

Lodgepole Pine (*Pinus contorta* Dougl. ex Loud. var. *latifolia* Engelm. ex Wats) Fruiting Under the Conditions of Introduction

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The article concerns the lodgepole pine seeds quality (*Pinus contorta* Loud. Var. *latifolia* S.Wats) in the European North of Russia. The nature of the problem lies in the fact that abundant seed production, which provides normal development of the reproductive organs, is needed for the assessment of the prospects for the future use of exotic species for industrial purposes.

The main part contains results of studying biometric parameters of the lodgepole pine cones and seeds mass and their variability. The authors established that, within the conditions of introduction, this pine produces cones and seeds of sizes compared to those typical for this species range. The linear dimensions of the cones differ in a lower level of variability than its mass. The researchers note that within Arkhangelsk conditions lodgepole pine seeds of local reproduction are noted for their low quality, which probably depends on lack of its own pollen. Scientific justification of this fact is supported by the data obtained in Karelia that lodgepole pine cannot use pollen of Scots pine for pollination, because there is a complete reproductive isolation between these two pines [1]. Our results agree with studies of Swedish scientists who have identified [2], that in the conditions of introduction the northern-latitude and high-altitude provenances of lodgepole pine had flowered more abundantly than southern ones. The article presents data on the average weight of 1,000 seeds, which is $3,6 \pm 0,2$ g ($C_v = 12,5$ % average level of variability) in Arkhangelsk conditions, and that corresponds to the data obtained from other research areas [3, 4].

One of the main conclusions is that in the introduction conditions ($64^{\circ}33'$ north. $39^{\circ}40'$ east) lodgepole pine of northern provenances produces more viable seeds compared to those of southern origins.

In the conclusion, it is stated that further seeds quality studies are needed to assess the prospects of lodgepole pine use for plantation growth, and seeds deficit problem can be solved through establishment of seed orchards.

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