

ALASKA PIONEER FRUIT GROWERS NEWSLETTER

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

President: **Erik Simpson** 7225 Blackberry St. Anchorage, AK 99502. 561-6661(w);
243-3058(h)

Vice-President **Bob Boyer** P.O. Box 9-1376 Anchorage, AK 99509

Secretary:

Treasurer: **Dell Kuk** 4021 E. 65th Ave. Anchorage, AK 99507 344-5489 (h)

Editor: **Pat Holloway** 1170 Gilmore Trail, Fairbanks, AK 99712 Ph. 474-7433

MEETING DATES

**MAY 16. 7-9 p.m. Dimond
Greenhouse, Anchorage Sell and
Exchange fruit trees.**

GROWING FRUIT TREES AND MUCH MORE IN TOK

Last winter (89-90) we dropped to -50 F and had a lot of snow. There was considerable damage from snow mold. We occasionally had snow mold in Michigan, but it never seemed to be harmful. Here last winter we lost a lot of our strawberries ('Toklat', 'Pioneer' and an old variety from friends of friends in Fairbanks). It also killed native plants such as the pasqueflowers.

We gave up on the 'Latham' raspberries. Some roots survived but not producing canes. The 'Kiskas' aren't doing good. There's been a lot of winterkill on the larger, most vigorous growing canes and those that survive produce very poorly.

The Siberian crabapple came through good except for some moose browse (the fencing has since been improved). The Ranetka crabapple survived but was under snow.

In the spring of '90 we planted a 'Dolgo' crab. It grew good and had stopped most growth by fall.

We order our nursery stock for delivery as late as possible so hopefully the ground can be dug, although we try to have at least some of the planting holes prepared the fall before. When the 'Dolgo' came, it had considerable blanched growth. I used a piece of old row cover to wrap the tree--a couple of layers loosely draped around it-- for several days. Whatever the reason the growth greened and went on growing--even the buds opened.

The serviceberry, 'Smoky' wintered under the snow. We were given serviceberry roots by a friend in Fairbanks from an old tree that grows good up there. Any idea what it might be? [Ed note: It's hard to say. Could be our native serviceberry or any one of a half dozen Canadian varieties that all grow well here].

The 'Holland Long Bunch' currant survived, but its growth wasn't vigorous.

Our largest chokecherry was moose browsed but still had a few flowers. We were given a rooted branch of a 'Canada Red' cherry 2 years ago. This past summer it grew vigorously. The parent tree has survived several years in this area.

There has been a couple of mentions of a pin cherry. Also saw them

listed by a nursery in the Palmer area. In Michigan, we had a native pin or bird cherry that made excellent jelly. They were hardy in the coldest areas of the interior of northern lower Michigan-- an area where temperatures were known to drop to -50 F. They were a fast-growing relatively short-lived tree that could reach 20-30 ft. although they were susceptible to an interior green wood rot. They grew on high, dry sandy or gravelly soil. The fruit was very small and very tart and grew like that of the cultivated sweet and tart cherries-- not like the native black and chokecherries. [Ed note: The pin cherry most likely is Prunus pennsylvanica. We have some growing at the Georgeson Botanical Garden in Fairbanks. They produce a shrubby tree to about 15 feet tall, very pretty, and the fruit does make good jelly. Other growers in the Tanana Valley have told me that they are not reliably hardy, and that seed source is very important. Look for the hardiest strain possible].

Our 'Viking KB3' asparagus has survived for the past several years. It is mulched each fall because we lost the first bed during a very low snow winter. Last summer we had a couple of small pickings.

The Caragana, Cotoneaster and common lilac grow in this area. We also have French and Persian lilacs, but they are still under the snow.

This past winter we had about normal, maybe a little above normal snow pack (20 inches as of March 15), and -53 F has been the coldest we have registered. Last spring we planted the 'Hansen' and Nanking cherries plus a lowbush huckleberry native to the northern lower Michigan sand plains. This year we'll add a few more things and hope for good growing.

-Tom & Lena Clark

SEED EXCHANGE RUSSIA/ALASKA

Over the past three years I have had the opportunity to meet with several delegations from The Russian Siberian Horticultural community. Their mission is to develop fruits vegetables, and grains that can survive winter temperatures as low as -65°F and yield well in latitudes that have a short summer with long cool days. Many Alaskan gardeners have discovered, to their sorrow, that many seeds and cultivars purchased from the Lower 48 do not do well here. Most United States corporate and university agricultural research concentrates on crops that are grown in more moderate climates. In contrast, the Russian research centers are located in Siberia where the climate is similar to Fairbanks.

