

Western Cascade Fruit Society NEWSLETTER WINTER 1994

PRESIDENT'S MESSAGE

Saturday, March 5 is the only major meeting of the year for members-at-large of the Western Cascade Fruit Society. Past annual meetings of our society have not pulled an impressive percentage of members — even with a program designed specifically for members-at-large. This newsletter is the only way for the officers and board of WCFS to communicate with members about this special event. It would be especially encouraging to officers and board members to see a strong membership turnout at the Spring Meeting. This would add additional meaning to the long hours spent at board meetings and the volunteer hours given to the fruit show and other activities.

I encourage all members to try their best to attend this year's annual meeting and activities. We must continue to do so if we are to maintain a good healthy organization.

My daughter lives in Rochester New York and has located a book store with the following book at the following prices. No guarantees due to the time lapse, but if you are interested in a of these, please give me a call. **Cherries of New York** (one at \$85, one at \$95). **Peaches of New York** @ \$90. **Plums of New York** @\$75 (Possible pages missing).

I have been checking with the experts on the possibility of a class this spring for potential small commercial growers on the specifics of growing good Jonagolds. The average person is not aware of the many requirements of growing superb Jonagolds on the West Side. I'll let you know if this works out — there will probably be a small charge. If you are interested in such a class, please call Gary Moulton at Mount Vernon on (206) 424-6121.

Please check out the "Trip of a lifetime" on pages 5 and 6 and provide feedback to me.
Charles Parkman — WCFS President

EDITOR'S MESSAGE

I want to thank all of you for your support during my tenure as editor. I want to give special recognition to assistant editor, Ed Lewis and his patient wife Barbara. Ed and Barbara have made their living room available to the many special volunteers who met at their house in Bellevue to fold, tape, label and mail the newsletter. Ed will be 88 on February 22, and is an inspiration to many of us.

I know you will all give your full support to new newsletter editor Pete Kaiser, and provide him with your ideas, experiments and news clippings for the edification of us all.

I will continue to provide computerized labels for the newsletter — at least until we can have someone geographically closer to Pete.

Dave Battey — Snoqualmie

ANNUAL SPRING EVENT & ROOTSTOCK/SCIONWOOD SALE

March 5 at the Snohomish County Extension Office we will hold our Annual Meeting combined with the rootstock and scionwood sale. This is your big opportunity to obtain scionwood for many dozens of varieties, talk with the experts and pick up rootstock. A rootstock order blank is included on **page 14** of this newsletter. **There is no admission charge.**

PROGRAM ACTIVITIES

9:30AM	Business Meeting and Election in Auditorium
10:00AM — 3:30PM	Rootstock Sale in open shed at West end of building
10:00AM — 3:30PM	Scionwood Sale in Meeting Room. 50¢ per stick
10:00AM — 3:30PM	Grafting Instruction and Workshop
10:00AM — 3:30PM	Grafting tool available for free use at rootstock table
10:00AM — 3:30PM	Continuous fruit oriented videos in Home Ec. Room

SPEAKERS (IN AUDITORIUM)

10:00AM	Disease Control of Stone Fruits in Western Washington Ralph Byther , Extension Plant Pathologist, WSU Research Center
11:00AM	Kiwi Fruit Varieties for Western Washington Bob Glanzman , Proprietor, Puget Sound Kiwi Co., Seattle
12:00 Noon	One hour lunch break
1:00PM	How To Grow Quality Jonagold Apples in Western Washington Gary Moulton , Research Associate, WSU Mt. Vernon Research Unit
2:00PM	Chestnut Growing in Western Washington Omroa Bhagwandin , Chestnut Grower, 183 Shady Grove Rd., Onalaska
WCFS BOARD OF DIRECTORS MEETING	
3:30PM	Board of Directors Meeting and election of officers — Auditorium

To ready your own scions for use in our sale (WCFS makes 50¢ on each scion sold) please cut **last year's growth** into eight-inch pieces, carefully label by variety, and preserve in zip-lock bags in your refrigerator until March 5. A very well wrung-out paper towel should be wrapped around the group of sticks placed in each bag. Please share your wood with others — this sharing is one of the most valuable resources for WCFS members.

The Snohomish County WSU Extension Center is at **600 - 128th St. SE, Everett**, and is easily reached by taking the 128th exit from I-5. Drive E. a short distance on 128th, looking to your right (South) for the McCollum Park signs. The WSU Extension Center is at the end of the park road.

SPRING NEWSLETTER DATES

Please have your input to the editor for the Spring Newsletter by Monday, April 11. The newsletter will be mailed by April 29. Thank you very much — Pete Kaiser, new WCFS newsletter editor, 340 Pierce Street, Port Townsend, WA 98368.

MARCH BOARD MEETING

The next WCFS Board Meeting will be on **Saturday, March 5, at 3:30PM** at the Snohomish County WSU Extension Center in conjunction with our Annual Spring Event.

Board Meetings are always open to WCFS members (to all, according to the by-laws). Come with suggestions, ideas, comments, criticisms, kudos, etc.).

JANUARY BOARD MEETING

The January 29th board meeting was held in the Swasey Library in Tacoma. Our board voted that \$1500 be donated for fruit tree research at Mount Vernon, voted to have the 1994 Fall Fruit Show at Edmonds Community College, declared a policy of not selling patented varieties at our annual scionwood sale, and heard the following report:

REPORT OF THE WCFS NOMINATING COMMITTEE (For Vote at Spring Meeting)

The following members are set forth as nominees for the WCFS Board of Directors for a three year period, starting with the Spring Meeting:

Paul Hoyme	New to Board
Ernie Mazzie	For Re-election to Board
Gil Schieber	For Re-election to Board

The nominating committee also recommends that **Steve Jackson** be appointed to the unexpired term of Emory Leland, who resigned during the last year.

The following slate of officers for WCFS for 1994 is offered:

Chuck Parkman	President	For Re-election
Orel Vallen	Vice President	For Re-election
T. K. Panni	Corresponding Secretary	For Re-election
Joe Zeppa	Recording Secretary	For Re-election
Evelyn Hoyme	Treasurer	New Candidate

The nominating committee respectfully suggests that those on the board who wish to re-cycle their positions to other members inform the board, preferably in writing, at the earliest convenience. The health of our society is related to a successful search for replacements. Search by the board can begin many months before the nominating committee is charged with preparing a slate of candidates.

