

Short Communication

**Chemical Composition of Desert Shrub Lana (*Haloxylon salicornicum*) used as Animal Feed in Western Rajasthan**

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Lana (*Haloxylon salicornicum* (Moq.) Bunge) is used as fodder for animals since long back. It is a shrub of desert area particularly of western part of Thar Desert (Shankar and Kumar, 1984) and grows well even in 100 mm rainfall regions. Farmers generally harvest the twig and fruiting tops of lana during the months of November and December and preserve it after sun drying for future use as fodder for camel, sheep, goat and cattle. However, in India, the information on its chemical composition is limited. It is generally fed by mixing with clusterbean straw and *Lasu* (dried phylloclades) of phog (*Calligonum polygonoides*). Taste of fresh lana is salty due to high concentration of salt and other minerals. Farmers believe that during mineral deficiency, the animals selectively eat this plant to meet their minerals requirements.

Samples of lana (*Haloxylon salicornicum*) were collected from five sites, viz., Pugal, RD-682, 6 Chak (Fattuwalla), Karnisar and Khajuwala of Bikaner district in the months of November and December. Samples were collected from different plants from a particular site to have random and homogenous materials of twigs as well as fruiting tops. Samples were dried in hot air oven at  $100\pm 1^\circ\text{C}$  for over night. Dried

samples were ground using grinding machine and analyzed for their proximate principles (AOAC, 1990) and fiber fraction (Goerning and van Soest, 1970).

Fruiting top of all the samples contained higher CP, total ash and EE than its twigs (Table 1). The CP content ranged between 14.02-18.8% in fruiting tops and 11.31-14.76% in twigs. Total ash content varied between 20.70-32.91% in fruiting tops and 8.93-15.11% in twigs. The range of EE content varied between 0.98-1.48% in fruiting tops and 0.50-0.73% in twigs. The TCHO, NDF and ADF contents were also higher in the twigs as compared to its fruiting tops in all the samples except the samples collected from Khajuwala where NDF content of the twig and fruiting tops were almost similar. Several workers also reported similar chemical composition of lana (Al-Ani *et al.*, 1971; Al-Ani and Jawad, 1973; Al-Ani and Jawad, 1974; Kaul, 1986; Singh *et al.*, 2003). Mixed sample collected from farmer's house (RD-682, Pugal) was also similar in composition as the sole sample of lana, which may be due to the fact that in mixed samples, lana contributes the major share. Samples of different locations did not vary in their chemical composition.

As far as chemical composition is concerned lana is a good source of protein,

Table 1. Chemical composition of twigs and fruiting tops of Lana (*Haloxylon salicornicum*)

Village	Sample	OM	CP	TCHO	EE	Total Ash	NDF	ADF
RD-682	Twig	86.84	14.76	71.45	0.63	13.16	59.74	36.69
	Fruiting top	76.09	16.54	58.41	1.14	23.91	36.28	19.16
Pugal	Twig	88.43	12.18	75.55	0.70	11.57	58.60	40.17
	Fruiting top	79.30	18.87	58.95	1.48	20.70	38.72	20.26
6-Chak	Twig	91.07	12.11	78.46	0.50	8.93	64.15	45.34
	Fruiting top	76.85	14.73	61.11	1.01	23.15	38.22	19.04
Karnisar	Twig	84.89	11.31	72.85	0.73	15.11	51.72	31.93
	Fruiting top	77.30	14.02	62.30	0.98	22.70	40.47	18.68
Khajuwala	Twig	86.10	12.47	72.92	0.71	13.90	53.30	32.66
	Fruiting top	78.43	14.75	62.69	0.99	21.57	50.37	23.40
Mean	Twig	87.47	12.57	74.25	0.65	12.53	57.50	37.36
	Fruiting top	77.59	15.78	60.69	1.12	22.41	40.83	20.11
RD 682, farmers house	Mixed sample	78.58	15.27	63.34	0.97	21.47	46.04	29.99

inorganic constituents and carbohydrates. It can be fed to animals by partial replacement of concentrate mixture either as sole feeding or after mixing with other feed/feed ingredients.

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