

Reformation cuttings in birch forests with spruce second tier and undergrowth in the Kostroma region

S. S. Bagaev – Central European forest experimental station, branch
Russian Research Institute for Silviculture and Mechanization of Forestry,
leading researcher, candidate of agricultural sciences, Kostroma, Russian Federation

Keywords: reformation cutting, birch forests, spruce undergrowth, second tier.

The results of studies on the softwood cultivation after the experimental reformation cuttings in the derivatives mature birch stands with the spruce second tier and undergrowth held by Kostroma (Central European) FES together with foresters in Sudislavsky metropolitan borough of the Kostroma region, Russia.

Variants with almost complete removal of birch canopy in one and two steps. Thus the need for pre-branding of trees is eliminated. States of stands after reformation cutting in deciduous and deciduous-spruce stands is good.

The stock of the upper tier is reduced due to partial preservation of birch to the end of the first decade. The adaptation of spruce, the growth rate and the accumulation of stock of wood are improved with an increase in the intensity of reformation cutting of mature stands.

After reformation cuttings of mature birch on drained soils, the maximum average annual increase in stock of spruce wood is achieved at the end of the second decade. Habitually growth parameters continue to increase in the third and fourth decades after cutting. Uneven-aged stands of dark coniferous tree species are formed.

Measure thinning of deciduous canopy is dependent on the quality and quantity of undergrowth, site conditions, the average diameter and the age of stands. The greater increase in growth over the stock of wood occurs when applying of reformation cutting in one step. Creating of spruce forests, as well as maximum preservation of the forest environment are possible with the use of this cutting system in a shorter time than with the creation of forest plantations that require a significant investment.