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A NEW IDEA IN SEED BEDS

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Professor S. A. Wilde in his book "Forest Soils, " 1942, page 147, has written: "In no other branch of plant production is a deficiency of humus manifested with such sharpness as it is in forest nurseries! Forest trees, especially conifers, develop in their youth on a purely organic layer of forest debris, and thus acquire more or less pronounced saprophytic tendencies."

This idea, as it is described by forester V. Baltins in the forestry journal "Meza Vestis" ("Forest News" in Latvian), Vol. 29., 1949, has been carried out practically by retired forester Dunemann in the region of Harz Mountains in Germany in recent years.

According to Dunemann the seed beds must be built with boards on their sides as it is often done in the U.S.A., but the usual nursery soil 1 foot deep is replaced by undecomposed or partly decomposed forest litter, usually needles. The beds are filled in the fall and the stuff pressed down. Species like firs and white pine are seeded in the fall, but Scots pine, Norway spruce, and European larch in the spring. Seeding is done by hand broadcasting the seed. It is covered with a thin layer of humus. Before germination the beds must be watered twice daily; after germination only once. Shading is very important, but the shade must be gradually reduced and then removed completely. The plants rapidly develop a large root system and have a great height increment. One-year-old Norway spruce appears to be 3 to 4 years old; with other species at least 1 year can be saved. Other fertilizers and weeding are not necessary!

The disadvantages are the high expense of erecting the seed beds, and the frequent unavailability of forest litter.

Last season I tried this method on a very small plot in northern Minnesota. There were many local disadvantages, but in spite of them jack pine seedlings showed much better growth than in the usual beds. The Norway pine were destroyed by mice.