

## Checklist of Palatable Grass Species from Peninsular India

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### Abstract

Grasslands are common landscapes of India and dominate peninsular Indian landmass. Though secondary, these grasslands are important from cultural as well as economical point of view. Domestic cattle population of this region largely depends on these grasslands as food source. The grasslands, exposed to anthropocentric activities like burning and grazing, are facing several changes like replacement of palatable species by unpalatable ones. As an attempt to understand the fodder potential of grasslands of this region, a comprehensive checklist of palatable grass species, based on literature survey and field experience, was compiled. Local pastoral communities were interviewed for information on palatable grass species and their utility potentials. Various herbaria were consulted for confirmation of habitats, presence and absence of awns and grass phenology. The grasses with awns are consumed before the maturation and after the dispersal of awns. A total of 143 grass species were documented as palatable, of which 64 are awned and 79 are unawned. The palatable grasses were classified in 9 habitats and the palatability grade based on their use value is assessed. This documentation will be helpful for understanding and better management of grasslands of peninsular India.

**Keywords:** fodder potential, grasslands, grasses, habitats

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### Introduction

Grasslands are grounds covered by vegetation dominated by grasses with little or no tree cover (Suttie *et al.*, 2005). Grasslands are important landscape due to their ability to provide fodder for livestock and wild animals. In grasslands, grasses form bulk of the fodder though they are not exclusively consumed by cattle, but legumes, other forbs and sedges are also consumed. Grasses are an advanced group of monocot plants that produce high quantity of biomass in short life cycle, and by this they play a vital role in food, fodder and economy of the world. Their high production of biomass is the result of a special photosynthetic pathway known as C<sub>4</sub> adapted by majority of the grasses in addition to normal photosynthesis mode. Grasslands are natural source of fodder for domestic animals and occupy about 31- 43% of the total surface of the Earth, about 20% of Asia and more than 10% of India (Pemadasa, 1990). Grasslands are often treated as wasteland and are converted to agricultural or industrial areas. Very few grasslands in the world have remained without any human interference. Human interference has resulted in changes in overall ecology of these habitats. Palatable grasses are slowly replaced by unpalatable grasses because of heavy grazing by livestock (Moretto and Distel, 1991; Young and Solbrig, 1993).

Indian grasslands are degraded stage of deciduous forests and hence are not climax grasslands (Champion and Seth, 1968). In India, with a wide range of environmental variables, the climax can be either forest or desert and the grasslands that

exist in the country are in seral stage (Bor, 1960). These grasslands are spread all over the country, but dominate the Peninsular Indian landmass.

Peninsular India is extending beyond the bed of Ganga river across the Indo-Gangetic plains of North India. The Indo-Gangetic plains represent the boundary of Peninsula. In peninsular India natural habitats are destructed by man within historical time, for the reason that the Humid-Tropical forests have been transformed into semi-arid deciduous forest or even into scrubland and savanna (Mani, 1974). Maharashtra, an important state in Peninsular India, has a long coast along Arabian Sea which accounts for 9.36% of the country's coastal area. The region lies between 22° 1' to 16° 4' north latitude and 72° 6' to 80° 1' east longitude with an area of 307,690 sq. km. (Lakshminarsimhan, 1996; Potdar *et al.*, 2012). In Maharashtra grasses are represented by 125 genera, 415 species, 2 subspecies and 41 varieties. All of these species are spread across all the habitats, while only a limited number of species can be called as true grassland grasses. The grassland community in Maharashtra grasslands is described as *Dichanthium- Sebima* type on the basis of dominant vegetation of grass species (Dabodghao and Shankarnarayan, 1973). On the basis of soil depth, topography and hydrography, grasslands of Maharashtra are classified in seven major and twenty four minor patterns (Oke, 1973). There are many pastoral communities in peninsular India which directly depend on grassland habitats. *Gawli dhangar*, one of the pastoral communities depending on grasslands, is

primarily buffalo keeping. In addition to buffalo, they keep other cattle, such as sheep and goats. This community has knowledge about grass species preferred by domestic animals and vernacular names (Gadgil and Malhotra, 1982). Traditionally some grassland patches are protected by local people, called as *Kuran* or *Gairan* and are used as a good source of palatable grass. Most of these protected patches occur in the form of Grassland-cultivation mosaic. One third of the fodder requirement for livestock comes from cultivation, while for the rest grasslands are the only source (Gadgil, 1993). Grasslands in this region are either exposed to cattle grazing or the grass is being harvested and fed to cattle. Burning is another activity that is often practiced in Peninsular Indian grasslands. This is done by local people with a point of view that after burning the grassland would facilitate growth of new grasses through seed germination in the next season (Suttie *et al.*, 2005). But these activities have resulted in palatable grasses being slowly replaced by unpalatable grasses (Naik and Patunkar, 1979). To augment palatable species in grasslands is the biggest challenge in front of grassland managers of this region.

