

**Research Article****Evaluation of Nutritional value of *Mollugo cerviana* Ser. growing wild in Bikaner District of Rajasthan**

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ABSTRACT

Plants of arid and semiarid zones are good source of phytochemically important compounds. *Mollugo cerviana* is a common wild plant of Bikaner and surrounding areas and it has been evaluated for the nutritive contents from root, shoot and fruits. The results obtained by AOAC (1995) method shows that the plant is rich in nutritive contents.

Introduction

In the nature several varieties of wild plants including herbs, shrubs and grasses are available which serve as food and fodder source for human beings and animals. Plants of arid and semiarid zones are good source of phytochemically important compounds. Very little work has been reported [1-6] on the study of nutritive contents in the wild plants of the arid and semiarid regions of the Rajasthan. The district of Bikaner is situated in North – West of the Rajasthan state between 27° 11' to 29° 03' North latitudes and 71° 54' to 76° 12' East longitudes, in the middle of the Thar desert with very little rainfall and extreme temperatures. In summer temperature exceeds 50° C and during the winter it dips to freezing point. The climate of Bikaner is characterized by extreme variations in temperature. The annual rainfall in the study area ranges from 260-440 millimeters (10-17 inch). *Mollugo cerviana* (locally known as Chiriya ka khet) is an erect, annual, glabrous herb with many stems 5 to 18 cm. high. Leaves linear, flowers in cymes, white, fruit capsule. Flowering and fruiting occur in July to November. It is common in sandy or fine gravelly soils, in wastelands and as a weed in cultivated fields specially in arid regions. The plant is harvested from the wild for local use as a food and medicine. Leaves cooked and used as a vegetable whereas aerial parts are used for the treatment of fever, rheumatic complaints, gonorrhoea, purification of blood and menstrual problems in women. It is a common plant of Bikaner and near by areas and besides medicinal importance it may contain sufficient amount of nutrients to be

considered as food and live stock feed. The present investigation evaluated the nutritive contents from root, shoot and fruit of the selected plant species.

Material and Methods

Well developed and disease free root, shoot and fruits of *Mollugo cerviana* were collected from Devikund Sagar village of Bikaner district. All collected parts were separately dried at 100° C for 15 minutes followed by 60° C till a weight was achieved. These dried samples were powdered using 20 mesh screen in Willey mill and then used for evaluation of nutritive contents by AOAC (1995) Method.

Result and Discussion

On the basis of percentage of dry matter the nutritive contents of *Mollugo cerviana* have been analyzed. The maximum amount of crude protein was observed in the fruit (12.70%) and minimum in the root (3.50%). The ether extract was found highest in the fruit (6.55%) and minimum in the shoot (1.00%). The total value of crude fat was observed highest in the shoot (10.50%) while it was lowest in the fruit (4.30%). The total ash was found maximum in the fruit (9.74%) and minimum in the root (5.35%). Nitrogen free extract (NFE) was reported highest in the root (81.70%) and lowest in the fruit (66.71%). The organic matter was highest in the root (94.65%) and minimum in the fruit (90.26%). Total carbohydrates

reported maximum in the root (90.20%) and minimum in fruit (71.01%). The amount of calcium was found highest in the shoot (2.30%) while lowest in the root (1.50%). The value of phosphorus was found highest in the shoot (0.40%) and lowest in the root (0.18%) (Table 1). Several other plant species from

present study area have been analyzed for their nutritive values [7-9] and found as a potential source of the nutritive contents. Similarly *Mollugocerviana* is also rich in nutritive contents which play active role in metabolism.

Table 1: Nutritive contents of *Mollugocerviana* in Percentage

S.NO.	Nutritive content	root	shoot	fruit
1	Crude protein	3.50	6.25	12.70
2	Ether extract	0.95	1.00	6.55
3	Crude fat	8.50	10.50	4.30
4	Total ash	5.35	6.20	9.74
5	NFE	81.70	76.05	66.71
6	Organic matter	94.65	93.80	90.26
7	Carbohydrates	90.20	86.55	71.01
8	calcium	1.50	2.30	1.75
9	phosphorus	0.18	0.40	0.25

Conclusion

The present work shows that *Mollugo cerviana* growing in Bikaner district of Rajasthan as wild plant has sufficient amount of nutritive contents. Therefore, this plant species may be useful as food and fodder for human beings and livestock respectively.

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