SUMMER 1987

WESTERN CASCADE TREE FRUIT ASSOCIATION

WCTFA

SPECIALIST TALKS ABOUT FUNGICIDES

by Ralph Byther

Dr. Ralph Byther, disease specialist at the Western Washington Research and Extension Center at Puyallup, spoke to WCTFA members at the annual spring meeting about fungicides. Here is a condensed version of his talk along with additional material.

Four basic criteria must be met before a fungicide can be expected to give disease control. The fungicide must be (1) present at the right time, (2) be present at the right place, (3) be present in sufficient quantity to be effective, and (4) must be toxic to the target organism.

To understand the significance of proper timing of fungicide applications, it must be realized that a majority of the fungicides used in disease control are protectant or contact fungicides. These materials need to contact the fungus prior to infections. Most fungicies prevent or disrupt the process of spore germination. Applications made after the fungus has entered into the plant tissues cannot be expected to give control. Likewise, if applications are made far in advance of conditions favoring disease development, the fungicide will most likely have weathered to a degree that it will be ineffective.

Spray schedules are developed from information about the life cycle of the disease organism and are usually based on phenology or development of the host plant rather than calendar dates. Infection can occur only when susceptible host tissues are present, spores of the disease causing fungus are potentially available, and the environment is favorable for disease development.

Moisture and temperature are critical to disease development. A vast majority of fungal spores require the presence of free moisture to germinate and cause disease. Apple scab spores require only 9 hours of moisture to germinate at 60 to 75 degrees,

but need 48 hours of moisture to germinate at 40 degrees.

In addition to protectant or contact fungicides there are also systemic fungicides that enter into the plant. Many of these fungicides also function as protectant materials. Deposits remaining on the outside of the plant disrupt the germination and infection process. Some systemic fungicides can actually eradicate a disease organism from infected tissues. They can also limit disease development by slowing down the spread of the fungus within tissues or prevent sporulation on infected tissues.

Systemics are protected from environmental weathering but are subject to metabolic breakdown and dilution within the plant. The actual amount taken into the plant, its translocation rate within the plant (generally moves too fast toward leaf edges), its areas of accumulation within the plant as well as its breakdown, will all influence its effectiveness as a disease control agent. Benlate, Rubigan and Topsin-M are considered to be locally systemic fungicides.

Some protectant fungicides as well as systemic fungicides demonstrate a curative (also referred to as "kick back or "after infection") activity if applied soon after infection has occurred. Because of the shallow nature of apple scab infections, curative activity is commonly demonstrated with this disease.

This "after infection" activity (36 hours) of Cyprex is well known and utilized in apple spray programs. Rubigan, which is available for the first time this year, has a "kick back" activity of 96 hours offering growers a new dimension in disease control. For example, if weather conditions or equipment breakdowns have not allowed a normal preventative application to be made, Rubigan can be applied four days after the beginning of an infection period and control can be expected. This fungicide will also be useful if a "scab predictor" is being used to schedule spray applications. Its exclusive use in a preventative program is less likely since it would need to be applied every 7 days (4 days kick back and only 3 days preventative).

The preventative spray schedule for apple scab calls for fungicide applications at prepink, pink, petal fall and one to two cover sprays. Generally, orchardists with overlapping bloom periods keep a continuous protectant fungicide on their trees during this time. The amount of time between sprays depends on the persistence of the fungicide used. (Consult the package label.) Dithane M-45 lasts up to 14 days, Rubigan only 3 days. Any fungicide will be washed off after an inch of rain, but laboratory tests have shown that Dithane M-45 and Cyprex have more persistence.

Total coverage of all susceptible plant parts is usually not possible, nor is it usually necessary. However, this does not mean that good coverage is not important for disease control--equipment and technique should be selected to achieve maximun coverage. Wettable powder fungicides are redistributed from their original site of deposition and protect areas that were initially missed or new growth that has occurred since spraying. The size of the fungicide particles, their chemical structure, their formulation, the characteristic of the plant surface, the addition of spreader-stickers (used if recommended in the label

directions), and the intensity and duration of rainfall will determine redistribution characteristics. Water bridges are also formed between fungal spores and fungicide particles which function to bring the fungicide in contact with germinating spores. Cyprex without additional spreader-stickers redistributes readily.

Better spray coverage is required for the so-called dry diseases, such as powdery mildew, which do not require the presence of free moisture. Spores of the powdery mildew fungi can germinate in the absence of free moisture in situations of high humidity. During periods of high humidity, the spores can land on unprotected surfaces, germinate and cause disease.

