JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

"SURVEY OF SOME COMMON WEED PLANTS IN SUGARCANE SACCHARUM OFFICINARUM FIELD IN BARAMATI TEHSIL, DIST. PUNE, MAHARASHTRA."

[1]Dipak V. Kumbhar, [2]Rahul P. Patil

[1] Department of Botany, Vidya Pratishthan's Supe Arts, Science and Commerce College Supe, Tal. Baramati, Dist. Pune 412 204, India.

[2] Department of Zoology, Vidya Pratishthan's Supe Arts, Science and Commerce College Supe, Tal. Baramati, Dist. Pune 412 204, India

Abstract-

The present survey was taken in Baramati taluka Pune district of Maharashtra; India The present paper provides information regarding some common weeds in sugarcane. Sugarcane (*Saccharum Officinarum*) is the most important crop in the world it is a member of the Poaceae family. India is one of the countries that produce a large number of sugarcane crops. Weeds are uninvited plants growing in the cultivated crop. The major characteristic of weeds is their unwanted occurrence, undesirable features, and ability to adapt to a disturbed environment. Weed plants that grow and reproduce aggressively.

Index Terms-Sugarcane (*Saccharum Officinarum*), weed.

INTRODUCTION

Sugarcane (*Saccharum Officinarum*) is the most important crop in the world it is a member of the Poaceae family. India is one of the countries that produce a large number of sugarcane crops. Sugarcane (*Saccharum Officinarum*) a crop in tropical and subtropical areas, provides around 60% of the world's production of sugar and 35% of the ethanol (FAO 2012). A member of the Poaceae, has tillers or steam branched into two primary shoots with a sucrose content of 10-18% and fiber content of 10-15 at harvest. It is a multipurpose crop and is used in the manufacturing of sugar and its products, fuel, and in the manufacture of industrial products. The reduction in the

yield of sugarcane due to weeds could be 10-15% (Bhatti and Soomro). Weeds are uninvited plants growing in the cultivated crop. Weeds are affecting human affairs in most areas of the earth. The major characteristic of weeds is their unwanted occurrence, undesirable features, and ability to adapt to a disturbed environment., Weed in general science is a plant, usually wild or feral, that is commonly considered to be a nuisance in a garden, lawn or other agricultural development. Weed plants that grow and reproduce aggressively**.**

STUDY AREA

Baramati is one of the tehsils in the Pune District. Baramati tehsil lies between 18º 2′ 44‟ N to 18° 23′19‟‟North latitudes and 74° 13′ 8‟‟ E to 74° 42′ 47‟‟ East longitudes. It is located at an altitude of 538 meters above mean sea level. The tehsil lies in the eastern part of the Pune district of Maharashtra. The river Nira flows west tothe east forming the southern boundary of the Tehsil and the district. The river Karha flows northwest to south- east Baramati tehsil is bounded by Indapur tehsil towards the east, Satara district towards the south, Purandar tehsil towards the west, and Daund Tahsil towards the north. The total geographical area (TGA) of Baramati tehsilis 1382 sq. km., which is about 8.80 percent of the TGA of the Pune district

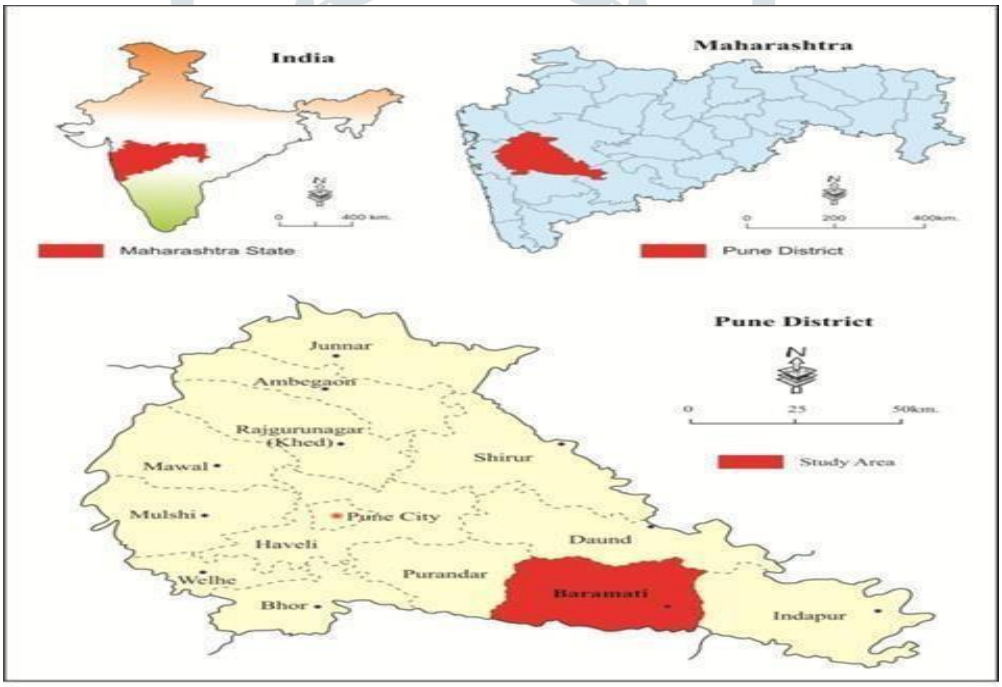

Fig: Study Area Map (Baramati)

