Peach Variety Performance in Southwest Iowa*

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A study of peach varieties was initiated at the Bluffs Experimental Fruit Farm near Council Bluffs, Iowa, in the spring of 1948. The primary objective of this study was to find and test varieties possessing hardy fruit buds. No commercial peach orchards were in existence in the area at that time. Home orchard plantings had been declining because most available varieties were not reliable. Tree hardiness was not considered pertinent because trees survived, but seldom bore fruit except in sheltered or protected sites. Discovery of trees with hardy fruit buds, therefore, would mean that the peach industry could move northward into Iowa.

Winter temperatures near Council Bluffs often reach levels below the −15°F. and −10°F. indicated by Lantz (1) and Tukey (2) as being the minimums for peach fruit bud survival. For this reason, the trial included only varieties possessing some degree of hardiness or those untested varieties with potential hardiness. This included 28 selections from the fruit breeding project at Iowa State University and several introduced seedlings originating in Iowa (Sungold, Tremmel, Vanderpoole).

All varieties in this trial have fruited at least once, assuring some observation of fruit characters. However, the majority of the tested varieties did not appear to possess enough hardiness of fruit buds to qualify them for planting in Iowa. Elberta, as a standard for comparison, usually bears 1 to 10 percent of a normal crop, which would never justify its use in a commercial planting. Failure to show bud hardiness in six, and sometimes seven years, provided a basis for variety removal from the test. A summary of varietal performance in terms of hardiness, color, adhesion, size, quality, and maturity date relative to that of Elberta is presented in Table 1.

Sixteen of the named varieties, and all but two of the Iowa State University selections, have been discarded for lack of bud hardiness. Two selections, A-123 and A-134, are still being tested to confirm their degree of hardiness. Table 2 shows the percent of total crop produced by these two seedlings as compared with 11 named varieties. These 11 varieties have shown above average fruit bud hardiness for one or more years from 1951 through 1961. Minimum winter temperatures are also included in the table.

The only complete crop failure of the test occurred in 1957. The minimum winter temperature of −19°F. occurred on January 14, 1957, following a late fall in which the first freeze occurred in November.

Cold injury to the trees was noted after the winter of 1959–60. This winter produced temperatures of −10°F., or below, 10 times. A low reading of −25°F. occurred on March 5, 1960. Injury was characterized both by terminal dieback and crotch damage. All varieties were injured, but extent depended upon location in the experimental site. The two varieties

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Table 1. Hardiness, fruit characteristics and comparative ripening dates of 46 peach varieties.

Variety	*No. years tested*	*Fruit bud hardiness*[1]	*Flesh color*[2]	*Adhesion*[3]	*Size*[4]	*Quality*[5]	*Ripening*[6]
A-123	13	3		F		F	1
A-134	12	3		F		P	1½
Afterglow*	7	1		F		G	−½
Autumn*	7	0		F		G	−1½
Blake	6	1		F		G	
Colora	6	2		F		G	
Early Red Free	6	1		SF		F	6
Early White Giant	14	1		SF		F	6
Eclipse	6	1		F		G	0
Elberta	14	1		F			0
Fairhaven	7	1		F	L		3
Goldeneast	12	1		F	L		2
Goldray	7	1		F	M		6½
Halberta Giant	7	1		F	L		−½
Hale*	12	1		F	L		−1
Halehaven	7	1		F	M		2
Hardee*	9	2		F	M		0
Jerseyland	11	2		SF	M		4½
Loring	5	0		F	M		2
Missouri*	8	1		SF	S		4
Polly*	12	1		F	L		1
Prairie Dawn	14	2		C	M		5
Prairie Daybreak	14	2		SF	L		6
Prairie Rambler*	7	0		F	L		− ½
Prairie Rose*	7	0		F	M		3½
Prairie Schooner	14	1		F	M		2½
Radiance	6	3		F	M		3
Raritan Rose	14	2		F	M		4
Redhaven	10	1		SF	L		3½
Redrose*	6	1		F	M		1½
Redskin*	6	0		F	M		½
Richhaven	5	1		F	M		2
Rio Oso Gem	6	0		F	M		−1
Starking Delicious	8	1		SF	M		
Sungold	9	1		F	M		½
Sunhaven	5	1		F	M		5½
Surecrop	5	2		C	S		5½
Tremmel	14	3		F	M		2½
Triogem	6	1		F	M		3
Tulip*	7	0		SF	S		6½
Vanderpoole*	11	1		F	L		1
Valiant*	7	1		F	M		2½
Vedette*	7	1		F	M		3
Veteran	6	1		SF	M		1½
White Hale	14	1		F	L		− ½
Wildrose*	8	1		F	L		3

*Removed from test.
[1]Numerical ranking of 0 (not hardy) to 4 (hardy).
[2]Y = yellow flesh; W = white flesh.
[3]F = freestone; C = clingstone; SF = semi-freestone.
[4]S = Small; M = medium; L = large.
[5]P = poor; F = fair; G = good.
[6]Weeks before or after Elberta.

that showed the greatest crotch injury were Lategold and Loring.

Brief descriptions of the characteristics of the varieties listed in Table 2 are given below.

A–123 (parentage unknown) appears to be among the hardiest of the yellow varieties tested. It is of the Elberta type and season, but the fruit size is smaller than Elberta. The quality is only fair to good, but is very acceptable in an area in which other peaches cannot be grown. The tree has shown moderate vigor and the least cold injury to the wood following the 1960 extreme cold.

