

fruit varieties

FOR MINNESOTA

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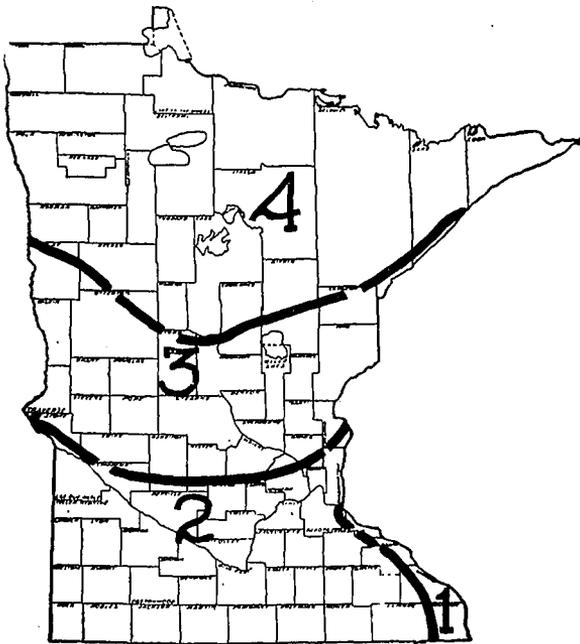
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UNIVERSITY OF GEORGIA

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UNIVERSITY OF MINNESOTA
U. S. DEPARTMENT OF AGRICULTURE



Minnesota Fruit Zones

The state is divided into four fruit zones ranging from zone 1, the most favorable, to zone 4, the least favorable.

Fruit Varieties for Home Orchards

	For southern Minnesota (fruit zones 1 and 2)	For northern Minnesota (fruit zones 3 and 4)
APPLES—Summer.....	Mantet, Oriole	Erickson, Mantet,* Oriole*
Fall.....	Beacon, Duchess, Lakeland, Minjon, Van Buren, Wealthy	Beacon,* Duchess,* Hibernial, Lakeland,* Minjon,* Van Buren*
Winter.....	Fireside, Haralson, Prairie Spy, Redwell, Victory	Fireside,* Haralson,* Redwell,* Victory*
CHERRIES (NANKING).....	Drilea, Orient	Drilea,* Orient*
CHERRIES (SOUR).....	Northstar	Northstar*
CHERRY PLUMS.....	Compass,† Convoy,† Sapa, Sapalta	Compass,† Convoy,† Opata, Sapa,* Sapalta*
CRABAPPLES.....	Chestnut, Dolgo, Whitney	Chestnut, Dolgo, Red River, Whitney
CURRENTS†.....	Cascade, Red Lake	Cascade, Red Lake, Viking
GOOSEBERRIES‡.....	Como, Pixwell	Como, Pixwell
GRAPES.....	Beta, Bluebell, Blue Jay,§ Moonbeam, Red Amber	Beta, Bluebell, Blue Jay,§ Minn. No. 78, Red Amber
PEARS.....	Bantam, Golden Spice, Mendel, Parker	Bantam, Golden Spice
PLUMS—Hybrid.....	Elliot, Ember, Redcoat, South Dakota,† Superior, Toka,† Underwood	LaCrescent, Redcoat, South Dakota,† Toka,† Underwood
European.....	Dietz, Mount Royal	
RASPBERRIES.....	Indian Summer, Latham, New- burgh, Sodus (purple)	Chief, Latham, Newburgh, Sodus (purple)*
STRAWBERRIES—		
June-bearing.....	Arrowhead, Dunlap, Premier	Arrowhead, Dunlap, Premier
Everbearing.....	Evermore, Gem, Red Rich, Wayzata	Evermore, Gem, Red Rich, Wayzata

* Should be planted in protected sites.

† Pollinizers.

‡ In white pine blister rust areas a permit must be obtained from the State Conservation Department before planting currants and gooseberries.

§ Imperfect flowers.

FRUIT VARIETIES

O R M I N N E S O T A

Leon C. Snyder, W. H. Alderman, W. G. Brierley¹

THE LARGE number of fruit varieties now offered for sale by nurserymen in Minnesota makes the selection of varieties for the home or commercial fruit plantings most difficult. A recent survey showed over 240 varieties offered for sale within the state. Of these only about 100 are recommended by the Minnesota Horticultural Society. This list is subject to annual study and revision by a special committee which prepares its recommendations in cooperation with the fruit specialists of the Division of Horticulture, University of Minnesota. It is hoped that this bulletin will help the grower select his varieties wisely.

Fruit Variety Descriptions

The variety descriptions are brief and in most cases are not adequate for identification purposes. They are intended to give some idea of the appearance, season of use, quality, and value of the variety. Some varieties not on the recommended list but commonly grown or offered for sale in Minnesota also are described. The varieties are arranged approximately in order of their time of harvest.

Varieties designated by Minnesota numbers (for example, Minnesota Number 724 apple, or Minnesota Number 69 currant) are University of Minnesota Fruit Breeding Farm productions which are not yet formally named and introduced. They have been tested sufficiently to indicate considerable promise and since most of them are offered for sale by a number of Minnesota nurseries they are included in this publication. Hardiness zones refer to the map on page 2.

¹The authors are indebted to A. N. Wilcox, J. D. Winter, and T. S. Weir of the Division of Horticulture for suggestions and criticism during preparation of this bulletin.

Symbols

C—For both commercial and home use

H—For home use only

*—For protected sites only

P—Winter protection needed

Apples

(Listed in order of harvest)

Anoka—Origin is South Dakota. Very hardy and productive summer variety which often begins bearing the third year. Fruit is below medium size, greenish yellow with red stripes. Cooking quality fair before fruit becomes mealy, but eating quality poor. Not on recommended list.

Transparent (Yellow Transparent)—A small, yellowish green, tart summer apple of Russian origin; culinary quality good. Tree vigorous and hardy but very susceptible to fire blight. Hardy all zones. Recommended for H* in zones 3 and 4.

Mantet—A beautiful, medium-sized summer apple from Manitoba, Canada, which ripens over a period of about two weeks. Bright, solid red color, excellent quality for all purposes. Suggested for trial for C in zones 1 and 2, H* in zones 3 and 4.

