

LAPINS AND SUNBURST SWEET CHERRY

Lapins and Sunburst are new self-compatible, dark fleshed sweet cherry cultivars named by Agriculture Canada Research Station, Summerland, British Columbia. Lapins matures late in the cherry season and has outstanding split resistance combined with other desirable fruit and tree characteristics. Testing to date has shown it to be better than presently grown cultivars. Sunburst is an early cultivar ripening in Bing season and is outstanding because of very large fruit size and very heavy yields. It should be a suitable cultivar in locations where fruit set is a problem and lengthy storage is not required.

Key words: *Prunus avium*, self-compatible, split resistance, cultivar description

[Cultivars de cerise douce Lapins et Sunburst.]

Titre abrégé: Cultivars de cerise douce Lapins et Sunburst

Lapins et Sunburst sont deux nouveaux cultivars de cerise douce compatibles à chair foncée nommés par la Station fédérale de recherches agricoles de Summerland (Colombie-Britannique). Lapins est plutôt tardif et montre une résistance exceptionnelle au fendillement, en plus d'autres caractères avantageux du fruit et de l'arbre. Les essais ont révélé jusqu'à maintenant qu'il surpasse les cultivars actuellement utilisés. Quant à Sunburst, c'est un cultivar précoce qui mûrit en même temps que Bing et qui se distingue par le très gros calibre des fruits et son rendement exceptionnel. Il devrait convenir aux régions où la nouaison pose un problème et où il n'a pas besoin d'être entreposé longtemps.

Mots clés: *Prunus avium*, compatible, résistance au fendillement

This report describes two new sweet cherry (*Prunus avium* L.) cultivars, Lapins and Sunburst, recently named by the Summerland Research Station. Both cultivars are self-compatible, produce high fruit yields and are resistant to rain-induced splitting. Lapins was named to honor Dr. K. O. Lapins, the cherry breeder at Summerland from 1957 to 1974. He was the first to incorporate the self-compatible characteristic into cultivars, such as Stella (Lapins 1971) now grown commercially. The cross, which resulted in both Lapins and Sunburst, was made by Dr. Lapins and he, together with H. Schmid, selected Lapins and Sunburst then propagated them for further testing at Summerland and by cooperating scientists, nurserymen and growers.

Origin

Lapins and Sunburst were sister seedlings and originated from the cross of Van with

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Stella in 1965. Both were selected in 1971. Lapins was tested as 2D-28-26 and Sunburst as 2D-28-37, but in 1977 the 2D designation, which indicated orchard location, was changed to 2S when the station map was redrawn. As a result these cultivars may have been tested as 2S-28-26 and 2S-28-37 by some cooperators.

Description

Lapins is a late season cultivar which matures 2 days later than Lambert (Table 1). The most important attributes of its fruit are resistance to splitting, firmness and large size (Table 1). Fruit are nearly round without distinctive shoulders or tip and do not have a cavity surrounding the seed (Fig. 1). This characteristic of flesh in contact with seed has helped prevent softening during storage. Firmness of the fruit has been equal or greater than Lambert but less than Van.

Pits which develop from bruises, a post-harvest disorder of sweet cherry (Porritt et

Table 1. Maturity date, fruit size and resistance to splitting of Lapins and Sunburst compared with commercially grown cultivars. Maturity date is the average of 9 yr, fruit weight is based on from three to nine (100 fruit) samples picked in each of 4 yr. Resistance to splitting was obtained in three seasons during which severe rains occurred at harvest

Cultivar	Maturity date	100-fruit wt (g)	% split fruit
Van	11/7	1016	53
Sunburst	12/7	1312	35
Bing	13/7	1006	57
Stella	14/7	1116	59
Lambert	21/7	1060	44
Lapins	23/7	1153	14

