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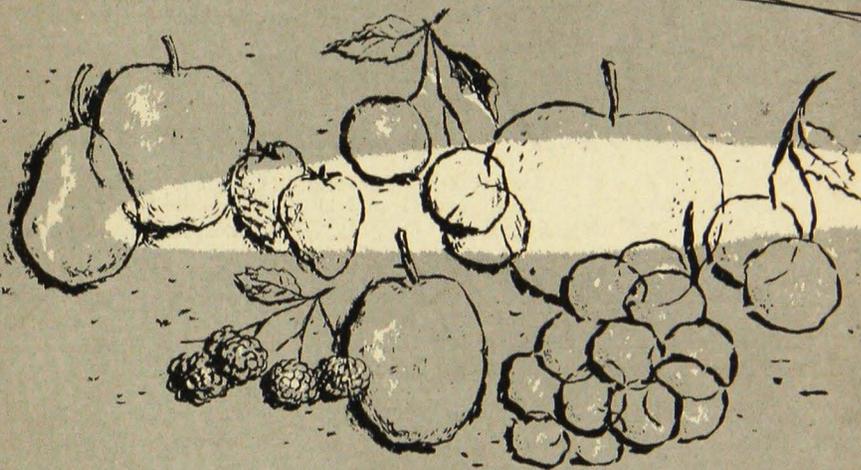
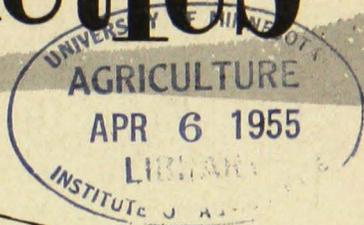
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fruit Varieties

FOR MINNESOTA



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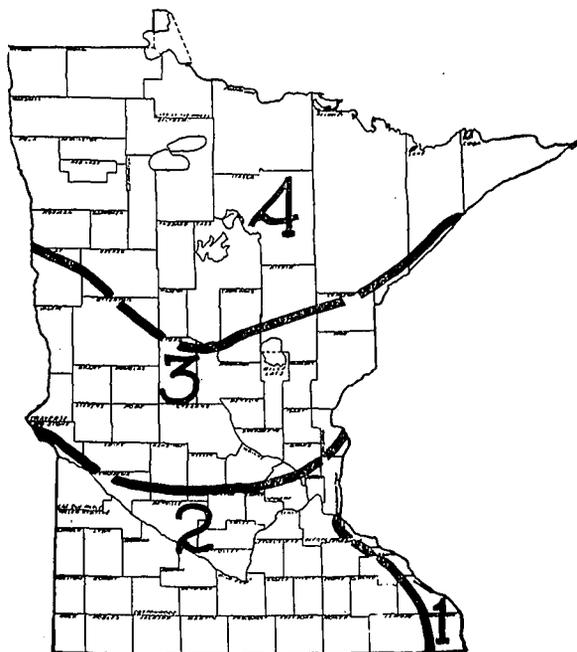
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UNIVERSITY OF MINNESOTA

Agricultural Extension Service

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, Wealthy	Beacon,* Duchess,* Hibernal,* Lakeland,* Minjon*
Winter.....	Fireside, Haralson, Prairie Spy, Redwell, Victory	Fireside,* Haralson,* Redwell,* Victory*
CHERRIES, PIE.....	Northstar, Meteor	Northstar, Meteor
CHERRY PLUMS.....	Compass,† Sapa, Sapalta	Compass,† Opata, Sapa,* Sapalta*
CRABAPPLES.....	Chestnut, Dolgo, Whitney	Chestnut, Dolgo, Whitney
CURRENTS‡.....	Cascade, Red Lake	Cascade, Red Lake
GOOSEBERRIES‡.....	Como, Pixwell	Como, Pixwell
GRAPES.....	Beta, Bluebell, Blue Jay,§ Red Amber	Beta, Bluebell,* Blue Jay,*§ Red Amber*
PEARS.....	Bantam, Golden Spice, Mendel, Parker	Bantam, Golden Spice
PLUMS—Hybrid.....	Ember, South Dakota,† Superior, Toka,† Underwood, Pipestone	LaCrescent, Red Glow, South Dakota,† Toka,† Underwood
European.....	Dietz, Mount Royal, Stanley	
RASPBERRIES.....	September, Latham, Newburgh	Chief, Latham, Newburgh
STRAWBERRIES—		
June-bearing.....	Arrowhead, Dunlap, Premier	Arrowhead, Dunlap, Premier
Everbearing.....	Gem, Red Rich, Wayzata, Superfection	Evermore, Gem, Red Rich, Wayzata, Superfection

