

WESTERN CASCADE FRUIT SOCIETY

WINTER 1989

SPRING MEETING MARCH 3RD

The spring meeting for the Western Cascade Fruit Society has been set for Saturday, March 3rd, at the WSU/Snohomish County Extension office in south Everett. Speakers, grafting class, business meeting and scion/rootstock sale will be part of the meeting.

PESTICIDE TRAINING COURSES SET

Washington State University Cooperative Extension is offering pre-license pesticide training and recertification programs next January and February in western Washington. WSDA licensing exams will be given at the end of the pesticide training courses. The 12 credit recertification course will fulfill this year's requirement for 45 training hours in 5 years to maintain your pesticide license.

PRE-LICENSE TRAINING

Jan. 9-11	Kelso
Jan. 16-18	Mt. Vernon
Jan. 23-25	Tacoma
Feb. 6-8	Lynnwood
Feb. 21-23	Olympia

RE-CERTIFICATION TRAINING

Jan. 10-11	Kelso
Jan. 17-18	Mt. Vernon
Jan. 24-25	Tacoma
Feb. 7-8	Lynnwood
Feb. 20-22	Olympia

Registration forms are available at your local county extension office. For more information contact WSDA, 206-753-5064.

STATUS OF COMPACT STELLA

by Robert A. Norton
Northwestern Washington Research and Extension Center

The cherry cultivar "Compact Stella" was introduced by the Canada Agriculture Research Station, Summerland, B.C. about 20 years ago and appeared extremely promising as the first self-fruitful, genetic dwarf cultivar. I observed it in the test orchard in Summerland in the mid 1970's. At that time it seemed stable in it's dwarfing habit and it cropped heavily each year.

Subsequently, in 1980, I imported budwood from the B.C. Certified Budwood Orchard and propagated it further for testing at this facility. Also in 1980, several thousand buds were imported by a commercial nurseryman and grafted on Mazzard seedlings and Maz. F 12/1. It was subsequently noticed in the nursery, that some of the nursery trees grew vigorously to 6-8 feet while others showed reduced internodes typical of a genetic dwarf cultivar. Most of these trees were sold but about 100 were retained and planted at the WSU Research Unit for evaluation.

In 1983-84, the trees came into bearing and we noted a distinct separation of the trees into three groups: (1) Vigorous trees, normal internode length and normal fruit; (2) semi-dwarf erect, narrow trees with abnormal fruit which did not ripen (low sugar content, red rather than black skin color) and (3) compact dwarf trees with very short internodes and abnormal fruit as above.

We sought the assistance of Dr. Richard Hamilton, Research Virologist, Canada Agriculture, Vancouver, B.C. in 1985 and supplied him scionwood of each of the three types growing in our orchard. He analyzed this material by electron microscopy and found that the vigorous trees were virus-free, but that the semi-dwarf and dwarf trees were infected with "Little Cherry virus (LCV)". Dr. Hamilton reindexed the three groups again in 1987 and confirmed the disease a second time. In addition to the growth differences noted, trees with Little Cherry have premature red foliage coloring in the fall.

Since 1985, we have obtained trees from commercial nurseries in the Northwest and have grown them to the fruiting stage. In all cases, those trees which had a dwarf growth habit, failed to produce normal fruit and those which produced normal fruit grew vigorously, similar to the non-dwarfing cultivar, "Stella".

It is, therefore, our conclusion that the dwarfing of "Compact Stella" in Washington was caused by Little Cherry virus and not from genetic dwarfing. The "Compact Stella" is no longer available from the B.C. Certified Budwood Orchard so we are unable to confirm whether a true genetic dwarf "Compact Stella" is obtainable. Thus, until one is found, we do not recommend propagation of "Compact Stella" in the United States.

If a satisfactory "Compact Stella" clone is found with normal fruit and a compact growth habit, please inform us so that it can be evaluated at this facility.

