



Agroforestry Facts
Hippe



Botanical Name	<i>Madhuca longifolia</i> var. <i>latifolia</i> (Roxb.) A.Chev.
Name in English	Mahua
Name in Kannada	Hippe
Family	Sapotaceae
Seeds Collection	Seed collection between June-August. The seeds after maturity dispersed from the tree and germinate rapidly in wild conditions.
Seeds Processing & Treatment	No pre-treatment required
Nursery	Ripe fruits are collected by shaking the branches. Fruits are rubbed and washed to obtain clean seeds. About 450 seeds weigh one kg. Fresh seeds have high germination capacity, which however is soon lost on storage. Fungi and insects readily attach the seeds. Fresh seeds are sown at a depth of about 1.5 to 2.5 cm. One-month-old seedlings are transplanted in nursery beds. Late transplanting gives poor results. Spacing in transplant beds is 30 x 15 cm; shading the seedling is necessary, One-year-old seedlings are used for planting



	in main field. Seedlings can also be containerized. In that case, one-month-old seedlings are pricked into containers. Shading is necessary
Plantation Management	The tree grows on a wide variety of soils, but prefers sandy soils. It grows well in alluvial soils of the Indo-Gangetic plains. In Sal forests, it is found growing on high clay and even calcareous soils. Planting is one in 30 cm ³ pits at a spacing of 4x 4 m. Planting of stumps is done in crow bar holes or 30 cm ³ pits
Model/Spacing	Ideal spacing 4 x 4 m.
Pests, diseases and Management	Bark eating caterpillar. Pest is active from February to March. Can be controlled by maintaining sanitary situation. Dichlorovos (0.1%) should be injected the holes and plugged. Foliar spray with Dimethoate (0.05%) at tri weekly interval.
Plant Rotation	35 – 40 years
Yield	30 – 40 kg seeds per tree
Uses	Leaves are used as fodder. Flowers and fruits can also be fed to cattle. Leaves contain crude protein 9.8%, crude fibre 20.3%; N free extract 60.7%; ether extract 4.1%; total ash 7.8%, calcium 1.6%, phosphorus 0.2%. Seeds contain 39% oil which is used for cooking and soap making. Seed cake is also fed to cattle. It also makes a good manure. It contains (on dry matter basis), the flowing : crude protein 19.4%, ether extract 12.0%; crude fibre 62.2%, total ash 6.4%; calcium 0.2%, phosphorus 0.8%; digestible crude protein-8.0% total digestible nutrients 60%. Flower can also be fed to livestock to replace cereal concentrates. A fully developed tree can produce upto 90 kg of flowers in a year. The chemical composition (in per cent) of the flowers is crude protein 8.0; ether extract 1.4; crude fibre 30.4; N free extract 52.4; total carbohydrate 83.8; total ash 7.8; calcium 0.22; phosphorus 0.16. The protein content is comparable to that of rice and the total carbohydrate to that of maize and oats as also the availability of total digestible nutrients. Flowers are used by the tribal as a source of alcohol. The oils have also been tested as potential cocoa butter extenders.
Buyers /Industries	Food and Pharmacy industry
Harvesting	Starts yield from 4 – 5 years.
Economic Returns	A well-maintained block plantation of Mahua will yield Rs. 2,94,000 per ha annually
Current Market Rate	Rs. 20 per kg of seeds.

