## WSU Extension

# Tree Fruit & Alternative Fruits W. Wash

# Harvest Report 2002 - Tree Fruit

# Cherry

In February 2002 and again in March, the weight of heavy snowfalls seriously damaged the net cage structure in both the Gisela rootstock plot and the older variety trial plot, breaking some of the posts and heaving others out of the ground. Some injury also occurred to the trees, and subsequent disease infection caused a few to be removed. Repair and re-setting of the posts and wires in the Gisela plot was done in April. The old variety plot was scheduled for eventual removal. Since there was not enough funds available to cover the labor cost of replacing the net cage in the old variety plot, the trees were removed in April–May 2002.

Bloom data was recorded in April and May, with bloom approximately 10–14 days later than in 2001. Cold wet weather at bloom time resulted in a poorer set in many cherry varieties, compared with 2001. In 2002 most cherry varieties produced adequate quantities of fruit for harvest. Observations were made of fruit set, cracking, and fruit quality for all varieties on trial. Several numbered selections also produced fruit and preliminary evaluations were recorded.

#### Sweet cherries (dark flesh)

All of the varieties in the trial had reduced yields in 2002 compared with the previous season, and some trees had noticeable disease infection. The crop load was still very acceptable for most varieties. **Early Burlat** is the first variety to ripen in season. However, since it ripens much earlier (approximately 3 weeks ahead of any other variety in this plot), it has to be netted separately. Cropping this year was light. **Bing**, the standard for high quality, is susceptible to cracking due to its crisp firm flesh, and it was moderately productive this year.

**Black Gold** (NY 13791) and **Hartland** ripen midseason at about the same time, and yield well on Gisela 5. In the late season **Lapins** and **Sweetheart** are both self-fruitful. **Lapins** on Gisela 5 rootstock has consistently produced good yields of fruit. **Sweetheart** ripens about a week later and the trees on Gisela 6 appear weak and less productive. It may do better on Gisela 5 or Gisela 1.

#### Sweet cherries (white flesh)

Several white-fleshed sweet cherries have been tested here over the years. **Rainier** is considered a prime quality variety. The productivity on Gisela 5 rootstock is good in most years. **White Gold** (NY 13688) is a new introduction from Geneva that has been productive on Gisela 5.

#### Sour (pie) cherries

Sour cherries generally bloom and fruit later than sweet cherries, are softer and more resistant to cracking, and to diseases like bacterial canker. **Montmorency** is the standard for pie cherries. **Surefire** is a new tart pie cherry with dark red juice (unlike **Montmorency** which has clear juice), very attractive when used for jam and pie. Young trees of **Surefire** produced a relatively good crop in 2002 and look very promising.

New: Varieties added in 2000 that are not yet fruiting include Almaden Duke, Balaton, Coe's Transparent, Governor Wood, Sonata, Tehranivee and Vandalay.

# **Apricot**

The 2002 season, like 2001 and 2000, saw a poor crop for apricots at Mount Vernon. Conditions at bloom time were cold and wet. No apricot variety we have tested has shown any commercial potential because of lack of productivity. Even varieties such as **Puget Gold** and **Harglow** failed to produce a crop this year. **Patterson** and **Westley** produced a little fruit, but most others had nothing. Some new apricot varieties, and trees of current varieties grafted on dwarfing Citation rootstock, were planted in winter 2001-spring 2002. We continue to look for new apricot varieties that might have better potential.

New: Varieties planted in 2002 include NY 525, NY 535, NY 544, NY 590, NY 592, NY 593, NY 595, NY 601, NY 605, NY 609, NY 612, NJA 43, NJA 82, NJA 97, NJA 105, Harogem and Jerseycot. Most are on Citation rootstock, which produces a more dwarfing tree and may improve productivity when trees begin to bear.

