ALASKA NAFEX NEWSLETTER

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A Publication of the Alaska Chapter, North American Fruit Explorers (NAFEX)

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MEETING DATES

Feb 13- Thurs. 7 p.m. Lake Otis Elementary School, Rm 7. Topics: sharing of growing experiences and recipes for preparing small fruits- currants, gooseberries, strawberries, raspberries, etc.; share of catalogs from diverse sources.

Mar. 13-Thurs. 7p.m. Lake Otis Elem. Sch.,Rm. 7. Topics: grafting workshop; using previously ordered stock and scionwood.

Apr. 10-Thurs. 7p.m. Lake Otis Elem Sch. Rm 7. Topics: Wayne Vandre, CES, speaking on diseases and insect pests that affect fruit trees in AK and their remedies.

May 8-Thurs. 7p.m. Lake Otis Elem Sch. Rm 7. Topics: to be announced.

(We may also have a pruning work party in early May). -Robert Purvis

SUMMARY OF JAN 9 MEETING

The meeting was held at the Anchorage Christian Center with ten members in attendance including D. Benesch, D. Brown, M. Black, A. Brewer, S. Davies, D. Emmons, K. Franke, S. Jacobson, R. Purvis and R. Raynor. President Robert Purvis presided over the meeting and introduced a new member, Dudley Benesch. WELCOME DUDLEY!

Members in attendance viewed the video tape, In Vitro World, which is a 25 minute, well written educational film. Using 2 species of houseplants, each requiring somewhat different propagation techniques, this film traced the process of tissue culture from the taking of cuttings through test tube and bottle environments to the greenhouse environment. Each step was clearly and interestingly explained. This film was a very good introduction for those who have heard of, but not worked with, this method of propagation.

(Editor's note: For any members who are interested in learning more about tissue culture, an excellent, practical reference is: Kyte, L. 1983. Plants from Test Tubes. Timber Press, Portland, OR. ISBN 0-917304-50-0.)

The remainder of the meeting was devoted to discussion and ordering of scion wood for spring grafting.

-S. Davies, Secretary

MEMBERSHIP DIRECTORY

The new NAFEX directory is presently being compiled. It will be published in the March issue of this newsletter. If you haven't yet paid your **$5.00 dues**, send your money **TODAY**, so you, too, can see your name in print! As of January 12, 1986, 20 people are dues-paying members of Alaska NAFEX. Dues are payable to President Robert Purvis (see address above).

ROOTSTOCKS FOR ALASKA'S APPLE TREES

Choice of an appropriately winter-hardy rootstock is a vital consideration for Alaskans hoping to grow apple trees. This article discusses observations, experiences and reflections on rootstock types.

Most apples are not propagated by seed but rather by grafting buds or scions (cuttings) from the variety desired onto either another tree or a rootstock. The bulge several inches above the soil line on apple trees sold at your local nursery marks the union of the rootstock with the grafted bud which later forms the central leader of the tree.

Nurseries graft buds onto rootstocks for several reasons. First, most apples do not 'breed true' from their seeds. Second, a rootstock can be used to impart desirable characteristics in the tree such as precocity (ability to begin bearing while young), high fruit productivity, size control, and resistance to diseases and pests, drought, and cold.

Interest in rootstocks dates back only about 25 years in this country. Before then, in England, the Malling, Merton Malling, and East Malling Research Stations developed a series of apple rootstocks designated M, MM, and EM, respectively. I believe that "EMLA" refers to EM's which are virus-tested.

Nursery catalogs which either specialize in rootstocks or sell cultivars grafted onto a great variety of rootstocks are a good place to obtain information on a particular rootstock's qualities, some of which are summarized below. The percent figures indicate the approximate size of a mature tree when a particular cultivar is grafted onto the rootstock in question, compared to a tree of the same variety grown on a seedling rootstock--the standard for comparison. For example, 25% means that a certain rootstock forms a tree 25% the size of the same variety grafted onto a standard or seedling rootstock. In general, the strongly-dwarfing rootstocks promote precocity and high fruit productivity.

EMLA 27 (15-25%), EMLA 9 (30-40%), and EMLA 26 (35-45%) rootstocks are notable for causing precocity. Of these, EMLA 26 is the hardiest. Nevertheless, their strong dwarfing effect is undesirable for Alaska since vigorous growth is needed to take full advantage of our short growing season. Furthermore, these stocks have such brittle roots that staking is frequently necessary, so it is unwise to order trees grafted onto these rootstocks for southcentral Alaska. 'Mark', another rootstock, is likewise not hardy.

