THE BEHAVIOR OF SOME NEW APPLE VARIETIES ON CROWN GRAFTING

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SUMMARY

In the situation when these plantations are in a good physiological condition and the alternative to break up and replant will acquire bigger investments, the crown grafting represents a faster possibility of orchard assortment change.

Therefore, in 2005 it were crown grafted in the didactic-experimental field of the Pomiculture Desk from Bucharest 18 recent apple varieties from Slovakia. These varieties are: Red Elstar, Red Chief, Rene, Jonafree, Pinova, Produkta, Piros, Enterprise, Gala King, Bolero, Polka, Charlotte, Waltz, Goldstar, Golden Lasa, Golden Orange, Galaxy and Remo. In 2006, another two varieties (Jonagold Red Prince and Braeburn) were grafted too. The rootstock was represented by the crown of the 8 years old trees which belong to the Prima apple variety. The grafting method chose was cleft grafting and stub grafting. The scion was represented by 2-3 buds branch length, blunt wedge-shaped; the wounded areas were protected with grafting wax.

It were made determinations concerning the grafting success percentage, the growing vigour of the shoots, the flower buds differentiation capacity and the productivity. The grafting success percentage was influenced by variety, quality of the scion branches and the rootstock thickness. It were registered good results, with a grafting success of 86 to 100%. The growing and ramifying of the shoots was also different depending on variety vigour. It was remarked a bigger difference between the columnar apple varieties (Bolero, Polka, Charlotte, Waltz) and the standard ones. Within the standard apple varieties, it were observed with a bigger vigour the varieties Jonafree and Pinova and with a lower vigour Breaburn, Golden Orange and Remo varieties. From the same point of view, within the columnar apple varieties, Bolero showed a bigger vigour than Polka and Charlotte. The ramifying capacity was well expressed at the varieties Enterprise, Golden Orange and Remo, and in opposite situation were noticed Rene, Red Chief and Gala King. From the second year of grafting, some varieties start to produce and in the third year, the flower bud differentiation and the productivity become notable, the crowns being capable to assure economically productions. The best varieties regarding the productivity were Gala King, Enterprise and Galaxy.

In this way, we think that the crown grafting could be a real possibility to a quicker change of the assortment, to realise in short time comparative fields for a faster test of the new varieties, to preserve and protect old varieties or create pomological collections etc.

REFERENCES