



Some common wild fodder weeds used by Gujjar tribe of district Rajouri (J&K)

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Abstract

The present study deals with some common wild fodder weeds used for rearing livestock by Gujjar tribe of district Rajouri (J&K).The study was conducted during Jan.2010 to July 2011. During the course of field study the authors have selected 05 important blocks densely inhabited by Gujjar tribe in district Rajouri i.e. Nowshera, Kalakote, Thanamandi, Budhal, Darhaletc.Four sites were selected in each block for the collection of fodder weeds on the basis of extensive and intensive field surveys.During this period the authors have reported a total of 57 fodder weeds belonging to 3 monocot and 19 dicot families.Out of total 22 angiospermic families of fodder weeds reported from the study area, the predominance was shown by monocot family Poaceae containing 14 fodder weeds followed by family Fabaceae and Asteraceae each having 08 and 06 fodder weeds respectively.

Keywords: Fodder weeds, gujjar tribe, livestock

Introduction

Jammu and Kashmir State is one of the hilly states of India having 22 districts, out of which district Rajouri is most important agricultural district having 7 blocks. It is located at western part of Jammu division in the foot hill of Pirpanjal range between 32⁰-58' & 33⁰-35' latitude and 74⁰-81' longitude at an elevation range of 370 – 6000 msl covering an area of 2630 sq.km. Out of the seven blocks of district Rajouri 05 blocks i.e. Nowshera, Kalakote, Thanamandi, Budhal, Darhal etc. are densely inhabited by gujjar tribes. Weeds are unwanted obnoxious plants growing in places where they are undesirable (Dangwal *et al.* 2010). Most of the weeds are thought to be of negative value; however, some weeds are of economic importance used by man as food, fodder, medicines and other miscellaneous purposes (Patil *et al.* 2007). Fodder is any agricultural food stuff used to feed domesticated livestock. It refers to the food given to animals rather than that they forage for

themselves. Livestock population has been an important source for various products therefore, rearing the cattle has been a genuine concern to various societies. These grazing animals are dependent on vegetation which also contains a high proportion of weeds. (King 1966). Gujjar tribe constitutes a major proportion of local population of district Rajouri. They are the tribal race of Jammu and Kashmir leading a nomadic lifestyle. Their primary occupation is rearing of cattle (Goat, sheep, buffalo horses etc.) and migrates from one place to another over different altitudinal zones of Himalaya for providing better fodder opportunities for their cattle. In order to do so they rely on forest plants and wild weeds as a source of fodder. It has been observed that among these tribe men folk has wider knowledge about fodder weeds as compared to their women folk. (Gaur *et al.* 2010). Gujjar tribe stays inside the huts in forests which are locally known as shappers. Being economically poor they practice farming and are dependent on these cattle and forest products for their livelihood. Their economy is based on selling milk, dairy products, eggs, wool etc. On an average one Gujjar family has 3-5 buffaloes and more than 100 sheep and goats, relatively better families may own 8-10 buffaloes

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and more than 250 goats and sheep. On an account of their routine requirements of fodder they are dependent on forest plants as well as wild weeds found in forests and nearby fields. A scientific study of fodder weeds is important for pinpointing the resources that can be utilized for meeting the increasing demand of fodder during the time of droughts or during normal days. Keeping this in view the present study was conducted as first ever attempt from the study area to explore and identify the fodder weeds that can be used to feed the livestock. This will ultimately help the farmers in reducing the number of weeds from their fields as these weeds are used for the purpose of fodder.

Material and Methods

The present study deals with some common wild fodder weeds used for rearing livestock by Gujjar tribe of district Rajouri (J&K). Extensive and intensive field trips were made during Jan. 2010 to July 2011 in order to survey the inhabiting areas of the Gujjar tribe in district Rajouri (i.e. block Nowshera, Kalakote, Thanamandi, Budhal, Darhal etc.). Four sites were selected in each block for the present study. The questionnaire was planned for the collection of data regarding the fodder weeds. During this course 6 informants of different age groups were interviewed from each site about fodder weeds their available vernacular names, flowering and fruiting seasons etc. The fodder weeds from each site were collected, pressed, dried, preserved and properly identified with the help of available literature, monographs by Sharma and Kachroo (1983), Swami and Gupta (1998), Kaul (1986) and confirmed from the authentic regional herbaria i.e. Botanical Survey of India, Northern Circle (BSD), Dehradun and Forest Research Institute Herbarium (DD), Dehradun and deposited them in the H.N.B. Garhwal Central University Herbarium, Department of Botany, S.R.T. Campus, Badshahithaul, Tehri Garhwal, Uttarakhand, India.

