

THE BEHAVIOUR OF SOME APRICOT VARIETIES GRAFTED ON GENERATIVE ROOTSTOCKS AT S.C. OLMA S.R.L. COM. BALTATI, JUD. IASI

COMPORTAREA UNOR SOIURI DE CAIS ALTOITE PE PORTALTOI GENERATIVI LA S.C. OLAMA S.R.L. COMUNA BĂLȚAȚI, JUD IAȘI

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Abstract. *Production of new planting material for apricot is difficult because in Romania we don't have valuable vegetative rootstocks to ensure easy propagation and to allow establishment of intensive and superintensive orchards. In this specific segment of nursery generative rootstocks are used obtained from the seeds of Prunus cerasifera, apricot or even almond. Thanks to this element, we can set up intensive orchards, being necessary a relatively large space for spatial formation and development of the tree crown.*

Key words: grafting, varieties, generative rootstocks

Rezumat. *Producerea materialului săditor la specia cais este dificilă deoarece în România nu există portaltoi vegetativi valoroși care să asigure o înmulțire facilă (marcotaj vertical, orizontal etc) și care să permită înființarea de livezi intensive și superintensive. În acest segment specific al pepinierii se folosesc portaltoi generativi (franc) obținuți din semințele de mirobolan, zarzăr sau chiar migdal. Datorită acestui element, plantațiile care se pot înființa sunt de tip intensiv, fiind necesar un spațiu relativ mare pentru formarea și dezvoltarea spațială corespunzătoare a coroanei pomilor.*

Cuvinte cheie: altoire, soiuri, portaltoi generativi

INTRODUCTION

Apricot, one of the species highly valued for its fruit, currently receiving great attention both from researchers and from growers.

Thus assortment of apricot has known a constant regeneration over time, each year adding new varieties, more productive and with outstanding quality fruit (Istrate, 2007).

Iasi district is the north-eastern limit of culture for this species, and for apricot, is a constant demand for planting material used for setting up new orchards and from smallholders who cultivate this species for their own consumption (Dascălu *et al.*, 2010).

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The presented material we study nursery behavior of four varieties of apricot (Goldrich, Umberto, Favorit and N.J.A 19) grafted on two rootstocks (*P. armeniaca* and *P. cerasifera*).

MATERIAL AND METHOD

The experience was made from year 2014, at S.C. Olma S.R.L., Baltati, Iasi, and we used 4 apricot varieties (Goldrich, Umberto, Favorit, N.J.A. 19) engrafted on *Prunus armeniaca* and *Prunus cerasifera* rootstocks.

Each variety was an experimental variant, and for each was taken 5 repetitions.

Biometric measurements were made on grafting grip, number of buds start in vegetation in first nursery field, number of plants lost in second field and total new trees obtained in second year of nursery field (Gradinariu *et al.*, 1998).

RESULTS AND DISCUSSIONS

In table 1 can be seen that the Goodrich variety, gripping the bud grafted on two rootstocks was 88% from 83% to *P. armeniaca* and *P. cerasifera*, and in the second nursery field losses were 12% and 17% respectively.

Variety Umberto had an identical behavior in both rootstocks being used, gripping was 86% and losses from the in the second nursery field around 14%.

Favorite variety has obtained the lower grip to grafting, which is 85% in the case of rootstock *P. armeniaca* and 80% at *P. cerasifera*. Also, the percentage of dying in the in the second nursery field was 15% and 20% respectively .

The N.J.A 42 grafted on to *P. armeniaca* gripping the grafting was 86%, all buds grafted starting in vegetation, and the losses were 14%. The same variety grafted on *P. cerasifera* recorded a grip rate of 79%, the number of buds lost in the second nursery field being 21%.

Table 1
Behavior in nursery of four apricot varieties grafted on different rootstocks

Grafted variety	Rootstock used	Grafting grip (%)	Buds started in vegetation (%)	Scions lost in second field (%)	Standard (STAS) trees obtained from those grafted (%).
Goldrich	<i>P. armeniaca</i>	88	88	12	84
	<i>P. cerasifera</i>	83	83	17	79
Umberto	<i>P. armeniaca</i>	86	86	14	82
	<i>P. cerasifera</i>	86	86	14	82
Favorit	<i>P. armeniaca</i>	85	85	15	81
	<i>P. cerasifera</i>	80	80	20	76
N.J.A 42	<i>P. armeniaca</i>	86	86	14	81
	<i>P. cerasifera</i>	79	79	21	75

Table 2 analysis it can be seen that in the field, to a height of 80 cm, the diameter of grafting section was 4 mm at N.J.A 42 and Goldrich varieties, 3.5

mm at Favorit variety and 5 mm at Umberto variety. Tree height at the time of stratification was between 1.80 m for Favorite variety and 2.8 m at Goldrich and Umberto varieties.

Of the total of 400 trees review (100 for each variety grafted) 327 were obtained from trees, gripping STAS being between 81-84% for Favorit, Umberto and Goldrich varieties, and the N.J.A. 42 has obtained 80%.

Tabel 2

Scion increase after gripping on the rootstock *P. armeniaca*

Grafted variety	Rootstock used	Diff. between rootstock and scion diameter (mm)	Scions behavior		Standard trees obtained	
			Diameter at 80 cm height (mm)	Height (m)	Pcs.	% from total
Goldrich	<i>P. armeniaca</i>	4.7	4	2.80	100	84
Umberto	<i>P. armeniaca</i>	3.2	5	2.80	100	82
Favorit	<i>P. armeniaca</i>	4.5	3.5	1.80	100	81
N.J.A 42	<i>P. armeniaca</i>	4.6	4	2.70	100	80
Total					327	

In the case of grafting on *P. cerasifera* (tab. 3) may find that the tree diameter at 80 cm above ground level was 4 mm to 5 mm for Favorite, Umberto N.J.A.42 varieties and 6 mm at Goldrich variety.

The height of the trees obtained was between 1.60 m from Favorite variety and 2.50 m in N.J.A. 42 and Umberto varieties.

Of the total of 400 trees taken into study were obtained at the end of the second year, 303 trees, lowest value on the N.J.A. 42, and highest value on the Umberto variety.

Table 3

Scion increase after gripping on the rootstock *P. cerasifera*

Grafted variety	Rootstock used	Diff. between rootstock and scion diameter (mm)	Scions behavior		Standard trees obtained	
			Diameter at 80 cm height (mm)	Height (m)	Pcs.	% from total
Goldrich	<i>P. sativa</i>	4	6	2.40	100	79
Umberto	<i>P. sativa</i>	5	5	2.50	100	80
Favorit	<i>P. sativa</i>	6	4	1.60	100	76
N.J.A. 42	<i>P. sativa</i>	5	5	2.50	100	70
Total					303	

CONCLUSIONS

All varieties grafted onto the that two rootstock recorded a percent closely to the standard (STAS).

Technical conditions for 1 year grafted trees emphasized that both systems (radicular and aerial) fall within the quality limits for apricot propagated material.

Both rootstocks can be used successfully used in orchards in NE Romanian area.

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