1. Disease Resistant Apple Cultivars and Selections
2. Apples (non-TFRC Test Plot)
3. Apples, NY Selections
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DISEASE RESISTANT APPLES
1992
Washington State University
Mount Vernon, WA 98273
G.A. Moulton, J. King, and R.A. Norton

This test planting of disease resistant apples, begun in 1990 with additions in 1991 and 1992, contains 57 different cultivars (varieties) and numbered selections. They represent the work of apple breeders at the NY State Agricultural Experiment Station, the cooperative program at Purdue, Rutgers, and Indiana universities, and in Canada, France, and elsewhere. This is the most comprehensive single-site planting of disease resistant apples anywhere in the state, and provides a valuable resource for both commercial growers and home gardeners who are interested in observing the performance of these varieties in the disease prone environment of western Washington.

We have been fortunate in receiving the support of the Western Cascade Fruit Society and the Western Washington Tree Fruit Research Foundation to maintain this planting, collect relevant data on the performance of the different varieties, and make the results available to interested persons. The prospect of continued support will enable us to add to the planting as new and promising varieties are introduced.

The 1992 harvest was the first year in which enough fruit was produced to conduct an initial evaluation for fruit quality, productivity, and harvest maturity. Use of the iodine test for starch conversion was very helpful in determining correct dates for harvest. Due to the unusually early spring and warm summer, most apple varieties were harvested three weeks to a month earlier than average; in some cases the longer season allowed late varieties to mature that might not do as well in a year of more normal temperatures. After harvest the fruit was placed in cold storage and taken out for post-harvest evaluation; the results where relevant are included in the notes on each specific apple. Varieties and selections are listed in harvest order within each category, with date of 1992 harvest noted in parentheses:

Established Varieties:

Prima (Aug 7) Heavy set, size somewhat variable, most medium size, not highly colored even when testing fully ripe; flavor OK but not best

Redfree (Aug 7) Moderate set, fruits below medium size, selective pick by color, about 30% of fruit; very firm and crisp, better flavor than usual

Chehalis (Aug 18/Aug 31) First fruit on trees in organic plot, medium size and above, good flavor, skin bruises easily

Liberty (Sept 8) Heavy set on mature trees in main orchard, young trees in organic plot had some fruits; size medium, uniform, very good color and flavor, rates high even compared with best of the newer releases

Novamac (Sept 8) Moderate set, medium size, uniform fruits, good dark red color but not 100%, flavor refreshing, flesh a bit on soft side (Not yet fruiting in organic plot)

Shay (Sept 8) Moderate set on mature trees in main orchard, size fairly uniform, medium, ovate shape; color quite variable, may be poor even on fruits that test fully ripe; flavor OK but not the best, keep only the young trees in organic plot

Nova EasyGro (Sept 17) Moderate-heavy set, medium size and above, color ok but more than usual sunburn, also water core in some specimens (Not in organic plot)
Jonafree (Sept 17) (Coop 22) Heavy set, size medium, fairly uniform, very good color this year, flavor good, somewhat tart to subacid (not in organic plot)

Macfree (Sept 17) Moderate set, size medium, color only fair, blush pattern 50-80% red over green; flavor ok but below the best (not in organic plot)

Promising:

Williams’ Pride (July 20) Good set and size, excellent dark red color, flavorful, attractive, very best early scab immune apple, with roadside market potential

NY 74828-12 (Aug 18/Aug 31) Good set on young trees, most fruits above medium size; best color at later pick date, rather irregular shape, very good flavor; promising Mac type, stores well for early apple

Coop 25 (Aug 31) Good set on young trees, most fruits medium size, color weak, pale & washy, but very good flavor, refreshing, firm crisp flesh holds well in storage, promising

NY 75414-1 (Sept 30) Young trees, first fruiting, Mac type, very dark wine red, conspicuous pale lenticels, irregular shape, size above medium, good flavor, keeps well, retains flavor and juiciness

NY 65707-19 (Sept 30) Moderate set, young trees, fruits very attractive, 80-100% clear red over yellow, glossy skin, long thin stems; crisp, juicy, refreshing flavor, retains firmness in storage

Enterprise (Oct. 10) (Coop 30) Moderate set, size above medium, deep wine red allover color, very firm, crisp, good flavor (hung on tree till December still very edible), may be too late ripening in a normal year

Needs Further Evaluation:

NY 66305-139 (July 31) First fruiting, few fruit, damaged by birds, some early drop; good color, pinkish red over cream yellow, oblate shape

Dayton (Aug 7) Heavy set, fruits above medium size, needs 2 or more picks (selective by color); attractive red blush 75-90% over lemon yellow, good flavor; not for long storage