Results and Discussion

During study period (Jan. 2010 to July 2011), authors have reported a total of 57 fodder weeds belonging to 3 monocot and 19 dicot families from the study area. Out of total 22 angiospermic families reported from 5 blocks of district Rajouri, The predominance was shown by monocot family

Poaceae containing 14 fodder weeds followed by family Fabaceae and Asteraceae having 08 and 06 fodder weeds respectively. The family Amaranthaceae contained 04 fodder weeds while the families Brassicaceae and Cyperaceae were represented by 03 fodder weeds each. The families Polygonaceae, Commelinaceae and Euphorbiaceae contained 02 fodder weeds each. The remaining families i.e. Aizoaceae, Malvaceae, Solanaceae, Caryophyllaceae, Oxalidaceae, Fumariaceae, Primulaceae, Nyctaginaceae, Caesalpinaceae, Lamiaceae, Ranunculaceae, Onagraceae and Chenopodiaceae contained 01 fodder weed. District Rajouri is one of the hilly district of J&K state whose boundaries are attached to district Poonch in north, district Jammu in south, Udhampur in east and Mirpur (Pakistan) in the west. District Rajouri has two regions with characteristic topography and climate i.e. the temperate and sub-tropical. The temperate region comprises of the blocks Thanamandi, Darhal, Budhal and some part of Rajouri and sub-tropical region comprises of areas like Nowshera, Kalakote and Sunderbani etc. These physiographic diversities resulted in a rich diversity of the district. Gujjar tribe constitutes the major proportion of local population leading a nomadic lifestyle. They graze their herds of sheep, goats and cattle from south of Pir-panjal range to alpine pastures of the greater Himalayan ranges in north. They keep the herds of buffaloes and goats for milk, sheep for wool and flesh, horses for carriage purposes. The dung of these cattle is used as manure in the farming practices, therefore, cattle healthcare and their proper feeding has been a genuine concern to them because their economy is based on these cattle. In order to provide better fodder to their pets these tribe rely on forest plants as well as wild weeds that grow inside the forests and nearby fields. In the study area these tribes are using about 57 weed species to meet the daily requirements of fodder for their cattle. Some of the fodder weeds like *Taraxacum officinale*, *Sonchus asper*, *Sonchus oleraceus*, *Lathyrus aphaca*, *Avena fatua*, *Phalaris minor* and *Echinochloa colonum* etc. Increases the milk yielding capacity when given to cattle. The spiny weeds like *Amaranthus spinosus* and *Silybum marianum* etc. are given to cattle in young stage (before emergence of spines), at maturation stage these weeds are sun dried, grinded and then given to cattle.



Table 1. Showing 57 Fodder Weeds along with their Families, Botanical names, available Vernacular names and Flowering and fruiting seasons.

S.No.	Family	Botanical Name	Vernacular name	Flowering and fruiting season
1.	Aizoaceae	<i>Trianthemaportulacastrum</i> L.	Kulfa	Jul.-Dec.
2.	Amaranthaceae	<i>Amaranthus spinosus</i> L.	Chelari	Sept.-Oct.
		<i>Amaranthusviridis</i> L.	Ganar	Jan.-Dec.
		<i>Celosia argentea</i> L.	-	Aug.-Dec.
		<i>Digeramuricata</i> (L.) Martius	-	Aug.-Oct.
3.	Asteraceae	<i>Bidenspilosa</i> L.	Saryala	Mar.-Dec.
		<i>Gallinsogaparviflora</i> (Cav.) icon	Phooli	Throughout the year.
		<i>Silybummarianum</i> L.	Kandyari	Jan.-Apr.
		<i>Sonchusasper</i> (L.) Hill.	BadiAand	Apr.-Oct.
		<i>Sonchusoleraceus</i> L.	-	Mar.-Apr.
		<i>Taraxacumofficinale</i> Weber	Aand	Feb.-Oct.
4.	Brassicaceae	<i>Capsella bursa-pastoris</i> Medik.	Jangalisarson	Jan.-Mar.
		<i>Coronopusdidymus</i> L.	Jangaliajavian	Jan.-Mar.
		<i>Lepidiumvirginicum</i> L.	-	Apr.-May
5.	Caesalpiniaceae	<i>Cassia occidentalis</i> L.	-	May-Nov.
6.	Caryophyllaceae	<i>Stellaria media</i> L.	Neela	Feb.-Mar.
7.	Chenopodiaceae	<i>Chenopodium album</i> L.	Bathua	Mar.-Apr.
8.	Commelinaceae	<i>Commelinabenghalensis</i> L.	Ghass	Aug.-Oct.
		<i>Cynotivaga</i> Lour	Ghass	Jul.-Oct
9.	Cyperaceae	<i>Cyperusdifformis</i> L.	-	Sept.-Oct.
		<i>Cyperusiria</i> L.	-	Sept.-Oct.
		<i>Cyperusrotundus</i> L.	-	Jul.-Dec.
10.	Euphorbiaceae	<i>Euphorbia hirta</i> L.	Shotidoodi	Sept.-Oct.
		<i>Euphorbia prostrata</i> Aiton	Doodal	Jan.-Dec.
11.	Fabaceae	<i>Lathyrusaphaca</i> L.	Jangalimatar	Feb.-Mar.
		<i>Medicagodenticulata</i> Willd.	Serari	Oct.-May
		<i>Medicagolupulina</i> L.	Sesrari	Mar.-Apr.
		<i>Melilotusindica</i> L.	Jangalimethi	Mar.-Apr.
		<i>Trifoliumrepens</i> L.	Jangalistal	Apr.-Oct.
		<i>Trifoliumtomentosum</i> L.	Jangalistal	Mar.-Apr.
		<i>Viciahirsuta</i> (D) S. F. Gray	Phali	Mar.-Apr.
		<i>Vicia sativa</i> L.	-	Mar.-Apr.
12.	Fumariaceae	<i>Fumariaindica</i> Haussk	-	Jan.-May
13.	Lamiaceae	<i>Lamiamplexicaule</i> L.	-	Mar.-Apr.
14.	Malvaceae	<i>Malvaparviflora</i> L.	Soonchal	Jan.-Mar.
15.	Nyctaginaceae	<i>Boerhaaviadiffusa</i> L.	-	Jul.-Dec.
16.	Onagraceae	<i>Oenotherarosea</i> W. Ait.	-	Jul.-Aug.
17.	Oxalidaceae	<i>Oxalis corniculata</i> L.	Khattiamal	Throughout the year
18.	Poaceae	<i>Avenafatua</i> L.	Gandial	Mar.-May
		<i>Cynodondactylon</i> (L.) Pers	Dheela	Apr.-Jul.
		<i>Digitariaciliaris</i> Retz.	Ghass	Aug.-Nov.
		<i>Echinochloacolonom</i> L.	Ghass	Jul.-Sept.



