

'Harlayne' Apricot¹

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'Harlayne' is an exceptionally cold-hardy, productive, late season apricot (*Prunus armeniaca* L.) suitable for the fresh market and for processing. The trees are vigorous, hardy, productive, and tolerant to perennial canker (*Leucostoma* spp.). The fruits are resistant to bacterial spot (*Xanthomonas pruni* [E. F. Sm.] Dows.) and brown rot (*Monilinia fructicola* [Wint.] Honey) but moderately susceptible to skin cracking if subject to heavy rains near harvest maturity. 'Harlayne' ripens 8 days after 'Veecot' and 4 days after 'Harogem' in the late season. It is a good dual purpose type being well-suited for the fresh market, home canning and appears suitable for commercial processing. The fruits will keep for about a week at room temperature and 2 to 3 weeks in a refrigerated storage. 'Harlayne' will extend the apricot season in Southwestern Ontario by about one week.

Origin

'Harlayne' resulted from the cross: V51092 x 'Sun Glo' made at Harrow in 1965. It was selected in 1970 from a progeny of 188 seedlings. The seed parent (V51092) is a selection from the Horticultural Research Institute of Ontario with the following parentage: ('Reliable' × open pollinated) × open pollinated (O.A. Bradt, personal communication). The pollen parent ('Sun Glo') originated in Washington, U.S.A.; its parentage is unknown (1). The first trees of 'Harlayne' were distributed for second test in 1972 under the original seedling number H 6506049. In subsequent years, it was tested under the designation HW 407. Trees were distributed for regional trials in 1972, 1973, and 1979 by the Western Ontario Fruit Testing Association (WOFTA) involving a total of 48 growers and research cooperators located primarily in Ontario, but also in Quebec, New Brunswick, and Nova Scotia in Canada; and Oregon, Michigan, Pennsylvania, Maryland, and Virginia in the United States. Trees were also distributed in 1979 and 1980 by the New York State Fruit Testing Cooperative Assn. (NYSFTCA) for trial by interested growers. 'Harlayne' is performing well in second test at Harrow and early reports of its performance in Niagara and Southwestern Ontario are encouraging. It should be

adapted to regions where 'Goldcot' can be successfully grown. The name 'Harlayne' was proposed by the Board of Directors of WOFTA in recognition of the author's efforts in apricot breeding and his contributions to WOFTA as its Executive Director.

In this report the performance of 'Harlayne' in the second test is compared with recent Harrow introductions (2, 3) and with 'Goldcot' and 'Veecot' which are the standard cultivars recommended for Southwestern Ontario (3).

'Harlayne' was the latest ripening of the 5 cultivars being compared (Table 1) and ripened 4 days after 'Harogem', 8 days after 'Veecot', 11 days after 'Goldcot' and 19 days after 'Harcot'. 'Harlayne' had the highest total score of the 5 cultivars based on the 17 characters that were evaluated, 'Veecot' was next, then 'Harcot' and 'Harogem' which had the same scores, and finally 'Goldcot' which had the lowest score. 'Harlayne' exhibited a very good level of cold hardiness and disease resistance. It also had generally good fruit characteristics. The 3 main problems were only fair to good uniformity of ripening, small to medium fruit size unless well thinned, and a slightly dull skin color, but still more attractive than 'Goldcot'. It was the least resistant of the 5 cultivars to skin cracking if repeated heavy rains occurred when the fruits were near harvest maturity. The fruits did not drop readily when ripe, like 'Goldcot', and were usually almost free of bacterial spot and brown rot. None of the

17 character ratings in the evaluation in Table 1 were low enough to seriously affect 'Harlayne's' suitability for commercial culture in Southwestern Ontario.

Description

'Harlayne' trees are vigorous, spreading, cold hardy and productive. They have a good level of field resistance to perennial canker, bacterial spot, and brown rot (Table 1). In controlled freezing tests following standard procedures (4), the dormant flower buds have exhibited a remarkable degree of cold hardiness equal to that of Goldcot in 1976 and 1979 and surpassing 'Goldcot' in 1978. The 3-year average temperature required to kill 50% of the dormant flower buds was -24.7°C which was 2.5° lower than 'Veecot' (Table 2).

