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## Grasses of JP Nagar (Amroha) district of Uttar Pradesh

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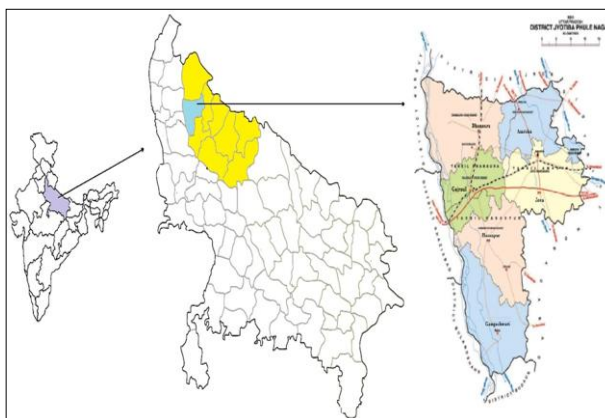
### Abstract

This paper gives an account of grasses of district J. P. Nagar (Amroha) of Rohilkhand region. A total of 46 species of 38 genera belonging to 6 subfamilies and 11 tribes were recorded under family Poaceae. Subfamily Panicoideae (25 species) was the dominant followed by Chloridoideae (9 species), Pooideae (6 species), Ehrhartoideae (2 species), Bambusoideae (2 species) and Arundinoideae (1 species). In the study area, the ratio of subfamily to genus was 1: 6.33, subfamily to species was 1: 7.66 and genus to species was 1: 1.21. Genus *Eragrostis* and *Saccharum* found dominant with 3 species followed by *Dactyloctenium*, *Setaria* and *Sorghum* with 2 species, while other genera have 1 species each. Some species were used economically as medicinal, fodder and for other purposes.

**Keywords:** Grasses, Poaceae, J. P. Nagar (Amroha) district

### Introduction

District J. P. Nagar (Amroha) is north-western district of U.P. (India). The district came into existence on 24th April 1997 in the memory of St. Mahatama Jyotiba Phule. It has 6 blocks namely Gangeshwari, Hasanpur, Amroha, Joya, Gazrola and Dhanora of 3 Tehsils Amroha, Dhanora & Hasanpur vide UP Gazette no. 1071/1-5-97/224/sa-5 dated 15/4/1997. Its geographical area is about 2470 Sq. Km., extending from Latitude 28°54' N to 39°6' N and Longitude 78°28' E to 78°39' E. The maximum & minimum height from sea level is 240ft. & 177ft. respectively. The maximum and minimum atmospheric temperatures are 43°C and 4°C respectively.



**Fig 1:** Map of Uttar Pradesh and J. P. Nagar (Amroha) district

The Poaceae (Grass family) is the largest family in monocot, having economically importance, give foods like cereals and millets; fodder, bamboo and fuel. Family consists about 11,290 species distributed in all continents except Antarctica (Clayton *et al.*, 2012) [2]. Karthikeyan *et al.* (1989) [6] listed [7] grass Flora of present India accounting for 1254 species belonging to 260 genera. Some other notable works done on Grasses done by Duthie (1883) [3], Bor (1960) [1], Raizada *et al.* (1961 & 1962) [16], Singh (1971) [20], Vedprakash *et al.* (1978) [22], Roy (1984) [17], Jain (1986) [5], Uniyal *et al.* (1994) [21], Moulik (1997) [14], Singh (2007) [18], Potdar *et al.* (2012) [15], Beena Kumari (2015) [12] and Malik (2015) [13], Kumar and Beena Kumari (2017 a & b) [8, 9].

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Khanna (2017) recently reported 300 species belonging to 106 genera from Uttar Pradesh. Some species of grasses showing socio religious activity (Singh *et al.*, 2018) <sup>[19]</sup> while some are invasive in nature (Beena Kumari *et al.*, 2016; 2018) <sup>[11, 10]</sup> in the study area.

### Material and Methods

Field trips were made during July 2016 and Dec 2017 in frequent manner in different seasons. Grasses specimens were collected, processed by standard herbarium methods (Jain and Rao, 1977) <sup>[4]</sup>. Identification of collected grasses has been done by morphological basis with available literature (Bor, 1960; Clayton *et al.*, 2012 and Singh, 2007) <sup>[1, 2, 18]</sup> and matched with BSI, Dehradun. Online database like Grass Base - The Online World Grass Flora (<https://www.kew.org/data/grasses-db.html>), the plant list ([www.theplantlist.org](http://www.theplantlist.org)) and The International Plant Name Index ([www.ipni.org](http://www.ipni.org)) were referred for correct nomenclature

and author citations. The herbarium sheets were preserved in Department of Botany, Hindu College, and Moradabad for future use.