A–134 (Halehaven seedling) is almost as hardy as A-123, but lacks the desirable fruit characteristics necessary for a good variety. The fruit are pale in color, soft, and fibrous. The tree is vigorous. Bud hardiness seems to be its only desirable feature.

Colora has fruited in three seasons and seems to possess some hardiness. This is the finest textured and highest quality peach of the yellow-fleshed varieties listed in Table 2.

Early White Giant is a large, early, white-fleshed peach that has been tested each year since 1948. Trees of this variety have never borne a full crop, but some fruit have been produced in each year except 1957. The fruit is very attractive, early, and easy to market.

Jerseyland is an attractive yellow-fleshed variety, semi-freestone in most years. On occasion, this variety has been outstanding in yield and appearance. The fruit quality is only fair, but is good enough for its season.

Prairie Dawn has a moderate degree of bud hardiness. This yellow-fleshed clingstone ripens about five weeks ahead of Elberta. It is a good fresh-market variety because of its earliness and excellent appearance. The flesh is soft and fibrous at maturity.

Prairie Daybreak ripens a week before Prairie Dawn. The fruit is large and attractive but of poor quality. Seed splitting has been a consistent fault with this variety.

Radiance is a white-fleshed freestone that has been tested for three

Table 2. Percent of total crop of fruit by the hardiest peach varieties, 1951–61

Variety	*1951*	*1952*	*1953*	*1954*	*1955*	*1956*	*1957*	*1958*	*1959*	*1960*	*1961*
A-123	**	10	80	90	100	100	0	100	100	80	70
A-134	**	10	10	90	90	90	0	80	100	50	90
Colora	**	**	**	**	**	**	**	**	20	20	50
Early White Giant	40	10	10	10	70	50	0	10	10	10	10
Jerseyland	**	**	**	1	70	20	0	0	10	10	80
Prairie Dawn	50	50	10	10	90	90	0	10	80	20	10
Prairie Daybreak	10	10	10	30	70	60	0	30	80	10	10
Radiance	**	**	**	**	**	**	**	**	60	70	70
Raritan Rose	**	50	10	10	70	70	0	10	50	20	10
Surecrop	**	**	**	**	**	**	**	**	20	90	10
Tremmel	50	90	90	10	90	70	10	50	100	100	50
Veteran	**	**	**	**	**	**	**	**	10	80	1
White Hale	**	10	0	10	70	30	0	10	20	20	10
Minimum temperature (°F.)	–22	–20	–13	–14	–18	–16	–19	–25	–20	–25	–16

**Trees not in orchard or not of bearing age.

fruiting seasons and appears to be moderately hardy. The quality is fair. The greenish-white skin color, with only a slight blush, detracts from appearance.

Raritan Rose has fruited in 10 of 11 seasons, yielding from 10 to 70 percent of a full crop. The consistency in production of this white-fleshed freestone, plus its good quality, and attractiveness make it one of the recommended varieties.

Surecrop has been observed for only three fruiting seasons and is included in this group because it bore 90 percent of a full crop following the —25°F. temperature in 1960. The 1961 yield was only 10 percent of a crop, indicating that it is subject to cold injury. The fruit are of good quality, but clingstone.

Tremmel (plant patent 1925) is a seedling variety discovered at Sigourney, Iowa. It is one of the hardiest yellow-fleshed varieties in the test and was the only variety to bear fruit in 1957. Thinning of the fruit has been required in some years. The fruit is freestone and of fair quality. It has a dark red skin covered with heavy fuzz, which makes it difficult to market.

Veteran has been erratic in performance. It bore heavily in 1960 and very lightly in 1961. The fruit characters of this variety are not outstanding in any way.

White Hale has not been hardy according to the ratings, but it has been a consistent bearer of light crops of exceptionally large, attractive fruit. The excellent quality and large size of this variety make it worthy of trial planting.

The results of this test indicate that all currently popular commercial varieties of peaches tested do not possess sufficient hardiness for Southwest Iowa. Several varieties such as Colora, Early White Giant, Prairie Dawn, Radiance, Raritan Rose and Tremmel have above average bud hardiness, but lack the dessert market quality necessary for commercial use. The search for a yellow-fleshed freestone peach variety of reliable hardiness and suitable for commercial production must be continued.

Literature Cited

1. Lantz, H. L. 1954. Peaches in Iowa. Trans. Iowa State Hort. Soc. 89:69–71.
2. Tukey, R. B. 1960. Bud hardiness of peach varieties in Indiana. Fruit Varieties and Hort. Digest. 15(1):2.

Annual Meeting of American Pomological Society in Yakima

Once again the time for the annual meeting of the American Pomological Society approaches. This year it will take place in Yakima, Wash., and will be held jointly with the Washington State Horticultural Association, Dec. 3, 4 and 5, 1962.

The program will include a fruit variety roundtable discussion, and a fine fruit exhibit. Among the speakers will be W. H. Upshall, current president of A.P.S., and Ed Gould, member of the Executive Board.

This meeting, the first in the West since 1948, will give members in that region an excellent opportunity to participate in an annual meeting of A.P.S., and it is hoped that they will take advantage of the opportunity. All other members and interested parties are also very welcome to attend. It should be an exceptionally good meeting, so mark your calendars accordingly.—*G. M. Kessler, Secretary-Treasurer.*