

Floristic Diversity and Indigenous Uses of Dominated Weeds in Maize Crop of Chinthapalli mandal, Visakhapatnam district, Andhra Pradesh, India.

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Abstract: *The weed flora of maize crop in Chinthapalli mandal Visakhapatnam district was assessed to identify the weeds and evaluate their abundance. The comprehensive stock of weeds obtained was analyzed to determine the relative abundance of taxa and life forms. Forty five weed species belonging to 15 dicot families, 4 monocot families were identified. In terms of abundance and distribution, weeds of Asteraceae and Amaranthaceae were found to be far more invasive. The diversity of weed species represented by Shannon's and Simpson's and species evenness were calculated in the maize crop. Out of 45 weeds 35 weeds are Ethnomedicinal use along with local name, botanical name, family, parts used, ailments for which the drug is administered and mode of administration are presented.*

Keywords: *Floristic composition, weeds abundance, ethnomedicinal importance, maize crop, Chinthapalli.*

I. Introduction

The recognition of plants as weeds is perhaps as old as agriculture itself. When land is cultivated to raise crops, weeds spring-up naturally along with the crop plants. Weeds are defined as “a plant out of place or an unwanted plant or a plant with a negative or plant that compete with man for the soil” (Kasera et al. 1998). Quite a number of plants considered as weeds in modern science have significant value in ethno-botany. Many of these naturally growing plants are not really “unwanted” in the light of traditional herbal medicine (Patnaik 1956; Govindiah 1981).

In 1956, Patnaik gave information on some useful weeds in and around Cuttack and Phatak and Oza (1958) provided information on some useful weeds of Baroda, its neighbourhood and Pavagarh of Gujarat. Weed surveys are useful for determining the occurrence and importance of weed species in crop production systems (Frick and Thomas, 1992). In 1996, Bhattacharyya gave information on medico-ethno-botanical value of Saurashtra weeds. Documenting the kinds of weed species and its relative distribution facilitates the establishment of priorities for research and extension services (Mc Closky et al., 1998). The presence of weeds in the fields and their impact on the crop production and environment has been well documented (Morse et al., 1995; Randall, 1996; Froehlich et al., 2000; Hassan and Marwat, 2001).

Weeds are also played an important role in Ayurvedic medicine. Thomas and Britto (2000) reported 53 common weeds of medicinal importance which are used to cure diseases like diarrhea, dysentery, gonorrhoea, rheumatism, headache, fever, worm, ulcer, urinary stone, asthma, cough etc. in Tirunelveli district of Tamilnadu. According to Saika and Hussain (2005) weeds are highly efficacious as medicine against some common diseases and other health problems of man. On the traditional uses of weeds a little work has been carried out in the India. They collected information on medicinal aspects of some weeds used by the *Ahom* and *Khamti* communities of Sivasagar. Naath et al. (2007) described ethno medicinal aspects of 38 species of weeds of Darrang district of Assam.

Chinthapalli mandal, Visakhapatnam district is one of the maize crop (*Zea mays* L.) growing areas it is being grown during rainy season and is a short duration crop. Hence, a large number of weeds compete for nutrients, moisture and space causing considerable yield reduction (Daulay and Singh, 1982). Weeds compete with crops for physical resources of environment, exhibit allelopathy, provide habitats for other harmful organisms cause problems during harvest, ploughing and seed purification. The farmers, therefore, control the weeds, to enhance productivity. The biology of weeds including identification and distribution, also deserve attention for effective control. The ecological information has always been pre-requisite for such efforts. Weeds of sugarcane fields (Adishesu, 1997; Prayaga Murthy, 2009) and Weed flora of crop fields (Prayaga Murthy 2009) have been taken to collect information on distribution of weeds of maize fields from different areas of Visakhapatnam district for the first time. But no work was reported on the weeds of maize crop in the district. Hence the present study was taken up on the floristic diversity and indigenous uses of dominated weeds in maize crop of Chinthapalli mandal, Visakhapatnam district to fill the back drop.

