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Study of fodder plants in Azmatabad village of Thannamandi, District Rajouri (J&K) India

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ABSTRACT

The present study was conducted to document the fodder plants and their usage by the Pahari and Gujjar community of Azmatabad village and adjoining area of Thanna mandi District Rajouri of J&K. Documentation is the first step in achieving conservation and sustainable use of fodder plants. Study area is inhibited mostly by Gujjar and Pahari tribes whose chief occupation is rearing of cattle, sheep and goats. These animals obtain their food by grazing in pastures, browsing leaves of shrubs and trees. The young twigs and leaves of trees are lopped for fodder. A total of 45 species were reported.

Figure : 00 References : 16 Table : 01
KEY WORDS : Azmatabad, Fodder, Gujjar, Leaves, Pahari, Pastures, Twigs

Introduction

Fodder is an agricultural term for animal feed. The non-cultivated fodder trees and shrubs are those plants (shoots or sprouts, especially tender twigs and stems of woody plants with their leaves, flowers, fruits or pods) that occur naturally and do not have to be planted, used and managed to feed livestock.Fodder and shrubs are important component of ruminant diet and they have been found to play an important role in the nutrition of grazing animals in areas where few or no alternatives are available . The earlier studies reveal that browses have multiple roles in farming systems such as fodder and veterinary medicines . As a major source of animal feeds, fodder trees and shrubs are highly valued by farmers, in order to provide the nutritional needs.[2-7,10-16] These forage species contain appreciable amounts of nutrients that are deficient in other feed resources such as grasses during dry seasons and dry periods[1,8] . Most browse plants have high crude protein content, ranging from 10% to more than 25% on a dry matter basis[9]. The various fodder trees and shrubs differ from place to place and trees looped for fodder in one place may not be looped at another place. In the state, various studies were conducted for the endangered plant and utilization pattern[1].

The present investigation carried out in rural communities of Azmatabad regarding the high dependence on fodder plants in the upkeep of means for domesticated animals. There are just two significant grain crops *viz.* Wheat ,and Maize developed in the Azmatabad village. Plants utilized as fodder incorporate whole plant, youthful twigs, leaves, straw of harvest plants, grains, seeds, deposits of heartbeats and so forth. Significant component of feed is comprised by the grasses and other little plants on which the creatures nibble in the fields, trees and bushes in timberlands.[14] Feed yielding trees and bushes contrast from one spot to another and the tree cut widely for grub in one spot may not by any stretch of the imagination be trimmed at somewhere else. A few examinations have been made

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TABLE-1 : List of Fodder plants in Azmatabad village, Thannamandi, District Rajouri, (J&K) India

S.NO.	Botanical Name	Family	Local Name	Habit	Parts used
1	*Pistacia chinensis*	Anacardiaceae	Kangarh	Tree	Leaves
2	*Carissa opaca*	Apocynaceae	Garna	Shrub	Leaves are browsed by sheep and goats.
3	*Cryptolepis buchananii*	Asclepiadaceae	Dod-bhel	Climber	Leaves browsed by sheeps and goats
4	*Bidens pilosa*	Asteraceae	Saryalo	Herb	Aerial parts are browsed by cattle, sheep and goats
5	*Galinsoga parviflora*	Asteraceae	Piploo	Herb	Entireplant
6	*Sonchus arvensis*	Asteraceae	Dudoli/sonchal	Herb	Entireplant
7	*Berberis lycium*	Berberidaceae	Simbulo	Shrub	Leaves are browsed by sheep and goats.
8	*Alnus nitida*	Betulaceae	Cham	Tree	Leaves
9	*Cordia dichotoma*	Boraginaceae	Lasoora	Tree	Leaves
10	*Brassica campestris*	Brassicaceae	Saryan	Herb	Oilcakes from seeds, Aerial plant
11	*Capsella bursa-pestoris*	Brassicaceae		Herb	Entireplant
12	*Chenopodium album*	Chenopodiaceae	Bathwa	Herb	Aerialparts
13	*Mallotus philippensis*	Euphorbiaceae	Kamila	Tree	Leaves
14	*Bauhinia variegate*	Fabaceae	Kachnar	Tree	Leaves
15	*Dalbergia sissoo*	Fabaceae	Tali,Shisham	Tree	Leaves
16	*Indigofera heterantha*	Fabaceae	Kaenthie	Shrub	Leaves and young twigs are browsed by sheep and goats.
17	*Indigofera tinctoria*	Fabaceae	Neel	Shrub	Leaves
18	*Lathyrus aphaca*	Fabaceae	Jungli mutter	Herb	Entireplant