Russians are a nation of seed savers. They do not have access to commercial producers of seeds, fruit trees, berries, or herbs as we do. Gardeners must raise the crop and then save the seeds which carry the genetic characteristics desired (arctic environment). They have done this for generations.

Each Siberian gardener has at least one coldframe to "jump start" their garden. It is estimated that 80% of all fruits and vegetables in Siberia are produced in personal gardens whereas in Alaska less than 1% of the vegetables consumed in Alaska are grown by the Alaskan farmers.

(Continued on p 5)

NAFEX MEMBERS

ANDERSON, C.D. & BETTY, 2527 Arlington Drive, Anchorage, AK 99517-1304
(H) 272-2971..(W) 562-1268

BAIRD, BILL & WILMA, 1130 11th Avenue, Anchorage, AK 99501....(H) 272-1929

BEAN, RIVER, HC 04, Box 9043, Palmer, AK 99645..(H) 746-1087..(W) 277-8622

BENESCH, WALTER, 1811 Muskox Trail, Fairbanks, AK 99709.....(H) 479-2386
(W) 474-7398

BOSTROM, EDWIN A., P.O. Box 56822, North Pole, AK 99705.....(H) 488-3946

BOYER, MR. & MRS. ROBERT, P.O. Box 9-1376, Anchorage, AK 99509.(H) 561-2885
(W) 344-3511

BREWER, ALICE, 1201 W. 45th Ave., Anchorage, AK 99503.....(H) 563-6734

BROOK, SUSAN, Box 93, Gustavus, AK 99826.....(H) 697-2348

BROWN, DEBORAH, 1353 W. 16th Ave., Anchorage, AK 99503.....(H) 278-2814

BUSH, ERIC A., HC01 Box 6231, Palmer, AK 99645.....(H) 376-5664

CARLSON, KENT , 8201 Stratton Circle, Anchorage, AK 99507....(H) 344-1909

CARLSON, VERNON & PATRICIA, 431 Steese Hwy., Fair., AK 99701... (H)

CARR, DERALD & MARY, HC 31 Box 5150, Wasilla, AK 99687-9703....(H) 376-5671

CLARK, THOMAS & LENA, P.O. Box 146, Tok, AK 99780.....(H) 883-5710

CLOUD, JOSEPH & BETTY, HC 01 Box 875, Kenai, AK 99611.....(H) 776-8660

CRUSEY, DAVE, Boz 871667, Wasilla, AK 99687.....(H) 373,7701

DEARBORN, JASON, HC 01 Box 6124, Palmer, AK 99645.....(H) 745-3501

DEISER, FRED & DAWN, P.O. Box 520692, Big Lake, AK 99652.....(H)

DIXON, PAUL, 429 W. 11th Ave., Anchorage, AK 99501.....(H) 272-1792

ON CHEMICAL CO.,INC. P.O. Box 101246, Anchorage, AK 99510-1246(H) 277-6725
(W) 279-4519

DOZIER, PAUL & DIANE, 204 Eureka Ave., Fairbanks, AK 99701.....(H) 456-5363

DUBLER, J.M. & PATTI, 7011 Genny Circle, Anchorage, AK 99507... (H) 344-0925

DUFENDACH, JON & CAROL, Box 309, Delta Junction, AK 99737.....(H) 895-4309

EBERHART, KATHERYN, P.O. Box 1006, Palmer, AK 99645.....(H)

ELLIOTT, DANIEL, 8200 Northwind "B", Anchorage, AK 99504.....(H) 338-3953

EMMONS, DOROTHY, 3206 Woodland Park Dr., Anchorage, AK 99517... (H) 243-2001

ENGLE, AUGUST W. 4709 Malibu, Anchorage, AK 99517.....(H) 243-5572
(W) 786-1629

FYFE, KAY M., P.O. Box 288, Willow, AK 99688.....(H) 495-0845

FOX, ROBERT, 627 Gaffney St., Fairbanks, AK 99701.....(H) 479-2028
(W) 456-6000

GILBERT, JIM, 28696 S. Cramer Rd., Molalla, OR 97038.....(H)

(NORTHWOODS NURSERY).....(W) (503) 651-3737

GOULD, PATRICK J., 7121 E. 34th Ave., Anchorage, AK 99516.....(H) 337-7632
(W) 786-3512