II. Study area

Chinthapalli block located on the northeastern part of Visakhapatnam district, it lies between 17° 44' 22" North latitude to 18° 04' 29" North and 82° 16' 00" East to 82° 38' 04" East. The soils are red ferruginous loams mixed with quartzite on the hill slopes and sandy to clay in the lower slopes and villages. In valleys the soil is fertile and characterized by the presence of humus on top. Calcareous and lateritic soils are met with in the more open and badly eroded terrain. In the densely wooded parts the ground is covered with a thick layer of humus. District shows variation in climatic conditions from plain regions to hilly areas. The temperature is low and cool climate is seen in the hilly regions compared to the plains. The mean maximum temperature is 33.6°C and the mean minimum temperature is 21.0°C. In some hill areas like Anantagiri, Araku, Paderu, and Chinthapalli the temperature touches to 10°C or even low during the months of December and January. The rainfall varies from plain to hill regions, hilly areas receive more rainfall than the plain regions. The annual rainfall in the regions is 1000-2000mm while that of the plain regions is 800-1000mm. Out of total rainfall South-West monsoon accounts for 60-65% while North-East monsoon contributes 30-35% and the rest is shared by summer and winter showers.

III. Material and Methods

All the weeds encountered in the field sites (Lothugedda junction, Bennavam, Annavam, Gondipakalu, Pedabarada, Chinthapalli, Tajangi, Lambasting, Mondigadda, etc.) of the maize crop fields were carefully collected and identified. Random quadrat method was adopted for studying phytosociological attributes of weeds. Quadrates of 1x1m were laid down and hence a sum of 30 quadrates for maize crop. All the weeds from each quadrat were collected separately in polythene bags. All the plant species encountered in 30 quadrates were listed. Weed specimens were collected for confirmation of identify and some farmers were interviewed and questioned about problematic weeds in their farms.

The phytosociological attributes; abundance, density and frequency and their relative values and importance Value Index (IVI) were calculated the following principles of Curtis and McIntosh (1950), Misra (1968) and Mueller-Dombois and Ellenberger (1974). The species diversity calculated by Shannon's index and Simpson's index.

$$\text{Frequency (\%)} = \frac{\text{Total number of quadrates in which the species occur}}{100 \text{ Total number of quadrates studied}} \times 100$$

$$\text{Density} = \frac{\text{Total number of individuals of a species in all quadrates}}{\text{Total number of quadrates studied}}$$

$$\text{Abundance} = \frac{\text{Total number of individuals of a species in all quadrates}}{\text{Total number of quadrates in which the species occurred}}$$

$$\text{Relative frequency} = \frac{\text{Frequency of individuals of a species} \times 100}{\text{Total frequency of all species}}$$

$$\text{Relative density} = \frac{\text{Density of individuals of a species}}{\text{Total density of all species}} \times 100$$

$$\text{Relative abundance} = \frac{\text{Abundance of individuals of a species}}{\text{Total abundance of all species}} \times 100$$

$$\text{Importance Value index} = \text{Relative density} + \text{Relative frequency} + \text{Relative abundance.}$$

Plant vegetation analysis was done using Shannon's Index:

$$H = -\sum P_i \ln P_i \text{ where } P_i = n_i/N \text{ (proportional abundance of } i\text{th species)}$$

n_i = number of individuals of the i th species and

N = total number of individuals.

Simpson's index, $D = 1-C$

$$\text{Where } C = \frac{\sum n_i(n_i-1)}{N(N-1)} \text{ and Species Evenness, } E = \frac{H^1}{\ln S}$$

Where H^1 = Shannon-Weaver Index and S = number of species



Maize crop field of Chinthapalli Mandalam.



Weed eradication-Hand fulling method

Table 1. Floristic diversity of weed species in Maize crop of Chinthapalli Mandalam.

