RR5-1. Shoot amount and branching properties in response to irrigation in mature larch forest in eastern Siberia

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Abstract

NPP of larch is the product of productivity and needle amount. Dose irrigation affects on only productivity ? In order to clarify the effect of irrigation on needle amount, we investigated needle amount per shoot, shoot amount per branch and several propertied of branching. Because shoot amount is strongly related to branch size, shoot number was analyzed with consideration of the effect of basal diameter of branch.
Although needle area per shoot was 43% increased by irrigation, amount of shoot number of each branch was not affected. This result represent that LAI of larch forest was increased by plasticity of shoot morphology, not by shoot amount adjustment.
On the other hand, we found that the long shoot per branch was increased by irrigation. Although this adjustment has small effect on needle amount in this year, it has increased the number of bud of short shoot. Therefore, it is concluded that irrigation increased both the amount of the needle area in next year potential of needle area increment in 2 years later.