Palatability is consumption of plant or plant parts with relish by grazing animal (Husain and Durrani, 2009). Generally palatability and preference are used as synonymous, though preference is essentially behavioral, which is totally depending on the choice of the grazing animals (Ivins, 1952). The palatability of the grass is dependent on the chemical constituents and nutritional content such as carbohydrates, proteins, fiber etc. and their proportions, which are regulated by environmental factors like topography, climate etc. (Jawed *et al.*, 2008). At the maturity of the grass, protein content decreases, while fiber, lignin, cellulose etc. increases, hence grasses are more acceptable when they are young (Heady, 1964; Mirza *et al.*, 2002). Some morphological modifications such as awns, leaf margins produced by grasses also affect the palatability of the particular grass species as these modifications cause injuries to oral cavities of grazing animals, so that by these modifications the grasses are avoided by cattle.

The present work, fodder potential of Peninsular Indian grasslands is understood by assessing palatability of various species of grasses growing in various habitats in addition to grasslands. A comprehensive checklist of palatable grasses of Peninsular India is provided here.

## Materials and methods

A preliminary checklist for palatable grasses from Maharashtra region of Peninsular India based on detail information about flowering season, habitats, vernacular names of grass species and palatability status was compiled (Blatter and McCann, 1935; Bor, 1960; Patunkar, 1980; Kulkarni, 1995; Potdar, 2012). For confirmation of this checklist local livestock holders and people were interviewed from different regions for preferred grass species by domestic animals. Vernacular names, both from literature and those used by pastoral communities, were attributed to the species wherever possible. These names are very region specific and people from different region use different vernacular names for same grass. Specimens deposited in herbaria, such as Botanical Survey of India, Western Regional Center (BSI) and Agharkar Research Institute Herbarium (AHMA) were

consulted for parameters such as flowering season, presence or absence of awns. Online World Grass Flora available at Royal Botanic Garden, Kew (RBG) website was also assessed for documentation of parameters like presence or absence of awns. Habitats of grasses were documented based of literature and field observations. As per compiled data, grass habitats were categorized in 9 categories (Tab. 1). Some grass species were exclusive to one habitat only, while some species were found to share two or more habitats.

Tab. 1. Total number of species per habitats associated with grassland and total number of species exclusive to habitat

No.	Habitat	Total no. of species	Exclusive species to habitat
1	Grassland grasses	48	9
2	Weed in a crop field or Associated with crop fields	36	5
3	Seashore or Costal regions	4	3
4	Lateritic plateaus	1	0
5	Marshy areas	62	17
6	Ruderal	40	2
7	Undergrowth of forest	31	9
8	Dry rocky areas	20	8
9	Cultivated in field	10	5

Effort was made to provide palatability grades to grasses based on their utility values (Tab. 2). Highly palatable species are graded with A, moderately palatable grasses are graded as B, while the grass species which are consumed before the flowering and after the awn are dispersed are graded as C. The species which are harvested and stored for their use at the time of non availability of grass or other fodder are also placed in grade C.

Tab. 2. The palatability grades of grass species based on animal preferences

No.	Grade	Palatability
1	A	Very good or excellent fodder
2	B	Good fodder grass
3	C	Grasses consumed when they are young or consumed when good palatable fodder species are not available

Botanical names are updated as per online database available at The Plant List (2013). The names of the grass species in the table are arranged alphabetically for the sake of convenience. The references to the literature are also provided in the list.

## Results and discussion

A total of 143 grasses from peninsular Indian region are recorded as a palatable, out of which 64 are awned and 79 are unawned (Tab. 3). The awned grasses are palatable only either before maturity of awns or after they fall off. All stages of unawned grasses are consumed by grazing animals. This can be one of the reasons for awned palatable grasses to be in lower number (64) when compared to unawned palatable grasses (79).

