



## **Weed Flora of Palanpur Taluka, Gujarat, India**

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### **ABSTRACT**

The present research was conducted at Palanpur, the administrative headquarters of Banaskantha district. This study is the result of 10 months of fieldwork survey in Palanpur taluka, 88 species of weeds were found during this study, which are shown in the check list. Total 28 families, 78 genera and 88 weed species were recorded in present study. Out of these 67 genera and 76 species are dicots and 11 genera and 12 species are monocots. Asteraceae is the dominant family in dicots with 15 species and Poaceae is the dominant family in monocots with 7 species.

**KEY WORDS-** Weed, Flora, Palanpur

Received 15.07.2023

Revised 21.11.2023

Accepted 19.12.2023

### **INTRODUCTION**

Weeds are plants that grow along with crops in the field, which are removed by farmers for better crop growth. Also, in monsoons, weed grows in abundance in the fallow land.

A weed is a plant which grows where it is unwanted. Weed is remarkably adapted to a changed environment to such an extent to be a threat to other plants. Whether a plant is considered a weed depends not only on its characteristics and habit but also on its relative position with reference to crop plants. Thus a plant of economic crop may also become a weed if it is found growing with other crops where it is not wanted. But for practical purpose weeds are undesirable, injurious, unsightly and trouble some plants which interfere with cultivated crops and affect human affairs. Weeds cause damage to both (Kharif and Rabi) crops. Weeds comprise all types of plants, grasses, sedges, rushes, aquatic plants and parasitic flowering plants [1].

The most basic concept of weed science is embodied in the term "Weed". Each weed scientist has clear understanding of the term, but there is no universal definition shared by all. The Weed Sciences Society of America, in a widely accepted definition, defines a weed as a plant growing where it is not desired. The Europeans Weed Research Society defines a weed as "any plant or vegetation excluding fungi, interfering with the objectives or requirements of people". These definitions are clear but leave the burden and responsibility for final definition, with people. Weed is a plant growing at a place and time where, it is not desired [1].

Moreover, around 25000 plant species have been identified in the world, of which about 250 plant species grow as weeds. Weeds are an important factor in the management of all croplands and its effect is dominantly seen in agricultural crops. Many weeds are eradicated and thrown because of lack of knowledge and awareness about their medicinal and economical values. Weeds are valuable and generally used as fodder, dyes, fuel material for preparing ropes and carpets, vegetables [2].

### **MATERIAL AND METHODS**

Latitude and longitude of Palanpur taluka is 24.1934° N, 72.4374° E, having total area as 787 km<sup>2</sup> consisting 735.25 km<sup>2</sup> rural area and 51.32 km<sup>2</sup> urban area. The area is famous for its dynamic weather and quite harsh summer. Warmest month of Palanpur taluka is may (41.48°C / 106.66°F), coldest month is January

(15.56°C / 60.01°F), wettest month is august ((170.06mm / 6.7in) and driest month is January. Palanpur is a Taluka of Gujarat state, having population 417,686 till June 2023.

This work was done from July 2022 to May 2023 in Palanpur taluka. Data was made with repeated field trip in all the different seasons. Weeds were identified with the help of Handbook of Weed Identification [4]. Detail of the plants which has been studied is given in Table no.-1

## RESULT AND DISCUSSION

Present study shows that, 88 angiosperm species belonging to 28 families and 78 genera were accurately documented. Asteraceae was dominant family with 15 species followed by Amaranthaceae with 10 species, Fabaceae with 9 species, Poaceae and Convolvulaceae with 7 species, Solanaceae with 4 species, Malvaceae with 4 species, and Tiliaceae and Acanthaceae with 3 species. Seven families such as Nyctaginaceae, Verbinaceae, Capparaceae, Menispermaceae, Asclepiadaceae, Commelinaceae, and Cyperaceae are with 2 species, rest 12 families such as Aizoaceae, Pedaliaceae, Boraginaceae, Primulaceae, Cleomaceae, Caryophyllaceae, Rubiaceae, Lamiaceae, Portulacaceae, Zygophyllaceae, Euphorbiaceae and Papaveraceae are monospecific.