S.No	Scientific name of plant	Family	TOI	TNI	D	F	A	Rf%	Rd%	Ra%	IVI
1	<i>Abutilon indicum</i>	Malvaceae	5	7	0.23	16.67	1.40	0.88	0.81	1.90	3.59
2	<i>Aerva lanata</i>	Amaranthaceae	20	26	0.87	66.67	1.30	3.53	3.00	1.76	8.29
3	<i>Ageratum conyzoides</i>	Asteraceae	25	34	1.13	83.33	1.36	4.41	3.92	1.84	10.17
4	<i>Acalypha indica</i>	Euphorbiaceae	6	9	0.30	20.00	1.50	1.06	1.04	2.03	4.13
5	<i>Achyranthes aspera</i>	Amaranthaceae	23	27	0.90	76.67	1.17	4.06	3.11	1.59	8.76
6	<i>Amaranthus viridis</i>	Amaranthaceae	26	41	1.37	86.67	1.58	4.59	4.72	2.14	11.45
7	<i>Bidens pilosa</i>	Asteraceae	30	40	1.33	100.00	1.33	5.29	4.61	1.81	11.71
8	<i>Celosia argentea</i>	Amaranthaceae	6	8	0.27	20.00	1.33	1.06	0.92	1.81	3.79
9	<i>Cissampelos pareira</i>	Menispermaceae	5	9	0.30	16.67	1.80	0.88	1.04	2.44	4.36
10	<i>Commelina benghalensis</i>	Commelinaceae	8	14	0.47	26.67	1.75	1.41	1.61	2.37	5.40
11	<i>Cuscuta reflexa</i>	Cuscutaceae	7	11	0.37	23.33	1.57	1.23	1.27	2.13	4.63
12	<i>Cyanotis cristata</i>	Commelinaceae	12	22	0.73	40.00	1.83	2.12	2.53	2.49	7.14
13	<i>Cynodon dactylon</i>	Poaceae	30	45	1.50	100.00	1.50	5.29	5.18	2.03	12.51
14	<i>Cyperus difformis</i>	Cyperaceae	24	43	1.43	80.00	1.79	4.23	4.95	2.43	11.62
15	<i>Cyperus rotundus</i>	Cyperaceae	30	46	1.53	100.00	1.53	5.29	5.30	2.08	12.67
16	<i>Digera muricata</i>	Amaranthaceae	7	9	0.30	23.33	1.29	1.23	1.04	1.74	4.02
17	<i>Desmodium triflorum</i>	Fabaceae	22	32	1.07	73.33	1.45	3.88	3.69	1.97	9.54
18	<i>Elephantopus scaber</i>	Asteraceae	4	6	0.20	13.33	1.50	0.71	0.69	2.03	3.43
19	<i>Elytraria acaulis</i>	Acanthaceae	30	43	1.43	100.00	1.43	5.29	4.95	1.94	12.19
20	<i>Emilia sonchifolia</i>	Asteraceae	5	6	0.20	16.67	1.20	0.88	0.69	1.63	3.20
21	<i>Eragrostis ciliata</i>	Poaceae	14	21	0.70	46.67	1.50	2.47	2.42	2.03	6.92
22	<i>Euphorbia hirta</i>	Euphorbiaceae	24	34	1.13	80.00	1.42	4.23	3.92	1.92	10.07
23	<i>Evolvulus alsinoides</i>	Convolvulaceae	12	17	0.57	40.00	1.42	2.12	1.96	1.92	6.00
24	<i>Justicia glauca</i>	Acanthaceae	4	6	0.20	13.33	1.50	0.71	0.69	2.03	3.43
25	<i>Lasia spinosa</i>	Araceae	8	12	0.40	26.67	1.50	1.41	1.38	2.03	4.83
26	<i>Lantana indica</i>	Verbenaceae	6	10	0.33	20.00	1.67	1.06	1.15	2.26	4.47
27	<i>Leucas biflora</i>	Lamiaceae	6	11	0.37	20.00	1.83	1.06	1.27	2.49	4.81
28	<i>Merremia gangetica</i>	Convolvulaceae	4	7	0.23	13.33	1.75	0.71	0.81	2.37	3.89
29	<i>Merremia hederaceae</i>	Convolvulaceae	7	10	0.33	23.33	1.43	1.23	1.15	1.94	4.32
30	<i>Mimosa pudica</i>	Mimosaceae	13	24	0.80	43.33	1.85	2.29	2.77	2.50	7.56
31	<i>Oxalis latifolia</i>	Oxalidaceae	5	22	0.73	16.67	4.40	0.88	2.53	5.97	9.38
32	<i>Phyllanthus amarus</i>	Euphorbiaceae	18	32	1.07	60.00	1.78	3.17	3.69	2.41	9.27
33	<i>Phyllanthus debilis</i>	Euphorbiaceae	12	16	0.53	40.00	1.33	2.12	1.84	1.81	5.77
34	<i>Scoparia dulcis</i>	Scrophulariaceae	3	6	0.20	10.00	2.00	0.53	0.69	2.71	3.93
35	<i>Setaria pumila</i>	Poaceae	13	22	0.73	43.33	1.69	2.29	2.53	2.30	7.12
36	<i>Solanum nigrum</i>	Solanaceae	6	8	0.27	20.00	1.33	1.06	0.92	1.81	3.79
37	<i>Sonchus oleraceus</i>	Asteraceae	4	7	0.23	13.33	1.75	0.71	0.81	2.37	3.89
38	<i>Spaeranthus indicus</i>	Asteraceae	7	8	0.27	23.33	1.14	1.23	0.92	1.55	3.71
39	<i>Spilanthes calva</i>	Asteraceae	3	6	0.20	10.00	2.00	0.53	0.69	2.71	3.93
40	<i>Stachytarpheta jamaicensis</i>	Verbenaceae	7	12	0.40	23.33	1.71	1.23	1.38	2.33	4.94
41	<i>Tridox procumbens</i>	Asteraceae	30	41	1.37	100.00	1.37	5.29	4.72	1.85	11.87
42	<i>Urena lobata</i>	Malvaceae	4	8	0.27	13.33	2.00	0.71	0.92	2.71	4.34

