

# Transfer of live aspen roots as a reclamation technique: Effects of soil depth, root diameter and fine root growth on root suckering ability

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## Abstract

A transfer of live trembling aspen (*Populus tremuloides* Michx.) roots including the surrounding forest floor was conducted to examine aspen's ability of vegetative regeneration to establish a boreal forest on a reclamation site. Forest floor was salvaged at two depths (15 cm and 40 cm) from a natural aspen stand and placed onto a reclamation site at those same depths. Root density, root characteristics, sucker density and height were assessed. Two controlled studies investigated the importance of root diameter and fine roots in relation to burial depth to the suckering success and root survival. Root fragments that produced emerged suckers were located in the upper 20 cm of the soil and mostly had diameters between 1 and 4 cm. Higher sucker densities, taller suckers and lower sucker mortality at the 40 cm treatment suggest that increased salvage depth (good mineral soil-root contact) is a prerequisite for successful suckering.