WCFS Nominating Committee — Paul Donaldson, Lyle Knudson and Dick Tilb

WWTFRF MOUNT VERNON FIELD DAY FEBRUARY 26

On Saturday, February 26, from 8:30AM until 3:30PM, the Western Washington Tree Fruit Research Foundation will hold an open house and field day in cooperation with the Washington State University Research Unit. This event will be held at the Mount Vernon Research Unit at 1468 Memorial Highway, Mount Vernon and the cost is free to WWTFRF members and a suggested \$10 donation from non-members. To get to the WSU Mount Vernon Research Station leave I-5 at exit #226. Proceed west on the Memorial Highway (#536) for about 3 miles. The station will be to your left. The schedule is:

8:30-9AM	Registration
9:00-10:00AM	Basic concepts of pruning young and old trees. Also pruning of raspberries and blackberries. Norton/Moulton
10:00-11:30	Field demonstration of above, plus establishing new trees
11:30AM-1PM	Lunch and WWTFRF meeting. Gourmet goodies available all day.
1:00-2:00PM	Specialized pruning such as trellis and spindle. Also pruning for kiwi and grapes and the establishment of new trees. Norton/Moulton
2:00-3:30PM	Field demonstration of the above
2:00-2:45PM	Propagation techniques including grafting and budding, stool bedding and other nursery techniques.

Rootstocks, scionwood and grafting supplies will also be available for sale at this event. For additional information please call (206) 496-6400 or (206) 584-5216. If you can volunteer to assist with this event please call Linda Markholt on (206) 355-9228.

MEMBERSHIP HONORS GIVEN AT SPRING MEETING

For many years, the Western Cascade Fruit Society has had the option to recognize outstanding contributors to the organization with "Life" memberships. Many of the pioneers in our organization have already been honored.

If you would like to nominate someone for Life Membership, please prepare a short biography to be read on the floor of the general meeting on March 5, and provide the information to the newsletter editor if your nomination is accepted.

BOOK REVIEW BY DICK TILBURY — *Orchard Pest Management*

Orchard Pest Management was edited by WSU researchers Dr. Elizabeth Beers and Dr. Jay Brunner, WSU Cooperative Extension agent Mike Willett, and *Good Fruit Grower* news editor Geraldine Warner (288 pages, 191 color photographs 100 illustrations).

This book has just been published by the *Good Fruit Grower*, and it's a dandy — a tree fruit pest identification tool that should be in every commercial and hobby orchardist's reference library. The book has excellent sections on integrated pest management, degree day modeling for spray timing, and well written sections on 25 major pests, 41 minor pests, natural enemies and pollinators — each illustrated with color photos, line drawings and graphics.

The Washington State Tree Fruit Research Commission helped in publication costs which enabled the use of color plates. I counted 42 different entomologists and other researchers in the list of credits. One shortcoming, if you can call it that, is that the book does not specify pesticide control measures. However, this was done deliberately to keep the book from soon becoming obsolete. The *Pacific Northwest Insect Control Handbook* fills this void and is revised yearly.

The book sells for \$38.50 including shipping and is available from the Good Fruit Grower Bookshelf, P. O. Box 9219, Yakima WA 98909 (1-800-487-9946)

If WCFS members would like to make a group buy of 10 or more books, we can get a discount such that the cost of a book **picked up** at the Spring Meeting (if we get 10 orders early enough) or picked up at a later meeting of the Seattle Tree Fruit Society would be \$30.25. If you wish to have the book mailed to you the cost would be \$33.00.

A copy will be available for inspection at the Spring Meeting on **March 5, which will also be the cutoff date for placing your order.**

To get in on the group buy, make a check for \$30.25 or \$33.00 out to Seattle Tree Fruit Society (STFS) and mail or give to me at the March 5 meeting. My phone is (206) 723-9009.

Dick Tilbury, STFS Treasurer, 4916 52nd Avenue S., Seattle WA 98118-2102

SLENDER SPINDLE TRAINING BOOK AVAILABLE

An article in *Pacific Farmer*, December, 1993, notes that one of the most authoritative books on the training of slender spindle fruit trees has just been translated from the original German and published by the Canadian Ministry of Agriculture and Fisheries. The title is *Pruning The Slender Spindle*, by Dr. Hermann Oberhofer.

The forty page booklet covers the basics of fruit tree pruning and canopy development before focusing on the slender spindle. Dr. Oberhofer states that the slender spindle "makes the most efficient use of sunlight, enabling the best use of the natural rules of growth." He states that the ideal slender spindle rootstock is M9 with M26 for weak varieties and MM106, MM111 or M7 for spur types. His book is available from the Ministry of Agriculture, Fisheries and Food, Suite 200, 1690 Powick Road, Kelowna, B.C, Canada V1X 7G5. The cost is \$10 Canadian and it is suggested that members band together and purchase a bank draft.

THE APPLES OF MAINE — REVIEWED BY LON ROMBOUGH OF & NAFEX

"I wish this book had a different name. For anyone familiar with *The Apples of New York*, seeing the title *The Apples of Maine* immediately gives an impression that two books are similar. But they are only indirectly related, and comparing them is inaccurate and unfair to *The Apples of Maine* in some ways.

For one, *The Apples of Maine* is a more historical work than *The Apples of New York*. That is, the author collected historical information on as many apples that have been grown in Maine as he could find reference to, rather than doing *Apples of New York* type descriptions or illustrations. His book lists the history, physical and cultural characteristics of more than 700 varieties of apples that have been grown in Maine from before 1600 to the present. A lot of

pomological history has been compiled here that is sometimes academic (because the varieties may not exist any longer) and sometimes practical, but always of value.

Its best use would be in **combination** with a book such as *The Apples of New York*, where it will do a lot towards clarifying synonyms, explaining origins, assisting identification and could give leads to finding the remaining trees of many of the varieties.

Additionally, some of the stories of the rise and fall of various varieties (Ben Davis, for example) are interesting and give insight into advantages and disadvantages of the apples, which could help a modern grower decide if they are worth trying again.....

This book is mainly for serious apple collectors and growers who want to trace and verify their varieties as best as possible, and gain useful insight into many of them. I'd also recommend it to those interested in pomological history, and, to some degree, history in general. Apples were an important part of the settling of the U. S. And the comings and goings of the people who imported, created, and grew them can be worth noting."

