technology transfer *fact sheet*

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Anisoptera spp.
Family: Dipterocarpaceae
Mersawa
Palosapis

Other Common Names: Pengiran (Sabah), Palosapis (Philippines), Kaunghmu (Burma), Phdiek (Cambodia), Mersawa (Malaysia), Krabak (Thailand), Ven-ven (Indochina).

Distribution: From Burma, throughout the Malayan region, Philippines, and New Guinea.

The Tree: Commonly 100 to 150 ft in height sometimes reaching 200 ft; 3 to 5 ft in diameter; boles are well formed and with or without buttresses depending on species.

The Wood:
General Characteristics: Heartwood pale yellow or light yellow brown, sometimes with a pinkish tinge, darkening on exposure; sapwood lighter but not sharply demarcated. Texture moderately coarse; grain interlocked; not lustrous; without distinctive odor or taste when dry; silica ranging from 0.24 to 1.37% is reported.

Weight: Basic specific gravity (ovendry weight/green volume) varies with species from 0.46 to 0.62; air-dry density 34 to 47 pcf.

Mechanical Properties: (First two sets of data based on the 2-in. standard, the third on the 2-cm standard.)

Moisture content (%)	Bending strength (Psi)	Modulus of elasticity (1,000 Psi)	Maximum crushing strength (Psi)
Green (34)	7,850	1,735	3,880
12%	13,500	2,220	7,220
Green (64)	8,130	1,580	4,150
12% (52)	18,100	1,720	8,400

Janka side hardness 725 lb for green material and 875 lb at 12% moisture content. Forest Products Laboratory toughness 236 in.-lb for green material and 308 in.-lb for dry (5/8-in. specimen).

Drying and Shrinkage: Lumber dries very slowly, particularly the core of thick stock with little degrade. Kiln schedule T6-D2 is suggested for 4/4 stock and T3-D1 for 8/4. Shrinkage green to ovendry: radial 4.0%; tangential 9.0%; volumetric 14.6%. Movement in service is rated as medium.

Working Properties: The timber can be worked to a good finish but there is considerable dulling of cutters due to the silica content. Carbide-tipped tools are suggested.

Durability: Generally classified as moderately resistant to attack by decay fungi and nonresistant to termites. Sapwood is particularly vulnerable to powder-post beetle and stain.

Preservation: Heartwood is reported to be difficult to impregnate; both open tank and pressure-vacuum systems gave less than 3 pcf of preservative absorption.

Uses: Veneer and plywood, joinery, furniture components, flooring, light construction.

Additional Reading: (9), (34), (52), (64)

9. Burgess, P. F. 1966. Timbers of Sabah. Sabah For. Rec. No. 6.
34. Lauricio, F. M., and S. B. Bellosillo. 1966. The mechanical and related properties of Philippine woods. The Lumberman 12(5):66 +A-H.
52. Sallenave, P. 1971. Proprietes physiques et mecaniques des bois tropicaux. Deuxieme Supplement. Centre Tech. For. Trop., Nogent-sur-Marne.
64. Timber Research Laboratory, Sentul. 1940. Tests on small clear specimens in green condition made at the Timber Research Laboratory, Sentul (Test Sheet No. 29) Mersawa (*Anisoptera marginata* and *Anisoptera laevis*). Malayan Forester 9(3): 133-138.

From: Chudnoff, Martin. 1984. Tropical Timbers of the World. USDA Forest Service. Ag. Handbook No. 607.