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PREFACE

The papers published in this special issue of the journal were presented at a workshop on "Techniques for Evaluating Planting Stock Quality" organised under the auspices of IUFRO by the Physiology Subject Group (S2.01) in co-operation with the Nursery Problems Project Group (P1.04-00) and Characterisation of Plant Material Working Party (S1.05-04). It is widely appreciated that quality of planting stock is critical to the growth, as well as survival, of a forest crop and the availability of a reliable and quick measure of quality of tree stocks could save forestry throughout the world vast sums of money. The objective of this workshop was to examine various plant physiological techniques which might assist the forester in assessing the quality of tree stock in the nursery, during transportation to the field, and after planting out.

The workshop was held in New Zealand (Rotorua, Palmerston North, and Christchurch) from 13 to 24 August 1979 and the programme consisted of a blend of review papers, presentations of original results, demonstrations of equipment, discussions, and field trips. The workshop dealt with an array of different techniques from basic field trials to the use of sophisticated laboratory equipment and each technique was assessed as to its usefulness and its limitations. The utility of these techniques was summarised in the final four sessions of the workshop, when the subject of planting stock quality was considered holistically at different stages in the growth and development of a forest crop. The proceedings of these final four sessions are published here after the papers.

To assist readers to compare related techniques the papers have been grouped into five categories, although this organisation was not used in the programme of the workshop. The categories are A: Nursery and Field Studies, B: Use of Controlled Environment Facilities, C: Water Status and Carbon Dioxide Exchange Studies, D: Chemical Techniques, E: Biophysical Techniques, and F: Root Growth Studies. To meet the requirements of the journal all the papers had to be referred and I am grateful to those persons who reviewed these manuscripts quickly and thoroughly. Unfortunately all the papers presented at the workshop are not included here as some did not meet the standards of the journal regarding new and original work or, in the case of a few review papers, were considered not sufficiently broad and up-to-date to warrant publication here. It should be acknowledged, however, that these unpublished papers still made a valuable contribution to the success of the workshop and these authors are thanked for their contributions.

Lastly I wish to thank Drs P. Gadgil, B. Lowry, and D. Whitehead who have dealt efficiently with the editing of the manuscripts during times of changing editorship.

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