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Hartland™ and Somerset™ Sweet Cherries in Denmark

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Abstract

Among 30 newer sweet cherry cultivars planted in a screening trial in Denmark the two Geneva NY, cultivars 'Hartland'™ and 'Somerset'™ have been outstanding in precocity and productivity. The yield has been especially remarkable in years where neighbouring cultivars blooming, on the same day, suffered from spring frost and gave no or only single fruits.

Material and Methods

Thirty cultivars were planted in a screening trial in fall 1994. Three trees of each cultivar were planted on Colt rootstocks at a spacing of 4 x 3 m. The trees were light pruned with a central leader. Management of the orchard was done as normal Danish standard for sweet cherries. In each of three cropping years fruit size, cracking index and fruit firmness were determined on 50 healthy fruits at three harvests with 2-4 days intervals during the ripening season. The cracking index was determined as earlier described (6, 7) over a 6 hours period in distilled water. Full bloom was recorded as the date when 90% of all flowers were open. The productivity of the trees was rated 1-9 (1 = no or single fruits; 9 = very heavy crop) the first three fruiting years, 3rd-5th leaf. (Table 1)

Results

The two cultivars 'Hartland'™ and Somerset'™ were only remarkable in the score for precocity and productivity. Several cultivars suffered from spring frost in 1998 and more in 1999. The average score of yield of the 30 cultivars was only 2,0 and only 'Hartland'™ and 'Somerset'™ had a score higher than 4.

'HARTLAND'™

Origin: Windsor x Open pollination, Geneva, New York. (2), tested as N.Y. 3308. The fruit ripens midseason, it is medium in size and firmness. Unfortunately, it had a high cracking index. The

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trees are moderate in growth with a good, open branching. It started heavy cropping at third leaf in accordance with the early results under its test number in Geneva in 1989 (3). In 1999, fifth leaf, the average yield of 3 trees was 16,0 kg/tree. In the original introduction in 1993 it was found to belong to pollinizer group VI and a unique pollinizer (2). In Belgium it also has been very productive and recommended as a test cultivar for the industry. (5).

'SOMERSET'™

Origin: 'Van' x 'Vic,' Geneva, New York, tested as 'N.Y. 6476' (3) The fruit ripens 5 days later than 'Hartland.'™ It is very firm, large and had a low cracking index. The trees had a moderate growth with a good open branching. It started heavy cropping one year later than 'Hartland,' on its 4th leaf. A lower final fruit set than 'Hartland' was caused by a heavy "June drop." Also in Belgium (5, 8) and in Romania (4) the trees were very productive. According to a description from Geneva (1) it belongs to the pollinizer group IV. Only very few cultivars flower as early as 'Somerset.'™

Conclusion

The two cultivars are found unique in combining high precocity and productivity with good quality under Danish conditions and are recommended as test cultivars for the industry.

Table 1. Results og 'Hartland'™ and 'Somerset,'™ 3rd-5th leaf.

	Date of full bloom +– 'Van'	Date of harvest +- 'Van'	g/fruit	Cracking index 1-100	Firmness score 1-5	Productivity 1-9
'Hartland'™	–3	–3	8,0	89	3,9	7,4
'Somerset'™	–4	+2	9,4	52	5,0	5,7
Mean 30 cultivars	—	—	—	—	—	2,0

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'Braeburn' Bitter Pit

On a tree basis an inverse relationship existed with fruit size and fruit calcium. Within a tree increases in the number of full seeds were associated with increases in fruit size and calcium of individual fruit. An increase in the number of flat seeds was associated with decreases in fruit weight and calcium. This association was not only a result of the relationship between full and flat seeds, as flat seeds themselves were associated with negative effects on fruit quality, irrespective of full seed number. From Broom et al. 1998. J. Hort. Sci. And Biotech 73(4):555-561.