Nine types of habitats were categorized where palatable grass species seen to grow (Tab. 1). A total of 58 palatable grasses are exclusive to a single habitat, while the remaining 85 grasses share 2 or more habitats. The classification of grasses

in these nine habitats revealed 17 palatable grasses exclusive to marshy habitat and only 3 palatable grasses were exclusively reported from the costal habitat. The highest number of palatable grasses was found in marshy habitat, which may be attributed to water availability throughout the year, while less number of grasses grows in costal habitat because of high salinity. The minimum number (1) of palatable species was

found on lateritic plateaus. Based on palatability potential, grasses are provided with three artificial grades. Out of 143 grasses 22 are A grade, 72 are B grade and 49 belong to C grade. Details about these grades are given in Tab. 2. Amongst grade C grass species like *Apluda mutica*, *Sehima* sp., *Dichanthium* sp., *Isiema* sp. etc. are cut, dried and stored for use as a fodder in summer season.

Tab. 3. Checklist of palatable grass species from Peninsular India with details like Presence or Absence of awns, Floral phenology, Vernacular names, Habitat, Palatability grade, References and Botanical names as per recent nomenclature

No.	Name of Grasses	Awns	Floral Phenology	Vernacular names	Habitats	Status of occurrence	Palatability Grade #	Re*
1	<i>Acrachne racemosa</i> (B. Heyne. ex Roth.) Ohwi.	P	Jul- Dec	<i>Chinkhe</i>	1, 5	Rare	C	1
2	<i>Aeluropus lagopoides</i> (L.) Thwaites.	A	Nov- Jan	<i>Dola gavat</i>	3	Occasional	B	4
3	<i>Alloteropsis cimicina</i> Stapf.	P	Jul- Nov	<i>Sinri</i>	1, 9	Common	B	2, 3, 4
4	<i>Andropogon fastigiatus</i> Sw.	P	Sep- Nov		8	Occasional	A	4
5	<i>Andropogon pumilus</i> Roxb.	P	Aug- Jan	<i>Baerki, Divartan, Gondval, lalgavat, Tambadgota.</i>	8	Frequent	A	2, 4, 5
6	<i>Apluda mutica</i> L.	P	Oct- May	<i>Ghagara, Holera, Kharvel, Phulia, Tambat, Makka, Tulsipoadi.</i>	1, 7	Frequent	B	3, 4, 5
7	<i>Aristida adscensionis</i> L.	P	Feb- Apr	<i>Longi-kasal</i>	6, 9	Common	C	1, 2
8	<i>Aristida funiculata</i> Trin. & Rupr.	P	Sep- Dec	<i>Bhuti, Pandhari kusal</i>	1	Common	C	2
9	<i>Aristida stocksii</i> (Hook. f.) Domin.	P	Sep- Nov		6, 8	Rare	C	2
