

# New York's Food and Life Sciences Bulletin

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## 'HARTLAND' BLACK SWEET CHERRY

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Figure 1.—Hart land black sweet cherry.

'Hartland' is a new early mid-season, consistently productive black sweet cherry with a winter hardy, disease tolerant tree. It is similar in ripening time to 'Sam', and it cross pollinizes most commercial cultivars. It has performed especially well in tests in New York, Michigan, and Maryland.

### ORIGIN

The 'Hartland' cherry originated as one of a family of 27 open pollinated 'Windsor' seedlings grown from seed planted in 1951. It was selected in 1958 because it had a uniquely spreading tree and a heavy crop of attractive fruit. It was designated 'NY 3308' and grafted in 1959 to make trees for further testing.

### TESTING

Between 1961 and 1986 scientists at the Geneva Experiment Station planted and evaluated three generations of orchards which included small numbers of trees of 'Hartland.' Station breeders also made 'Hartland' available as a numbered test selection to members of the Fruit Testing Association Nursery, Inc. and the scientists at other public research institutions. Thirty-one Fruit Testing Association members have tested it under diverse conditions and six public research institutions have it on trial. It has maintained a consistent cropping record in all locations.

### TREE

Trees of 'Hartland' are large, vigorous, winter hardy, and heavy cropping from an early age in New York. 'Hartland' trees have a unique, spreading, tree form. 'Hartland' has more lateral branching and flowering on previous season's, non-spur growth than all other cultivars that we have tested except 'Starking Hardy Giant.' Its naturally wide branch angles make it an easy tree to train with ample light penetration. The moderately droopy, secondary branching habit and its leaves which always show mid-vein, upward folding in hot weather are distinctive traits. The flowering spurs of 'Hartland' trees are retained in fruiting condition longer than most other cultivars tested. The combination of fruiting on both spur and non-spur sites allows good fruit distribution within the tree.

### POLLINATION

'Hartland's' blossom season is judged as mid-season compared to other commercial cultivars. Trees of 'Hartland' were tested during blossom time for pollenizer effectiveness and were found to belong to the pollenizer group designated as Group VI (S3S6). This is an important finding since this group is not widely represented in commercial

sweet cherry plantings throughout the world. Hence, 'Hartland' is uniquely well suited to be employed as a pollenizer in all commercial orchards except those with other Group VI cultivars. 'Hartland' itself is unfruitful if self-pollinated. Even though 'Hartland' produces abundant quantities of good pollen, this pollen will not effectively pollinize flowers of the same cultivar. Provisions must be made for cross-pollination by planting another cross-compatible, preferably mid-season blossoming cultivar within 30 meters (about 100 feet) from 'Hartland' trees.

## FRUIT

Fruits of 'Hartland' are medium-large, frequently two centimeters (nearly one inch) in diameter unless the tree is overset, when they will average 1.75 centimeter.

The individual fruits of 'Hartland' are nearly round (slightly oblong), their skin color at full maturity is a deep greyed-purple and is pleasantly glossy. The internal color is the same as the skin. Sugar levels of 'Hartland' fruit are lower than many commercial cultivars, usually ranging between 14.5 and 17 per cent, but adequate for all taste panels to have judged it acceptable. Moisture stress induced fruit cracking is less than most cultivars that ripen in the same maturity season at Geneva. Fruit firmness of 'Hartland' as measured by various tests have rated it as medium-firm, about like 'Sam' and 'Stella' and considerably better than 'Hedelfingen,' (1).

## PESTS

While virus-free propagating wood of 'Hartland' is available, the cultivar is not resistant to infection by viruses transmitted by pollen or grafting. 'Hartland' has not been tested experimentally for the degree of its susceptibility to common sweet cherry diseases, such as brown rot, cherry leaf spot, or bacterial canker, or to insects. However, our long trial period has shown that it has a higher degree of natural, field resistance to fungal leaf spot, brown rot, and bacterial canker than most cultivars that we have tested at Geneva. But, it is sufficiently susceptible to these diseases that a fully integrated pest management program will be needed.

## COMMERCIAL USEFULNESS

Because 'Hartland' is an early mid-season, black sweet cherry it probably will be most used for fresh market. Commercial sweet cherry orchardists throughout the Great Lakes Region and carefully chosen Mid-Atlantic and Northeastern coastal orchard sites will find that 'Hartland' will be a reliable cropper and an excellent pollenizer of other cultivars. While machine harvesting has not been attempted by us with test trees, it is the originating pomologist's opinion that its tree will be better suited to such harvesting than

'Gold,' a major processing cultivar in the Great Lakes Region. If it can be successfully machine harvested, processing of frozen cherries of 'Hartland' for common uses like yogurt and ice cream should succeed.

## AVAILABILITY

Cornell Research Foundation has applied for plant patents on 'Hartland' and has applied for trademark of this name. Nonexclusive licensing arrangements with responsible nurseries are being made through Cornell Research Foundation, Inc., Cornell Business and Technology Park, 20 Thornwood Dr., Suite 105, Ithaca, NY 14850. Trees will continue to be available from the Fruit Testing Association Nursery, Inc., NYSAES, Hedrick Hall, Geneva, NY 14456, as well as from licensed commercial nurseries.

## ACKNOWLEDGEMENTS

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## LITERATURE CITED

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2. Way, R. D. 1968. Pollen incompatibility groups of sweet cherry clones. *Proc. Amer. Soc. Hort. Sci.* 92:119-123.

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