WSDA UPDATE ON APPLE MAGGOT QUARANTINE

by William E. Brookreson, WDSA Assistant Director

As a result of the October 23 meeting in Bellingham and the review of the Apple Maggot Quarantine, the Department has decided to move ahead with efforts to redefine the quarantine area to exclude the apple producing areas of Northwest Washington.

Initially, we considered an effort to address Skagit and Whatcom counties only. After further review, that does not appear to be the best decision. First of all, it does not include the total commercial apple producing activity in that part of the state and as a result, would continue to be a marketing problem for any sales other than roadside because of the impression that apple maggot is right at the border of these counties.

In addition, some sellers of the same varieties into the same markets would be subject to quarantine and permits and some not. The likely result of that is confusion in the market and continued bureaucratic restrictions at the buyer end and at our end to meet their requirements.

Finally, from a cost standpoint, it does not make good economic sense to address this issue in a piecemeal fashion, repeatedly moving signs and structuring a survey to consider one or two counties at a time. It is more cost effective to deal with the producing area.

The result of these considerations is that we are proposing to survey those areas that do not have a history of apple maggot detection: Whatcom, Skagit, Snohomish, San Juan, Island, Clallam and Jefferson counties in 1990. If these areas are determined to be not infested as a result, to lift the apple maggot quarantine for all these uninfested counties.

To accomplish this in one season, we will need some additional staff dollars from the legislature. Without these, we are looking at a two year program to spread some of the costs into the next biennium. A solid survey is necessary if we are to maintain our credibility and have our results accepted by not only California but also other potential markets in Asia and Canada. We will work with your legislators in these areas.

I appreciated the opportunity to meet with representatives from the apple industry in Northwest Washington. I was very impressed by the quality of the product and the vision of creating a new market niche based on that quality and different varieties.

CODDLED APPLES FOR DINNER

by Walt Lyon

Those of you who take the Good Fruit Grower will have noticed in the October 1st issue the article about cooking apples. I have been a subscriber for about 5 years, and this is the first time I remember seeing an article about cooking fruit. I would hope that we see more on the subject in future issues. The recipes were good. We have tried 2 of them.

I'm sure that apples must be used for cooking in Europe a great deal more than in this country. I have always been curious about the coddled apples so often mentioned in English publications. I have talked to a number of people about this and have never found anyone who had tasted a coddled apple.

The term "codlin" is a part of the name of several English varieties. The definition of "coddle" is to cook slowly just below the boiling point. And the only reason I can see for doing that would be to ensure that the slices remain as slices, rather than cook into a sauce. So I would assume that those codlin varieties are ones that tend to stay as slices when cooked.

Hazel has done some experimenting using varieties she knew tended to stay in slices, and her recipe is included below. The first, and perhaps the best, variety she tried was Porter. This is one of the most fragrant of all apples. It makes good pies too.

Anyway, we think Hazel's version of coddled apples might be something like they would do in England even though she used steam instead of slightly less than boiling water. Of course, this would't be anything like the recipe they call "codlins and cream".

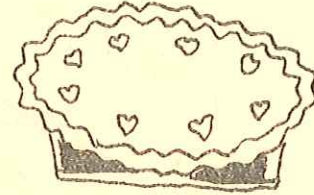
HAZEL'S VERSION OF CODDLED APPLES

Into the bottom pan of steamer put peels and cores from 5 or 6 apples and add 2 cinnamon sticks. Cover 2 to 3 inches with water and boil. Cut the apples in 4 pieces, then each piece in 3 more pieces to get fairly uniform pieces. Put slices in top part of steamer and set over boiling peels. Cover and boil until tender.

Pour the peels, cores and cinnamon through a sieve. Add the cinnamon sticks to the juice and sweeten to your taste. Put apples in a container that is fairly tall and pour the hot, sweet juice over them. Completely cover the apples. Cover, and when cool, refrigerate.

If your apples are red, the red peels make the apple slices a beautiful pink. I can't guess how much sugar to use. I use Equal to sweeten the juice, and I think a few cloves would not be amiss. Don't let your apples steam too long. You want the pieces to stay whole. The steam cooks them quite quickly.

