard (*A Handbook of Hardy Fruits*), Hedrick (*The Pears of New York*), Hogg (*The Fruit Manual*), and the Downing brothers (*Fruits and Fruit Trees of America*) more than a century ago, have we seen such a thorough collection of information about pear history and cultivars. As the curator for the U.S. Department of Agriculture's world pear collection, many of the pear varieties described in *The Book of Pears* are very familiar to me, and some are like dear friends. Some of the pears I thought I knew so well, I discovered to have hidden virtues and mysterious histories, thanks to Morgan's impeccable research and colorful stories.

And "Perry" or pear cider is not neglected. England, which is Morgan's home, preserved the traditions of fermented ciders that were almost lost in America until very recently. The many British perry pear selections used for this delicious beverage are included in *The Book of Pears*.

Noteworthy is an ingenious, multi-page key for identifying unknown pear varieties. Across the top are illustrations of the many different shapes that pears assume, and under each shape is a list of appropriate varieties carefully grouped by ripening season. What a brilliant tool!

My only criticism of *The Book of Pears* is that there is so much information packed into its 304 pages, that the publisher used a rather small text size to squeeze it all in. You may need to grab your spectacles before diving into Joan Morgan's very enjoyable expedition into the world of the pear.

The Book of Pears is available from Chelsea Green Publishing in Vermont: <http://www.chelseagreen.com/farm-garden/the-book-of-pears>

Joseph Postman, Nafex, Pomona Winter 2016

Fast Track Fruit Breeding

Appalachian Fruit Research Station Genetic Enhancement of Fruit Crops Research Unit FasTrack Breeding Initiative

The American tree fruit industry is facing challenges of climate change, reductions in available labor, global competition, the need for reduced chemical inputs, the spread of exotic pests and pathogens, and consumer demands for enhanced fruit quality. To meet these challenges the development of improved varieties is more vital than ever. Yet, fruit tree breeding remains a slow, arduous process that has changed little over the centuries. Fruit tree breeding limitations include: a) protracted generation cycles, that is, the time between seed planting and fruiting which can last from 3 to 20 years depending on the fruit crop; b) the large land areas necessary for planting seedling fruit tree populations and the associated expenses of field operations; and c) the fact that flowering occurs only once each year and is dependent upon sufficient chill in the winter and warmth in the spring.

Genomics research aimed at improving tree fruit breeding has focused on marker-assisted selection (MAS); that is the association of pieces of DNA with fruit characteristics of interest. In this case selection for certain characteristics can be made at the DNA level. However, as with classical fruit breeding, the improvement to fruit tree breeding offered by this biotech strategy is still limited by the inherently slow generation cycles of fruit trees. To address this need, a technology to shorten the breeding cycle is required.

Using the European plum (*Prunus domestica*) also known as the “domestica” or “prune” plum we demonstrate that not only can the generation cycle be dramatically shortened but that we can overcome the environmental limitations of winter chilling on flowering and produce fruit year-round. We have achieved this by incorporating into plum trees a gene from poplar, a forest tree, which induces the plum trees to flower early and continually and to produce fruits with viable seeds within one year versus the normal 3-7 years.

We are using this early flowering gene for the development of a breeding strategy that we call ‘FasTrack’ breeding. Instead of the field, ‘FasTrack’ breeding can be carried out in a greenhouse. Through the ‘FasTrack’ breeding method we plan to rapidly incorporate improved traits into plum and to develop improved breeding stock and new varieties in a fraction of the time that would be required for conventional breeding.

It is interesting to note that while ‘FasTrack’ utilizes genetic engineering to speed the breeding process, the breeding stock and varieties produced from ‘FasTrack’ breeding will not be genetically engineered.

United States Department of Agriculture
Agricultural Research Service website



‘FasTrack’ plums flowering and fruiting in the greenhouse.





Marty's Discovery

Discovered by Martin McCallum in Discovery Bay, WA in the early 2000's.

A large to very large, red with some yellow, crisp, sweet, white fleshed all-purpose apple with a pleasant mixture of flavors; keeps well until February or March.

The Spring 2016 BeeLine was produced by Gathering Editor Marilyn Couture, with input from membership.

