

RESEARCH ARTICLE

Studies on Weed Diversity in Groundnut fields of Parbhani District

Deshmukh RS

Department of Botany, B. Raghunath Arts, Commerce & Science College, Parbhani.
Email: rsdeshmukh19@gmail.com

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ABSTRACT

Survey of weed diversity in Groundnut fields in Parbhani district was conducted during December 2009 to December 2012 in *Kharif* season (June to September). Total 34 weeds were observed and collected from Groundnut fields in *kharif* season belonging to 17 families and 19 genera. Majority of the weeds were found to be erect herbs (26); followed by prostrate herbs (07) and climber (01). Maximum weeds belong to family Asteraceae (06 weeds), Euphorbiaceae (05 weeds), Malvaceae (04 weeds), Amaranthaceae (03 weeds), followed by the family Cyperaceae (02 weeds) Oxalidaceae (02 weeds), Solanaceae (02 weeds), Poaceae, Fabaceae, Caesalpinaceae, Commelinaceae, Molluginaceae, Papaveraceae, Portulacaceae, Sapindaceae, Tiliaceae and Zygophyllaceae consisting only one weed species each.

Key words: Weed, Groundnut, Diversity, *Kharif*

INTRODUCTION

Weed is a plant growing where it is not desired. These unwanted plants so called weeds are very common, dominant and wide spread in the crop fields. They compete with our crop plants for food, water, sunlight and space. According to survey, there are over 8,000 weed species around the world of which around 250 cause serious losses in yield [1].

However some of the weeds are the rich source of phytochemicals like flavonoids, coumarins, amino acids, cyanogenic compounds, glycosides, saponins, steroids, tannins and many others present in weeds are the great reservoirs of many new and potential drugs.

Taking this into consideration, survey of weed diversity in Groundnut fields in Parbhani district was conducted during December 2009 to December 2012 in *Kharif* season (June to September) with following objectives-

1. Survey for the various weed species growing in groundnut fields in the region.
2. To identify various weed species of this region.
3. To maintain the Herbarium of the weed plants

METHODOLOGY

I. Study area

Parbhani is a district place in Maharashtra, India, located at 19.27°N 76.78°E. It has an average elevation of 347 meters. In the northeast of district on the boundary of Hingoli district and Parbhani district there is extension of Ajanta ranges called Nirmal Hills.

II. Collection of weeds from different groundnut fields

Weeds were collected from different groundnut fields of Parbhani district. For this several excursions were arranged in different localities of the study area.

III. Identification of weeds

The collected flowering plant species were identified on the spot and in the laboratory on the basis of their natural characters with the help of identification keys and floras, Naik [2] and Yadav and Sardesai, [3].

IV. Preparation of Herbarium

Collected and identified weed species are dried, well-pressed and poisoned and mounted on thick, white

paper sheets of good quality and standard size of 11 ½ x 16 ½ inch herbarium sheets, well-labeled and arranged in species covers, genus covers and were placed in the herbarium cupboards in order to develop a departmental herbarium.

RESULTS AND DISCUSSION

The survey of weed diversity in Groundnut fields in Parbhani district was conducted during December 2009 to December 2012. Regular excursions were arranged to different Groundnut fields of Parbhani district in *Kharif* season (June to September) at least twice in a month. The excursions were arranged in such a way that it covered the entire study region. As a result of this most of the weed species could be studied at different growth stages. These were identified on the basis of their natural characters with the help of identification keys, floras, photographs, and relevant literature. The identified weeds are preserved and maintained in the form of Herbarium in the Department of Botany, Yeshwant Mahavidyalaya, Nanded for further studies. The results are presented table -1.

