

FOLK USES OF COMMON GRASSES OF TEHSIL BALAKOT, DISTRICT MANSEHRA, KHYBER PAKHTUNKHWA, PAKISTAN.

Dr. Abbas Hussain Shah¹, Danish Ali², Dr. Zayad Tariq³ and Dr. Azhar Mehmood

¹*Department Botany Government Post Graduate College Mandian Abbottabad*

²*Department of botany, Hazara University Pakistan*

³ *Khyber Medical University Peshawar.*

*Corresponding author: danibotanist@gmail.com.

ABSTRACT

This study was designed to document the folk uses of common grass species during 2021-2022 during spring seasons. Questionnaire method and interviews were employed for data collection. A total of 215 informants were interviewed which included local farmers, healers, shepherds and women. Study revealed 37 species of grasses belonging to 2 families with various folk uses. Of these 21 species were used as fodder, followed by 13 species having medicinal uses. These grass species are used to cure asthma, as astringents, to treat leprosy blood clotting, wound healing, and Diabetic and as anthelmintic. Remaining grass species were found which were used commonly in making baskets, brooms, clips, mostly girls of the study area kept flower of *Cyperus niveus* in hair for beauty. Some of these grasses are also grown in the locality for ornamental purposes such as *Cynodon dactylon*. In part used the leaves of most of the grasses were used to cure different diseases and many others purposes. Rest of whole plants, rhizome and rarely flowers were also documented Ethno botanically in the study area.

KEY WORDS: Balakot, Grasses, fodder, natural product, medicinal used, blood clotting.

1. INTRODUCTION

Balakot is located between 34°33'N 73°21'E Latitude and 34°33'N 73°21'E Longitude. It leads to Kaghan valley, a famous tourist attraction of Northern areas of Pakistan. The devastating earthquake of 2005 seriously jolted the town resulting major destruction of infrastructure, mass migration and climatic changes. Present day Balakot town was rebuilt from the rubble. (Climatically) Balakot falls under Moist Sub-tropical zone having hot summers and mild winter season. Area receives enough rainfall as compared to adjoining areas. Highest precipitation recorded in the months of February to March and later in monsoon season i.e. June and August.

Grasses belong to family Poaceae which is one of the monocot families of flowering plants. Grasses are classified into about 150 tribes 660 genera and 10,000 species [1]. Grasses are cosmopolitan in occurrence which means grasses species adapted to almost each terrestrial habitat on earth [2]. In Pakistan Family Poaceae is represented by 158 genera and 492 species [3]. The species are most abundant in the tropics, but their species richness is maximum in the temperate region. The great flexibility of various species has enabled them to flourish in diverse habitats [2]. The economic importance of grasses is realized from the fact that man has been growing cereals for the last 10,000 years [4]. Grasses are very important as they are main

source of fodder and feed for cattle. Different scientist carried out ethno botanical research on grasses and collected valuable data [5] studied such as usage of 16 taxa of grasses from 4 tribal communities of west Dinjapur district of West Bengal. In a similar study of grasses of West Bengal, India it was found that 52 grasses species belonging to 35 genera were being used in 144 different manners by 10 tribal communities of the area [6]. In Pakistan [7] studied the ethno botanical importance of grassy weeds in Dera Ismail khan District KPK, Pakistan, and recorded 22 weeds species of grasses were used by local people for various purposes. [8] Studied ethno botanical utilization of grasses in That Desert, Pakistan. During this study about 29 species of grasses belonging to 10 tribes were collected that were being utilized for 10 different purposes.

2. MATERIAL AND METHOD

A widespread field's survey was carried out during 2021-2012 during spring seasons to collect ethno botanical knowledge of Grasses in Balakot. Questionnaire method was adopted to collect information from the local people including Hakims, farmers and other people. Data pertinent to Botanical name, Family, Vernacular names, part used, and ethno botanical uses was also documented. Necessary materials which were involve field notebook, pen, trowel, plant presser and newspapers. The grasses were collected at the flowering stages and specimen was properly dried, pressed using newspaper for about 3 weeks at room temperature. Grasses specimen were identified with the help of flora of Pakistan [9], [10].

