

We are unable to supply this entire article because the publisher requires payment of a copyright fee. You may be able to obtain a copy from your local library, or from various commercial document delivery services.

From Forest Nursery Notes, Summer 2013

122. © Production of cuttings in response to stock plant temperature in the subtropical eucalypts, *Corymbia citriodora* and *Eucalyptus dunnii*. Trueman, S. J., McMahon, T. V., and Bristow, M. *New Forests* 44:265-279. 2013.

Production of cuttings in response to stock plant temperature in the subtropical eucalypts, *Corymbia citriodora* and *Eucalyptus dunnii*

Stephen J. Trueman · Tracey V. McMahon · Mila Bristow

Received: 16 June 2011 / Accepted: 14 February 2012 / Published online: 24 February 2012
© Springer Science+Business Media B.V. 2012

Abstract Propagation of subtropical eucalypts is often limited by low production of rooted cuttings in winter. This study tested whether changing the temperature of *Corymbia citriodora* and *Eucalyptus dunnii* stock plants from 28/23°C (day/night) to 18/13°C, 23/18°C or 33/28°C affected the production of cuttings by stock plants, the concentrations of Ca and other nutrients in cuttings, and the subsequent percentages of cuttings that formed roots. Optimal temperatures for shoot production were 33/28°C and 28/23°C, with lower temperatures reducing the number of harvested cuttings. Stock plant temperature regulated production of rooted cuttings, firstly by controlling shoot production and, secondly, by affecting the ensuing rooting percentage. Shoot production was the primary factor regulating rooted cutting production by *C. citriodora*, but both shoot production and root production were key determinants of rooted cutting production in *E. dunnii*. Effects of lower stock plant temperatures on rooting were not the result of reduced Ca concentration, but consistent relationships were found between adventitious root formation and B concentration. Average rooting percentages were low (1–15% for *C. citriodora* and 2–22% for

S. J. Trueman (✉)

Agri-Science Queensland, University of the Sunshine Coast, Maroochydore DC, QLD 4558, Australia
e-mail: strueman@usc.edu.au

T. V. McMahon

Faculty of Science, Health and Education, University of the Sunshine Coast, Maroochydore DC, QLD 4558, Australia
e-mail: tmcmahon@usc.edu.au

M. Bristow

Department of Employment, Economic Development and Innovation, Agri-Science Queensland, Locked Bag 16, Gympie, QLD 4570, Australia
e-mail: mila.bristow@cdu.edu.au

M. Bristow

Cooperative Research Centre for Forestry, PB 12, Hobart, TAS 7001, Australia

Present Address:

M. Bristow

Research Institute for the Environment and Livelihoods, Charles Darwin University, Darwin, NT 0909, Australia