Melba—Early red apple of the McIntosh type from Ottawa, Canada. Below medium size, excellent for eating, fair for cooking, drops easily when ripe. Red sports have better color. Recommended for H in zones 1 and 2, H* in zones 3 and 4.

Erickson—Originated by Charles Erickson, Aitkin, Minnesota. A very large apple, sometimes irregularly shaped, greenish yellow, striped, or often nearly overspread with attractive red. Mildly tart, good for cooking or eating. Ripens at the same time as Duchess but will cook satisfactorily two weeks before maturing and has good sale in local markets as a green apple. Tree large, very hardy, and bears

every year. Recommended for C in zones 1 and 2, H in zones 3 and 4.

Oriole—Origin is Minnesota Fruit Breeding Farm. Large summer apple of highest quality for eating or cooking. Greenish yellow; about one half covered with attractive red. Tree vigorous and hardy but susceptible to fire blight. One of the best of the summer varieties. Fruit bruises easily and must be handled with care. Recommended for C in zones 1 and 2, H* in zones 3 and 4.

Duchess—Old and well-known summer variety of Russian origin. Good for sauce or pies but many consider it too tart for eating. Tree hardy and productive. Fruit of medium size, partially covered with attractive red stripes, bruises easily. Recommended for C in zones 1 and 2, H in zones 3 and 4.

Duchess (Red Sports)—Similar to Duchess except that the fruit is more highly colored and the tree a little less vigorous. Better for market than Duchess. Recommended for C in zones 1 and 2, H* in zones 3 and 4.

Van Buren—Origin is in New York. Similar to Duchess but has superior red color. More vigorous than the sports of Red Duchess commonly grown in Minnesota. Good for sauce and pies. Suggested for trial for C in zones 1 and 2, H* in zones 3 and 4.

Beacon—Origin is at Minnesota Fruit Breeding Farm. Very hardy and productive variety ripening a few days after Duchess. Fruit of medium size,



Fig. 1. Oriole—an early harvest apple

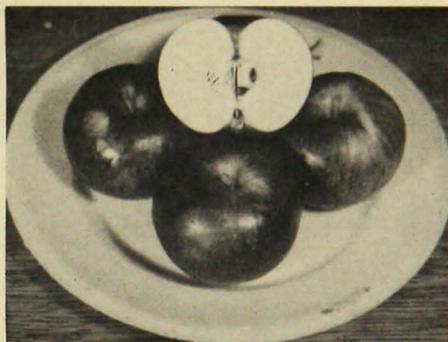


Fig. 2. Lakeland—a new fall apple

very attractive all-over red, less acid than Duchess, and good for dessert and culinary use. Ripening period extends two weeks and the fruit will keep four weeks after harvest. Excellent market variety but is susceptible to cedar rust. Recommended for C in zones 1 and 2, H* in zones 3 and 4.

Wealthy—Originated by Peter Gideon, Excelsior, Minnesota. Long a favorite in Minnesota and still rates well as a fall apple because of its good cooking and dessert qualities. Weak points are lack of resistance to fire blight and cedar rust, a tendency to drop badly at harvest time, and the biennial-bearing habit. Its usually weak crotches may be avoided by topworking. Fruit medium sized but often runs small on old trees unless they are thinned; striped red, will hold in good condition for about two months. Recommended for C in zones 1 and 2, H* in zones 3 and 4.

Minnesota No. 724—Early ripening apple of McIntosh type, very promising because of its bright red color, rich aroma, tender flesh, and excellent quality. Similar in flavor to its McIntosh parent, ripens two weeks earlier, and will keep nearly as long. Suggested for trial in zones 1 and 2.

Hibernal—Vigorous, hardy, old Russian variety, useful for fruiting in districts 3 and 4, and elsewhere as stock for topworking. Fruits medium sized, irregular, green with dull red stripes. Too acid for eating but good for cook-

ing. Will keep about a month. Tree vigorous, branches wide angled and strong. Fairly productive but may come into bearing late. Recommended for H in zones 3 and 4.

Wedge—Origin is Minnesota Fruit Breeding Farm. Vigorous, hardy, and productive tree which bears handsome, large, bright red fruits which are good for baking, sauce, or pies. Dessert quality is only fair. Season: late September to November. Usually scalds if held later in cold storage. Very much resistant to fire blight and cedar rust. Not on recommended list but very hardy for the north.

Patten (Greening)—Origin is Iowa. Fruits medium to large, flattened, greenish yellow, sometimes with red blush. Good quality for cooking. Keeps till December. Tree is hardy and productive and bears regularly. Recommended for H in zones 3 and 4.

Lakeland (Minnesota No. 978)—Origin is Minnesota Fruit Breeding Farm. Tree strong and well shaped, and produces annual crops of well-spaced fruits. Fruits medium, red, well colored, and hang to the tree at harvest time. Quality very good for cooking; good for dessert. Susceptible to cedar rust but moderately resistant to fire blight and scab. Suggested for trial for C in zones 1 and 2, H* in zones 3 and 4.

Minjon—Origin is Minnesota Fruit Breeding Farm. Very similar in appearance to Jonathan. Tree is very hardy and productive. Fruit below medium in size, completely covered with a rich attractive red; flesh stained with red. Very good for pies and sauce and fair to good for eating. Season of use: mid-September to mid-December. Fruit sets in clusters and should be thinned for best development. Recommended for C in zones 1 and 2, H* in zones 3 and 4.

Kendall—Dark red apple of the McIntosh type; New York origin. Worth testing in southern half of Minnesota.

McIntosh—Old variety from Ontario, Canada. Fruits medium sized, nearly solid bright red; flesh white, tender,

bruises easily. High quality for eating but usually not rated high for culinary purposes. Keeps until January. Crop evenly distributed over the tree but apples tend to drop easily. Productive and moderately hardy. Topworking on hardy stock recommended for zone 2. Recommended for C in zone 1 and C* in zone 2.

