

'Skeena' Sweet Cherry

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Additional index words. *Prunus avium*, fruit breeding, cultivars

'Skeena' sweet cherry (*Prunus avium* L.) was released to provide a late-season (where 'Van' is considered mid-season), high-quality sweet cherry cultivar that matures ≈14 to 16 d after 'Van'. This cultivar was recommended for naming by our cooperating evaluators in Canada and around the world. The fruit is attractive, large, firm, and has good flavor characteristics.

Origin

'Skeena' originated at Summerland, B.C., from a cross between 2C-60-07 and 2C-38-32 (Fig. 1) made in 1976 by W.D. Lane and H. Schmid. Fields were renumbered in the early 1970s and 2C-60-07 became 2N-60-07 and 2C-38-32 became 2N-38-32. Progeny from the cross was planted in the seedling orchard in Fall 1978; 'Skeena' was first selected in 1984 and given the seedling designation 13S-43-48. It was propagated on *P. avium* rootstock and planted in second-test trials in 1988, 1990, and 1991. Budwood was provided to cooperators beginning in 1985 and was sent for testing to other parts of Canada, the United States, and Europe. 'Skeena' was named to provide a late-season (14 to 16 d after 'Van') sweet cherry that matures between 'Lapins' and 'Sweet-heart' with very good fruit size and quality.

Description and Performance

Trees of 'Skeena' are vigorous, with a spreading growth habit. The leaves are medium to large, elliptical in shape, and have dentate margins. The nectaries are kidney-shaped and orange-red in color.

The flower density of 'Skeena' is medium in comparison with 'Van', which has a high flower density. The bloom period is early midseason, similar to 'Van'.

The fruit of 'Skeena' are large, symmetrical, and kidney-shaped (Fig. 2A) (Schmidt et al., 1985). The pedicel length is medium compared with 'Van', which has short pedicels. The fruit are attractive (Fig. 2 A and B) with wine-red to mahogany skin color and red to dark red flesh. Fruit are very firm, juicy, sweet

when mature, and have good eating quality. For comparison 'Van' fruit are average in size, with good firmness and eating quality, and are intermediate to sweet in taste and juicy. 'Skeena' matures ≈14 to 16 d after 'Van'.

In each year the number of trees sampled and the number of samples per selection varied. In the first years after finding the selection in the seedling row, only one tree was sampled, but as trees were propagated sample size increased. The following number of fruit per sample were used for each measurement: average fruit weight, 100 to 200; total soluble solids concentration (SSC) (ABBE Mark II digital refractometer; AO Scientific Instruments, Keene, N.H.), 20 to 25; durometer firmness (Shore Instrument, Jamaica, N.Y.), 20 to 25; FirmTech firmness (BioWorks, Stillwater, Okla.), 24; natural cracking, 100; and cracking index (CI), 50. The durometer provides a dimensionless measure of firmness, from 0 to 100 (the higher the number, the firmer the fruit), that is closely related to people's perception of firmness (Kappel et al., 1996). A durometer measurement of 73 was

determined to be "Just Right" (Kappel et al., 1996) on the Just Right scale (Meilgaard et al., 1991) used in determining the relationship between firmness and perception. The CI was calculated by storing fruit at room temperature overnight, then immersing them in distilled water at room temperature for 2 and 4 h and counting the number of cracked fruit. The following equation was used: $CI = [(3a + b)/150] \times 100$, where a and b = number of fruit split after 2 and 4 h, respectively. The lower the number, the more tolerant the fruit to cracking.

'Skeena' is large with an average fruit weight of 11.1 g (Table 1). Average fruit weight in cooperators' plots was lower than at Summerland [7.8 g, in Denmark (Christensen, 1997); 9 g, in Belgium (Druart, 1996)]. The protocol at Summerland is to harvest fruit at a more mature stage, i.e., the fruit are darker than the fruit of the European cooperators), which may account for some of the difference in fruit size. Total SSC was slightly higher than the standard cultivars Van, Bing, and Lapins. The durometer and FirmTech firmness measurements indicated that 'Skeena' had good firmness relative to the standards. Our cooperators rated firmness of 'Skeena' as good. The tolerance of 'Skeena' to rain-induced cracking appeared to be better than the standard cultivars, based on the level of natural cracking. The CI was also lower than the standard cultivars. In Belgium (Druart, 1996), cracking was slightly higher for 'Skeena' than for 'Van', whereas in Denmark it was lower (Christensen, 1997). Productivity under conditions at Summerland has been medium to good (subjective assessment). For compari-