EMLA 106 (60-70%) causes trees to harden off slowly in the fall, resulting in damage by early winter freezes. EMLA 111 (70-80%) has good vigor and hardiness, but is not explicitly cited for cold hardiness. EMLA 7a (55%) has been cited by both Hilltop Orchards and Nurseries and by Oregon Rootstock Inc. for its winter hardiness, good root system, resistance to disease, and ease of transplanting, but Rich Raynor and other experienced growers are doubtful about its hardiness in Alaska.

Domestic seedlings used as rootstocks give a standard-sized, vigorous tree adaptable to a wide range of growing conditions. Seedling rootstocks are probably a better choice than any of the Malling or East Malling rootstocks for Alaska if nothing else is available.

Currently, 'Antonovka', an apple variety from the Soviet Union, is used widely in trees being grafted expressly for Alaska. Siberian crabapple (Malus baccata), possible hardier than 'Antonovka' has also been used by some Alaska NAFEX members, but some varieties develop incompatibility problems when grafted onto it.

Malus Ranetka, 'Robin', 'Selkirk' and 'Wien' are all very hardy crabapples which grew vigorously after the winter of 1984-85 in the experimental plots at the Plant Materials Center in Palmer. Malus Anis, Borowinka and Columbiana are three other possible rootstocks that are cited for their winter hardiness. Columbiana also survives Fairbanks winters.

Rootstock Sources for Alaskans

For members of NAFEX who have limited

Some scionwood will be shipped to Alaska in early March in time for the grafting workshop. For Chapter members living more than 60 miles from Anchorage, I suggest you call or write these individuals to avoid delays. Scionwood, once it arrives, should be kept in the dark, in a refrigerator or a snowbank, until it is used. Generally, it will remain viable for 30 to 60 days. Spraying it with an anti-desiccant like 'Wilt-Pruf', or coating it lightly with wax will retard the drying-out process. -Robert Purvis

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ROOTSTOCKS FOR SASKATOONS

Saskatoon, juneberry, or serviceberry (Amelanchier) is a hardy shrub that produces an abundance of showy, white flowers followed by tasty, blueberry-like fruit. Through an intensive breeding program to improve fruit flavor and size, researchers in western Canada have developed some promising, hardy cultivars such as 'Pembina', 'Smoky' and 'Regent'. These cultivars have been grown in the Fairbanks area for several years with considerable success.

One problem with commercial propagation of saskatoons is the lack of an adequate rootstock. Species of mountain ash (Sorbus) have been tried, but the union is weak, and the plant is short-lived. Another plant that is used more extensively is cotoneaster, Cotoneaster acutifolia. Some commercial nurseries don't bother to mention the use of this plant as a rootstock, and the grower invariably is taken by surprise 2-3 years after planting when cotoneaster suckers begin to out-compete the stunted saskatoon. Saskatoons that are grafted onto cotoneaster rarely grow more than 2-3 feet high and are not productive. The best remedy for this situation is to dig up the saskatoon and re-plant it deeply so that all of the cotoneaster plus all of the graft union and a portion of the saskatoon stem are buried. Because of the soil depth, suckering of the cotoneaster will be inhibited, and roots will eventually form on the buried portion of the saskatoon stem to support future plant growth. Since breeders continue to work with this plant and develop more appropriate rootstocks, this problem should be alleviated soon.

-P.S. Holloway

A VISIT WITH LAWRENCE CLARK

As the chickadees searched for suet in the mature apricot tree framed by his dining room window, Lawrence Clark recalled his 45 years in the State and his first recollection of fruit trees in Anchorage. He found that the sole nursery supplier at that time, the Northern Commercial Company, sold only slow-growing, dwarf (Malling) stock. After a serious search for a hardy rootstock suitable for the local climate, Clark settled on the Siberian crabapple for his initial experiments in fruit tree propagation.