10	<i>Arthraxon lancefoliosus</i> (Trin.) Hochst.	P	Aug- Dec	<i>Faradyachne gavat, Turda</i>	1, 8	Common	B	1
11	<i>Arundinella leptochloa</i> (Steud.) Hook. f.	A	Oct- Jun		7	Occasional	B	4
12	<i>Arundinella pumilla</i> (Hochst.) Steud.	P	Sep- Nov		7	Common	C	1
13	<i>Bothriochloa bladonii</i> (Retz.) S. T. Black	P	Sep- Jan		5		B	2, 3
14	<i>Bothriochloa pertusa</i> (L.) A. Camus	P	Oct- Dec	<i>Ghanda, Kathora, Palva.</i>	1, 6, 2, 5	Common	B	1, 2, 4
15	<i>Brachiaria distachya</i> (L.) Stapf.	A	Aug- Dec	<i>Motia</i>	1, 7	Occasional	C	1, 4
16	<i>Brachiaria erusiformis</i> (Sm.) Griseb.	A	Sep- Jan	<i>Shimpi, Wag-bast</i>	2	Common weed	C	1, 2, 3
17	<i>Brachiaria mutica</i> (Forssk.) Stapf.	A	Aug- Jan	<i>watergrass, Buffalow grass</i>	1	Cultivate	A	2, 3
18	<i>Brachiaria ramosa</i> (L.) Stapf.	A	Aug- Nov	<i>Chapar, chapsura</i>	1, 5	Common	B	1, 4
19	<i>Brachiaria reptans</i> (L.) C. A. Gardner & C. E. Hubb.	A	Sep- Oct	<i>Chimanchara, Chopli</i>	2, 7	Common	B	3
20	<i>Capilpedium asimile</i> (Steud.) A. Camus	P	Sep- Dec		6, 7	Occasional	C	3, 4
21	<i>Cenchrus biflorus</i> Roxb.	A	Oct- Dec	<i>Bhoront, Kukar</i>	3	Occasional at shore	C	1, 5
22	<i>Cenchrus ciliaris</i> L.	A	Jul- Dec	<i>Anjandhman</i>	6, 8, 9	Occasional in fields	A	1, 3, 4
23	<i>Cenchrus pennisetiformis</i> Steud.	A	Aug- Sep	<i>Sankaveth</i>	6, 8		A	3, 4
24	<i>Chionachne gigantea</i> (J. Koenig) Veldkamp	A	Sep- Dec	<i>Kanta- karvel, kasali, Varival</i>	5, 6		C	1, 3
25	<i>Chionachne semiteres</i> (Benth.) Henrard.	A	Sep- Dec		2	Rare	B	4
26	<i>Chloris barbata</i> Sw.	P	Aug- Dec	<i>Gondvel, Ghosha, Mesi</i>	2, 6	Occasional at wetlands	C	3, 5
27	<i>Chloris bournei</i> Rang. & Tadul.	P	Sep- Jan		2, 6	Occasional at wetlands	C	3
28	<i>Chloris gayana</i> Kunth.	P	Jul- Oct		8	Occasional	A	3, 4
29	<i>Chloris montana</i> Roxb.	P	Sep- Oct		8	Occasional	C	2
30	<i>Chloris virgata</i> Swz.	P	Sep- Dec	<i>Gholshep, Ghorapuchhi</i>	2, 6	Common on walls	B	2, 3
31	<i>Chrysopogon aciculatus</i> (Retz.) Trin.	P	Aug- Oct		6, 5	Occasional	C	1
32	<i>Chrysopogon fulvus</i> (Spreng) Chiouv.	P	Sep- Dec	<i>Ariva, Gogar, Kabandol, Vagnakbi</i>	7	Common	C	1, 2, 3
33	<i>Chrysopogon lancearius</i> (Hook. f.) Haines.	P	Oct- Nov		1, 4	Rare	B	1, 3
34	<i>Chrysopogon orientalis</i> (Desv.) A. Camus.	P	Sep- Oct		1	Rare	C	3, 4