#### Peach

In 2002 the conditions for pollination of peaches were very poor and fruit set was low in all varieties. Even the usually productive varieties yielded poorly in many cases. Again, we are looking for consistent productivity as well as quality, and are removing varieties and selections that have not measured up. New material from various breeding programs was planted into a new stone fruit block south of the blueberries in spring 2002. Some of this material includes so-called "crisp flesh" peaches, and other new selections with fruit characteristics that may be very interesting. We look forward to seeing sample fruit from this plot in 2003.

In the early season **Harrow Dawn**, ripe in early August, had some fruit but much less than usual. Most of the introductions in the **Flamin Fury** series (developed by a private breeding program in Michigan), did not perform well in 2002 and are on the list for discard. One of the better ones, which is worth trial as an early season peach, is **PF 5B**. **Saturn**, a flat "peen-tao" type peach with white, very sweet flesh is of high quality but did not yield much fruit this year.

In early-midseason, mature trees of **Harbelle, Harken**, and **Redhaven** provided a limited amount of fruit for harvest days. **Starfire**, about two weeks after **Redhaven**, was much less productive than usual. **Harrow Fair** also had some fruit on young, small trees. Late in the season, at the end of August, another **Flaming Fury** series, **PF 17**, did produce some good fruit and seems worth further trial. **Harrow Beauty** set some fruit on young trees.

Of the Harrow peach selections currently on trial, HW 272 is usually productive, though set this year was poor, and the yellow fleshed fruit is high quality.

New: A number of new peaches were planted in spring 2002, many from the breeding programs in New Jersey and Byron, Georgia.. They include yellow fleshed

selections H14-126, D91-184 and D101-162, white fleshed selections NJ 318, D88-1, D80-8 and D88-147. Also there are selections of the "stony hard" type: K40-34 and H28-20 (yellow) and H11-64, H11-73, H13-98, J19-28 and L7-176 (white). A peen-tao type peach, K22-38, was also included. Named varieties added this year include Bicentennial, Contender, Early Loring, Early Redhaven, Fireprince, GaLa, Junegold, Juneprince, Roseprincess, Springprince, Sunbright, Sunland, Sunprince, Sunsplash, Vedoka. and Vivid. We look forward to seeing their performance in 2003.

#### **Nectarine**

Bloom conditions for the nectarines were the same as for the peaches, and fruit set in most varieties was very poor. The exception was **Hardired**, a yellow fleshed nectarine ripe about 10–15 days after Redhaven, which set a fair amount of fruit, although there was some cracking. At present it is the only variety that is a reliable producer from year to year. The white fleshed variety **Crystal Rose** had some fruit but its future is doubtful if yields do not improve.

New: The new stone fruit block planted in spring 2002 includes several nectarine varieties and selections. Named varieties are **Early Scarlet** and **Sunglo**. Trial selections include **B8-11-45** and **K54-17** (yellow) and **K54-25** and **K56-4** (white.)

#### **Plum**

Poor weather conditions in the early bloom season of 2002 adversely affected a few of the early blooming varieties. **Beauty** had no fruit and **Methley** had comparatively little. However, the rest of the early plums produced a fair crop, and the later varieties were very fruitful. **Early Laxton** and **Hollywood** had somewhat smaller crops than usual. **Obilnaja**, from eastern Europe, produced a good yield flavorful fruit, small to medium in size.

Imperial Epineuse, Victory and Seneca are all proving to be reliable productive varieties with high quality fruit. Queen Victoria, a classic English variety ripe in mid season, produced a very heavy crop in 2002.

Trees fruiting for the first time in 2002 included **2P** (Raintree), with smallish very dark red fruit, red flesh and good flavor, ripe at the end of August. Also ripe at that time is **Purple Gage**, which set a good crop of fruit, purple-blue in color with greenish yellow flesh, rather small but very sweet and juicy. Ripe in mid September, **Tabarza** did not set heavily, and fruit was quite small, sweet but with a distinctive flavor perhaps not to everyone's taste. All will be further evaluated in 2003.

