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**Nazish Rizwan Kirmani**

MVSc Student Division of  
Livestock Production and  
Management, SKUAST-  
Kashmir, Jammu and Kashmir,  
India

**MT Bandy**

Professor, Division of Livestock  
Production and Management,  
SKUAST-Kashmir, Jammu and  
Kashmir, India

**Muzamil Abdullah**

Assistant Professor, Division of  
Livestock Production and  
Management, SKUAST-  
Kashmir, Jammu and Kashmir,  
India

**Corresponding Author:**

**Nazish Rizwan Kirmani**  
MVSc Student Division of  
Livestock Production and  
Management, SKUAST-  
Kashmir, Jammu and Kashmir,  
India

## Ethno-medicinal plants used by Bakarwals for treatment of livestock

**Nazish Rizwan Kirmani, MT Bandy and Muzamil Abdullah**

### Abstract

Ethno medicine forms an inherent part of Bakarwal community as they believe in traditional method of treatment. Hence present study was planned to identify the plants used by Bakarwals for treatment of various diseases. A total of 10 herbs/shrubs belonging to different families have been documented in this research. It was found that *Rumex hastatus* Linn (Kutch) and *Rheum webbianum* Royle (Phamb challan) are used to treat wounds and cuts, *Iris kashmiriana* Baker (Kabriposh) and *Podophyllum hexandrum* Royle (Wan wangun) are used for their antiseptic properties, and *Datura stramonium* Linn (Datur boel) and *Saussurea costus* (Koth) have been put to use for treatment of joint pain. Some other plants mentioned in the study include, *Rumex nepalensis* spreng. (Abuj), *Artemisia scoparia* Waldst. & Kitam (Tethwan) and *Trigonella foenumgraecum* (Fenugreek seeds/Meethi). The research findings clearly indicate a prevalence of ethno medicine in the bakerwal community which may potentially be due to inaccessibility of modern veterinary facilities and reluctance to adapt to modern veterinary medicine. There is need for in-depth study of ethno medicinal plants in order to facilitate the growth and development of ethno veterinary medicine.

**Keywords:** Bakarwal, ethno medicine, traditional, treatment, veterinary

### Introduction

Medicinal plants have always been used in traditional methods of treatment for curing different ailments in humans as well as in animals. A large number of rural people use local herbal medicines for treatment of their domestic animals and the role of Ethno veterinary medicine in livestock development is beyond dispute [1, 5, 6, 11]. The ethno veterinary medicine is based on traditional knowledge and skills. It varies from community to community and is usually transferred from one generation to another. Ethnoveterinary practices are usually cheaper, safer, time tested and based on local resources and are used as an alternatives to conventional animal drugs besides, these practices are much less prone to drug resistance and are ecofriendly than conventional medicine [7, 8, 9]. In Jammu and Kashmir, livestock rearing plays an important role in the economy as it's a hilly region, where sedentary, semi-migratory and migratory systems of livestock rearing are followed. Majority of people involved with livestock rearing still use local herbs available for curing various disease. It has been seen that now rural population is adapting to conventional medicine and ethno medicine has remained very important for pastoralist rearing livestock. Livestock rearing forms main occupation of pastoral communities of Jammu and Kashmir. Bakarwals are also pastoralists and they have been using Ethno medicine for treatment purposes and therefore, in the present study an attempt has been made to investigate and document important medicinal plants used specially by them to cure a wide variety of ailments. Information provided includes scientific Name, Family Name, Local Name, Part of plant used and disease against which it is used (Table2).

### Materials and methods

The study was conducted on different highland pasture migration tracts falling in area of Pahalgam and Sonmarg along with satellite villages in district Anantnag and Ganderbal of J&K, which is the route often taken by Bakarwals for migration. The information with regards to the ethno veterinary practices adapted by Bakarwal community was collected by a well-planned and structured interview. A total of 200 respondents were interviewed following grab sampling technique, out of which 80 hailed from Pahalgam and 120 from Sonmarg. The response of each respondent against each plant was recorded (Table1), in order to ascertain the objectives under study, the simple technique of frequency and percentage was used.

The information with regards to the part (s) used; mode of preparation was collected from the respondents (Table 2).