Several WCFS members have this 378 page book in their collection and recommend it highly — especially for those of us interested in varietal history. The font used in the book is very striking as is the quality of the binding.

The Apples of Maine is available from the author, George A. Stilphen, R. R. 1, Box 1347, Bolster's Mills/Harrison ME 04040. The price is \$38.00 plus \$3.00 shipping.

Dave Battey — Snoqualmie

NEWS FROM THE CHAPTERS

The **Peninsula Fruit Club** just elected Pam Buck as their new president. Pam is at 6835 Old Clifton Road SW, Port Orchard, WA 98366 (206) 674-2604. Congratulations Pam! Thanks to outgoing president Tom O'Connor for all of his hard work and inspiration.

Penninsula's annual grafting show will be held at the Bremerton library on February 19 from 10AM to 2PM. Members will also be spending a day at South Kitsap High demonstrating and teaching grafting techniques to students who have shown great interest in the past.

At the **Piper Orchard**, eight apple trees from our nursery have been planted in the orchard as replacement trees. One pear, Louise Marie, grown, fruited and identified by Ed Lewis, was planted in January. Five of the nursery pears being grown by Walt Lyon are ready for transplanting to the orchard this Spring.

The Piper Orchard Chapter of WCFS is indebted to Ozzie and Lois Moe for their warm hospitality for monthly work parties as well as Ozzie's hot coffee and Lois' carrot cake.

We meet every third Saturday except for August and December. For further information call Paul Donaldson on (206) 364-0161 or Ed Lewis on (206) 454-3615.

The **Seattle Tree Fruit Society** has a new look. A new heading for the chapter's monthly newsletter has been designed by the artistic director of the Seattle Zoo. Remember that annual dues for the STFS are \$18, which provides the additional resources required for a monthly publication and includes the quarterly WCFS newsletter. If you are interested in joining the Seattle chapter please write to STFS, 4916 52nd Ave S, Seattle, WA - 98118. STFS meets monthly at the Ravenna Senior Center, 6559 Ravenna Ave NE.

The **South Puget Sound** chapter has expressed strong interest in apple identification classes. This may trigger the WCFS Board of Directors to set up formal training for members.

"TRIP OF A LIFETIME" EUROPEAN ORCHARD TOUR

The Western Cascade Fruit Society is planning a group tour to England and the Continent this fall (Sept — Oct, 1994), led by WSU Horticulturalist Emeritus Dr. Robert A. (Bob) Norton and his wife Carol. We must now define the areas and types of attractions that the earnestly interested among you want to visit.

Please answer the following questionnaire carefully, because we want to develop a tour that will result in a happy commitment by all of us. There is more detail in the England section because it is easier to identify the many sites of special interest; and they're generally listed in the order of travel down the road. Sites on the Continent are more generally horticultural, but not completely so; your personal suggestions for tourist and shopping visits are invited. It has been our experience that both partners in a couple want to see both the horticultural attractions AND the historic sights, as well as the gardens — and even the shopping. We've not included much shopping specifically, but there will be opportunities.

So, in the following list, please give your preferences on a scale of 1 (best) to 4 (least), or cross off something you really don't want, and, perhaps, add something you DO want.

TRIP QUESTIONNAIRE

2 weeks (\$2,000 — \$2,500) 3 weeks (Closer to \$3,000)
England at beginning, or end, or split (Check or comment below)

ENGLAND

London, Kent, Surrey, Sussex (Rank as requested above)

- Kew Gardens, Museums & Galleries, bus tour
- Brogdale Horticultural Trust
- Wisley Gardens (Royal Horticultural Society — 200 acres)
- East Malling (Research Station)
- Canturbury Cathedral Roman Villa, mosaics
- Several apple farms, woods, nurseries
- Hever Castle (Ann Boleyn home, 1,000 yew maze)
- Sissinghurst and other botanical gardens

Wiltshire, Somerset, Devon, Cornwall (Rank as requested above)

- Additional National Trust gardens and houses
- Cider mill and shops Mendip Hills and caves
- Wells and Bath Crafts, crystal, pottery
- Glastonbury, Tintagel (Tales of King Arthur)
- Picturesque villages Windswept shores
- Devon and Cornish cream teas Dartmoor

Avon, Midlands, Staffordshire (Rank as requested above)

- Long Ashton Research Station, Bristol
- Additional farms, gardens, Coventry Cathedral, Cotswolds
- Bass Beer brewery Wedgwood

THE CONTINENT

Normandy (Rank as requested above)

- Home of William the Conqueror D-Day beaches
- Bayeaux Cathedral Orchards and farms
- Historic oak tree Stained glass windows
- Mont-St-Michel Cider makers

Belgium (Rank as requested above)

- St. Truiden Fruit Research Station Chocolates
- Morren Nurseries
- WWI & WWII Memorials, Flanders Luxembourg

Netherlands (Rank as requested above)

- Wilhelminadorp Experiment Station (Roostocks, varieties, training systems)
- Orchard Districts

Switzerland, Germany and other parts of France are possible if you express strong personal interest in these areas and less in England.

Degree of interest in this trip: Strong, Mild (keep me informed) Prob. Can't go.

Name & Address & Phone _____

Comments: _____

Please return this questionnaire to:

Charles H. Parkman, WCFS President, P O Box 128, Carlsborg, WA 98324 (206) 452-6600

B.C. FRUIT TESTERS ASSOCIATION

Our neighbors to the north have an organization similar to our own and they publish a quarterly newsletter, *Fresh From The Cider Press*, with about a dozen pages of information on fruit growing, grafting, horticultural history, bees, etc. The B. C. Fruit Testers Association membership person and treasurer is Diane Perry, 5002 Old West Saanich Road, RR#3 Victoria, B.C. V8X 3X1, Canada. Write to her for dues information.

ARE YOUR WCFS DUES DUE?

Check the upper right-hand corner of your WCFS Newsletter mailing label. If you find a big mean green reminder label on your bulletin or if the month and year on the mailing label are past, **you are in danger of being dropped from our mailing list.** If the date is up to three months in the future, you have one more newsletter coming. Please remit dues to Ray Elder, 2539 NE 108th Place, Seattle, WA 98125, or to your chapter treasurer.

