

A note on some Fodder Grasses of the Chingleput District

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An account of the grass flora of the Chittoor, North Arcot and South Arcot Districts has been already published in this journal. Some of the prominent fodder grasses met with in the Chingleput District are now listed and some lines of improvement of the grass flora are suggested. The present survey was made in Trivellore, Saidapet, Conjeevaram and Chingleput taluks, in December 1943.

Chingleput is a sea coast district with the Bay of Bengal on the east, the Nellore District on the North, the South Arcot District on the south and the North Arcot and Chittoor Districts on the west. It is almost a flat country with a maximum elevation of 300 feet above sea level in its western taluks of Trivellore and Conjeevaram. Here and there are some small hills. The district as a whole is not characterised by anything like a rich flora.

The average rainfall of the district is 46.5 inches, most of it being received during the North-east monsoon. The soils are mostly sandy loam or red loam and gravelly in few places.

The available land in the district is classified as follows:—

	Acres.
Forest	125,308
Not available for cultivation	717,564
Other uncultivated areas excluding current fallow	155,447
Current fallow	213,434
Net area sown	754,144

It is seen that the forest area is not much and the area under cultivation is fairly large. The important cereal crops of the district, with the area under each are listed below:—

	Irrigated (acres).	Unirrigated (acres).
Paddy	5,73,787	5,25,253
Cholam	267	5,811
Cumbu	2,203	10,470
Ragi	59,673	21,559
Korra ... ..	...	919
Varagu ... ..	...	49,489

The straw of the foregoing cereals are used as fodder. The estimated average acre yields of straw in pounds are noted below:—

			Irrigated crop	Unirrigated crop
Paddy	...	...	2,234	1,626
Cholam	...	...	4,395	1,725
Cumbu	...	...	3,615	1,638
Ragi	...	...	5,972	2,860
Korra	...	...	...	578
Varagu	...	...	...	3,360

Based on the above figures, the total production of fodder in the district is computed to be roughly 3,082 million pounds. For computing the total quantity of fodder required, the cattle population of the district and their requirements are given below:—

	No.	Requirement of fodder in lbs. per head per day
Cattle over 3 years:	469,659	18
do. 1 to 3 yrs.	85,503	12
do. under 1 year.	67,138	8

On the basis of the foregoing figures, the total fodder required for the year is nearly 3,656 million pounds while 3,080 million pounds are produced. Thus there is an apparent deficit which is made up by grasses in the forest areas and those in the fields growing in fallow periods which are grazed by cattle. All classes of cattle are not fed alike. Work animals, cows and buffaloes in milk are well fed. The rest are rarely stall-fed excepting for a small quantity of straw given in the night. To improve the general standard of cattle in the district, the feeding requires to be improved all round.

Fodder grasses Nearly 100 species of grasses have been recorded as occurring in this district and a large number of these were collected by us while on tour in this district. Some of the more important grasses are listed below:—

Sehima nervosum Stapf This is present in all districts except West coast. A good fodder and comes upto 6000 feet above sea level.

Hind.: *Chota shadai Ghans*; Tam.: *Kura itti*; Kan.: *Sinna shadai hullu*; *Nalai hullu*.

Amphilophis pertusa Stapf Comes up in all districts in elevations upto 4000 ft. above sea level. A good fodder and hay.

Urdu: *Basana*; Tel.: *Janu gaddi, Turri gaddi*; Tam.: *Chinna karai pillu*.

Chrysopogon montonus Trin This is also found in all districts except West coast. It comes upto 3000 ft. above sea level. It luxuriates in laterite soil. A good fodder grass.

Var. *robustus*, Hook. f. culms stouter and taller; all parts larger. Kan.: *Chello San Kanni*.

Dichanthium annulatum Stapf It is found in all the eastern and central districts. It comes up in low elevations and is a good fodder.

Dichanthium caricosum A. Camus. This is found in all districts except West coast. It comes upto 3000 ft. above sea level. A fair quality fodder.

Kan.: *Urukur hullu*.