Note: When Hazel says "red apples", she means Opalescent. They work well for this, as they do for baking or sauce or pies or whatever. I still think I like Porter best.



MORE APPLE GOODIES . . .

Marilyn Tilbury sent along this cake recipe with an excellent recommendation.

Marlene Falkenbury, new president of Seattle Tree Fruit Society, has baked this delicious cake for our monthly meetings. It is somewhat like Beth LaLonde's Idared cake recipe which was published in the Spring 1987 newsletter. I like them both and give the edge to Marlene's because it uses more apples!

MARLENE'S GERMAN APPLE CAKE

Mix and set aside: 2 cups flour
2 teaspoons cinnamon
1 teaspoon soda

Beat: 2 large eggs

Add: 3/4 cup oil
1 1/2 to 1 3/4 cups sugar
(I prefer 1 1/2 cups)
1 teaspoon vanilla

Add dry to wet and mix.

Add 4 cups peeled and chopped cooking apples and (optional) 1/2 cup chopped walnuts.

Spray a 9" x 13" pan with "no stick" and spoon mix into pan. Bake at 350 degrees for about 45 minutes (glass pan) or about 55 minutes (metal pan) or until a toothpick inserted comes out clean. Cool before cutting.

Jeanne Dimartino, WSU/Snohomish County Extension Master Food Preserver Coordinator, offers these apple ideas:

* try chopped apples in tuna sandwiches

* for holiday punch use 1 part cranberry juice cocktail and 1 part cider seasoned with cinnamon sticks and cloves

* use 2 tablespoons cornstarch to thicken 2 cups cider and pour over apples for pie filling

* pare and slice 3 cups apples, cook until tender--whip with 1 cup yogurt and brown sugar and cinnamon to taste--fold whipped mixture into 1 cup yogurt--chill

The Maxwells from the new Olympia chapter provided this recipe:

APPLE ABSTRACT--A STRUDEL TYPE

crust 2 1/2 cups flour
 1 teaspoon salt
 1 cup shortening 1 egg yolk and enough
 milk to make 2/3 cup

Line 10" x 16" greased jelly roll pan with 1/2 of crust. Put 3 hands full of corn flake type cereal on dough. Peel and slice 8 to 10 apples on top of cereal. Top with 1 cup sugar, 1 tablespoon cinnamon, 1 teaspoon nutmeg. Drizzle over 3 to 4 tablespoons melted butter. Cover with top crust, don't need to seal, just cover most of apples. Beat egg white and brush on top crust. Bake 1 hour at 375 degrees. While hot, dribble over a mixture of 3/4 cup powdered sugar, vanilla and milk. Good hot or cold, or serve warm with a scoop of ice cream.

KEEPING YOUNG TREES GRASS FREE IMPORTANT

by L. D. Tukey

Penn State Horticultural Review

Grass around young woody plants, including fruit trees, can suppress growth and plant establishment. The need for adequate soil moisture in the root zone is well recognized. However, the effects from poor grass and weed control in the young plant's root zone are often overlooked.

In 1981, S. L. Fales and R. C. Wakefield at the University of Rhode Island, Kingston, reported that turfgrass can suppress the growth of dogwood. They further showed that root leachates from turfgrass can cause inhibition of vegetative growth in forsythia. However, leachates from perennial ryegrass and red fescue inhibited root growth, but not Kentucky bluegrass.

Cultivating the area around dogwood greatly reduced the grass inhibiting effect. Close mowing gave no improvement over allowing the grass to develop. The researches concluded that suppression of woody plants by turfgrass appeared to involve chemical inhibition. (Agronomy Journal 73:606-610. 1981)

In an earlier paper, A. P. Nielson and R. C. Wakefield showed that additional N-K-P as a top dressing was more beneficial to turfgrass than to ornamental shrubs. (Agronomy Journal 70:39-42. 1978)

Young woody plants with bark mulch would normally grow better than when in bare soil under low soil moisture conditions and with adequate soil nitrogen. Favorable environmental conditions are especially important for root growth and development. Good plant establishment is reflected in subsequent plant growth and performance, including that for fruit trees.

