

Saraca asoca (Roxb.) Willd.

Synonyms: *Jonesia asoca* Roxb.

Saraca indica sensu Bedd. non L.

Family: Leguminosae

Various names

Common/Trade names: Ashoka, Sita Asoka, Anganapriya

Sanskrit name: Kankeli

Hindi name: Ashoka

Popular name/s in the southern region

- *Andaman & Nicobar Islands:* Asoka
- *Andhra Pradesh:* Ashokapatta
- *Karnataka:* Ashokadamara, Kenkelimara
- *Kerala:* Asokam
- *Lakshadweep:* Asokam
- *Puducherry:* Asogam
- *Tamil Nadu:* Asogam
- *Telangana:* Ashoka

Distribution

Saraca asoca is distributed throughout India in evergreen forests up to an elevation of about 750 meters. It is found in Himalayas, Bengal and whole of southern region. In Himalayas it is found at Khasi, Garo and Lushi hills. Asoka is often grown in temple premises and homesteads.

Description

Evergreen trees reaching up to a height of 10 m, bark 2-3 mm thick, surface brown or brownish-black. Leaves are compound with 6-12 leaflets. The leaflets measures $7.2 \times 2-8$ cm are narrowly oblong, oblong-ovate or ovate-lanceolate. Flowers bisexual, yellow-orange or red, arranged in dense sessile corymbs at leaf axils or leaf scars. Stamens 7 or 8, much exserted, free; filaments orange coloured. Fruit a pod $10-5 \times 2-5$ cm, flat, oblong, almost woody, tapering at both ends; seeds 2-8, 3.8 cm long, ovoid, slightly compressed.

Uses

Saraca asoca preparations are used to treat gynecological disorders.



Agro-ecological requirements

Grows naturally in humid to very humid tropical lowland climates, generally in areas with annual temperature 19 to 35 °C and annual rainfall of 1500- 4000 mm. Sandy loam soil is ideal for cultivation.

Cultivation

Planting-stock production

Propagules can be raised from seeds and stem cuttings.

Seed propagation: Seeds are best suited for propagation. Mature seeds are collected from more than five year old trees in December–January. Seedlings are raised in nursery in March in mother beds or polybags of 25 × 20 cm size filled with potting mixture of soil, sand, and farmyard manure. Seeds germinate in about 15 days. Seeds are soaked in water for 12 hours before sowing to improve germination percentage. Approximately, 2 kg seeds are required for raising seedlings sufficient for one hectare of land at a spacing of 3 × 3 m. Seeds are recalcitrant type and can be stored in cool dry, ventilated container for 6 months.

Seed dimension: 2.8-5.8 × 1.6-4.1 cm. Seed weight: 61-62 seeds/kg at 54% M.C (Fresh seeds).

Vegetative propagation: Cuttings of 15 cm long having 4 to 5 nodes are used. Basal portions of cuttings are dipped in solution of 2000ppm IBA (Indole-3-butyric acid), and planted in the polypots filled with rooting media of sand, soil and farmyard manure in the ratio of 1:2:1. The polypots are put in net house and watered as per the requirement. Germination can be witnessed after 23 days.

Field planting: Two months old seedlings are transplanted in the pits during monsoon season in June/ July. About 1100 seedlings per hectare are required for planting at a spacing of 3 × 3 m for a pure crop. When intercropped with plantation crops such as coconut, only about 200-250 seedlings may be planted per hectare, alternating with coconut rows. When intercropped with herbs, it may be planted at a spacing of 3 × 6 m, requiring approximately 550 plants per hectare.

Manuring/Fertilization: Farmyard manure is applied twice: first in May-June while filling the pits and again in October–November at the time of second weeding.



Irrigation: Asoka is a rain-fed crop. During summer the seedlings may require irrigation.

Pest and diseases: No serious pests or diseases are reported.

Harvesting & Post-harvest processing

The plant starts flowering after 5 years and produces fruits during July to October. The tree survives for about 50 years. The bark is peeled off in vertical strips with 6 cm interspaces between each strip. The peeled off area is renewed with fresh bark within one to two years. This nondestructive method is recommended for harvesting bark. The bark is dried under shade, packed, and stored in containers.

Yield

The yield is around one ton per hectare of bark per year.

Economics of cultivation

Cost of cultivation is about ₹ 62,500 per hectare (for entire duration)

Market price: ₹ 80-100/ kg (as on September 2019)

Quantitative quality standards for cleaned salable stem barks (acceptable limits) (w/v)

- *Foreign matter*: Not more than 2%
- *Ash*: Not more than 13%
- *Acid-insoluble ash*: Not more than 0.6%
- *Ethanol-soluble extractive*: Not less than 11%
- *Water-soluble extractive*: Not less than 10.5%

Note: The farmers are advised to adopt suitable practices so as to meet the quality parameters and standards of the buyers.