УДК 630*116.64:582.475.4

FORESTR-MELIORATIVE PROPERTIES OF SCOTCH PINE AND THEIR USE IN EROSION CONTROL PLANTINGS

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The basic forest-meliorative properties of Scotch Pine are displayed. The attention is paid to the structure and distribution of root systems of pine wood and related plants in erosion control plantations depending on their composition and methods of soil preparation. It's displayed basic properties of forest litter and intensity of its schedule.

Scotch Pine, morphological characteristics, erosion control plantations, forest-meliorative properties, forest litter, root system, soil erosion.

The main wood species that use when creating massive erosion control plantations, the importance given to Scotch Pine. The natural habitat of this plant in Ukraine is climatic zone of Polissya and partly Forest Steppe. At present, a large area of its distribution (including through afforestation) is due to the presence of wide amplitude with respect to the environmental factors of the environment.

The aim of the research was to establish the characteristics usage, growth and forest-velorative properties of pine stands with other plants in massive erosion plantations at ravine and gully areas.

Effective implementation by massive erosion plantings of its erosion control functions depends on a number of forest and meliorative properties. These properties include: the structure and distribution of root systems; impact on soil conditions and the formation of the forest floor during formation of artificial protection forest plantations; snow distribution, impact on the uniform and dependent on it freezing soil; regulation of surface runoff and more.

This article focuses on the basic study of the structure and distribution of root systems and erosion properties of protective forest floor in pine plantations in ravine-beam systems.

Practical experience in protective afforestation in ravine-beam territories shows that the use of pine as the main plant is appropriate in terms of medium and high eroded soil varieties. In soils not eroded or lesser degree of eroded preferred more

demanding to soil fertility woody plants - common oak, ash ordinary and green and so on.

Research subject was pine root systems in pure and mixed stands of massive erosion ravine-beam territories created by different ways of soil preparation. It's founded out the features of the structure of the root systems of pure and mixed stands of pine on platforms and in different terraces. As the accompanying woody plants that influenced the structural features of the root systems of pine, was investigated birch, oak, acacia, lime.

In plantations of beam and ravine systems the important indicators of forest litter that characterize its erosion properties are: power supply, bulk density and moisture content. These figures are significantly dependent on the intensity of the decomposition of litter, a criterion which serves as the ratio of reserve capacity or unresolved parts unfolded.

Considered material gives rise to certify that pine in terms of eroded soil on the slope surface areas developed a deep root system with a distinct taproot. On the terraces which can provide good loosening soil, roots pivotal reaches its maximum depth.

On the distribution of lateral pine roots in mixed cultures associated exercise significant influence woody plants. With the participation of oak and lime pine root system develops in the direction of related plants regardless of location on the slope and the displacement of its roots from the upper horizons of this plant is not selected. These related plants are the most desirable. Birch effect son pine positively provided its presence in planting no more than 30% in stock and fair distribution area. Acacia among the options of mixing considered the largest pine antagonist.

For biological activity of forest litter of erosion experimental plantings can be placed in the following descending order: oak and lime; oak (mixed with Amorpha fruticosa); acacia; pine. Biological activity and mineralization of litter in mixed plantations is more intense compared to net or small admixture of other related woody plants.