LOOK FOR MUTATIONS

by Chris Wehrfritz

Fresh from the Cider Press (Vol 2,#4)

Mutations, in simple terms, are changes in the hereditary material of living organism.

Mutations are normally thought of as rare quantum changes, like a change in the color of the fruit (e.g. Gravenstein to Red Gravenstein, Bartlett to Red Bartlett). Mutations are also thought of as improvements.

Both of these beliefs, rare quantum changes and improvement, are fallacies. Correctly, mutations occur frequently, but most of them are small changes which are not noticed or not pursued for their potential. Furthermore, mutations may cause desirable changes or undesirable changes.

The selection of mutations with desirable features can be used for the creation of new and superior strains (selection method). This method lends itself to annual plants which have a very large number of plants to choose from. For trees, a large number of plants is normally not available. But the selection pool is enlarged by having mutations available on branches and even twigs.

It follows from this, that any serious fruit grower should look for desirable mutations and propagate them. If you have a tree, a branch or a twig with superior fruit, leaves or health, mark it with a ribbon and use its shoots for grafting.

One would think that the search for mutations and their utilization would be a common practice amongst fruit growers. This is not generally the case in North America. Either the average fruit grower is not aware of it or cannot be bothered. The European and Japanese fruit growers are more alert for mutations. Currently, the Dutch are testing 70 mutations of Jonagold and the Japanese have selected several superior strains from a pool of Fuji mutations.

Another conclusion follows from the above statements. If negative changes occur just as well as positive changes, then an indiscriminate use of budwood may lead to some inferior plants. To avoid the propagation of inferior mutations, nurseries should go back to proven sources for budwood rather than propagating indiscriminately from their young nursery trees. Better yet, they should obtain improved strains (mutations) selected by knowledgeable fruit growers.

The members of our association too, should participate in this continuous search for improved strains and their commercialization.

Now is the time to look for a twig with improved features; now is the time to mark a branch that is exceptionally precocious; now is the time to select outstanding trees. Use these selections as sources for scions for your own propagation and, after the improvements are confirmed, for general propagation. All that is

needed is that you recognize superior traits on your fruit trees and that you propagate and evaluate them.

Let all of us participate in an annual search for improved strains by mutations. We may come up with 50 small improvements of Jonagold in a 5 year span and a further 50 small improvements every 5 years thereafter, leading to considerable improvements in 2 decades. As a large group, we may also find 1 quantum mutation every 5 years. It is a game of numbers--the larger the pool the higher the chances for a winner that all of us can share.

EDITOR'S NOTE: Fresh from the Cider Press is published by the B.C. Fruit Testers Association, 9181 Basswood Rd, Sidney, British Columbia V6L 3W8.

SAVE SCIONWOOD FOR SPRING MEETING

by Bill Davis

It's not too early to start thinking about saving your scionwood for sale during our annual spring meeting on March 3rd. The scionwood will be sold in conjunction with the rootstock sale for \$.50 each. All members are asked to save scions of their favorite varieties and any other varieties they think members would like to have.

Be sure to select only healthy wood free of insect, disease and winter damage and from trees of known performance. In general, one year old wood that is about the size of a lead pencil is preferable to older wood. Please don't bring patented varieties!

To help make the scionwood sale somewhat more organized than it has been in the past, members planning to bring scionwood should send a list of the varieties they're providing to:

Bill Davis (771-)8978)
21611 92nd Av W
Edmonds 98020

A list will be provided of what varieties are available if everyone cooperates. In the past we've had a lot of requests for Jonagold, so if you have this variety please plan to bring some.

It's very important to label each scion individually. Masking tape is fine, or you can use plastic plant labels. Please print labels legibly (spelling and neatness count) and specify fruit if it's not apple scionwood--Frost peach or Comice pear.

