

Evaluation of Response of Norway Spruce on the Influence of Climatic Factors in Forest Stands of Different Species Composition

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The article considers the issue of creation and formation of new plantations in forest areas, passed continuous sanitary logging. Less stability of homogeneous ecosystems is noted, in this connection the creation of pure spruce forests, especially in protective forests, seems to be impractical. In the formation of mixed stands it is necessary to select breeds that would be in a number of positions are complementary to each other and compensate for the impact of certain environmental factors. As a companion species or in the zone of coniferous-broad-leaved forests, the Linden is proposed in view of the presence of natural mechanisms of protection from dry periods, to which spruce is vulnerable. Also in the article the problem of interspecific and intraspecific competition as a factor determining the growth and development of stands is considered. In particular, the influence of this factor on the formation of the radial growth of wood was studied. The aim of this work was to assess the reaction of European spruce in stands of different species composition to the impact of different climatic factors, performed by methods of analysis of dendroclimatic information. The average chronology for stands with spruce more than 6 units in species composition and with Linden more than 6 units in species composition were calculated. A comparison with the results of a similar study, also carried out on the territory of Shchelkovo training and experimental forestry. The method of correlation analysis and method of analysis of climograms identified most of the drought sensitivity of spruce trees in a pure stand compared to spruce trees from stands with a small proportion of spruce. The value of growth of spruce in the composition of the stand with a predominance of Linden was less dependent on the influence of climatic factors, which may indicate a greater stability of spruce in the composition of Linden-spruce stands in comparison with pure spruce. It is recommended to create mixed lime-spruce stands for the conditions of the Moscow region in the corresponding forest growth conditions. The creation of such stands will improve the stability of forests in the Moscow region and will provide better performance of their functions of protective forests.