Heteropogon contortus Beauv. This is found in all districts upto 7500 ft. above sea level. A gregarious grass, the awns of whose fruits attach themselves to the clothing of men and hairs of animals. A good fodder suitable for hay making. When mature, the seeds get detached.

Hind: *Sinkolo*; Tel.: *Eddi gaddi, Kaseri gaddi, Dubbu gasari gaddi, yerragoyi*; Tam.: *Oosipullu, Karunsi pul, Pani pullu*; Kan: *Kari vunugada hullu, Sunkari hullu*.

Themeda triandra Forsk. Seen in all districts upto 7000 ft. above sea level. When young it is eaten by cattle.

Tam.: *Erigai Thatta pullu*; Kan.: *Bettonchi hullu, Thodda anji hullu, Gondamanah hullu*.

Iseilema prostratum, Anderss. It comes up in low elevations in drier parts. A good fodder.

Iseilema laxum Hack. It comes up in eastern and central districts in elevations up to 2500 ft. above sea level. A good fodder.

Tel: *Erra Chengali gaddi*; Tam: *Tenga nari pillu*.

Apluda aristata Linn. This too is found in all districts up to 7000 ft. above sea level. Often it scrambles over bushes. When young it is readily eaten by cattle.

Hindi: *Guruna*; Tam: *Manda pillu, Mungil Pullu, Sengamann pillu*; Kan: *Sanna Kari Kachi hullu, Akku Hullu*.

Digitaria marginata Link. A good fodder found in all districts up to 7000 ft. above sea level.

Hindi: *Takri takra*; Tam: *Arisi pillu, Akki Pillu*; Kan: *Hennu akkibu hullu*.

Paspalum scrobiculatum Linn. Wild or cultivated it is present in all districts.

Urochloa panicoides Beauv. Seen in all districts except the West Coast up to 3000 ft. above sea level. The grain is eaten by the poor people and it is a good fodder.

Hindi: *Kuri*; Tel: *Salla wudu*; Kan: *Kadu billi, Samari hullu*.

Urochloa reptans Staph. Similar to the above

Tam: *Shani pullu*.

Echinochloa colona Link. Seen in all districts except the West parts up to 6000 ft. above sea level. It is an excellent fodder and the grains are eaten by the poor.

Hindi: *Sawank*; Tel: *Otha gaddi, Kaproda gaddi*, Tam.: *Sawu, Sawise, varsanum Pullu, Karum pul*.

Panicum repens Linn. Seen in all districts in sandy soil or standing water upto 7000 ft. above sea level. Relished by cattle and believed to stimulate milk yield.

Eng: Sugar grass; Urdu: *Reda*; Tel: *Ladda gaddi Kari gaddi*, Tam: *Tinei Pillu, Inji Pillu*; Mal: *Inchi kanu pullu*, Kan: *Sonti hullu*

Sacciolepis interrupta Stapf Seen in all districts in altitude upto 6000 ft. in swampy places. Grazed by cattle.

Tel. *Wolam*; Tam: *Tandan Pillu*; Kan: *Hodikai hullu*

Setaria pallidifusca Stapf et Hubbard. Seen in most districts in elevations upto 7000 ft. Fair fodder.

Hindi: *Bandora*; Tel: *Nakka*; *Kuradakori gaddi*. *Nakka toka gaddi*.

Cenchrus ciliaris Linn. Comes upto 3000 ft. above sea level. An excellent fodder. Tam.: *Kolukkattai pullu*.

Tragus biflorus Schult. Seen often in sandy localities upto 3000 ft above sea level.

Perotis indica O. Kt. Common in all districts on sea shore sand and elsewhere upto 5000 ft. Common in dry soils.

Tel.: *Nakka peeche*, *Nakka toka*. Tam: *Narival*, *Kudirai valpullu*. *Thopparai pullu*, Kan: *Nari misai hullu*; *Jabburu Korlai hullu*.

Sporobolus diander Beauv.: Comes upto 3500 ft. above sea level. Readily eaten by cattle.