3. RESULTS AND DISCUSSION

The results presented here revealed the folk uses of 37 species of grasses belonging to Monocot 2 families of angiosperms. Most of the species were used as fodder for the livestock while remaining species have medicinal uses and are used to treat a variety of diseases. Some of these plants are used to stop bleeding, to cure asthma, for treating gastric disorders, as antipyretics etc. Some of these grass species are also used effectively by local healers to repel worms from gastrointestinal tract.

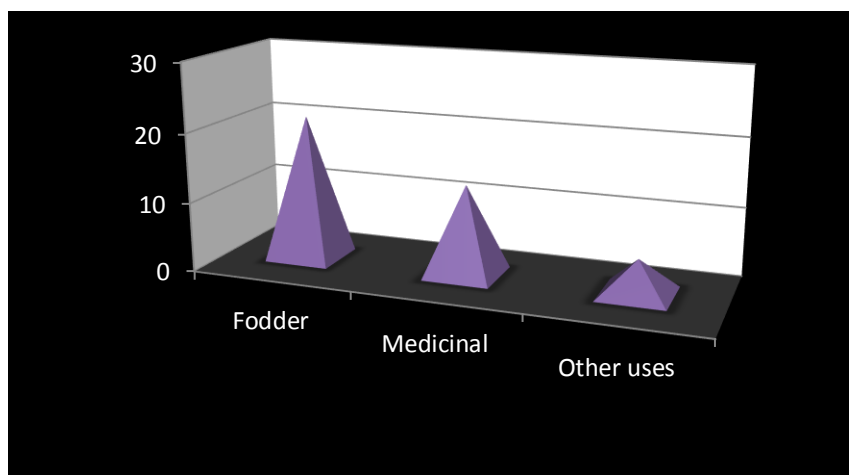


Figure 1. Uses of grasses in study area

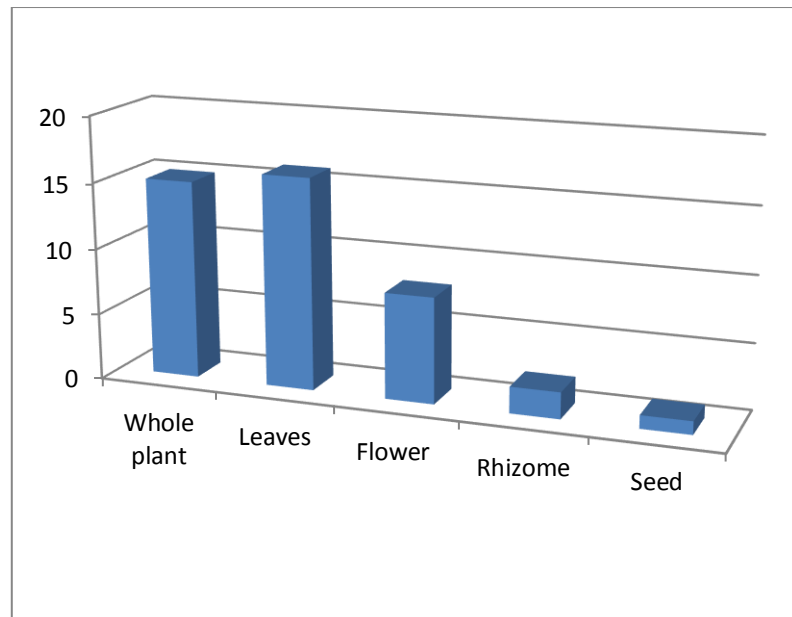


Figure 2: Parts of the grasses used

TABLE 1: List of the grasses species records from the study area, their vernacular name and Ethno botanical uses

