

Silvicultural assessment of regeneration of pine plantations in the
Kyiv-Chernihiv Polissya

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There are given results of research productivity of artificial plants at maturity age on various categories of silvicultural areas depending on the ways of its creation. It was investigated the growth of pine on completely and partially treated soil characterized the composition of the stands, depending on the agrotechnics of cultivation.

Keywords: *artificial stands, clearcuts, tillage, preparation silvicultural area, stock, species composition.*

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Лесоводственная оценка возобновления сосновых насаждений в Киево-Черниговском Полесье

Приведены результаты исследований продуктивности искусственных насаждений в возрасте спелости на различных категориях лесокультурных площадей с учетом способов создания. Исследовано рост культур сосны по сплошь и частично обработанной почве, охарактеризовано состав насаждений в зависимости от агротехники выращивания.

The stands productivity and the degree of fulfillment of defined functions can be explained by the high level of agrotechnics of forest cultivation, which includes a set of successive agrotechnical and forestry activities that enable the creation and cultivation of artificial plantations a particular purpose and specified quality.

Important role in growing highly productive stands is playing a selection of species according to site conditions, scientifically based on mixing schemes arrangement of species and taking into account their mutual influence and interaction, the use of high quality seeds and planting material, preparing of silvicultural area and soil tillage.

The purpose of research is to study of cultures at the age of felling of main use reveal advantages or disadvantages of various agricultural practices to develop practical recommendations on choosing the optimal option of creating and growing highly productive plantations. Thus the reliability of the results of the comparative analysis

is higher, the older researched studied cultures.

The main objects are represented of pine plantations planted in 1904–1914 at the Brovarskij, Sobuchiskij and Pikulskij forestries. The plantations were created by sowing and planting on clearings and on lands came from the agricultural use as well.

Results of researches. Physical and chemical analysis of soils in sample plots showed homogeneity site conditions, in which plantations grow.

Soils on the investigated areas for the humus content related to the poor, except for the two areas of plots, where a scale soil humus content is very poor (humus content of less than 1%).

In the areas that have gone out of temporary agricultural use the continuous soil cultivation was conducted by the autumn plowing system.

Placing seats 1,5x0,5 m. In the 71–76-year-old cultures on 1 hectare have preserved 426–746 trees. Trees reached 24.9–30,1m average height and average diameter 25,9–35,2 cm. Stock wood ranges from 433–532 m³·ha⁻¹. In the undergrowth rarely found self-seeding of pine height 0.5–2.0 m.

The average diameter of trunks in of pine plantations created on clearcuttings are generally higher than in plantations established on agricultural use. Planting created on clearcuttings, to the age of felling of main use - mixed composition, in some cases in terms of fresh soils stands second tier consisting of oak. It should be noted that the total stock of stands higher than the net created in the land that emerged from the temporary agricultural use.

The investigated plantations were created as planting seedlings and planting seeds. When sowing clearings soil treated 0,5x0,5 size of sites, placing them taken 1,5x0,7 m. Sowing conducted by local seeds. According to archival materials, the area of crops in the early twentieth century in the regions of research gradually decreased, and because of the unsatisfactory results in the 1913–1914 crop is not carried out.

In the 73–76 age plantations created by sowing seeds, pure in composition and simple in form, an admixture consisting of oak plantations - small. The method of creating cultures reflected in the average size of trees and other terms. The aver-

age height of pine trees in sowings is higher than in plantings. The differences are within 5–7%.

Conclusions. Past studies suggest that differences in productivity pine stands that are created in the same habitat conditions even at the age of maturity, determined of creating ways by the number of trunks plantations. Differences in growth of artificial plantations are caused by violations structure of soil in agricultural uprooting and prolonged agricultural use stored for a long time. The difference altitude is significant up to 50–60 years of age. Thus, the lands that came under temporary agricultural use to the mature age was formed pure stands, on the clearcuts – was formed mixed composition of stands.