* 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 for Minnesota

Orrin C. Turnquist and Leon C. Snyder

SEVERAL VARIETIES of fruits are suitable for growing in Minnesota. Without a guide or description of varieties, it would be difficult to make selections for home or commercial fruit plantings. The list in this bulletin follows closely the Minnesota Horticultural Society recommendations, which are prepared by a special committee in cooperation with fruit specialists of the University of Minnesota Department of Horticulture. It is hoped that this publication will help the grower to select his varieties wisely.

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. The varieties are arranged approximately in order of their time of harvest. Hardiness zones refer to the map on page 2. Varieties recommended for zone 3 may be grown in the next zone north on favorable protected sites.

Fruit Variety Descriptions

Symbols

C—For both commercial and home use

H—For home use only

**—For protected sites and favorable soils only*

P—Winter protection needed

Apples

(Listed in order of harvest)

Anoka—Origin is in South Dakota. 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

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

recommended list, since other varieties of the same season are superior.

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 zone 3, and H* in zone 4.

Oriole—Origin is Minnesota Fruit Breeding Farm. Large summer apple of highest quality for eating or cooking. Greenish yellow; about one half cov-



Fig. 1. Oriole—an early harvest apple

ered 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 and 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 zone 3.

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 and H* in zone 3.

Beacon—Origin is at Minnesota Fruit Breeding Farm. Very hardy and productive variety ripening a few days after Duchess. Fruit of medium size, very attractive all-over red, less acid than Duchess, and good for dessert and culinary use. Fruit ripens unevenly and must be color picked. Excellent market variety but is susceptible to cedar rust. Recommended for C in zones 1 and 2 and H* in zone 3.

Charlamoff—Origin is Russia. A hardy vigorous tree with medium to large fruit. Color of fruit purplish red over yellow background. Flavor is pleasantly subacid. Good for sauce and fair for eating. Of primary value in the north because of its hardiness. Recommended for H in zone 3 and H* in zone 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 poor color, 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 apples are thinned; striped red, will hold in good condition for about two months. Recommended for C in zones 1 and 2 and H* in zone 3.

Hibernal—Vigorous, hardy, old Russian variety, useful for fruiting in zones 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 cooking. Will keep about a month. Tree vigorous, branches wide angled and strong. Fairly productive but may come into bearing late. Recommended for H* in zone 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 is late September to November. Usually scalds if held later in cold storage. Very resistant to fire blight and cedar rust. Recommended for H in zone 3 and H* in zone 4.

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 zone 3 and H* in zone 4.

Lakeland—Origin is Minnesota Fruit Breeding Farm. Tree strong, 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 and H* in zone 3.

Minjon—Origin is Minnesota Fruit Breeding Farm. Very similar in ap-

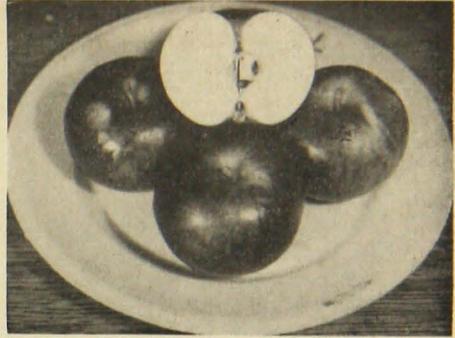


Fig. 2. Lakeland—a new fall apple

pearance 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 is mid-September to mid-December. Fruit sets in clusters and should be thinned for best development. Recommended for C in zones 1 and 2 and H* in zone 3.