However, a majority of fungal diseases are considered wet diseases. Fungicide redistribution and transfer are activated when the wet conditions needed for disease development occur. Thus, wet weather conditions favoring disease also favor the redistribution of fungicides which promote their contact with fungal spores.

Test results from fungicide applications to tree fruit, indicates the amount of water carrier applied per acre does not affect disease control as long as the proper amount of fungicide is delivered to the proper site. No differences were observed in apple scab control using 10 to 120 gallons per acre when the amount of active ingredient remained constant. The type of spray equipment available and the type needed to achieve good coverage determines the amount of spray mixture needed per acre.

In some situations, addition of spray oil has increased the effectiveness of funcicides. Thus, the concentration of the fungicide could be reduced by 1/4 or 1/2 and still acceptable control obtained.

Several other factors will influence how effective a fungicide will be in a disease control program. Its spectrum of activity will determine if more than one disease might be expected to be controlled. Dithane M-45 controls scab amd several other apple diseases but does not control powdery mildew. Bayleton controls powdery mildery, not apple scab. Dikar, a combination of Dithane plus Karathan, will control both diseases. Benlate and Rubigan will also control both of these diseases.

The potential for resistance to develop will also influence the use patterns of a material. With repeated applications many fungi have readily developed resistance to Benlate and thus it is not recommended for field use in eastern Washington orchards even though it has good activity against scab and powdery mildew. It is the only good post harvest rot control fungicide available and in order to prevent these rot fungi from becoming resistant to its actions by over application, it is limited to only post harvest disease control. Cyprex, Bayleton and Rubigan have a moderate potential for resistance to develop and should not be used exclusively in a spray program. No resistance problems have been reported with use of Captan, Dithan M-45, Dichlone, Funginex, Karathane or sulfur.

Resistance and narrow spectrums of disease control are avoided by the use of either tank mixtures of several fungicides or

alternating the use of these fungicides with other fungicides having different modes of activity. The use of very effective, but resistant-prone fungicides, should be limited to critical stages in the crop development and the less effective materials at less critical times.

Some of the newer fungicides (Bayleton and Rubigan) are also growth regulators. If applied too strong, they can effect plant growth. Excessive concentration and excessive use should be avoided.

Sometimes fungicides can cause a fruit russetting on certain varieties. Be sure to read and follow label directions on any material you use. Humid, moist weather which delays the drying of sprays commonly increases the potential for spray damage.

Do not use water applied pesticides during freezing weather, especially in very slow drying weather. The water can form ice crystals and separate from the spray mixture. This leads to poor coverage or a possibility of chemical damage from the undiluted pesticide. Most wettable powder fungicides have a good shelf life. Under cool, dry conditions an unopened contained can be expected to last 5 years.

Cultural practices can reduce the potential for disease and thus inprove the performance of fungicide applications. Proper pruning can open up a tree to increased air circulation and sunlight (and improve spray penetration) so moisture evaporates faster. Raking up and destroying diseased leaves and fruit, and pruning out and destroying diseased branches reduces disease pressure. Planting only disease resistant or immune varieties is the best method of control, but of course limits the horticultural and culinary qualities of your crop.

DR. RALPH'S SPRAY RECOMMENDATIONS

--to keep things as simple as possible for the backyard orchardist with a few trees and a little of everything who practices good cultural methods--a mixture of Benlate and Captan controls apple and stone fruit diseases. It is usually not necessary to add a spreader-sticker. Because of the constant disease pressure in western Washington applications should be made on a preventative schedule.

Always read and follow label directions when applying fungicides. At bloom time do not use an insecticide (except for BT for tent caterpillars) on your fruit trees since pollinating bees will be killed too. Fungicides sprayed by themselves will not harm bees. Be cautious of using combination tree fruit sprays since they contain both fungicides and insecticides.

Trade names have been used to simplify the presentation of information. No endorsement is intended.