NY 66305-139 (Aug 7) Moderate set on young trees, size variable, very attractive color, bright washed red over yellow; good flavor right off tree but stores poorly

Coop 28 (Aug 31) Moderate set on young trees, fruits above medium size, excellent color and appearance, flesh firm, juicy, good flavor; develops scald in storage, possible fresh market

CLR-20T-14 (Aug 31) Moderate set, young trees, size below medium to small, color unattractive, dull brick red over yellow-green, very firm, juicy, flavor subacid to tart, retains flavor well in storage

PSER-11T-27 (Aug 31) Moderate-heavy set, size medium or above, solid yellow color with slight orange blush, russetting, tough skin; good flavor, subacid, firm and juicy; probably not commercial - unattractive

PWR-37T-131 (Sept 30) Young trees, first fruiting, bicolor 70-90% red over lemon yellow, firm flesh, strongly acidic, flavor mediocre.

NY 61343-1 (Sept 30) Moderate set, size medium, bicolor 20-80% bright red stripe over yellow, considerable russet, very similar to Northern Spy in appearance; flavor good right off tree, skin shrivels after
storage, flesh softens and develops off flavor

NY 61345-2  (Sept 30)  Moderate set, size medium and below, Mac type, 90-100% wine red, good color, flesh juicy, breaking, flavor good, begins to soften in storage after 2 months, size a bit small

NY 73334-35  (Sept 30)  Young trees, first fruiting, long conic shape, very irregular, color unattractive, dull red, big open core, bitter pit, nice flesh texture, very crisp and flavorful, keeps well

NY 73344-57  (Sept 30)  Young trees, first fruiting, Mac type, 90-100% wine red, similar appearance to Empire, very dense hard flesh, flavor acceptable even after storage, potential late keeper

NY 75413-30  (Sept 30)  Rather light set, size medium or above, Mac type, dark wine red, somewhat irregular shape, some russet, flavor good, tends to soften and become bland in storage

Questionable (Problems and Drawbacks):

NY 75441-67  (Aug 18/Aug 31)  Moderate set on young trees, fruit size medium or somewhat below, color ok, finish poor, calyx scars, russetting (mildew); stores well but unattractive, undesirable astringent flavor

CLR-12T-161  (Aug 31)  Moderate set, young trees, size rather variable, color allover yellow, somewhat unattractive, acceptable flavor fresh off tree develops aftertaste in storage; inferior flavor to PSER-11T-27 and no better looking

HER-10T-108  (Aug 31)  Moderate set, vigorous young trees, variable size, unique appearance with very oblong shape, color golden yellow blushed pink, conspicuous purplish lenticels; flesh very yellow, hard, strongly acid, bland and sour after storage

Coop 25  (Sept 30)  Young trees, first fruiting, color dull red over yellow, russetting, yellow flesh, some moldy core; crisp breaking flesh, very good flavor but unattractive, no market potential

Coop 29  (Sept 30)  Young trees, first fruiting, unattractive green-yellow skin, russetting, prominent lenticels; flavor good, rather flowery taste, no market potential, shrivels in storage

CLR-13T-45  (Sept 30)  Young trees, first fruiting, very unattractive, dull copper blush 10-30% over yellow-green, mildew susceptible; flavor ok but flesh softens, becomes spongy after storage

CLR-13T-49  (Sept 30)  Young trees, first fruiting, very unattractive, yellow, small, very hard, tough flesh, mediocre flavor, probable discard

CQR-10T-17  (Sept 30)  Young trees, first fruiting, attractive bicolor, 60-90% orange-red stripe over lemon yellow, very juicy, firm yellowish flesh; good texture but off flavor, undesirable

HCR-14T-125  (Sept 30)  Young trees, first fruiting, greenish yellow with occasional pinkish orange blush, rather dense flesh, breaking, crisp, nice texture, flavor acceptable but appearance too poor for market

HER-3T-175  (Sept 30)  Young trees, first fruiting, fruits green, hard, unattractive, mediocre flavor, probably going nowhere

Gold Rush  (Sept 30)  (Recently named; tested as HER-4T-16, Coop 38)  Young trees, first fruiting, green-yellow, elongated shape, firm flesh, sweet-tart flavor. Highly unattractive, severely shriveled after storage, harvested too early, may be too late maturing in normal year
HER-3T-175  (Sept 30) Young trees, first fruiting, very unattractive, dull copper blush 10-40% over yellow green, size below medium, bland mediocre flavor, bitter pit, probable discard

HFR-22T-173  (Sept 30) Young trees, first fruiting, light green skin, pale bloom, irregular shape, rather flattish; bland flavor, probable discard

PAR-4T-215  (Sept 30) Young trees, first fruiting, dark, dull purplish red 90-100%, rough, pitted skin, very tough, flavor ok but hard flesh, too tough to chew, probable discard

PWR-37T-131  (Sept 30) Young trees, first fruiting, attractive, nice round shape, red color, greenish flesh, very astringent and bitter, possible cider apple?
This report covers apple varieties in the general orchard plots, some of which are not in the TFRC test block. The following list describes new and possibly promising cultivars. Many of the standard varieties now recommended are described in the new edition of bulletin EB0937. A discard list is also included.