Flowers of 'Harlayne' are white in color, self fertile, and bloom with 'Harcot', but after 'Goldcot', 'Veecot' and 'Harogem'. Leaves are medium to large, cordate in shape with acuminate apexes and serrate leaf margins. There are usually 3 or more small, globose leaf glands on the petiole near the leaf blade. The fruits of 'Harlayne' are of medium size and when properly thinned may attain a length of 5 cm and width of 4 cm (Fig. 1). They are oblong in shape but more flattened at the stem than at the blossom end. The stem cavity is narrow and deep. The suture is more conspicuous at the stem than at the blossom end of the fruit and the fruit halves are equal. The skin color is orange except on the sun-exposed side where a light red blush may cover 10 to 20% of the skin surface. The fruits are more attractive than 'Goldcot' but less attractive than 'Harogem', 'Veecot' and 'Harcot'. The fruits do not drop readily, even when ripe, but are subject to skin cracking in unusually wet seasons, especially around the stem cavity and along the suture. The flesh is orange, very firm, fine textured,

Table 1. Average performance of 'Harlayne' compared with recent Harrow introductions and commercial standards at the Harrow Research Station (1978 to 1980).

Cultivars evaluated	Avg rating (scale = 1 to 10)				
	Harcot (July 22) ^a	Goldcot (July 30) ^a	Veecot (August 2) ^a	Harogem (August 6) ^a	Harlayne (August 10) ^a
Tree type	8	8	8	7	8
Vigor	8	8	8	7	8
Winterhardiness	7	8	7	8	8
Perennial canker	8	8	9	9	8
Bacterial spot	9	9	6	6	8
Brown rot	8	8	8	8	8
Bloom time	7	6	6	6	7
Crop	6	7	7	8	7
Ripening uniformity	6	6	7	7	6
Fruit size	7	5	6	6	6
Attractiveness	7	5	7	8	6
Flesh firmness	7	4	8	9	8
Flesh texture	7	4	8	9	8
Flavor	8	5	6	6	7
Flesh adherence to pit	8	9	10	8	9
Storage ability	7	5	8	8	8
Processing ability	5	6	8	5	8
Total score (17 characters)	124	113	127	124	128

^aRatings were subjective on a scale from 1 (least desirable) to 10 (most desirable).

^bAverage ripe date (1978 to 1980).

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Table 2. Cold hardness of 'Harlayne', 'Veecot' and 'Goldcot' flower buds in controlled freezing tests (1977 to 1979)¹.

Cultivars	T ₅₀ flower buds ²			Mean
	February 16, 1977	March 6, 1978	February 28, 1979	
Goldcot	-23.7 a	-27.7 b	-21.5 a	-24.3
Veecot	-20.0 b	-25.5 c	-21.0 b	-22.2
Harlayne	-24.2 a	-28.6 a	-21.4 ab	-24.7

¹Mean separation within columns by Duncan's multiple range test, 5% level.

²Temperature required to kill 50% of the flower buds using a standard freezing test (4).

