

ALASKA PIONEER FRUIT GROWERS NEWSLETTER

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MEETING DATES

Mar. 21. 7 p.m. N.B.A. lunchroom. Dick Green will speak on kiwi fruit growing in Anchorage.

May 16. N.B.A. lunchroom. Anchorage grafting workshop.

SOME PEAR POSSIBILITIES

Two Eastern European pears, distributed by the USDA Germplasm Repository in Corvallis, OR are now available for American orchards. 'Ubileen' from Bulgaria, is a very early 'Bartlett' -type that bears fruit with a red blush. From Belgrade, Yugoslavia comes 'Shipova', a cross between mountain ash and pear. Its mountain ash parentage seems to give it a hardiness superior to most pears. The fruit, about the size of a 'Sekel' pear, is yellow with an orange-red cheek and has no grit. Both were the most disease-resistant pears in the Northwoods Nursery (Molalla, OR) orchards in 1990. Both are available from Northwoods on OH x F513 rootstocks.

-Article excerpted from Jan 1991 Organic Gardening, Brave New World by Barbara Pleasant. It was submitted by Leslie Toombs who noted that the most hardy probably would be the 'Shipwa' variety grafted right onto Mt. Ash rootstock.

SOME INTERESTING PUBLICATIONS

Susan Brook, NAFEX member from Gustavus, sent some information on 2

publications that might interest Alaska readers. The first, A Grower's Guide to Pruning Highbush Blueberries is a manual available in VHS format (\$27.00 plus \$3.00 shipping payable to Oregon State Univ.). Although highbush blueberries do not grow well in Alaska, the information might be useful for anyone interested in growing our wild huckleberries and blueberries. The video illustrates the basics of plant growth- identifying fruit and leaf buds, wood of different ages, and unproductive wood; basic equipment; how to prune plants of different ages; and pruning for speed and machine harvesting. It is available from Publications Orders, Agricultural Communications, Oregon State University, Administrative Services A422, Corvallis, OR 97331-2119.

The second publication concerns cranberries: The Michigan Cranberry Information Package which supplies information on subjects such as cranberry culture and production, industry contacts, the Federal Cranberry Marketing Order, and environmental regulations. It is available for \$35.00 from the Horticultural Economic Development Center, Western Michigan University, Kalamazoo, MI 49008-5054. This information is for the bog-grown American cranberry and would be of interest to anyone attempting to grow that plant or Alaska's wild bog cranberry. The information would not be directly related to culture of the lingonberry or lowbush cranberry.

THE FRENCH CONNECTION?

Recently, NAFEX member Clair Lammers brought me some 'Beautiful Arcade' seeds (Malus) that he had received from Scotian Gold Cooperative, Ltd. located in Nova Scotia, Canada. He mentioned that when he had called them, they had answered his call in French, but that they did speak English. Needing to find out some additional information on the seed, I decided to give them a call. I dialed the number, and as I was also writing some notes, did not clearly hear the person when there was an answer, but assumed that it was in French. When I asked the party if they spoke English, I got a slightly frosted reply, "Sir, I am speaking English!"..... they were very nice, though, and I did get my questions answered.

-Robert Fox, Fairbanks

ANOTHER VISIT TO THE WHITEHORSE GARDENS

At the end of June, I made a very quick visit to the Whitehorse Botanical Garden. I did not have an opportunity to visit with the owners, but made some quick notes between drenching cloudbursts on the status of the fruit crops growing in their raised beds. The plants were poorly labeled, so I'm not sure the spelling and I.D. is correct for all the cultivars, and there were no planting dates on anything. In translating my watersoaked notes, there were three crabs that seemed to have survived with little winter injury: 'Dolgo', 'Rescue' and 'Norcue'. The following showed top dieback: 'Kerr', 'Parkland', 'Minnesota', 'Noran', 'Noret', 'Norda', and 'Norson'. A tree labeled 'Boughen Delight' was dead.

'Peborusk' and 'Peter' pear were doing well as were 'the following plums: 'Bounty', 'Northern', 'Dandy', 'Brookred' and 'Pembina'. The following plants had top dieback: 'Brookgold' plum, 'Ptitsin #5' plum, Japanese plum, and hazelnut.

'The entire top of 'Killarney' raspberry was dead, and I observed lots of top dieback on 'Boyne' and 'Festival' raspberry.