## Results and Discussion

Himalayan region is rich in flora and is home to different pastoral communities like Gujjars, Bakarwals, Chopans etc who believe in exploiting naturally available resources to rear their livestock. Bakarwal community is associated with rearing of livestock like sheep, goat, horses etc. They usually migrate to different pastures in summer season along with their livestock and during autumn they descend back to plains. They generally lack basic facilities of healthcare and depend on traditional treatments both in humans as well as in animals. The response of respondents against each plant presented in Table 1 indicates that 96.5% of respondents use *Curcuma longa* (Haldi), followed by *Artemisia scoparia* Waldst. & Kitam A which is used by 96% of respondents. The other plants also attained respondent percentage of more than 60% indicating significant prevalence of medicinal plants in this community. A total of 10 herbs/shrubs belonging to different families have been documented in the present study as per information collected from Bakarwals used for treatment of various livestock ailments (Table 2). These plants were *Rumex hastatus* Linn (Kutch) leaves of this plant are directly applied on wounds and cuts for healing, *Iris kashmiriana* Baker (Kabriposh) flowers from this plant are used as antiseptic, *Podophyllum hexandrum* Royle (Wan wangun) is used for different ailments and commonly as antiseptic. A research investigation has reported that *Podophyllum hexandrum* Royle (Wan wangun) is used to treat eye wounds in animals, *Rheum webbianum* Royle (Phamb challan) is used in treating wounds, *Datura stramonium* Linn (Datur boel) is used to reduce inflammation and joint pain, *Artemisia scoparia* Waldst. & Kitam (Tethwan) is widely used as anti-helminthic<sup>[4]</sup>. *Artemisia scoparia* Waldst. & Kitam (Tethwan)

is being used as a wormicide, *Saussurea costus* (Koth) is used for different ailments like pain, swelling, fever, ulcers etc. and *Curcuma longa* (Turmeric/Haldi) is used as a paste or with other ingredients like oil as antiseptic<sup>[10,2]</sup>. It has also been reported in literature that 60% of the owners used local or traditional medicines (turmeric, mustard oil and local weeds called *Eupatorium adenophorum*) for remedies of leg and back injuries, *Rumex nepalensis* spreng. (Abuj) is used as antiseptic. Leave extract of this plant is used as antiseptic and as liver tonic<sup>[3]</sup>. *Trigonella foenumgraecum* (Fenugreek seeds/Meethi) seeds are crushed and mixed with water and applied as paste for reducing swelling and for treating diarrhea. However, a study in this context suggested relevance of Fenugreek leaves in treatment of diarrhea<sup>[10]</sup>.

## Conclusion

The information attained from the study shows that the use of ethno medicine is still prevalent in Bakarwal community which often has lack of access to modern veterinary care and have strong belief in traditional treatments. In order to maintain sustainable livestock production under pastoralism extensive and in depth studies must be carried out so that a better understanding of ethno veterinary medicine is developed.

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**Table 1:** Distribution of respondents according to their response for each plant

S. No	Plant (scientific name)	Pahalgam (N=80)	Sonmarg (N=120)	Total (N=200)	Percentage (%)
1	<i>Rumex hastatus</i> Linn	39	105	144	72
2	<i>Iris kashmiriana</i> Baker	69	110	179	89.5
3	<i>Podophyllum hexandrum</i> Royle	65	85	150	75
4	<i>Rheum webbianum</i> Royle	60	96	156	78
5	<i>Datura stramonium</i> Linn	76	102	172	86
6	<i>Artemisia scoparia</i> Waldst. & Kitam	78	114	192	96
7	<i>Saussurea costus</i>	70	108	178	89
8	<i>Curcuma longa</i>	77	116	193	96.5
9	<i>Rumex nepalensis</i> spreng.	73	95	168	84
10	<i>Trigonella foenumgraecum</i>	75	110	185	92.5