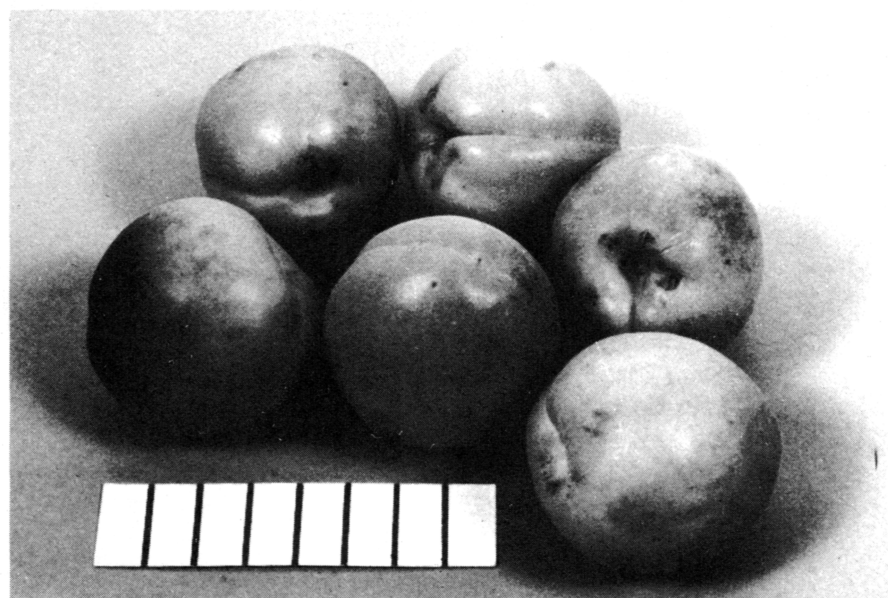


Fig. 1. Fruits of 'Harlayne' apricot (scale in cm).

and does not adhere to the pit. The flesh is not as dry as 'Veecot' but moderately dry and the flavor is good, and sweeter than 'Veecot'. The pits are small, oblong,

light tan in color, with inconspicuous wings and a prominent keel. The kernels are plump but bitter and inedible.

'Harlayne' is a promising late season

apricot for the Ontario fresh market which will extend the season by about a week. The fruits are firm and should be suitable for shipping because the flesh does not soften rapidly even when fully ripe. The fruits keep well for at least 2 or 3 weeks in refrigerated storage (1 to 5°C, > 80% relative humidity). 'Harlayne' is rated very good for home preservation as canned halves in syrup or as jam. 'Harlayne' may also be suitable for commercial processing as puree for baby food based on tests conducted in our laboratory and preliminary tests conducted by Gerber Products Company, Fremont, Michigan (W. S. Watson, personal communication). The puree of 'Harlayne' was rated superior to 'Goldcot' in sensory tests conducted in Ontario and Michigan in 1979. 'Goldcot' is the main cultivar used for commercial puree in Michigan.

Availability

Budwood of 'Harlayne' from virus indexed trees is available from the Harrow Research Station and is distributed by the Western Ontario Fruit Testing Association, Harrow, Ontario, NOR 1G0. Trees of 'Harlayne' will be available from WOFTA and from NYSFTCA, Geneva, New York in limited quantities in 1981 and from major commercial nurseries in Canada and the United States in 1982.

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'Hargrand' Apricot¹

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'Hargrand' is an exceptionally large, firm-fleshed apricot (*Prunus armeniaca* L.) suitable for the fresh market, home canning and commercial processing, especially as puree for baby food. The tree is cold hardy and productive and tolerant to perennial canker (*Leucostoma* spp.). The fruits are moderately resistant to brown rot (*Monilinia fructicola* [Wint.] Honey), bac-

terial spot (*Xanthomonas pruni* [E. F. Sm.] Dows.) and skin cracking. 'Hargrand' ripens in the midseason with 'Veecot' and is being introduced for the Ontario fresh market to meet the need for better dual purpose cultivars in this season. It should be adapted to regions where 'Goldcot' and 'Veecot' are successfully grown.

Origin

'Hargrand' was selected in 1972 at Harrow from a progeny of 145 seedlings planted in 1967. It resulted from the cross: V51092 × NJA1 which was made by K. O. Lapins and Catherine H. Bailey in 1966

at the Agriculture Canada Research Station, Summerland, British Columbia. The seed parent (V51092) originated at the Horticultural Research Institute of Ontario from the following cross: (Reliable × open pollinated) × open pollinated (O. A. Bradt, personal communication), and is a sister seedling of 'Veecot'. The pollen parent (NJA1) originated at the New Jersey Agricultural Experiment Station and was selected from the cross: 'Phelps' × 'Perfection' (L. F. Hough, personal communication). 'Hargrand' was tested as a seedling tree under the designation H6636087. It was first propagated in 1972 and trees for second test trees were distributed to cooperating researchers and growers in 1974 by the Western Ontario Fruit Testing Association (WOFTA) under the test number HW 410. It has been propagated each year since then by WOFTA and has also been propagated since 1975 by the New York State Fruit Testing Cooperative Association (NYS-FTCA). Test trees have been widely distributed in Canada and the

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