FRUIT VARIETIES FOR W. WASHINGTON COASTAL AREAS

Dick Moulton, the Grays Harbor expert from WSU, has written a Cooperative Extension addendum to WSU Bulletin 0937, *Tree Fruit Varieties for Western Washington*, which lists his suggestions for coastal areas of the state. Anyone needing the complete list of suggestions can write to Grays Harbor WSU Extension, P. O. Box 552, Montesano, WA 98563. We will note only Dick's most highly recommended varieties:

- Apples** — Wynooche, Chehalis, Akane, Spartan, Liberty, Freedom and Jonagold.
- Cherries** — Angela, Hardy Giant, Van, Emperor Francis, Montmorency
- Pears** — Clapp Favorite, Bartlett, Orcas, Comice, Shinseiki, Kosui
- Plums/Prunes** — Methley, Beauty, Shiro, Seneca, Early Italian

WE HAVE THE ANSWER

Is Spring grafting a complex and challenging task?

Not for the home gardener since the invention of black plastic electrical tape! As a home fruit grower you are not concerned about consistency in height of a graft above ground or in making every graft look the same. You are interested in "take" and good growth of the new scionwood. Grafting requires five things: 1. Cambial contact (the cambium layer on the stock must match the cambium layer on the scion). 2. Pressure (there must be enough pressure to keep the cambium of the stock and scion in good contact). 3. Heat (there must be heat to activate the forming of callus that heals the wound and bridges the cambiums between the stock and the scion). 4. Strength (The fancy double cuts that our ancestors performed on stock and scion gave physical strength to the graft). 5. Sealing of the scion from dehydration.

Black plastic tape provides all five of these requirements.

Select your scion for rough compatibility with the diameter of the rootstock. Then slide scion up and down the stock until diameters match. Cut off the stock at an angle about 1 to 1 1/2 inches long. Make certain that the cut is clean and smooth. Do the same to the scion, and make the stock and scion. About one inch below the slant cut on the stock, wrap two wraps of black plastic electrical tape around the stock to anchor it. Place the slant on the scion against the stock on the stock. Carefully wrap the tape upward, overlapping about half, and pulling on the tape provide a very tight wrap. About one inch above the top of the slant cut on the scion, wrap the tape around the scion twice, and then loop back about four inches of tape upon itself and anchor the end of the tape around the scion and back to the two-inch "tab" that you have just formed. This is important. Whether you use the tab to attach a label to, or just leave it, this sticking of tape to itself prevents the entire wrap from unraveling in the hot sun.

The black plastic tape keeps the cambium in contact and under pressure. It also draws heat needed for the formation of callus, protects the scion from dehydration and provides a very strong graft.

Complete the graft by cutting the scion top at a forty-five degree angle, leaving about two buds above the top of the tape. It is best to seal this cut on the top of the scion with a dab of water-based paint to insure against dehydration.

In August, gently slit the black plastic once, down the side, with a razor blade, scalpel or very sharp knife to prevent girdling. Do not peel the tape off as this will weaken the newly formed joint and damage the bark. It will fall off over time.

So, high-tech black plastic tape has made it simple for us. No need for the fancy cuts or raffia or grafting wax (or cow dung and clay mixtures) of our forebears.

Dave Battey - Snoqualmie

SPECIAL GROUP RATES FOR THE GOOD FRUIT GROWER

WCFS president Chuck Parkman has corresponded with the circulation department of the *Good Fruit Grower* concerning group rates. The *Good Fruit Grower* is a large format monthly magazine dedicated to expertise in the fruit growing industry. It is often quoted in STFS and WCFS newsletters and often contains articles by Bob Norton and Bob Stebbins and other experts we have come to respect. The normal U. S. subscription rates are \$30.00 per year. Our group rate is just half that, \$15 per year. Our option for reduced rates expires on May 1, 1994, so if you are interested in a group subscription please send a check for \$15 made out to WCFS to the WCFS Treasurer. The group rates require that WCFS cut one check to the *Good Fruit Grower* covering the total amount of our group subscriptions.

REFLECT BEFORE REWORKING FRUIT TREES

BY JOHN WILTON, SENIOR CONSULTANT, MAF TECHNOLOGIES, NEW ZEALAND

PLEASE TAKE TIME TO READ THIS ARTICLE THOROUGHLY — IT CONTAINS MANY INTERESTING FACTS NOT JUST RELATED TO THE TOP-WORKING OF FRUIT TREES

This article is condensed from material obtained from Dr. Bob Stebbins, retired OSU horticultural specialist, by Ed Lewis. Ed's curiosity was piqued by an article in the September, 1993, *Good Fruit Grower*, in which Dr. Stebbins comments on the success of his experiments with the early grafting and ten-bud grafting discussed in this article. The article is from *The Orchardist*, August, 1991.

From what I have observed in the last two or three years the results from grafting can be rather variable and in many instances considerably better results can be obtained had more thought about technique and overall tree management objectives been exercised prior to dashing ahead with the grafting.

As with many things associated with fruit growing you get what you pay for. Grafting is no exception. The operation needs to be approached from the viewpoint of what will give the best tree performance following the grafting exercise, rather than what method will give the contract grafter the best return from his efforts which I suspect is often the case.

Several years ago I did a literature search on grafting and top working techniques for a client. This turned up some interesting papers. A few of these exploded some well known myths about grafting such as its best done in the spring when the sap flow is running.

English works published back in the 1940's showed that winter grafting when the trees were fully dormant produced the greatest amount of scion development and as time of grafting was delayed further into the growing season scion growth became progressively weaker.

I have observed similar trends in growth here (New Zealand) and on my own orchard have found the best results for both kiwifruit and nashi has come from grafts done early in the winter, rather than in the spring when sap flow has or is about to commence.

The same English work also compared the subsequent scion vigour performance of various types of graft. This study shows that grafting techniques in which there was wood to wood contact between the scion and understock out performed those in which there was only bark contact, as is the case with the commonly used rind grafts.

Cleft grafting in which the understock branch is split and the scion inserted into the cleft thus created, or whip and tongue (grafts) will usually outperform rind grafts in which the scion is just shoved down the cambium layer margin between bark and wood. In the case of dormant grafting the bark will not lift so it is not possible to use rind grafting techniques.

