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Raj Kumar

Angiosperms Taxonomy
Laboratory, Department of
Botany, Hindu College,
Moradabad, Uttar Pradesh,
India

Beena Kumari

Angiosperms Taxonomy
Laboratory, Department of
Botany, Hindu College,
Moradabad, Uttar Pradesh,
India

Common grasses of Bijnor district used by bhoxa tribals in their primary health care system

Raj Kumar and Beena Kumari

Abstract

Within the wide diversity of flowering plants 'Grasses' are the one which can be found anywhere with great abundance. Grasses are the members of Poaceae (Gramineae) family which are the most vital part in our life as food, medicine, cattle-fodder and many different things. The Bhoxa tribals of Kotwali and Najibabad blocks use different parts of grasses in crude form as cure for many diseases. This paper deals with 23 grass species used in fungal infection, fever, cough, haematuria, urinary diseases, intestinal worm, wounds, snakebite, gonorrhoea etc. Present study reveals five subfamilies with their species namely Bambusoideae (3), Pooideae (2), Arundinoideae (1), Chloridoideae (3) and Panicoideae (14).

Keywords: Grasses, bhoxa tribals, medicinal value, Bijnor district

Introduction

Bijnor, occupies the North-West corner of the Rohilkhand Division, and is a roughly triangular stretch of country with its apex to the north. The extreme parallels of north latitude are 29° 2' and 29° 58' and of east longitude 78° 0' and 78° 57'. In total, it covers an area of 4,049 kms. Most part of the district fall under the Tarai zone, an area that is backward both politically and industrially. The temperature ranges from a day time maximum of about 42°C at the height of summer to a night time minimum of about 20°C during the coldest period of winter. There are 11 blocks in the district but Bhoxa tribals only live in two of them, viz. Kotwali and Najibabad. Most tribals are famers. The Bhoxas are found in six villages of Kotwali and Najibabad blocks; where they originally migrated from the regions of Kumaun and Nainital of Uttarakhnad. The total tribal population in Bijnor is 1,876. The Bhoxas suffer from many illnesses but they do not go to hospitals for proper treatment and use their traditional method for treating illnesses by using local plants. Keeping in mind, this research work on common grasses of kotwali and Najibabd blocks which are used medicinally by Bhoxa tribals was undertaken for the first time.

Materials and Method

The study was conducted during 2017-18 in six villages of Kotwali (Site I) and Najibabad (Site II) blocks of Bijnor District. Twenty tribal farmers were randomly selected from each village. Information was collected by personal interviews using structured questionnaires and also consulting available literature [5, 6, 8, 10]. Collected grass specimens were identified with the help of available literature [1, 2, 3, 4, 7, 9, 11] and by comparing with the already identified grass specimens of the Department of Botany, Hindu College, Moradabad. After correct identification, the grasses were given voucher numbers and deposited as voucher specimens in the said herbarium, for future references.

Result and Discussion

Present findings were confined to 23 species of grasses under five subfamilies with their species namely Bambusoideae (3), Pooideae (2), Arundinoideae (1), Chloridoideae (3) and Panicoideae (14) and eight tribes. Andropogoneae and Paniceae tribes represented maximum species (Table 1 and Fig. 1). A list of collected grasses along with their local name, flowering and fruiting period, parts used and diseases is given in Table 2. Root is used for maximum ailments followed by whole plant, leaf, seed and grain.

Correspondence

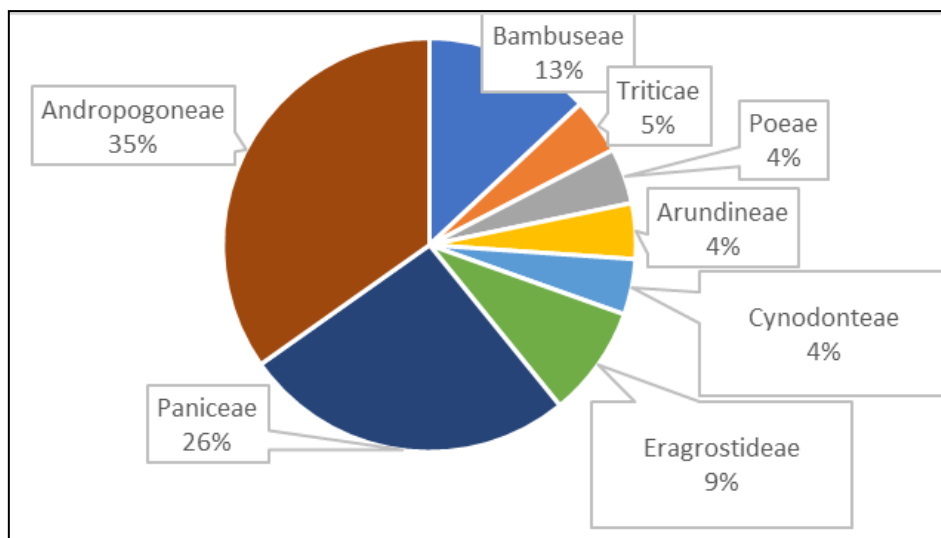
Beena Kumari

Angiosperms Taxonomy
Laboratory, Department of
Botany, Hindu College,
Moradabad, Uttar Pradesh,
India

Table 1: Grass diversity in Kotwali (Site I) and Najibabad (Site II) blocks of Bijnor District