**TABLE NO.-1: RECORDED WEED FLORA OF PALANPUR TALUKA**

No.	Botanical Name	Gujarati local name	Family
1	<i>Euphorbia hirta</i> L.	Nagla dudheli	Euphorbiaceae
2	<i>Boerhavia diffusa</i> L.	Bethi satodo	Nyctaginaceae
3	<i>Boerhavia erecta</i> L.	Ubhi satodi	Nyctaginaceae
4	<i>Cocculus hirsutus</i> (L.)Diels in Pfreich	Vevdi	Menispermaceae
5	<i>Tinospora cordifolia</i> (Thunb.)Miers	Galu	Menispermaceae
6	<i>Parthenium hysterophorus</i> L.	Gajar gass	Asteraceae
7	<i>Tridax procumbens</i> L.	Pardeshi bhangro	Asteraceae
8	<i>Launea sarmentosa</i> (Wild.)Sch.Bip.	Bhoipatri	Asteraceae
9	<i>Pulicaria wightiana</i> (Dc.) C.B.Clarke		Asteraceae
10	<i>Erigeron benariensis</i> L.		Asteraceae
11	<i>Xanthium strumarium</i> L.	Gadariyu	Asteraceae
12	<i>Sonchus asper</i> (L.)Hill		Asteraceae
13	<i>Blumea axillaris</i> (Lam.) DC.		Asteraceae
14	<i>Acanthospermum hispidium</i> L.		Asteraceae
15	<i>Vernonia cinerea</i> L.	Shadevi	Asteraceae
16	<i>Oligochaeta ramosa</i> Wagenitz		Asteraceae
17	<i>Echinops echinatus</i> Roxb.	Utkanto	Asteraceae
18	<i>Lactuca virosa</i> L.		Asteraceae
19	<i>Sphaeranthus indicus</i> L.		Asteraceae
20	<i>Acmella paniculata</i> (Wall ex DC.) R.k.Jansen		Asteraceae
21	<i>Amaranthus spinosus</i> L.	Katalo dhimdo	Amaranthaceae
22	<i>Amaranthus viridis</i> Hook.F.	Dhimdo	Amaranthaceae
23	<i>Digera arvensis</i> Forssk.	Kanejro	Amaranthaceae
24	<i>Gomphrena decumbens</i> Jacq.		Amaranthaceae
25	<i>Pupalia lappacea</i> (L.)Juss		Amaranthaceae
26	<i>Celosia argentea</i> L.	Lapadi	Amaranthaceae
27	<i>Aerva lanata</i> (L.) Juss.exschuit		Amaranthaceae
28	<i>Achyranthus aspera</i> L.	Angehdi	Amaranthaceae
29	<i>Chenopodium album</i> L.	Chill ni bhaji	Amaranthaceae
30	<i>Alternanthera sessilis</i> (L.) DC.		Amaranthaceae
31	<i>Casia tora</i> (L.)Roxb.	Kuvandio	Fabaceae
32	<i>Melilotus indica</i> (L.)All	Ran menthi	Fabaceae
33	<i>Tephrosia purpuria</i> (L.)Pers	Sarpankho	Fabaceae
34	<i>Sesbania cannabina</i> (Retz.)Pers.		Fabaceae
35	<i>Alysicarpus ovalifolius</i> (Schumach.)J.leonard		Fabaceae
36	<i>Abrus precatorius</i> L.	Chanothi	Fabaceae
37	<i>Cassia auriculata</i>	Aaval	Fabaceae
38	<i>Crotalaria hebecarpa</i> (DC.)Rudd		Fabaceae
39	<i>Crotalaria aegyptiaca</i> Benth.		Fabaceae
40	<i>Physalis minima</i> L.	Popti	Solanaceae
41	<i>Datura metel</i> L.	Dhtura	Solanaceae
42	<i>Solanum surattense</i> Burm.f.	Bhoi ringni	Solanaceae
43	<i>Withania somnifera</i> L.	Ashwgandha	Solanaceae