GREEN, DICK, 4711 Kupreanof, Anchorage, AK 99507.....(H) 561-4938

HANSON, DAVID & SHEILA, P.O. Box 34, Hope, AK 99605.....(H) 688-1156
(W) 694-7358

HANSON, MICHAEL, P.O. Box 671769, Chugiak, AK 99567.....(H) 688-1156
(W) 694-7358

HARGER, Katheryn D., HC2 Box 7460, Palmer, AK 99645.....(H)

HENDERSON, ROBERT E., Box 105, Haines, AK 99827.....(H)

HOLLOWAY, PAT, 1170 Bilmore Trail, Fairbanks, AK 99712.....(H) 457-1599
FAX 474-7439 (W) 276-8827

AMES, DR. HERBERT, 1000 E. 28th Ave., Anchorage, AK 99504.....(H) 272-3828
(W) 563-3042

JOHNSON, WALTER, 1521 "G" St., Anchorage, AK 99501-5031.....(H) 279-106^o
 KINGSBURY, LEILONI, HC Box 8100, Talkeetna, AK 99676.....(H)
 KUK, DELL, P.O. Box 100936, Anchorage, AK 99510..(H) 344-5489..(W) 264-0447
 KUMIN, JOHN & LINDA, 7921 Charlotte Place, Anchorage, AK 99502.(H) 243-8175
 (W) 563-8877
 LAMMERS, CLAIR, 1364 Esro Rd., Fairbanks, AK 99712.....(H) 488-6446
 (CLAIR'S CULTIVATIONS)
 LEE, DORAN R., P.O. Box 168, Willow, AK 99688.....(H)
 LEE, HELEN M., P.O. Box 877629, Wasilla, AK 99687.....(H)
 LEIPZIG, JOHN, 1944 Red Leaf Rd., Fairbanks, AK 99709.....(H) 455-6560
 (W) 474-6817
 LOOMIS, JOHN, 4437 E. 9th Ave., Anchorage, AK 99508.....(H) 333-7872
 MANLEY, JAMES C., Box 955, Homer, AK 99603.....(H) 235-6868
 MARSHALL, TOM, 1569 Birchwood St., Anchorage, AK 99508.....(H) 279-4705
 MCKAIG, PEGGY, 847 E. Loop Rd., Anchorage, AK 99501.....(H) 337-2352
 (c/o GOVERNMENT HILL BARBER SHOP).....(W) 276-1598
 MEGGITT, CHARLES & BARBARA, P.O. Box 60106, Fairbanks, AK 99706(H) 479-6183
 MILLER, ARVID, 6701 E. 104th, Anchorage, AK 99516.....(H)
 MILLER, JAMES, P.O. Box 110935, Anchorage, AK 99511-0935.....(H)
 MILLS, GREG, 3121 Knik Ave., Anchorage, AK 99517.....(H) 243-7169
 (W) 263-6296
 NIELSEN, ROBERT & NICKI, 4938 Mills Dr., Anchorage, AK 99508... (H) 333-1481
 (W) 561-1361
 NELSON, SAM, 3938 San Roberto #5, Anchorage, AK 99508.....(H)
 NUGEN, JAMES & DAWN, P.O. Box 770106, Eagle River, AK 99577... (H) 688-9057
 (W) 688-2881
 O'BRIEN, MICHAEL J., HC 1 Box 1377, Kenai, AK 99611.....(H) 776-86^o
 (W) 776-87^o
 PALMQUIST, MIKE, 545 Boundary St, Wasilla, AK 99688.....(H) 376-5630
 PETTIT, JIM, 12741 Ridgwood, Anchorage, AK 99515.....(H)
 POOR, RICHARD, P.O. Box 240176, Douglas, AK 99824.....(H) 364-3329
 POWERS, TOM, Mile 315 Parks Hwy., Nenana, AK 99860.....(H) 832-5236
 PURVIS, BOB, N.W. 248 Sunrise Dr., Pullman, WA 91163.....(H) (509) 334-2540
 RASMUSSEN LIBRARY, University of Alaska Campus Mall.....(W)
 RHYNEER, DR. GEORGE 10500 Old Eagle River Rd., Eagle River, AK (H)
 99577
 RILEY, JULIE, 6411 Italy Circle, Anchorage, AK 99516.....(H) 345-2029
 (W) 279-5582
 SCHMIDT, DELMORE & BETTY, P.O. Box 2549, Homer, AK 99603.....(H) 235-6975
 SIMPSON, ERIK J., 7225 Blackberry St., Anchorage, AK 99502.....(H) 243-3058
 (W) 561-6661
 STORY, JO, 1569 "I" Street, Anchorage, AK 99501.....(H) 272-8619
 SUDKAMP, GERALD, 2230 Chandalar Dr., Anchorage, AK 99504.....(H) 337-4986
 SWAIM, BRUCE, A, Box 1026, Delta Junction, AK 99737.....(H) 895-4787
 TOOMBS, LESLIE, 2627 Cottonwood St., Anchorage, AK 99508.....(H) 279-4697
 (W) 563-1955
 TURKINGTON, JEFFREY A., P.O. Box 3534, Soldotna, AK 99669.....(H) 262-6086
 UNDERHILL, POLLY, 1009 Barrow St., Anchorage, AK 99501.....(H) 272-1860
 VAN DEN TOP, JERALDINE, 12100 Hilltop Dr., Anchorage, AK 99515.(H) 344-1617
 (W) 786-1608
 WANT, JOE, P.O. Box 10044, Fairbanks, AK 99710.....(H)
 WARNER, PAMELA N., 8503 Mentra St., #2, Anchorage, AK 99518....(H) 344-97^o
 WRIGHT, PATRICK, 1343 W. 25th Ave., Anchorage, AK 99503.....(H) 279-13
 (W) 264-2631

