

ANNATTO



Plant Profile

Family : *Bixaceae*

English name : Arnotta or Annatto plant

Indian name : Sinduri (Sanskrit)
Sinduriya, Latkan (Hindi)
Rangmale (Kannada)
Sappira virai,
Uragumanjal (Tamil)

Species : *Bixa orellana*

Annatto is a natural carotenoid obtained from *Bixa orellana* shrub. The seeds are gaining economic importance in recent years as a highly desirable colourant. The ripe fruits of annatto on drying yield annatto seed which serves as the raw material for the production of annatto colour.

Uses

- **Chemical ink, Coating medicines, Drugs, Dyeing, Food colouring, Hair oils, Polishes, Poultry feed**
- The annatto dye is non-toxic and is mainly used for colouring edible materials like butter, ghee, other milk products, margarine, cheese, *vanaspati*, chocolates, cosmetics etc.
- It neither affects the colour nor the aroma of these products.
- The dye is also used in colouring citrus juice, concentrates, drinks etc.
- Annatto dye is also used in floor polishes, shoe polish, hair oils etc.,

SOIL

- It is a hardy tree and does not require very fertile soil for its cultivation. An average soil which has moisture retaining capacity is suitable for the cultivation of this crop.
- Soil which is poor in drainage and has rocks in the subsoil should be avoided.

CLIMATE

- Annatto is a tropical plant. It can be grown successfully in a warm dry climate.
- It cannot withstand frost and hence unsuitable for cultivation in the places where frost occurs frequently.

VARIETIES

There are no named varieties in this crop

INPUTS

Sl.No.	Materials	Per acre	Per hectare
1.	Number of seedlings	200	500
2.	Farm Yard Manure (t)	10	25
3.	Fertilizers	Annatto is presently being grown as an avenue tree or a hedge plant; hence, its fertilizer requirement is yet to be worked out.	

CULTIVATION

Propagation

- Best time for raising the nursery is during April-May months. The plant can be propagated by seeds or through stem cuttings.
- Seedlings are raised in polythene bags containing a mixture of soil, sand and manure. Seeds germinate in about 8-10 days and only one seedling is grown in each bag.

Transplanting

- Seedlings are transplanted when they are 20 cm tall.
- Pits of size 30 cm³ are dug in early March at a spacing of 4.5 m x 4.5 m. They are filled with a mixture of soil and compost before the onset of monsoon.
- One year old healthy seedlings are planted in the main field at the onset of rains.

IRRIGATION

- Pits are watered immediately after planting. Regular irrigation depending on the climate is necessary for good growth and yield of the crop.

PLANT PROTECTION

- Plant is very hardy in nature and is not attacked by any pest or disease of serious nature.

HARVESTING AND YIELD

- Plants start flowering in the first or second year of planting. To encourage good vegetative growth and for better performance of the plantation in subsequent years, flowers are plucked off in the first two years.
- The first crop is obtained after three years of planting and the plants continue to give economic yield up to 8-10 years under good management.
- Generally the plants flower in the last week of August and the flowering continues up to middle of October. In about 30 days of flowering, capsules begin to appear on the trees and after 90 days of appearing the capsules they mature and dry up in January.
- On maturity, the dried capsules make a rattling sound. Another indication is the formation of a crack at the stigmatic end of the capsule.
- The dried fruits are kept packed in gunny bags and kept closed for some days. Later, they are taken out and exposed to the sun.
- Seeds are separated from the dried capsules by beating them with sticks. After that the seeds are sun dried, cleaned and packed in gunny bags before they are marketed.
- A three year old plant on an average may yield about 0.5 to 1.0 kg of seeds per tree per year. The maximum yield is obtained from 4 to 10 years age plantation. There after, there is a gradual decline in the yield.
- Seed yield may be around 250 kg to 500 kg per hectare per year from 4 year old plantation.



Annatto Seeds



Colour powder