35	<i>Chrysopogon polyphyllus</i> (Hack.) Blatt. & McCann.	P	Sep- Dec		5, 7	Frequent	B	3, 4
36	<i>Chrysopogon serrulatus</i> Trin.	P	Jul- Dec		8, 9	Rare	B	3, 4
37	<i>Coix aquatica</i> Roxb.	A	Sep- Nov	<i>Kachor</i>	5	Common along streams	B	3
38	<i>Coix lacryma-jobi</i> L.	A	Aug- Jan	<i>Kasai, Kochura, randavar, Ranjondhala, Ran- mabai, Ran-maka</i>	5	Rare	C	3
39	<i>Cynodon dactylon</i> (L.) Pers.	A	Throughout the year.	<i>Durva, Harali</i>	5, 6	Common	B	1, 3, 4, 5
40	<i>Cynodon radiatus</i> Roth.	A	Aug- Nov	<i>Harali</i>	7	Common along forest	B	4
41	<i>Dactyloctenium aegyptium</i> (L.) Willd.	A	Aug- Feb	<i>Gandhi, Anchi, Manchi,</i>	6, 2	Common	C	2
42	<i>Dactyloctenium aristatum</i> Link.	A	Jul- Oct		1, 2, 6	Common on hill slops	B	4
43	<i>Dactyloctenium scindicum</i> Boiss.	A	Sep- Nov	<i>Bhara, Bobaria</i>	5	Rare	B	1
44	<i>Dichanthium annulatum</i> (Forssk) Stapf	P	Oct- Mar	<i>Jinjiva, Marvel, Paunava</i>	1, 6	Common	A	3, 5
45	<i>Dichanthium armatum</i> (Hook. f.) Blatt. & McCann.	P	Sep- Oct		7, 8		B	4
46	<i>Dichanthium caricosum</i> (L.) A. Camus.	P	Sep- Dec	<i>Jetare, Marvel</i>	1, 6	Frequent	A	2, 3
47	<i>Dichanthium foveolatum</i> (Delile.) Roberty.	P	Sep- Dec	<i>Gbandel, Marvel</i>	1	Common	B	2
48	<i>Digitaria abludens</i> (Roem. & Schult.) Veldkamp	A	Aug- Oct		1, 5	Occasional	B	4
49	<i>Digitaria bicornis</i> (Lam.) Roem & Shult.	A	Aug- Dec		2, 7	Common	C	3, 4
50	<i>Digitaria ciliaris</i> (Retz.) Koeler.	A	Aug- Feb		2, 7	Common	B	1, 2, 3, 4
51	<i>Digitaria longiflora</i> (Retz.) Pers.	A	Aug- Dec		1, 6	Frequent	B	2, 3, 4
52	<i>Digitaria stricta</i> Roth.	A	Aug- Feb		1, 5	Rare	C	2, 3
53	<i>Dinebra retroflexa</i> (Vahl) Panz.	A	Sep- Feb	<i>Lonigavat, Lona, Kali kauli</i>	7	Common weed	B	2, 4
54	<i>Echinochloa colona</i> (L.) Link.	A	Jul- Feb	<i>Borad, Bovur, Harund, Ranborat, Rovar, Sama, Savank.</i>	2, 5	Common	B	1, 2, 4, 5