DISEASE AND INSECT PROBLEMS OF TREE FRUITS IN WESTERN WASHINGTON

by Ralph Byther

MOST COMMON		CONTROL NEEDED	LESS COMMON		CONTROL NEEDED
Apple and pear			Apple and Pear		
Diseases:	scab	yes	Diseases:	anthracnose	yes
	powdery mildew	*		European canker	yes
				bacterial canker (pear only)	yes
Insects:	codling moth	*	Insects:	apple maggot	yes
	aphid	*		rosy apple aphid	yes
	leaf roller	*		scale	*
	pear slug	*		fall webworm	*
	apple-and-thorn skeletonizer	*		tent caterpiller	*
	tentiform leaf miner	*		woolly apple aphid	*
Mite:	pear leaf blister mite	yes		pear psylla	*
CHERRY AND PLUM			CHERRY AND PLUM		
Diseases:	brown rot	yes	Diseases:	coryneum blight	*
	bacterial canker	yes		fungus leaf spot	*
				powdery mildew	*
				virus	yes
Insects:	aphid	*	Insects:	fruit fly	*
				scale	*
				tent caterpillars	*
PEACHES			PEACHES		
Diseases:	peach leaf curl	yes	Diseases:	coryneum blight	yes
	brown rot	yes		powdery mildew	*
				bacterial canker	yes
Insects:	earwig	*	Insects:	scale	*
				aphids	*

*Need for control will depend on the severity of the problem and your tolerance for some damage. In most cases, the problem should be controlled on young trees just becoming established. Larger trees can usually tolerate mild infestations with no long-term detrimental effects.

WSU APPLE PUBLICATIONS AVAILABLE

prepared by Rick Reisinger

		Price	
EB1227	Apple Maggot in Washington	.25	
EB1312	Cost of Establishing a Jonagold or Gala Apple Orchard	.50	—
EB1320	Apple Maggot Trap Placement	.25	—
EB0718	Trickle Irrigation Scheduling Chart for Orchards	.25	—
EB0913	Critical Temperatures for Blossom Buds -- Apples	.25	—
EB1044	Apple Scab	.25	—
EB1075	Aphids in Apples	.25	—
EB1099	Chemical Aids to the Fruiting of Apple Trees	.25	—
EB1194	Bitter-Pit of Apple and Its Control	.25	—
EB0419	Spray Guide for Tree Fruits in Eastern Washington	2.00	—
EB0665	Fruitfulness in Pome and Stone Fruit	,50	—
EB1074	Publications for Commercial Orchardists	.00	—
EB1126	Fruit Thinning of Apples and Pears with Chemicals	.50	—
EB1207	Symptoms of Herbicide Injury To Tree Fruits	.50	—
EB1253	Tree Fruit Farm Accidents and How to Prevent Them	.50	—
PNW0062	Grafting Fruit Trees	.50	—
PNW0121	Nutrient Disorders in Tree Fruits	.25	—
PNW0154	Meadow Mouse (Vole) Control in Tree Fruit Orchards	.25	—
PNW0156	Training & Pruning Apple and Pear Trees	.50	—
PNW0174	Orchard Spraying in the Pacific Northwest	2.00	—
EM4429	Orchard Soil Sampling	.25	—
FG0028a	Fertilizer Guide: Fruit Trees for Washington	.25	—
FG0028E	Fertilizer Guide: Instructions for Tree Fruit Leaf Samples: Nutrient Analysis	.25	—
FG0028F	Fertilizer Guide: Nutrient Con-Tent -- Fruit Trees	.25	—
FG0028G	Fertilizer Guide: Interpretation of Leaf Analyses -- Tree Fruits in Wash	.25	—
PNW0282	Bee Pollination of Tree Fruits	.75	—

Please order the above publications from your local WSU Cooperative Extension Office or: Bulletin Office, Cooperative Extension, Cooper Publications Building, WSU, Pullman, WA 99164-5912. Please send a check, money order, or purchase order for the exact total cost of the publications. Make checks payable to COOPERATIVE EXTENSION PUBLICATIONS. Thank you.

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FIESTA

NEW APPLE DESCRIBED

by L. D. Tukey
Penn State Horticultural Reviews

Fiesta, a new apple cultivar from England, is the result of a cross between Cox's Orange Pippin and Idared made at the IHR East Malling in 1972. In trials at Brogdale and in growers' orchards, it has been well liked by growers and some consumers.

Fiesta has better skin finish, fruit size, fruit setting potential (can be heavy) and yield, grades out higher, and has a longer storage life than Cox. It also appears to have self-fertility, and can be pollinated by Cox, Idared, Discovery, Spartan and Golden Delicious, although blooming a little later than Cox.

The fruit is firm and has a crisp texture, but bruises easier for a Cox-type. The tree is about 25% bigger than Cox, and has good branch angles and drooping lower branches. Its growth habit is similar to Idared in many respects.

ORCHARD LIFE SPAN DECREASING

by L. D. Tukey
Penn State Horticultural Reviews

By 1998 the life span of Dutch apple orchards may be a mere 8 years, according to Dr. S. J. Wertheim, Proefstation voor de Fruitteelt at Wilhelminadorp, The Netherlands. Currently, orchard life is 12 to 15 years in Holland and over 20 years in England.

