

In our Contemporaries

NZ Journal of Forestry Science

Stem sunscald after thinning and pruning young *Pinus radiata* in the sandy soil region of Chile

Huber A., Peredo H.L. Vol. 18(1): 9-14 (1988)

Six-year-old trees were thinned to 450-500 stems/ha and pruned to 50% of the green crown in November 1983, and slash was removed. All trees exhibited stem malformation during the spring of 1984. The damage length and orientation, the flattening of the stem in the sunscald zone, and the summer solar course for the latitude, led to the conclusion that damage was due to insolation.

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Can DRIS improve diagnosis of nutrient deficiency in *Pinus radiata*?

Svenson G.A., Kimberley M.O. Vol. 18(1): 33-42 (1988)

Diagnosis and Recommendation Integrated System (DRIS) norms were obtained for *Pinus radiata* using foliage chemical analysis results and site index data from published studies. The norms were then tested on fertiliser trials in which response to varied nutrition was known. DRIS proved accurate at ranking treatments in order of growth and nutritional health.

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Above-ground dry matter and nutrient content of *Pinus radiata* as affected by lupin, fertiliser, thinning, and stand age

Beets P.N., Madgwick H.A.I. Vol. 18(1): 43-64 (1988)

Additions of nitrogen through N-fixation and fertiliser application doubled dry matter and nutrient contents of *P. radiata* growing on a nitrogen-deficient sand dune. Efficiency of tree uptake of added fertiliser nitrogen relative to controls averaged only around 12%. However, litter fall rates increased and forest floor weights doubled, indicating that more nitrogen was being cycled with long-term consequences for stand growth.

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Soil properties as affected by *Pinus radiata* plantations

Turner J., Lambert M.J. Vol. 18(1): 77-91 (1988)

Soils beneath planted *Pinus radiata* were compared with soils beneath adjacent native *Eucalyptus* forest at two sites with contrasting nutrient status in New South Wales. At the lower fertility site, the soil under *P. radiata* was lower in nitrogen, exchangeable magnesium, and pH and higher in organic matter and exchangeable aluminium than soil under native forest. At the higher fertility site, the soil under pine had lower concentrations of nitrogen and organic matter than that under native forest, but was not significantly different in other respects.

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Incidence and severity of *Cyclaneusma* Needle-cast in 15 *Pinus radiata* plantations in New Zealand

Bulman L.S. Vol. 18(1): 92-100 (1988)

Disease severity was highest in the 11- to 20-year-old stands and lowest in the 1- to 5-year-old and over 25-year-old stands. Losses in wood volume of 5% per annum in the forests sampled were predicted for stands aged between six and 20 years.

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Cypress canker in New Zealand plantations

van der Werff H.S. Vol. 18(1): 101-108 (1988)

A national survey to determine the distribution and extent of cypress canker was carried out in 1981-82 in plantations of *Cupressus macrocarpa*, *C. lusitanica*, and *Chamaecyparis lawsoniana* and in shelterbelts of *Cupressocyparis leylandii*. *Seiridium unicorne* was widespread throughout New Zealand while *S. cardinale* had a limited distribution. Incidence of disease was low.

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Loss of Compound 1080 (sodium monofluoroacetate) from Carbopol gel smeared on foliage to poison deer

Compound 1080 (sodium monofluoroacetate) in a gel carrier was applied to the

leaves of broadleaf (*Griselinia littoralis* Raoul) baits (cuttings) to poison deer. In two trials on Stewart Island, assays for F- showed that the poison disappeared during rain, 90% being lost in 207mm of rain and 81mm of rain in the respective trials. In one trial significant losses of Compound 1080 also resulted from biodegradation in storage.

Baits set to kill deer were sampled after 0, 15, 30, and 45 days of weathering. Only 10% of the treated leaves retained toxic gel after 45 days. About 1.4% of the Compound 1080 was lost from the leaves per millimetre of rainfall. This rate was similar to loss rates for Compound 1080 from other baits commonly used in animal control operations.

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SEESAW: a visual sawing simulator, as developed in version 3.0 (note)

Todoroki C.L. Vol. 18(1): 116-123 (1988)

Program SEESAW is a computer simulation program for the sawing of pruned logs. It was developed to aid in the evaluation of pruned log types and to provide a tool for analysing their interactions with various sawpatterns and sawmill practices. This version of the program accommodates important sawmill variables such as saw kerfs and number and positioning of knees on the carriage and, through the use of interactive computer graphics, simulates all sawmill activities, i.e., sawing, edging, docking and grading, and resawing.