Please contribute your articles for our next Summer issue!

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

Email your articles to: couture222@msn.com
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John Littlehales, Erik Simpson OOS and Martin McCallum,

Photo by Marilyn Couture, March 14, 2011

The Next Big Thing: Red-Fleshed Apples

Derek Mills, Hocking Hills Orchard
NAFEX – Apple Interest Group Chairperson

Google the phrase “next big thing” and “red flesh” and a number of articles will show up dealing with red-fleshed apples. The stated goal of the group is to bring great-tasting red-fleshed apples to mass production due to not only the novelty of red flesh but also the anti-oxidant properties of the anthocyanins in the flesh.

I am all about developing new varieties of fruit to market but when I read where the NBT group says they are working to develop great tasting varieties of red-fleshed apples I wonder how many of the currently available red-fleshed varieties they have brought to trial?

Out of our almost 900 varieties of apples we grow at our orchard, Hocking Hills Orchard in southeastern Ohio, 140 of them are some type of red-fleshed apple, whether the flesh is purple (*Aldenham Purple*), beet red (*Clifford*), red (*Red Devil*), pink (*Pink Pearl*, *Hidden Rose*), orange (*Peche Melba*), red in the center only (*Ten Commandments*) red on the outer edge only (*Geneva*, *Pendragon*) or red-streaked throughout (*Bloodstreak*).

Granted, most of them are on the tart side, but some of them are sweet (*Geneva* and *Red Devil*.) Some of them are known for making great cider (*Brown's Apple* and *Raven*), some are beautiful apples (*Pink Pearl*) and some make great red jelly, with no extra pectin needed (*Almata*).

Most of the red-fleshed apples originating in the United States were developed by two individuals, Dr. Niels Hansen and Albert Etter in the early 1900's.

Dr. Niels Hansen's worked to try to extend the range of apple growing along the northern tier of the US. Most of the varieties he developed have red flesh, red skin and reddish green leaves. Varieties such as *Hansen's Red Flesh #1 - #3*, *Almata*, and others.

Albert Etter lived in California and the varieties he developed, again for the most part, have red flesh, yellow skin and green leaves. Varieties such as *Pink Pearl*, *Blush Rosette*, *Christmas Pink* and others. Both men used a variety called *Surprise* as the basis of their breeding programs. *Surprise* is a small to medium sized greenish yellow-skinned fruit with pinkish flesh that was first mentioned in England in 1831, and was introduced to the Ohio valley around 1840. *Surprise* is believed to be a descendant of *Niedzweckiana* which originated in Kazakhstan.

Niedzweckiana is a medium to large red-fleshed, red-skinned fruit that many times is brutal to try and eat fresh. Let it over-ripen on the tree and add it to cider, however, and then it is worth the effort to grow.

Just a side note, which I think is sort of cool for apple nuts: the largest city in Kazakhstan is Almaty, which, in one of the official languages, means “Mother of Apples”.

The first red-fleshed variety I grew was *Pink Pearl* and it is still one of my favorite all-time favorite apples to eat. *Pink Pearl* is a medium-to large-sized yellow-skinned fruit with pink flesh and a sweet/tart flavor. Make an apple pie with just *Pink Pearls*, delicious!

In the last few years *Red Devil* has started putting out a bumper crop, and even though I wish the season for them lasted longer than a couple of weeks at the end of August, they are delicious to eat.

Red-fleshed varieties are my favorite to grow and our earliest ripen in early August and the latest in late October. I constantly search out red-fleshed varieties I do not grow and plant red-fleshed crosses to develop new varieties..