Today, Clark's 2.5 acres overlooking Turnagain Arm boast numerous mature, fruit-bearing trees and bushes, a large greenhouse for flowers and vegetables, and a formal orchard of 150 apple trees planted in a grid on 8- by 12-foot centers. Using peat mixed with fill dirt moved in to level his property, Clark grafted 'Yellow Transparent' (Russian), 'Esther Reds' (obtained in Montana), and 'Almadas' onto the early-blooming Russian apple rootstock, 'Antonovka'. Aside from fertilizing with ammonium nitrate twice a year (in the spring when the ground thaws and again in mid July), Clark does nothing special to prepare the orchard for winter. "If they can't stand the winters, there's no point in trying to grow them."

During the last two winters, the lack of snow cover has caused some damage to the young trees. "Reflection from the ice caused the sap to sun blister the trees." Sun-scalding isn't his only problem. The local moose are partial to new growth, and rabbits and shrews have contributed to the

space to plant lots of apple trees, the next best thing is to purching a tree is to obtain cuttings of scionwood and graft them onto existing apple trees. The Chapter has located several reliable sources of scionwood.

The closest is Alaska NAFEX member, **Steve Jacobson, SR Box 2056, Wasilla, AK 99687 (Ph: 376- 2123 w; 376- 6480 h).** He will have the following summer apple varieties available for scionwood this spring, all of which would ripen fruit most summers in Southcentral: 'Summerred'; 'Earliblaze'; 'Stark Earliest'; 'Jerseymac'; 'July Red'; 'Vista Bella'; 'Summer Treat'; and 'Early Geneva'.

Lawyer's Nursery, Inc. 950 Highway 200 West, Plains, MT 59859 (Ph: (406)826-3881) sells several rootstocks including Ranetka, 'Antonovka', Columbiana, 'Robin', 'Selkirk', Borowinka, and Anis. The largest rootstocks (1/4" to 3/8" diameter) sell at Lawyer's for $0.40 - 0.50 each and are suitable for grafting. However, because Lawyer sells only in quantities of 100 or more at a time ($100.00 minimum order), those who wish to buy rootstocks for experimentation are advised to order through one of Alaska's professional nurserymen such as Jay Dearborn or Steve Jacobson.

Another source of rootstocks is **Oregon Rootstock, Inc., 10906 Monitor-McKee Rd. N.E., Woodburn, OR 97071 (Ph: (503)634-2209).** ORI offers some very hardy Polish rootstocks such as P-18 (75%), the Russian Budagovski rootstock series Budagovski 118 (75%), and 490 (65-70%). Both appear to be promising for Alaska. Note, however, the minimum 100 rootstock order requirement at $1.00 - $1.75 each.

Another Pacific Northwest source is NAFEX member **Dan Whitney, Rt. 1, Box 111, Cowiche, WA 98923 (Ph: (509) 678- 4798).** The early-ripening varieties he has for scionwood are 'Tydeman Red'; 'Red Gravenstein'; 'Heyer 12'; 'Ottawa 292'; 'Red June'; 'Battleford'; 'Summer Scarlet'; 'Rescue'; 'Summer Rambo'; 'Gala'; 'Sweet Sixteen'; 'Summer Treat'; 'July Red'; 'Red Baron'; 'Summer Rose'; 'Discovery'; 'Early Harvest'; 'Vista Bella'; 'Summerred'; 'Crimson Beauty'; 'Redfree'; 'Jerseymac'; 'Early Geneva'; 'Prima'; 'Spartan', plus Manchurian crabapple. Price of scionwood is $1.00 per foot plus 10% shipping with 10 buds average per foot.

Available from **Rocky Meadow Orchard and Nursery, Rt. 1 Box 104, New Salisbury, IN 47161** owned by **Ed Fackler**, national vice-president of NAFEX, are the following early varieties: 'Akane'; 'Carroll'; 'Discovery'; 'Dudley'; 'Dutchess of Oldenburg'; 'Earliblaze'; 'Early Cortland'; 'Early Sheepnose'; 'Fameuse'; 'Haralson'; 'Hazen'; 'Irish Peach'; 'Jerseymac'; 'Kidd's Orange Red'; 'Lady Sudeley'; 'Liberty'; 'Lodi'; 'Lubsk Queen'; 'Lyman's Large Summer'; 'Mantet'; 'Mollie's Delicious'; 'Norland'; 'Nova Cortland'; 'Nova Easygro'; 'Nova Mac'; 'Oriole'; 'Quinte'; 'Red Astrachan'; "Red Baron'; 'Red Gravenstein'; 'Ribston Pippin'; 'St. Edmund's Pippin'; 'State Fair'; 'Summer Pearmain'; 'Summer Rambo'; 'Summerred'; 'Summer Rose'; 'Vista Bella'; 'White Astrachan'; 'Whitney' crabapple; and 'Young American' crabapple. The price from Fackler's nursery is $1.00 per foot plus 10% shipping and handling. The also offer 'Beautiful Arcade' rootstock (limited quantities) and P-22 interstems on 'Antonovka' or 'Budagovski 118'.