Victory—Origin is Minnesota Fruit Breeding Farm. A McIntosh type but more hardy. Fruit hangs to the tree better and keeps until March. Has the characteristic fine aromatic qualities which make McIntosh a favorite dessert variety; a pleasant acidity has added good culinary qualities lacking in the parent. Holds fresh color well in salads. Fruit is medium sized, fairly well colored, flattened, and has a short stem. Suggested for trial for C in zones 1 and 2, H* in zones 3 and 4.

Cortland—Apple is of the McIntosh type and was originated in New York. Later than the McIntosh and hangs better to the tree at harvest time. Fruit medium sized, nearly solid red, usually marked by a wide flaring cavity at the stem end. Culinary and dessert qualities good, holds fresh color well in salads. Season: mid-October through January. Recommended for C in zone 2, H* in zones 3 and 4.

Macoun—Origin is New York. Very dark red, winter apple of the McIntosh type. Worth trial in south Minnesota.

Northwestern (Greening)—Origin is Wisconsin. The most popular green apple grown in this territory. Tree is large, vigorous, annual bearing, and resistant to fire blight and cedar rust. Not fully hardy; topworking is recommended. Fruit very large, round, and attractive, green or yellow; only fair in dessert quality but good for pies or sauce. Apples hang well in high winds and will keep until May or later. May scald if stored at temperature below 36° F. Recommended for C in zones 1 and 2.

Delicious — Originated near Des Moines, Iowa. Not fully hardy. Fruit is

striped to solid red, medium sized; flavor is rich approaching sweet. Quality very good for dessert but poor for cooking. Season: November to March. When topworked it is recommended for C in zone 1, H* in zone 2.

Delicious (Red Sports)—Starking, Richared, and others are similar to Delicious except for a more intense color which develops earlier. Recommendations same as for Delicious.

Golden Delicious—Origin is West Virginia. Medium-sized, round-conic, bright golden yellow apple of very high quality for eating and cooking. Requires a long season to ripen. Frequently shrivels in storage. Tree lacks hardness and should be topworked. Season of use: November to March. When topworked it is recommended for H in zone 1, H* in zone 2.

Jonathan—An old New York variety, not fully hardy, but can be grown in districts 1 and 2 if topworked. Fruit is below medium size, round, solid bright red, crisp, juicy. Very good quality for dessert or culinary use. Season: October to February. Tree productive and early bearing. Susceptible to cedar rust and fire blight. When topworked it is recommended for C in zone 1, H* in zone 2.

Jonathan (Red Sports)—Jonared and other red sports are similar to Jonathan except that sports are darker red. Same recommendations as Jonathan.

Haralson—Origin is Minnesota Fruit Breeding Farm. Tree upright, medium sized, strongly branched; produces heavy crops and is biennial bearing. Fruits cluster, and thinning is required for best development. Fruit medium size and attractive red; flesh crisp and juicy, flavor tart. Quality good for dessert and excellent for cooking. A long-keeping winter apple. Recommended for C in zones 1 and 2, H* in zones 3 and 4.

Prairie Spy—Originated at Minnesota Fruit Breeding Farm. Fruit is large, bright red, often with russet in cavity at stem end. Pleasant, mild flavor. Quality excellent for all purposes. Tree is vigorous, hardy, and very productive.

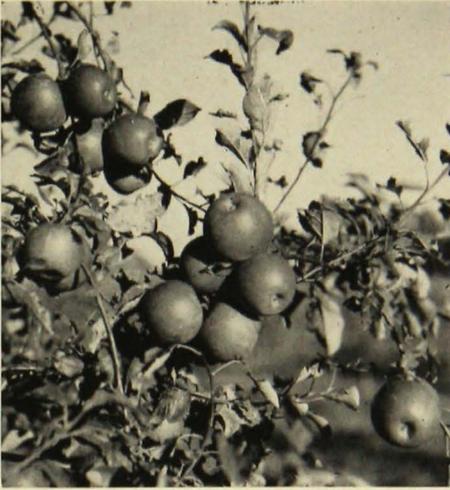


Fig. 3. Haralson—a good winter apple

Older trees have a tendency to overload, making thinning desirable. A long-keeping winter apple, but it tends to scald in cold storage at temperatures below about 36° F. Recommended for C in zones 1 and 2, H* in zones 3 and 4.

Fireside—Origin is Minnesota Fruit Breeding Farm. Tree large, very vigorous, hardy, and annual bearing, but requires a long season to mature and color its fruits. Apples are large, moderately well colored in attractive red over yellow, and hang well in winds. Flavor rich, approaching sweet; quality of the best for eating fresh, but only fair for culinary use. A long-keeping winter apple. Recommended for C in zones 1 and 2, H* in zones 3 and 4.

Secor—Origin is Iowa. Tree is vigorous, spreading, and has good foliage. Fruit is medium, red with obscure stripes. Flavor rich, spicy, subacid. Not widely tested but now grown in zone 1.

Redwell—Origin is Minnesota Fruit Breeding Farm. Very promising new variety which produces annual crops. Fruit hangs persistently even in high winds and is so well distributed throughout the trees that thinning is not necessary. Matures late, develops a solid bright red color, a medium rich, nonacid flavor, and rates good to very

good for dessert or culinary use. Although late maturing, the fruit keeps only into early winter and may scald if stored at temperatures below about 36° F. Suggested for trial for C in zones 1 and 2, H* in zones 3 and 4.

Crabapples

(Listed in order of harvest)

Rescue—Originated in Saskatchewan. Tree medium in growth, a heavy annual bearer, very hardy. Fruit large, greenish yellow with red stripes; flesh yellowish white, firm, sweet subacid. Quality good for eating. Suggested for trial for C in zones 1 and 2, H in zones 3 and 4.

Dolgo—Origin is South Dakota. The most popular jelly crab. Fruit small, oval, solid bright red, hangs well to tree, rather hard to pick. Ripens in early midseason. Tree very hardy, productive, and resistant to diseases. Very ornamental when covered with white flowers or when laden with ripe fruit. Recommended for C in zones 1 and 2, H in zones 3 and 4.

Whitney—Illinois is origin. Old favorite, one of the best crabapples for eating or pickling. Fruit large and red striped with very pleasant flavor and juicy, tender flesh. Ripens early midseason, quickly becomes mealy. Tree very narrow and upright, very susceptible to fire blight. Recommended for C in zones 1 and 2, H in 3 and 4.

