

FEATURES OF EARLY DEVELOPMENT OF *PICEA ABIES* (PINACEAE) SEEDLINGS ON XYLOLYTIC SUBSTRATE

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The paper presents the results of a laboratory-based experimental study of the effect of different types of xylolytic substrate on seed germination and early development stages of Norway spruce (*Picea abies* (L.) H. Karst.). The experimental substrates contained corrosive and destructive types of spruce, birch, and aspen rots. We analyzed the biomass of plant tissues, the architecture and surface area of the root system of the seedlings during the formation of cotyledon needles (4 weeks), true needles (8 weeks) and at the beginning of mycorrhiza formation (18 weeks). Xylolytic substrate implies potentially better conditions in terms of the content and availability of nutrients than soil in mid-boreal spruce forests. The type of destruction had almost no effect on the development of the plants, in contrast to the species of the woody detritus. The features of more successful development (earlier onset and higher activity of mycorrhization, higher total biomass and true needle biomass) were observed in the seedlings reared on the substrates showing active nitrogen and phosphorus consumption in the first weeks after sowing (control and aspen with destructive type rot).

Keywords: Norway spruce, *Picea abies*, xylolytic substrate, woody detritus, mycorrhiza

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