Shortening the life span will enable growers to more effectively take advantage of new cultivars and production techniques. Early cropping is essential as well as low interest rates (7%) and a low tree cost ($2.00-$2.50).

In multi-row bed systems with 1618 trees/acre, yields in the second year have been 297 boxes (42 lbs)/acre, and in the sixth year (998 boxes/acre. A good first year crop is possible by planting 2 year old trees.

TIP BEARERS DO BETTER ON SPECIAL TRELLIS

by L. D. Tukey
Penn State Horticultural Reviews

The Delbard Tri-Crossarm tree form for trellising apple trees in the Penn State low trellis hedgerow system appears to be especially suited to Rome Beauty, a terminal bearer.

Unlike the oblique palmette form, where the framework or lattice of the hedgerow is developed from scaffolds arising from the tree's central leader, the Delbard has no central leader. The form is developed from two primary scaffolds arising low on the tree's trunk and a secondary scaffold from each primary.

Lateral bearing wood, developing on this lattice of crossing scaffold limbs, is fairly uniform in vigor and ideally suited to the bearing habit of Rome Beauty or its strains. The result is a bush type of hedgerow which is a little wider than that with the narrow oblique palmette hedgerow.

Yields of Law Rome/M-9 stions at 10 x 6 ft (726 trees/acre) have average 1285 boxes (42 lbs)/acre for the past 3 years. The weight of the crop is almost entirely supported by the 6 ft high 4-wire trellis.

The Delbard form can be used with non-tip bearers, but the oblique palmette with a narrow hedgerow appears more suitable. Both forms are compatible with each other in the same intensive orchard.

SLENDER SPINDLE CROPPING TECHNIQUES

by L. D. Tukey
Penn State Horticultural Reviews

Regardless of the pruning system used on slender spindle apple trees, the aim must be to produce the maximum crop of premium valued fruit. The actual outcome will depend largely on the season, the balance of vegetable and fruiting growth, and the degree of crop thinning.

The generally accepted way of achieving the right growth balance in the slender spindle in England is by some form of renewal pruning of the fruiting laterals on the tree's central axis and branch framework by replacement of laterals on a 3 to 4 year cycle. The main factor limiting cropping in the slender spindle appears to be developing suiable "weakish" shoots to receive adequate light to the bearing wood.

Growers in England vary as to the best pruning style and philosophies to achieve these goals. Eric Gunn of FAST prefers a compact tree with M-9 which can be planted closer than 12 x 6 ft, or developed outward to fill the allotted space.

Trees should be well controlled with cropping back to the trunk (no wasted tree volume). In the initial stages, a good deal of tying down and tucking in of shoots is done. Later, all laterals on the main branches are spurred back, and new growth encouraged by shortening the spur systems.

NAFEX NATIONAL MEETING AT OSU

Corvallis, Oregon will host the national NAFEX meeting on the Oregon State University campus August 19th, 20th and 21st. This first west coast meeting is the twentieth anniversary of NAFEX. Attended WCIFA chapter [illegible]

"The North American Fruit Explorers is a network of individuals throughout the United States and Canada devoted to the discovery, cultivation, and appreciation of superior varieties of fruits and nuts. Founded in 1967 by a small group of pomological hobbyists, NAFEX has grown to an organization of more than 3,000 members, and is chartered as a nonprofit corporation in the state of Illinois. Although the ranks of our membership include professional pomologists, nurserymen, and commercial orchardists, NAFEX members are all AMATEURS in the truest sence of the word--they are motivated by their LOVE of fine fruit."

"NAFEX members typically work together to help each other by sharing ideas, information, experiences and propagating material.

We communicate with each other through the pages of *Pomona*, a quarterly journal assembled largely from articles submitted by the membership." *From the Handbook for Fruit Explorers*,

The three day conference includes talks by Dr. Norton on "New Varieties of East and West"; Dr. Porter Lombard (OSU) on "What's New in Pears"; Dr. Ron Cameron (OSU) on "Virus Diseases in the Home Orchard"; Dr. Edward Proebsting (WSU) on "Cherries"; and Bob Rackham (OSU extension) on "Managing Pests and Diseases in the Home Orchard and Vineyard". Field trips include a visit to Windmill Farms to see their unique trellising systems, Oregon Rootstock to learn more about the new dwarfing rootstocks and the National Clonal Germplasm Repository which contains all available species of pears, blueberries, currants and gooseberries and five other genera.

To register for the conference fill out and return the enclosed registration form. **Please note: you must be a member of NAFEX to register for the conference.** Spouses need not be a member. Lodging and some meals are available at extra cost.

