

KHEJRI: A MIRACLE TREE FOR GOAT REARING

Mohd. Arif

**ICAR- Central Institute for Research on Goats, Makhdoom,
Mathura (Uttar Pradesh)**

Goat rearing is the most common practice for small and marginal farmers due to their adaptation in wide agro-climatic conditions. Goat requires less space and maintenance and is mainly a browsing animal rather than grazer, therefore the success depends on good quality feed and fodder. Fodder trees and legume shrubs are the cheapest source to meet the nutritional requirement of goats as compared to the costlier concentrate feed. Khejri (*Prosopis cineraria*) is the most preferred tree species used as a fodder for goats because it provides nutritious fodder during acute shortage of green forage. Inclusion of Khejri in feeding will reduce the cost on feed and make the goat rearing a more valuable option. Beside fodder value khejri also act as a shelter and protector for the goats. Khejri also known as a Kalpavriksha of Rajasthan is one such tree which contains high nutrients content in fodder. It is a multipurpose tree used for fodder, timber, fuel wood and as a vegetable beside it is worshipped in Rajasthan by a large number of people due to its religious significance. It is the only leguminous tree which grows well against all the climatic odds of the desert and supply green fodder even during the driest period of May-June when other fodders become scarce, leafless and dormant. Its fodder especially the leaf and pods are the most preferred parts browsed by the goats. Therefor it is a boon to the goat rearing in arid and semi-arid area particularly under marginal and small land holding conditions to augment profit from such a least maintenance requiring animal known as poor man's cow (Goat).

Khejri belongs to leguminoseae family. It is a small moderate sized even green thorny tree, with slender branches armed with conical thorns and with light bluish green foliage. It grows successfully in dry regions of India mainly Rajasthan, Haryana, Gujarat, Western Uttar Pradesh and drier parts of Deccan. It is frost and drought resistant tree and can withstand temperature extremes ranging from 104-114° F in the summer to less than 50° F in the winter. It requires minimum rainfall.

SOURCE OF NUTRITIOUS QUALITY FODDER:

The foliage of Khejri used as a nutritive fodder, while pods are rich in protein and minerals. The leaves of Khejri are small in size but highly nutritive and palatable. These leaves locally known as "Loong" and it are very much liked by goats. It is much valued as fodder tree that way lopped heavily. On an average a full grown tree is expected to yield about 60 kg of green forage (Mann and Sharma, 2006). Pods locally known as 'Sangria' and considered as rich animal feed.



Leaves of Khejri



Pods of Khejri

The composition of Khejri leaves and pods as fodder is given below in the table:

Nutrients (%)	Leaves	Pods
Crude Protein	11.9	18.0
Crude Fibre	17.5	26.0
Ether Extract	2.9	-
Ash	8.1	-
Nitrogen free extract	43.5	-
Phosphorus	0.4	0.4
Calcium	2.1	0.4
Iron	-	0.2
Carbohydrate	-	56.0
Fat	-	2.0

Source: Khan et al. (2006)



IMPORTANCE IN GOAT NUTRITION:

Khejri tree provides enriched fodder in terms of various elements required for growth and development of goats. In a feeding trial Singh and Bhatia (1982) found that growth rate of goat kids increased at the rate of 46 g day⁻¹ fed on khejri leaves at the rate of 672 g day⁻¹ for 50 days.

OTHER USES OF KHEJRI TREE:

- ❁ *Means of shelter:* This is the only tree species in desert which provides much needed shade and shelter to the farmers and their livestock.
- ❁ *Source of medicine:* It has also got some medicinal values to cure human as well as animal diseases due to this it is also called as Kalp taru and Wonder tree. Beside all parts of the tree are useful for human and animals.
- ❁ *Role in ecosystem services:* It is the golden tree of the desert and plays a vital role in preserving the ecosystem of arid and semiarid areas. It provides a favourable atmosphere by moderating the local climate of the area.
- ❁ *Protective role:* Khejri tree stabilize the shifting sand dunes and acts as windbreak and shelter belts in dry areas. This sort of function helps in protecting the animals from the hot and cold winds and shifting dunes.