Subfamily	Tribe	Name of species	Habitat	Site I	Site II
1. Bambusoideae	Bambuseae	<i>Bambusa arundinacea</i> Willd.	P	-	+
		<i>Bambusa vulgaris</i> Schrad. ex J.C. Wendl.	P	-	+
		<i>Dendrocalamus strictus</i> (Roxb.) Nees	P	+	+
2. Pooideae	Triticae	<i>Hordium vulgare</i> L.	C	+	+
	Poeae	<i>Phalaris minor</i> Retz.	W	-	+
3. Arundinoideae	Arundineae	<i>Arundo donax</i> L.	W	+	+
4. Chloridoideae	Cynodonteae	<i>Cynodon dactylon</i> (L.) Pers.	W	+	+
	Eragrostideae	<i>Dactyloctenium aegyptium</i> L.	W	-	+
		<i>Desmostachya bipinnata</i> (L.) Stapf	W	+	+
5. Panicoideae	Paniceae	<i>Cenchrus ciliaris</i> L.	W	+	+
		<i>Echinochloa colonum</i> (L.) Link.	W	+	+
		<i>Panicum antidotale</i> Re	W	-	+
		<i>Pennisetum typhoides</i> Burm f.	C	+	+
		<i>Setaria glauca</i> L.	W	+	+
		<i>Setaria verticillata</i> (L.) P. Bea	W	+	+
	Andropogoneae	<i>Apluda mutica</i> L.	W	+	+
		<i>Coix lacryma-jobi</i> L.	W	+	+
		<i>Cymbopogon citratus</i> (DC.) Stapf.	C	+	+
		<i>Dichanthium annulatum</i> (Forssk.) Stapf	W	-	+
		<i>Heteropogon contortus</i> (L.) P. Beauv. ex Roem. & Schult.	W	-	+
		<i>Saccharum spontaneum</i> L.	W	+	+
		<i>Sorghum halepense</i> (L.) Pers.	C	-	+
<i>Vetiveria zizanioides</i> (L.) Nash	C	+	+		

(Abbreviation: P= Planted, C= Cultivated, W= Wild) x`

**Fig 1:** Grass species recorded under eight Tribes of Poaceae**Table 2:** Grass species used by Bhoxa Tribes of two blocks of Bijnor district.

S. N.	Grass sp.	Local name	FL. & Fr.	voucher specimen no.	Plant parts	Diseases
1.	<i>Apluda mutica</i> L.	Panoi	Sept - Feb	113	whole plant	Fungal infection
2	<i>Bambusa arundinacea</i> Willd.	Bans	Not seen.	122	pulp(culm)	Haematuria.
3	<i>Bambusa vulgaris</i> Schrad	Baisani bans	Not seen	116	Young shoot	Diarrhoea and vomiting.
4	<i>Cenchrus ciliaris</i> L.	Kusha	Throughout the year.	129	Root	Intestinal worms
5	<i>Coix lacryma-jobi</i> L.	Vaijanti	Aug. - Dec.	132	Seeds	spleen and stomach upset
6	<i>Cymbopogon citratus</i> (DC.) Stapf.	Lemon ghas)	Jan - March.	096	Leaf	fever and indigestion
7	<i>Cynodon dactylon</i> Pers.	Doob ghas)	All the year round.	011	Root & Leaf	Urination and skin diseases.
8	<i>Dactyloctenium aegyptium</i> Boiss.	Bhobra	June - Sept.	048	Grain	joint pains
9	<i>Dendrocalamus strictus</i> (Roxb.) Nees	Bans kasban	Not seen.	098	Leaf	Diabetes.
10	<i>Desmostachya bipinnata</i> Stapf.	Dab	June - Nov.	055	Root	Asthma and rheumatism.
10	<i>Dichanthium annulatus</i> Stapf.	Zargha	Aug - Jan.	017	inflorescence	Cough.
11	<i>Echinochloa colonam</i> L.	Shama	Oct - Dec.	112	Root	wounds and inflammations
12	<i>Eleusine indica</i> (L.) Gaertn.	Phulwa	July - Oct.	124	whole plant	hypertension and influenza
13	<i>Heteropogon contortus</i> L.	Bawali ghas)	Oct - March	087	Root	snake bite
14	<i>Hordium vulgare</i> L.	Jow	Jan - March.	057	whole plant	Jaundice
15	<i>Panicum antidotale</i> Retz.	Bansi	June - Nov.	114	whole plant	burnt healing
16	<i>Phalaris minor</i> (L.) Retz.	Chirya ka bajra	Feb. - April.	118	Leaf	Ear- ache

17	<i>Pennisetum typhoides</i> Burm f.	Bajra	Sept - Nov.	019	Grain	sexual desire
18	<i>Saccharum spontaneum</i> L.	Sarkanda	Sept - Jan.	013	Root	intestinal worms, fever and body pain
19	<i>Setaria glauca</i> L.	Bandra	June - Dec.	144	Seeds	Fever
20	<i>Setaria verticillata</i> L.	Chir-chita	Aug - Dec.	157	Root	Boils
21	<i>Sorghum halepense</i> (L.) Pers	Baru	July - Dec.	077	whole plant	stomach ache, epilepsy and diarrhoea
22	<i>Vetiveria zizanioides</i> (L.) Nash.	Khas ghas	July - Nov.	064	Root	Headache.

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