

Technical Bulletin on *Cochlospermum religiosum*

(Buttercup tree or Galgal)



State Silviculturist, Jaipur, Rajasthan

- Family** : Cochlospermaceae
Synonyms : Bombax gossypium,
Cochlospermum gossypium, *Maximiliana gossypium*
Common name : Silk cotton tree, Buttercup tree, Galgal, Gurnala, Katira
The name *Cochlospermum* because the seed resembles a snail.
Religiosum because the flowers are used for temple offerings



Distribution :

Cochlospermum religiosum Tree is native to India, Burma and Thailand. In India it occurs in the western sub- Himalayan tract from the Sutlej eastward, Chotanagpur, Bundelkhand, the drier part of the Indian Peninsula. In Rajasthan this species is found in the forest area of Pratapgarh, Chittorgarh, Kota and Banswara district. It is reported from Sitamata game sanctuary (Siri Peepli naka), Chittorgarh division Vijaypur range (Rawat ka taalab naka), Rawatbhata range and Peepalkhut range of Pratapgarh forest division.

A very conspicuous tree, characteristic of the hottest, driest and stoniest slopes. *Cochlospermum religiosum* has been enlisted critically endangered species in Rajasthan by FRLHT, a leading organization working for protection and conservation of medicinal plants in India.

Silviculture :

It is a small deciduous tree growing up to 6.0 mtrs. The bark is smooth, fibrous, deeply furrowed and pale grey to brown in colour. It is sparsely clothed with leaves and shed them at the height of the flowering season. The leaves appear at the tips of the branches and are palmately lobed alternatively arranged, cordated at base. It is light demander, coming up in open forests exposed to full sun light. Cochlospermum is a fairly quick growing tree, the root system is shallow and the tree may be uprooted by strong wind and the branches break easily. The flowers of the Buttercup tree are the most conspicuous part of the tree. They are large, growing up to about 10 cm, buttercup shaped and bright yellow. The stamens are orange. The flowering season is between February to April, particularly after the leaves are shed. The fruits are brown and oval shaped. They appear from April to July in the form of a capsule made up of 5 segments 5-8 cms long. The mature capsule splits and release the seeds embedded in the silky cotton within.



Seed collection :

Fruits are collected by lopping the branches or from the floor, kept in open for some time and then the seeds are separated by trashing. Seeds remain viable for 1 to 2 month. Approximately 13400 numbers of seeds are found in one Kg of seed.

Pretreatment of seed :

Soaking in warm water for 24 hours. Seeds take about 25 days in germination.

Nursery technique :

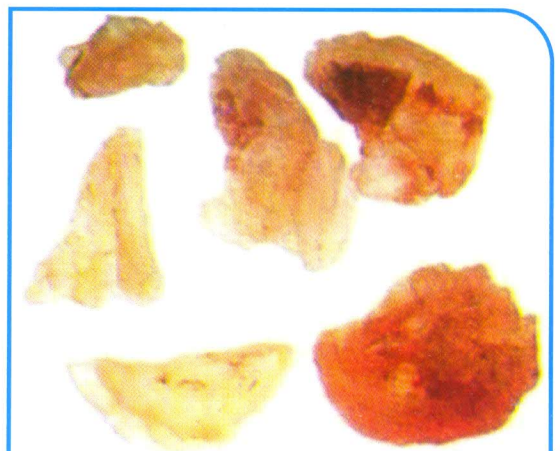
Fresh seeds are broadcasted in primary beds in June and seedling are pricked out to polythene bags.

Uses :

- The tree yields a gum, katira gum, which is insoluble in water but swells in it, and mixed with gum-arabic gives a water-borne adhesive paste.
- The gum has some value in cigar and ice-cream manufacture, and can be used as a substitute for gum tragacanth in various industrial processes.
- It is sweetish, cooling and sedative and helpful in cough medicine.
- The dried leaves and flowers are said to be stimulant.
- The seeds contain non-drying oil 14–15% usable in soap-manufacture. The residual seed-cake is a suitable cattle concentrate, or can be used as manure.
- The floss from the seed is used for stuffing pillows.



Cochlospermum pod at Sita mata Sanctuary
(Sree Peepli naka)



Katira gum

During March –April 2011 a rapid survey of this species was done in Pratapgarh, Chittorgarh division and in Sitamata game sanctuary. A few trees of *Cochlospermum* were observed in flowering / fruiting stage in Hudabawji block (Pipalkhut), Vijaypur range and in Sree Peepli naka (Sita mata Game Sanctuary)area. Efforts are being done to collect the seeds of this species for raising plants in respective nurseries. The total number of tree of this species standing in Rajasthan can be counted as they are left very few. It is therefore, an urgent need to protect/regenerate its germ plasm by protecting existing trees and raising more and more plants in nursery and planting them in forest of Rajasthan.



Cochlospermum flower at Sita mata Game Sanctuary (Sree Peepli naka)

Chief Conservator of Forest (Silviculture), Jaipur, Rajasthan

Grass Farm Nursery, Khatipura Road, Jaipur, Rajasthan. Tel: 0141-2350662

E-mail : silvagrassfarm@yahoo.com