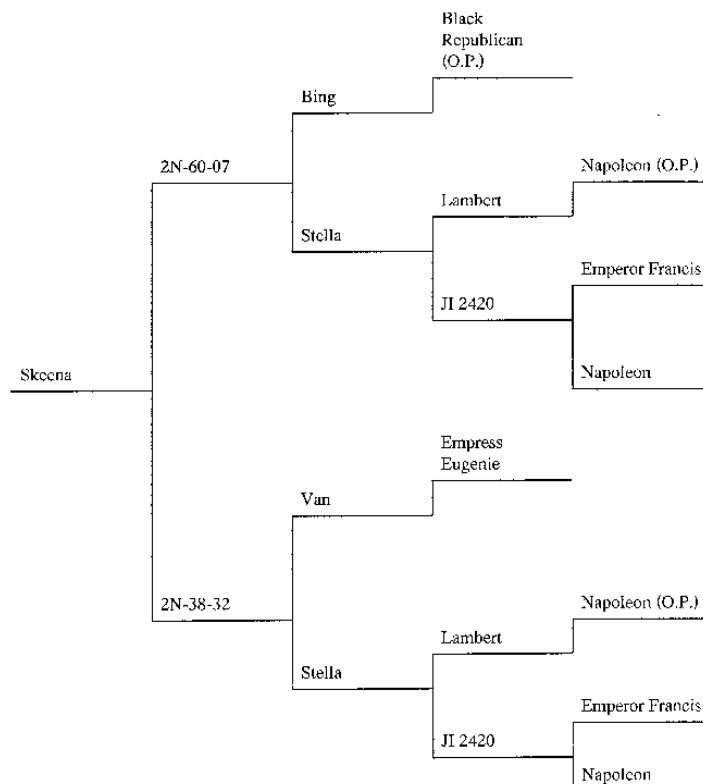


Fig. 1. Pedigree of 'Skeena' sweet cherry.

Received for publication 8 June 1999. Accepted for publication 15 Aug. 1999. Contribution no. 2036 of the Pacific Agri-Food Research Centre. The cost of publishing this paper was defrayed in part by the payment of page charges. Under postal regulations, this paper therefore must be hereby marked *advertisement* solely to indicate this fact.

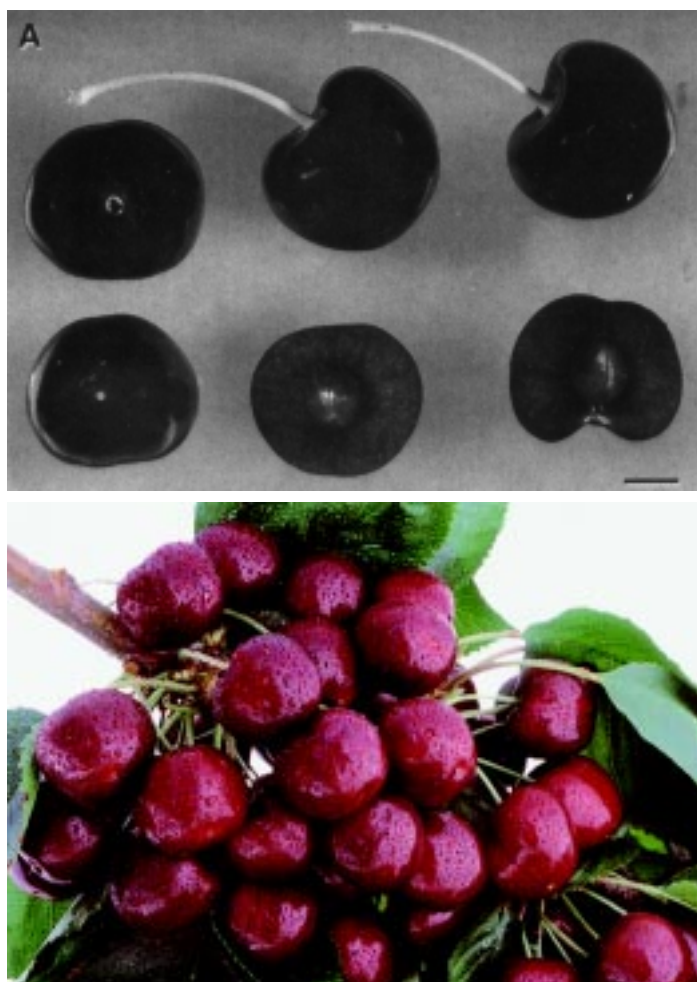


Fig. 2. 'Skeena' sweet cherry. The bar in Fig A represents 1 cm.

Table 1. Fruit quality characteristics of 'Skeena' sweet cherry in comparison with those of standards 'Van', 'Bing', and 'Lapins' at Summerland, B.C.

Cultivar	Wt per fruit (g)	Total soluble solids (%)	Fruit firmness		Natural cracking (%)	Cracking index ^x
			Durometer ^z	FirmTech ^y (g·cm ⁻¹)		
Skeena	11.1 (8) ^w	19.2 (7)	80 (4)	204(1)	22 (8)	23 (4)
Van	9.8 (15)	18.4 (13)	79 (4)	225(1)	37 (13)	42 (3)
Bing	9.6 (8)	18.6 (7)	71 (3)	157(1)	40 (8)	66 (2)
Lapins	10.8 (16)	17.4 (12)	78 (4)	219 (1)	24 (15)	42 (2)

^zThe durometer provides a dimensionless reading from 0 to 100. The higher the number the firmer the fruit.

^yFirmTech measures the amount of force required to compress the fruit a constant distance. A 24-fruit sample was used.

^xCracking index (CI) = $[(3a + b)/150] \times 100$, where a and b = number of fruit split after being immersed in distilled water at room temperature for 2 and 4 h, respectively. A 50-fruit sample was used for the CI determinations.

^wThe number in parentheses indicates the number of years the trait was measured.

son, the cropping of 'Van' is considered to be good to very good. The assessment of productivity was similar for the Belgian (Druart, 1996) and Danish (Christensen, 1997) testers, who rated the productivity as good to very good; both testers rated 'Van' as very good.

Availability

The Okanagan Plant Improvement Co. (PICO), 4200 Highway 97, P.O. Box 6000, Summerland, B.C. V0H 1Z0, is the agent for this cultivar. 'Skeena' was granted Plant Breeders' Rights in Canada in 1997 (certificate no. 0319). A U.S. plant patent has been applied for.

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