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Khejri- A Wonder Tree of the Thar

(*Sumit Kumar Yadav and Harshita Nagda)
Rajasthan College of Agriculture, MPUAT, Udaipur
*Corresponding Author's email: syadav12150@gmail.com

1. Ayurvedic name: -Sami
2. Hindi name: - Khejri, Jand and Thand
3. English name: - Spunge tree
4. Scientific name: - Prosopis julifera
5. Family: - Mimosaceae
6. Parts used: - Bark and fruits

Distribution:- It is native to arid portions of Western Asia and the Indian Subcontinent, including Afghanistan, Bahrain, Iran, India, Oman, Pakistan, Saudi Arabia, the United Arab Emirates, and Yemen.

Historical significance: - In 1730 AD, the village of Khejarli near Jodhpur in Rajasthan was the scene of a violent environmental confrontation. Amrita Devi and her three young daughters gave their lives in an attempt to protect some Khejri trees which Maharaja Abhay Singh had ordered cut to make way for his new palace. This led to widespread defiance in which 363 people were killed trying to save the trees. In the 1970s, the memory of this sacrifice led to the start of the Chipko movement.

Climate:- It has ability to grow in semi-arid and arid marginal environments receiving low rain fall of 250-500 mm/annum and yet it produces profuse flowering and fruiting.

Soil:- The soil with 2:2:1 ratio of sand : clay : FYM is best for plant growth and increasing biomass. Soil mixture with 50% clay is preferred.

Botany:- The plant is much branched shrub or small tree. Branches are slender, glabrous, with compressed, straight and scattered prickles. Leaves are pinnate, glabrous or puberulous. Pinnae are usually 2-pairs and opposite. The plant has deep root system and has low requirements for water and nitrogen. Shoots grow to produce new leaves, which appear twice in a year in March-April and July-October and thereafter these leaves develop slowly. Flowering stars in January, reaches in full bloom during February - March. Fruit setting starts from April onwards which attains maturity in May.

Usages:- The stem bark has folkloric repute to possess anti-inflammatory, ant rheumatic, tonic, and vermifuge properties is reported to be used in the treatment of anxiety, asthma, bronchitis, dyspepsia, fever, dysentery, leprosy, piles, and tremors, asthma, bronchitis, dysentery, leukoderma, leprosy, muscle tremors and piles.

Propagation:- Propagation material is seeds collected during May-June.

Orchard management :-Vegetative propagation is necessary either budding on nursery raised rootstocks or *in situ* budding on raised rootstocks.

Training and pruning:-Training and Pruning operations should be done twice in a year *i.e.* november and june months and should be continue upto four years of budding.

Agro techniques

Nursery technique:- Raising Propagules : Plants raised through seeds show 90.0% survival under field conditions. About 20 gm seeds/ha are required. Seeds are pretreated with concentrated H_2SO_4 for 15-20 minutes and sown in polybag at 2.0 cm depth during May and subsequently one month old seedling is transplanted in the field during July-August at 5m X 5m spacing in field.

Planting in the field

Land Preparation and Manure Application:- The land is prepared by ploughing 3-4 times with disc plough and the soil is brought to a fine tilth. The land is divided into plots of convenient size. The main and subirrigation channels are laid out. Pits of 45cm X 45cm X 45cm size are dug at a spacing of 5m X 5m and should be filled with top soil and well decomposed FYM in the ratio of 1:1.

Transplanting and Optimum Spacing:- One month old seedlings is transplanted in field conditions.

Intercropping System:- Intercropping of crops like pearl millet and cluster bean could be grown.

Irrigation Practices:- The crop requires monthly irrigation for achieving maximum growth of above and below ground biomass and bark yield.

Weed Control:- Weeding and hoeing is done manually after every 15-20 days in rainy season and after rains, at same intervals upto 3-4 years of age.

Disease and Pest Control: No serious insects and pests were observed in this plant in the early stage except termite attack.

Harvest management

Crop Maturity and Harvesting:- It is a perennial slow growing tree. It takes about 7 to 8 years for flowering, fruiting and bark production.

Post-harvest Management:- Scrapping of bark from the older branches is done in the month of November by knife and stored in dry shady and ventilated place in gunny bags for marketing.

Yield : After 2 years of plantation, approximately 500 kg of bark is obtained from one hectare plantation.