Numbered selections from Geneva, New York are in process of evaluation. **NY 101 (NY 77.610.1)** is a pink blushed gage type, very sweet and flavorful. Fruits ripen over about a 3-week period.

New: A number of new plum varieties and selections, as well as a few old standards, were added in a new stone fruit block in 2002. They include **Battema**, **Blackruby**, **Byrongold**, **Earli Magic**, **Moldavian**, **Mount Royal**, **Ovishiwase**, **Reine de Mirabelle**, **Rubysweet**, **Shiro**, **Vanette**, **Vanier** and **Vision**. New selections from the Geneva, NY breeding program are **NY 1456**, **PP 6975-2**, **PP 7520-1** and **PP 7520-3**.

#### Pear

Bloom and fruit set were abundant on pears in 2002. Early ripening varieties did well this year. They are best used within 2–4 weeks of harvest. **Bella de Guigno** and **Ubileen** ripen well on the tree but develop internal browning if left too long. **Harrow Delight** will keep a bit longer to about 6 weeks. All the above varieties are very productive.

The Bosc pear trial is concluding this year. Yields for **Starkrimson**, **Bosc**, **Concorde** and **Conference** were very good though not as high as in 2001. Trees of **Comice** in the test plot produced yields comparable to their best, and other **Comice** trees were very productive also. Young trees of the russet sport **Taylor's Gold Comice** produced good crops of very attractive, uniform fruit. This variety appears to have excellent potential for commercial production in cool maritime climates like ours. Fruit from standard **Bosc** and from **Bronze Beauty**, **Golden Russet**, and **Wenatchi Gold** strains all were fully russeted and yields were good.

Thisyear the timing of the main harvest was later than usual, but was also shorter. **Comice**, **Bosc**, **Concorde** and **Conference** were all harvested in the week of September 23–30.

New: Varieties and selections added to the pear trials include some old standards for comparison and some new introductions. They are **Bartlett**, **Best Ever**, **Beurre Giffard**, **Blake's Pride (USDA 66131-021)**, **Clara Frijis**, **Jack Pear**, **Lubenicarka**, **Onward**, **Orcas**, **Red Sensation**, **Seckel** and the selections **NY 10368** and **USDA 71655-014**.

### Asian Pear (Nashi)

Most varieties of Asian pear set well in 2002. **Hamese #1** (yellow skin) and **Ichiban Nashi** (tan skin) ripened somewhat later than usual, in early September. **Chojuro, Kosui** and **Yongi** all produced well. **Mishirasu** fruit is very large, heavily russeted and not especially attractive but good flavor and productivity recommend it for home orchards and specialty markets. **Atago** continues to be a very promising late season variety, productive and flavorful with attractive pale tan skin

New: Selections from the UC Davis breeding program, UC 8-46 and UC 17-63, were added to the Asian pear trials.

#### Apple

In 2002 the fruit set was very good and hand thinning where needed resulted in acceptable fruit size for most varieties. In determining optimum harvest for a specific variety, we relied extensively on indices of starch conversion, fruit firmness, and soluble solids (sugars) as well as external color. Yields of most varieties were good and fruit quality was high.

#### Standard / Commercial (sweets and tarts)

Several red strains of **Gala** are currently on trial. **Regal Gala (Fulford)** remains the overall leader due to its relatively large size and even color. **Ultrared** and **Brookfield** were notable for deep red, even color. **Brookfield** appears to be about 10 days later than the other Gala strains evaluated. **Galaxy** fruit has good color, but trees are smaller and less vigorous than other Gala strains on M9 rootstock.

Strains of **Jonagold** being evaluated for their potential in both commercial and home orchards include **Jonagored**, **Rubinstar**, **DeCoster**, **Jomured**, **King** (**Jored**), and **Jonica** as well as young trees of **Crimson Jonagold**. This season was very good for all the strains, with good color developing in time for harvest, and selective color picking for top quality fruit.