Transcendent—Old, not recommended for planting in Minnesota because of great susceptibility to fire blight.

Virginia—Old variety still recommended for growing in northern Minnesota and for use as a hardy stock for topworking Jonathan and McIntosh. Fruit is large, flattened, greenish yellow with red blush. Ripens medium late. Flavor tart. Tree is very vigorous; susceptible to fire blight. Recommended for H in zones 3 and 4.

Trail—Origin is Ontario. A very hardy, large-sized, red-striped crab with pleasing dessert and culinary qualities. Suggested for trial in all zones.

Chestnut—Minnesota Fruit Breeding Farm is origin. Large-sized, September-ripening crab. Excellent quality for eating and for use as sauce or pickles. Fruit two inches or more in diameter, somewhat flattened; yellowish bronze marked with red. Flesh crisp, juicy with a pleasant spicy flavor. Will keep about two months. Hardy, vigorous, and very productive. Recommended for C in zones 1 and 2, H in zones 3 and 4.

Red River—Originated in North Dakota. Hardy and productive crab with large, well-colored red fruit. Flavor sour when first colored but quality becomes good if allowed to hang on the trees for about 10 days. Although not on the recommended list, this variety is being grown in zones 3 and 4.

Pears

(Listed in order of harvest)

Bantam—Origin is Minnesota Fruit Breeding Farm. A hardy, early-bearing, productive variety. Fruit small, greenish yellow with bronze blush, tender, juicy, and of very good quality. Ripens early, drops easily, and will keep about a week. Tree very resistant to fire blight. Recommended for H in zones 1 and 2, H* in zones 3 and 4.

Golden Spice—Originated at Minnesota Fruit Breeding Farm. Very productive and hardy. Size small. Color yellow, sometimes with light blush. Flesh firm, crisp, juicy. Quality fair for eating but good for sauce or canning. Will keep about four weeks. Very resistant to fire blight. Recommended for H in zones 1 and 2, H* in zones 3 and 4.

Lincoln—Origin is in Illinois. Tree large, vigorous, upright-spreading, productive. Fruits medium large, roundish, yellow, juicy, and of good quality. Suggest trial for H in zone 1, H* in 2.

Parker—Minnesota Fruit Breeding Farm is its origin. Fruit medium to large, greenish yellow with attractive blush. Quality very good for eating or canning. Ripens midseason, keeps about three weeks. Susceptible to fire blight. Recommend H in zone 1, H* in 2.

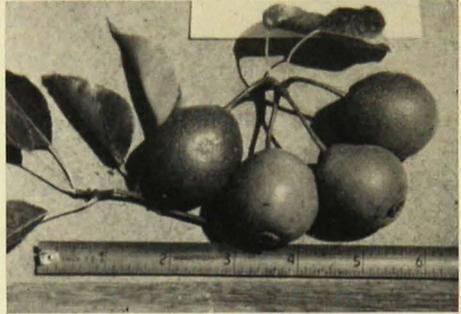


Fig. 4. Bantam—a hardy pear

Patten—Originated by C. G. Patten, Charles City, Iowa. A late-ripening variety with large fruits of good quality if used at once. Tree is narrowly upright in form, only moderately productive, and very slow to come into bearing. Recommend H in zone 1, H* in 2.

Mendel—Originator is William Pfaender, New Ulm, Minnesota. A productive, reasonably hardy, late-ripening variety. Fruit above medium size, somewhat rough and irregular in shape, yellow and russet in color. Flesh tender and juicy; flavor pleasant. Very good quality for eating and canning. Should be picked late and stored about three weeks to ripen. Will keep until mid-November. Recommended for H in zone 1, H* in zone 2.

Hybrid Plums

(Listed in order of harvest)

These plums require pollinizers. General pollinizers are starred below.

LaCrescent—Produced by Minnesota Fruit Breeding Farm. One of the earliest and finest-quality plums for home use but too tender and easily bruised for market. Size below medium. Color clear yellow, sometimes with light blush. Flavor sweet, aromatic. Free-stone. Tree vigorous and hardy but only moderately productive. Recommended for H in zones 3 and 4.

Underwood—Origin is Minnesota Fruit Breeding Farm. One of the most popular and widely grown of the Minnesota varieties. Tree is hardy, vigor-

ous, and long lived. Fruit medium large with a smooth, satinlike skin. Color a rich, attractive red. Flesh tender, juicy, and sweet. Quality very good. Clingstone. Good for jam or preserves. Ripens early over a season of about two weeks. Recommended for H in all zones.

Redcoat—Minnesota Fruit Breeding Farm is origin. A medium-early variety, hardy, and an exceptionally regular and heavy bearer. Fruit of medium size, long oval, and an attractive red; flavor is pleasant. Quality good for eating and very good for canning, jelly, and preserves. Freestone. Recommended for H in all zones.

Pipestone—Originated at Minnesota Fruit Breeding Farm. Hardy and productive midseason variety, being grown successfully throughout the northern prairie states. Fruit large, solid red; flesh juicy, sweet, and clingstone. Good for dessert, jelly, jam, and preserves. Recommended for H in all zones.

***Kaga**—Origin is South Dakota. Recommended as a pollinizer. Fruit below medium in size, distinctly flattened, medium-bright red; flesh is firm, meaty, characterized by a strong but pleasing flavor. Quality good for eating and cooking. Ripens midseason. Tree hardy, productive, rather small; very susceptible to brown rot. Recommended for H in zones 3 and 4.

Fiebing—Originated by Charles Haralson, Deephaven, Minnesota. Hardy, good-flavored variety grown successfully in northern parts of the state, but it suffers badly from brown rot farther south. Fruit is large, bright red; flesh is meaty and clingstone. Good for dessert, jam, jelly, and preserves. Ripens midseason. Recommended for H in zones 3 and 4.

***Surprise**—Originator is Martin Penning, Sleepy Eye, Minnesota. Old-time variety of the native type; recommended as a pollinizer. Tree is hardy but not a heavy bearer. Fruit is below medium size, a glistening bright red, juicy, and pleasantly flavored. Quality good for eating, preserves, and juice.