44	<i>Peristrophe puniculata</i> (Forssk.) Brummitt		Acanthaceae
45	<i>Justicia procumbens</i> L.		Acanthaceae
46	<i>Hygrophilapolysperma</i> (Roxb.) T. Anderson		Acanthaceae
47	<i>Calotropis gigantea</i> (L.)R.Br.	<i>Moto akdo</i>	Asclepiadaceae
48	<i>Calotropis procera</i> (Ait.)R.Br.	<i>Nano akdo</i>	Asclepiadaceae
49	<i>Argemone mexicana</i> L.	<i>Darudi</i>	Papaveraceae
50	<i>Corchorus capsularis</i> L.		Tiliaceae
51	<i>Corchorus olitorius</i> L.	<i>Nani chhunchh</i>	Tiliaceae
52	<i>Triumfetta rhomboidea</i> Jacq.	<i>Zipti</i>	Tiliaceae
53	<i>Abutilon indicum</i> (L.)Sweet	<i>Kamski, Khapat</i>	Malvaceae
54	<i>Sida rhombifolia</i> L.	<i>Bala</i>	Malvaceae
55	<i>Hibiscus ovalifolius</i> (Forssk.) Vahl		Malvaceae
56	<i>Azana lampas</i> (Cav.)Aleo	<i>Jangli bhindi</i>	Malvaceae
57	<i>Spergula arvensis</i> L.		Caryophyllaceae
58	<i>Leucas aspera</i> (Wild.)Spr	<i>Kumbo</i>	Lamiaceae
59	<i>Ipomoea pestigridis</i> L.	<i>Vagpadi</i>	Convolvulaceae
60	<i>Ipomoea triloba</i> L.		Convolvulaceae
61	<i>Ipomoea turbinata</i> Lag.		Convolvulaceae
62	<i>Convolvulus arvensis</i> L.	<i>Khetarau phudardi</i>	Convolvulaceae
63	<i>Convolvulus pluricaulis</i> choisy.	Sankhpushpi	Convolvulaceae
64	<i>Ipomea coccinea</i> L.		Convolvulaceae
65	<i>Merremia dissecta</i> (Jacq.)Hall		Convolvulaceae
66	<i>Clerodendrum multiflorum</i> (Burm.f.)O.Ktze.Rev		Verbinaceae
67	<i>Lantana camara</i> L.	<i>INDR DHANU</i>	Verbinaceae
68	<i>Tribulus terrestris</i> L.	<i>Gokhru</i>	Zygophyllaceae
69	<i>Borreria hispida</i> (L.) K.Schum		Rubiaceae
70	<i>Sesamum radiatum</i>		Pedaliaceae
71	<i>Tricodesma indicum</i> R.Br.	<i>Undhafuli</i>	Boraginaceae
72	<i>Trianthema portulacastrum</i> L.		Aizoaceae
73	<i>Cleome gynandra</i> L.	<i>Gandhatu</i>	Cleomaceae
74	<i>Capparis sapiaria</i> L.	<i>Kanther</i>	Capparaceae
75	<i>Capparis deciduas</i> (Forsk.)Edgew	<i>Kerdo</i>	Capparaceae
76	<i>Anagallis arvensis</i> subsp.foemina (Mill.)Schiz & Thell.		Primulaceae
77	<i>Dactyloctenium aegyptium</i> (L.) Wild		Poaceae
78	<i>Echinochola colona</i> (L.)Link	<i>Moto jino</i>	Poaceae
79	<i>Acrachne racemosa</i> (B.Heyne exRothowi)		Poaceae
80	<i>Cynodon dactylon</i> (L.)Pers	<i>Dharo</i>	Poaceae
81	<i>Chloris barbata</i> Sw.	<i>Mindadiu</i>	Poaceae
82	<i>Eragrostis cilianensis</i> (All.)Link		Poaceae
83	<i>Imperata cylindrica</i> (L.)Raeusch		Poaceae
84	<i>Cyperus rotundus</i> L.	<i>Chido, Chiyo</i>	Cyperaceae
85	<i>Bolboschoenus martimus</i> (L.) Palla		Cyperaceae
86	<i>Commelina benghalensis</i> L.	<i>Motu sismuliu</i>	Commelinaceae
87	<i>Commelina diffusa</i> L.	<i>Nanu sismuliu</i>	Commelinaceae
88	<i>Typha angustata</i> Bony. &Chaub.	<i>Gha bajaryu</i>	Thypaceae

#### ACKNOWLEDGEMENT

The authors thank all the farmers who gave permission to do this work in their fields.

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#### CITATION OF THIS ARTICLE

Shakibkhan S. Bihari, Jitendra S. Patel, Abbas Ali R. Seliya, Aafree R. Hashmi. Weed Flora of Palanpur Taluka, Gujarat, India. *Bull. Env.Pharmacol. Life Sci.*, Vol 13 [1] December 2023: 412-414