Annotation

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Parameters of apple tree crown depending on the method and period of pruning

The article is devoted to the comprehensive studying impact of methods and terms of pruning on the diameter, volume, projected area of the crown and level of development of feeding area by apple trees of varieties Golden Delicious and Jonaveld on the rootstock M.9 T337 in irrigated garden. It is found that the change of crown parameters primarily depends on methods and terms of pruning.

Efficiency of fruit production limits labor productivity level at pruning due to the high complexity of operations and labor shortages. Therefore, development and implementation of elements of the mechanized care of plantings, in particular contour pruning, become more urgent. By adjusting parameters of the aboveground part of trees the best coverage of the crown center is provided, air circulation improves, thus stabilizing fruiting and improving marketable yield qualities.

The purpose of the study is to define effective method and timing of pruning which provide the optimal parameters of the crown of apple trees in the intensive planting.

Trees were pruned in winter or in winter and in early summer period in the presence of 10 leaves per stem, by one of the following methods: traditional (manual), contour with forming fruit wall of 80 cm width in a lower part and 50cm in a top part (modeling by template) annually shortening accretions on the periphery of a crown and contour with manual correcting.

Pruning method significantly affects the diameter (impact of factor is 45%), the crown volume (35%), projected area and degree of developing feeding area (43%). It is found that 3% increase in the diameter of the tree crown of Jonagold variety compared with Golden Delicious variety which crown volume is by 12% more and by 7% more comparing projected area and degree of developing feeding area. When contour pruning with manual correcting the crown diameter on average is reduced by 9%; the crown volume is reduced by 18% and the projected area and degree of developing feeding area – by 16%. Due to a combination of winter pruning with early summer one it is noted decreasing in diameter by 5%, the crown volume – by 10%; the projected area and the degree of developing feeding area – by 9%, respectively.

Key words: *apple, crown, volume, projected area, contour pruning.*