

P5. Safe sites of larch seedlings in the lightly burnt forest in eastern Siberia

Tetsuoh Shirota ¹⁾, Hideyuki Saito ¹⁾, Trofim C. Maximov ²⁾, Alexander P. Isaev ²⁾ and
Kunihide Takahashi ¹⁾

- 1) Laboratory of silviculture, faculty of agriculture, Hokkaido University, N8W8
Sapporo, Japan
- 2) Institute of Biological Problems in Criolythozone, Siberian Division, Russian
Academy Science, 41, Lenin Ave., Yakutsk, Russia
e-mail: shirota@for.agr.hokudai.ac.jp

Abstract

Regeneration of *Larix cajanderi* (*L.gmelinii* var *cajanderi*) was surveyed in the lightly burnt mature larch forest after three years later from the last fire in 2002. The vegetation was described among the three 50m x 1m line plots. Thickness of litter layer was measured on the mount and hollow of the polygons among each line plot. Location of seedling, canopy trees, and burnt stamp were investigated in each line plot. Age and height of all seedlings were measured.

Litter layer was not completely removed by forest fire. Although the spots without litter layer were found, their distribution was discontinuous and each spot was small (< 0.01m²). On the ground covered with moss, the litter thickness was deeper (5-15cm). 73 seedlings (4860 seedlings/ha) were found in three line plots. Their safe cites were categorized into the mount of burnt polygon(17seedlings, 23%), the side of coarse root of canopy trees(16seedlings,22%), the burnt log and stump(39seedlings,53%) and other(1seedlings,1%).

In mature larch forest, spatial correlation between large and small trees is negative. This structural property suggests that regeneration under canopy tree has disadvantages in completion for resources. The spatial correlation of seedlings would be random, positive and negative in the first, second and third safe cite, respectively. The survive rate of larch seedlings in the third safe cite, so burnt logs and stumps, are expected to be higher.