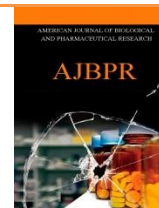




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### EVALUATION OF NUTRITIVE CONTENTS FROM SOME TREE SPECIES OF THE PALI DISTRICT OF RAJASTHAN

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#### ABSTRACT

Evaluation of nutritive contents from three selected tree species of plant species growing in the Pali district of Rajasthan was carried out. The stems, leaves and fruits of *Acacia leucophloea*, *Anogeissus latifolia* and *Boswellia serrata* collected from three different areas Desuri, Ghanerao and Khandwa were analysed for mineral contents. The maximum crude protein (17.47%) in fruits, crude fat (1.31%) in leaves and total carbohydrate (83.88%) in stems of *Acacia leucophloea* were found and crude fibre (47.81%) in stems of *Anogeissus latifolia*.

#### INTRODUCTION

The plants of the Pali district are potential source of nutritionally important compounds. The animals and human beings in this region are fully dependent on these plants for food, fodder, fibre and fuel. The plant species growing in this region besides their medicinal importance may contain sufficient amount of nutrients to be considered as livestock feed and fodder. A number of plants have been analysed for their nutritive contents [1-9].

#### MATERIALS AND METHODS

The present investigation deals with nutritive contents of stems, leaves and fruits of *Acacia leucophloea*, *Anogeissus latifolia* and *Boswellia serrata* growing in the Pali district of Rajasthan. These were collected from three different areas Desuri, Ghanerao and Khandwa.

The stems, leaves and fruits were separately dried at 100° C for 15 minutes so as to inactivate the enzymes followed by 60° C till a constant weight was achieved.

These dried samples were powdered using 20mesh screen in Willey mill and then subjected to chemical analysis by A.O.A.C. procedure for Crude protein, Crude fat, Crude fibre and Total Carbohydrates [10].

#### RESULTS AND DISCUSSION

Concentration of the nutritive contents in the various plant parts (stems, leaves and fruits) of all the selected tree species collected from three different sites i.e Desuri, Ghanerao and Khandwa areas are presented in Table-1.

The maximum (17.47%) amount of crude protein content was estimated in the fruits of *Acacia leucophloea* collected from the Khandwa area, while minimum (7.42%) in the leaves of the *Anogeissus latifolia* collected from Ghanerao area of Pali district (Table-1).

The maximum (47.81%) crude fibre content was found in stems of *Anogeissus latifolia* collected from Ghanerao area and minimum (24.82%) in leaves of the *Acacia leucophloea* collected from Khandwa area (Table-1). Crude fat (ether extract) concentration was found maximum (1.31%) in leaves of *Acacia leucophloea* collected from Ghanerao area, while minimum (0.68%) in stems of same plant collected from same area (Table-1).

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The maximum (83.88%) total carbohydrate contents were found in the stems of *Acacia leucophloea* collected from

Khandwa area and minimum (72.00%) in the fruits of same plant collected from same area (Table-1).

**Table 1. Nutritive contents of selected tree species in percentage on dry matter basis. Values are mean  $\pm$  SE (Five samples for each plant).**

Mineral contents	Sites	<i>Acacia leucophloea</i>			<i>Anogeissus latifolia</i>			<i>Boswellia serrata</i>		
		Stems	Leaves	Fruits	Stems	Leaves	Fruits	Stems	Leaves	Fruits
Crude Protein	Desuri	10.02 $\pm 0.04$	9.40 $\pm 0.16$	12.37 $\pm 0.21$	8.64 $\pm 0.06$	10.76 $\pm 0.08$	9.12 $\pm 0.07$	7.92 $\pm 0.12$	9.24 $\pm 0.28$	16.18 $\pm 0.14$
	Ghanerao	9.48 $\pm 0.20$	8.64 $\pm 0.10$	16.56 $\pm 0.12$	7.96 $\pm 0.15$	7.42 $\pm 0.12$	9.64 $\pm 0.28$	8.48 $\pm 0.22$	10.08 $\pm 0.15$	15.03 $\pm 0.48$
	Khandwa	7.81 $\pm 0.02$	7.84 $\pm 0.22$	17.47 $\pm 0.44$	8.88 $\pm 0.20$	8.76 $\pm 0.11$	8.86 $\pm 0.41$	8.02 $\pm 0.08$	10.22 $\pm 0.04$	14.98 $\pm 0.18$
Crude Fibre	Desuri	46.82 $\pm 0.17$	29.10 $\pm 0.19$	28.01 $\pm 0.12$	38.64 $\pm 0.15$	30.12 $\pm 0.81$	29.82 $\pm 0.08$	41.28 $\pm 0.17$	31.78 $\pm 0.19$	30.10 $\pm 0.33$
	Ghanerao	45.66 $\pm 0.12$	26.02 $\pm 0.20$	29.86 $\pm 0.42$	47.81 $\pm 0.12$	28.40 $\pm 0.25$	31.17 $\pm 0.24$	38.42 $\pm 0.18$	29.12 $\pm 0.44$	32.64 $\pm 0.19$
	Khandwa	39.18 $\pm 0.18$	24.82 $\pm 0.06$	34.39 $\pm 0.28$	36.02 $\pm 0.41$	26.01 $\pm 0.21$	26.09 $\pm 0.38$	37.08 $\pm 0.43$	34.82 $\pm 0.27$	38.16 $\pm 0.26$
Crude Fat	Desuri	1.18 $\pm 0.68$	0.73 $\pm 0.69$	1.02 $\pm 0.44$	0.92 $\pm 0.34$	0.85 $\pm 0.58$	0.98 $\pm 0.10$	1.19 $\pm 0.21$	0.97 $\pm 0.70$	1.17 $\pm 0.28$
	Ghanerao	0.68 $\pm 0.12$	1.31 $\pm 0.22$	1.18 $\pm 0.32$	0.91 $\pm 0.28$	0.92 $\pm 0.18$	0.82 $\pm 0.15$	0.98 $\pm 0.48$	0.78 $\pm 0.15$	1.15 $\pm 0.28$
	Khandwa	0.83 $\pm 0.26$	0.97 $\pm 0.18$	1.20 $\pm 0.59$	1.16 $\pm 0.09$	0.81 $\pm 0.14$	0.97 $\pm 0.41$	0.86 $\pm 0.31$	0.92 $\pm 0.52$	1.02 $\pm 0.21$
Total Carbohydrate	Desuri	79.14 $\pm 0.08$	81.47 $\pm 0.67$	75.75 $\pm 0.65$	78.04 $\pm 0.27$	72.73 $\pm 0.29$	76.87 $\pm 0.79$	76.05 $\pm 0.38$	80.31 $\pm 0.65$	72.87 $\pm 0.49$
	Ghanerao	80.60 $\pm 0.38$	80.23 $\pm 0.26$	73.14 $\pm 0.17$	79.23 $\pm 0.12$	77.60 $\pm 0.19$	81.08 $\pm 0.18$	80.72 $\pm 0.14$	78.62 $\pm 0.24$	76.53 $\pm 0.15$
	Khandwa	83.88 $\pm 0.21$	83.09 $\pm 0.27$	72.00 $\pm 0.32$	77.35 $\pm 0.29$	75.62 $\pm 0.49$	75.35 $\pm 0.24$	82.48 $\pm 0.24$	79.96 $\pm 0.32$	73.76 $\pm 0.29$

## CONCLUSION

The present study indicates that these tree species growing in the Pali region of Rajasthan have sufficient amount of nutritive contents, which may be useful as feed and fodder for the livestock.

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