55	<i>Eleusine indica</i> (Linn.) Geart.	A	Sep- Feb	<i>Mabar- nachani, Mendala, Mela</i>	1, 5, 6	Common	B	3, 4, 5
56	<i>Enteropogon dolichostachya</i> (Lag.) Keng	P	Sep- Dec		7		C	2
57	<i>Eragrostis amabilis</i> (L.) Wight & Arn.	A	Sep- Mar	<i>Bakralu, Belakuda, Waya, Dhani.</i>	6		B	1
58	<i>Eragrostis aspera</i> (Jacq.) Nees	A	Oct- Dec		2	Occasional weed	C	2, 3
59	<i>Eragrostis cilianensis</i> (All.) Janch	A	Aug- May	<i>Ranpobe, Pobe</i>	1	Occasional	C	3
60	<i>Eragrostis ciliaris</i> (L.) R. Br.	A	Sep- Jan	<i>Undir- panjo, Tor chandbol, Burbudi.</i>	5	Common	B	1, 4
61	<i>Eragrostis gangetica</i> (Roxb.) Steud.	A	Jul- Mar	<i>Todha, Asara, chota asara, Kalaurgi</i>	5	Occasional	B	1, 4
62	<i>Eragrostis japonica</i> (Thunb.) Trin.	A	Sep- Mar	<i>Chikisi, Dhuria, Shetpatra</i>	2, 5	Occasional	B	2, 4
63	<i>Eragrostis nutans</i> (Retz.) Nees ex. Steud.	A	Oct- Dec	<i>Fulia, chikta, Khari</i>	5	Common at wet places	B	1
64	<i>Eragrostis pilosa</i> (L.) P. Beauv.	A	Jul- Oct	<i>Burwai, chiriaka dana, Kutki</i>	5, 6	Common	B	1, 4
65	<i>Eragrostis patula</i> (Kunth) Steud.	A	Sep- Oct		5, 6	Common on wet soil	B	2
66	<i>Eragrostis unioloids</i> (Retz.) Nees Ex steud.	A	Aug- Feb	<i>Chidsi, Chimandara, Holpoho</i>	2, 5, 6	Frequent	B	1
67	<i>Eragrostis viscosa</i> (Retz.) Trin.	A	Jul- Dec	<i>Bhubhur, Bhulmi, Chilpal, Chitki</i>	2, 6	Frequent	C	1
68	<i>Eriochloa procera</i> (Retz.) C.E. Hubb.	A	Oct- Jan		5	Occasional to wet places	C	1, 2, 4
69	<i>Eulalia trispicata</i> (Shult.) Henr.	P	Oct- Dec		1, 7	Frequent to grassland	C	1, 3, 4
70	<i>Hackelochloa granularis</i> (L.) Kuntze	A	Aug- Oct	<i>Dalura- ghas, Kanjani, Kangri</i>	1, 7	Common	B	3, 5
71	<i>Hemarthria compressa</i> (L. f.) R. Br.	A	Nov- Dec	<i>Baika</i>	5	Rare	B	1, 2, 3, 4
72	<i>Heteropogon contortus</i> (L.) P. Beauv. ex Roem & Schult	P	Aug- Feb	<i>Kali- kusali, Kursali, Nanisunkhali</i>	1, 5, 8	Common	C	3, 4
73	<i>Heteropogon ritchiei</i> (Hook. f.) Blatt. & McCann.	P	Aug- Nov		5, 7	Occasional	B	

