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# Survival and Growth of Aboriginal and Introduced Woody Plant Species at Middle Hill Sandy Sites in Steppe Zone

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*The study is devoted to the evaluation of the success of the forest crops from woody species on sandy soils in the steppe climatic conditions.*

*The article deals with the need to identify among the native and introduced woody species the most promising ones to creating plantations with high viability, durability and protective potential.*

*Presents the results of studies carried out on a plot of middle hill sandy sites allotted for the creation of the «Pearl of Eurasia» forest park. The variety of woody and shrubby species in the planted forest crops causes a decrease in the combustion capacity of future forest park plantations, their stability, functionality, recreational and aesthetic value [1]. Aboriginal species include indigenous vegetation in the research region, to introduced – species imported from other biogeographical regions and potentially useful for the locality [2].*

*The authors analyzed the ecological properties of the planted woody species, the indicators of their survival rate and growth in the silvicultural area, depending on edaphic conditions, terrain and exposure. Surveys of the forest crops of native species showed that the most sustainable to growing conditions in the silvicultural area were the green ash, the pedunculate oak and the common elm. A certain efficiency was observed when using the technology of planting the Norway maple with a closed root system and when adding chernozem to the planting holes when planting the crab apple. The common alder crops proved to be successful due to the optimally chosen place of planting.*

*The Crimean pine belongs to the introduced species and is the forest-forming breed of the forest park being created. Earlier studies have established a significant influence of climatic factors on the survival rate and growth of the Crimean pine [3]. In this article it is proved that the best survival rate and growth of the Crimean pine seedlings in the first years are typical for plots of the shadow exposure. The efficiency of planting of the Crimean pine seedlings with a closed root system is confirmed. Promising among the introduced species for fastening and afforestation of sands are the hackberry, the chestnut horse and the fontanesia Fortune.*

*Seedlings of the catalpa, honey-locust and tree of heaven grow successfully provided when chernozem is introduced into the planting holes. Red oak plantings should be located on the lowered aligned positions.*

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