For dormant grafting, cleft graft techniques are used for larger branches, and whip and tongue, or cleft for smaller branches where scion and understock size are similar. Even though the trees are apparently dormant and showing little sign of life when fully dormant there is sufficient cell division activity during dormancy to callous the graft wound and knit the scion and understock together before growth commences in the spring. This way the grafts get a flying start in the spring.

The performance after grafting is directly related to the number of buds of the new variety inserted into the old (understock) variety. English studies have also shown tree performance well after grafting to also be influenced by the techniques used at the time of grafting.

In these studies, frameworking in which most of the former tree framework was retained and many scions used was vastly superior to topworking where the trees were lopped back to the base of the leaders and just a few grafts used to establish the new variety.

Grafting can be very time consuming and rather expensive, particularly where complete frameworking is attempted. As far as I can estimate, (the) rate of grafting, including tree preparation, is somewhere in the region of 10 to 15 grafts per hour for a competent grafter who knows what he is about.

If you are looking at the option of grafting a block (of trees) over re-planting it's probably reasonable to expect to spend almost as much on the grafting operation as you would spend on hauling the old trees out and putting in new ones.

This would allow you to spend somewhere between one and two hours per tree. Taking this approach you can use partial frameworking techniques which, although not as detailed as full frameworking, do at least enable you to retain much of the established tree structure and where a good tree structure already exists this offers a large advantage over the simple topworking job where all this has to develop again.....

Graft gradient (angle) is also worth thinking about. During their early stages of development new branches are best maintained at 30° or more above the horizontal..... A common error here is to position the graft at too flat an angle which causes most of its growth potential to become a vertical water shoot.....

One interesting paper I came across was a South African one which described work done with scion length and thickness.

This paper took the approach that what was important was the number of buds of the new variety placed on the tree, rather than the number of grafts themselves. By using long scions a similar number of buds could be obtained with only half the grafting effort as when using short scions.

There, best results came from using 10 bud scions rather than five bud scions. As well giving extensive growth for future branch development, these long scions usually gave a good selection of fruiting laterals for early fruiting wood, plus a few fruit spurs near their base as well.

Yield data given from this study showed that long grafts gave between 2.37 and 2.73 kilograms of fruit per graft for harvesting within 20 months after the grafting job compared with only 1.21 to 1.34 kilograms of fruit per graft for the shorter grafts. On the basis of this data a partially frameworked with 15 long scions this month could be harvesting 35 to 40 kilograms of fruit for the 1992 harvest season.

These long scions develop sail area quickly and are initially more prone to wind damage so will need more care and attention to prevent breakage.

The other secret in using them would be to position them far enough from each other that all the good wood they produce can be utilised and does not have to be cut away before had a chance to fruit for you.

Incidentally, I suspect early grafting may be one way to beat the wind problem because the graft union has more time to strengthen before growth takes off.

They also found that scions exceeding 8 millimeters (.3 inch) in diameter performed better than those of smaller diameter.

If you are going to graft rather than grub the orchard for replanting, tree health is something you have got to consider pretty carefully.....

Incidentally, tree health problems following grafting are invariably worse the greater reduction in tree foliage area to support the root system over the grafting period. For this

reason, frameworking, or partial tree frameworking runs much less risk to tree health risk than top-working where most of the tree top is removed.....

Good condition of scion wood is critical to a successful grafting job. The main cause of failure, other than the obvious one of careless matching of the cambium layers at grafting is dehydration of the scion wood either during storage or after working on to the tree.

The main (causes) of drying out are poor preparation for storage, or a poor sealing job at grafting time. Where grafting is delayed until after bud break it is necessary that the scion wood be still dormant and under our conditions this probably means storing it under some form of refrigeration. As most cool stores tend to dehydrate things which are in them its necessary to ensure that the scion wood does not dry out while stored in the cool store.

One of the most convenient methods I have found for storing scion wood is to simply plunge it into damp fresh untreated sawdust. If this material is not readily available, wrapping the wood up into a moisture proof bundle with polythene sheeting will do as long as its not too dry to start with.

Humidity within the package can be maintained with addition of some slightly damp newspaper for sacking, however if you are adding moisture or using wetted materials care must be taken not to get the wood excessively wet otherwise fungal decay is likely to ruin the wood. Should you be unlucky enough to have your scionwood get a little dry during storage, soaking it overnight in water prior to using it is a useful way to restore its moisture status to a more viable level.....

Once on the tree, sealing it against dehydration and moisture intrusion to the graft union is vital to success. Modern plastic grafting tapes make this job much easier than it used to be as far as protection of the graft union goes. With pipfruit, loss of moisture from the cut end of the scion can be considerable, so it's critical that the exposed end of the scion be protected. Over the years, many different sealing compounds have been used for grafting. Occasionally some have given poor results, either through cracking or in the case of some poorly formulated petroleum compounds, seepage of material into the graft union area. My advise is that if you have got a sealant compound which works well, stick with it.

For good results grafts need care and attention during the first growing season. The important points to watch are:

1. Early removal of any flowers or fruitlets that may set — a real problem with precocious varieties like Braeburn.
2. Rubbing off of any upper surface buds on the scion which are likely to become water shoots to direct their growth potential into better angled laterals coming away from other scion buds.
3. Protection against wind damage.....
4. Clear stock suckers and regrowth from the immediate area around the graft to prevent it becoming smothered out. Leave (stock) shoots further away alone so that they can provide leaf area to support the roots.....
5. Where tight binding material has been used make sure it does not constrict shoot thickening once a graft union is firm. The best way to do this is to cut it by running a sharp knife across it on its shaded side. Do not take the tape off, particularly in mid-summer, otherwise you run the risk of sunburn injury to the bark area which has been covered with tape.
6. "Sap Drawers" which have been retained for the benefit of root and tree health should be retained for the whole growing season, however if portions of their growth is interfering with scion development these portions should be removed.
7. Do not overlook pest and disease control.....
8. Where early grafting is practised, holding a few scions in the fridge means that any misses can be reworked later in that growing season.

CHECK YOUR LABEL TO SEE IF YOUR WCFS DUES ARE DUE

FRUIT SHOW A SUCCESS

The 1993 Fruit Show was very successful, attracting 990 paying guests and netting \$2,086. The WCFS Board of Directors wishes to express their deep appreciation for the high quality volunteers that made this event so memorable.