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What's new in Forest Research

- No. 171 Seedling quality and seedling specifications of radiata pine
- No. 172 Better planning with aerial photography
- No. 173 Growth of native trees in plantations
- No. 174 Wood degrading bacteria in posts

FRI Bulletins

No. 115

Long-internode or multinodal radiata pine

Carson M.J. (1988)

A simulation study using STANDPAK indicated greatly increased clearcutting grade yields and higher profitability of a long-internode breed relative to unimproved radiata pine. Superior stem form and growth rate of the Multinodal Growth and Form Breed made it the most profitable, although with associated high yields of knotty grades. \$10.00 + GST.

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No. 124

Introduced forest trees in New Zealand: recognition, role, and seed source

Part 3: The Larches *Larix decidua* Miller, *Larix kaempferi* (Lambert) Carr., *Larix × eurolepis* A. Henry

Miller J.T., Knowles F.B. (1988)

Part 4: *Pinus mugo* Turra – dwarf mountain pine, *Pinus uncinata* Mirbel – mountain pine

Ledgard N.J., Ecroyd C.E. (1988)

Part 5: *Pinus attenuata* Lemmon – knobcone pine

Miller J.T., Knowles F.B. (1988)

Part 6: The Spruces *Picea sitchensis* (Bong.) Carrière, *Picea abies* (L.) Karsten – ornamental spruces

Miller J.T., Knowles F.B. (1989)

Each booklet in this series provides an account of these species in New Zealand, referring to their introduction, history, and role as exotic forest trees, their recognition in the field, and the location and quality of current local seed sources.

Each part: \$7.00 + GST.

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No. 137

The Firewood Venture: Planning, Execution, Evaluation

Shula R.G., Hay A.E., Tarlton G.L. (Ed.) (1989)

A practical guide to planning and growing a firewood plantation. It is divided into five main sections and covers such topics as: the cost of energy from wood compared with other fuels; wood properties of firewood species; the choice of species; management considerations; harvesting and processing options; town planning and legal aspects; marketing of firewood.

\$28.00 + GST

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No. 139

Agroforestry Symposium Proceedings

Maclaren P. (Ed.) (1988)

There are papers on Government policy, survey results, forest grazing in large forests for weed control and profit, farm-scale agroforestry, "timberbelts", and agroforestry computer models. Tree

species discussed include *Pinus radiata*, *Juglans nigra*, and *Eucalyptus regnans*. Animal species include sheep, cattle, and deer.

\$45.00 + GST

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No. 125

Mountainland Forestry: 30 years' research in the Craigieburn Range, New Zealand

Ledgard N.J., Baker G.C. (1988)

Mountainland research on climate and soils (the physical processes affecting plant growth and soil depletion), the plant species most suitable for stabilising eroding slopes, and techniques for developing self-sustaining vegetation succession are summarised. Recent research on soils, plant productivity, nutrient cycling, ecophysiology, and management of established forests is outlined.

\$20.00 + GST

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No. 147

Puruki Forest climate: measurement techniques, data base, preliminary analyses

Brownlie R.K., Kelliher F.M. (1989)

Hourly meteorological measurements have been made for the 12-year period 1976-87, during which time the vegetation changed from tall coarse pasture with widely spaced *Pinus radiata* seedlings to a closed canopy forest. This long-term forest meteorological record is unique in New Zealand.

\$15.00 + GST

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NZ Journal of Timber Construction

Timber Engineering as Appropriate Technology – Energy Considerations

Buchanan A.H., Evans R.J., Vol. 5(1): 10-11 (1987)

Although the oil shock has passed, the energy awareness which it raises is still with us. Another energy crisis could be not too far away. This article gives figures for the energy needed to manufacture various wood products and competing materials. Sawn timber is very energy-efficient compared with other wood-based products which, in turn, are much better than metals and other energy-intensive materials.

STOP PRESS

Sale of State Forestry Asset

As we go to press the Government has taken urgency on "The Crown Forestry Asset Sales Act 1989" – an Act to provide for the management and disposal of Crown forestry assets and for the protection of Maori claims.

Although more details will be given in the next issue of this journal, the Act authorised the Minister of State Owned Enterprises and the Minister of Finance to appoint the New Zealand Forestry Corporation, or any other person, to (a) transfer Crown forest assets or (b) grant a Crown forest licence to any person. Neither the land nor any interest in the land is being transferred, merely a licence to secure the crop.

Crown forestry licences may include an initial fixed term, not exceeding 10 years, plus a period sufficient to harvest all crops including any established during the initial fixed term. Other licence features include payment of an annual fee for the use of the land, and may include appropriate protective covenants relating to Wahi Tapu, research and conservation areas, archaeological sites and public access. There is no specific requirement in the Act for replanting of plantations.

Crown forest land cannot be alienated until Treaty of Waitangi claims on that land have been considered by the Waitangi Tribunal. Procedures for, and compensation in respect of, successful claims are given in the Bill. The return of any land to Maori ownership shall not have any effect on the licensee of the land.