Other fruits growing in the gardens that seemed to be doing well were pin cherry, native saskatoon, golden chokecherry, 'Shubert' chokecherry, mongolian cherry,

and 'Manor' cherry. The manchurian apricot showed top dieback. -P. Holloway

SELF INCOMPATIBILITY IN PRUNUS

Self incompatibility in Prunus is widespread. Most commercial almond (Prunus dulcis) and sweet cherry cultivars (Prunus avium) are self incompatible, and some are cross incompatible. Thus, they require a specific pollen source other than themselves to bear fruit. Plums (Prunus domestica) can be self compatible, self incompatible or partially self compatible. Partial self compatibility means that fruit set from self pollination can occur, but success is usually low, less than 15%.

The sour cherry (Prunus cerasus) industry in the United States is a monoculture of the cultivar Montmorency, thus it has been considered self compatible. Beginning in 1983, cultivars of cherries have been introduced from Europe into breeding programs, and many of these are self incompatible. Consequently, self-incompatible sour cherry cultivars are now being released.

Researchers at Michigan State University tested several cherry cultivars to determine their compatibility rating. 'Tschernokorka' and 'Crisana' sour cherries are self incompatible. This was shown by observing pollen germination and pollen tube growth in the pistil. If the pollen is incompatible, the pollen might germinate, but it is killed as it grows down the style of the pistil. In 'Meteor' and 'Montmorency' sour cherries, pollen germinates, and growth begins down the style, but a large amount of pollen is killed as it grows. Some gets through and fertilizes the ovule, but a lot gets stopped along the way. The researchers labeled this as partial self-incompatibility.

What this means for Alaska sour cherry growers is that pollination intensity is extremely important to fruit set in 'Meteor' and 'Montmorency' sour cherries.

Excerpted from HortScience 1990. 25(12):1636-1638. A preliminary analysis of self-incompatibility in sour cherries. by A. Lansari and A. Iezzoni.

'Friendship' Blueberry

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Additional index words: *Vaccinium corymbosum*, *V. angustifolium*, cold hardiness, half-high blueberry

Except under rare conditions where a specialized or protected microclimate may exist, highbush blueberries (*Vaccinium corymbosum* L.) are generally not sufficiently cold hardy for consistent production or long-term

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survival in Wisconsin. The blueberry breeding program at the Univ. of Minnesota, initiated in 1967 (Luby et al., 1986) with the objective of developing low-statured, cold-hardy, high-quality cultivars, has thus been of particular interest to Wisconsin, considering the similarities in climate in both states. Through the cooperation of Minnesota researchers, a replicated trial of 'Northblue', 'Northsky', and 'Northcountry', the first blueberry cultivars introduced from the Minnesota program, was established at the Hancock Experiment Station, Hancock, Wis., in 1982 using 2-year-old potted plants. Micropropagated blueberry clones of the same age, designated WI 1 and WI 2, were also included in this trial. We propose 'Friendship' as the name for the WI 2 blueberry, which has performed well in this trial.

Origin

'Friendship' originated from open-pollinated seed collected in the early 1970s from

plants growing in the northwestern village of Friendship, Adams County, Wis. A brief historical perspective by Dana and Bigger (1980) on the discovery of this native stand described it as a mixture of *V. corymbosum* and *V. angustifolium* Ait. and noted that fruit was collected from taller plants typical of *V. corymbosum*. Leaf and fruit samples from these plants were subsequently identified as *V. corymbosum* by herbarium specialists at the Univ. of Wisconsin-Madison and are the first recorded collection of this species in Wisconsin.

No controlled evaluations of these seedlings were made before 1982. Of the original seedling population, five plants remained in 1980. Selections WI 3, WI 4, and WI 5 from this population have been maintained but were not considered of sufficient merit to be included in the evaluation.

Table 1. Fruit and plant size of blueberry cultivars grown at Hancock, Wis., in 1989.

Cultivar	Fruit wt ^a (g/berry)		Plant size ^b	
	July	Aug.	Ht (cm)	Spread (cm)
WI 1	0.6	0.5	82	68
Friendship	0.7	0.6	78	61
Northsky	0.7	0.6	38	53
Northcountry	0.6	0.6	81	68
Northblue	1.8	1.1	76	65

^aMean for 50 berries per harvest.

^bMean plant size for five plants, age 9 years.

Table 2. Annual and seasonal yield of blueberry cultivars at Hancock, Wis.

