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'KRISTIN' SWEET CHERRY

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Kristin' is a new, mid-season, productive, large, black, high quality sweet cherry. It is similar to 'Schmidt' but trees are more winter hardy and more heavily cropping and fruits are larger. It has performed especially well in tests in Norway, Montana, and New York.

ORIGIN

The'Kristin' cherry originated as one of a family of seven seedlings grown from a 1938 controlled cross, 'Emperor Francis' x 'Gil Peck'. The original seedling bore its first fruits in 1946. Because of its initial good performance, it was selected for repropagation and further testing.

TESTING

Between 1948 and 1976, 18 1-year-old nursery trees were planted into second-test evaluation orchards at Geneva. Tree performance and fruiting evaluations were made from 1948 until the variety was introduced in 1982.

I n 1958 and 1959, fruiting performance on 8- and 9-year-old trees was especially good and because of this, this NY 1599 selection was given to the New York State Fruit Testing Association forthe propagation and sale of nursery trees. The Association sold trees of it for 8 years, 1960-1967. During this period, this new cherry continued to perform well in second-test evaluation orchards but performance was not outstanding. Therefore, in 1966, it was tentatively decided that the selection, although good, possibly was not sufficiently outstanding to be introduced. Consequently, the sale of trees was discontinued. That tentative decison is now reversed, and the selection is being named and introduced.

In 1969, dormant scions of this new NY 1599 sweet cherry were sent from Geneva for testing at the Ullensvang Research Station, Lofthus, Norway. At 60° North in Norway, between 1969 and 1981, 'Kristin' trees grew well in an experimental orchard. They were healthy, cropped well, and no winter injury was observed. Commercial cherry growers and researchers alike were impressed with its performance. It is partly due to their urging thatthis variety is now being introduced. Dr. Jonas Ystaas of the Ullensvang Station chose a girl's name, 'Kristin', to be the name of this new cherry.

TREE

In New York, trees of 'Kristin' are large, vigorous, winter hardy, and heavy cropping. In Norway, it has been above average in its reliable cropping. Yields in Norway in the 1974-1981 period were 0.6, 7.4, 13.9, 9.6, 29.4, 6.9, 12.3, and 24.3 kilograms per tree.

The 'Kristin' cherry was also tested near Flathead Lake in the cold state of Montana by Professor. Homer N. Metcalf, Department of Plant and Soil Sciences, Montana State University, Bozeman. He states, "trees (are) of much better than average hardiness, though southwest trunk injury will occur in severe winters. It is hardier than 'Bing' and 'Chinook'. We think it is worthy of naming and introduction."

In Norway, 'Kristin' trees were grafted onto the *Prunus avium* F12/1 clonal rootstock and were planted in an ex-

penmental orchard in April 1969. Trees have been healthy and have made good growth. In 1981, at 13 years of age, they had an average girth of 60 cm (23.4 inches) at a height of 25 cm (9.8 inches) above the ground. Trees have been winter hardy, showing no damage to fruit buds or trunks, even during the 1979-1980 test winter of several days at -18C(-0.4F).

FRUIT

Fruits of 'Kristin' are large, frequently 2.5 cm (about 1 inch) in diameter. In 1973, the largest fruits at Geneva were 2.8 cm. In Norway, from 1974-81, fruits were large. Their annual average weight per individual cherry ranged from 7.0 to 9.2 gm, with an 8-year average of 8.0 gm.

'Kristin' is a glossy, attractive, dark sweet cherry. The skin is very dark red or purplish black, and the flesh is red. The flesh is too dark for use in brining, but the variety is excellent for fresh eating, with firm flesh that is commonly known as a "black oxheart" type.

'Kristin' ripens in the middle of the sweet cherry season. At Geneva, this is in mid-July, about 2 days after 'Emperor Francis'. At Flathead, MT, "it ripened in advance of the main 'Lambert' season.'[1] In Norway, it ripens at the same time as 'Van' and a few days earlier than 'Sam[1].

The flesh of 'Kristin' cherries is firm, meaty, juicy, with sweet and richly aromatic flavor and with very good eating quality. In Norway, between 1974 and 1981, the soluble solids content annually ranged from 15.0 to 18.7 per cent and averaged 17.2 per cent. This is a good soluble solids content and is well above an acceptable quality threshold value of 14.2 per cent as defined for sweet cherries by Vangdal (1). Mature fruits developed a fine quality, even in cloudy summers and in years when the crop load was heavy. The pit is small and the flesh clings to it, somewhat.

Like most firm-fleshed sweet cherry varieties, 'Kristin' fruits will crack if rainy weather occurs just before harvest. But, in Norway it always cracked less than 'Van' and was equally resistant to cracking as the crack-resistant 'Ulster'.

'Kristin' is a possible replacement for 'Schmidt' which has been a leading fresh-market sweet cherry variety in the eastern United States. 'Kristin' fruits are superior in size and quality to those of 'Schmidt'.

CROSS POLLINATION

Like most sweet cherry varieties, 'Kristin' is self-unfruitful. Even though it produces good pollen, this pollen will not effectively pollenize flowers of the same variety. Provision must be made for cross- pollination by planting another cross-compatible variety within 30 m (about a hundred feet) from the 'Kristin' trees.

Pollination research at Geneva showed that 'Kristin' probably belongs either to incompatibility group II (S1-3)or to group IX (S1-4) (2). Therefore, it is recommended that neither group II varieties, such as 'Windsor', and 'Van', nor group IX varieties, such as 'Napoleon' and 'Vogue', be depended upon to pollenize 'Kristin'.

'Kristin' blooms about the same time as most other sweet cherry varieties. Therefore, the grower need not be concerned about planting early or late bloomers in the same orchard to provide for cross-pollination. On the other hand, tart cherry varieties are not suitable pollen sources for sweets because they usually bloom a week or more later than sweet varieties.

INSECTS AND DISEASES

Virus indexes at Geneva have shown that virus-free propagating wood of 'Kristin' is available but the variety is not resistant to infection by viruses transmitted by pollen or buds, 'Kristin' has not been tested for the degree of its susceptibility to common sweet cherry diseases, such as brown rot, cherry leaf spot or bacterial canker, or to insects. Presumably, it is susceptible to them all and afull schedule of chemical sprays will be needed.

COMMERCIAL USEFULNESS

Because 'Kristin' is a mid-season, black sweet variety, it probably will be most useful for roadside stand or pick-your-own markets. Its large fruit size, attractive color, firm flesh and excellent eating quality should make it competitive with any black variety now grown in the East. In Norway, it will be useful for commercial cherry growing.

AVAILABILITY

Beginning in 1984, limited quantities of nursery trees of 'Kristin' can be purchased from the New York State Fruit Testing Association, Geneva, NY 14456.

LITERATURE CITED

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