Table 1: Weed diversity in Groundnut fields of Parbhani district

Sr. No.	Name of the weed	Family	Habit
1	<i>Abelmoschus ficulneus</i> (L.) Wt. & Arn. Ex Wt.	Malvaceae	Erect
2	<i>Abutilon indicum</i> (L.) Sweet	Malvaceae	Erect
3	<i>Acalypha indica</i> L.	Euphorbiaceae	Erect
4	<i>Achyranthus aspera</i> L.	Amaranthaceae	Erect
5	<i>Agreatum conyzoids</i> L.	Asteraceae	Erect
6	<i>Amaranthus tricolor</i> L.	Amaranthaceae	Erect
7	<i>Argemone maxicana</i> L.	Papaveraceae	Erect
8	<i>Biophytum reinwardtii</i> (Zucc.) Klotz.	Oxalidaceae	Erect
9	<i>Cardiospermum helicacabum</i> L.	Sapindaceae	Climber
10	<i>Cassia tora</i> L.	Caesalpinaceae	Erect
11	<i>Commelina benghalensis</i> L.	Commelinaceae	Erect
12	<i>Corchorus olitorius</i> L.	Tiliaceae	Erect
13	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Prostrate
14	<i>Cyperus rotundus</i> L.	Cyperaceae	Erect
15	<i>Cyperus triceps</i> Endl.	Cyperaceae	Erect
16	<i>Digera muricata</i> (L.) Mart.	Amaranthaceae	Erect
17	<i>Eclipta prostrata</i> L.	Asteraceae	Prostrate
18	<i>Euphorbia heterophylla</i> L.	Euphorbiaceae	Erect
19	<i>Euphorbia hirta</i> L.	Euphorbiaceae	Erect
20	<i>Euphorbia prostrata</i> Ait.	Euphorbiaceae	Prostrate
21	<i>Mollugo nudicaulis</i> Lamk.	Molluginaceae	Erect

Table 1 Continued..

Sr. No.	Name of the weed	Family	Habit
22	<i>Oxalis corniculata</i> L.	Oxalidaceae	Erect
23	<i>Parthenium hysterophorus</i> L.	Asteraceae	Erect
24	<i>Phyllanthus amarus</i> Schumach & Thonn.	Euphorbiaceae	Erect
25	<i>Physalis angulata</i> L.	Solanaceae	Erect
26	<i>Portulaca oleracea</i> L.	Portulacaceae	Prostrate
27	<i>Sida acuta</i> Burm. f.	Malvaceae	Erect
28	<i>Sida chordata</i> (Burm.) Borss.	Malvaceae	Erect
29	<i>Solanum nigrum</i> auct.	Solanaceae	Erect
30	<i>Sonchus bronchytus</i> DC	Asteraceae	Erect
31	<i>Tribulus terrestris</i> L.	Zygophyllaceae	Prostrate
32	<i>Tridax procumbens</i> L.	Asteraceae	Prostrate
33	<i>Veronia cinera</i> (L.) Less.	Asteraceae	Erect
34	<i>Vigna triloba</i> L.	Fabaceae	Prostrate

From the results presented in Table-1, total 34 weeds were observed and collected from Groundnut fields in *kharif* season belonging to 17 families and 19 genera. Majority of the weeds were found to be erect herbs (26); followed by prostrate herbs (07) and climber (01). Maximum weeds belong to family Asteraceae (06 weeds), Euphorbiaceae (05 weeds), Malvaceae (04 weeds), Amaranthaceae (03 weeds), followed by the family Cyperaceae (02 weeds) Oxalidaceae (02 weeds), Solanaceae (02 weeds), Poaceae, Fabaceae, Caesalpiniaceae, Commelinaceae, Molluginaceae, Papaveraceae, Portulacaceae, Sapindaceae, Tiliaceae and Zygophyllaceae consisting only one weed species each.

CONCLUSION

The diversity of weeds in crop fields may prove a huge resource for the coming new biotechnologies. The weed diversity may prove a boon to farmers. It may be a frontier. Therefore, the detail study of weed diversity of crop fields and its utilization is an urgent need of human beings.

Thus weeds are the key resources for new genes and biotechnologically valuable compounds.

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