

THE RELATIONSHIP BETWEEN MORPHOLOGICAL FEATURES  
AND THE ROOTING OF CUTTINGS OF PINUS CARIBAEA  
VAR. HONDURENSIS X P. TECUNUMANII

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Over 1400 shoots were collected from young hedged seedlings and dissected into 10 cm lengths, which were set as cuttings. Rooting was examined in relation to clonal and family identity, length of the shoot from which a cutting was dissected, position of the cutting on the shoot, appearance and state of activity of the terminal bud (for terminal cuttings), length of both primary and secondary needles near the tip, at the base, and in the central region of the cutting, and basal diameter.

Regression coefficients for all variables were highly significant for both probability of rooting and the mean number of roots per rooted cutting. Clonal identity was the most effective predictor of both parameters. Of the morphological features, primary needle length was the best predictor of both rooting and the mean number of roots. Shoot selection on the basis of this feature can be used to assure operationally acceptable levels of rooting.

On the basis of trends established for individual morphological features, the type of cutting with the highest probability of rooting would be the terminal segment from a shoot 10 to 19 cm long, with primary needles in excess of 25 mm in length, an active terminal bud, and a basal diameter of 1 to 1.9 mm. Cuttings with the highest probability of rooting tended also to have the highest numbers of roots - for all parameters except basal diameter, for which smaller cuttings (in particular those in the 1 to 1.9 mm class) had fewer roots. Studies are in progress to determine the type of cutting displaying optimal field survival and performance.