WCTFA is sponsoring a charter bus to Corvallis for the conference. The bus will leave Sumner the morning of the 18th and return late afternoon or evening of the 21st. Cars can be left safely at the Sumner bus garage. Cost of the bus trip is $43 and 43 seats are available. To reserve a bus seat send a check **immediately** for $43 made out to John Parker to 60 Tala Shore Dr, Port Ludlow, 98365. **Please note: the $43 bus transportation charge does <u>not</u> include conference registration fees or NAFEX membership dues or board and room.**

Air transportation is available through United Airlines which will give 40% or more off regular rates for NAFEX members going to the conference.

NEW CHAPTERS FORMING IN AREA

Two new chapters have been formed in western Washington--one in the San Juan Islands, the other in Kitsap County.

The San Juan "Island Chapter" meets the second Saturday of each month with special inter-island meetings on the second month of each season. Potential projects for the chapter include researching earlier fruit production on the islands, surveying currant fruit production and through scion wood and rootstock sales increasing quality fruit on the islands. For more information contact Kristan Johnson, P. O. Box 962, East Sound 98245, 376-5291.

The "Kitsap Chapter" meets the second Thursday of each month at the Kitsap County Agricultural Extension Building in Port Orchard. Members are interested in any kind of fruit raising and they have already had talks on grafting, chip budding, T budding, stooling and growing raspberries and blackberries. One upcoming meeting will be to a member's house to sample 25 varieties of blueberries. For more information contact Don McDonald, 876-8785.

FROM THE BOARD OF DIRECTORS . . .

BOARD MEMBERS Three board members were elected for three year terms at the spring meeting to replace expiring terms of John Parker, Ben LaLonde and Walt Lyon. After the meeting, the board met and elected officers for 1987.

WCTFA OFFICERS AND BOARD OF DIRECTORS FOR 1987

John Parker, President (not a board member)
60 Tala Shore Dr, Port Ludlow 98365; 437-2313
John Davey, Vice President (1989)
3519 SW 171st St, Seattle 98166; 246-6144
Paul Donaldson, Secretary (1989)
916 NW 122nd, Seattle 98177; 364-0161
Walt Lyon, Treasurer (1990)
19717 80th NE, Bothell 98011; 483-5574
Nancy Jo Cushman, Newspaper Editor (1988)
9210 131st NE, Lk Stevens 98258; 659-6087
Dave Battey (1988)
40404 SE 70th Dr, Snoqualmie 98065; 888-2504
Dr. Robert Bourdeau (1990)
15211 Wash. Av NE, Bainbridge Is 98110; 842-4865
Ben LaLonde (1990)
491 Lotzgesell Rd, Sequim 98382; 683-4055
Emory Leland (1988)
7014 29th Av NE, Seattle 98115; 523-6363
Gene Lewis (1989)
17052 10th Av NW, Seattle 98177; 542-4664

LIFE MEMBERSHIPS Tom Perkins, Emory Leland, Dal Leaf, Gerald Pate, Dr. Robert Norton, and Tom Thornton were voted life membership in WCTFA at the spring meeting.

BYLAWS The revised bylaws were accepted by unanimous vote at the spring meeting.

DONATION Board members voted to contribute one thousand dollars to the Mt. Vernon Research Station for tree fruit research.

FALL FRUIT SHOW The board agreed to co-sponsor a smaller version of the All About Fruit Show with Snohomish County Extension. Dates are Oct. 31st and Nov. 1st and the show will be held at the Snohomish County Extension Education Center in south Everett. Admission will be free. WCTFA wants to concentrate on displaying apples and other fruit, getting good speakers and dispensing "quality" information to the public on all types of fruit growing. Because of the limited space only a small number of commercial booths will be allowed. This will be in a covered outdoor area next to the cider presses. Preference will be given to WCTFA members and to more educational booths on backyard fruit growing. If you're interested in a commercial booth please contact either Nancy Cushman or John Parker. It is the board's hope that smaller fruit shows could be held every year at various locations which would better serve the public and be easier to plan for.

DEATHS President John Parker noted the deaths of two NOFC, WCTFA members this month. The two are Dal Leaf, who was just awarded a life membership this spring and who was one of the original founders of WCTFA, and Ralph Tidrick, who was a retired cranberry

merchant who shared his love of cranberries with NOFC.

BOARD MEETINGS are open to the general membership and the directors would particularly like to have all chapters represented. The next meeting will be Monday, June 29th, 4:30 pm, at the Snohomish County Extention Education Center.