Pacific Coast Nursery, 18616 N.W. Reeder Rd. Portland OR 97231, is another place worth seeking out if Lawyer's and ORI are out of stock.

One other organization especially noteworthy for supplying scionwood from new varieties for testing is the **New York State Fruit Testing Cooperative Association, Inc. Geneva, NY 14456 (Ph: (315)787-2205).** Membership is $5.00 per year, and entitles one to receive the catalog and have the privilege of testing unnamed varieties newly developed, but not available to the public. The NYSFTCA sells both trees and scionwood, both tree and small fruits as well as grapes. Note, however, that the apple trees are available only on the Malling rootstocks, M9; M26; M106 and M111.

damage. To inhibit the "girdling" of tree trunks by the shrews, Clark paints the bottom 18 inches of the trunks with white latex, which seals the bark and prevents sun-scalding by reflecting sun glare away from the trees. Although an occasional leaf roller appears, there has been virtually no insect problem in the orchard. Although Clark hasn't yet used any spray, he may when the orchard gets to the blooming stage.

Of the several killed trees that Clark replanted in the spring of '85, most had new growth by the end of summer. In anticipation of moose damage again this winter, Clark plans to graft the 'Chinese Golden' apple, a smaller and faster-growing variety, onto the killed 'Yellow Transparents'. An early-bearing 'Chinese Golden' that was grafted years ago to a Siberian crabapple annually yields an impressive quantity of mature eating apples that are preserved as applesauce by Mary Clark, an avid flower gardener.

Mary also makes jam with the (again impressive) yield from the Clark's apricot trees. While on one of their annual trips outside which included visits to northern nurseries, Clark acquired two Manchurian apricot trees that originated as seedlings in Montana. Planted 7 years ago, one tree has bloomed from the 15th to the 29th of May and has borne full-sized fruit for the last 4 years.

During a grand tour of the grounds, Clark chuckled and commented that he tracked his numerous experiments in the simplest, most practical way possible. Two 'experimental' trees of Siberian crabapple rootstock are festively adorned with numerous bits of electrical tape and many tags reflecting the respective scionwood names and graft dates. A self-educated grower, Clark pointed out a mature, fruit-bearing Siberian pear tree that became host last summer to a 'Chinese Golden' apple graft. He's."...waiting to see what happens".

In his quest for the hardiest and fastest-growing decorative and fruit bearing varieties, Clark recommends chokecherry trees, which grow from 4 to 25 feet in 8 to 10 years and can be raised locally from seedlings. The resident winter robins--two last winter and one this year--favor Clarks' several mature chokecherry trees.

In keeping with a practical approach to growing, the Clarks enjoy sharing their knowledge and their bounty. They offer seedlings, rooted suckers, etc. during their annual June yard sale--an event worth attending, not only for the seedlings but for the sight of this northern orchard by the sea!

-Colleen Ryan

NO MORE FRUIT TESTING?

Most Alaska NAFEX members have derived some benefits from the variety testing program at the Alaska Plant Materials Center in Palmer and from the driving force behind this program, horticulturist, Kathy Wright. This program is in danger of being eliminated in the most recent series of State budget cuts. If you believe strongly in this program and would like to see it continue, please voice your concerns by writing to members of the **House (Rep. Adams, Chairman) and Senate (Senators Faiks and Sackett, Co- chairmen) Finance Committees at Pouch V, Juneau, AK 99801.** Please write today!

-P.S. Holloway

WE NEED YOU !

This newsletter is only as good as its contributors. We urge members to share their fruit-growing experiences with others by writing a short article for the newsletter. If you know of any good sources of plant materials, or have some you're willing to share or sell; if you've read a good book or fruit-related article lately; if you're looking for a particular species or cultivar, please send your information or requests to the editor, Pat Holloway at the address listed on page 1. All contributions, large of small, are welcome!