Trees of Honeycrisp were very productive in 2002, including some that were top worked in 2000. Early ripening strains of Fuji, Beni Shogun and September

Wonder (Jubilee) are looking very promising for growers in our area. Melrose and Red Boskoop are reliable, late keeping varieties that produced very well this year. Braeburn and Hillwell (red) strain produced well with little russet. The first pick was in late October, and later picks were delayed into November.

#### Japanese (mostly sweets)

In the early season Akane, Sansa and Tsugaru Homei are varieties of proven good quality. Sansa in particular is one of the best quality apples.

Early strains of **Fuji** are looking very promising both for home and commercial growers. **Beni Shogun** and **September Wonder** (formerly **Jubile Fuji**) both ripened in early October even though 2002 was a late year in general. Russeting is sometimes a problem but **September Wonder** was very attractive this year, with good finish and flavor. Late strains of **Fuji** were not harvested until early November. Considering the earlier harvest and better performance of the early strains, there is no reason to grow the late **Fuji**.

Yellow apples worth noting for good flavor and keeping quality are **Shizuka** and **Mutsu**. **Shizuka** is very productive, flavorful, and more attractive than **Mutsu**, which ripens 7-10 days later in most years. **Mutsu** is of excellent quality but may not ripen fully in cooler areas.

#### **Sweet**

A recent introduction from Minnesota ripe in the early season, **Zestar** (Zesta!) produced fruit for evaluation in 2002. It is crisp and firm with a pleasant refreshing flavor. Also in the early season, **Sunrise** again proved to be a reliable, heavy producer of good quality fruit. **Aroma** is less productive, and multiple pickings are needed for both of these varieties. Sweet apples are popular in Japan and many Japanese apples such as **Sansa**, **Homei Tsugaru**, **Sayaka**, **Senshu** and **Fuji** (above)would fall into this category. **Gala** and its strains are noted for sweet flavor. Recent B.C. introductions **Silken** and **Creston** also fit this category. Both are yellow apples but **Creston**, ripe about 2 weeks later, often has a bicolor appearance with variable red blush and stripe.

Two of the newer sweet types in the late season are **Ambrosia** and **Cameo**. Both ripened fully in 2002, perhaps because of the clear sunny weather lasting well into October. **Ambrosia** ripens slightly earlier, and in our conditions is usually a bicolor apple with most fruit appearing yellow striped with orange red. **Cameo** had very good color in 2002, but color is late developing. The flesh is sweet and rather bland, very hard and dense.

## Cox Types (sweet-tart to tart)

**Alkmene** is a productive tree with medium-small, sweet- tart fruit. **Fiesta** is productive but the relatively large fruit lacks the spicy flavor of most Cox types, being rather sweet and mild. **Elista (Daliest)**, a red strain of **Elstar** from Europe, retains the lively tart flavor of **Elstar** and adds higher percent red color. **Rubinette** has very good sweet-tart flavor, but its small size and russeted finish limit its use to home orchards. **Karmijn de Sonnaville** is only moderately productive but its high acid (tartness) and high sugar content make it very popular as a gourmet apple. **Corail (Pinova)** is a recent introduction from Germany, ([Cox Orange Pippin x Duchess of Oldenburg] X Golden Delicious). Ripe in early to mid October, it is a very attractive yellow with reddish pink blush that may go up to 70-80% in sunexposed fruit. An excellent keeper, it has very firm, crisp, sweet-tart flesh.

#### McIntosh Types (mostly sweet-tart)

The **McIntosh** variety is very popular in the eastern United States, resulting in many Mac strains and crosses. **Jonamac**, **Spartan**, and **Empire** are all high quality varieties proven to be well adapted to our area. **Thome Empire** is eye-catching with its unusual blackish-red color. However, trees on M9 appear lacking in vigor. **Royal Empire**, another red sport of **Empire**, is also very attractive, with good red color, smooth finish, and lively flavor. So far it compares favorably with **Thome Empire**, and the trees appear more vigorous than **Thome**. **Redcort**, a red sport of Cortland, has a unique tart flavor at first picking and retains its firmness for later pickings. **Empire** and **Redcort** store better than the other Mac types. **Compact Mac** is a tree of upright-columnar habit with good quality fruit, useful where space is limited. **Royal Court**, a sport of **Cortland**, looked good again this year, with very firm, rather tart flesh. Fruits hang a long time without getting soft.

