

Significance of Wood Terepnoids and Fenolics in the Resistance of Scots Pine Provenances Against Fungal Diseases

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Abstract – The resistance of trees to herbivores and pathogens consists of both structural and chemical defence mechanism. Carbon based monoterpenes have an important role in plant resistance against herbivores and parasitic ascomycetes. We tested how the variable growing circumstances affect to terpenoid and phenolic concentration and composition of pine needles in provenance trial of Scots pine and to the susceptibility of pine provenances to fungal diseases. The material consists of nine pine provenances representing a 1200-km N-S transect from Estonia to northern Finland. They have grown in three different sites, one in Estonia and two in Finland, one in central and the other in northern part of the country. This material has tested both natural and artificial infections of *Scleroderris* canker and other disease resistance of pine. The results indicate significant variation in the susceptibility to diseases and in the concentration and composition of secondary metabolites.

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