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Included in this New Bulletin of TEAK 21 is an issue of major importance: How do teak prices behave? In other words what is the real price increase (if any) of plantation teak?

How Do Teak Plantation Prices Behave?

The profitability of teak plantations is highly sensitive to the price of land, management costs, site productivity, quality and timber prices - especially price increases. Unfortunately there is much disagreement in the literature regarding price rises and the nature of these rises. Are they real (i.e. above inflation)? As this issue is particularly important in determining profitability, the present note concentrates exclusively on establishing what price increase, if any, in real terms should be used to predict the future (post current global recession) value of plantation teak?

Ball *et al* (1999) acknowledge that ... *there is a lack of reliable information on yields and costs but especially on future markets and prices for plantation-grown teak wood for the calculation of returns. There seems indeed to be a lack of information on future markets for 'luxury' hard-*

woods in general. De Vriend (1998) agrees that large differences in prices make future projections very difficult. He also observes that real prices of Latin American sawnwood have been highly variable and states that it is difficult to make sound price projections for teak because of the large number of sizes and qualities. This has created fertile ground for speculation.

Actual Increases

De Vriend (1998) outlines the annual price increase of sawn teak at Dutch wharves, which has been 2.3% during the 16 year period to 1996. However, real prices have only increased at the rate of 1.5% annually. He stresses that these increases are only valid for Myanmar natural forest teak and Indonesian

(long rotation) plantation teak. Additional information is available from Myanmar log auctions. The main categories of these logs experienced low single digit increases in real terms over the last decade. Short rotation plantations are a different matter.

Expectations

Several teak plantation funds predict annual price increases from 0 to 8% (De Vriend, 1998). De Camino *et al* (1998) state that: *At first glance, diminishing inventories of teak natural forests and restrictive policies ... will force future prices upwards but, given the uncertainty of prediction models, this factor is difficult to assess.* De Vriend echoes these sentiments and cites references that forecast the likelihood of *unchanged timber prices.* He surmises that:

... there is no indication that teak prices will increase strongly in the near future. Yet, somewhat contradictorily he predicts that in Costa Rica ... the real annual teak price increases can be expected to be between 1-3 percent.

Other authors like De Camino *et al* (1998) assume no real price increase in determining Net Present Value for teak, which reflects comments from Upton *et al* (1997). In relation to Brazil, the latter state: *It is anticipated that, in the long run ... prices will increase in line with inflation.* No recent study has given any reason to change this outlook. A major problem, as mentioned, is the weakness of prediction models. Various counter arguments (e.g. scarcity of hardwoods will induce real price rises in future, versus: substitutes will exert downward pressure on prices) do not provide a conclusive case for or against above-inflationary trends in prices.

Word of Caution

A word of caution is advised when analysing teak

plantation price trends that are confined to short time periods or depend on local or even national sources. Apparent real price rises may be due to adjustments-to-market rather than reflect international trends. For example, Maldonado and Louppe (2000) noted dramatic price rises in Cote d'Ivoire between 1993 and 1997 (US \$ 60 to more than US \$ 300/m³ in the period). This was probably largely due to artificially low prices at the beginning of the period, implying that increases were induced by local adjustments-to-market that did not reflect intrinsic teak value increases. Enough information on pricing in plantation teak is not available to differentiate between adjustments-to-market and real increases.

General Conclusion

To overcome current problems associated with teak pricing, it has been proposed to develop - urgently - an international pricing mechanism linked to standard grading rules (Keogh, 2008). Until

prices, based on such a mechanism show otherwise, the safest option for forecasters is to assume no real increase in plantation teak prices.

However, there is likely to be one exception to this general conclusion. If short rotation plantation teak is of large dimension, of cylindrical shape with central pit, low taper, maintains superior wood properties, has high heartwood content, has attractive colour, is knot free, lends itself to constancy of supply and is adequately marketed, then it should behave (in pricing terms) in a similar fashion as natural forest teak (i.e. experience real price increases).

Thus, there is likely to be a convergence between the best of short-rotation plantation teak and the lower grades of natural forest teak. In addition, if natural forest teak continues to deteriorate in quality aspects, especially in terms of dimension as it has been doing in recent decades (shown by the introduction of inferior Sawlog Grades 6, 7 and 8) then this convergence will accelerate.

The plantation timber that is most likely to behave in a similar manner to natural forest teak is the final harvest and the ultimate thinning (early thinning timber in short rotations is unlikely to achieve similarities with forest teak). However, even if the best of short-rotation plantation material reaches natural forest teak category dimensions, the quality of forest produce is likely to be superior. For this reason natural forest teak is always likely to receive a higher price for a given dimension. Nonetheless, this does not demean the best of plantation teak – it simply puts it into another (normally lower) category.

So: what real price increase should be applied to exceptionally good short-rotation plantation teak described above? Until prices, based on a working international pricing mechanism show otherwise, any price increase in real terms for this material is largely guesswork but is not expected to exceed 1%.

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