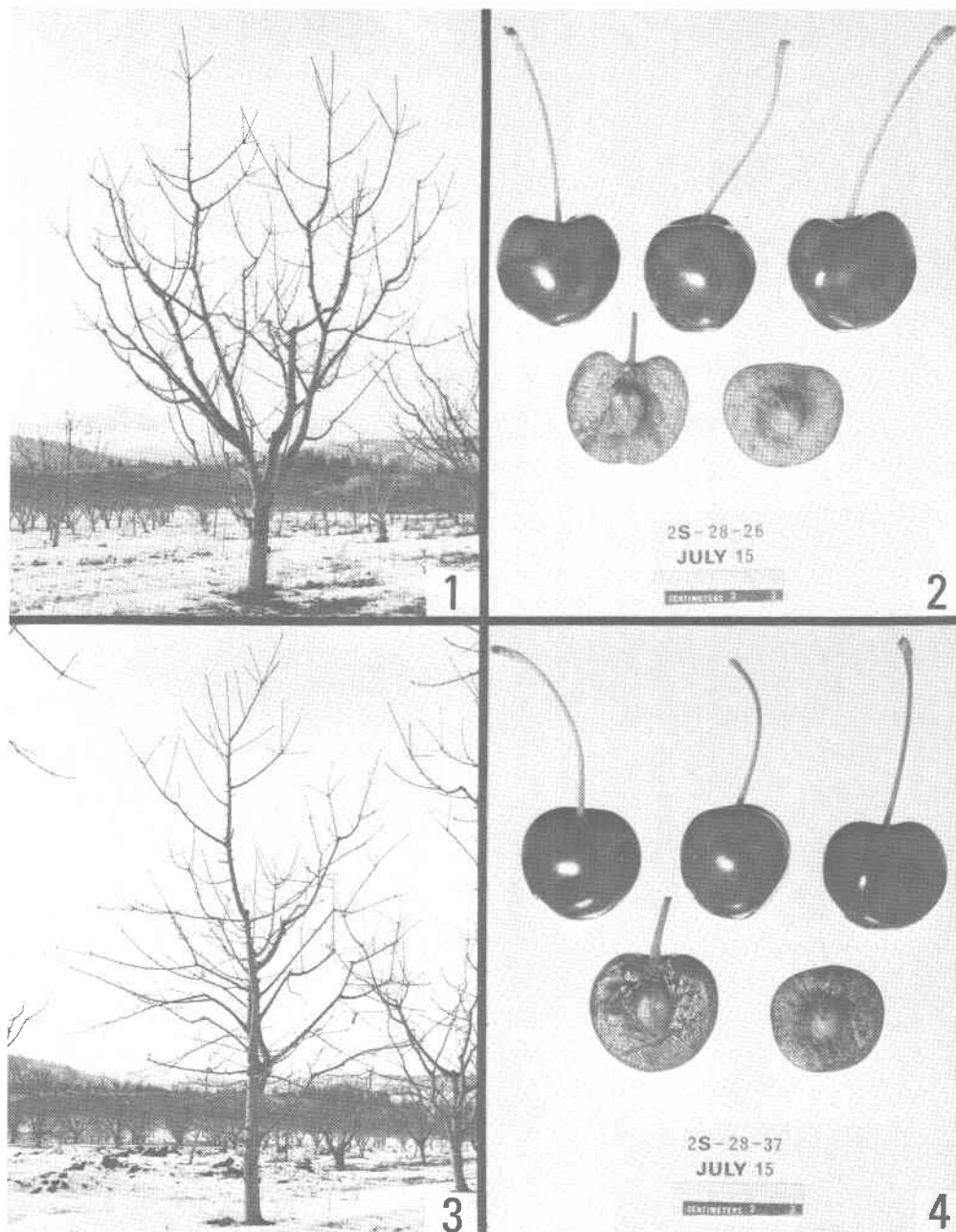
al. 1971), have seldom occurred in laboratory tests but precise evaluation of resistance to pitting of Lapins will be available only after experience with commercial packing and shipping. Lapins fruit has a very attractive luster and its stems are medium in length and thick enough to resist wilting during periods of normal storage. Taste and texture have been excellent and eating quality is very good. Part of the reason for this good taste is a decrease in the level of acidity before the fruit is fully mature and it therefore tastes sweet when the skin is still red. This characteristic has made Lapins well adapted to fresh marketing when fruit is picked at less than full maturity.

