

THE MARKETING OF TREATED ROUNDWOOD FENCE MATERIAL IN NEW ZEALAND

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The amazing coincidence of large-scale land development, abundant supplies of pine post material and the introduction of a copper-chrome-arsenate preservative, along with well-distributed pressure treatment units, all combined to launch the success story of treated pine roundwood during the mid-1950s.

Over the years, as costs have increased, the industry has sought new methods to offset these increases. Hand peeling has given way to machines and these, in turn, have improved in efficiency and output. Smooth, attractive, more uniform machine-peeled posts lend themselves to more compact handling, stacking, cartage and distribution. Post sizes have been reduced and this has made possible large savings in treatment and handling costs. Fifteen years ago a post, to be marketable, had to be 2 m in length and about 15 cm in diameter. Today in the North Island the standard length is 1.83 m and, for round posts, a diameter of 10 cm is regarded as sufficient by many customers; otherwise half-round or quarter-round posts are sought. From an average volume exceeding 0.03 m³ 15 years ago, the average volume today is probably 0.02 m³. This smaller piece size does not seem to have resulted in less efficient or less permanent fencing.

Post sizes in demand are not always well matched with the raw material available from the forest, and this difficulty must be overcome by production and marketing techniques. Again, the market is changeable and varies according to region and type of farm operation. In the North Island at least, posts below 9 cm s.e.d. are generally difficult to sell. Half-round posts, acceptable in one area, are refused elsewhere. New uses for roundwood, of different sizes, such as for small-fruit growing and vineyards, further complicate the matter.

Ideally, the industry must aim for the minimum number of variations in post specifications, and it is therefore endeavouring to promote standard size specifications. However, it must produce that range of materials best suited to the end use, or demanded by the customer, and yet it must dispose of the full range of production from the forest. It may induce or

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restrict usage of certain sizes by pricing policy. By production techniques it may alter the ratio of sizes produced, such as by use of debarking machines that will remove small or large volumes of wood, as required. It can seek new markets or uses for roundwood to utilize unpopular post sizes.

Although exotic forests are well-distributed throughout New Zealand, so that few treatment plants are more than 80 km from a forest, small-scale local production leaves much to be desired. Many forests are on hilly country where extraction costs are high. Clay soils often affect operations and make year-round production difficult. Small volume output limits the quality of extraction and debarking equipment. Inevitably, posts of certain sizes are produced which are not in demand on the local market. Where that local market is restricted to, say, 50 000 pieces per year (and this is typical of many producers) then the volume is insufficient to attract good contractors on a steady year-round basis.

To overcome these problems, roundwood treaters look further afield for their material supplies and haulages of 480 km occur. The extra cartage is more than offset by the advantages. An area of production such as Kaingaroa Forest has the advantages of level ground, all-weather access, and a good supply of skilled forest workers. When small roundwood is produced in volume from such an area, then sophisticated equipment can be used. Although a wide range of sizes will be produced, these are easily disposed of because of access to a wide geographical market, and good utilization results.

The future requirements of small roundwood could well come from strategically located stands grown specifically to produce post material, either as a thinning operation where the final crop could be high grade poles, or where the stand is clearfelled at post size. On good sites, closely spaced trees would yield straight, quality roundwood with little taper, as required by the market, and harvesting costs would be low.

To overcome many existing production and marketing problems, the practice of tree-length harvesting, cartage and debarking has many attractions. When treated roundwood is sold under a minimum s.e.d. specification, it will include, in an efficient yard, a range of diameters usually up to 2.5 cm over the minimum. In less efficient yards, the average material can range above this figure. Those pieces only 2.5 cm above the minimum diameter contain from 30 to 50% more volume than the minimum, but the price remains the same. The cost of production of dry roundwood to the plant door is about 45% of total costs, and treatment costs about the same. It will therefore be obvious that a 30 to 50% increase in volume has a marked effect on treatment and thus on overall costs of production, but with no compensating increase in selling price. Where roundwood is cut to length in the forest, it seems impossible to obtain consistent lengths and diameters. This problem could be solved by tree-length harvesting, cartage and debarking, with the material cut to best advantage in the yard, using precision equipment. The diameter of the tree would dictate whether a pole, strainer or post was to be produced.

The costs of felling, trimming, cutting to length and extracting smallwood are unaffected by small diameter differences. A piece with 10 cm s.e.d. entails as much effort to place on the skids as one with 13 cm s.e.d., and should therefore be priced similarly. Stumpages should not be based on volume but per piece up to splitter size, say, 15 cm s.e.d. under bark, and stumpage calculated accordingly. Pieces over 15 cm s.e.d. could be sold on cubic measure. Special lengths in the under 15 cm category, such as 2.4 m stays, require special piece rates. If cost increases for posts are to be avoided in future, and if foresters are to obtain the maximum return on the wood they grow, it seems that the common aim should be the promotion and production of more half-round and quarter-round posts, rather than small round posts. This means that raw material size should be weighted towards diameters above 15 cm.

It is estimated that some five million treated wood posts are produced annually in New Zealand. This figure could rise with possible new markets and at the expense of alternatives. In addition, some 75 000 poles/piles are treated each year (according to the N.Z. Railways specification, a post becomes a pole at 3 m length). These essential commodities can best meet the requirements of users, in price and performance, as treated wood products. It is necessary to ensure that a continuing supply of the best possible quality is available and maintained in the future.