Cultivar ^a	Yield ^b (kg/plant)				1989 Seasonal yield (kg/plant)			Total
	1983	1984	1985	1986	13-18 July	21-25 July	28 July- 4 Aug.	
WI 1	0.01	0.11	0.27	0.45	0.22	0.58	0.25	1.05
Friendship	0.03	0.54	0.80	1.28	0.22	0.82	2.01	3.05
Northsky	0.07	0.25	0.83	0.48	0.70	0.63	0.40	1.73
Northcountry	0.05	0.30	0.69	0.79	0.24	1.40	0.46	2.10
Northblue	0.14	0.75	1.10	0.76	1.67	1.34	0.93	3.94

^aPlanting established with 2-year-old potted plants in 1982.

^bNo yield was obtained in 1987 and 1988 as a result of winter injury in both seasons and severe drought and high temperatures in 1988.

Description and performance

Mature plants of 'Friendship' are similar in growth habit and stature to 'Northcountry', averaging 0.7 to 0.8 m tall in Wisconsin (Table 1). Although genetic studies have not been made, plant growth, fruiting, and stature suggest it is a hybrid of *V. corymbosum* x *V. angustifolium*.

When sufficient water is provided, fruit are medium in weight (Table 1), with a mild subacid sweet flavor reminiscent of native *V. angustifolium* in Wisconsin. A medium waxy bloom on fruit, similar to 'Northcountry' or 'Northsky', results in a sky-blue fruit, a color slightly darker than the Minnesota cultivars at maturity. Since fruit color develops before fruit maturity, berries must remain on the plant until ripe for best flavor. Fruit size remains uniform throughout much of the harvest season, which extends 3 to 4 weeks, depending on the season.

Full bloom of 'Friendship' coincides with 'Northsky', is 2 to 3 days earlier than 'Northcountry', and up to 7 days earlier than 'Northblue' in central Wisconsin. The degree of self-fruitfulness for 'Friendship' is unknown. Peak harvest for 'Friendship' varies by season and occurs 7 to 10 days later than for 'Northblue' and up to 7 days later than for 'Northcountry' (Table 2). 'Friendship' was comparable to 'Northcountry' in yield in most seasons.

Periodically, winter cold injury occurs on 'Friendship' and is similar to that observed on Minnesota clones in Wisconsin. Severe low-temperature injury is apparent following winters in which minimum temperature is below -30°C. Cold injury is manifested in death of terminals on previous season's growth, loss of fruit buds, and negligible bloom.

In a commercial demonstration planting in Wisconsin, all the Minnesota clones and 'Friendship' displayed light to moderate susceptibility to stem canker (*Godronia* sp.) infection. Susceptibility of 'Friendship' to other common blueberry diseases is unknown.

Processing potential has not been evaluated. Fruit softness in 'Friendship', similar to that of 'Northcountry', suggests 'Friendship' is not suited to mechanized harvest with currently available equipment. Cultural practices suggested for Minnesota half-high blueberry cultivars (Hoover et al., 1988) are considered suitable for 'Friendship'. Based on plant spacing trials established in 1984, we recommend 0.8 to 1 m between plants

be maintained. 'Friendship' retains its leaves late into fall, suggesting late-season cold acclimation might be more conducive to greater winter injury than for other cultivars. Observations on the degree of winter injury in our plantings over nine growing seasons do not support this hypothesis.

Availability

'Friendship' blueberry is propagated under a joint exclusive royalty agreement with Knight Hollow Nursery, 3333 Atom Rd., Middleton, WI 53562 and Hartmann's Plantation, 310 60th St., P.O. Box E, Grand Rapids, MI 49055. Interested nurseries and individuals should contact either of these nurseries directly.

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 Hoover, E., C. Rosen, D. Trinka, D. Wildung, J. Luby, L. Hertz, D. Noetzel, W. Sienstra, and C. Finn. 1988. Blueberry production in Minnesota (revised). AG-FO-2241. Agr. Ext. Serv., Univ. of Minnesota, St. Paul.
 Luby, J.L., D.K. Wildung, C. Stushoff, S.T. Munson, P.E. Read, and E.E. Hoover. 1986. 'Northblue', 'Northsky', and 'Northcountry' blueberries. *HortScience* 21:1240-1242.
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HARDY ASPARAGUS PLANTS FOR SALE

Dr Herb James will be starting seeds of a hardy asparagus variety this spring. If you are interested in ordering any - call him before March 1. →
 272 - 3828 home
 563 - 3042 work
 (ANCHORAGE)