S. No	Botanical Name	Family	Local Name	Parts used	Ethnobotanical uses
1	<i>Arundo donax</i> L.	Poaceae	Nar	Whole plant	Leaves of the plant are eaten by cattle. Stem of this plant are used for making Pens. Rhizome is diuretic.
2	<i>Bromus hordeaceus</i> L.	Poaceae	Chamb ali boti.	Whole plant.	The whole green plant is grinded, and its juice extracted after that a little amount of water is added with water, milk, sugar to make a syrup in Hindko called Chamballi syrup used 2 spoon at night for Chambal. Leaves and stem are used as fodder. In Balakot city this Mature plant used as ornamental due to its brightness.
3	<i>Bromus cruciformis</i> L.	Poaceae	Chatlo.	Whole plant.	Extract of Leaves is used for Stomachache The whole plant used as fodder
4	<i>Bromus lanceolatus</i> Roth.	Poaceae	Boznii.	stem leave and flower.	The extract of young leaves and stem is used for blood clotting. Also used as fodder
5	<i>Cymbopogon jwarancusa</i> (Jones) Schult	Poaceae	Ghanda lli.	Whole plant.	Leaves and stem are used as fodder
6	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Khabal	Whole plant.	Extract of plant is given to stop Diarrhea and vomiting in animals.
7	<i>Cyperus alopecuroides</i> L.	Cyperaceae.	Della	Rhizome	According to one informant in old period during its flowering condition people makes cap. And for Goat used as fodder

8	<i>Cyperus difformis</i> L.	Cyperaceae.	Phool wala grass.	Leaves stem and flower.	The plants are crushed and kept in one glass of water for one night and used its water at morning for Blood purification in Men.
9	<i>Chloris barbata</i> L.	Poaceae	Munyar a.	Whole plant.	Plant used as fodder
10	<i>Cyperus laevigatus</i> L.	Cyperaceae.	Gundey ala.	whole plant.	Antihelminthic
11	<i>Echinochloa colona</i> (L.)Link	Poaceae.	Bassa.	Whole plant	The whole plant is used as fodder. The flower stalk are used for making finger rings. Ladies used a bunch of inflorescence as kechar for beauty.
12	<i>Eleusine indica</i> (L.) Gaertn.	Poaceae.	Barru.	Whole plant	The whole plant used as fodder.
13	<i>Eragrostis minor</i> Host Gram, Austr	Poaceae	Bassi.	Leave.	The young leaves crushed and extracts its juice then poured on wound for blood clotting Also used as good fodder for buffalo.
14	<i>Eragrostis major</i> Host Gram.	Poaceae	Bassa.	Whole plant.	When plant complete its life cycle then dig out and makes tokarri (in hinko) used as ornamental purpose. Also used as fodder
15	<i>Poa bulbosa</i> L.	Poaceae	Selta.	Whole plant.	Local farmer are of the that mostly grasses used as fodder among these grasses <i>poa bulbosa</i> used at specific time during delivery of a cow because it consist of maximum nutrition.
16	<i>Poa annua</i> L.	Poaceae	Selta.	whole plant.	Good fodder for goat
17	<i>Panicum antidotale</i> Retz.	Poaceae	Phapra grass.	leaves, stem and flower.	Used as fodder

