

New sour cherry cultivars selected from local sources

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North-East Hungary, the sour cherry growing region is still rich in genetic variability of the species. As a result of clone selection, useful varieties have been selected during the last quarter of the 20th century as 'Újfehértói fürtös', 'Debreceni bőtermő' and 'Kántorjánosi', which furnish more than a half of the Hungarian sour cherry market. Recently in 2007, further two varieties have been approved and registered by the State: 'Petri' and 'Éva' (Szabó & Szőke, 2008). Their experimental evaluation was performed at Újfehértó and at Helvécia. They are similar to the earlier approved ones, but are more valuable than those regarding several qualities. The choice of varieties has been increased due to the novelties, and some of the old varieties could be substituted by them especially in the NE-Hungarian region.

'Petri'

Lövőpetri is the village of origin of the clone, which has been selected by Szőke Ferenc, a local fruit grower. In 2007, State registration was given to the cultivar. It's ripening season is particularly late, i.e. in early July. Fruit size is medium (5–5.5 g), slightly oblate, the diameter is 21.9 mm. The pericarp is glossy, deep crimson, the pulp is moderately dying. The stone represents 7.4 per cent of the fruit mass. The taste is harmonic sour-sweet, not tartish after being consumed freshly. It is not prone to be dropped. The flesh is consistent like 'Újfehértói fürtös' and juicy. The panel judged the canned product as for flavour, taste, size and shape, moreover, its colour to be better than that of the comparable cultivar 'Újfehértói fürtös'. Its juice as a drink was equivalent with that of the latter (Table 1 and 2).

The tree grows with moderate vigour, moderately erect, then spreading, finally with a globe shaped

canopy. It grows equally well on *P. mahaleb* or on cherry rootstock. Branching tendency and the development of fruiting structures is excellent. The number of fruiting spears is three times higher than on the cultivar 'Újfehértói fürtös'. The growth at fruiting age is balanced, some thinning of branches is required. The blooming date is late and the flowers are self fertile. The rate of fruit set after self-pollination was 11.5% according to observation over 20 years, i.e. twice as that of varieties of similar size. Open pollination results in 27.9% fruit set. Fruit set rates observed on a couple of NE-Hungarian sour cherry varieties are presented in Table 3. Self and cross fertility of 'Petri' is outstanding. The fertility is expressed also in the yields obtained (Table 4). It's quality being proper for fresh consumption is coupled with high productivity.

Table 1 Panel data of canned sour cherries (Helvécia)

Cultivar	Consistency		Taste, flavour		Size, shape		Colour		Total	
	H*	Ú**	H	Ú	H	Ú	H	Ú	H	Ú
Debreceni bőtermő	3.9	3.8	3.9	3.8	4.0	4.2	3.9	3.6	15.7	15.3
Kántorjánosi 3	3.9	4.0	3.9	4.3	4.2	4.2	4.1	4.1	16.1	16.5
Petri	4.1	4.1	4.2	4.1	3.9	4.2	4.1	4.0	16.2	16.3
Éva	3.9	4.0	3.9	4.2	3.9	4.1	4.1	4.3	15.7	16.4
Újfehértói fürtös	4.0	3.9	3.8	4.1	3.7	3.9	3.8	4.0	15.4	15.8
Average	4.0	3.8	4.0	3.8	4.1	4.2	4.0	3.6	16.1	15.3

Remark: *H: Sample of Helvécia; **Ú: Sample of Újfehértó

Source: Szani et al., 2008

Table 2 Panel data of juices (Helvécia, 2000–2002)

Cultivar	Flavour		Taste		Colour		Total	
	H*	Ú**	H	Ú	H	Ú	H	Ú
Debreceni bőtermő	3.6	3.6	3.7	3.4	2.6	3.6	9.9	10.6
Kántorjánosi 3	3.7	3.6	3.9	3.6	3.1	3.6	10.6	10.8
Petri	3.4	3.7	3.6	3.7	2.9	3.4	9.9	10.9
Éva	3.8	3.3	4.2	3.3	3.6	2.7	11.5	9.3
Újfehértói fürtös	3.5	3.5	3.6	4.1	2.6	3.8	9.7	11.3

Remark: *H: Sample of Helvécia; **Ú: Sample of Újfehértó

Source: Szani et al., 2008



'Petri'



'Éva'

Table 3 Self-fertility and fruit set at open pollination in sour cherry varieties and clones compared to the standard cultivar 'Újfehértói fürtös' (Újfehértó, 1994–2002)

Cultivar	Self-fertilisation		Open pollination	
	%	base of comparison	%	base of comparison
Újfehértói fürtös	4.5	100.0	21.9	100.0
Kántorjánosi 3	5.3	117.8	18.2	83.1
Debreceni bőtermő	4.0	88.9	21.3	97.3
Petri	12.2	271.1	30.2	137.9
Éva	3.6	80.0	22.3	101.8

Source: Szabó, 2004

Table 4 Productivity of sour cherry cultivars (Újfehértó, 1996–2002)

Cultivar	Total yield		Yield		Yield	
	kg/tree	%	kg/tcf cm	%	kg/m ³	%
Újfehértói fürtös	184.0	100.0	0.57	100.0	1.21	100.0
Kántorjánosi 3	309.0	167.9	0.84	147.4	1.53	126.4
Debreceni bőtermő	245.0	133.1	0.93	163.1	1.95	161.1
Petri*	373.0	202.7	1.06	186.0	1.95	161.1
Éva*	420.0	228.3	1.03	180.7	1.78	147.1

*= data of 4 years; kg/tcf cm=yield kg per trunk circumference cm;

kg/m³ = yield kg per crown-canopy volume m³

Date of planting: 1990–1991 of the experiment (2 trees/cultivar);

rootstock: *Prunus mahaleb*

Source: Szabó, 2004

'Éva'

Szőke Ferenc, fruit grower and breeder selected in a house garden around the commune of Fényeslitke this cultivar, which has been recognised by the State in 2007 and applied

for a patent. Ripening in early July, the fruit is largely the same in appearance and tastes as 'Újfehértói fürtös'. The fruit size is large or medium large (5.4 g), 22.1 mm. Its shape is round, above slightly flattened, its stem bears stipulae less frequently than other sour cherry varieties, i.e. at a rate of 43.2% only. The ratio of stones is 6.8%. The pericarp is dark red, glossy. The pulp is hard, slightly dying. The taste is slightly acid, it contains less sugar than 'Újfehértói fürtös'. Fruits are not prone to drop. The juice made for a drink represents the same quality as that made from 'Újfehértói fürtös'. The canned product of 'Éva' has been judged to be somewhat better than that of the standard cultivar in consistence, smell, flavour, size and colour. The vigour of tree is strong, shoots are rising, but they are somewhat smaller than those of 'Újfehértói fürtös'. Old trees may develop drooping branches like whips, but the tendency to get bald is less expressed, substantially, than in 'Újfehértói fürtös'. The start of bearing in young trees is early and fruit load is abundant. Blooming date is late, the flowers are self-fertile. According to experimental proofs raised between 1985–2005, the mean rate of fruit set was 4.3% after self-pollination, and 21.8% in open pollination. The main values of the cultivar are definitely the high quality for fresh consumption as well as for processing in addition to its high productivity.

References

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