Protection of the scion from drying out is also important. You can place them in a plastic bag with a slightly moistened paper towel and put them in the crisper compartment of your refrigerator. If you don't have room in the refrigerator, you can bury the wrapped scionwood bundles in sawdust or soil on the north side of a building. Bury them deep enough so they will stay cold even in late spring. Sealing the cut surfaces of the scions in low-heat paraffin would be ideal, but not absolutely necessary.

EVALUATING BETTER TASTING APPLE CULTIVARS

by L. D. Tukey

PennState Horticultural Reviews

In Massachusetts "Fruit Notes", Drs. S. W. Greene and W. R. Autio presented a review of the newer, high quality apple cultivars for New England and cooler climates. Published in the Summer 1989 issue, the pomologists at the University of Massachusetts stress that growers should be evaluating the better tasting apple cultivars.

Gala and its red color strains appear promising: Kidd's D-8, Royal Gala, Regal Gala, Imperial Gala, Scarlet Gala, Spur Gala-Go-Red, and Galaxy. Jonagold appears to like cooler climates and should do well in New England. A few red strains have been found but these need to be evaluated. Jonagold is not a strong storage keeper, although it has excellent quality at harvest.

Other cultivars discussed and suggested for consideration were Red Fuji, Liberty, Braeburn, Criterion, Elstar, Acey Mac, Pioneer Mac, Akane, Paulared, Empire, Mutsu, Melrose and Idared. It was noted that Gala needs fruit thinning to obtain adequate fruit size, Criterion bruises easily, Elstar needs storage to develop flesh quality, Akane is a shy producer, Empire develops small size in cooler climates, and Jonagold is not a long keeper.

FRUITING POTENTIAL OF APPLE TREES

by L. D. Tukey

PennState Horticultural Review

The cropping potential of an apple tree is related to the capability of bearing wood to produce and mature fruit as influenced by the genetic composition of the tree (the stion), environmental conditions and management practices. Fruit number is related to the number of fruiting clusters and the number of fruit buds on a tree. Fruit size is related to the vigor of these buds, the vitality of the wood supporting the fruit, and the growth of the fruit itself.

The potential for economical regulation of cropping is related to the manageability of the bearing volume of a tree or a group of trees. That is, small size trees which resemble branches are more easily managed for cropping than large size trees containing many bearing branches.

Both trees and orchards have an optimum period of productivity. The length of this period is bounded by the age of initial bearing and the age when fruit quality (color, size and shape) decreases and the regulation of the bearing wood no longer remains economical. Since this period is shorter than for conventional trees and orchards, there is a greater potential for updating cultivars and reconstruction orchard land than in presently used systems. Thus, there is much to be gained by moving to intensive orchard systems which utilize many small low-height trees.

DOUBLE YOUR MONEY, JOIN A WCFS CHAPTER!

The SEATTLE TREE FRUIT SOCIETY chapter meets usually at the Ravenna-Bryant Senior Center, 6559 Ravenna Ave NE, on the last Saturday of each month except December, 9:30 am to noon. They also have field trips and publish a monthly newsletter (\$6.00 per year). The president is Marlene Falkenberg, 7547 32nd Ave. N.E., Seattle 98115.

The NORTH OLYMPIC FRUIT CLUB chapter meets on the first Thursday of each month in the Grange Hall in Gardiner. The President is John Parker, 60 Tala Shores Drive, Port Ludlow, WA 98365.

The South Puget Sound Chapter (Olympia) meets monthly in the Horticultural Building of the South Puget Sound Community College. Its president is Norm Schut, 5619 Sunrise Beach Rd NW, Olympia 98502.

The Peninsula (Kitsap) Chapter meets at 7:30 pm on the second Thursday of each month in the WSU Extension Office, Port Orchard Courthouse. President: Max Meyers, 11102 126th Ave NW, Gig Harbor 98335.

The San Juan Islands Chapter meets on the second Monday each month 7-9 pm in the East Sound Fire Hall on Orcas Island. For information: Kristan Johnson, 522-3663.