Not on recommended list but commonly planted.

Superior—Origin is Minnesota Fruit Breeding Farm. The largest and one of the best of the hybrid plums. Tree comes into bearing early, produces heavily but is not reliably hardy in the northern part of the state. Fruit is very large, bright solid red; flesh firm, juicy, clingstone. Quality good for dessert, jelly, jam, and preserves. Ripens midseason. Sometimes needs thinning. Somewhat resistant to brown rot. Recommended for H in zone 1, H* in zone 2.

Waneta—Origin is South Dakota. A very hardy and productive variety which has been widely grown in the prairie states. Removed from the recommended list because of only fair quality and susceptibility to brown rot. Fruit is large, red, medium juicy, clingstone.

***Toka**—Origin is South Dakota. An excellent pollinizer. Tree erect, vase-shaped, vigorous, productive. Fruit resembles Kaga except the color is a brighter red. Tree seems superior to Kaga. Recommend H in all zones.

Monitor—Originated at Minnesota Fruit Breeding Farm. A large and productive variety still recommended in some states, but in Minnesota it is being displaced by others which have better quality and which ripen at the same season. Fruit large, dull but attractive red with russet dots and lines; flesh firm, juicy, clingstone. Flavor pleasant but slightly tart. Quality fair; develops too much acidity when cooked, but good for jelly. Hardy in all zones.

Redglow—Origin is at Minnesota Fruit Breeding Farm. Very large, late variety held in high regard in test plantings from Iowa to Manitoba. Tree large, vigorous, and productive; fruit attractive red. Flesh firm, meaty, juicy. Quality very good but becomes acid in cooking. Recommend for H in all zones.

***South Dakota**—Origin is South Dakota but introduced by the Minnesota Fruit Breeding Farm with cooperation and approval of South Dakota Experiment Station. Tree is of native

plum type, very hardy, vigorous, and productive. An excellent pollinizer. Fruit medium sized, oval and somewhat compressed, bright red over yellow; flesh tender, juicy. Quality good for eating fresh or for jelly but only fair for jam. Recommend H in all zones.

Elliot—Origin is the Minnesota Fruit Breeding Farm. Large late plum that has been a very heavy and reliable cropper in this and surrounding states. Tree very hardy, medium sized with drooping branches. Fruit large, bright red; flesh solid, firm, medium juicy. Quality good for dessert and jelly. Pit small, nearly free. Recommended for H in zones 1 and 2, H* in zones 3 and 4.

Ember—Originated at Minnesota Fruit Breeding Farm. A late-ripening variety with the best quality of all the hybrid plums for eating and all culinary purposes except jelly. Tree is vigorous, hardy, and moderately productive. Fruit is large, yellow with red blush; flesh tender, juicy, sweet, clingstone. Fruit will hang to the tree after ripening and will keep three to four weeks after harvest. Recommended for H in zones 1 and 2, H* in zones 3 and 4.

European-Type Plums

(Listed in order of harvest)

A few varieties of the prune or damson type have been found to be hardy enough for growing in the southern half of Minnesota. The following are the most promising tested thus far.

Russian Green Gage—Very early ripening variety of the green gage type; it has fruited consistently at the Minnesota Fruit Breeding Farm. Tree fairly hardy, medium productive. Fruit small to medium size, greenish yellow; flesh tender, juicy, very sweet and pleasant, freestone. Good for eating or cooking. Suggest trial for H in zone 1, H* in 2.

Dietz—Origin is Minnesota. Grown for many years in the vicinity of New Prague, Minnesota, by Bohemian farmers who brought either seed or trees from Central Europe. Tree medium hardy and very productive. Fruit of this

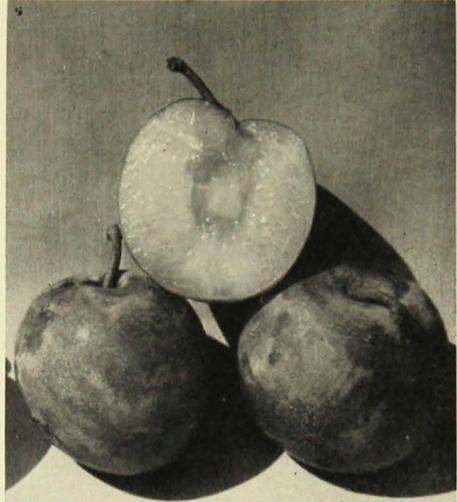


Fig. 5. Redglow—a good midseason plum

miniature prune is bluish black; flesh firm, tender, medium juicy, sweet, freestone. Very good quality for eating and cooking. Trial for H in zone 1, H* in 2.

Bonny St. Anne—Origin is eastern Canada. Tree medium hardy. Fruits large, dark purplish black with a heavy bloom; flesh firm, meaty, freestone. Subject to brown rot. Quality very good for dessert, sauce, and canning. Suggested for trial for H in zone 1, H* in zone 2.

Krikon—Origin is in Sweden. Variety of damson type, imported by the Jewel Nursery Company of Lake City, Minnesota. Tree vigorous, hardy, and very productive; fruit small, bluish black; flesh firm, juicy, sour, clingstone; not suitable for eating but very good for making the famous damson jams and preserves. Trial for H in zones 1 and 2.

Mount Royal—Originated in Canada. A medium-hardy variety, vigorous and productive. Fruit below medium size, roundish, slightly flattened at the ends, bluish black. Fruit colors before ready for use; flesh meaty, tender, juicy, sweet, and freestone. Very good quality for dessert or culinary purposes. Suggested for trial for H in zones 1 and 2.

Stanley—Origin is New York. Tree medium hardy. Fruit medium large, blue; flesh amber when ripe. Quality

good for sauce. Not widely tested but doing well in west central Minnesota. Trial for H in zone 1, H* in zone 2.

Cherry Plums

(Listed in order of harvest)

These plums require pollinizers. General pollinizers are starred below.

Manor—Origin is in Manitoba. A vigorous upright bush, producing heavy annual crops. Fruit medium sized, dark purplish red to purple; flesh dark red to purple, meaty, tender, juicy, sweet, resembling Sapa. Quality excellent for canning. Suggested for trial for C in all zones. Pollinized by Compass, Convoy, Oka, Sapa, and Sapalta.

