The TIMBER POLE MARKET

Forestry Sub-Sector Studies - **Briefing 4** - January 2005

water & forestry
Department
Water Affairs & Forestry
REPUBLIC OF SOUTH AFRICA

This series of briefing notes provides summary information on the various parts of the forestry sector. The studies, commissioned by DWAF, focus on the role that each sub-sector can play in promoting poverty eradication. DWAF recognises the importance forests and forestry play in people's livelihoods and aims to create an environment that will increase forestry's impact on local-level development.

Introduction

The South African pole industry is an important market for timber poles. Timber poles compete with steel and concrete poles in building, fencing, electricity, transmission and fixed telephone line applications. These poles represent an indispensable product in the establishment of fixed infrastructure. Based on recorded plantation sales, the total average annual supply of poles to the South African market is estimated at 750 000 m³ to 800 000 m³. Many pole timber markets have a fairly regional flavour, with smaller pockets of both commercial plantations and woodlots supplying the demands of local communities for building and fencing material.

Main Timber Pole Markets

There are two main types of timber pole markets: treated and untreated. Treated pole applications are used for making transmission and telephone poles. The major customers in the timber pole market are Eskom, Telkom and municipalities/metro councils.

This market is dominated by large companies such as Woodline, Thesens and Boland Wood Industries and they supply an estimated 85% of total demand. This market is highly competitive with cost pressure from large customers and alternative pole types, e.g. concrete and steel.

The figure for pole treating can be regarded as reasonably accurate since 95% of formal treaters are licensed. A further ± 230 000 m³ of poles are sold untreated, mostly on a cash basis directly from plantations.

These are used by surrounding communities for building and fencing purposes. Problems experienced by these communities include the life span and the strength of untreated poles.

Box 1: Main Pole Markets

Plantation Timber Pole Sales
750 000 – 800 000m³/a

Pole Treating
520 000 – 550 000m³/a
- Transmission Poles (25%)
- Telephone Poles (10%)
- Building Poles (65%)

Untreated Poles
230 000 – 250 000m³/a
- Building Poles (70%)
- Fencing Poles (30%)

Value-added Chain for Timber Poles

It is generally accepted that the supply of pole logs alone is not a worthwhile business due to its long-term nature and low returns. There are models in which growers participate in downstream processing and/or retailing. These need to be considered, especially for groups of smaller growers.

Average margins in treating operations are around 15 - 20%, but these operations need to be run at high capacity utilisation implying that adequate raw material supplies are a necessity.

Pole retailing operations are normally only found in larger metropolitan areas. These operations require large investments in real estate and also high volume

Box 2: Building and Fencing Poles Value-Added Chain

Description of Stage	Value (R/m³)
Standing logs	55
Logs at roadside	135
Logs delivered to plant (< 100 km)	175
Treated poles ex plant	700
Delivered to the market	
- Local (< 100 km)	750
- Distant (> 100 km)	800 - 900
Retail ex merchant	950 – 1200

turnovers, both factors being drawbacks for small businesses. Average margins in retailing are around 25 – 30%.

It is very evident that smaller pole treating operations need considerable backward integration (in the form of owning plantations or through formal supply agreements) to operate profitably.

Cost Structure for Pole Treating

Industrial preservation or treatment of wood uses toxic materials and is governed by regulations (R602 of 27 March 1986) as promulgated in terms of the Forest Act, 1984 (Act 122 of 1984). The South African Bureau of Standards (SABS) is responsible for implementing the regulations, and does so through SABS inspectors appointed in terms of Section 28 of the Standards Act (Act 29 of 1993).

The predominant preservation options in use are creosote and copper chromium arsenate (CCA). These preservatives have been used for many years and are accepted as the most effective both from preservation and cost perspectives.

The market shares of the two main preservation options are roughly 64% creosote and 34% CCA respectively. There are about 150 – 160 plants operating in South Africa, with 40 of these creosote plants and 100 CCA plants. National capacity utilisation of creosote plants is relatively high (+ 75%), but for CCA plants low (under 35%), implying far too many plants of the latter category.

The applicable SABS certification schemes for treated poles are SABS 753/754 for transmission and telephone poles, SABS 457 for building and agricultural poles and SABS 1288 for poles used in roofs and general construction applications.

The average (industry) cost structure of a formal pole treating operation set out in Box 3 shows the high percentage of material input costs to total costs (± 50%), and it is clear that adequate and regular supply of timber and efficient relationships with chemical suppliers are key to successfully operating a treatment plant.

Box 3: Pole Treating Plant Cost Structure

Description	Cost (Rm³)	%
Raw material	175	25
Chemicals	180	26
Salaries & Wages	50	7
Other Expenses	65	9
Overheads	110	16
Margins	120	17
TOTAL	700	100

A small treating plant

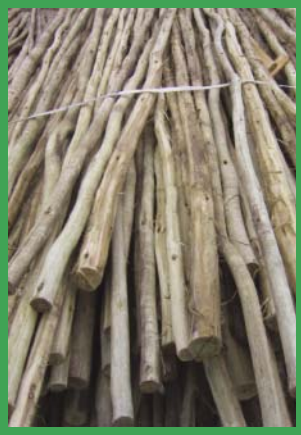
Business Opportunities in the Timber Pole Market

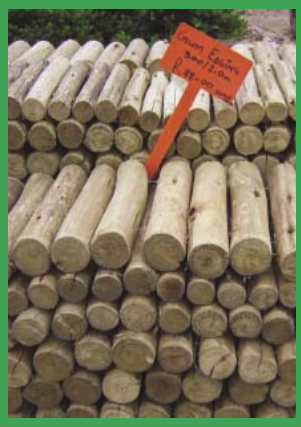
The transfer of the Department of Water Affairs and Forestry managed plantations located in the provinces of Limpopo, Kwazulu-Natal and Eastern Cape, offers immediate forestry enterprise development opportunities for Small and Medium Enterprises and rural communities. With the exception of Eastern Cape, almost all plantations are linked to DWAF pole treating plants. This overcomes the hurdle of access to downstream processing facilities. The scattered nature of DWAF plantations in the Eastern Cape requires a different solution that involves some form of co-operation between various future plantation owners.

Previous research and recent deliberations in Limpopo indicate that there is generally an under-supply of suitable treated poles to nearby markets in all of the regions. Better management of DWAF's assets (plantations and plants) by private sector operators is imperative in order to successfully and profitably run timber pole enterprises in the various regions. Scope exists, through the upgrading of the plants (inter alia obtaining SABS marks) to achieve higher value-added production of transmission or telephone poles and the supply thereof to regional municipalities.

In the Eastern Cape, opportunities exist for value adding to an under-utilised resource. This requires a considerable investment in new plants (e.g. a plant in Butterworth has been studied) and interventions by development players to facilitate joint venture arrangements between individual small growers/ community woodlots in the region.

The industry body, South African Wood Preservers Association (SAWPA), is instrumental in promoting industry development and can be contacted at telephone: (011) 974 1061 or e-mail: sawpa@global.co.za for more information.





This study was sponsored by DFID and a copy of the full report on the timber pole market can be obtained from the Director: Participative Forestry, Department of Water Affairs and Forestry, Pretoria; Tel: 012 336 7718/7719; Fax: 012 336 8937; e-mail: lea@dwaf.gov.za

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