Redmax, an early McIntosh strain, has proven to be a reliable producer of good quality fruit. Mac strains ripe in the mid-season (Marshall, Morspur, Pioneer, Rogers Red and Improved) all appear to be much similar at this point, and the newer trees are producing well.

From the Geneva program, **NY 428** is a selection of McIntosh type that may be named in future. It is productive and stores well. A similar cross that has just been named is **Millenium** (NY 460). It is late to ripen but has good flavor and stores very well.

#### **Russet Types**

Russet in apples can range from a light netting of tan skin to thick, lumpy and brown. Several of the Cox types, such as **Rubinette**, while not fully russeted, typically have russet streaks over the base color. Often russet apples have denser flesh than non-russet types, and many show good storage quality. **Roxbury Russet** is one of the earliest known American apples, dating to 1639. It has good reported disease resistance, sweet-tart flavor, and can be used in cider production, either sweet or hard cider. **Ashmead's Kernel** is a classic late keeping russet variety of very good quality, with sweet-tart flavor. **Canada Grise** (Reinette Gris du Canada) is a late ripening apple, very tart with dense, hard flesh, primarily for culinary uses. A Geneva selection, **NY 486** has lightly russeted golden skin and complex sweet-tart flavor; it is still being evaluated.

#### Cider Apples

Trees in a replicated plot of cider apples -selected for hard (fermented) cider production- were harvested for pressing by a group of local cider makers. The plot established in 1994 contains five trees each of the varieties **Brown Snout**, **Foxwhelp**, **Muscadet de Dieppe**, **Taylor's**, **Vilberie** and **Yarlington Mill**. Trees planted in 1999, including **Brown's Apple**, **Chisel Jersey**, **Dabinett**, **Harry Masters' Jersey**, **Kingston Black** and **Michelin**, all set some fruit in 2002.

New varieties added to the replicated plot in 2002 are Breakwell Seedling, Bulmer's Norman, Frequin Rouge, Golden Russet, Medaille D'Or, Reine des Hatives, Reine des Pommes, Somerset Redstreak, Tom Putt and Tremlett's Bitter.

In 2002 for the first time cider was pressed and is being made on-site at the station, with the cooperation of Drew Zimmerman and the Northwest Cider Society. Varietal ciders were made for evaluation as well as blends from cider and standard varieties. Ciders will be evaluated in spring or summer of 2003. For anyone who is interested in hard cider making, see our detailed report on varieties and culture.

#### New

Severalnew red sports of **Braeburn** had sufficient fruit for preliminary evaluation in 2002, **Braestar**, **Joburn**, and **Lochbuie**. New sports of **Gala**, **Gale** and **Pacific**, also had some fruit this year. It will take several more seasons to see how they compare with other strains. Trees of **Saturn** produced a few very attractive red fruit but not enough for evaluation. We look forward to seeing these in 2003.

#### **Disease Resistant Cultivars and Selections**

In 1999 a new disease resistant apple plot was established, including new varieties and selections and ones that performed well in the earlier trial. The table below shows the varieties and selections by ripening date in the 2002 season. We will be doing a final evaluation on several of the selections and retain only the better performing ones in 2004.

**Pristine** remains the outstanding early variety, attractive yellow, crisp and tart. Flavor is good on **Wynooche** but its tendency to drop and uneven ripening requires careful watching and multiple picks. **Princess** (CQR-12T-50) is a recently named introduction from the PRI (Purdue, Rutgers, Illinois) breeding program. An attractive clear yellow in color, it hangs on the tree very well. Fruit quality and storage are yet to be determined.