They grow many of the same vegetables and berries we do but have a larger variety of fruit trees. I believe the Russians have many plant varieties that are yet to be discovered. One plant they have developed which could flourish here is the Oblepeka thornbush berry. This berry is high in Vitamin C. The juice from the berry is used as an ointment for the treatment of burns and as a drink to improve digestion. Extensive research is being conducted to improve yields and to develop a mechanical harvester.

They also have a thornless gooseberry that is sweet and produces fruit the size of a golf ball; a tree that produces small lemons; many

varieties of Actinidia Kiwi; and early maturing tomatoes. These hardy tomatoes are started in a greenhouse and then transplanted to a sunny protected area of the garden to ripen. The tomatoes are full sized, rich in flavor, and acclimate to the harsh arctic environment.

In the spring of 1989, several varieties of tomatoes (59-65 days) were brought back from the Siberian Institute of Horticulture in Novosibirsk. I have obtained eight varieties of these tomatoes and have a limited quantity of each for sale.

Dick Green

Dick Green
Natural Garden Supplies
Master Gardener
Anchorage, Alaska
561-4938

Establishing Tissue Cultured Red Raspberries

Most of the following information was gleaned from the 1991 Proceedings of the Illinois Small Fruit and Strawberry Schools and the North American Bramble Growers Association meeting in St. Petersburg. We thought a quick review would be worthwhile.

Tissue culture (TC) is a system whereby small portions of a plant, normally buds, are grown on an artificial medium. Most tissue cultures are grown in glass or plastic containers, hence, the process is referred to as in vitro ("vitro" is a Greek word that means glass). When grown in vitro, plant parts can be induced to grow as unorganized masses of cells (callus), to continue to develop shoots and/or roots. The type of development that occurs is primarily a function of the components of the TC medium. Components of the medium include sugar, hormones, vitamins, minerals, and water. Agar is usually added to thicken the solution for support of the tissue in the container. The cultures must be established and grown in hospital-like sterile (aseptic) conditions. Ahrens Nursery has reported that an operating room nurse helped them to obtain these conditions (Wengard, 1990).

When growing points are placed on the correct medium, the dormant axillary buds will elongate to form several side shoots. As these shoots develop, they can be cut from the mother culture and either transferred (subcultured) to fresh propagation medium to make more plants or rooted to make a whole plant.

In general, after rooting, TC plants are further grown in plugs in a shaded greenhouse with high humidity and/or fogging facilities. The plants will be grown in these conditions until they are large enough to be transplanted, sold directly, matured in a nursery, or placed in cold storage. Some nurseries overwinter their plants in a greenhouse and begin to deliver the plants as soon as possible in the spring. TC plants are small, lightweight, and easy to ship in cartons.

TC-propagated small fruit plants are now being sold directly to the public. These plants become established quickly and grow more rapidly than traditionally propagated plants.

Receiving TC plants: Upon receipt, open the cartons immediately, especially if in midsummer. Keep the root mass and growing medium cool and moist at all times. Plant as soon as possible. Cloudy days, just before rain, or late afternoon and evenings are always the preferred times to transplant. It also may be necessary to plant after danger of hard frost has passed.

-AHRENS NURSERY

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