

PRICE SIZE GRADIENTS FOR SAWLOGS: A REVIEW

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Unlike New Zealand, where sawlogs are sold almost exclusively on a flat stumpage basis, many countries have price gradients for size and quality. These prices are rarely published formally, but details are occasionally given in economics papers or are available from other sources. A representative range of stumpage values for softwood sawlogs — radiata pine where possible — are summarized in this note.

Direct comparisons are rarely possible because: prices are quoted in variants of currency and volumetric units; rates may apply to either tree or log sizes; and the price point may be at stump, on forest road, or at mill yard. To allow comparisons, it has been necessary to convert:

- (1) All volumes to true cubic metres under bark.
- (2) All prices to New Zealand currency at exchange rates ruling at 1.1.72, namely:

Australia	\$A1.00 = \$NZ1.00
South Africa	R0.91 = \$NZ1.00
United Kingdom	£0.46 = \$NZ1.00
Sweden	Kr5.79 = \$NZ1.00
- (3) All prices, at price points other than stumpage, to stumpage, by deduction of a reasonable cost of production.
- (4) All prices based on log size scale to one based on tree dbh over bark by using relationships given in Warren (1959).

This means that tree prices include smallwood and pulpwood. Representative price gradients for sawlog clearfellings are available for Queensland, New South Wales, South Australia, South Africa, Great Britain and Sweden. One gradient exists in New Zealand. Converted values are compared in Fig. 1.

Summaries of source material and basic information are given below. Full details, including methods of calculation, are available in an unpublished report (Sutton, 1972).

Queensland. Log price lists for all species and for all areas are formally gazetted by the Queensland Government (Anon., 1968, 1969). These price lists are comprehensive and the rates vary with species, stem dbh, stem volume, and the height of pruning. Radiata pine is not extensively planted in Queensland but rates do exist for the Toowoomba Depot. Representative 1970 stumpage rates for unpruned trees, and for trees pruned to 6.4 m, assuming logging, harvesting and rail costs of \$5 25/m³, are included in Fig. 1.

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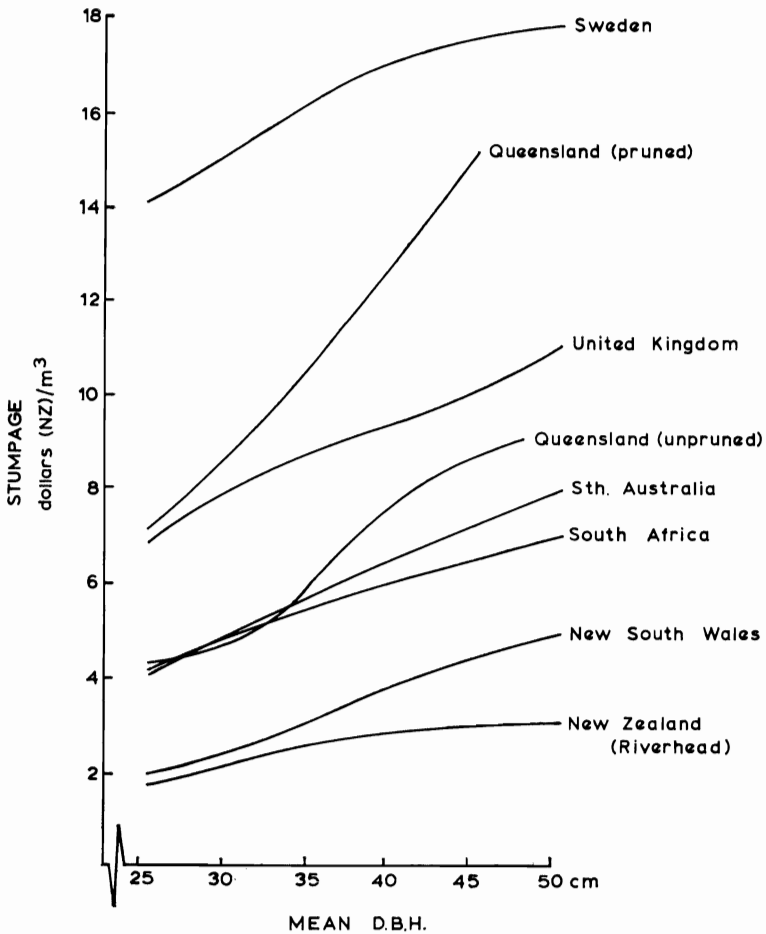


FIG. 1: Price size gradients for sawlogs.

New South Wales. Stumpage values for radiata pine clear-felling as published by Lugton (1968).

South Australia. As in Queensland, stumpage rates in South Australia vary with locality. Radiata pine values for 1971 for a large forest a reasonable distance from the processing plant have been made available by courtesy of the South Australian Woods and Forests Department.

South Africa. Stumpage values for pruned radiata pine in South Africa as published by Grut (1970).

Great Britain. Periodically, the British Forestry Commission publishes average prices for its standing coniferous timber sales by average tree volumes. Values for the year ended 31 March 1971 (Anon., 1971) are unfortunately limited to small tree sizes. The only published stumpage rates known to extend over a more useful range are those of Hummel and Grayson

(1957). They are now somewhat out of date. They do, however, provide an indication of the expected gradient for size, as the values are only slightly (\$0.70 to \$1.50/m³) lower than present-day values for the lower end of the size range. Hummel and Grayson's values are, therefore, probably still indicative of current prices for the higher range, if it were possible to obtain one now.

Sweden. Prices for sawlogs vary by region, species, log quality and size. Values have been calculated, assuming a harvesting and extraction cost of \$3.85/m³, from a price list supplied by courtesy of the Swedish Logging Research Foundation for unsorted (excludes poorest quality) pine sawlogs of a representative region of southern Sweden.

New Zealand. In New Zealand, forest produce is almost always sold on a constant price per unit volume basis. One exception to the constant unit price is the Riverhead Forest sale reported by Painter (1965).

CONCLUSIONS

In contrast to the position in New Zealand, many overseas countries are prepared to pay considerably higher premiums for larger sized sawlogs. For the countries studied, gradients for sawlog stumpages either increase by at least \$3.50/m³, or double in value, for a tree size increase from 25 to 50 cm dbh over bark.

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