Among the selections, **HWR-19T-18** stood out in the early season. The fruit is firm and flavorful with attractive red color and hangs on the tree for a long time. **PSWR-11T-48** also has very good flavor but size and color are uneven. **Coop 33** continues to perform well, with bright red fruit that is firm and crisp. **CLR-20T-60** is a large bicolored apple with good flavor, and **NY 75414-1** and **NY 65707-19** both rated well for flavor and appearance.

New: Two new varieties from eastern Europe, Rajka and Releika, produced fruit for the first time in 2002. Both are attractive bright red in color. Rajka is ripe in early October, with a light, refreshing flavor, and Releika, ripe in mid October, hangs on the tree without softening until November. A third variety, Resi, has not yet fruited. Belmac, a new scab immune Mac type from eastern Canada, looks good in the later season (late October.)

Selections fruiting for the first time this year were **NY 81204-42**, a very attractive pinkish red apple with crisp white flesh and good flavor, **Coop 43**, which may be too late ripening here, and **CQR 10T-17**, showing initial susceptibility to mildew.

#### **Unusual Fruit**

In 1997a planting of unusual fruit was established with additions in 2000-01. We are testing a number of uncommon kinds of tree and bush fruit to see if they are well adapted to western Washington conditions, and note any specific cultural needs that may apply to growing them in our area. Among the fruit kinds that have been planted are figs, kiwi varieties (both *Actinidia deliciosa* and *A. arguta* clones), black, red and white currants, persimmons, paw paws, and seedless grape varieties. Some of the uncommon bush fruits include aronia, mulberry, elderberry, honeyberry, sea buckthorn, mountain ash, cornelian cherry and sorbus.

Two plants of **aronia** (*A. melanocarpa*) planted in 1998, produced heavy yields in 2001 and again in 2002. Bushes must be netted to keep birds away. Aronia fruit was harvested too early in 2001 as the juice tested to only 12 - 14 brix. This year we tested berries at 21.4 brix on September 23, and fruit continued to ripen on the bushes, becoming "raisins" by mid October. Aronia has potential in our area for an alternative fruit crop in commercial production.

Trees of quince **Aromataya** (planted 1999) and **Van Deman** (planted 2000) both produced fruit in 2002. **Aromataya** had a very heavy set and several branches were cracked or broken by the weight of fruit. Quinces are primarily used for various culinary purposes, as they are very hard and rather inedible direct from the tree. Varieties of mountain ash **Ivan's Beauty**, **Ivan's Belle** and **Nevezhinskaya** all produced fruit for evaluation in 2002. Here again culinary preparation is needed as the fruits direct from the tree are not appealing in texture (rather mealy) and quite astringent in flavor. The trees are very ornamental with attractive leaves, white clustered flowers, and bright red or orange fruit.

We have also been managing trial plots of blueberry varieties and selections, which are part of the research program of <u>Dr. Pat Moore</u> at the Puyallup research station. Anyone interested in the results of this project can obtain specific reports from him. Some 150 blueberry plants no longer needed in the trial were transplanted to the Display Fruit Garden in spring 2002 and should bear fruit again in 2003.

# Crabapple

In 2002 **'Evereste'** and **'Golden Raindrops'** remain the top rated varieties for overall ornamental quality and high disease resistance. Park-sized trees of **'Silver Moon'** are huge and impressive in late spring, covered with large, pure white fragrant flowers in clusters. Too big for backyard planting, they are fine candidates for low maintenance in large public spaces.

Two ofthe most promising introductions added recently are 'Adirondack' and 'Red Jewel,' both showing excellent disease resistance so far. 'Adirondack' is a very upright tree, with white bloom rather late in the season, and persistent pinkish orange oval fruit to add winter color. Young trees of 'Red Jewel' already show excellent ornamental quality. The flowers are small but very abundant, with pale ivory buds opening to brilliant white, and the small bright red berries are very colorful, persisting well into January.

