



# Timber Talks



## Department of Fisheries and Forestry

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New Trees from Cuttings

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The benefit from re-stocking areas with seedlings that are progeny of superior quality trees is obvious, and tree improvement programs have been initiated in British Columbia to attain this goal. Seed orchards and clone banks have been established, where propagation was accomplished by grafting scions from plus trees of Douglas fir on to seedling root-stock. Resultant tree mortality and reduced vigor, due to incompatibility of scion and root-stock growth, was so serious that the need for a more suitable means of propagation was evident. Rooting of cuttings eliminates the problem and has been successfully accomplished when the scions were from young Douglas fir. Tests were made in the greenhouse to induce rooting on cuttings from mature trees.

Current year's shoots collected from four mature Douglas-fir trees were brought to the laboratory and cut into 3-inch lengths. After removing all leaves up to 1 ½ inches from the base, the cuttings were placed in 100 ppm Indolebutyric acid for 24 hr and then set in flats of coarse sand. The flats were placed in the greenhouse under temperature conditions of soil and air heated to 20°C, soil only heated to 20°C or no heating of either soil or air. High air humidity was maintained by enclosing the cuttings in a clear polyethylene sheet.

Only cuttings that received the warm soil and cold air treatment rooted, and this occurred mainly during the latter part of March and early April. The number that rooted from the different trees varied, and by August ranged from 32 to 18 per cent. Only those that were collected in the fall and early winter rooted well.

Preliminary trials indicate that the treatments applied to Douglas fir have a somewhat different effect when applied to cuttings from mature western hemlock. Successful rooting was obtained from all treatments, but results were best when neither the soil nor the air was heated.