43	<i>Vernonia albicans</i>	Asteraceae	3	6	0.20	10.00	2.00	0.53	0.69	2.71	3.93
44	<i>Vernonia cinerea</i>	Asteraceae	24	32	1.07	80.00	1.33	4.23	3.69	1.81	9.73
45	<i>Vetiveria zizanoides</i>	Poaceae	5	12	0.40	16.67	2.40	0.88	1.38	3.26	5.52

D=Density, F=Frequency, A=Abundance, RD=Relative Density, RF=Relative Frequency, RA=Relative abundance, IVI=Importance Value Index.

IV. Results

Maize fields are severely infested with 45 weed species belonging to 41 genera and 19 families. Of these 45 species, 15 dicot families, 4 monocot families, Asteraceae and Amaranthaceae stood first and second with 10 and 5 species respectively followed by Euphorbiaceae, and Poaceae had 4 species, Convolvulaceae 3, Malvaceae, Commelinaceae, Cyperaceae, Acanthaceae, Verbenaceae each had 2 species, remaining families each one had single species.

Abundance, Density, Frequency and their relative values for determining the distribution pattern and importance Value Index (IVI) of the weeds encountered in maize crop fields was provided in Table-1. A total of 45 weed species belonging to 15 dicot families and 4 monocot families was recorded from 30 quadrates. *Oxalis latifolia* (Oxalidaceae) (4.40) was most abundant weed followed by *Scoparia dulcis* and *Spilanthes calva* each one has (2.00). The important value index calculated for the individual weed species encountered in field revealed interesting results. *Cyprus rotundus* (12.67) was the most important species followed by the *Cynodon dactylon* (12.51), *Elytraria acaulis* (12.19), *Tridox procumbens* (11.87) and *Bidens pilosa* (11.71) Table-1. The diversity of weed species represented by Shannon's (3.584) and Simpson's (0.003) and species evenness in the maize crop is (36.01). The frequency classes of the weed species encountered in the study was analyzed and frequency formula for each class also determined. It is revealed interesting results. Out of 45 Species: A class is represented by 17 species followed by 9 under B, 4 under C, 9 under D, and 6 under E class. (Table-2). Frequency formula A>B>C<D>E. From the obtained results it is clearly established that most of the weed species encountered in the maize crop field fall under A, B, C, D and E frequency classes and hence the weed flora is relatively heterogeneous. 35 plant species and 35 genera belonging to 16 families have been recorded ethno botanical importance. Out of them 12 are dicot families and 4 are monocot families. Most of the weed species are herbs used by them to cure different ailments. Various plant parts or products viz. Stem, leaf, inflorescence, seed, root, fruit, rhizome, to be employed to make different formulations