74	<i>Hygorhyza aristata</i> (Retz.) Nees. ex Wight & Arn	P	Nov- Mar	Deobbat, Urodhan	5	Occasional	B	1, 3, 4
75	<i>Imperata cylindrica</i> (L.) Rausch.	A	Aug- Nov	Dhup	5	Occasional	C	2, 3
76	<i>Isachne globosa</i> (Thunb.) Kuntze.	A	Aug- Feb	Daura	2, 5	Frequent to marshy places	B	1, 3, 4
77	<i>Isachne meeboldii</i> C.E.C. Fisch.	A	Aug- Dec		2, 5, 6	Occasional in grasslands	B	2
78	<i>Ischaemum afrum</i> (J. F. Glem) Dandy	P	Sep- Jan	Kunda, Nuth	2		A	2
79	<i>Ischaemum timorense</i> Kunth.	P	Oct- Nov		5, 6, 7	Occasional	C	3, 4
80	<i>Ischaemum semisagittatum</i> Roxb.	P	Oct- Dec	Ber, Dalaga	6, 7	Occasional	B	4
81	<i>Iseilema anthephoroides</i> Hack.	P	Aug- Dec	Tambadgota	2, 5, 6	Frequent	A	2, 3, 5
82	<i>Iseilema holei</i> Haines.	P	Oct- Feb		7	Rare	B	2
83	<i>Iseilema laxum</i> Hack.	p	Aug- Dec	Mosbi, Mus, Shadta, Tambit.	1, 5	Occasional	A	2, 3, 4
84	<i>Iseilema prostratum</i> (L.) Andersson.	P	Oct- Jan	Achigrass, Sona	1, 5	Common	B	1
85	<i>Leersia hexandra</i> Sw.	A	Throughout the year		5	Occasional	B	1, 4
86	<i>Leptochloa chinensis</i> (L.) Nees	A	Sep- Feb	Chenbel, Jhira, Phulkia	2, 5	Rare	C	2
87	<i>Leptochloa fusca</i> (L.) Kuntz.	P	Sep- Oct		3, 5		C	1
88	<i>Lophopogon tridentatus</i> (Roxb.) Hack.	P	Aug- Dec		1, 5	Common	B	4
89	<i>Melanocenchris abyssinica</i> (R. Br. ex Fresen.) Hochst.	P	Aug- Sep		1, 8		C	1
90	<i>Ochthochloa compressa</i> (Forssk.) Hilu	A	Jul- Nov		8		B	1, 4
91	<i>Ophiuros exaltatus</i> (L.) Ketz.	A	Sep- Dec	Hutia, Uphada	2, 6	Occasional	B	4
92	<i>Oplismenus burmanni</i> (Retz.) P. Beauv.	A	Jul- Feb	Kudak, Yerwa	2, 7	Common to shady places	B	2, 4
93	<i>Oplismenus compositus</i> (L.) P. Beauv.	A	Aug- Dec	Shara, Turdia	5, 7	Common to shady places	B	4
94	<i>Oryza rufipogon</i> Griff.	P	Sep- Dec		5	Occasional	C	2, 3
95	<i>Panicum atrosanguineum</i> Hochst. ex A. Rich.	A	Oct- Dec		7		A	4
96	<i>Panicum curviflorum</i> Hornem	A	Oct- Nov	Bhatur	1		A	3
97	<i>Panicum miliaceum</i> L.	A	Oct- Dec	Ghoti sava, varai, Chinee	9	Cultivate	A	1, 3
98	<i>Panicum paludosum</i> Roxb.	A	Aug- Feb	Borati, Kulus- nan	2, 5	Occasional	B	2, 3
99	<i>Panicum repens</i> L.	A	Oct- Nov		2, 5	Occasional	B	2, 4, 5
100	<i>Panicum sumatrense</i> Roth.	A	Sep- Nov	Sava	9	Occasional	B	1, 4
101	<i>Paspalidium flavidum</i> (Retz.) A. Camus.	A	Jul- Oct	Burad, Shedyia	5, 7	Frequent	B	2, 4
102	<i>Paspalidium geminatum</i> (Forssk.) Stapf.	A	Sep- Mar		5	Common	B	3, 4
103	<i>Paspalidium punctatum</i> (Burm.) A. Camus.	A	Sep- Dec	Petnar, Dossa	5		C	4
104	<i>Paspalum dilatatum</i> Poir.	A	Jun- Aug		5, 6, 9	Rare	A	1, 3, 4
105	<i>Paspalum scrobiculatum</i> L.	A	Aug- Apr	Harik, Kodra, Majore, Pakodi	2, 5	Frequent	B	3, 4.
106	<i>Pennisetum bohenackerii</i> Hochst. ex Steud.	A	Aug- Feb	Mohl	2, 5	Frequent	A	2
107	<i>Pennisetum pedicellatum</i> Trin.	A	Aug- Jan		1, 6	Frequent	A	3, 4
108	<i>Pennisetum purpureum</i> Schumach.	A	Oct- Dec	Elephant grass	9	Cultivate	C	1, 4, 3
109	<i>Perotis indica</i> (L.) Kuntze.	A	Oct- Aug	Kurad, Kburas	1, 8	Occasional	B	4
110	<i>Polypogon monspeliensis</i> (L.) Desf.	P	Jul- Feb		2, 5	Rare	A	1, 3
111	<i>Pseudanthistiria heteroclita</i> (Roxb.) Hook. f.	P	Sep- Jan	Pokalya	1, 7	Frequent in grasslands	B	2, 4
112	<i>Rottboellia cochinchinensis</i> (Lour.) Clayton.	A	Sep- Dec	Bura	2, 5	Occasional	B	4
113	<i>Saccharum ravennae</i> (L.) L.	P	Dec		8		C	1, 3
114	<i>Saccharum spontaneum</i> L.	A	Sep- Dec	Bagheri, Kamis, Khair, Bochari, Kan	5	Occasional	C	2, 4
115	<i>Sacciolepis indica</i> (L.) Chase.	A	Sep- Dec		2, 5	Common in ...	B	4