**Alkmene**
This productive, spur-type tree produces a yellow-orange fruit with about 75% red blush; it is attractive but russet can be a problem. Flavor is sprightly and sweet—quite good; not a good keeper but excellent for the home gardener or right-off-the-farm sales.

**Honeycrisp**
Very productive; large, yellow, red-striped fruit; uniform conic shape; flavor and texture very good; does have scald problems in storage at lower temperatures.

**Jonagored**
An attractive dark red sport of Jonagold, can be up to 100% red; definitely a major change. Flavor and texture appear to be the same as Jonagold.

**Karmijn de Sonnaville**
Productivity moderate; fruits are large and not highly attractive, striped dull brick red 75-90%, often russeted. Flavor very sprightly, strongly acid at harvest but mellowing after storage to a complex and very good gourmet flavor; great home garden variety.

**Redcort**
A red sport of Cortland; very attractive, large, with good color, flavor and texture. Needs to be a ty bear.

**Redmax**
Fruited for the first time this year; fruit very attractive and productive; looks a lot like a Red McIntosh but has a little blander flavor—will keep watching.

**DISCARDS**

**BC 8 SE-9-70**
Colorful and fairly attractive, but the texture is tough and rubbery; fruit is small, flavor mediocre.
**Holstein**
Very vigorous tree, not highly productive; Alkmene or Karmjin would be a better choice.

**Kerry Pippin**
Small fruit, unattractive; stores poorly, quality mediocre.

**Ortley**
Mediocre quality; not productive; fruit not uniform in size; old variety primarily for culinary use.

**Parkdale Beauty**
Golden type; fruit doesn't mature properly here.

**Summer Granny**
Unattractive, not productive; early ripening, fruit get soft fast, not even a Granny type, flavor poor.
APPLE PROGRESS REPORT - NY SELECTIONS -- 1991
WASHINGTON STATE UNIVERSITY
MOUNT VERNON, WASHINGTON

J. King, R.A. Norton, and G.A. Moulton

In 1991 all 15 trees of numbered NY selections fruited well and it was a good opportunity to conduct a final evaluation and summary of those selections currently planted.

RETAINED IN TRIAL:

NY 617 (10/9) - Size large, sometimes very large; bright red blush and stripe 70-90% over yellow. Slight russet in cavity. Oblong to oblong conic, symmetrical; stem medium length, fairly thick. Basin broad, deep, large open calyx. Disposition: (Mount Vernon) Keep; one of the better selections, good color and flavor, uniform. (Prosser) In trial.

IN TRIAL AT PROSSER:

NY 428 - see description below
NY 617 - see above
NY 632 - see below
NY 694 - see below

PROVISIONAL DISCARD:

NY 428 (10/9) - Size medium or slightly below. Dark wine red blush 100% over yellow, pale conspicuous dots. Cavity russeted. Shape oblate to roundish conic, often lopsided. Smooth skin, light bloom. Stem short to very short, thick, may be clubbed. Disposition: (Mount Vernon) Provisional discard; small, irregular. (Prosser) In trial; good flavor and color, keeps well, may respond better in eastern WA.

NY 632 (10/9) - Size large, dark red blush 80-100% over greenish yellow, conspicuous pale dots. Slight russet, especially in cavity. Roundish conic, symmetrical; stem medium length, slender to medium thickness, flexible. Basin broad, shallow, lobed. Disposition: (Mount Vernon) Provisional discard; unattractive, too much russet, only fair flavor. (Prosser) In trial; good color, sizes well, may perform better in eastern WA.