Table 2. Ethno medicinal uses of weed species

S. No.	Species name	Ethno medicinal uses of weeds
1.	<i>Abutilon indicum</i> (L.) Sweet Family: Malvaceae Habit: Shrub LN: Thuthurubenda	The seeds are laxative and work effectively in curing piles when administered in doses of 1 spoonful per day for a week by the tribes.
2.	<i>Aerva lanata</i> (L.) Juss. Family: Amaranthaceae Habit: Herb LN: Pindikura	Roots used for headache by the local people and also used in leafy curries.
3.	<i>Ageratum conyzoides</i> L. Family: Asteraceae Habit: Herb LN: Pumpullu	A hot poultice of the leaves and stem is applied on leprosy sores and other skin diseases. Plant juice is applied externally for cuts and wounds.
4.	<i>Acalypha indica</i> L. Family: Euphorbiaceae Habit: Herb LN: Muripindi	Leaves crushed with the leaves of <i>Vitex negundo</i> and 3 drops of fresh juice administered orally and one drop each instilled into eyes to cure jaundice for a period of 3 days
5.	<i>Achyranthus aspera</i> L. Family: Amaranthaceae Habit: Herb LN: Utthareni	The leaf paste with that of neem and the resin of <i>shorea robusta</i> is mixed and applied on the body for chicken pox and measles. The roots are chewed for teeth infection for a period of 10-15 days in the morning as a part of tooth wash
6.	<i>Amaranthes viridis</i> L. Family: Amaranthaceae Habit: Herb	Roots pound to paste with that of <i>Oroxylum indicum</i> and the paste along with hot water is administered internally for liver and spleen problems in children