Lapins is self-compatible and has fertilized all the cultivars with which it was crossed. Similarly, all other cultivars effectively pollinated Lapins. Based on previous experience with self-compatible tree fruits such as sour cherry, peach and apricot as well as Stella sweet cherry (unpublished results), Lapins is also considered to be a universal pollen donor and suitable as a pollinizer for all other cultivars. Despite its self-compatibility it did not set full crops when bagged to prevent pollination by insects. In experiments with Stella, which also behaved this way (Lane 1979), it was concluded that fruit set was increased compared to unaided pollen transfer if bees were present in the orchard at bloom time to increase the transfer of pollen.

The foliage of Lapins is dense and green and its branches are oriented upward (Fig. 1). Trees observed at the station have readily developed spurs and side branches, which has resulted in a favorable fruiting structure giving consistent, high yields. We have not evaluated hardiness in the laboratory; however, the original tree was not damaged by cold during 17 winters, several of which caused damage to other sweet cherries. Lapins has also been observed to enter dormancy (lose its leaves) before other cultivars located in the same evaluation block.

Sunburst matures in mid-season, 1 day after Van, and 11 days before Lapins (Table 1). It has produced extremely large fruit on well-managed trees and size has exceeded all other cultivars evaluated at Summerland. Fruit of 22.5 g have been recorded. The fruit have also resisted splitting better than commercially important cultivars (Table 1). Fruit are round and it has a stem of medium length, slightly thinner than Lapins (Fig. 4). Flesh texture is softer than most commercial cultivars, a deficiency if fruit is shipped long distances, but this has not been a constraint when fruit is consumed soon after picking. Cooperative testers have reported the rate of softening in storage to be slow. Only low levels of pitting have been observed in laboratory tests conducted to evaluate resistance to this disorder.

Organoleptic quality of Sunburst has been rated very good and this characteristic



Figs. 1-4. 1. Lapins tree with upright branches. 2. Lapins fruit several days before maturity. 3. Sunburst tree. 4. Sunburst fruit.

combined with its large size makes it an appealing cherry with excellent attractiveness. Its taste is sweet with less acidity than Bing or Van and its color is uniform dark red with good luster when mature.

Sunburst, like Lapins, is self-compatible and tests have indicated that it too is a universal pollen donor. The tree has medium vigor at Summerland. Young trees produce consistently high yields of large fruit, but mature trees can over-produce resulting in reduction of fruit size and lower sugar content. Reduction in crop loads has been achieved by pruning which also corrects drooping branches resulting from the heavy crop (Fig. 3). Sunburst is a heavy cropper and is thus well suited to marginal growing areas where fruit set of presently available cultivars is low because of reduced flower number caused by frost or poor pollination due to inhibition of pollen tube growth by cold weather. Sunburst is also well suited for home gardeners because of consistent, high yields, large fruit size and resistance to rain splitting. Like Lapins, hardiness of Sunburst has not been quantified in vitro but damage has not occurred to a 17-yr old tree in our planting.

Outstanding Characteristics

Lapins matures 2 days later than Lambert, presently the most important cherry cultivar in British Columbia, and has equal or better fruit size and quality, including firmness, and tree productivity. Resistance to rain splitting has been exceptional during three seasons with severe rain during the harvest period and it is superior to other cultivars in this characteristic. Commercial

testers have reported Lapins to have better fruit quality and split resistance than Lambert.

Sunburst has been the most productive and largest cherry cultivar tested at Summerland. Evaluation has also shown it to be more split resistant than most commercially grown cultivars. Its rather soft fruit texture and overproduction in mature trees make it suitable as a specialty cultivar. Both Lapins and Sunburst are self-compatible and give consistently good yields even in years when pollination conditions are marginal for self-incompatible cultivars.

Availability

Trees of Lapins and Sunburst have been indexed virus-free. Propagation wood is available from the B.C. Fruit Growers' Association Certified Budwood Scheme, c/o Research Station, Agriculture Canada, Summerland.

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