NY 652 (8/30) - Size variable, below medium to large. Dark wine red blush 80-90% over yellow, pale bloom. Russet in cavity and occasional patches. Pale dots sometimes conspicuous. Round to round conic; stem short to very short, moderately thick, may be clubbed. Basin small, shallow, smooth or faintly ribbed. Disposition: Provisional discard; Mac type, attractive color and finish, white flesh, good flavor, does not keep.
**DISCARD:**

**NY 162 (8/30)** - Size large to very large, bright red stripe 60-80% over yellow green. Broad cavity and shoulder, very irregular and lumpy, overall shape conic. Some russet. Stem short, thick, stiff. Tendency to pre-harvest drop. Disposition: Discard; unattractive, lumpy, poor quality

**NY 315 (10/16)** - Size medium or slightly larger, solid greenish yellow with 10-30% pinkish orange blush. Conic shape, symmetrical, smooth skin, few conspicuous dots. Stem medium length, moderately thick, stiff. Noticeable scab. Disposition: Discard; unattractive shape, poor finish, mediocre

**NY 347 (10/9)** - Size variable, large to slightly below medium. Solid yellowish green, lemon yellow where exposed to sun. No blush. Grey scarfskin on some. Roundish oblate, irregular, obscurely ribbed. Stem short to medium long, thick, stiff. Basin deep, strongly lobed. Disposition: Discard; unattractive shape, color; lumpy

**NY 415 (10/16)** - Size large, solid greenish yellow, yellow-orange where exposed to sun. Some russet especially in cavity and onto shoulder. Oblong to conic, stem medium length, thick to fairly slender. Disposition: Discard; unattractive shape, finish, not outstanding flavor.


**NY 614 (9/30)** - Size large, bright red blush and stripe 50-80% over yellow. No russet. Roundish oblate, very irregular and lumpy, some obscurely ribbed. Stem short to nearly absent, medium thickness, stiff. Basin narrow, deep, distinctly lobed. Disposition: Discard; poor shape, only fair flavor, mediocre

**NY 616 (10/9)** - Size large, pinkish red blush and stripe 50-80% over yellow. Slight russet, in cavity or occasionally around calyx. Oblong to oblong conic, symmetrical; stem medium length, fairly thick. Cavity fairly broad, of moderate depth; basin deep, narrow, faintly ribbed. Disposition: Discard; poor color, flavor mediocre

**NY 665 (9/30)** - Size medium to large, red-orange stripe and speckle 80-100% over yellow, russet slight, only around cavity. Roundish conic; stem very long, thin, and flexible, cavity very shallow to absent. Basin shallow, faintly lobed.
Disposition: Discard; poor flavor and color, peculiar stem.

**NY 674 (9/30)** - Size medium, dull orange or brick red stripe 70-90% over yellow; slight russet in cavity. Color and size variable, some unattractive. Roundish conic to oblate, stem variable, slender and long to short, thick. Basin moderately deep, lobed. Disposition: Discard; poor, bland flavor; good processing qualities not a factor here.

**NY 678 (9/30)** - Size medium, brick red blush 60-90% over yellow green, little or no russet. Oblong conic, stem very short, moderately thick, may be lipped. Basin rather small, shallow to moderately deep, obscurely lobed. Color somewhat dull. Disposition: Discard; mediocre flavor, poor color.

**NY 694 (10/9)** - Size variable, below medium to large, dull red stripe and speckle 70-90% over yellow green. Little russet. Oblong conic to ovate, stem medium length, slender. Basin abrupt, moderately deep, lobed or ridged. Color somewhat dull. Disposition: (Mount Vernon) Discard; poor color, unattractive, poor finish. (Prosser) In trial, good flavor and flesh texture commend it, may be better looking in eastern WA.
The 1991 Asian pear trials started out with a lot of disease pressure particularly strikes of pseudomonas that ran rapidly down shoots and twigs—killing them. This was especially noticeable during the bloom season. Trees of Kosui and Hosui were harder hit than most and were severely weakened. The pears showed susceptibility to both Tubercularia and European cankers as well. Apparently a couple of dormant and delayed dormant copper sprays may be necessary to reduce these problems, in addition to selecting varieties that are more resistant.

Even though the Asian pears bloom early, fruit set was, as usual, quite good for several varieties. There were also some varieties that fruited for the first time.

Those that looked good this year were as follows:

Ichiban Nashi
First fruiting, just before Shinseiki; fruit has an attractive golden-brown solid russet; fruit size medium, set good; fruit flavor was sweet and good with a pleasant texture—looked promising. There was little evidence of pseudomonas strikes, so quite possibly it has some resistance.

Shinsui
First fruiting, with Shinseiki. Fruit is similar in appearance to Ichiban Nashi, but less precocious, so there wasn't much fruit to evaluate. Fruit that was tested was quite good but didn't last long before it started getting soft; still needs more evaluation.

Yoinashi Young tree didn't produce much, but the attractive cream colored fruit was large and tasty.

Shinseiki
Probably our best yellow-skinned fruit at present. Fruit size and quality is much better than 20th Century.

Hamege #1
Young tree produced a few yellow-skinned, good flavored, medium-sized pears; this variety may have some possibilities.