Oka—Origin is in South Dakota. Tree not reliably hardy, sometimes only moderately productive. Fruit of medium size, reddish purple; flesh deep purplish red, medium firm, juicy, sweet. Quality very good for eating or cooking. Recommended for H in zone 1, H* in zone 2. Pollinized by Compass, Opatá, and Sapa.

Opatá—Origin is in South Dakota. One of the hardiest and most productive of the cherry plums. Fruit ripens early, is medium sized, purple with greenish yellow flesh; juicy. Quality fair for eating; good for cooking. Recommended for H in zones 3 and 4. Pollinized by Compass, Convoy, Manor, Oka, Sapa, and Sapalta.

Sapa—Origin is South Dakota. Popular variety of the cherry plum. Tree is small, hardy, and very productive. Fruit is medium sized, a dull reddish purple, clingstone; flesh is deep purplish red, juicy, and sweet. Quality good for eating and excellent for juice, canning, jams, or preserves. Recommended for C in zones 1 and 2, H* in zones 3 and 4. Pollinized by Compass, Convoy, Manor, and Opatá.

Sapalta—Origin is at Alberta, Canada. Closely resembles Sapa in habit and fruit but seems sweeter and less clingstone. Fruit of excellent quality for eating, juice, canning, and preserves. Suggested for trial for H in all zones.

Pollinized by Compass, Convoy, Oka, and Opatá.

***Convoy**—Originated by W. J. Boughen, Manitoba, Canada. Tree upright with narrow head; vigorous, hardy, and productive. Fruit is medium sized, bright red; flesh yellow, juicy. Quality good for canning. An excellent pollinizer. Suggested for trial for C in all zones. Pollinized by Compass, Sapa, and Sapalta.

***Compass**—Origin is Minnesota. Well-known old Minnesota variety, hardy, and a reliable bearer. It is now grown primarily as a pollinizer for other varieties of this group. Fruit is small, attractive red, somewhat acid, but useful for sauce or preserves. Ripens mid-season. Recommend H in all zones. Pollinized by Convoy and Sapalta.

Nanking Cherries

(*Prunus tomentosa*)

(Listed in order of harvest)

Orient—Origin is Minnesota Fruit Breeding Farm. A small tree or large bush, vigorous and productive. Fruit small, one-half inch in diameter, bright red; flesh meaty, juicy, and of pleasant subacid cherry flavor. Ripens early in July. Quality good for eating, excellent for jelly. Suggest trial for H all zones.

Drilea—Originated at Manitoba, Canada. Bush is upright, large, vigorous, drought resistant, productive. Fruit is small—one-half inch in diameter—and a bright scarlet red. Flesh firm, tender, sweetly tart, pleasant. Ripens in early July. Quality very good for eating or jelly. Suggested for H in all zones.

Korean Cherries

These are an entirely new type of cherry developed at the Minnesota Fruit Breeding Farm from plants of Asiatic origin. Only a few selections are available in the nursery trade and these are mainly of Minnesota origin. These are Minnesota Nos. 20, 23, 57, and 60.

The small, narrow-leaved bushes attain a height of about four feet and

bear heavy crops of small, shiny, red cherries. The fruits are slightly larger than the Nanking cherry and are borne on longer stems. The flesh is firm and meaty, of only fair dessert quality, but good for sauce, pies, and jelly. Suggested for trial in all zones.

Sour Cherries

(Listed in order of harvest)

Northstar (Minnesota No. 58)—Originated at Minnesota Fruit Breeding Farm. Tree is small, productive, resistant to leaf spot and brown rot. Fruits are about three-fourths of an inch in diameter, at first bright red, becoming dark mahogany red. Flesh yellowish to dark red, juicy, tender, pleasantly acid, and meaty. Quality is good for sauce and pies. Probably the hardiest of the sour cherries. Suggested for trial in zones 1 and 2.

Early Richmond—Origin is in Europe. Tree is upright spreading, medium sized, moderately productive following mild winters, lacking hardiness, often short lived. Fruit three-fourths of an inch in diameter, light to dark red; flesh pale yellow, tender. Ripens in July. Quality very good for sauce and pies. Not recommended but commonly planted in southern Minnesota.

Montmorency—Origin is in Europe. Tree is upright spreading, large, sometimes productive following mild winters, lacks hardiness, often short lived. Fruits three-fourths of an inch in dia-



Fig. 6. Northstar—a hardy sour cherry

meter, red to dark red; flesh pale yellow with reddish tinge, tender, tart. Ripens in late July. Quality very good for sauce and pies. Not recommended but often planted in south Minnesota.

Sweet Cherries and Peaches

There are no sweet cherries or peaches recommended in Minnesota as none are hardy enough to be dependable.

Grapes

(Listed in order of harvest)

Minnesota No. 78—A hardy and very early blue-black grape. Berries and clusters are about the size of Beta but fruit is sweet and of good dessert quality. Worth testing in northern districts. Has defective pollen and should be planted near another grape variety. Suggested for trial for H in all zones.

Beta—Origin is Minnesota. Old and well-known variety, hardy, vigorous, and productive. Bunches and berries rather small; fruit blue-black, too sour for eating but good for jelly and juice. Recommended for H in all zones.

Fredonia—Origin is New York. Vine vigorous, self fertile. Fruits black with heavy blue bloom; skin thick, tough; flesh tender, juicy, medium sweet. Quality fair. Suggested for trial for H in zones 1 and 2, HP in zones 3 and 4.

Blue Jay—Origin is at Minnesota Fruit Breeding Farm. Vigorous and hardy blue-black grape with compact clusters above medium in size; berries large. Flavor rather sour when color first develops but becomes mild and of pleasing quality if allowed to ripen about 10 days on the vine. Very good for juice and jelly. Because of defective pollen it should be planted with another variety. Recommended for H in zones 1 and 2, HP in zones 3 and 4.