1993 FRUIT SHOW INVENTORY

The following list is an inventory of the number of "plates" of a specific variety that were displayed at our 1993 show. An asterisk (*) denotes a variety that was not shown in 1992 (It may very well have been shown in a previous year). **The high number of plates (276) shown this year is amazing considering that 1993 was such a difficult fruit growing year.**

1993 had a damp spring and an overly wet growing season — fine for growing wood but not for growing apples. Fruit set in the Puget Sound Country was well below normal. As a result the number of varieties and plates shown were less than 1992. The 276 varieties (including "sports") shown in 1993 included 80 varieties not shown in 1992. For comparison, there were 333 varieties shown in 1992 included 140 varieties not shown in 1991. There were 218 varieties in the 1991 show, 47 of which were "new" varieties. There were 94 "new" varieties in 1990 and 75 "new" in 1989.

In 1993 — Varieties with five plates or more (including "sports") were:

Spartan (10)	Belle de Boskoop (7)	Liberty (6)	Gravenstein (5)
Cox's Orange (8)	Gala (7)	Spigold (6)	Macoun (5)
Jonagold (8)	Tomkin's King (7)	Arlet (5)	Melrose (5)

In 1992 — Varieties with five plates or more (including "sports") were:

Gala (14)	Elstar (8)	Golden Delicious (6)	Jonamac (5)
Jonagold (13)	Tomkin's King (8)	Liberty (6)	New York 429 (5)
Melrose (12)	Bramley (7)	Northern Spy (6)	Pink Pearl (5)
Gravenstein (11)	Fuji (7)	Opalescent (6)	Spencer (5)
Macoun (10)	Idared (7)	Arlet (5)	Summerred (5)
Spartan (10)	Akane (6)	Black Gilliflower (5)	Sweet Sixteen (5)
Ashmead's Kernel (9)	Belle de Boskoop (6)	Calville Blanc (5)	Winter Bannana (5)
Hudson's Golden	Brock (6)	Criterion (5)	Wolf River (5)
Gem (9)	Cortland (6)	Freyberg (5)	
Mutsu (9)	Cox's Orange (6)	Golden Russet (5)	

1991 — Varieties with five plates or more (including "sports") were:

Jonagold (10)	Gravenstein (6)	Melrose (6)	Esopus Spitzenburg (5)
Tompkin's King (7)	Liberty (6)	Belle de Boskoop (5)	Northern Spy (5)
Gala (6)	Macoun (6)	Elstar (5)	Spartan (5)

1990 — varieties with five plates or more (including "sports") were:

Jonagold (16)	Akane (8)	Gravenstein (6)	Golden Delicious (5)
Gala (14)	Idared (8)	Holstein (6)	Hudson's Golden
Liberty (11)	Mutsu (8)	McIntosh (6)	Gem (5)
Spartan (11)	Ashmead's Kernel (7)	Opalescent (6)	Macoun (5)
Melrose (10)	Elstar (7)	Spigold (6)	Westfield-Seek-No-
Northern Spy (9)	Calville Blanc (6)	Baldwin (5)	Further (5)
Tompkin's King (9)	Criterion (6)	Esopus Spitzenburg (5)	Yellow Newton (5)

Dave Battey - Snoqua

CHECK YOUR LABEL TO SEE IF YOUR WCFS DUES ARE DUE

1993 WCFS FRUIT SHOW VARIETY LIST

NUMBER FOLLOWING VARIETY NAME IS NUMBER OF PLATES DISPLAYED
(* = NOT ON 1992 LIST)

APPLES

ACEY MAC 1*
 AKANE 3
 ALKMENE 3
 ALLINGTON PIPPIN 1*
 AMANASHIKI 1*
 ARLET 5
 ASHMEAD'S KERNEL 4
 BACCATA V. JACKII (CRAB) 1*
 BALDWIN 1
 BARRY 1*
 BELLE DE BOSKOOP 4
 BELLE DE BOSKOOP, RED 2*
 BEN DAVIS 1
 BLACK GILLIFLOWER 3
 BLACKJON 1
 BLANGSTEAD COX 1*
 BLAXSTAYMAN 1*
 BOB WHITE (CRAB) 1*
 BOGO BOSKOOP 1
 BRAEBURN 3
 BRAMLEY SEEDLING 4
 BROCK 3
 BROWN RUSSET 1
 BROWN'S APPLE 1*
 BURGUNDY 4
 CALVILLE BLANC D'HIVER 3
 CHEHALIS 3
 CHENANGO STRAWBERRY 1*
 CHESAPEAKE 1
 CHESTNUT CRAB 2
 CHISEL JERSEY 1
 CLAYGATE PEARMAN 1*
 COLLAMER 1
 CONRAD 1
 CORNISH GILLIFLOWER 3
 CORTLAND 2
 COURT PENDU PLAT 2
 COW JERSEY 1
 COX, CHERRY 1*
 COX'S ORANGE PIPPIN 6
 COX, QUEEN 1*
 CRITERION 1
 DALITER (ELSTAR SPORT) 1*
 DAVEY 2
 DAVIES 1*
 DECLON 1*
 DELBARD JUBILEE 1*
 DELISTEIN 1*
 DEMOCRAT 1
 DEXTER 1*
 DISCOVERY 1
 DUCHESS OF OLDENBURG 2
 DUKE OF DEVONSHIRE 1*
 DULCE 2*