Kosui
Fruit quality is again excellent, however, this year the trees took a beating from pseudomonas strikes and canker.
Mishirasu
First fruiting; a very large, pyriform shaped, dark-brown, cream streaked pear; the flavor was good with a pleasing crunchy texture.

UC 17-63
Best of the UC selections at Mt Vernon, a large, yellow-skinned pear with heavy russet streaking and roundish, pyriform shape. It is really quite unattractive; however, the flavor is good and the texture pleasing.

UC 8-46
The tree was quite productive and the fruit was attractive, similar to the attractiveness of the Conference pear. Flavor was a little bland, however.

Chojuro
A russet, round, good-sized pear with cream colored flesh; ripens in late September to early October, about 2 weeks after Shinseiki; flavor is good; tree is productive.

Kongi
Very similar to Chojuro in appearance, size, harvest date, and productivity; flavor very similar, may be a little spicier.

DISCARDS:
UC 12-43
Doesn't mature properly, mediocre quality.

Charles Harris
Won't mature here; it is a large pear but tasted like a piece of wood. Needs to be tried in a warmer climate.

Seigyoku
Although the fruit quality is quite acceptable, the tree is not very productive here; also the fruit drops very readily—Shinseiki is a better choice.

Yakumo
Mediocre quality, small fruit, tends to be shy bearing.

Kikisui
Mediocre quality, unattractive, small fruit.

Niisseiki (20th Century)
Flavor varies, some of the fruit is good and some mediocre, size tends to be a real problem—needs to be thinned heavily. Shinseiki is a better choice for this area.

Ishiwase
Large fruit of mediocre quality; very unproductive.
Imamura Aki
Doesn't mature here; needs a longer growing season.

Arrirang
Doesn't mature here; needs a longer growing season.

Shinko
Quality at Mt Vernon is mediocre most years—it is just on the borderline of maturing. In a slightly warmer microclimate it probably would be a good choice since it does produce large fruit which hangs well on the tree; also in a warmer climate the flavor would be enhanced.

Hosui
Fruit quality is good but the tree is very unproductive and highly susceptible to pseudomonas and canker.

Golden Russet
Very poor quality.

Shinseiho
Probably our most attractive pear, yellow skinned with pronounced lenticels; however, the flavor is poor.

Kimizukawase
Tree is very unproductive, the fruit won't mature here.

Meigutsu
Unproductive, won't mature here.

Niitaka
Tree is productive, flavor is fair to good in some years, but would be better in a slightly warmer microclimate.

Seuri
Fruit is extremely spicy and may suit some tastes, but doesn't keep well; tree is unproductive which may be due to it being the earliest bloomer, and thus lacks a pollinizer to cross with it.
EUROPEAN PEAR PROGRESS REPORT -- 1991
WASHINGTON STATE UNIVERSITY
MOUNT VERNON, WASHINGTON

J. King, R.A. Norton, and G.A. Moulton

In 1991 the European pears were affected by an unusually high rate of scab infection, and fruits were damaged not only on varieties of known susceptibility such as Bartlett and Flemish Beauty, but also on varieties in which serious scab infection is seldom observed. Bloom and fruit set were good on most varieties, including several young trees for which this was the first fruiting season. Evaluation continues on the quality, productivity, and tree habits of several red-skinned pear varieties in addition to the two, Starkrimson and Sensation Red Bartlett, that are already established.

Those that looked good this year were the following:

**Bosc (Beurre Bosc)**
Trees of this classic old variety were productive, bearing large, uniform fruit showing comparatively little sign of scab infection. Fruit from *Golden Russet Bosc* were identical in appearance and degree of all-over russet to those of our older Bosc tree.

**Cascade**
In its first fruiting, this red pear from Oregon produced large, roundish, well-colored dark red fruits, but only a few of them; not enough to conduct a full evaluation. First glance appears promising.

**Clapp Favorite/Bennett**
After long years of uncertainty it now appears most likely that *Bennett* is a local strain of *Clapp Favorite*, differing only slightly in fruit shape when grown in western WA locations. Both are vigorous, productive, reliable bearers, and the fruit is good sized, uniform, and attractive. A good early fall pear.

**Comice**
Trees are slow to mature and begin bearing; fruits this year were also on the small side but of characteristic good quality.

**Conference**
Tree seems not highly vigorous, perhaps due to the Quince C rootstock, or the location in landscape garden, but the fruits it does produce, though few, are of good appearance and quality.

