

# Growth in Height and Diameter of Pine Stands in the West Siberian Subtaiga-Forest-steppe Region of the Altai Krai

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*The studies are focused on there searches of the growth progress of pine stands and based on the electronic allotment database containing the taxation characteristic for more than 268 thousand allotments of the ribbon forests in the Altai Krai with a total area of 1 014 thousand ha. The database includes a taxation description of the eleven forest districts of the Altai Krai in which the ribbon forests are located. For graphing of the growth progress in height and diameter, a selection of taxation descriptions of natural and artificial stands with a predominance of pine growing in the forest types most common in ribbon forests of the Altai Krai was made from the database: flat hilly surface dry forest, fresh forest, and grass forest. The article provides data on the distribution of forest land by type of forest; equations and graphs describing the growth progress in height and diameter of natural and artificial pine stands. To approximate the data, the Mitscher lichfunction was used. The study revealed that the largest values of the average height and average diameter of the stands were observed in the type of forest grass forest, and the smallest – in the forest type of flat hilly surface dry forest. In the conditions of forest types of flat hilly surface dry forest, fresh forest, and grass forest up to III, IV and V age classes, respectively, artificial stands exceed natural ones in average diameter and height. However, after these age classes they begin to exceed them according to these indicators. The curves of the growth progress of natural pine stands growing in forest types of flat hilly surface dry forest, fresh forest, and grass forest correspond better to III, II and I age class of bonitet, respectively. The totality of the values of the taxation indicators of the researched stands represents a certain set of points which have upper and lower limits and increase with age. The obtained data can form the basis for tables being developed for the growth progress of natural and artificial pine stands in ribbon forests of the Altai Krai by forest types and climatic zones.*