116	<i>Sacciolepis interrupta</i> (Willd.) Stapf.	A	Oct- Dec	<i>Pokalia</i>	5	Occasional in wetlands	B	2, 3
117	<i>Sacciolepis myosuroides</i> (R. Br.) A. Camus.	A	Nov- Feb	<i>Kura-lom, Pokalia, Didhina</i>	2, 5	Occasional in rice fields	B	4
118	<i>Schizachyrium exile</i> (Hochst.) Pilg.	P	Aug- Nov		1, 5	Rare	C	3, 4
119	<i>Sehima ischaemoides</i> Forssk.	P	Sep- Dec	<i>Paunat, Sheda</i>	1	Rare	B	3, 4
120	<i>Sehima nervosum</i> (Rottl.) Stapf.	P	Sep- Oct	<i>Pavnat, Paunya, Pavana, Sheda</i>	1	Common	A	2, 4, 5
121	<i>Sehima notatum</i> (Hack.) A. Camus.	P	Aug- Dec	<i>Pavana</i>	1, 7	Frequent in opne grasslads	B	2
122	<i>Sehima sulcatum</i> (Hack.) A. Camus.	P	Aug- Nov	<i>Pavana, Sheda</i>	1, 2	Common	A	2, 5
123	<i>Setaria intermedia</i> Roem. & Schult.	A	Aug- Jan	<i>Lundi, Landgar, Pandar, sava</i>	5, 7	Frequent in shades	C	2
124	<i>Setaria pumila</i> (Poir.) Roem. & Schult.	A	Jul- Nov	<i>Bindi, Kolara, Kolu, Kolwa</i>	1, 5, 6	Common	B	2, 3, 5
125	<i>Setaria verticillata</i> (L.) P. Beauv.	A	Sep- Jan	<i>Danyani, Lapti, Bardani, chilaya</i>	6	Occasional to shady places	C	1, 5
126	<i>Sorghum controversum</i> (Steud.) Snowden.	P	Sep- Jan		2, 5	Occasional in bunds	B	2
127	<i>Sorghum deccanens</i> Stapf. ex Raizada.	P	Sep- Dec	<i>Kakla</i>	2	Common along bunds	B	2
128	<i>Sporobolus coromandelianus</i> (Retz.) Kunth.	A	Nov- Jan		1	Frequent in grasslands	A	2
129	<i>Sporobolus helvolus</i> (Trin.) T. Durand. & Schinz	A	Nov- Dec		8		B	3, 4
130	<i>Sporobolus indicus</i> (L.) R. Br.	A	Jul- Nov	<i>Ghorla</i>	1, 6	Common	A	2, 5
131	<i>Sporobolus maderaspatanus</i> Bor.	A	Aug- Dec		3		B	1, 3
132	<i>Tetrapogon tenellus</i> (Roxb.) Chiov.	P	Aug- Dec		1, 6	Occasional in grasslands	B	1, 3, 4
133	<i>Thelepogon elegans</i> Roth.	P	Sep- Jan	<i>Kharbadi, Tirpha, Kadi</i>	1, 2, 6	Frequent in grasslands	C	3, 4
134	<i>Themeda cymbaria</i> Hack.	P	Aug- Oct	<i>Karar, Fulgavat</i>	7		C	1, 3, 4
135	<i>Themeda quadrivalis</i> (L.) Ktze.	P	Sep- Jan	<i>Bhati, Fulora, Zini, Bhataru</i>	1, 6	Common	C	2, 3, 4, 5
136	<i>Themeda tremula</i> (Nees. ex stued.) Hack.	P	Oct- Feb	<i>Barki, Bhatandi, Gundi</i>	1, 6, 7	Common	C	1, 3, 4
137	<i>Themeda triandra</i> Forssk.	P	Sep- Feb	<i>Batani, Bunden, Murar, Bhoru</i>	5, 7	Frequent along streams	C	2, 3
138	<i>Tragus mongolorum</i> Ohwi	A	Aug- Sep		1, 8		C	1
139	<i>Tricholaena teneriffae</i> (L.f.) Link.	A	Sep- Dec		8	Rare	C	3, 4
140	<i>Tripogon bromoides</i> Roth.	P	Jul- Dec		1, 7, 8	Occasional	C	2
141	<i>Tripogon jaquemontii</i> Stapf.	P	Aug- Nov		1, 6, 8	Common	C	2
142	<i>Urochloa panicoides</i> P. Beauv.	P	May- Sep	<i>Padhya, Kuri, Kuriya</i>	1, 2	Common	B	1, 2
143	<i>Urochloa setigera</i> (Retz.) Stapf.	P	Jul- Dec		2, 5, 6	Occasional to	B	1

Note: Abbreviations: Awns: P- Present; A- Absent. Habitats: 1- Grassland grass; 2- Weed in a crop fields or Associated with crop fields; 3- Sea shore; 4- Lateritic platus; 5- Marshy areas; 6- Ruderal; 7- Undergrowth of forests; 8- Dry rocky areas; 9- Cultivated. Status: Occurrence of the species. Palatability Grade: A-Very good or excellent fodder; B-Good fodder grass; C- Grasses consumed when they young or consumed when good palatable fodder species are not available. \*References: 1- Blatter & McCann (1935); 2- Patunkar (1980); 3- Bor (1960); 4- Potdar (2012); 5- Kulkarni *et al.* (1995).

## Conclusion

A checklist of palatable grass species from Peninsular India was compiled to understand the status of fodder potential of grasslands and other habitats. The grasslands are dominated by un-palatable species as these species are slowly replacing palatable species, due to anthropogenic pressures like burning and grazing. All palatable grass species show a different palatability grade which can be assessed based on their consumption and animal preference to eat them. Large numbers of palatable grasses seem to prefer marshy habitat while sea shores and lateritic plateaus shelter a minimum number of palatable species.

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