**Harrow Delight**
A recent introduction from Canada that reached full production this year. A fall pear harvested in early September, trees were very productive, almost too much so. Fruit size in consequence was below medium but greater attention to thinning next year may improve that. Flesh is sweet, melting, mildly aromatic, probably not for long storage.
Highland
Trees this year did not produce as well as usual, with relatively few and smaller fruit. Fruit quality still very good.

Orcas
Continues to be a reliable producer of good quality fall pears, that size well and are suitable for canning or drying as well as fresh eating.

Rescue
Mature tree is not highly vigorous, but very productive; fruits size well and are attractively blushed orange over yellow when ripened out. Sweet mild flavor, smooth and juicy. Harvest in late August.

Spalding
First year of fruiting; tree is moderately vigorous but rather leggy and spreading. Fruit set was fair, most fruits below medium size. Fruit flavor was light and sweet, and texture very crisp and juicy. Harvest in early September; storage not yet evaluated.

Starkrimson (Kalle) Red Clapp Favorite
So far the best performer of the red-skinned pears; tree is vigorous but not excessively so, is a reliable producer and usually sets well. Fruit is medium size, of uniform shape, and attractive allover red blush color. Good quality fall pear, smooth, juicy, and mildly flavored; harvest late August or early September.

PROVISIONAL DISCARDS:

Crimson Gem Comice
Tree is slow to come into production though it appears to be growing well. Only a few fruits this first year of fruiting, and red color in faint stripes was not impressive.

HW 605
Blight resistant selection from Canada; in two years since first fruiting appears to be shy bearing. Fruits tend to be small. Harvest tentatively set in mid to late September, fruits too few for storage evaluation.

HW 606
Blight resistant selection from Canada; shy bearing, no fruit at all in 1990. Early fall pear, harvest in mid August; hangs well on tree.

Surecrop
Tree is vigorous and productive, but fruits are hard and fail to soften after storage. Try earlier picking dates before discarding.
DISCARDS:

**Atlantic Queen**
Tree is vigorous, productive, and fruit medium-large, but fruit quality is poor, and does not ripen out after storage.

**Flemish Beauty**
Old standard, vigorous and productive, but this year scab made most of the fruit worthless for harvest and storage.

**Moonglow**
Tree vigorous, fruit set moderate, size medium or slightly larger. Fruit quality mediocre, tends to be bland; flavor declines after relatively short storage.

**Sierra**
Tree is not highly vigorous, and though very productive, with a good set of medium-large fruit, the quality of the fruit is below that of Highland or Bosc in similar late season.

**Sirrine**
Fruit is of very good quality, sweet and aromatic, especially good for drying. However, tree is sprawling and hard to manage, and fruit set and size quite variable.

**Tim Harris**
This pear is the earliest ripening of all the current varieties, with fruits beginning to be ripe in early August and continuing through late August. Besides this non-uniform ripening, the fruits are small, and the strongly aromatic flesh quickly develops an "off" chemical flavor.

**Turnbull**
Strong vigorous trees are slow to begin bearing, tend to set poorly, and fruit remains very hard even when harvest is delayed until late October. Probably unsuited to the climate here.
RESEARCH PROGRESS 1991
WASHINGTON STATE UNIVERSITY
MOUNT VERNON, WASHINGTON
APRICOTS, PEACHES, NECTARINES, & PLUMS

G.A. Moulton, R.A. Norton, J. King

Disease pressure was high in 1991 particularly for apricots, peaches and nectarines. Corynium, bacterial canker, and brown rot outbreaks were prevalent on many of the varieties. This winter a rigorous dormant spray program will be necessary to reduce these diseases for next year.

APRICOTS
Most of the apricots had a light set which is normal for most varieties since they bloom so early, often during unfavorable weather. Corynium was prevalent on many of the varieties, and even with a normal spray program, brown rot blossom blast dieback was prevalent.
Those that looked best were as follows:

Harlow
A few tree cankers but overall it probably looked the best, very little Corynium was present, the fruit was of medium size with a bright orange finish, flavor was good, the tree was moderately productive.

Puget Gold
Again probably the most consistently productive cot on the station, flavor was good, fruit size medium. However, it is susceptible to Corynium which needs to be controlled.

PROVISIONAL DISCARD:
Alfred
Although not very productive this year, the fruit is flavorful, attractive, but small, and the tree seems to be more disease resistant than a lot of other varieties.

Rival
Earliest ripening cot, tends to drop, very attractive, little cracking, not very productive, healthy tree not as disease prone.

Gold Strike
First fruiting, cracks, sour, browning at pit, poor crop.

Blenril
Fairly productive, has some cracking, not highly attractive: however, good flavor and texture.

Harlayne Light crop, large size, firm texture, disease problems.
Wilson Delicious
Tree has been unproductive; evaluate one more year.

