Effect of "Knip" Method in Apple Nursery Tree Production on the Apical Dominance cv Gala Galaxy

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Abstract: This research paper presents the results of a field trial with managed nursery trees including apple cultivar Gala Galaxy, on the rootstocks M9 and MM 106. In April 2011, saplings (bench grafted) were planted in the distance 100 cm x 35 cm. In the second season (2012) the experimental plot was separated in a randomized block system of five combinations (GerBA 2.5%, Progebalin 2.5%, Pinching, i.e. removal of terminal leaves and Control), with three repetitions of 10 plants (150 saplings for each apple rootstock combinations in total). The length of lateral shoots was examined. The length of 8 lateral shoots from the nursery tree canopy was measured (the first four were located at the bottom and second four were on the top of the canopy). Application of treatments was done three times in 14 days interval, starting when the main axis reached the length of 15 cm above cutting scion (70 cm above the ground). Control saplings were not cut and were not treated. Comparison of 'knip' method of nursery tree production with controls shows significant changes in shoot length along the sapling. In 'knip' saplings, the longer shoots were located on the lower part of the sapling's canopy whilst in the control sapling, the upper shoots had the highest growth. This clearly shows the effects of sapling production using 'knip' method in limiting the apical dominance of apple saplings.

Keywords: *apical dominance, apple nursery tree, cultivar, rootstock, bioregulators*

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