The TAHOMA CHAPTER meets 7-9 pm in Almendinger Hall, WSU Research and Extension Center, 7612 E Pioneer, Puyallup. The president is Bob Kuper, 28316 80th Ave E, Graham 98338.

The Piper Orchard Chapter restores an historic orchard in Carkeek Park, Seattle. Work parties are 10-3 pm on the third Saturdays of all but the summer months and December. For information: Ed Lewis, 9615 NE 14th St, Bellevue 98004.

HEDGEROW ORIENTATION DISCUSSED

by L. D. Tukey

PennState Horticultural Reviews

The effect of row orientation in apple hedgerow plantings is complex, depending upon various factors, according to J. W. Palmer, Institute of Horticultural Research at East Malling, England.

A computer model was used to calculate light interception and distribution within hedgerow canopies at different times of the year: row spacings, tree height and latitudes under N-S or E-W orientation. These factors interacted to influence optimum row orientation.

Dr. Palmer indicated that row orientation was likely to be more important at lower latitudes and with tall hedgerows with wide alleyways, but unlikely to be significant in low height multi-row systems.

In general, the more favorable N-S orientation supported earlier studies. Canopies in N-S rows received sunlight first on the east and then on the west side. In E-W rows, there was less light variation on a side of the canopy.

TIDBITS FROM THE CORE

by Nancy Jo Cushman

Do your bit to hasten the demise of the dreaded Red D_____. Pass around some home-ground varieties of apples that really have some taste. Admittedly, I have some advantage in taste-testing free apples since I work for a low-paying government agency and everybody is always on a diet (apples don't count), but I was somewhat surprised by the unofficial results:

Ten people can munch their way through a 40 pound box of apples per week and look offended if not refilled.

Macoun was a decided favorite, but given a choice between Sinta and Akane, Akane was favored (even though I kept saying Sinta was one of my favorite eating apples).

A mixed box of Cox's Orange Pippin, Cox's crosses and Hudson Golden Gem proved rather a challenge. But word got around and the Hudsons disappeared rapidly. This was probably because:

1. I never eat any apples but Hudson when they're in season.
2. A proper British volunteer kept touting the merits of russets and insisting everybody try one of the ugly pears.

I was left with the impression I could make a small fortune selling these ugly russets. Also requested was Gravensteins, Jonagolds, and Galas (unfortunately I was too embarrassed to bring in any of my very small, very scabby Galas).

The bottomless pit teenage son eats only Summerreds and a hard yellow, good keeping apple, somewhat like Mutsu, which has not been identified. For some strange reason, the male members of the family munched their way through a box of Blenheim Orange (a classic English cooking apple) even though I kept suggesting they try some eating varieties. Perhaps, it was because the box of Blenheims was handiest or because the tree produced very large, good looking apples this year.

A couple of weeks ago I noticed the last box of Summerreds was looking rather sad, so I quartered them and threw 'em in the microwave in a glass baking dish. Cooked until soft and run through a Foley food mill to remove peels, etc., this is my version of a no-work applesauce. Unfortunately, the red peels and staining from the Summerreds made the applesauce resemble rhubarb sauce which is not greatly appreciated around here.

What do I like? Hudson Golden Gem is always a favorite--also Oriole and Chehalis for early season apples. Sinta, Cox's Orange and Cox crosses, Jonagolds and Spitzes are worth eating. I was impressed enough with Lord Lambourne this year to detour to the back orchard and eat all but the specimen fruit. My neighbor swears by Pink Pearl and Davey for eating apples. Davey and Gravenstein are my favorite pie apples, but I was also very impressed with Davey for drying--no bland, wishy-washy flavor here.

What do you like? Let me know your favorite varieties and what you do with them. Also any little quirks the varieties have.