DISCARDS:
Tilton
Severe cracking was again a problem with this variety, so serious it makes the fruit almost unusable; finish is also poor.

Schulgen
Not productive, can't get it to bear fruit.

Queen
Not productive.

Hargrand
Large fruit of mediocre quality, fruit tends to crack, tree is disease susceptible and unproductive.

Goldcot
Highly susceptible to Coryneum, grows vigorously but unproductive.

PEACHES
There were a lot more split-pits than normal, even the better varieties such as Harken were badly damaged. With the increased amount of split-pits, rot damage also increased because the rotting was initiated from inside the peach, where the peach had split, where humidity was high and where there were no spray residues.

The following were some either new or promising varieties:

Harrow Diamond
First fruiting, very early, ripe 2-3 weeks ahead of Redhaven. There were some split-pits but not excessive, tree is productive, fruit is of good quality especially for this time of year.

Sweet Haven
Some split-pits, but this variety needs to be evaluated in a normal year when split-pit damage isn't so high. Fruit is ready about 2 weeks before Redhaven; fruit quality is good, color is excellent; tree is productive.

Candor
Excellent color, good set, some split-pits but not as bad as others in the same season; strong peach flavor, very good, texture nice.

Harbelle
There were some split-pits this year but the size and quality was excellent; productivity was very good.
Tuma LCR
Very good flavor, looked quite promising; it is supposed to be leaf curl resistant--however, resistance needs further testing.

Nerland LCR
Looked good this year, nice quality peach; like the Tuma peach needs further testing for leaf curl resistance.

Harken
Split-pits were high and productivity was low this year; rain came during much of its bloom; Coryneum was a problem but fruit quality was again good.

PROVISIONAL DISCARDS:
Brighton
Although there were many split-pits this variety needs to be looked at in a normal year; the tree is quite productive with good fruit size; it ripens 2 weeks before Redhaven.

Stark Earliglo
A productive early peach with fair quality; some split-pits.

DISCARDS:
Veteran
This variety just doesn't mature properly at Mt Vernon--the growing season isn't quite long enough. This would be suited for slightly warmer microclimates.

Flavorcrest
The tree is not productive, the fruit is attractive with a bright red color but it doesn't yield; maturity is also on the late side.

Vera
Not productive.

NECTARINES
Being fuzzless peaches, nectarines tend to have more of a problem with cracking. This year cracking was even more prevalent than normal. Skin cracking is quite variable from year to year on each of these varieties. The following are some of the better ones:

Nectired
This was the first nectarine to ripen--about 2 weeks before Redhaven; some cracking but good flavor and an attractive red skin--may be promising particularly in a low cracking year.

Juneglo
Did't perform as well this year primarily because of the cracking problems; the quality and flavor is good; the red colored skin is very attractive; fruit size medium.
Harko
Some cracking but looked ok.;s this red blushed fruit has
good flavor but can be tart.

PROVISIONAL DISCARD:
#12-14
Early, moderately productive; fruit not highly attractive;
some cracking; give it at least another year.

DISCARDS:
Stark Crimson Gold
Not productive with small, unattractive, fruit.

Ruby Grand
Cracks, unproductive, won't mature here.

Independence
Unproductive, and too late for here.

PLUMS
Overall, plums are probably one of the fruits best adapted to
our climate in comparison to peaches, nectarines, and cots.
They don't seem to be quite as susceptible as other stone
fruits to the disease problems in a year like this.
Brownrot, however, can be a problem, as well as aphids.
The following are ones that looked good this year;

Methley
Consistently very productive and needs to be thinned; the
fruit are round, small, red and attractive; the flavor is
refreshing not overly sweet or tart. Good for jelly.

Beauty
A Santa Rosa type and often mistaken for it; a medium to
large red plum that is heart-shaped; flesh is very juicy and
sweet; skin can be sour; very refreshing to eat. Unlike
Santa Rosa it is a productive, consistent bearer.

Shiro
Very similar in size, texture, and shape to Beauty; color is
an attractive yellow; flavor is not as sharp but is
refreshing.

NY 858
Very productive; it looks like an improved Mirabelle; fruit
is small, round, yellow with purple dots; flavor is good,
sweet.

Seneca
Quite productive; had an aphid problem; fruit quality was
good as usual.
**Au-Crimson**
Large, sprightly, attractive, juicy, red, plum; tree still young so production was low; could be promising.

**CB 68**
Small dark red fruit, with a firm, sprightly, juicy, red flesh; the tree was young but productive; has some possibilities.

**Methley B-20**
Young tree with a light crop; similar size to Methley, the flesh is denser and amber in color; flavor is more sprightly.