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, C* in zone 2, and H* in zone 3.

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 is mid-October through January. Recommended for C in zone 2 and H* in zone 3.

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. Recommended for H in zones 1 and 2 and H* in zones 3 and 4.

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 zone 1.

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 hardiness and should be topworked. Season of use is November to March. When topworked it is recommended for H in zone 1 and H* in zone 2.

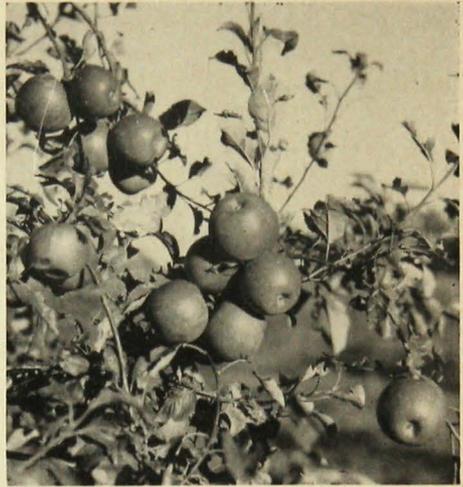


Fig. 3. Haralson—a good winter apple

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 and H* in zone 3.

Jonathan—An old New York variety, not fully hardy, but can be grown in zones 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 is 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 and 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.

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. 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 and H* in zone 3.

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 and H* in zone 3.

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 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. Recommended for C in zones 1 and 2 and H* in zone 3.

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 and 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 H in all zones.

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 H* in zone 4.

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.

Trail—Origin is Ontario. A very hardy, large sized, red-striped crab with pleasing dessert and culinary qualities. Suggested for trial for H in zone 3 and H* in zone 4.

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 zone 3, and H* in zone 4.

Hyslop—An old variety of unknown origin. Tree is vigorous. Fruit is medium size with yellow background blotched with red and coated with a bluish bloom. Quality is fair to good for cooking. Season is late September to October. Recommended for H in zone 3 and H* in zone 4.

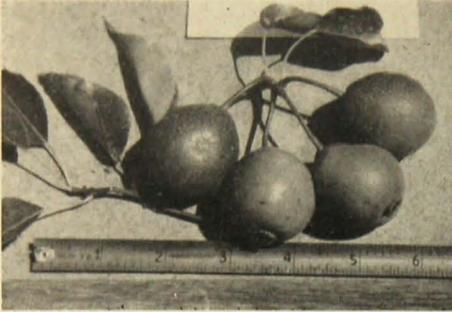


Fig. 4. Bantam—a hardy pear

Pears

(Listed in order of harvest)

Plant two or more varieties of pears to insure cross pollination.

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 zone 1 and H* in zone 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 and H* in zone 2.

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 and H* in zone 2.

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 and H* in zone 3.

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 and H* in zone 2.

Mendel—Originator is William Pfander, 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 and H* in zone 2.

Hybrid Plums

(Listed in order of harvest)

These plums require pollinizers. General pollinizers are starred below. Hybrid plums are not recommended for the north shore of Lake Superior.

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. Freestone. 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, vigorous, 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 zones 1, 2, and 3 and H* in zone 4.

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 zones 1, 2, and 3 and H* in zone 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 zone 3 and H* in zone 4.

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 zones 1, 2, and 3.

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 and H* in zone 2.

***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 zones 1, 2, and 3 and H* in zone 4.

***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 zones 1, 2, and 3 and H* in zone 4.

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 and H* in zone 3.

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



Fig. 5. Redglow—a good midseason plum

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 and H* in zone 3.

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 and H* in zone 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 and 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 zone 1 and H* in zone 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 zone 1 and H* in zone 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 and H* in zone 2.

Cherry Plums

(Listed in order of harvest)

These cherry plums require pollinizers. General pollinizers are starred below.

Oka—Origin is in South Dakota. Tree not reliably hardy in the north, 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 and H* in zone 2. Pollinized by Compass, Opata, and Sapa.

