

**Moringa oleifera****Moringaceae****North-west India**

**COMMON NAMES:** **Chonyi:** Muzungwi; **Daasanach:** Hocholoch; **English:** Ben oil tree, Drumstick tree, Horse-radish tree, Moringa; **Giriama:** Muzungi, Muzumbwi, Muzungwi; **Kambe:** Muzungwi; **Sanya:** Muzungwa; **Swahili:** Mrongo, Mzunze; **Tharaka:** Muguunda.

**DESCRIPTION:** A deciduous tree to 10 m, usually smaller, with tuberous roots, **pale feathery foliage** and drooping branches. **BARK:** Grey, thick and corky, peeling in patches. **LEAVES:** Pale green, **thrice compound**, the whole leaf **30–60 cm**, leaflets **usually oval, tip rounded 1–2 cm long**. **FLOWERS:** Cream, fading yellow, in long sprays, each flower with 5 petals, 1 erect and 4 bent back, sweet-scented, attracting insects. **FRUIT:** Long capsules, to 45 cm, **bluntly triangular in section**, splitting when dry to release **9 dark brown 3-winged seeds** from the pith.

**ECOLOGY:** A species native to northern India but now cultivated throughout the tropics, especially in arid areas. It is a very drought-resistant and valuable tree, grown at the coast, in Makindu and other drier parts of the country. Introduced in the early 1990s for afforestation and soil conservation in Manderu town and rehabilitation of a former refugee camp site. Prefers sandy soils, 0–1,450 m, but most common at the coast. Requires generally well-drained soils, but needs a high groundwater table in areas where rainfall is less than 350 mm. Agroclimatic Zones III–VI. Normally flowers in August–September and seeds mature December–February around Malindi; fruit mature in December in Nyanza.

**USES:** Edible leaves and fruit capsules (prepared as a vegetable), medicine (oil from seeds and root), fodder (leaves, young fruit), bee forage, shade, windbreak, fibre, tannin, live fence, oil (Ben oil for industrial use), water purification (powder from seeds), spice (roots substitute for horse-radish or mustard).

**PROPAGATION:** Large stem cuttings (truncheons, more than 1 m long), root cuttings, direct sowing at site or seedlings.

**SEED:** Pick mature (brown) capsules from the tree, dry in the sun, put in a bag and thresh with a stick.

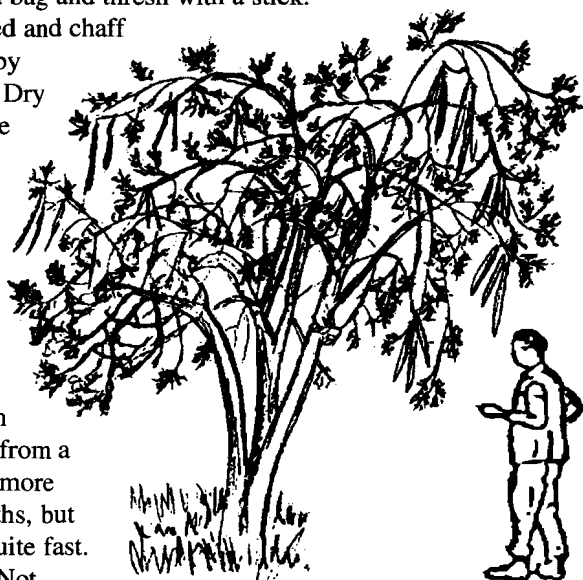
Separate seed and chaff

by hand or by winnowing. Dry further in the sun for 3–5 days.

Germination rate 50–95%; 3,700–6,000 seeds per kg.

Germination time ranges from a few days to more than 2 months, but usually is quite fast.

**treatment:** Not necessary.



**storage:** Seed can be stored for long periods.

**MANAGEMENT:** Fast growing; pollarding, coppicing, lopping.

**REMARKS:** The leaves are used as a vegetable (Mijikenda), while the young capsules (drumsticks) are a delicacy among the Asian community. Immature seeds can be used like green peas. Grown as a living fence in coastal homesteads. The wood is soft. Root bark contains poisonous alkaloids, so care should be taken in its use as a spice or medicine. It is said to cause dizziness (*kisuzi*, Mijikenda). *Moringa* is a small genus with about a dozen members in Africa and Asia. Most species are from north-eastern Africa and western Asia.

**FURTHER READING:** <http://www.worldagroforestrycentre.org/Sites/TreeDBS/AFT/AFT.htm>; Albrecht, 1993; Beentje, 1994; Bein et al., 1996; Bekele-Tesemma et al., 1993; Dharani, 2002; Jensen, 1999; Katende et al., 1995; Lötschert and Beese, 1983; Maundu et al., 1999; Mbuya et al., 1994; Noad and Birnie, 1989; Palgrave and Palgrave, 2002; Verheij and Coronel, 1991; von Maydell, 1990.