### Result and Discussion

The present study documented 46 grass species belonging to 38 genera, 6 subfamilies and 11 tribes of the study area. The plant species have been arranged in alphabetical order in Table-1 with their subfamilies and tribes. Subfamily Panicoideae (25 species) was the dominant followed by Chloridoideae (9 species), Pooideae (6 species), Ehrhartoideae (2 species), Bambusoideae (2 species) and Arundinoideae (1 species) (Table-2). The ratio of subfamily to genus was 1: 6.33, subfamily to species was 1: 7.66 and genus to species was 1: 1.21. Genus *Eragrostis* and *Saccharum* found dominant with 3 species followed by *Dactyloctenium*, *Setaria* and *Sorghum* with 2 species, while other genera have 1 species each

**Table-1:** List of Grasses of J. P. Nagar (Amroha) district

S. No	Plant Name	Sub-family	Tribe	Location
1.	<i>Apluda mutica</i> L.	Panicoideae	Andropogoneae	Waste Places
2.	<i>Arundo donax</i> L.	Arundinoideae	Arundineae	Near water bodies
3.	<i>Avena sterilis</i> L. var. <i>cultra</i>	Pooideae	Poeae	Weed in Cultivated fields
4.	<i>Bambusa vulgaris</i> Schrad.	Bambusoideae	Bambuseae	Private Gardens
5.	<i>Brachiaria ramosa</i> (L.) Stapf	Panicoideae	Paniceae	Moist places
6.	<i>Cenchrus biflorus</i> Roxb.	Panicoideae	Paniceae	Road sides
7.	<i>Cenchrus ciliaris</i> L.	Panicoideae	Paniceae	Road sides
8.	<i>Chloris barbata</i> Sw.	Chloridoideae	Cynodonteae	Waste places
9.	<i>Coix lacryma-jobi</i> L.	Panicoideae	Andropogoneae	Gardens
10.	<i>Cymbopogon citratus</i> (DC.) Stapf	Panicoideae	Andropogoneae	Near Cultivated fields
11.	<i>Cynodon dactylon</i> (L.) Pers.	Chloridoideae	Cynodonteae	Gardens, Road side, Railway line
12.	<i>Dactyloctenium aegyptium</i> (L.) Willd.	Chloridoideae	Cynodonteae	Gardens, road side
13.	<i>Dactyloctenium scindicum</i> Boiss.	Chloridoideae	Cynodonteae	Road side
14.	<i>Dendrocalamus strictus</i> (Roxb.) Nees	Bambusoideae	Bambuseae	Private gardens
15.	<i>Desmostachya bipinnata</i> (L.) Stapf	Chloridoideae	Chlorideae	Near Cultivated fields
16.	<i>Dichanthium annulatum</i> (Forsk.) Stapf	Panicoideae	Andropogoneae	Gardens, Cultivated fields
17.	<i>Digitaria setigera</i> Roth	Panicoideae	Paniceae	Weed in Cultivated fields
18.	<i>Echinochloa colona</i> (L.) Link	Panicoideae	Paniceae	Near water bodies
19.	<i>Eleusine indica</i> (L.) Gaertn.	Chloridoideae	Eragrostideae	Waste places, road sides
20.	<i>Eragrostis ciliaris</i> (L.) R.Br.	Chloridoideae	Eragrostideae	Weed in Cultivated fields
21.	<i>Eragrostis pilosa</i> (L.) P.Beauv.	Chloridoideae	Eragrostideae	Moist places
22.	<i>Eragrostis tremula</i> Hochst. ex Steud.	Chloridoideae	Eragrostideae	Weed in Cultivated fields
23.	<i>Hemarthria compressa</i> (L.f.) R.Br.	Panicoideae	Andropogoneae	Moist waste places
24.	<i>Heteropogon contortus</i> (L.) P.Beauv. ex Roem. & Schult.	Panicoideae	Andropogoneae	Near water bodies
25.	<i>Hordeum vulgare</i> L.	Pooideae	Triticeae	Cultivated in fields
26.	<i>Hygroryza aristata</i> (Retz.) Nees ex Wight & Arn.	Ehrhartoideae	Zizaniinae	Near water bodies
27.	<i>Imperata cylindrica</i> (L.) Raeusch.	Panicoideae	Andropogoneae	Moist places
28.	<i>Oryza sativa</i> L.	Ehrhartoideae	Oryzeae	Cultivated in fields
29.	<i>Panicum antidotale</i> Retz.	Panicoideae	Paniceae	Near Cultivated fields
30.	<i>Paspalum flavidum</i> (Retz.) A.Camus	Panicoideae	Paniceae	Moist places
31.	<i>Paspalum distichum</i> L.	Panicoideae	Paniceae	Moist places
32.	<i>Pennisetum glaucum</i> (L.) R.Br.	Panicoideae	Paniceae	Cultivated in fields
33.	<i>Phalaris minor</i> Retz.	Pooideae	Poeae	Weed in Cultivated fields
34.	<i>Poa annua</i> L.	Pooideae	Poeae	Moist places, gardens
35.	<i>Polypogon monspeliensis</i> (L.) Desf.	Pooideae	Poeae	Near Cultivated fields
36.	<i>Saccharum bengalense</i> Retz.	Panicoideae	Andropogoneae	Near Cultivated fields
37.	<i>Saccharum officinarum</i> L.	Panicoideae	Andropogoneae	Cultivated in fields
38.	<i>Saccharum spontaneum</i> L.	Panicoideae	Andropogoneae	Fallow fields
39.	<i>Setaria barabata</i> (Lam.) Kunth	Panicoideae	Paniceae	Moist waste places
40.	<i>Setaria verticillata</i> (L.) P.Beauv.	Panicoideae	Paniceae	Gardens, road sides
41.	<i>Sorghum bicolor</i> (L.) Moench	Panicoideae	Andropogoneae	Cultivated in fields
42.	<i>Sorghum halepense</i> (L.) Pers.	Panicoideae	Andropogoneae	Weed in Cultivated fields
43.	<i>Sporobolus diandrus</i> (Retz.) P.Beauv.	Chloridoideae	Eragrostideae	Road sides, fallow fields
44.	<i>Triticum aestivum</i> L.	Pooideae	Triticeae	Cultivated in fields
45.	<i>Urochloa panicoides</i> P.Beauv.	Panicoideae	Paniceae	Moist places
46.	<i>Zea mays</i> L.	Panicoideae	Andropogoneae	Cultivated in fields