Opata—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, 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 H in zones 1 and 2 and H* in zones 3 and 4. Pollinized by Compass and Opata.

Sapalta—Origin is at Alberta, Canada. Closely resembles Sapa in habit and fruit but seems sweeter and less cling-

stone. Fruit of excellent quality for eating, juice, canning, and preserves. Recommended for H in zones 1 and 2 and H* in zones 3 and 4. Pollinized by Compass, Oka, and Opata.

***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 Sapahta.

Nanking Cherries

(*Prunus tomentosa*)

(Listed in order of harvest)

Only two varieties have been named, Orient and Drilea (see below for description). Seedlings are fairly uniform and produce a satisfactory product. Due to their lower cost they may be planted in place of named varieties.

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 in zones 1, 2, and 3 and H* in zone 4.

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 zones 1, 2, and 3 and H* in zone 4.

Pie Cherries

(Listed in order of harvest)

Pie cherries are usually fruitful without pollinizers.



Fig. 6. Northstar—a hardy sour cherry

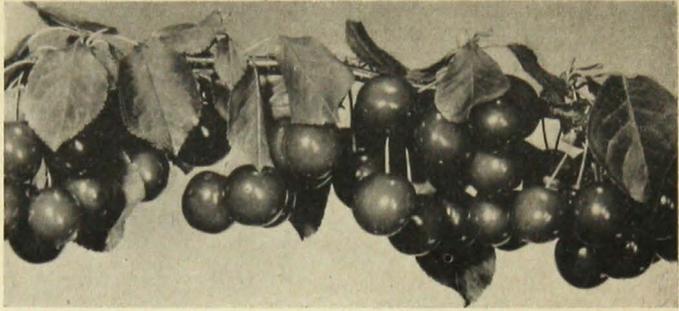
Northstar (Minnesota No. 58)—Originated at Minnesota Fruit Breeding Farm. Tree is small, productive, resistant to leaf spot and brown rot. Fruits are about three-fourths of an inch in diameter, at first bright red, becoming dark mahogany red. Flesh yellowish to dark red, juicy, tender, pleasantly acid, and meaty. Quality is good for sauce and pies. Probably the hardiest of the sour cherries. Suggested for trial as H in zones 1 and 2 and H* in zone 3.

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.

Meteor (Minnesota No. 66)—Originated at Minnesota Fruit Breeding Farm. Tree is vigorous and standard size for a pie cherry. Fruit is large and attractive bright red. Flesh is yellow and medium juicy. Flavor pleasantly mild acid. Very good quality for pies. Ripens about 7-10 days later than North Star. Suggested for trial as H in zones 1 and 2 and H* in zone 3.

Montmorency—Origin is in Europe. Tree is upright spreading, large, some-

Fig. 7. Meteor—a new hardy pie cherry



times productive following mild winters, lacks hardiness, often short lived. Fruits three-fourths of an inch in diameter, 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 is hardy enough to be dependable.

Grapes

(Listed in order of harvest)

Beta—Origin is Minnesota. Old and well known variety, hardy, vigorous, and productive. Bunches and berries rather small; fruit bluish black, too sour for eating but good for jelly and juice. Recommended for H in zones 1, 2, and 3 and HP in zone 4.

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 zone 1 and HP in zones 2 and 3.

Red Amber—Origin is at Minnesota Fruit Breeding Farm. Productive variety, the sweetest and most highly fla-

vored of the hardy grapes. Clusters and berries are medium in size. Fruit is amber red, attractive. Quality very good for eating or cooking. Recommended for H in zones 1 and 2 and HP in 3 and 4.