For small sites 'Lancelot' (white bloom, small yellow fruit) is a good choice; its compact habit (topping out at 6'-7') has a formal, well-groomed look that adapts well to urban landscapes. Three new introductions have a very distinctive dwarf tree habit, almost bonsai-sized. 'Guinevere' is a small plant of horizontal spreading habit, with greenish bronze leaves and medium pink buds opening to pinkish white flowers. 'Lollipop' and 'Cinderella' have abundant white flowers and clean, small leaves of an attractive light green. The fruit is tiny and pearl-like; fruit of 'Cinderella' is yellow and 'Lollipop' is red. Trees are young and it is not yet clear what size they will reach at maturity.

In pink-flowering crabapple varieties, 'Prairifire' with its intense deep pink color and attractive spreading shape remains the best, though it is somewhat less resistant to scab. 'Louisa' is a fine specimen tree, with a strongly weeping habit and pale rose-pink flowers. The graceful limb structure is attractive even in winter when all the leaves are gone. Field resistance to scab and mildew is also very good. Because of its low weeping limbs, grafting on the rootstock at about 4' to 5' high makes a more attractive tree, similar to a weeping cherry.

Severalother pink-flowering crabapples are well adapted to this climate. For a low, broad spreading effect (about 6' in height), 'Candymint Sargent' is a good choice, with purple-bronze foliage and darker-edged pink flowers. 'Prairie Maid', with pink flowers contrasting to bronze-green leaves, is very attractive in spring and summer. The red fruit is often taken by birds. 'Maypole', in the Colonnade series of upright apples, has attractive deep pink flowers but the dark red fruits may be too large for street ornamental uses.

New trees of pink-flowering varieties were evaluated in 2002. 'American Spirit' has large, maroon flower buds, opening to bright magenta red single flowers. Its growth habit is upright and it may have potential in locations where space is limited. 'Tea Crab' (M. hupehensis), while not a new introduction, has shown fair to good disease resistance and attractive pale pink bloom in spring, with small red-orange fruit in fall.'Pink Princess' blooms in the late season, with small, very profuse maroon flowers covering the tree in a haze of pink. Tree habit is spreading and the early leaves bronze-purple, darkening to bronze-green, with fair scab resistance

A 2002 introduction originating in the Puget Sound, 'Marilee' is patented by Marvin Jarmin of Mount Vernon. It has pink and white semi-double flowers, with a narrowly upright growth habit which would be suitable for street side ornamental planting, especially as it sets no fruit to drop and make a mess. A WSU cross of Alkmene X Prima with white single flowers is immune to scab and produces attractive, edible yellow fruit that hangs on the tree well into winter if not harvested. The fruit is somewhat tart, useful for jelly, pickled fruit, and hard cider blending. Pollination trials in 1998 showed that this seedling will pollinate both Jonagold and Fuji. "Pink Cloud" seedling, so designated by its discoverer, has highly ornamental pink double flowers, bronze leaves, and large, tart red fruit. Both of these seedlings have potential for future introduction.

# **Acknowledgments**

The assistance and support in our tree fruit projects provided by the members and board of the Western Washington Fruit Research Foundation, Western Cascade Fruit Society, Seattle Tree Fruit Society, Home Orchard Society, and those at the Northwest Agricultural Research Foundation, the Washington Wine Advisory Commission, the Washington State Nursery and Landscape Association and local fruit growers are most gratefully acknowledged. The contribution of nurseries that have donated trees and materials, and the many individual volunteers who have given their time and help are also very much appreciated, and recognized with our thanks.

For a full copy of this report, including tables and harvest data, please send \$10 to:

Fruit Horticulture Dept., WSU - Mount Vernon 16650 S.R. 536 Mount Vernon, WA 98273

Our pages provide links to external sites for the convenience of users. WSU Extension does not manage these external sites, nor does Extension review, control, or take responsibility for the content of these sites. These external sites do not implicitly or explicitly represent official positions and policies of WSU Extension.