	LN: Thotakura	
7.	<i>Biden pilosa</i> L. Family : Astareaceae Habit: Herb LN: Thitthirika	Whole plant is used for cough, cold and cancer by the tribes. Leaf paste is used for ear troubles, sore eyes, ulcers and toothache by the tribes.
8.	<i>Celosia argentea</i> L. Family: Amaranthaceae Habit: Herb LN: Kodi juttu	The whole inflorescence is sun dried and pulverized into fine powder. About 10gm of the powder is taken with water twice daily for about two weeks to treat uterine bleeding.
9.	<i>Cissampelos pareira</i> L. Family: Menispermaceae Habit: Climber LN: Adavi banka teega	Leaves crushed with that of <i>Andrographis paniculata</i> and <i>Pongamia pinnata</i> and the extract given orally to kill intestinal worms. Three spoonfuls thrice a day for three days.
10.	<i>Commelina benghalensis</i> L. Family: Commelinaceae Habit: Herb LN: Enneddura kura	Plant paste is applied on body and foot sores till they subside. In cattle, plant paste is applied to treat sores.
11.	<i>Cuscuta reflexa</i> Roxb. Family: Cuscutaceae Habit: Herb LN: Sitamma savaralu	Plant paste is applied for tongue ulcers. One spoonful of decoction of the young plant with honey is administered once a day for 7 days for epilepsy.
12.	<i>Cynodon dactylon</i> (L.) Pers. Family: Poaceae Habit: Grass LN: Garika	Few leaves are pestled with 7 leaves of <i>Zizyphus mauritiana</i> and 7 grains of raw rice and a mixture is prepared by adding 150ml of water to it. This taken once in a day for about 10 days to treat dysuria.
13.	<i>Cyperus rotundus</i> L. Family: Cyperaceae Habit: Grass LN: Tunga	About 10g of tuberous underground stolen are crushed and the extract along with few drops of honey is taken for about 3 days to treat diarrhea and digestion.
14.	<i>Digeria muricata</i> (L.) Mart. Family: Amaranthaceae Habit: Herb LN: Chencheli kura	Leaves are used as vegetable and as laxative. Juice of whole plant in doses of two spoonfuls thrice a day for two days for indigestion
15.	<i>Desmodium triflorum</i> (L.) DC Family: Fabaceae Habit: Shrub LN: Munta mandu	Plant extract is administered for malaria by the tribal's. 2 spoonfuls twice a day for 5 days.
16.	<i>Elephantopus scaber</i> L. Family: Asteraceae Habit: Herb LN: Yedduadugu	Leaf paste diluted in water and administered orally to cattle to control loose motions. Leaf paste mixed with coconut oil (<i>Cocos nucifera</i>) applied on ulcers
17.	<i>Elytraria acaulis</i> (L.f.) Lind. Family: Acanthaceae Habit: Herb LN: Nilaven	Leaf paste is applied on wounds and boils. Leaf juice is administered in doses of two spoonfuls twice a day for 9 days to treat menstrual disorders.
18.	<i>Emilia sonchifolia</i> (L.) DC Family: Asteraceae Habit: Herb LN: Kunka	Leaf paste is applied on boils, bruises and wounds. Leaf paste in doses of one spoonful once a day at bed time for about 2-3 months to treat night blindness.
19.	<i>Euphorbia hirta</i> L. Family: Euphorbiaceae Habit: Herb LN: Pachabottu	Leaf extract mixed with sugar is taken 2-3 spoonfuls thrice a day for dysentery. Plant juice is applied to treat wounds between the toes caused by constant walking bare footed during rainy season.
20.	<i>Justicia glauca</i> Rottl. Family: Acanthaceae Habit: Herb LN: Konda pindi	Plant used for diabetes. Roots ground with a pinch of salt and the paste is massaged for muscle pains and the extract given for the same for 2 or 3 spoonfuls twice a day, till cure.
21.	<i>Lasia spinosa</i> (L.) Thw. Family: Araceae	Rhizome paste is mildly heated and massaged over body to get relief from pains. Rhizome cooked and eaten by the local