Blue Jay—Origin is at Minnesota Fruit Breeding Farm. Vigorous and hardy bluish black grape with compact clusters above medium in size; berries large. Flavor rather sour when color

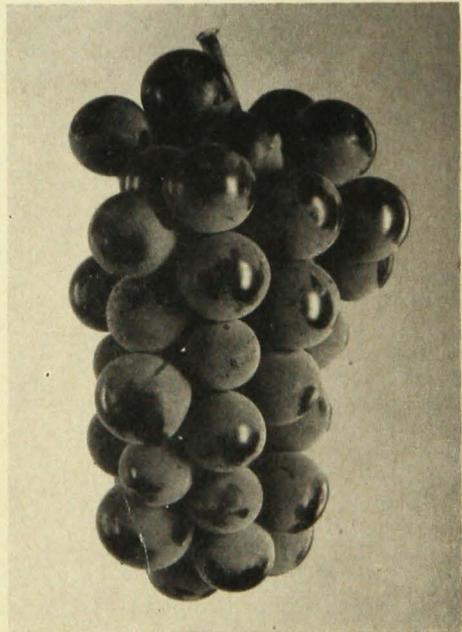


Fig. 8. Blue Jay—a hardy blue grape

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 and HP in zones 3 and 4.

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 and HP in zones 2 and 3.

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

Bluebell—Origin is Minnesota Fruit Breeding Farm. Clusters large, berries bluish black, about the size of Concord. Refreshing, sprightly, sweet flavor; quality good for dessert and culinary use. Vine is vigorous and very productive. Recommended for H in zones 1 and 2, HP in zone 3.

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

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

Red Raspberries

(Listed in order of harvest)

Winter protection recommended for all varieties.

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 proved 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 H in zone 2 and C in zones 3 and 4.

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. Suitable only for the summer crop. The fall crop ripens late and in Minnesota most of this crop is usually destroyed by frost before it matures. Suggested for trial as C in zones 2, 3, and 4.

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 C in all zones.

September—Origin is New York. A new fall bearing raspberry. The spring crop ripens in the same season as Indian Summer. Berries large, bright red, firm, and clinging to the plant, making picking difficult until fully ripe. Quality good. Fall crop ripens several weeks earlier than Indian Summer and will produce a fair crop in a favorable season. Suggested for trial as H in all zones.

Taylor—New York origin. Very large, round-conic berries that ripen late and pick easily. Color is bright red and



Fig. 9. Latham—a popular maincrop raspberry

quality good. Plant vigorous and very productive. Trial for C in zones 2, 3, and 4.

Latham—Originated at Minnesota Fruit Breeding Farm. 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 C 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 H in zones 1, 2, and 3.

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 winter protection. Recommended as H in zones 1, 2, and 3.

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. Recommended as H in zones 1, 2, and 3.

Blackhawk—A new variety from Iowa not yet sufficiently tested in Minnesota to be on the recommended list. Under Iowa conditions the plant is vigorous and very fruitful. Fruits are large, sweet to mildly acid, and rate excellent for use fresh, frozen, or in jams, sauces, or pies.

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

Viking—A Norwegian variety. Berries are 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.

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. Recommended for 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 sulfate 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, Michigan, and the Pacific coast 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. Recommended for 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

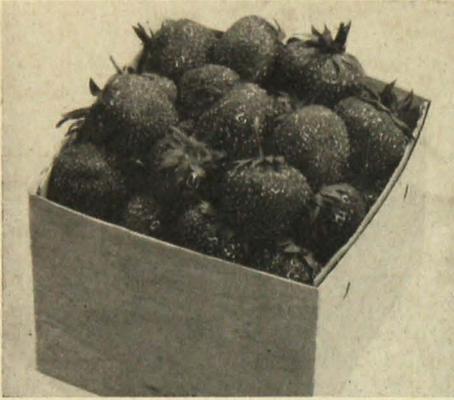


Fig. 10. Arrowhead—late June-bearing variety

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 zones 3 and 4.

Robinson (Scarlet Beauty)—Origin in Michigan. Berries are large, blunt, and light red; flesh is light colored, sweet. Late maturing. Fair quality. Plants are vigorous and prolific. 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. Pro-

ing to be well adapted in western and northern Minnesota. Recommended for C* in zones 2, 3, and 4.

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.

Superfection—Origin is Michigan. A new variety similar to Gem. Plants are vigorous and highly productive. Fruit is large and bright red. Recommended for C in all zones.

Brilliant—Another new variety from Michigan that resembles Gem. Suggested for trial as 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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