Kan.: *Navalu dondi hullu*, *Thoddu Karai kandaka hullu*.

Eragrostis plumosa Link. Seen in all districts upto 4000 ft. above sea level. It makes good light hay and is much liked by cattle and horses.

Tel.: *Chinna garikai gaddi*; Kan: *Sanna purlai hullu*.

Eragrostis gangetica Steud.: Readily eaten by cattle and comes upto 7000 ft. above sea level.

Cynodon Dactylon Pers.: It comes up in all districts except West coast upto 7000 ft. above sea level. Highly nutritious especially to horses and the underground stems are often very long.

Eng: *Hariali grass*; Hindi: *Dub*; *Urdu* *Dubbula Ghanso*. Tel: *Gericha gaddi* *Gurka harioli*; Tam: *Arugam pullu*; Kan: *Kudi gerikai Karkeri hullu*.

Chloris barbota Sw.: It comes up in all districts except West coast in elevations upto 2000 ft. A good fodder before flowering.

Tam: *kodai pullu*, *Sevarugu pullu*. Kan: *Henu manchada kalu hullu*

Dinebra retroflexa Panz. In central and eastern districts upto 3000 ft above sea level. Readily eaten by cattle before flowering.

Tel.: *Wadata toka gaddi*; Kan: *Nari balada gandu hullu*.

Twenty-six species are listed above as occurring in the district and a important among the fodder grasses. Most of them are growing in waste places, bunds of cultivated fields and in forest areas in patches or in scattered patches here and there. No systematic trial appears to have been made to establish any of them in large areas, and the list therefore does not indicate the predominance of any grass in the district.

Conclusion Among the many fodder grasses occurring in the district only a few are of fodder value. No data are available regarding their yields or number of cuttings obtainable each year. Some of the promising species have been raised in Coimbatore under rainfed conditions and the yield obtained are given below:

Name of the grass	No. of cuttings	Yield of grass in lb per acre
<i>Sehima nervosum</i> Stapf	2	9,680
<i>Amphilophis pertusa</i> Stapf	1	7,520

<i>Dichanthium annulatum</i> Stapf	1	5,920
<i>Cenchrus ciliaris</i> . L.	2	20,560
<i>Panicum antidotale</i> Retz	2	14,760
<i>Eremopogon feveolatus</i> Stapf	2	11,520
<i>Iseilema laxum</i> Hack	1	4,540
<i>Pennisetum purpureum</i> Schum	1	5,760
<i>Panicum maximum</i> Jacq	2	20,560
<i>Chionachne semiteres</i> C. Fish	1	15,200
<i>Cenchrus setigerus</i> Vahl	1	11,400
<i>Enteropogon monostachyos</i> Schum.	2	12,680

Under favourable conditions greater number of cuttings and higher yields than the above can be expected.

Grasses by themselves or the straw of cereals do not provide all the food nutrients. They require to be supplemented by leguminous forage. It will be an advantage if wild growing perennial legumes, similar to the clover of the European countries, could be selected from the naturally occurring leguminous weeds and established in the pasture. The poor types of grasses on the roadsides, waste places and the grazing areas of the forest may be replaced by valuable types like *Sehima nervosum*, *Cenchrus ciliaris*, *C. setigerus*, *Amphitlophis pertusa*, *Dichanthium annulatum* etc. and their feeding value and production increased. This work may be usefully undertaken by the forest department and local bodies in their respective spheres. Where feasible *Commiphora Berryi* can be planted to prevent cattle trespass until the grasses establish themselves.

A beginning has already been made by the introduction of some of the reputed fodder grasses like *Cenchrus ciliaris*, *C. setigerus* etc. in the Attani forest area of the Bhavani range through the kind co-operation of Mr. J. A. Wilson, the District Forest Officer, Coimbatore, North and our experience shows that these two grasses are a success in the forests and have induced the ryots in the neighbourhood, to establish these in waste places. Other grasses like *Iseilema laxum* and *I. anthaphoroides*, which have so far not been tried in forest areas, may also be tried.

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