DYER (POMME ROYALE) 1
 EARLYGOLD 1
 ECHO 1
 EGREMONT RUSSET 2
 ELAN 1*
 ELMER 1
 ELSTAR 3
 EMPIRE 3
 EMPRESS (NY 651) 1*
 ENTERPRISE (COOP30) 1*
 EPICUREAN 1*
 ERWIN BAUER 1
 ESOPOS SPITZENBURG 2
 EVERESTE 1*
 FALL PIPPIN 1
 FALL RUSSET 1
 FAMEUSE (SNOW) 1
 FARMER SPY 1*
 FIELD SPY 1
 FIESTA 2
 FIRESIDE 1
 FORTUNE SEEDLING #5 1
 (BRIAN MULLIGAN)
 FOXWHELP 1
 FRANKLIN 1*
 FREYBERG 2
 FUJI 1
 FUJI (RED) 1
 FUJI REDSPORT 1
 FUKUTAMI 1
 GALA 2
 GALA (RED) 1
 GALA REGAL 1
 GALA (ROYAL) 2
 GALA (SCARLET) 1*
 GALLIA BEAUTY 1
 GEEVESTON FANNY 1*
 GEORGE CARPENTER 1
 GINGER GOLD 2*
 GLOCKENAPFEL 1
 GLORIE VAN HOLLAND 1*
 GLOSTER 3
 GOLDEN DELICIOUS 1
 GOLDEN NOBLE 1
 GOLDEN NUGGET 1
 GOLDEN RUSSET 4
 GOLDEN SUPREME 1*
 GORO 1*
 GOUDREINETTE (SEE BELLE DE BOSKOOP)
 GRANNY HURST 1*
 GRAVENSTEIN 3
 GRAVENSTEIN (RED) 2
 GREENSLEEVES 1
 GRIMES GOLDEN 1
 GROVE 2
 HARALSON 2
 HAWAII 1

HAWLEY 1*
 HENER-20 1
 HIME KAMI 1*
 HOLIDAY 1
 HOLLY 1
 HOLSTEIN 2
 HONEYCRISP 1*
 HONEYGOLD 1
 HOWGATE WONDER 1
 HUBBARDSTON NONESUCH 4
 HUDSON'S GOLDEN GEM 4
 IDARED 4
 INDIAN MAGIC (CRAB) 1*
 INGRID MARIE 1*
 JAMES GRIEVE 1
 JEFFERIS 1
 JEWETT RED 1
 JIMMI 1*
 JONAFREE 1*
 JONAGOLD 8
 JONAGORED 1*
 JONAMAC 2
 JONATHAN 2
 JONWIN 2
 KARMIJN DE SONNEVILLE 4
 KATJA 1
 KEEPSAKE 4
 KENDALL
 KENT 3
 KERRY PIPPIN 1*
 KESTREL 1
 KIBBE SPY 1*
 KIDD'S ORANGE RED 2
 KINGSTON BLACK 1
 KING'S ACRE PIPPIN 2
 KOREI 1*
 KYOKO 1*
 LADY 1
 LATE STRAWBERRY 1
 LIBERTY 6
 LODI 1
 MACOUN 5
 MACFREE 1
 MAIDEN BLUSH 1
 MCINTOSH 2
 MCSHAY 1
 MARBLE 1*
 MARY POTTER (CRAB) 1*
 MEDINA 1
 MELROSE 5
 MERTON CHARM 1*
 MERTON NAVE 1*
 MERTON RUSSET 1
 MERTON WORCESTER 1*
 MICHINOKU 1*
 MONROE 1
 MOSA-64 1
 MURASAKI 1*

MUTSU 3
 NEWTON WONDER 1
 NEWTOWN PIPPIN
 (SEE YELLOW NEWTON)
 NEWTOWN SPITZENBURG 2
 NEW JERSEY 100 1*
 NEW YORK-23 1*
 NEW YORK-315 1
 NEW YORK-316 1
 NEW YORK-347 1
 NEW YORK-415 1*
 NEW YORK-428 1
 NEW YORK-429 2
 NEW YORK-529 1
 NEW YORK-543 1
 NEW YORK-674 1*
 NEW YORK-44408-11 1
 NEW YORK-61345-2 1
 NIAGARA 1
 NITTANY 1
 NORFOLK ROYAL 1
 NORTHERN SPY 3
 NORTHERN SPY (EARLY) 1
 NUGGET 1
 OHIO NONPAREIL 2
 OLYMPIC 1*
 ONTARIO 1
 OPALESCENT 4
 OREI 1
 ORENCO 2
 ORIN 1
 ORIOLE 1
 ORLEANS REINETTE 2
 ORMISTON ROY (CRAB) 1*
 ORTLEY 1
 OSWEGO 1*
 OZARK GOLD 1
 PALOUSE 2
 PERRY RUSSET 1
 PINK PEARL 1
 POMME RAISEN 1
 PORTER'S PERFECTION 1*
 PRIMA 2
 PRISCILLA 1
 PROFESSOR SPRENGER (CRAB) 1*
 PUMPKIN SWEET 1*
 REDGOLD 1
 REGENT 1
 REINE DES POMMES 1
 RHODE ISLAND GREENING 3
 RIBSTON PIPPIN 1
 ROXBURY RUSSET 2
 SALT COTE PIPPIN 1
 SALOME 1
 SANDOW 1*
 SEKAI-ICHI 1
 SENSHU 1*
 SHAMROCK 1
 SHAY 2
 SHENANDOAH 1*
 SHINKO 1
 SINTA 1
 SIGNE TILLISCH 2
 SMOKEHOUSE 2

SNOW (SEE FAMEUSE)
 SPARTAN 10
 SPENCER 1
 SPIGOLD 6
 SPIJON 1
 SPLENDOR (RED) 1
 STATE FAIR 1
 STAYMAN WINESAP 2
 STEARNS 2
 STURMER PIPPIN 1*
 SUGAR TYME (CRAB) 1*
 SUMMER RAMBO 1
 SUNRISE 3
 SUNTAN 1
 SWAAR 2
 SWEET ALFORD 2
 SWEET SIXTEEN 2
 TEA (CRAB) 1*
 TOKO 1
 TOMPKIN'S KING 6
 TOMPKIN'S KING RUSSET 1*
 TWENTY OUNCE 1
 TYDEMAN'S LATE ORANGE 1
 TYDEMAN'S RED 1
 VANDEVERE 1
 VICTORY 1*
 VIKING 2
 WAGENER 1
 WASHINGTON STRAWBERRY 1*
 WAYNE 1*
 WEALTHY 1*
 WEALTHY (RED) 1
 WHITE ANGEL (CRAB) 1*
 WHITE WINTER PEARMAN 1
 WICKSON 1
 WIJCIK (MCINTOSH) 1
 WINESAP 1*
 WINCHESTER 1
 WINSTON 1
 WINTER BANANA 2
 WINTERSTIEN 1
 WOLF RIVER 1
 WORCESTER PEARMAN 1*
 X-ELLENT 1
 YELLOW NEWTON 2
 YELLOW TRANSPARENT 1
 YOKO 1*
 YORK IMPERIAL 1