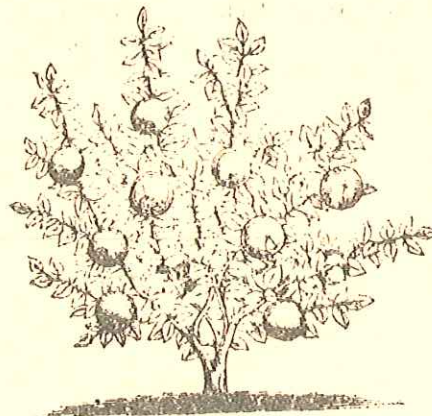
Just for fun last spring, I ordered 2 bench grafts from Bear Creek Nursery. You select the rootstock, scionwood, send \$4.50 and receive a whip graft ready to plant in your nursery row. I was a little concerned about the mailability of these trees, but they arrived safely and grew nicely. A hundred percent graft success sure beats even my best grafting season. For more information, contact Bear Creek Nursery, P.O. Box 411, Northport, Wa 99157.

Do your bit to insure testing of fruit varieties for the Pacific Northwest continues at the Mt. Vernon Research Station. Dr. Norton is reaching retirement age and his replacement may not continue the 20 years worth of fruit tree research. Write a letter to Jim Zuiches, director of the Agriculture Research Center at the College of Agriculture, Hulbert Hall; and Sam Smith, the president of Washington State University in Pullman 99163. Indicate your interest in seeing variety testing, particularly for disease resistant apples, continued at Mt. Vernon. Send a tax deductible donation check to Northwest Agricultural Research Foundation, 1468 Memorial Hwy, Mt. Vernon 98273. All donations go directly towards fruit testing.

FROM THE BOARD OF DIRECTORS

This year's Fruit Show at Port Orchard was judged a success, although the weather could have been better. Next year's show will probably be at the UW Urban Hort Center in Seattle, the third weekend in October. Plans are to have the 1991 show outside of the Seattle-Tacoma-Everett area. If you have any ideas for a suitable location, let a board member know.

Nominations for 3 new board members are being sought for the 1990-93 period. Suggestions should be sent to Paul Donaldson, secretary. The next board meeting is scheduled for Saturday, January 13th, 10 am, at the WSU/Snohomish County Extension Education Building in south Everett (1/4 mile east of 128th St. exit). At the present time, board meetings have been scheduled for the second Saturday of each month except for March when the board will meet after the Spring Meeting. All members are invited to attend.



WASHINGTON STATE UNIVERSITY
Research & Extension Unit
1468 Memorial Highway
Mount Vernon, WA 98273

Tree Fruit Scionwood
Available Spring 1990

ORDER MUST BE RECEIVED BY JANUARY 20, 1990

<u>Quantity</u>	<u>Scionwood</u>
1 - 4	\$ 1.50
5 - 9	1.25
10 - 20	1.00
20 & up	.75

<u>Quantity</u>	<u>Scionwood</u>
<u>Desired</u>	<u>Tree Fruit</u>
	<u>(10" stick)</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Please list substitutions (if first choice not available).

Total amount of order _____

25% of total for postage & handling _____

Research contribution (optional - see attached) _____

Amount enclosed (payment required with order) _____

Name _____ Telephone () _____

Address _____

Please make checks payable to NORTHWEST AGRICULTURAL RESEARCH FOUNDATION.

Though there are no observable symptoms of virus in any of the plant material, we make no guarantees of freedom from virus or any other disease.

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7547 32nd Av E, Seattle 98115; 522-2273

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9615 NE 14th, Bellevue 98004; 454-3615

Max Meyers (Peninsula Fruit Club President)
11102 126th AV NW, Gig Harbor 98335; 851-4422

Pat Rothenberg (1991)
744 Wallin, Bremerton 98310; 337-0652

Ron Schaevitz (Piper Orchard Chapter President)
1227 NW 117th St, Seattle 98177; 362-1227

Norm Schut (South Puget Sound Chapter President)
5619 Sunrise Beach Rd, Olympia 98502

