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Evaluation of Some New York Sweet Cherry Selections in Romania

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Abstract

Six sweet cherry cultivars and 16 numbered selections from the New York State Agricultural Experiment Station were evaluated for bloom and maturity dates, tree yield and trunk circumference in an orchard planted in 1977 at The Fruit Research Institute in Pitești-Mărăcineni, Romania. The latest blooming selections were NY 9801 and 'Vogue.' Harvest maturity spanned approximately 11 days. 'Van' was the highest yielding cultivar and only 'Vogue,' 'Kristin,' NY 7690 and NY 6476 had mean average yields similar to 'Van.' NY 7690 was the only high yielding New York selection with a comparably small trunk circumference to be considered as a potential commercial cultivar in Romania.

Introduction

The Fruit Research Institute in Pitești-Mărăcineni, Romania, is responsible for testing new sweet cherry varieties which have the potential to diversify and improve the sweet cherry assortment (1, 2, 3). New selections are tested for their adaptation to the agroecological conditions and their po-

tential commercial value. In March 1977, a comparative trial orchard was planted in Pitești with 16 number selections and one cultivar from the New York State Agricultural Experiment Station, Geneva, New York, and 5 cultivars of commercial importance in Romania. The objective of this article is to present the results of this experiment.

Materials and Methods

The field trial included 22 individuals (16 numbered selections and 6 cultivars). 'Kristin' was formerly NY 1599. The selections were randomized in 4 complete blocks with 4 trees in each replication. The trees, propagated on mahaleb rootstock, were planted at 4.5 m in the row and 5 m between rows and trained to a modified central leader system. The space under the trees was disced while orchard grass

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was grown between the rows. Nitrogen fertilizers were applied only in the first three years so as to not stimulate excessive vegetative growth.

Data was taken on the following characteristics: bloom and maturity dates, tree yield for 1986-1990, and trunk circumference in 1990.

Results

Bloom date in Romania ranged from the fourth week of March in 1990 to the last week of April in 1987. Generally, the bloom span was over a 10

or 15 day period (Fig. 1). In all years and for all cultivars, bloom periods overlapped for several days which was sufficient for cross-pollination. The earliest blooming selections were NY 5690, NY 2779, and NY 6476 and NY 7690 while the latest blooming selections were NY 9801 and 'Vogue.' Yearly differences in harvest maturity ranged from the last week in May to the middle of June, spanning approximately 11 days (Table 1).

'Van' is the most productive sweet cherry cultivar with high fruit quality

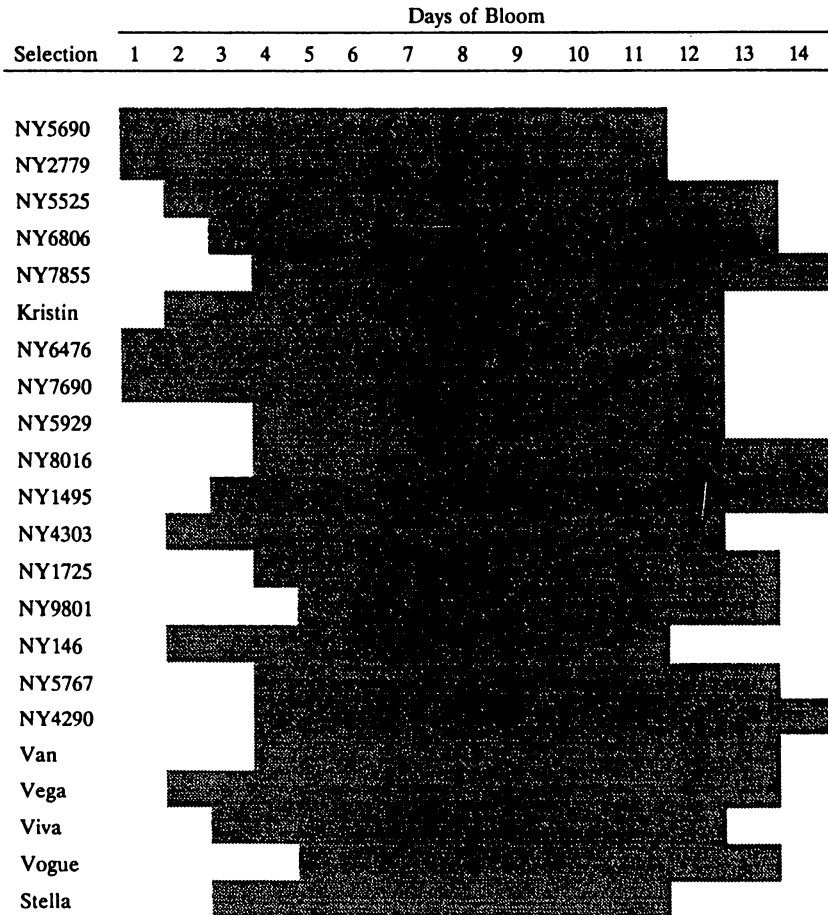


Figure 1. Bloom periods for sweet cherry cultivars and numbered selections in Romania in 1987.

