

Mango Wood

FAMILY	Anacardiaceae
GENUS	<i>Mangifera</i>
SPECIES	<i>Indica</i> (there are 34 other species, however this is the common mango)
DISTRIBUTION	Pan Tropical, including Central & South America, Sub-Saharan Africa, Asia, SE Asia and Oceania
COMMERCIAL USES	Craftwood products, furniture to a moderately small design - occasionally tables and chairs, turned plates and bowls, some veneer (very fragile depending on the waviness of grain), paneling.
TRADE & VERNACULAR NAMES	Malaya: Sepam, Sarawak, Malaysia: Machang. India & Pakistan: Mango or Mangga. Vietnam: Xoai, and Indonesia: Mangga.
TECHNICAL PROPERTIES	Relatively soft hardwood with very little lateral shrinkage in drying. However, longitudinal shrinkage is 0.5%. Saws easily. Machining depends on the amount of grain irregularities. The wood bores and mortises well. Glues well.
COLOUR	Lustrous, blond wood without distinct sapwood. Old trees sometimes contain a small central dark core. Marbled staining is preventable and occurs during processing, however it is often desired.
TEXTURE & GRAIN	Moderately coarse texture with an irregular strongly interlocked grain.

TIMBER SOURCING

Mango wood is sourced from smallholder farming systems as mango trees tend to grow singularly or in small groups and not dense plantations. The large crown of the tree provides shade, so it is frequently intercropped with other species such as turmeric.

The trees are often found in gardens or borders to farms, serving as fences. If farming plots do not maintain annual mango fruit crops the trees are chopped down and the wood is used for construction or sold to local markets.

The trees grow up to 1m per year and usually have a short main stem, with large branches. One or two 16ft logs can be obtained from the stem. As prices of traditional furniture timber such as Teak (*Tectona Grandis*) continue to rise, there has been an increasing international demand for mango wood.

LEGAL SOURCES

In Indonesia, mango wood is a community wood and governed by community forestry legislation. There is no specific license for harvesting mango wood in community land, and transferring the wood only requires a "Trip letter" that is prepared by either the sender or the supplier. The head of a village can also provide the appropriate transport documentation.

FSC CERTIFIED SOURCES

The cooperative group "Akamba Handicraft" in Mombasa, Kenya, was a pilot to a now fully FSC group certified cooperative, the Coast Farm Forestry Cooperation (CFFA). The pilot scheme consisted of 576 farmers and 3000 carving members with scope for expansion. This helps reduce impact of mango wood sourcing on the biodiversity rich coastal farms in Kenya, whilst maintaining the traditional wood carving industry



TFT FIELD RESEARCH – JAVA, INDONESIA

BACKGROUND

Research done by the Indonesian TFT field team gave an insight into the sourcing methods of Indonesian factories. Data was obtained from timber traders in Semarang, Indonesia from factories and suppliers.

SUPPLY CHAIN

The relationships between the suppliers and factories are not based on written contracts and are not exclusive to either party. Factories often have a number of suppliers who obtain the majority of their wood directly from farm owners with one or two trees for sale, or from a middle man. Suppliers usually cut the trees from up to five different villages after they have bought a high enough volume to fill a truck. This method is used to prevent pests and diseases getting to the wood. Some suppliers use log yards to collect the wood.

SOURCE LOCATIONS

Factory suppliers source mango wood from the surrounding villages. According to the suppliers wood that is cut and sold is mostly unproductive, old or the fruits are not of high enough quality for the market (e.g. sour).

MANGO WOOD PRODUCTION

Factories require trees with a minimum diameter of 25cm and a minimum length of 1m. If around three suppliers supply to one factory they can supply 150 m³ to 250m³ of mango wood per month to a single factory in the form of logs and lumber. This equates to between 3 to 5 containers of 40ft per month due to a conversion rate of 40%. During the dry season mango wood production is highest, with production slowing considerably in the rainy season, when felling is focused on roadside clearance.

Suppliers have observed a decrease in the production of mango wood from their sourcing areas. As a result of this some suppliers noted that in order to maintain their wood production they need to extend their work area to other locations. However, they do not have any data or written documentation to support this.

ENVIRONMENTAL ISSUES

Environmental issues associated with recovered mango wood include

- Potential overuse of chemical pesticides and fertilizer usage for fruit production (impact limited in small farmer plots)
- Removal of valuable habitats for insects and nesting birds in diseased and non-productive trees

As part of an agroforestry system, mango wood plays various positive roles such as erosion control, flood mitigation and enhanced biodiversity. Additional environmental benefits of sourcing from an FSC certified forest includes the reduction of pressure on natural forests.

SOCIAL ISSUES

Based on interviews with suppliers, there were no significant social problems identified. However, it was noted that the poorer farmers sold smaller diameters mango trees, since they were in need of the income.

The key social benefit of recovered mango wood identified was the additional revenue provided.

FSC group certification benefits would include involvement in national dialogue on associated issues of sustainable forest management, such as forest tenure, worker rights and community participation in the allocation and management of public resources.



CONCLUSIONS & RECCOMENDATIONS

- A decrease in mango wood in the villages in Semarang has been noted by many suppliers. This infers that current demand exceeds supply in the current sourcing area, which may affect the long term viability of recovered mango wood.
- Consequently, any reduction in long term stocks of recovered mango wood may encourage felling of productive trees. The resultant issues would then be similar to any community forestry source, with added food competition issues.
- The successful Kenyan case study suggests that depending on Member demand, TFT should review potential to support community orchard projects in working towards FSC recycled status.
- TFT advise Members that large volumes of 'recovered mango wood' may be unsustainable in the medium to long term and mango wood may then be sourced from productive trees. Any Members sourcing large volumes of mango wood should work with the TFT to establish the status of the source and work towards FSC recycled status within 2 years.