S.NO.	Botanical Name	Family	Local Name	Habit	Parts used
19	*Medicago lupulina*	Fabaceae		Herb	Entire plant
20	*Medicago sativa*	Fabaceae	Allipalli	Herb	Entire plant
21	*Robenia pseudo-acacia*	Fabaceae	Kikar	Tree	Leaves
22	*Trifolium pratense*	Fabaceae	Shatul	Herb	Entire plant
23	*Trifolium repens*	Fabaceae	Shatul	Herb	Entire plant
24	*Trigonella foenum-graecum*	Fabaceae	Methi	Herb	Entire plant
25	*Quercus floribunda*	Fagaceae	Maru	Tree	Young twigs are used as fodder
26	*Quercus leucot-richophora*	Fagaceae	Rein	Tree	Young twigs are used as fodder
27	*Aesculus indica*	Hippocastanaceae	Bankhori	Tree	Leaves
28	*Bombax ceiba*	Malvaceae	Simblu	Tree	Leaves are used as fodder durings car city of fodder.
29	*Cedrella serrata*	Meliaceae	Drovey	Tree	Leaves
30	*Cedrella toona*	Meliaceae	Toon	Tree	Leaves
31	*Melia azadarach*	Meliaceae	Dareck	Tree	Leaves
32	*Albizia lebbeck*	Mimosaceae	Sirin	Tree	Leaves
33	*Ficus palmata*	Moraceae	Phagwara/kemri	Tree	Leaves
34	*Ficus carica*	Moraceae	Kemri	Tree	Leaves
35	*Morus alba*	Moraceae	Toot	Tree	Leaves
36	*Olea cuspidata*	Oleaceae	Kaoo	Tree	Leaves
37	*Oxalis corniculata*	Oxalidaceae	PeeliKhattiBooti	Herb	Entire plant
38	*Alloteropsis cimicina*	Poaceae	Kaah	Herb	Entire plant
39	*Avena sativa*	Poaceae	Kandal	Herb	Aerial parts

S.NO.	Botanical Name	Family	Local Name	Habit	Parts used
40	*Capillipedium assimile*	Poaceae	Setokaah	Herb	Entire plant
41	*Cenchrus ciliaris*	Poaceae	Kaah	Herb	Entire plant
42	*Cynodon dactylon*	Poaceae	Kaah	Herb	Entire plant
43	*Echinochloa colona*	Poaceae	Ghass	Herb	Entire plant
44	*Panicum antidotale*	Poaceae	Kaah	Herb	Entire plant
45	*Paspalidium flavidum*	Poaceae	Kaah	Herb	Entire plant

to record the grain yielding plants,[13] the feed plants of Ramnagar-Dudu valley of Jammu, grain plants of Rajouri (J&K), the grub plants of District Kathua, J&K.

Study area

Azmatabad village of Thannamandi, district Rajouri, Jammu and Kashmir, India is situated at a distance of 26 km from district headquarters and is stretched between 33°56,501 lat- and 74°56¹12¹¹ longitudes. The altitude of the study area was about 1968m. Azmatabad village is also connected to Mughal road. The upper reaches of the study area receive heavy snowfall from Dec-April and winter is severe there, whereas the lower reaches have a pleasant season throughout the year. The basic floristic composition of the study area varies from that of a sub-tropical to sub-temperate forest with 4 distinct seasons a year, Spring (March -May), Summer (June-August), Autumn (September -November) and Winter (December-February). The study area is dominated by coniferous forests, although broad leaved, mixed forest and alpine pastures are also found in some higher reaches like D.K.G,rattan peer ,sukhsar *etc.*

Material and Methods

Hotspots of Pahari and Gujari speaking people were identified and confirmed in the study area. An extensive field survey was carried out between March to July 2022 in these hotspots. Information on the use of fodder plants and plants part used by the Pahari and Gujari community of Azmatabad village was obtained through interviews with the villagers, Hakeems, and elders in the Pahari and Guajjri languages. Detailed name of plants and use of plants, parts used, method of preparation, and mode of use were noted in the notebook.

Result and Discussion

Present study documented 45 plant species **(**Table-1)which are used as source of fodder. It has been observed that beside agriculture, locals, mostly are dependent upon forest resource to meet out their daily needs. Most of the fodder yielding plants are multipurpose and are used for other purposes also like as source of fuel, timber, agricultural tools, wild edible *etc.* According to the informants the multipurpose fodder yielding plant species particularly trees are under great stress and are declining day by day. Because of increasing population, pastures are continuously being converted into agricultural land and as such grazing area has been reduced considerably. Another reason reported for decline in the grazing area is the growth of Jarhi (*Parthenium hysterophorus*) an exotic invasive weed that is spreading rapidly in grasslands and even in forest area

Conclusion

The present study has been able to document the diversity of plants used as fodder in Azmatabad Thanna mandi. Overgrazing,lopping of fodder yielding plants and indiscriminate cutting of forest trees for fodder and other purposes has resulted in the decline of some species and as such, it is advised to take appropriate steps for establishment of farms of fodder yielding species so that pressure on natural populations may be reduced**.**

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