**DISCARDS:**
**Shropshire Damson**
Good only for culinary/processing, too sour for fresh eating; tree is productive.

**Explorer**
Biggest problem is low productivity; fruit quality was good and very attractive but it sets very few fruit.

**Sedekno**
Not productive; fruit quality is good but it doesn't set enough fruit.

**NY 1502**
Fruit has good quality but again this variety is not highly productive.

**Mirabelle**
Productive, good but replaced by NY 858.

**Oullins**
Highly vigorous but not productive; Green Gage type, fruit quality is only fair.
WALNUT EVALUATIONS 1991

In 1980-1985 a small test plot of walnut trees was established at NWREU Mount Vernon, consisting of one tree each of ten cultivars. In November 1991 after harvesting and drying the nuts, an evaluation was conducted with results shown in the table below:

<table>
<thead>
<tr>
<th>Rating</th>
<th>Cultivar</th>
<th>Size(1)</th>
<th>Seal(2)</th>
<th>Whole</th>
<th>Meat</th>
<th>% Meats</th>
<th>Separation(3)</th>
<th>Fill(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cascade</td>
<td>2.5</td>
<td>92</td>
<td>48</td>
<td>52</td>
<td>1.0</td>
<td>1.2</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>good flavor, quite acceptable</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Kraetz #1</td>
<td>3.0</td>
<td>68</td>
<td>28</td>
<td>41</td>
<td>1.2</td>
<td>1.5</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>heart shape, separates cleanly, acceptable flavor</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Kraetz #3</td>
<td>2.5</td>
<td>66</td>
<td>26</td>
<td>39</td>
<td>1.0</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>heart shape, separates cleanly, acceptable flavor</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Kraetz #2</td>
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<td>74</td>
<td>34</td>
<td>46</td>
<td>1.0</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>acceptable flavor, some appear yellowish</td>
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</tr>
<tr>
<td>4</td>
<td>I.N.</td>
<td>2.8</td>
<td>86</td>
<td>38</td>
<td>44</td>
<td>1.4</td>
<td>1.2</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>good appearance, flavor fair, slightly bitter</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Chopaka</td>
<td>1.5</td>
<td>78</td>
<td>32</td>
<td>41</td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>good flavor, poor appearance, dark</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Ambassador</td>
<td>1.0</td>
<td>64</td>
<td>30</td>
<td>47</td>
<td>1.6</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>good flavor, quite small</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Spurgeon</td>
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<td>82</td>
<td>36</td>
<td>44</td>
<td>1.4</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>acceptable flavor, slightly bitter</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Hanoku</td>
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<td>42</td>
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<td></td>
<td></td>
<td></td>
<td>spongy texture, withered, poor flavor</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Okanogan</td>
<td>3.0</td>
<td>98</td>
<td>36</td>
<td>37</td>
<td>1.6</td>
<td>2.8</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>blackened, moldy, off flavor, not good</td>
<td></td>
</tr>
</tbody>
</table>

(1) Size: comparative rating with 1 = largest, 3 = smallest
(2) Seal: comparative rating of closure of the nut shell suture, with 1 = suture raised and tightly closed, 3 = suture flat, open, permeable.
(3) Separation: rating with 1 = all complete halves, 2 = 50% halves, 50% quarters or pieces, 3 = all quarters and pieces.
(4) Fill: comparative rating with 1 = meat fills up shell, 3 = meat shriveled/withered.

An overall impression of these cultivars was that Cascade, though not large, had the highest percentage of meat/shell, and was superior in producing whole, unwithered nut meats of good flavor. Shell sutures cracked easily by hand, though this is a disadvantage if nuts are allowed to lie on the ground too long, e.g. in a home garden or orchard. Three selections from Loren Kraetz of Arlington, WA, also rated well for their good flavor and ease of separation and cracking. Chopaka rated well for flavor, though poor in size and appearance. The two largest varieties, Okanogan and Hanoku, also had the highest percent of shriveled nut meats, and sealed poorly, allowing mold and off flavors to develop inside the shell.
<table>
<thead>
<tr>
<th>Source</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambassador</td>
<td>4306 Santa Fe Ave</td>
</tr>
<tr>
<td>Kraetz #1</td>
<td>2645 Butler Rd</td>
</tr>
<tr>
<td>Kraetz #2</td>
<td>2645 Butler Rd</td>
</tr>
<tr>
<td>Kraetz #3</td>
<td>2645 Butler Rd</td>
</tr>
<tr>
<td>Okanagan</td>
<td>2645 Butler Rd</td>
</tr>
<tr>
<td>Spurgeon</td>
<td>2645 Butter Rd</td>
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</tbody>
</table>