18	<i>Piptatherum miliaceum</i> (L.) Loss.	Poaceae	changa.	whole plant.	Stem is used to make broom. When the stem is dried in the presence of sunlight and makes a device hinko called chajh (winnow). Also used for ornamental purpose and makes place to perform prayer. Good work in soil bonding.
19	<i>Piptatherum virescens</i> (Trin.) Biss.	Poaceae	chanjaa .	Leave.	The whole plant used as fodder.
20	<i>Paspalum paspaloides</i> (Minch.) Kims scribn.	Poaceae	Londar aa.	Leave	Used as fodder
21	<i>Pycerus flavidus</i> (Retz) T.Koyamo.journ.jap.	Poaceae	Della	Rhizome and leave.	The rhizome of <i>Pycerus flavidus</i> is crushed and then add water and kept it on tooth for toothache.
22	<i>Pennisetum orientale</i> L.C. Rich.	Poaceae		Leaves	The plant used as fodder.
23	<i>Leptohloa panacea</i> (Retz.) Ohwt	Poaceae	Gandali .	Leaves and flower.	Fodder
24	<i>Setaria pumila</i> L.	Poaceae	Budley ara.	whole plant.	Plant used as fodder
25	<i>Saccharum griffithii</i> Munro ex Boiss	Poaceae	Barruu.	whole plant.	Plant used to reduce soil erosion. it work as soil binding agent. Also used as fodder for donkeys
26	<i>Saccharum spontenum</i> L.	Poaceae	Barruu.	Whole plant.	Farmer says that Its stem is very hard so used to stop wind break. Also good for soil bonding

27	<i>Setaria verticillata</i> (L.)P. Beauv.	Poaceae	Baguu.	Leave.	Leaves used for blood clotting
28	<i>Stipa capensis</i> Thunb.	Poaceae	Budley ara.	leaves.	Plant used as fodder
29	<i>Setaria verticillata</i> .(L.)P.Beauv.	Poaceae	Baguu.	Leave.	Leaves used for blood clotting
30	<i>Stipa capensis</i> Thunb.	Poaceae	Selara.	Leaves	Used as fodder.
31	<i>Chrysopogan aucheri</i> L	Poaceae	Lundar a.	Leaves and flower.	Used as fodder also used to make broom.
32	<i>Dactyloctenium aegyptum</i> (L.) Wild.	Poaceae	Patkarr a.	Leave.	According to Lohari massi I suffer a disease locally called KHOSHI after earth quick so my old aged people said that decoction of this grass used to complete finish this disease(Khoshi) So I used this and become free from that disease
33	<i>Digitaria ciliaris</i> (Retz) Koelar	Poaceae.	Selara.	Leaves and flower.	Whole plant used as fodder.
34	<i>Eleusine indica</i> (L) Gaertn.	Poaceae.	Chulen dara.	Leaves and flower.	Whole plant used as fodder.
35	<i>Triticum aestivum</i> L.	Poaceae.	Kanrak.	Leaves and seed	It is used in Constipation. In dry and green form used as fodder.
36	<i>Bromus sp</i>			Stem and leaves	Fodder
37	<i>Phlaris minor</i>			Flower	Asthama

Poaceae represented by 34 different species. In 16 plants leaves had folk uses while 15 plants were used as whole. In 8 species inflorescences had folk uses while only 4 species were having their culms used for a variety of purposes. Such as culms of *Arundo donax* are used for making writing tools. *Piptatherum* sp is grown as wind break and for soil binding. Our conclusions are in line with reports of different workers from other areas of Pakistan. [11] Conducted ethno botanical study of grasses in Central Punjab-Pakistan. He reported that total 51 species of grasses belong to 46 genera were recorded from the area. The results of [14] are closely related with our pronouncement. In Balakot the *Poa annua* was used as fodder while extract of the rhizome of *Arundo donax* have diuretic properties and *Cyperus* sp, *Digitaria ciliaris*, *Setaria verticillata* was used as fodder. Similarly, the use of all these grasses were reported from [11]. An additional alike verdict was found by [12]. From the study area reported 28 different weeds species of grasses belonging to 22 genera were recorded ethno botanical importance in Dera Ismail Khan district KPK Pakistan. During this study the end result show that *Eragrostis minor*, *Panicum antidotale* were used as fodder. Other results are much different because ecologically the Study area is divided into subtropical zone, moist temperate zone and sub alpine zone. First time conducted ethno botanical study of grasses in tehsile Balakot. Mostly the peoples of the area unaware from modern facilities and still depend on traditional knowledge.

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