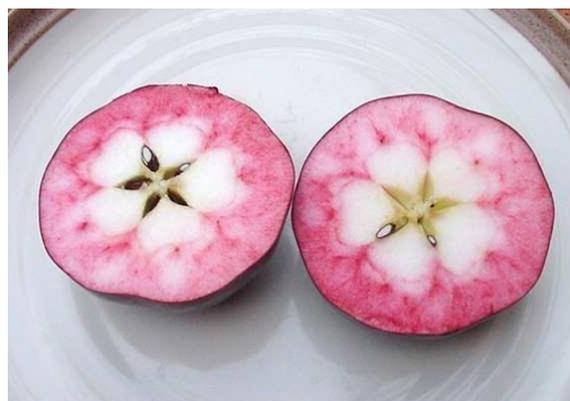
Everyone knows that apples do not come true from seed so every year I do my own crosses trying to obtain different red-fleshed varieties. One of my crosses was picked as the best tasting in our apple tasting this past October where I had 42 varieties for folks to sample. This was a cross of *Pink Pearl x Black Gilliflower*. I have a number of trees of this cross growing, as well as crosses of *Pink Pearl x Golden Russet*, *Pink Pearl x Antonovka 1.5 Pound*, *Red Devil x Pink Pearl*, and others.

Another cool thing about red-fleshed apples are the colors of the blossoms in the spring, from light pink, pink, to dark red and the intensity of the aromas varies as widely.

Many, but not all – as nothing in nature is 100% - of the red-fleshed varieties have pinkish xylem instead of the usual green. When I am growing red-fleshed seedlings one of my tests is scraping the bark. If I am undecided about a certain seedling and the xylem winds up being pinkish, it is kept around.

Red-fleshed apples are not new, but the mass marketing advertising their anti-oxidant properties will be.

Red
Devil



Sops
In
Wine

* * * * *



Avoiding Rootstock Mistakes

Tom Auvil, a research horticulturist for the Washington Tree Fruit Research Commission

Good Fruit Grower, Feb. 1, 2016, Issue

Growers can find more success if they avoid some common mistakes when selecting rootstock

The right rootstock is really the root of a grower's success, and growers can achieve far greater success if they avoid a few common mistakes.

1. Failing to plan early Everyone wants to be first in line, but there's a waiting list for many of the newer rootstock cultivars. Planning early makes it more likely growers will get what they want — and need — when they want it. Planning should include setting expectations for the orchard. If getting the trees grown and ready to produce is your No. 1 priority, then you want to go with rootstocks that have more horsepower. At the same time, growers need to determine how they want to manage their orchard, including trellis type, whether they will be installing shade cloth or netting and how they plan to irrigate. Early planning can save money and aggravation later.

2. Lack of knowledge about soil Some folks roll their eyes when you tell them to look at their soil, but soil types in an orchard can change dramatically in just a few feet, changing irrigation needs and potentially affecting rootstock choices. With additional planning, growers can do a better job of managing rootstock selection and water application technologies to build an easier-to-manage orchard than growers have been satisfied with in the past. For instance, the biggest challenge with drip irrigation is matching the length of the set with the soil type, but many growers don't realize where they have sand and where they have clay. In a 600-foot row, I plan to plant three different rootstocks just because the soil texture changes so much. We have good dirt, bad dirt and OK dirt in the same row, but by reading the trees that are there currently, I can tell my needs in each spot.

3. "When your only tool is a hammer, everything looks like a nail" Too often, growers just know they want to plant a row of trees. They buy one variety of rootstock from one nursery, and that's it. Soil type isn't the only reason to choose different cultivars. Growers should be buying different cultivars from two or three nurseries to better manage risk as well. They also should be in regular contact with those nurseries to ensure they're not going to end up with the rootstock that's left over because no one else wants it, either because the scion genetics or the rootstock genetics have advanced or the trellis system of choice has changed. We're all looking for this nirvana, and there isn't one solution, with one rootstock for all varieties.

* * * *

WHAT'S A CHILL HOUR?

Grow Organic.com November 14, 2016.

You're happily choosing your bare root fruit trees from a catalog when you suddenly notice extra numbers in the tree descriptions. Number of chill hours, what is that? Isn't it enough to know your USDA plant hardiness zone? That's about cold temperatures—so why do you need another number?

The USDA zone tells you the coldest temperatures in your area. Broadly speaking, the chill hours tell you how long the cold temperatures last.

The traditional definition of a chill hour is any hour under 45°F.

But wait, there's more. Academics have competing theories on what "chill" means. Some say the chill only counts if the temperature is between 45°F and 34°F. Some differ over chill calculations for the Utah Model, and let's not forget the new Dynamic model....