Table 1. Relative harvest maturity date for sweet cherry cultivars and numbered selections in Romania.

Maturity (days)												Maturity (days)											
Selection	1	2	3	4	5	6	7	8	9	10	11	Selection	1	2	3	4	5	6	7	8	9	10	11
NY1495	x											NY146									x		
NY5525				x								NY4290									x		
NY1725						x						NY9801									x		
NY5767							x					NY2779										x	
NY5929							x					NY7855										x	
Viva							x					NY4303										x	
Vogue								x				NY5690											x
Van								x				NY6476											x
NY6806								x				NY7690											x
Vega									x			NY8016											x
Kristin										x		Stella											x

in Romania. Only 'Vogue,' NY 7690, 'Kristin,' and NY 6476 had mean average yields for the 5 year period similar to 'Van' (Table 2). The fruit size for NY 7690 was also especially large, with a mean fruit weight of 8.1 g compared to 6.2 g for 'Van.' NY 7690 had a smaller trunk diameter than did 'Van' while 'Kristin' was more vigorous and as a result is not of commercial interest (Table 3).

Discussion

NY7690 was the only New York selection which performed with suffi-

cient yields and/or acceptable vigor to be considered as a potential commercial cultivar in Romania. Continuing research with these and newer selections is underway at Geneva, N.Y. with Dr. Robert L. Andersen as project leader and Mr. Kenneth G. Livermore as Senior Research Technician. In 1991, this program named 'Royalton,' formerly [NY 11390 (NY 1725 open-pollinated)]. It will release NY 3308 in 1992. Both will be patented by Cornell Research Foundation. NY 7690, a white fleshed type, and NY 6476, a black fleshed type, are still

Table 2. Yield of 22 sweet cherry cultivars and numbered selections.¹

Selection	Yield (kg/tree)	Selection	Yield (kg/tree)
Van	37.8 a ^x	NY9801	27.6 bcde
Vogue	32.6 ab	NY2779	27.2 bcde
NY7690	32.4 ab	NY4290	25.6 bcde
Kristin	31.0 abc	NY7855	24.2 bcde
NY6476	29.8 abc	NY5767	24.2 bcde
NY4303	29.0 bcd	NY5929	23.2 cde
Viva	29.0 bcd	Stella	22.4 cde
NY146	28.8 bcd	NY1495	22.2 cde
NY1725	28.4 bcd	NY5525	22.0 cde
NY5690	28.2 bcd	NY8016	20.2 de
NY6806	27.8 bcd	Vega	18.8 e

^xMeans followed by different letters are significantly different according to Duncan's multiple range test at P = 5%.

^yYield is an average of five years (1986-1990).

EVALUATION OF SOME NEW YORK SWEET CHERRY SELECTIONS

Table 3. Trunk circumference of 22 sweet cherry cultivars and numbered selections in 1990.

Selection	Trunk circumference (cm)	Selection	Trunk circumference (cm)
NY5767	91 a ^x	Van	75 bcdefg
Kristin	86 ab	NY9801	73 bcdefgh
NY1495	83 abc	NY8016	71 cdefgh
NY5690	82 abc	NY6476	69 defghi
NY5929	82 abcd	NY5525	68 efghi
NY1725	80 abcde	Vega	67 fghi
Voogue	80 abcde	Stella	66 fghi
NY4303	78 abcdef	NY7855	65 ghi
NY6806	77 bcdefg	NY4290	65 ghi
NY2779	76 bcdefg	Viva	61 hi
NY146	75 bcdefg	NY7690	61 hi

^xMeans followed by different letters are significantly different according to Duncan's multiple range test at P = 5%.

prominent elite selections which may be released. Public researchers can contact R. L. Andersen directly for access to selections and the New York State Fruit Testing Cooperative Association, Inc. will provide trees to growers.

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Sharbo Selection—A New Almond

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Almond is an important fruit crop cultivated in district Kinnaur. Due to dry, temperate climate, good quality nuts are produced which are comparable to those grown elsewhere. In the efforts of cultivation, a large number of seedlings have been selected by the growers.

The seedling 'Sharbo Selection' is about 15 years old growing at Regional Horticultural Research Station, Sharbo. Percentage is not known. The tree is vigorous and well spread. Full bloom was recorded in the middle of March. The flowering coincided with Tree No. 109, Tree No. 69, 'Katha,' 'Telengi Selection' and Dhebar.' The fruit set

was only 5 per cent under selfing by bagging, whereas it was 64% in open pollination. The fruit set when pollinated with above mentioned seedling selections ranged from 6 to 10 per cent.

The flower buds are present laterally on one-year-old growth. Some flowers are present on spurs on older shoots. The fruit is thin shelled, oblong, kernel slightly shrivelled. Yield was 7.5 kg of dried nuts during 1989, whereas the cumulative yield of the last five years was 21.5 kg. The seedling is resistant to gummosis which is common in other cultivars and seedling selections being grown at the station.

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