	Habit: Herb LN: Salava dumpa	people.
22.	Lantana camara L. Family: Verbanaceae Habit: Shrub LN: Kampu rodha	Leaves and roots are pound to paste and the paste is applied for skin diseases. The roots are used for cold and earache by the tribes. The plant extract is used for nose and ear problems by the local people.
23.	Leucas aspera (Willd.) Link Family: Lamiaceae Habit: Herb LN: Tella tummi	Leaves are used for snake bite. Plant used for piles by the tribal's. Whole plant is used for skin disease by the local people.
24.	Merremia emarginata (L.) Cuf. Family: Convolvulaceae Habit: Herb LN: Elika Jeevaku,	The whole plant is used for rheumatism, piles and swelling by the Mali tribes. Plant is used for weakness of memory, indigestion, and sensation of pains by the tribes.
25.	Oxalis corniculata L. Family: Oxalidaceae. Habit: Herb LN: Pulichintaku.	The leaves of the plants are used for fever, dysentery, scurvy and cooling. Whole plant is used for diuretic, digestive disorders and urinary infections by the tribes.
26.	Phyllanthus amarus Schum. & Thonn Family: Euphorbiaceae Habit: Herb LN: Nelusiri	Whole plant is used to cure jaundice. The decoction of the herb is used to cure stomachic by the tribes. The leaves pound with the roots of <i>Andrographis paniculata</i> and the paste applied on the scalp to cure infection.
27.	Scoparia dulcis L. Family: Scrophulariaceae. Habit: Herb LN: Sweet broom weed	Plant juice is administered for fever by the tribes. Dosage of 2 Spoonfuls thrice a day for 3 days.
28.	Setaria italica (L.) Beauv. Family: Poaceae. Habit: Herb LN: Korralu.	Leaves are used for burning sensation and aphrodisiac by the tribes. Caryopsis is used for pains after parturition, diuretic, astringent, rheumatism and diabetes by the tribes.
29.	Solanum nigrum L. Family: Solanaceae Habit: Herb LN: Kamanchi	Plant used for dysentery plant used for stomachache in children. Leaf paste is used for wounds. Fruits are used for piles and fever.
30.	Sphaeranthus indicus L. Family: Asteraceae Habit: Herb LN: Bodasaramu.	The whole plant is used for skin diseases. Seeds and roots are used as anthelmintic by the local people. Leaves are used for cough by the tribes.
31.	Stachytarphetaurticaefolia (Salisb.) Sims. Family: Verbenaceae Habit: Herb LN: Koraputtia	Leaves ground with that of <i>Leucas indica</i> and the paste applied on cuts and wounds by the local people.
32.	Tridax procumbens L. Family: Asteraceae Herb: Herb LN: Gaddi chamanti.	The leaves are reported to be employed in bronchial catarrh, dysentery and diarrhoea. The leaf paste is used to control bleeding of minor wounds or cuts and it cures the wounded parts gradually.
33.	Urena lobata Sp. Family: Malvaceae Habit: Herb LN: Nalla benda	The root extract is used as anthelmintic by the tribal's. Dosage: spoonful twice a day for 3 days. Leaf paste is applied on head for 1 hour before bath for dandruff and premature hair fall by the local people.
34.	Vernonia cinerea (L.) Less Family: Asteraceae Habit: Herb LN: Sahadevi	Fresh juice of the leaves is used against herpes, eczema and ringworm. Leaf extract used in malaria fever by the local people.
35.	Vetiveria zizanoides (L.) Nash	Oil is obtained by distillation of roots. It is used body pains.

Family: Poaceae Habit: Herb LN: Vattiveru	
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V. Discussion and conclusion

The frequently occurring species viz. *Cyprus rotundus*, *Cyprus difformis*, *Elytraria acaulis*, *Cynodon dactylon*, *Amaranthus viridis*, *Tridox procumbens*, *Bidens pilosa*, *Ageratum conyzoides* and *Euphorbia hirta* are also found in other crops where they are known to cause heavy yield losses due to competition for nutrients, water, and space. *Cyprus rotundus* is one of the prominent weed of the present study. It is one of the most noxious weeds of cultivation and its spread is so great and its ravages are so serious that in certain places, cultivation of fields has been actually abandoned in despair. The weed control before the flowering time the flower stalks should be chopped off with grass-cutting swords. The tubers are roasted and eaten by some people. *Cynodon dactylon* is one of the best and the worst grasses and its fodder is much relished by cattle and horses. But unfortunately it is the most troublesome weed in cultivated places. The eradication of the weed is extremely difficult on account of the underground stems which are very hardly and are not easy to destruct. Deep ploughing is inadvisable as the bits get buried deep in the soil. Juice is useful in the treatment of dysentery and diarrhea. *Amaranthus viridis* also a popular weed in maize crop. The weed is control frequently cut the flowering tops. Old plants should not be fed to cattle as the seeds pass through the alimentary canal uninjured. Leaves are eaten as a vegetable and are also used as emollient poultices. *Tridax procumbens* the weed is another example of an introduced in maize crop. The ease with which the plant spreads itself is greatly due to the large number of achenes produced which are capable of being dispersed over extensive areas on account of the papas of the achenes which enable them to be carried by wind. The grass-cutting sword ought to be frequently used to remove the flowering tops in waste places. 35 plant species and 35 genera belonging to 16 families have been recorded ethno botanical importance. Out of them 12 are dicot families and 4 are monocot families. Most of the weed species are herbs used by them to cure different ailments. Various plant parts or products viz. Stem, leaf, inflorescence, seed, root, fruit, rhizome, to be employed to make different formulations.

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