Original article

EDN CURFRO DOI 10.24419/LHI.2304-3083.2025.3.03

Growth and Condition of Siberian Cedar Pine in Mixed Cultures during Introduction in the Moscow region

Vladimir A. Bryntsev¹

Doctor of Agricultural Sciences

Anna A. Kozhenkova²

Candidate of Agricultural Sciences

Petr A. Aksenov³

Candidate of Agricultural Sciences

Abstract. The growth and condition of Siberian cedar pine in mixed 27-year-old forest plantations with a planting density of 9 thousand pcs/ha were studied, with a row-by-row mixture of: 1 row of Siberian cedar pine, 2 rows of European spruce, 1 row of Siberian larch, 2 rows of European spruce. The studies showed that Siberian cedar pine in the plantations had a low safety rate – 17% (3.4 times less than spruce and 1.7 times less than larch), and of the surviving ones, only 19% were in good condition. It lagged far behind other species in trunk height and diameter and crown diameter. The study of the growth dynamics in trunk height and diameter on model trees showed that the negative impact of spruce on Siberian pine begins to manifest itself after 10 years of forest plantations. It is concluded that Siberian cedar pine is not competitive with European spruce in mixed cultures. It is recommended to create pure cultures of Siberian cedar pine.

Key words: Siberian cedar pine, introduction, forest crops, interspecific competition.

For citation: Bryntsev V., Kozhenkova A., Aksenov P. Growth and Condition of Siberian Cedar Pine in Mixed Cultures during Introduction in the Moscow region. – Text: electronic // Forestry Information. 2025. N° 3. P. 28–35. DOI 10.24419/LHI.2304-3083.2025.3.03. https://elibrary.ru/curfro.

¹ N.V. Tsitsin Main Botanical Garden of the Russian Academy of Sciences, Chief Researcher at the Laboratory of Dendrology, Associate Professor (Moscow, Russian Federation), bryntsev@mail.ru

² N.V. Tsitsin Main Botanical Garden of the Russian Academy of Sciences, Researcher at the Laboratory of Dendrology, Associate Professor (Moscow, Russian Federation), kozhenkova_anna@mail.ru

³ Bauman Moscow State Technical University – Mytishchi branch, Associate Professor of the Department of Forest Crops, Breeding and Dendrology (Mytishchi, Moscow region, Russian Federation), axenov.pa@mail.ru