PEARS

ANJOU 1
 A-RI-RANG 1
 AURORA 1
 BARTLETT 1*
 BARTLETT (RED) 1*
 BENNETT 1
 BOSCO 1
 CHOJURO 2
 COMICE 3
 CONFERENCE 1
 EL DORADO 2
 GIESER WILDMAN 1

HAMESI #1 1*
 HAWAII 1*
 HIGHLAND 3
 ICHIBAN-NASHI 1*
 KOSUI 1*
 MISHIRASU 1*
 NIITAKA 1
 ORCAS 1
 PACKHAM'S TRIUMPH 1
 RED SENSATION 1*
 RESCUE 3
 SECKEL 2*
 SHINKO 1
 SHINSEIKI 1*
 SINGO 1
 SPALDING 1*
 STARKRIMSON 1
 SURECROP 1
 TWENTIETH CENTURY 1
 (NIJISSEIKI)
 YOINASHI 1*
 YONGI 1*

GRAPES

NIAGARA 1

KIWI

ABBOTT/ALLISON 1
 ANNA NASNAJA 2*
 BLAKE 1
 CORIACEA 1*
 ELMWOOD 1
 GENEVA 1*
 GRACIE 1
 HARAY 1*
 HAYWARD 3
 ISSAI 1
 KEN'S RED 1*
 PURPEA 1*
 SAANICH 1

NUTS

BACELONA FILBERT 1
 CASCADE WALNUT 1
 CHEPAKA WALNUT 1
 EUROPEAN CHESTNUT 1
 FRANQUETTE WALNUT 1
 MISSOURI MAMOTH HICK
 SPURGEON WALNUT 1*

PERSIMON

AMERICAN (SEEDLING) 1
 FUYU 1

QUINCE

RICHES 1*
 VAN DEMAN 1*

MEDLAR

NOTTINGHAM 1

PASSION FRUIT 1*

ROOTSTOCKS AVAILABLE FROM WCFS THIS SPRING

EM27	1/4"	20%	Apple	M7A	1/4"	55%	Apple
P22	1/4"	25%	Apple	EM111	1/4"	75%	Apple
EM9	1/4"	35%	Apple	CITATION	1/4"		Plum, Peach, Apricot
MARK	3/16	40%	Apple	St Julian A	1/4"		Plum, Peach, Apricot
MARK	1/4"	40%	Apple	GM61	1/4"		Cherry
EM26	1/4"	45%	Apple	OHxF333	1/4"		Pear
M7A	3/16	55%	Apple	OHxF5133	1/4"		Pear
				Pyrus Betulifolia	1/4"		Asian Pears

NOTES: 1) In the above list, the fraction is stem diameter and the percentage is that of standard seedling rootstock. 2) Undersize rootstock of 3/16" is available to graft those undersize scions! M7A and MARK only. 3) EM111 is an excellent understock for dwarf interstem trees. Various dwarf interstem wood is available. Please inquire.

ROOTSTOCK ORDERING INFORMATION

🍏🍏🍏 TAX-FREE DISCOUNT FOR ORDERING EARLY 🍏🍏🍏

Just place your order prior to the day of the Annual Spring Event and we'll pay the 8.2% sales tax to the Governor for you! But to avoid disappointment, please place your rootstock order early — since some popular rootstocks are in limited supply this year.

All rootstock not sold through pre-orders prior to March 5 will go on sale at the Spring Event from 9AM until 1PM but **ALL ROOTSTOCK SOLD ON THE DAY OF THE SPRING MEETING IS SUBJECT TO A 10% SURCHARGE FOR SPECIAL HANDLING!**

ROOTSTOCK ORDER FORM *(Please Mail As Soon As Possible)*

PRICES: M7A, EM26, EM111, St Jul A, P Betulifolia \$1.50 Each 10 or more \$1.25 Each
 MARK, EM9 \$1.75 Each 10 or more \$1.50 Each
 EM27, OHxF 333, OHxF 513 \$2.00 Each 10 or more \$1.75 Each
 CITATION, GM 61, P22 \$2.50 Each 10 or more \$2.00 Each

TYPE	NO.	COST	TYPE	NO.	COST	TYPE	NO.	COST
EM27			EM26			St Julian A		
P22			M7A 1/4			GM 61-vf		
EM9			M7A 3/16			OHxF 333		
MARK 1/4			EM111			OHxF 513		
MARK 3/16			CITATION			P. Betulifolia		
SUB-TOTAL			SUB-TOTAL			TOTAL		

NAME: _____ TELEPHONE: _____

ADDRESS _____

Please fill out the form and return with check (made out to WCFS). Mail to: Steve Jackson 2330 229th Ave. NE, Redmond WA 98053-6532. Please call after 6PM on (206) 868-8344.

Unless prior arrangement is made, all pre-ordered rootstocks must be picked up between 9AM and 1PM during the meeting on March 5.

A Special Note Of Thanks to Walt Lyon for carrying the load of handling rootstock sales all of these years. Thanks again, Walt, for all the work you have done for WCFS.

Steve Jackson — Redmo

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WESTERN CASCADE FRUIT SOCIETY EDITOR

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LIFE
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WESTERN CASCADE FRUIT SOCIETY MEMBERSHIP INFORMATION

(Please indicate whether you wish standard WCFS membership or affiliation with a chapter. Yearly dues for standard or chapter memberships are \$10, except as noted)

NAME(S) NEW
 RENEWAL

STREET ADDRESS

CITY, STATE, AND ZIP

PHONE PLEASE CHOOSE ONE CATEGORY BELOW

STANDARD \$10() NORTH OLYMPIC \$10() PENINSULA/KITSAP \$10()

PIPER \$10() SEATTLE TREE FRUIT \$18() TAHOMA \$10() S. PUGET SOUND \$10()

ENCLOSED FIND \$5 EXTRA FOR WESTERN WASHINGTON FRUIT RESEARCH

Check to receive "opportunity descriptions" for society participation.

Make checks payable to WESTERN CASCADE FRUIT SOCIETY and mail to:

WCFS Treasurer, 2539 NE 108th Place, Seattle WA 98125.

YOU MAY PAY YOUR CHAPTER TREASURER FOR BOTH CHAPTER & SOCIETY DUES