FINANCIAL STATEMENT At the request of Treasurer Walt Lyon, a commitee was appointed to audit the books. Their financial statement follows:

WESTERN CASCADE TREE FRUIT ASSOCIATION

FINANCIAL STATEMENT FOR 1986

INCOME		
Dues	$1,487.50	
Rootstock & scion wood sales	1,191.68	
Donations	122.00	
NTFS Newsletter	18.00	
	2,819.18	2,819.18
EXPENDITURES		
Stamps, envelopes, mailing newsletter	234.37	
Expenses of annual meeting	300.00	
Secretary's expenses	41.94	
Secretarial work (re-writing of by laws)	51.30	
One half dues & newsletter subscriptions returned to Chapters	68.00	
Piper Orchard sign project	20.00	
Ferry fares of board members	71.40	
Sales tax on rootstock & scion wood sales	81.88	
Donations for research	1,142.00	
Expenses of rootstock, scion wood sale	502.48	
Overpayment of dues, return	10.00	
Bank service charges	24.49	
Printing of checks	32.90	
	2,580.76	2,580.76
		238.42
Bank balance on Dec. 31, 1986		2,218.98
Cash on hand		43.45
Net worth		2,262.43

Submitted by:

Walter L. Lyon

Walter L. Lyon
Treasurer

Approved by Autiting Committee:

Tom Berry

Tom Berry

Eugene Lewis

Eugene Lewis

VOLUNTEERS' CORNER

HELP WANTED ADS

FRUIT ENTHUSIASTS needed for information booth on prunes, plums, cherries, peaches, nectarines, apricots, etc., and for berries at fall fruit show. Members having interest in and experience with stone fruit and berries please contact Bob Bourdeau, 842-4865, who is chairing the booths.

ROOTSTOCK, GRAFTING, PRUNING AND TRAINING "experts" needed for booth at fruit show. If you can volunteer time or would like to chair this booth, contact Nancy Jo Cushman, 659-6087, or any board member.

SHRUBS AND PLANTS NEEDED The Piper Homestead Chapter requests donations of shrubs and plants for the borders of the orchard. The Master Plan for development of the Piper Orchard, which has been approved by the Seattle Department of Parks and Rcreation, specifies that the borders of the orchard be developed with plantings consistent with principals of an edible landscape.

In April members of the Chapter met with a group of Parks Department people to discuss this development in the near future. The leader of the Parks Department group approved the idea that the gardeners of the Parks Department be circularizied with a list of plantings desirable for the orchard which, if found to be in surplus for Department's plantings, such surpluses would be brought to the chapter's attention for possible use in the orchard.

The chapter also requests that WCTFA members who have surplus plants of those listed below inform any chapter members so that we can arrange to put them in the orchard.

Following is the list of plants we have considered suitable:

- Salal
- mahonia (oregon grape)
- Rosa nutkana
- blueberries
- evergreen huckleberries
- red twig dogwood
- high bush cranberries
- service berry
- gooseberries
- red currant
- western azalea
- lilac
- wild plum
- elderberry
- strawberry tree
- Californian wax myrtle
- bay laurel
- sassafras
- golden chinkapin
- strawberries
- wintergreen
- lingonberry
- daylilly
- vinca

Phone numbers of two members to contact are 364-0161 and 454-3615.

by Paul Donaldson

FINANCIAL WHIZ needed to help design a suitable accounting method for WCTFA and its chapters. Contact Treasurer Walt Lyon, 483-5574.

NEWS CONTRIBUTIONS needed by underpaid, overworked editor. Do you have favorite varieties, a neat training idea, or a good pest control method? Send stories to Nancy Jo Cushman, 9210 131st NE, Lake Stevens, 98258.

INFORMATION WANTED

ORCHARD BEE information is requested by Ed Lewis, 454-3615.

In western Washington we have a small, native Mason Bee (Osmia Lignaria) which is a very active pollinizer for tree fruit and berries.

Another small bee was introduced by USDA, Beneficial Insect Divison, in some 25 states. The Japanese Hornfaced Bee (Osmia Cornifrons) is now being grown in western Washington by some of our members.

These little Orchard Bees are very active for 4 to 6 weeks gathering pollin and nectar, laying eggs and sealing them off with moist soil. They soon die and present no problem regarding a spray program. The Mason Bees can be established by setting out appropriate nests in early spring. Information, bees and supplies are available from Orchard Bees, 1111 Cindy St, Auburn, In 46706.