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		<i>Echinochloa crus-galli</i> L.	-	Sept.-Oct.
		<i>Eleusineindica</i> (L.) Gaertn.	-	Aug.-Oct.
		<i>Heteropogoncontortus</i> L.	Saryalaghass	Aug.Nov.
		<i>Loliumtemulentum</i> L.	-	Mar.-Apr.
		<i>Paspalidiumflavidum</i> Retz.	-	Jul.-Dec.
		<i>Phalaris minor</i> Retz.	Sitti	Mar.-Apr.
		<i>Setariageniculata</i> Lam.	-	Aug.-Oct.
		<i>Setariaglauca</i> P. Beauv	-	Jul.-Sept.
		<i>Seteriaverticellata</i> L.	Chichra	Aug.-Oct.
		<i>Sorghum halepense</i> (L.) Pers.	Barun	Sept.-Nov.
19.	Polygonaceae	<i>Rumexacetocella</i> L.	Arphali	Aug.-Sept.
		<i>Rumexnepalnesis</i> Spreng	Arphali	Aug.-Oct.
20.	Primulaceae	<i>Anagallisarvensis</i> L.	Neel krishna	Mar.-Apr.
21.	Ranunculaceae	<i>Ranunculus arvensis</i> L.	Chuchumba	Mar.-Apr.
22.	Solanaceae	<i>Solanumnigrum</i> L.	Kachmach	Aug.-Sept.



1. *Echinochloa coloum*



2. *Celosia argenta*



3. *Chenopodium album*



4. *Commelina benghalensis*



5. *Taraxacum officinale*



6. *Gallinsoga parviflora*



7. *Eleusine indica*



8. *Cynodon dactylon*



9. *Avena fatua*

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10. *Trifolium repens*



11. *Oxalis corniculata*



12. *Lathyrus aphaca*

Plates 1-12. Showing Fodder Weeds used by Gujjar tribes of district Rajouri



13. Buffalo



14. Gujjar tribe



15. Herd of goats

Plates 13-15. Showing photograph of Gujjar tribe and their cattle capture during the course of study.

The weeds like *Sorghum halepense* and *Heteropogon contortus* etc. are dried and stored, these weeds are given to cattle in winters (during the period of drought). However some of the weeds reported from the study area i.e. *Cynodon dactylon*, *Taraxacum officinale*, *Sonchus asper*, *Silybum marianum*, *Commelinabenghalensis*, *Euphorbia hirta* etc. are of medicinal importance used in pharmaceutical industries. The weeds like *Chenopodium album*, *Taraxacum officinale*, *Lathyrus aphaca*, *Trianthem portulacastrum* etc. are used in some cooking recipes in the study area. The fruits of *Solanum nigrum* are also edible

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