

In our Contemporaries

Tussock Grassland and Mountain Lands Institute Review

ROLES FOR FORESTRY IN HIGH COUNTRY LAND USE

K. F. O'Connor.

This nine-page review is presented as "a progress report as the basis for a summary prospectus for further collaborative research". It is in six parts: Purpose and Perspective; Forests past and present; Attitudes to forestry; Farm forestry options; the Integrated farm forestry options; and Forest influence on fertility. A total of 51 references is given.

NZ Journal of Timber Construction

QUALITY CONTROL OF STRUCTURAL TIMBER

Bryan Walford Vol 3. No 4. 1987

In New Zealand visually graded sawn structural timber is subjected to little quality control compared with mechanically graded timber, and in both cases control procedures ensure consistency in the method of grading rather than the strength of the graded timber. A method of quality control is proposed that is (a) based on the use of proof testing to monitor bending strength, (b) is impartial to grading method, (c) is industry-operated and, (d) should raise the image of timber as a structural material.

N.Z. Tree Grower

GROWING TOTARA

D. Bergin, G. Pardy, Forest Research Institute August 1987

Totara can be readily established on a wide range of sites. Pattern and techniques of planting vary according to objectives and the site. Totara has potential for growing in small woodlots but further research is required on improving stem form and assessing wood quality of fast-growing trees.

ANIMAL REPELLENTS FOR TREE SEEDLINGS

L. Crozier

Seven practical animal repellents were tested in trials of radiata pine. Egg-based repellents were most effective. Recipes are provided for repellents to protect seedlings from animal damage.

N.Z. Journal of Forestry Science

GROWTH OF NATURALLY REGENERATED BEILSCHMIEDIA TAWA AND PODOCARPS IN UNLOGGED AND SELECTIVELY LOGGED PODOCARP/TAWA FOREST, PUREORA

M. C. Smale, M. O. Kimberley, New Zealand Journal of Forestry Science 16(2): 131-141 (1986).

Height growth averaged 12-13 cm/annum in dominant and co-dominant plants and 3-6 cm/annum in dominated plants, while diameter growth averaged 2-3.5 mm/

annum in dominant and co-dominant plants and 1-2 mm/annum in dominated plants. Tawa saplings and poles grew significantly faster in logged forest than in unlogged forest.

SELECTION OF EUCALYPTUS SPECIES FOR SOIL CONSERVATION PLANTING IN SEASONALLY DRY HILL COUNTRY

R. L. Hathaway, M. King, New Zealand Journal of Forestry Science 16(2): 142-151 (1986).

There were significant differences among species in height and diameter growth, Eucalyptus tortoise beetle and leafroller caterpillar damage, wind damage, stem straightness, crown width, crown density, and branch size. *Eucalyptus cordata*, *E. fastigata*, *E. fraxinoides*, *E. obliqua*, *E. pulchella*, and *E. regnans* ranked highly for most traits.

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GROWTH AND NUTRITION OF *PINUS RADIATA* ON RHYOLITIC TEPHRA AS AFFECTED BY MAGNESIUM FERTILIZER

I. R. Hunter, J. M. Prince, J. D. Graham, G. M. Nicholson, *New Zealand Journal of Forestry Science* 16(2): 152-165 (1986).

An area of extremely magnesium-deficient radiata pine was supplied with 100 kg Mg/ha as a mixture of ground dolomite and Epsom salts. Slow recovery over five years improved height by 66% and diameter by 45% compared to untreated trees. Magnesium utilization was 29% over that time. Calcium possibly had some effect on recovery.

INTRA-ANNUAL GROWTH OF YOUNG *PINUS RADIATA* IN NEW ZEALAND

R. B. Tennent, *New Zealand Journal of Forestry Science* 16(2): 166-175 (1986).

Height and diameter growth of five-year-old *Pinus radiata* was measured monthly at four forests. A conditioned seven degree polynomial was fitted to the cumulative growth. The differential was used to calculate the proportion of growth in each month. There were significant differences in growth pattern between the forests.

LOG QUALITY AND THE STRENGTH AND STIFFNESS OF

STRUCTURAL TIMBER

H. Bier, *New Zealand Journal of Forestry Science* 16(2): 176-186 (1986).

Average bending strength and stiffness of 100 x 50mm and 200 x 50mm *P. radiata* timber from 78 logs depended on density, but the lower 5-percentile strength was more dependent on branch index. Low branch index logs yielded timber of framing grade strength without grading, but graded timber from logs with large branch index was below strength.

STRESS-GRADES FOR *PINUS RADIATA* PLYWOOD FROM BASIC DENSITY AND KNOT RATIO

H. Bier, *New Zealand Journal of Forestry Science* 16(2): 176-186 (1986).

Average bending strength and stiffness of 100 x 50mm and 200 x 50mm *P. radiata* timber from 78 logs depended on density, but the lower 5-percentile strength was more dependent on branch index. Low branch index logs yielded timber of framing grade strength without grading, but graded timber from logs with large branch index was below strength.

PRETREATMENTS TO HASTEN THE DRYING OF *NOTHOFAGUS FUSCA*

Haslett, A. N.; Kininmonth, J. A. *New Zealand Journal of Forestry Science* 16(2): 237-246 (1986).

Steaming improved the drying rate, but caused excessive fine internal checking in green wood. Soaking in hot water at

about 70°C reduced the drying time substantially and was the only treatment suitable for green timber. Neither prefreezing nor compression rolling had any effect on drying rate and both caused excessive degrade.

FRI Bulletins

No. 104

A FURTHER EXAMINATION OF THE CLEARWOOD PROPERTIES OF *RADIATA* PINE GROWN IN NEW ZEALAND

A. Mishiroy, D. J. Crown, G. B. Walford (1986)

This study of wood properties of New Zealand "transition-crop" radiata pine was commissioned by the Japanese Government and arose from Japanese interest in using future supplies of this wood as structural framing material. Despite limited sampling, conclusions were essentially the same as those reached by other FRI researchers.

No. 107

RED DEER POPULATION SURVEYS IN THE HARPER-AVOCA CATCHMENT (1956-1983)

G. J. Hickling (1986)

Population numbers were greatly reduced after intensive hunting between 1955 and 1961, but recovered during the 1960s and early 1970s, reaching a maximum of about 650 deer by the late 1970s. Between 1978 and 1983 the population declined by approximately 65% as a consequence of illegal hunting.

No. 114

WALLABIES IN NEW ZEALAND: HISTORY, CURRENT STATUS, RESEARCH, AND MANAGEMENT NEEDS

B. Warburton (1986)

Black-striped, dama, parma, swamp, and brush-tailed rock wallabies are found on three islands in the Auckland district. There are dama wallabies in the Rotorua district, and Bennett's wallabies in Canterbury and Otago. Population numbers and the need for control measures vary from region to region.

SYMPOSIUM

Management of New Zealand's Natural Estate

The New Zealand Ecological Society is sponsoring this symposium which aims to answer a number of key questions relating to the future management of New Zealand's natural estate through integrating the views of manager, scientists and other interested people. The natural estate includes national, conservation and maritime parks, scenic and allied reserves, together with largely natural but unprotected areas such as coastal and marine areas, rivers, high country, etc. The symposium will include overview and case-study papers, workshops, field trips and a general discussion session.

Topics covered will include:

- Protected area design and location
- Management of largely intact natural area
- Management of semi-natural areas

Integrating ecological management with other land and water uses.

The symposium is to be held at the University of Otago, Dunedin, **August 22-25, 1988.**

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