**Table 2:** List of Ethno medicinal plants used by Bakarwals for treatment of livestock

S. no	Scientific name	Family	Local name	Part used	Disease
1.	<i>Rumex hastatus</i> Linn	Polygonaceae	Kutch	Leaves	Applied on wounds and cuts
2	<i>Iris kashmiriana</i> Baker	Iridaceae	Kabriposh	Flowers	Used as antiseptic
3	<i>Podophyllum hexandrum</i> Royle	Berberidaceae	Van wangun	Fruit	Used as antiseptic (eye wound)
4	<i>Rheum webbianum</i> Royle	Polygonaceae	Pamb challan	Leaves/ rhizome	Wound treatment
5	<i>Datura stramonium</i> Linn	Solanaceae	Datur boel	Seeds	Paste of dried seeds is used for joint pain
6	<i>Artemisia scoparia</i> Waldst. & Kitam	Asteraceae	Tethwan	Leaves	Used as anti-helminth
7	<i>Saussurea costus</i>	Asteraceae	Koth	Rhizome	Joint pain, back pain, ulcers and fever
8	<i>Curcuma longa</i>	Zingiberaceae	Haldi	Rhizome	Used as antiseptic
9	<i>Rumex nepalensis</i> spreng.	Polygonaceae	Abuj	Leaves	Used as antiseptic
10	<i>Trigonella foenumgraecum</i>	Fabaceae	Meethi	Seeds	Used for reducing swelling



*Podophyllum hexandrum* Royle (Wan Wangun)



*Trigonella foenumgraecum* (Meethi seeds)



*Trigonella foenumgraecum* (Meethi plant)



*Artemisia scoparia* Waldst. & Kitam (Tethwan)



*Rumex nepalensis* spreng. (Abuj)



*Datura stramonium* Linn (Datur)

Some of the ethno medicinal plants used by Bakarwals for treatment of livestock

**References**

1. Adedeji OS, Ogunsina TK, Akinwumi AO, Ameen SA, Ojebiyi OO. Ethnoveterinary medicine in African organic poultry production. International Food Research Journal.2013; 20(2): 527-532.
2. Ahmad S, Radotra S, Singh JP, Verma DK, Sultan SM. Ethno Veterinary uses of some important plants by pastoralists in Kashmir Himalaya. SKUAST Journal of

- Research.2017; 19(1): 121-128.
3. Biswas P, Dutt T, Patel M, Kamal R, Bharti PK, Sahu S. Assessment of pack animal welfare in and around Bareilly city of India, *Veterinary World*. 2013;6(6):332-336.
  4. Dar MS, Khuroo AA, Malik AH, Dar GH. Ethnoveterinary uses of some plants by Gujjar and Bakerwal community in Hirpora Wildlife Sanctuary, Kashmir Himalaya. *SKUAST Journal of Research*. 2018; 20(2):181-186.
  5. Galav P, Jain A, Katewa SS. Ethnoveterinary medicines used by tribals of Tadgarh-Raoli wildlife sanctuary, Rajasthan, India. *Indian Journal of Traditional Knowledge*. 2013; 12(1):56-61.
  6. Malik BK, Panda T, Padhy RN. Ethnoveterinary practices of aborigine tribes in Odisha, India. *Asian Pacific Journal of Tropical Biomedicine*. 2012; 2(3):1520-1525.
  7. Naik RM, Venugopalan V, Kumaravelayutham P, Krishnamurthy YL. Ethnoveterinary uses of medicinal plants among the Lambani community in Chitradurga district, Karnataka, India. *Asian Pacific Journal of Tropical Biomedicine*.2012; 2(2):470-476.
  8. Pragada PM, Rao GMN. Ethnoveterinary medicinal practices in tribal regions of Andhra Pradesh, India. *Bangladesh Journal of Plant Taxonomy* .2012; 19(1):7-16.
  9. Sharma R, Manhas RK, Magotra R. Ethnoveterinary remedies of diseases among milk yielding animals in Kathua, Jammu and Kashmir, India. *Journal Ethnopharmacology*. 2012; 141(1): 265-272.
  10. Sofi SA, Hakeem R, Manzoor MA, Wath MR, Sofi KA. Ethno- veterinary practices performed for animal care in Kulgam district, (Jammu and Kashmir). *International Journal of Research and Analytical Reviews*. 2019; 6(1):657-663.
  11. Tiwari L, Pande PC. Ethnoveterinary plants of Johar valley of Pithoragarh district, Uttarakhand Himalaya. *Vegetos*. 2009; 22(1):55-62.