HOW TO COUNT CHILL HOURS

Here's the best way to count chill hours: *get someone else to do it!*

Luckily, there are institutions already tracking this information.

Farmers and gardeners in most California counties have access to official data on chill hours through the Pomology Weather Service at the UC Davis Fruit & Nut Research Information Center. This service records chill hours—so you don't have to.

If you're not covered by this weather service, contact your local Master Gardeners and Farm Advisors to find out your local source of chill hour information.

CHILL HOURS ARE IMPORTANT TO FRUIT TREES

As you know, trees cannot walk away if they don't like the weather—they have to stay and suffer through it. **Nut and fruit trees (except for citrus) need a specific number of chill hours each winter to regulate their growth.**

If a tree doesn't experience enough chill hours in the winter the flower buds might not open at all in spring, or they might open unevenly. In addition, the production of leaves may also be delayed.

Okay, you're thinking, how about just planting trees with low chill requirements? That way they're sure to get enough cold weather. Sorry, that won't work. A low-chill tree in a high-chill area would break dormancy too soon and be damaged, or even killed, by the cold weather.

From Grow Organic.com November 14, 2016.

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WCFS NEW MEMBERS

OOS

Blythe Barbo
Al Cairo
James Marvin Whitney

BIFC

Cindy Anderson
Maury Baker
Peggi Erickson
Jim Ewing
David Fehsenfeld
Linda Slater

PFC

Michele Caulfield
Tom & Collen Chichester
Jennifer Clark
Steve Gardner
Sarah Harrison
Randy Lee
Kathy Martz
Francine McKinley
Laura Reigel
Carl & Debra Vincent

* * * * *

Learn to Grow Your Own Groceries!

All classes take place on Wednesday evenings from 7:00pm – 9:30pm at WSU Snohomish County Extension's Cougar Auditorium, 600 128th St SE Everett, WA inside McCollum Park. In addition, for those attending the first two classes, there will be an opportunity to have your garden soil tested at a reduced cost, and the results interpreted.

Apr. 20.....Weeding and Watering

Apr. 27.....Growing the Heat Lovers in the Chilly NW

Cost is \$25 per person per class, any five or more are \$20 each. Register online at GrowingGroceries.BrownPaperTickets.com. snohomish.wsu.edu/growing-groceries. For more information about the program, contact Kate Halstead, (425) 357-6024, khalstead@wsu.edu

Blueberry Viral Infections—March 2016

My blueberries have been experiencing death of buds on some, most or all of the buds on a plant. I noticed it about two weeks ago when it came on very quickly. I have Chandler, Polaris, Duke, Darrow and Bluecrop. All but Bluecrop are affected. I have attached a picture of the affected blueberries. Both fruit and vegetative buds are affected. It seems that the situation may have stabilized now as I have not seen additional plants affected in the last couple of days. On cross-section the branches appear normal.

Bob Cain, Clallam Master Gardeners, was here yesterday and suspected Blueberry Shock or Blueberry Scorch viral infection. Bob recommended pruning off the diseased branches and I am in the process of doing that.

Is anyone else having this problem in Western Washington?

Jim House, OOS President
360-775-1869



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Attention WCFS Members

Want to know instantly what's happening in the organization?

Subscribe to the WCFS Forum. It's a benefit of membership. The Forum is private and closed to the public. It keeps us together and on top of what's happening in our chapters. Click on this link and follow the prompts:

<http://lists.ibiblio.org/mailman/listinfo/wcfs>

Judi Stewart, Forum Administrator



Chapter News

WCFS

WCFS OFFICERS AND BOARD MEMBERS

Olympic Orchard Society

After a highly successful Fruit Show Oct. 31, OOS welcomed 18 new family members and took prepaid fruit tree orders for 35 trees which were grafted in March. Pruning workshop was Feb. 5 at Peninsula Nurseries, adjourning to orchard of new member Tom Sutton for pruning demo. March was an incredibly busy month with two mini grafting workshops in Couture's garage and one major Grafting workshop March 19 at Lazy J. Farm. Grafters created trees for Sequim High School horticulture class March 29. Marilyn Couture, OOS Secretary

