ECRONICON OPEN ACCESS

EC VETERINARY SCIENCE
Guest Editorial

Prosopis juliflora Pods - A Fodder of Dryland Region of Tamil Nadu

S Jidhu Vaishnavi[1] and D Udhaya Nandhini[2]*

[1]*Assistant Professor, Amrita School of Agricultural Sciences, Arasampalayam, Coimbatore, Tamil Nadu, India*

[2]*Post Doctoral Fellow, Centre of Excellence in Sustaining Soil Health, Anbil Dharmalingam Agricultural College and Research Institute, Trichy, Tamil Nadu, India*

***Corresponding Author:** D Udhaya Nandhini, Post Doctoral Fellow, Centre of Excellence in Sustaining Soil Health, Anbil Dharmalingam Agricultural College and Research Institute, Trichy, Tamil Nadu, India.

Received: December 13, 2022; **Published:** December 23, 2022

Prosopis juliflora, an evergreen xerophytic tree, grows well in a variety of soil types and climates. It was brought to India in 1876 to colonise dry terrains due to its endurance to drought, submergence, and salt, as well as its strong coppicing ability, and it has since expanded to many parts of India, covering approximately 20 lakh hectares. One of the worst invaders in India, *P. juliflora* was thought to be harming local biodiversity and natural habitats.

It was brought to Tamil Nadu in 1959 in an effort to help the rural poor fulfil their fuelwood needs and restore the vegetation on their degraded fields, but it quickly spread and now covers nearly all of the state's agrozones. In several locations around the state of Tamil Nadu, this tree is extensively used as a fire wood or charcoal resource in addition to producing pods (Figure 1) for cattle feed.

Figure 1: *Yellow colour pods of mesquite tree.*

Feeding nearly 99.95 lakh cattle in Tamil Nadu has become a real challenge. While fodder scarcity and rising fodder costs have caused widespread distress selling of cattle across Tamil Nadu are changing the way of feed. So, selection of less expensive feed to raise the milk production is a practical challenge for them. Using of mesquite pods as nutritious feed has been the choice of local people to cut off the feed costs.

Prosopis produces pods in the summer and winter. The pods benefit animal productivity, society, and the economy in general in dry locations. According to estimates, the Mesquite in Tamil Nadu's southern region produces roughly 4 million tonnes of pods annually at a rate of 10 tonnes per hectare. In the southern zone, domestic cattle, goats, and sheep depend heavily on the pods. The annual pod production of 5 years old tree ranges from 12 to 65 kg. All indigenous ruminant animals, including cattle, sheep, camels, buffalo and rabbits, like the ripened pods which is highly palatable in nature.

It is clear from the table 1 that *Prosopis juliflora* pods were rich in organic matter, protein calcium and phosphorus minerals. Pods contain an adequate amount of nutrients for livestock. *P. juliflora* pod extracts, which contain juliprosine, prosoflorine, and juliprosopine, can be utilised as a ruminal feed addition to reduce gas formation during ruminal digestion and as an antibacterial agent [2]. Feed supplemented with de-wormer from *Prosopis juliflora* works as an anti-helminthic agent [3]. Farmers of the local have been claimed that dry pods can be used as a concentrate to compensate for protein deficiencies in roughage such as wheat and paddy straw.

Chemical Composition	Mean
Dry matter (DM)	91.74
Organic matter (OM)	86.13
Crude protein (CP)	12.96
Ether extract (EE)	1.67
Crude fibre (CF)	22.53
Nitrogen free extract (NFE)	57.23
Total ash (TA)	5.61
Acid Insoluble Ash (AIA)	0.90
Calcium	0.59
Phosphorus	0.23

Table 1: *Chemical composition (%) of Prosopis juliflora pods [1].*

It is an excellent source of energy for cattle and other ruminants. Because the pods contain extremely little phosphorus, according to balance tests, pods should be fed phosphorus-rich feeds or a mineral mixture. Farmers opine that the cattle enjoy pods and they can survive during periods of extreme drought.

Substitution of these pods as an unconventional feed is satisfactory among the farmers of southern dry lands of Tamil Nadu where *Prosopis* pods are used in a large scale as feed. *Prosopis juliflora* pods could be used instead of expensive commercial concentrates.

Bibliography

1. Chellapandian M and D Thirumeignanam. "Nutritional evaluation of *Prosopis juliflora* pods for sheep". *International Journal of Science, Environment and Technology* 8.1 (2019): 165-169.

2. dos Santos ET., *et al*. "Antibacterial activity of the alkaloid-enriched extract from *Prosopis juliflora* pods and its influence on *in vitro* ruminal digestion". *International Journal of Molecular Sciences* 14.4 (2013): 8496-8516.

3. Syomiti M., *et al*. "Medicated Prosopis spp-based feedblocks-for antihelmintic efficacy and performance of weaner lambs". *Livestock Research for Rural Development* 27 (2015): 50.

Volume 8 Issue 1 January 2023
©All rights reserved by S Jidhu Vaishnavi and D Udhaya Nandhini.