

Original article

EDN ORHTWO

DOI 10.24419/LHI.2304-3083.2024.2.06

## Influence of Plantation Age on the Prospects of Selecting Plus Trees of Pine (*Pinus sylvestris* L.) in the Novosibirsk region

**Vyacheslav V. Tarakanov<sup>1</sup>**

*Doctor of Agricultural Sciences*

**Raisa A. Tretyakova<sup>2</sup>**

**Michael Yu. Shabla<sup>3</sup>**

**Roman V. Rogovtsev<sup>4</sup>**

**Abstract.** In the territory of the Kolyvansky lesnichestvo of the Novosibirsk region, in pure pine stands of high fullness of 3–6 age classes of the mshistoyannual group of forest types, the peculiarities of trunk diameter distributions and the prospects of selecting plus trees (PT) were studied. It was revealed that in stands of 3–5 age classes without signs of mining logging (in contrast to stands of 6 age class, passed by selective logging) distributions of trunk diameter at the level of 1.3 m are characteristic for natural stands – they are unimodal and slightly asymmetric (the mode is shifted to the left, the right “tail” of the distribution is stretched due to relatively high occurrence of thick-dimension trees); also, a lower proportion of trees with trunk defects was observed in them. The conclusion about the expediency of PD selection before the beginning of clear-cutting and selective felling, which systematically removes the best (business) trees, which reduces the selection differential, was confirmed. In plantations not affected by clearcutting, high quality PDs were selected with significant excesses of values of selectable traits over population averages: by 60 % on average for trunk diameter and by 15 % for height.

**Key words:** distribution by trunk diameter, *Pinus sylvestris*, forest seed sites, plus trees.

**For citation:** Tarakanov V., Tretyakova R., Shabla M., Rogovtsev R. Influence of Plantation Age on the Prospects of Selecting Plus Trees of Pine (*Pinus sylvestris* L.) in the Novosibirsk region. – Text : electronic // Forestry Information. 2024. № 2. P. 68–78. DOI 10.24419/LHI.2304-3083.2024.2.06. <https://elibrary.ru/orhtwo>

<sup>1</sup> Federal Research Center «Krasnoyarsk Scientific Center of the Siberian Branch of the Russian Academy of Sciences» – West Siberian branch of the V.N. Sukachev Forest Institute of the Siberian Branch of the Russian Academy of Sciences, Professor, Head of the Laboratory of Forest Genetic Resources; Novosibirsk State Agrarian University, Professor of the Forestry Department (Novosibirsk, Russian Federation), tarh012@mail.ru

<sup>2</sup> Novosibirsk State Agrarian University, Postgraduate Student of the Department of Forestry (Novosibirsk, Russian Federation), rrtreyakova@yandex.ru

<sup>3</sup> Novosibirsk State Agrarian University, Postgraduate Student of the Department of Forestry (Novosibirsk, Russian Federation), shablya.michail@yandex.ru

<sup>4</sup> Forest Protection Center of the Novosibirsk region, Branch of FBU «Roslesozaschita», Head of the Department of «Novosibirsk Seed Centre» (Novosibirsk, Russian Federation), rvr79@mail.ru