

Original article

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Natural Seed Regeneration under Single-Storeyed Plantation Canopy in Dendro Orchard, Dendro Park and Urban Forest

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Abstract. Softwood and hardwood tree species natural seed regeneration in man-made plantations (dendrological orchard and dendrological park) and urban forest in north-eastern part of the Moscow region was under study. Natural regeneration and undergrowth under forest area canopy, biological groups under individual tree crown cover were taken into account. Softwood hardwood tree species natural seed regeneration adaptation potential has been assessed. Complete lack of seed regeneration in the said sites tree species adaptation was assessed as unsatisfactory. With available viable natural seed regeneration tree species adaptation was considered satisfactory or good depending on available seed regeneration and undergrowth. Softwood species adaptation in all studied sites was found unsatisfactory while red and common oaks, Manchurian walnut, Norway maple and European white elm –satisfactory or good. It was found that small red oak undergrowth after 1st mechanical damage lose its central shoot and shape substitution shoot at 30-40° angle but after 2nd damage such plant dies. Adaptation of other studied hardwood tree species was regarded unsatisfactory. To promote bio-diversity conservation, recovery of ground air layer, attraction of urban parks and forests it is recommended to use the following tree species: oaks red and common, Manchurian walnut (in loam soils), Norway maple and European white elm.

Key words: natural regeneration, seed regeneration, tree species, array, self-seeding, undergrowth, central shoot, replacement shoot, soil density, mechanical damage, windfall, tree plant adaptation.

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