Dick Tilbury (1991)
4916 52nd AV S, Seattle 98118; 723-9009

APPLE

Akane
 Ashmead's Kernel
 Benham
 Blenheim Orange
 Bramley's Seedling
 Centennial Crab
 Chehalis
 Chestnut Crab
 Cornish Gilliflower
 Cox's Orange Pippin
 Davies
 Discovery
 Egremont Russet
 Elstar
 Freyberg
 Geneva Early
 Golden Noble
 Gravenstein
 Harvey
 Hawkins
 Holstein
 Horse Apple
 Hubbardston
 Jonagold
 Karmijn de Sonnaville
 Keepsake
 Kent
 Kerry Pippin
 Liberty
 Melon
 Melrose
 Mott Pink
 Mutsu
 Opalescent
 Ortley
 Porter
 Red Gravenstein
 Red June
 Rhode Island Greening
 Spartan
 Spigold
 Stearns
 Summerred
 Sunset
 Suntan
 Westfield-Seek-No-
 Further
 Winterstein

CIDER APPLE

Bellflower
 Brown's Apple
 Bulmer's Norman
 Chisel Jersey
 Geeveston Fanny
 Harry Master's Jersey

Merton Russet
 Pomme Gris
 Porter's Perfection
 Reine des Pommes
 Sweet Alford
 Sweet Coppin

PEAR

Atlantic Queen
 Bennett
 Bosc
 Comice
 Conference
 Flemish Beauty
 Highland
 Orcas
 Santa Maria
 Seckel
 Sierra
 Surecrop

ORIENTAL PEAR

Chojuro
 Hosui
 Kosui
 Niitaka
 Niji-seiki
 (20th Century)
 Seuri
 Shinko
 Shinseiho
 Shinseiki
 Yakumo

CHERRY

Angela
 Bada
 Bing
 Corum
 Early Burlat
 Emperor Francis
 English Morello
 Hardy Giant
 Hudson
 Kansas Sweet
 Kristin
 Moreau
 North Star
 Rainier
 Sam
 Schatten Morelle
 Stella
 Ulster
 Van
 Vogue

PLUM

Beauty
 Early Italian
 Explorer
 Laroda
 Methley
 Mirabelle
 Oullins
 Santa Rosa
 Seneca
 Shiro
 Shropshire Damson
 Simka
 Stanley
 Valor
 Verity

APRICOTS

Alfred
 Blenril
 Goldcot
 Goldrich
 Harcot
 Hargrand
 Rival
 Sunglo
 Tilton
 Veecot

WESTERN CASCADE TREE FRUIT ASSOCIATION
 9210 131st N.E.
 Lake Stevens, WA 98258

Bulk Rate
 U.S. POSTAGE PAID
 Marysville, WA 98270
 Permit No. 16



ASSOCIATION

Address Correction Requested

ROOTSTOCK ORDERS

Now is the time to put in your order for rootstocks to be picked up at the spring meeting on March 3, 1990.

We have on order:

300	MARK	Apple
400	P-22	Apple
400	EM 9	Apple
200	OHXF 333	Pear
100	Citation	Plum and Peach

In addition we can get small quantities of M 26 and M 7A.

 ROOTSTOCK ORDER BLANK

PRICES: MARK \$1.75 each, 10 or more \$1.50 each.
 P-22 \$1.75 each, \$15 for 10, 25 or more \$1.25 each.
 EM 9, M7A, M26 and Citation \$1.50 each, \$12 for 10, 25 or more \$1 each.
 OHXF 333 \$2.00 each, 10 or more \$1.75 each.

<u>No.</u>	<u>Cost</u>		<u>No.</u>	<u>Cost</u>	<u>No.</u>	<u>Cost</u>
MARK	_____	M7A	_____	_____	Citation	_____
P-22	_____	M26	_____	_____	Sub-total	_____
EM 9	_____	OHXF333	_____	_____	Tax (7.8%)	_____
					Total	_____

Your name, address and phone number _____

Please fill out the form and return with check (made out to WCTFA) which must include sales tax. Mail to Walter L. Lyon, 19717 80th NE, Bothell, WA 98011, (206)483-5574.