**Table 2:** Numerical data according to subfamilies

S No	Subfamilies	Number of Tribe	Number of Genera	Number of Species
1.	Panicoideae	2	20	25
2.	Chloridoideae	3	7	9
3.	Pooideae	2	6	6
4.	Ehrhartoideae	2	2	2
5.	Bambusoideae	1	2	2
6.	Arundinoideae	1	1	1

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**References**

- Bor NL. The Grasses of Burma, Ceylon, India and Pakistan. Pergamon Press London, 1960.
- Clayton W, Vorontsova MS, Harman KT, Williamson H. Grass Base–The Online World Grass Flora. Copyright, the Board of Trustees, Royal Botanic Gardens, Kew, 2012.
- Duthie JF. A list of the grasses of North-Western India, indigenous and cultivated. Roorkee, 1883.
- Jain SK and Rao RR. A Handbook of Field and Herbarium Methods (Today and Tomorrow's Publication) New Delhi, 1977.
- Jain SK. The Grass Flora of India. A Synoptic account of uses and phytogeography. Nelumbo, the Bulletin of Botanical Survey of India. 1986; 28(1-4):229-240.
- Karthikeyan S, Jain SK, Nayar MP and Sanjappa M. Poaceae, Florae Indicae Enumeratio Monocotyledonae. Botanical Survey of India, Calcutta, 1989, 435.
- Khanna KK. Angiospermic plants of Uttar Pradesh- a check list. Geophytology. 2017; 47(1):69-110.
- Kumar R, Kumari B. Diversity of grass flora of Moradabad district with special reference to their utility. Int. J of Bot. Stud. 2017; 2(6):166-169.
- Kumar R, Kumari B. Medicinal grasses resources from Sambhal district of Rohilkhand region UP, India. Int. J of Applied and Pure Sci. and Ag. 2017; 3(6):56-60.
- Kumari B, Singh SP, Singh KK. Angiosperm Diversity of Stress Sites of Moradabad district of Rohilkhand Region (Uttar Pradesh). International Journal of Advanced Scientific Research and Management, 2018; 1:48-51.
- Kumari B, Singh SP, Singh AP, Kumar R, Verma S. A preliminary survey of invasive alien angiosperms of Rohilkhand region (U.P.), India. Plant Archives. 2016; 16(1):45-50.
- Kumari B. Some new records of Poaceae in Moradabad district of Rohilkhand region of Uttar Pradesh, India. Journal of Plant Development Sciences. 2015; 7(7):573-577.
- Malik V. A checklist of grasses (poaceae) of Saharanpur forest division. Indian Journal of Fundamental and Applied Life Sciences. 2015; 5(2):74-80.
- Moulik S. Grasses and Bamboos of India. Scientific Publishers, 1997.
- Potdar GG, Salunkhe CB and Yadav SR. Grasses of Maharashtra. Shivaji University Kolhapur, 2012.
- Raizada MB, Bhardwaja RC, Jain SK. The Grasses of the Upper Gangetic Plain. The manager of Publications. New Delhi, 1961. 1966.
- Roy GP. Grasses of Madhya Pradesh (Flora of India, Series-4), Botanical Survey of India, Kolkatta, India, 1984.
- Singh AK. Sedges & Grasses of Eastern Uttar Pradesh. Daya Publishing House. New Delhi, India, 2007.
- Singh SP, Kumari B, Singh KK. Diversity and Conservation Status of Socio-Religious Angiosperms of Amroha District of Rohilkhand Region (U.P.), India. International Journal of Advanced Scientific Research and Management. 2018; 1:35-38.
- Singh V. Common Grasses of Meerut. Indian Forester. 1971; 97:274-281.
- Uniyal BP, Baludi B, Nath B. The Grasses of Uttar Pradesh: A Check list. BSMPS, Dehradun, 1994.
- Vedprakash SU, Pal DC, Jain SK. Additions to the India grass flora in last two decades. Bull. Bot. Surv. India. 1978; 20:143-147.