I am interested in hearing from persons who are growing these bees as to their experience. We many want to get together for exchange of ideas. I am growing both types of bees and have set up a nest of Japanese bees at Mt. Vernon.

by Ed Lewis

WCTFA BOARD OF DIRECTORS would like more input from members--suggestions for field trips, speakers and sources for new information on growing tree fruit would be appreciated.

A DISCOURSE ON TRAINING APPLE TREES

by Nancy Jo Cushman

After 15 years of growing 150 different varieties of apple trees, I'm still looking for the perfect fruit tree--one you can stick in the ground and forget 'til it's time to harvest. This means no training, little pruning, no spraying or staking, no thinning and lots of nice fruit every year.

About the closest I've come is Chehalis, a scab resistant tree with a rather shrubby shape that needs only to have some of its twiggy denseness pruned out at mature size. (Provided, of course, you allow it to grow as it wants to.) I've never thinned the fruit and they are still of respectable size. They are good flavored and firm when not overripe and they make the best dried apple slices since they don't darken when exposed to the air. Chehalis's only drawback is that it doesn't keep.

Some of my most favorite eating apples are among the worst to civilize. Spritzenberg is rangy, Gravenstein is too vigorous, Davey is whippy, Jonagold is a joke unless grown on a trellis, Sinta is terribly scab prone....One is left with a choice of letting them grow their way or improving upon mother nature. Neither way leads to perfect fruit trees or even reasonably shaped trees, but I'm still trying.

Over the years, I've tried several ways to get free standing trees to develop branches at the prescribed 45 degree angle. This usually means holding branches down until they will stay at a wider crotch angle.

Toothpicks work well for very small branches, provided of course, you get to them before they become large branches. Never buy cheap wooden toothpicks--only expensive colored "cocktail" toothpicks have sharp points at both ends and enough stanima to keep from bending.

Clothespins work for slightly larger branches, but are really more useful for clipping weights on or attaching string so it doesn't girdle the branches.

Boards with slots or cut off nails at each end can be used for spacers, but they never seem to be the right length and the slotted boards refuse to stay in place under pressure. Besides, I have a cat who persists in perching on these boards--the branches either snap or the boards fall off.

My next method was tying branches down--usually to a weight on the ground since there's never a convenient branch to tie to. Cement blocks seem to work best since they are lawnmower proof, unlike plastic bottles. Jugs, either plastic or glass, or old 2 gallon gas cans filled with water are useable. But do keep in mind, that old gas cans rust and leak, glass jugs freeze and shatter glass all over the place and clear plastic or glass jugs are great for starting fires on hot summer days due to their magnifying effect on the sun's rays. I'm probably the only member in the history of WCTFA who burned up a fruit tree with a glass bottle--and it was one of my better shaped trees, too.

Since my orchard was beginning to look like a junk yard and it was

needed, but they also tend to slide around and fall off at inconvenient times. And they're not heavy enough to be used on the bigger branches. Besides, the plastic bags tend to disintegrate after a summer in the sun, dumping sand on unsuspecting passerbys.

My next plan of attack is to convince my 12 year old to make 100 dixie cups filled with cement with a large paper clip stuck in the top. They seemed to work just perfectly at the Summerland Research Station, but I have a feeling all my paper clips will fall out...

Anyway, I'm planning to put in another hundred new varieties of apple trees and surely one of them will turn out to be the perfect tree.

NURSERY RECORD KEEPING

Discussion at the WCTFA scion exchange/rootstock sale on March 7 suggested to me that information on marking and mapping trees in the nursery and orchard (yard) may be of value to many of our members. Having the most unusual collection of fruit in the neighborhood is of little use to others, (and restricted use to the collector) unless the varieties in the collection can be accurately identified. How embarrassing to share your wonderful new fruit with friends and neighbors - but not be able to positively identify the variety when they ask its name and history!

I will share my methods, which make use of a computer and word processor - but **the same lists I keep in my computer can be created with paper and a pencil or typewriter.**

The nursery (it used to be part of our vegetable garden, but is now the whole vegetable garden) where my rootstocks are planted is set off in a simple grid for easy location of any plant. I number my rows, and then number individual trees in the rows. I then create a list, by row, of each type of rootstock, and when it was planted.