Red Amber—Origin is at Minnesota Fruit Breeding Farm. Productive variety, the sweetest and most highly flavored of the hardy grapes. Clusters and berries are medium in size. Fruit

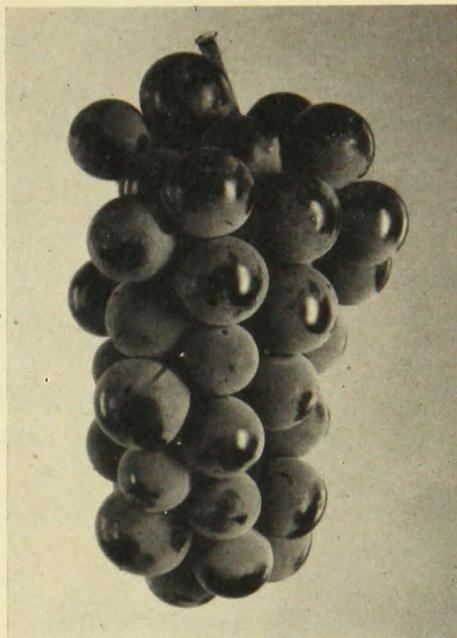


Fig. 7. Blue Jay—a hardy blue grape

is amber red, attractive. Quality very good for eating or cooking. Recommend H in zones 1 and 2, HP in 3 and 4.

Moore Early—Origin is Massachusetts. Vines vigorous, semihardy, not very productive. Berries larger than Concord but clusters smaller and looser. Similar in color and flavor to Concord. Not on recommended list but widely planted in southern Minnesota. Needs winter protection in zone 2.

Moonbeam—Origin is at Minnesota Fruit Breeding Station. Very vigorous green variety with medium-sized clusters and large berries. Flavor mild but sweet; quality good. Sometimes shatters if left too long on the vine. Good variety for ornamental arbors because of the clean and attractive foliage; leaves dark green above, silvery below. Recommend H in zone 1, HP in 2.

Campbell Early—Origin is Ohio. Vigorous and productive semihardy variety producing large clusters and berries. Fruit blue black, flavor sweet, quality good. Recommended for H in zone 1, HP in zone 2.

Portland—Origin is New York. Large-fruited, greenish yellow grape of very good quality. Vine requires winter protection. Recommended for H in zone 1, HP in zone 2.

Bluebell—Origin is Minnesota Fruit Breeding Farm. Clusters large, berries blue black, about the size of Concord. Refreshing, sprightly, sweet flavor; quality good for dessert and culinary use. Vine is vigorous and very productive. Recommend H in zone 1, HP in 2.

Worden—Origin is New York. Similar to Concord but fruit is larger, of better quality, and ripens earlier. Recommended for H in zone 1, HP in zone 2.

Concord—Origin is in Massachusetts. Fruit is blue black, sweet; clusters are large; quality good. Sometimes fails to ripen in Minnesota. Recommended for H in zone 1, HP in zone 2.

Red Raspberries

(Listed in order of harvest)

Sunrise—Originated by U. S. Department of Agriculture. Berries ripen as early as Chief, are of medium size, bright red in color. Quality fair to good. Subject to diseases and produces too many sucker plants. Not on recommended list.

Chief—Originated at Minnesota Fruit Breeding Farm. A seedling of Latham. Ripens about a week earlier than Latham and is of slightly better quality. Berries are of medium size and bright red in color. Picks easily when grown under favorable conditions but tends to stick in dry weather. Plant is hardy and productive and is resistant to drought and mosaic. It has proven equal or superior to Latham in many localities in the western and northwestern portions of the state, but is not always so satisfactory for shipping. Recommended for HP in zone 2, CP in zones 3 and 4.

King—An old variety of Virginia origin. Formerly one of the leading varieties in Minnesota but not widely planted at present.

Indian Summer—Origin is New York. A fall-bearing or two-crop variety, its

first crop ripening very early. Berries large, elongated, and of good quality. The heavy fall crop ripens late and in Minnesota much of this crop may be destroyed by frost before it matures. It is the best of the fall-bearing varieties now available but suitable only for home plantings. Plant is vigorous but needs winter protection. Recommended for HP in all zones.

Newburgh—Origin is New York. Has large berries that ripen late, are attractively colored, are of good quality, but sometimes do not pick easily. The plant is vigorous, relatively free of anthracnose, and productive. Should be irrigated. Recommend CP in all zones.

Madawaska—Origin is in Ontario, Canada. Canes not too vigorous and so susceptible to anthracnose that a spray program is needed to control this disease. Fruit is large, elongated, dark red in color. Quality excellent, especially for freezing and preserves. Suggested for trial for HP in all zones.

Taylor—New York origin. Very large, round-conic berries that ripen late and pick easily. Color is bright red and quality good. Plant vigorous and very productive. Trial for CP in all zones.

Latham—Originated at Minnesota Fruit Breeding Farm. Sometimes called "Big Four," a reference to the large size of the berries and to the introduction of the fruit for trial under the designation "Minnesota No. 4." Berries ripen late; they are very large, bright glossy red, good quality, pick easily, and ship well when properly handled. Frequent occurrence of double berries is a marked characteristic. The plant is very vigorous and productive. At present it is by far the best variety for eastern and southern Minnesota. Recommended for CP in all zones.

Purple Raspberries

Sodus—Origin is New York. Berries are very large, medium firm, purple in color, and ripen late. The plant is vigorous, productive, and relatively free of mosaic. Recommend HP in all zones.



Fig. 8. Latham—popular maincrop raspberry

Black Raspberries

Cumberland—Originated in Pennsylvania. Plants vigorous but subject to mosaic and anthracnose. Berries large, jet black, firm, of good quality. Should be planted in a protected site where snow drifts in for the winter protection. Not on recommended list.

Morrison—Origin is in Ohio. Plants large, vigorous, but subject to anthracnose. Berries very large, firm, attractive, and of good quality. Should be planted in a protected site where snow drifts in for winter protection. Not on recommended list.

Blackberries

Blackberries usually are not hardy enough to succeed in Minnesota and are not recommended. Winter covering with soil is difficult and usually is accompanied by breakage of canes. Should be planted where snow drifts in for winter protection.

Upright Type—The following are standard varieties: Alfred, Ancient Briton, Eldorado, and Snyder.

