

Silvicultural efficiency of high productive pine plantation thinning in The Tomskaya region south taiga

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Intensification of forest management implies an increase in the share of thinning. Thus, due to intermediate use reduces the load on the intact forest landscapes. The meaning of thinning is to use potential mortality. In addition, in mixed plantings major influence on formation of the stand composition. Based on these premises, the most suitable methods are grassroots and combined. They allow to simulate the natural processes in the forest. To date, there is no unequivocal opinion on the effects of thinning on the dynamics of valuation metrics. This circumstance is due to the research on the effects of thinning.

The objects of research are highly productive middle-aged pine's artificial forest stands, pure and even-aged. Forest type – herb. The study area is limited to the southern taiga in Tomsk oblast. In 2006-2008 in urban forests Tomsk were conducted thinning combined method.

The methodology included a bookmark permanent plots. Measured heights and diameters of trees, the length and the projection of the crowns. At 7 PP rated more than 4 thousand trees. Also cores taken in the quantity of 30 pieces per PP.

It was established that the application of existing standards for forest inventory leads to mistakes. The output of industrial wood are lower, and the waste outlet on the contrary inflated. The difference is 3–3,5%. It is recommended to develop standards based on origin. It should be remembered that when the thinning is selected only part of the stand.

The correct execution of thinning on grassroots or the combined method provides an increase in the average diameter. This output can be used as the basis for assessment of the thinning. Dynamics of radial growth has a positive trend. However, larger trees respond better to treatment. The thin trees are inhibited and do not allow growth. In General, the response of trees depends on the intensity of thinning.

Key words: *silvicultural effectiveness; thinning; average diameter; product structure; Pine raznotravnyy; Southern Taiga; radial increment, medium-aged forest*