Peninsula Fruit Club

The Peninsula Fruit Club has been busy— In January, Mary DiMatteo talked to us about growing nut trees in the Northwest. We then had a scion gather event and had a good time gathering the sticks we would sell at our annual grafting show. We thank all those that came and helped out. In February we had local business that organize local food sales (Kitsap Fresh and Kitsap Community Food Coop) come and talk to us about what they do and we practiced our grafting skills. We also have had a winter pruning demonstration at a member's house. Most recently we went to a local vineyard, Perennial Vintners, and had a wonderful lecture, demonstration, and hands on pruning by Mike Lempiere, the owner. We are very thankful for his time, effort, and passion for grapes. We will be cutting blueberries at Blueberry park. Most importantly our annual grafting show with over 150 cultivars was held March 5th at the West Side Improvement Club, Bremerton. Mike Geiser, PFC President

Snohomish County Fruit Society

Last fall, SCFS had fun playing with our food. After a monthly meeting on edible art, we put our newly acquired knowledge to work at a workshop with the kids at the Snohomish Boys and Girls Club. We taught kids how to use fruit to make attractive holiday snack treats. Over the winter we elected new officers and changed the composition of our board from three members at large serving 3 year terms to four members at large serving two year terms. This spring SCFS expanded our member bareroot order to include rootstock, bareroot strawberries, and bareroot raspberries to take advantage of bulk prices. Volunteers distributed it to members in time for our grafting workshop on April 2. Upcoming meeting topics include biochar, apple anthracnose, biodegradable strawberry mulches, and high tunnel construction and use. Beckie Jackson, SCFS President

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Treasurer	Jerry Gehrke bercogehrke@comcast.net

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2019	Jackie Furrey Jackie_furrey1@yahoo.com Randy Lee randyrlee3@yahoo.com Vacant
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Links

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

Related Organizations

Backyard Fruit Growers
www.sas.upenn.edu/~dailey/byfg.html

California Rare Fruit Growers
www.crfg.org

East of England Apples and Orchards Project
www.applesandorchards.org.uk

Indiana Nut Growers Association
www.nutgrowers.org

Midwest Fruit Explorers
www.midfex.org

North American Fruit Explorers
www.nafex.org

Northern Nut Growers Association
www.northernnutgrowers.org

Oregon Sustainable Agriculture Land Trust
www.osalt.org

Western Cascade Fruit Society
www.wcfs.org

Western Washington Fruit Research Foundation
www.wwfrf.org

Home Orchard Society
www.homeorchardsociety.org/

Seattle Tree Fruit Society
www.seattletreefruitsociety.com/

Seattle Tree Fruit Society—Apple ID program
www.seattletreefruitsociety.com/appleid.php

Fruit Research

National Clonal Germplasm Repository
www.ars-grin.gov/cor

Tree Fruit Research and Extension Center, Washington State.
www.tfrec.wsu.edu

Northwest Berry and Grape Infonet.
berrygrape.oregonstate.edu

Pedigree: A Genetic Resource Inventory System
www.pgris.com

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

Government Sites

US Dept. of Agriculture
www.usda.gov

USDA Agricultural Research Service
www.ars.usda.gov

Helpful Sites

Orange Pippin
www.orangepippin.com

Kiyokawa Family Orchards
www.mthoodfruit.com

Red Pig Tools
www.redpigtools.com

Friends of Trees
www.friendsoftrees.org

Cornell Gardening Resources
www.gardening.cornell.edu
http://www.fruit.cornell.edu/tree_fruit/GPGeneral.html

The National Arbor Day Foundation
www.arborday.org

UBC Botanical Garden
www.ubcbotanicalgarden.org

The Reckless Gardener
www.recklessgardener.co.uk

Farm & Garden
www.farm-garden.com

SeeMeGarden.com
www.seemegarden.com

GardenGuides.com
www.gardenguides.com

VitiSearch: Helpful Resources about Grapes
www.vitisearch.com

Avant-Gardening: Creative Organic Gardening
www.avant-gardening.com

The Hardy Plant Society of Oregon
www.hardyplantsociety.org

Ask the Berry Man
www.asktheberryman.com

BackyardGardener.com
www.backyardgardener.com

Tom Brown's website
www.applesearch.org

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