Trailing Type—Lucretia (Dewberry), Boysenberry, and Youngberry (Thornless Boysenberry) are unsuited to Minnesota conditions, although these varieties are sometimes grown in favored locations when given extra-heavy winter protection.

Red Currants

(Listed in order of harvest)

Cascade—Originated at Minnesota Fruit Breeding Farm. Clusters are above-medium size and compact. Berries very large and dark red, with a pleasant mild flavor and good quality. Ripening period ranges from early to midseason. Bushes are nearly erect, moderately vigorous, and very productive. Recommended for H in all zones.

Red Lake—Originated at Minnesota Fruit Breeding Farm. The most popular variety for home or market. The long-stemmed clusters are fairly well filled and pick easily. Berries are very large, of a clear bright red color, sprightly in flavor, of good quality, and ripen late. Bushes are vigorous, upright, and very productive. High yields and vigorous growth coupled with excellent jelly-making qualities make this an outstanding variety. Recommend C in all zones.

Viking—A Norwegian variety. Berries are of medium size, good quality, and very late in ripening. Bushes are upright, vigorous, fairly productive, and immune to the white pine blister rust disease. May be grown in the Blister Rust Control Area of northeastern Minnesota if a special permit is obtained from the Department of Conservation, State Office Building, St. Paul, Minnesota. Recommended for H in zones 3 and 4.

White Currants

White Grape—An old variety, probably of European origin. Ripens in mid-season. Clusters are long and loose; berries are yellowish white in color. Flavor is mild and quality fair to good. Bushes are moderately vigorous and fairly productive. Satisfactory for home plantings if a white variety is desired.

Black Currants

At present no varieties are recommended for planting because of the susceptibility of all to white pine blister

rust. Planting or importing prohibited in states where white pine important.

Gooseberries

(Listed in order of harvest)

Como—Originated at Minnesota Fruit Breeding Farm. Berries are medium to large and of fair quality, ripening in midseason. Color is green tinged with yellow. Bushes are of medium size, very productive, and resistant to both leaf spot and mildew. Recommended for H in all zones.

Pixwell—Origin is in North Dakota. Berries are of medium size, light red when ripe, and of fairly good quality. Long stems make picking easy. Bushes are moderately vigorous and very productive. Recommend H in all zones.

Blueberries

Blueberries will succeed only on acid soil. A mixture of sand and acid peat is best. Soil can be made acid by adding one-half pound aluminum sulphate per square yard.

The low-bush species grow wild in the northeastern part of Minnesota, but they are not cultivated and no varieties are propagated. Moderately hardy but will winterkill without snow protection.

The high-bush blueberry cultivated in the northeastern states and on the Pacific coast is an eastern species and is not hardy in Minnesota. May be tested as a novelty but must be given winter protection.

Strawberries

(Listed in order of harvest)

June-bearing

Beaver—Origin is in Wisconsin. Berries are medium to large, attractively colored, and firm in texture, but only fair in quality. Plant is hardy, productive, and vigorous, often making so many runners that the rows become crowded. Succeeds on somewhat lighter

soils than Premier. Recommended for C in all zones.

Premier (Howard 17)—Origin is in Massachusetts. Berries are large, bright red, fairly firm, and of good quality. Plant is hardy, productive, and vigorous, usually making a good row with less crowding than Beaver or Dunlap. At present the leading commercial variety in state. Recommend C in all zones.

Dunlap—Origin is in Illinois. Berries are attractively colored, medium in size, and of very good quality. Ripens early. Plant is hardy, productive, and vigorous. Yields are sometimes reduced because of crowded rows. For many years this has been the leading variety in Minnesota for both home and market, but it has been largely superseded by Premier in commercial plantings. Recommended for C in all zones.

Arrowhead—Originated at Minnesota Fruit Breeding Farm. Has a large, attractively colored berry, firm in texture and of good quality. Ripens medium late in season; excellent for canning and preserving. Plant is very vigorous, productive, and hardy. Recommended for C in all zones.

Robinson—Origin is in Michigan. Berries are large, blunt, and light red; flesh is light colored, sweet. Late maturing. Fair quality. Plants are vigorous and prolific. Suggested for trial for C in zones 1 and 2; recommended for C in zones 3 and 4.

Everbearing

Evermore—Originated at Minnesota Fruit Breeding Farm. Berries are medium to large, uniform in shape, a dark glossy red; quality is good. Plant is hardier than other everbearers, vigorous, runs freely, productive. Proving to be well adapted in western and northern Minnesota. Recommended for C in zones 2, 3, and 4.

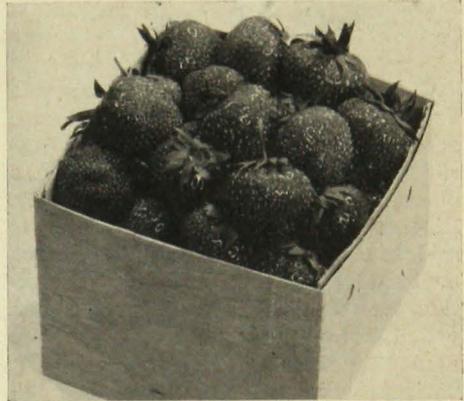


Fig. 9. Arrowhead—late June-bearing variety

Gem—Origin is in Michigan. Berries are medium to large, light red in color, firm, tart, and fair in quality. Plant is moderately vigorous, productive, makes many runners, and is moderately hardy. Grown throughout the state because it is a dependable cropper and because the fall crop ripens early—usually in August. Recommend C in all zones.

Red Rich—Developed by Marion Hagerstrom of Enfield, Minnesota. Berries are large, slightly compressed and irregular; they are bright red, becoming dark red as the berries become fully ripe. Flesh is deep red all the way through. Quality excellent for dessert, preserves, or freezing. A vigorous grower and a good plant maker. A promising variety. Trial for C all zones.

Wayzata (Rockhill)—A reselection by Fred Braden of Wayzata, Minnesota, from the widely variable original Rockhill variety. Berries are large, brightly colored, firm, and of excellent quality. Ripens any time from late August to the first frost. Plant is vigorous but forms very few runners on most soils. Requires careful mulching for winter. Planting stock should be selected from fields of known fruiting performance. Recommended for C in all zones.

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