

1992. The final date for submissions to be received was July 31, 1992, although a number were received subsequent to this date. Oral submissions were heard over the months of August and September, and special hearings took place in Owaka, Tuatapere, Invercargill and Greymouth. By the conclusion of this process 177 submissions had been received, 119 of which were oral. The submissions came from a wide cross-section of interests, including environmental groups, Maori interests, and private owners of indigenous forest. The submissions are currently being analysed by the Committee and officials to determine whether any amendments to the Bill are required before it is referred to the House of Representatives for a second reading.

South Africa to follow NZ privatisation

David Reade

The South African Government owns 340,000 ha of plantations, made up mainly of pine species including good quality *Pinus radiata*. It is following in New Zealand's privatisation path and a Forestry Corporation will be created from next January.

An early task in the privatisation process is to put a value on its resource and the South African Government chose Auckland-based Groome Poyry to carry out a survey working through the Department of Water Affairs and Forestry. Two consultants - John Groome and Bill Liley - spent several weeks there examining two sample plantations in detail, and their report is now with the South African Government.

John Groome comments: "As the present activities of the Government include processing and marketing as well as growing the forests the value arrived at could not be too high or too low. The former could result in stumpages having to increase in order for the new corporation to meet its purchase price servicing.

"The latter could encourage the new entity to become an advantaged processing player in the marketplace. No decision has yet been made as to whether the corporation will be simply a grower or not."

It is also not yet clear whether new control of the plantations will result in an export trade in logs and processed products. But Mr Groome points out that steaming time from the East Coast to Southern east Asia is less than from



Size, rate of growth and longitudinal stresses in eucalypt logs

Sir,

In Chapter III, Section 1, of his classic book on "Growth Habits of Eucalypts" Max Jacobs dealt with "Longitudinal Growth Stresses of Erect Stems". By cutting diametrical planks into narrow strips and measuring the changes from their in-plank lengths, he showed that in stems and logs of *E. delegatensis* (formerly *E. gigantea*) the outer wood was under tension and the inner wood under compression "with a systematic strain gradient across the diameter". When logs are sawn, there will therefore be unequal stresses on opposite faces or edges of the individual pieces of timber. These differences produce both spring in the log during sawing and deformations in the shape of the sawn material. Nowhere did Jacobs cite the age of his test logs. However, he stated that "the faster the growth, the worse the trouble" and suggested that "an ameliorating action is to grow the trees more slowly".

More than 30 years ago one of us (N.B.) noticed that in sawing logs of *E. saligna* and *E. pilularis* of similar age

Chile to Pacific Asia. Australia is also within range for good-quality softwood product, and the higher densities of *P. radiata* and *P. patula* from South Africa could result in timber from these species being competitive.

Against a new export competitor emerging is the fact that the mechanical wood-processing industry has a long way to go to become competitive, he says. It is dominated by frame saws and subject to run-of-the-bush log supplies. Log grading to supply specialised plants has yet to evolve.

Messrs Groome and Liley studied plantations in the George region of the Southern Cape which as well as *P. radiata* and *P. pinaster* included fine stands of native timber - yellowwood and stinkwood - and at Weza in Southern Natal, the latter being a fine example of a well-managed pine plantation.

In the private sector one large grouping concentrates on its pulp and paper activities and the other on supplying South African mines with timber with 3 million m³ going underground every year.

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from trees grown on the same site the large-diameter logs from the outer trees produced more stable timber than logs from the closer-spaced and more slender trees within the stand. In his M.R. Jacobs Oration to the Australian and New Zealand Institute of Forestry Conference in 1991 Harry Bunn stated that in his experience with eucalypts "tree size was of greater importance than rate of growth in determining how the log would behave during sawing".

These observations conflict with Jacobs' emphasis on rate of growth as a cause of trouble, but in fact they accord with his data. He reported that in his extensive tests "it was found that the amount of shortening of the strips cut from the outside of logs of various sizes is more or less constant". Although he did not comment on it, Jacobs' cross-sectional diagrams show that there was similar broad constancy in the lengthening of strips cut from the centre of logs of varying diameter. If these extremes remain more or less constant irrespective of diameter, it must mean that the radial gradient between them becomes less steep with increase in log size, and thus the stresses within pieces of sawn timber should decrease as log diameter increases. This conclusion is supported by Jacobs' figures for the curvature (i.e. stress) in peripheral strips from logs ranging from three to 24 inches in diameter, which showed a steady decline with increasing diameter. He also remarked that "the smaller the log, the greater the spring".

Without figures on the age of his test material Jacobs' data do nothing to support his statement that fast growth worsens the stress problems in handling eucalypt logs, but they help to explain how these problems are reduced as log diameter increases.

Neil Barr
R.G. Miller

Foresters gazetted

Sir,

I was glad to receive the latest Forestry magazine as part of my re-entry into the New Zealand Institute folds.

I am currently engaged as the Project General Manager for the NZ-PNG Reforestation Projects here in Papua New Guinea.

I do from time to time spare a brief thought for those of you lesser mortals who enjoy the 10°-20° temperatures and brisk!! winds as we up here suffer with 30° plus temperatures and zephyr-like breeze conditions, in our tropical paradise!!

From time to time gems of wisdom