BEHAVIOR STANLEY PLUM VARIETY DWARF PEACH ROOTSTOCK

Popovici Daniel*, Ştefan Iulian*, Biro Cornelia*, Ivanescu Renate*

* University of Oradea, Faculty of Environmental Protection, Gen.Magheru st., no.26, 410048, Oradea, Romania, e-mail: popovicistatiune@yahoo.com

Abstract

Biological characteristics of dwarf peach rootstocks refer to the effect of increasing compatibility (scion, rootstock) productivity, longevity, resistance to disease and pests, uniformity individuals. Considering that fruit production is influenced by association scion rootstock and varieties should be chosen depending on the conditions rootstock of the plantation will be established prerequisites for obtaining optimal plantations. Modern research focused on obtaining rootstocks with small height allows the intensive plantations of peach. Dwarf rootstocks are one of the easiest and cheapest ways to obtain fruit trees with small and medium size. The vigour rootstock is of major importance in the implementation of rootstocks production. Influence of the rootstock scion manifests phenotypic characters influence the physiological variety grafted on rootstock remains as long as the association survives (size, precocity, and productivity, resistance to ground and climatic factors, longevity fruit trees). Goals the dwarf rootstocks in the programmed type of research include the following: vegetative propagation of rootstocks; propagation through modern methods; good compatibility between scion and the rootstocks; good production; plasticity and longevity in conditions of minimum soil tillage.

Key words: fruit research, dwarf rootstock, vegetative propagation, compatibility, plasticity, longevity, productivity.

INTRODUCTION

Plum, *Prunus domestica*, is part of the family *Rosaceae*, subfamily *Prunoideae*, this species was assessed through multiple qualities of fruit and ecological plasticity. Fruits are highly valued for nutritional qualities and of the multiple forms of capitalizing being one of the most common fruit growing species with the tradition of Romania both in commercial orchards as well as in their own households (Ardelean, 1986).

The rootstock breeding program are aimed at creating small with vigor rootstocks and does not present difficulty in multiplication rootstocks adaptable to different types of soil, resistant to diseases and pests. The rootstock defines the culture system, thus extending the intensive plantations of plum tree and superintensive stock is however limited (Stephen, 1994).

Following the improvement program developed peach rootstocks were homologated and patented several dwarf rootstock type of pretability for the species: peach, plum and almond (Muresan, 1967). The vast majority of rootstocks used in plum breeding nurseries at the disadvantage of issuing

wild offshoots high growth inducing effect of grafted trees (Popescu, 1982). Most often spread to the multiplying rootstock plum varieties is *Mirobolanul* which is a rootstock with prentability for heavy soils with temporary excess moisture, but this has the disadvantage of issuing offshoots and print high growth vigour. By using dwarf peach rootstock was removed these shortcomings and contribute to the modernization culture technologies in this species (Dutu, 1992).

MATERIAL AND METHODS

For the proposed study we chose peach rootstock dwarf, which is under approval and Stanley plum cultivar. Of the variety graphed the rootstock effect Prints small growth and do not savages offshoots.

Stanley plum tree is a kind of American, very common in our country. Vigor of growth is average with very vigorous skeleton branches, predominantly bouquets May fertile and good pollinator is very productive and tolerant Plumpox. Fruits are medium size, covered with blue bloom, the kernel is non-stick. Age of maturity is the third decade of August.

As used research methods were used biological methods, which involves calculating and interpreting data recorded from 10 trees, so calculating the trunk area and tree height, compared with the same variety and rootstock witness is *Mirobolan*, units of measurement are metric.

RESULTS AND DISCUSSION

Observations and measurements were made on trunk sectional area and tree height.

Regarding the cross-sectional area of the trunk, the data in Table 1 and Table 2 reveals that the average section area is 2.28 cm² trunk, *Stanley* plum cultivar grafted on peach rootstock Oradea 4 compared with *Stanley* plum cultivar grafted on rootstock *Mirobolan*, which vigor-sectional area of 1.30 cm² trunk is so values.

At its height Stanley plum trees grafted on dwarf peach rootstock (Table 1), the recorded average value of 1.78 m, compared to Stanley plum tree rootstock grafted on *Mirobolan* (Table 2), which has an average value of 1.90 m, so the values are slightly significant.

In conclusion, the determinations made nursery phase differences between rootstocks used in this experience are insignificant, they were much or very much significant phase orchard.

Table 1

Trunk cross-sectional area and the variety of plum tree height Stanlay, grafted on dwarf rootstock for peach.

	Sectional area of the trunk (cm²)	**Height of trees (m)**
1	2.05	1.75
2	2.05	1.80
3	2.05	1.60
4	1.25	1.80
5	2.05	1.83
6	2.05	1.80
7	2.05	1.75
8	2.05	1.75
9	2.40	1.85
10	2.78	1.90
Average	2,28	1.78

Table 2

Trunk cross-sectional area and height *Stanlay* plum tree variety, grafted on rootstock *Mirobolan*

Tree	Trunk cross-sectional area cm²	Tree height m.
1	2.13	1.92
2	2.16	1.87
3	2.15	1.94
4	1.55	1.60
5	2.11	1.96
6	2.15	1.91
7	2.13	1.87
8	2.17	1.95
9	2.53	1.98
10	2.95	2.01
Average	2.30	1.90

CONCLUSIONS

1. Portaltoii dwarf peach can be used as *Stanley* plum rootstock variety, offering the possibility of modernizing culture technologies for this species.
2. Portaltoii dwarf peach perform well soil – climate factors Oradea area.
3. Portaltoii dwarf peach Prints the small force resulting growth of small and medium sized varieties.

4. Dwarf peach rootstocks not grow wildly important goal thus reduces maintenance work in the plantation.

REFERENCES

1. Ardelean M., 1986, Ameliorarea plantelor horticole şi tehnică experimentală, Tipo. Agronomia Cluj–Napoca.
2. Ardelean M., Sestraş R., Cordea Mirela, 2002, Tehnică experimentală horticolă, Ed. Academicpres.
3. Butuc Mădălina, 2012, Soiuri de prun din livezile comerciale din Romania, Horti magazin, no. 5/2012, Ed. Agricola.
4. Dobrotă Cristina, Yamashita M., 1999, Creşterea şi dezvoltarea plantelor, Ed. Casa de editură Gloria.
5. Duţu I., 1992, Stadiul actual privind ameliorarea vegetativă pentru speciile sâmburoase.
6. Mitre V., 2001, Pomicultură specială, Ed. Academicpres.
7. Mureşan T., 1967, Bazele genetice ale ameliorării plantelor, Ed. Agro-Silvică.
8. Popescu M., Miliţiu I., Mihăescu Gr., Cireaşă V., Godeanu I., Drobotă Gh., Cepoiu N., 1982, Pomicultură generală şi specială, Ed. Didactică şi Pedagogică, Bucureşti.
9. Ştefan I., 1994, Materialul folosit pentru crearea de portaltoi cu talie mică la migal.
10. Ştefan I., Ştefan Monica, 1994, Rezultate parţiale cu privire la obţinerea de portaltoi cu talie mică la cais şi piersic, Sesiunea de referat I.C.P.P., Piteşti.
11. Ştefan I., Ştefan Monica, 1995, Ameliorarea genetică a portaltoilor dwarf pentru piersic, sesiunea jubiliană, Universitatea de Ştiinţe Agronomica a Banatului.