When the rootstock is established and ready for grafting, I list my new scions in alphabetical order, and create two paper labels for each scion. I do not necessarily graft trees in alphabetical order in the row, since matching scion and stock diameter is more important. Alphabetization helps me find the labels and assists in building a variety list later. If your computer does not have a program for creating name and address labels, use your word processor. Set the line length at 32, the number of lines per page at six, and play with your bottom and top margins until you can print on standard 3.5 X 15/16 labels. **If you don't have a computer, these same widely available stickyback computer labels can be written on by hand.** I print three lines on each label - the variety name, a reference (book) source if available, and the source of the scion. (If my source knows their source - I list both). One label is firmly attached to the grafted rootstock, the other is used to label any remaining scionwood, which I then return to refrigeration. If my graft fails, I can remove this from the refrigerator later in the season, and often still save the variety. Even budwood can be kept in this way, if the leaf stems are carefully removed, and the scion dipped in paraffin (see more on this in the Summer 1986 Newsletter).

Once grafting is complete, I return to the computer, and update my rootstock row and tree list to show the variety, the source of the scion, and the date grafted. After printing the list I return to the row, and **double check my list against the labels on the individual trees.**

The computer created paper labels will slowly disintegrate - but my row by row map keeps the variety identity intact. For years I have experimented with different types of metal and plastic

labels. No matter how expensive they are, they cannot be trusted. They either blow off, fade so they are unreadable, or create the opportunity to girdle the young tree. Some of them also attract my goose and ducks - who promptly gum them to death! I finally decided to forego "permanent" labelling until the tree is planted in its final place in the yard or orchard.

For these "final" labels, I use 2" X 10" pieces of thin copper, placed on a soft surface, and inscribed with a blunt lead pencil so that the copper is embossed with the information. I double over one end and punch a hole through two thicknesses of copper, and attach the label to the tree with a large loop of #14 or #12 copper wire. This type of labelling has now survived three years with no hint of loss.

Later in the season, after I am able to tell which of my grafts "took", I complete my cataloging process by updating an alphabetical list of varieties. This list contains the variety name, the location of the variety by row and number, the type of rootstock, the date grafted, and the source of the scionwood.

Accurate records of your plantings take time, but are well worth the effort. A tragic reminder of the importance of good records is the loss of an incredible miscellaneous fruit and nut collection on the shores of Lake Chelan that were planted by an elderly gentleman over the last several decades. He kept no records of his acres of well cared for friends. This huge collection could have been valuable in pinpointing the correct varieties for the area, but he kept his records in his head, and they died with him. Frustrated by lack of knowledge of the varieties, the new owners of the land have deemed it not worth watering, and this vast and unusual collection has quickly withered away.

Do any of you have special record keeping or labelling processes to share with us? Does anyone have a "foolproof" method of labelling and mapping a single collector tree with many varieties grafted on it?

Dave Battey - Monte Vista Farm, Snoqualmie

REMINDER THAT DUES ARE DUE

by Walt Lyon

In the last newsletter we urged members to please send in dues before the spring meeting. A few have done so, but only a small portion of the total membership. Send a $10 check made out to WCTFA to Walt Lyon, 19717 80th NE, Bothell, WA 98011.

Also, those who wish to make donations to the Mt. Vernon Research Station for tree fruit research should make checks payable to the Northwest Agricultural Foundation, Inc. and mail them to the foundation at 1468 Memorial Highway, Mt. Vernon, WA 98273.

NAFEX National Meeting

Oregon State University
Corvallis, Oregon

August 19, 20 & 21, 1987

Registration: Before June 30, $17.00
After June 30, $22.00
(Registration fee includes bus transportation for 2 field trips) $ 17—

Lodging: Rooms with bath, Bloss Hall
(per day) Single $12.00 X 3
Double $17.00 $ 36—

Salmon Banquet: $13.00
6:30 p.m. August 20 $ 13—

Box lunches for field trips:
August 19 & 20
@ $3.25 small size
@ $4.25 larger size

(The only food available on the field trips will be box lunches.) $ 6.50

Total $ 72.50

(Please check your figures)

Mailed 6-9-87
Renewal dues $ 18.88

Make checks payable to. **NAFEX National Conference**
P.O. Box 1135
Philomath, OR 97370

☐ NEW MEMBERSHIP

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☐ 1 Yr (*Handbook* + 3 issues) U.S. $8.00	____
☐ 2 Yr (*Handbook* + 7 issues) U.S. $15.00	____
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☐ Index to Pomona (with current update), $2.50	____
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1987 CALENDAR OF EVENTS PLANNED

AUG 19th, 20th, 21st	**NAFEX National Meeting at Corvalis**
SEPT 18th, 19th	**Openhouse at Mt. Vernon Research Station for WCTFA and HOS members (fruit displays, lectures, field trips and barbeque)**
OCT 3rd	**Fall Orchard Tour (tentative date)**
OCT 31st, NOV 1st	**All About Fruit Show co-sponsored with Snohomish County Extension**