MATERIAL AND METHODS

The surveys of weeds were conducted from Some Villages of Baramati Tehsil, District Pune. The selected area is under the peninsular zone and the variety of sugarcane is Co86032 and Co 265 mostly cultivated. Where the collection of the different weed species which medicinal value from the sugarcane farm. The different species collected during the surveys were identified with the help of The Flora of the Presidency of Bombay (Cook,1908), and the Flora of Baramati (Bhagat, et al 2008). The collected data was arranged as a list with names of plants, and

their family with used by the local people for different purposes.

Family-wise distribution of weeds is observed in study area

Sr. no.	Name of Species	Family
1	*Abutilon hirtum*	Malvaceae
2	*Abutilon indicum*	Malvaceae
3	*Acalypha indica*	Euphorbiaceae
4	*Acanthospermum hispidum*	Asteraceae
5	*Alternanthera bettzickiana*	Amaranthaceae
6	*Alternanthera paronychioides*	Amaranthaceae
7	*Alternanthera pungens*	Amaranthaceae
8	*Amaranthus spinosus*	Amaranthaceae
9	*Amaranthus viridis*	Amaranthaceae
10	*Argemone mexicana*	Papaveraceae
11	*Blumea oxyodonta*	Asteraceae
12	*Boerhavia erecta*	Nyctaginaceae
13	*Brachiaria deflexa*	Poaceae
14	*Brachiaria eruciformis*	Poaceae
15	*Brachiaria ramose*	Poaceae
16	*Calotropis procera*	Asclepiadaceae
17	*Cardiospermum halicacabum*	Sapindaceae
18	*Cassia tora*	Fabaceae
19	*Chenopodium album*	Chenopodiaceae
20	*Chenopodium murale*	Chenopodiaceae
21	*Chrozophora rottleri*	Euphorbiaceae
22	*Commelina diffusa*	Commelinaceae
23	*Convolvulus arvensis*	Convolvulaceae
24	*Conyza bonariensis*	Asteraceae
25	*Corchorus trilocularis*	Tiliaceae
26	*Croton bonplandianum*	Euphorbiaceae
27	*Cynodon dactylon*	Poaceae
28	*Cyperus rotundus*	Cyperaceae
29	*Dactyloctenium aegyptium*	Poaceae
30	*Digera arvensis*	Amaranthaceae
31	*Diplocyclos palmatus*	Cucurbitaceae
32	*Echinochloa colona*	Poaceae
33	*Eclipta Alba*	Asteraceae
34	*Euphorbia hirta*	Euphorbiaceae
35	*Euphorbia hypericifolia*	Euphorbiaceae
36	*Euphorbia Microphylla*	Euphorbiaceae
37	*Hibiscus panduriformis*	Malvaceae
38	*Ipomoea hederacea*	Convolvulaceae
39	*Lantana camara*	Verbenaceae
40	*Launaea nudicaulis*	Asteraceae

41	*Malvastrum coromandelianum*	Malvaceae
42	*Parthenium hysterophorus*	Asteraceae
43	*Phyllanthus maderaspatensis*	Euphorbiaceae
44	*Physalis minima*	Solanaceae
45	*Plumbago zeylanica*	Plumbaginaceae
46	*Portulaca oleracea*	Portulacaceae
47	*Rhynchosia minima*	Fabaceae
48	*Setaria viridis*	Poaceae
49	*Sonchus asper*	Asteraceae
50	*Sonchus oleraceus*	Asteraceae
51	*Solanum xanthocarpum*	Solanaceae
52	*Stemsodia viscosa*	Scrophyllariaceae
53	*Trianthema portulacastrum*	Aizoaceae

DISCUSSION

The study revealed a total of 54 weeds listed alphabetically according to the families. In this study total of 54 different weed species distributed in 43 genera belonging to 22 different families were reported during the study. From the survey the most dominant or frequent family categories recorded were - Asteraceae represented by 9 members; Poaceae & Euphorbiaceae represented by 7 members each; Amaranthaceae represented by 6 members or Malvaceae represented by 4 members. Most of the species have medicinal value in the local area. The part of weed plant species was used in the herbal form or the vegetable purpose.

CONCLUSION:

The study conducted that the sugarcane crop is dominated by most of the weed species which are medicinally useful for the important. The traditional knowledge or information about weed species remains unexplored. There is a need of transferring the knowledge of the local use of weeds to the next generation as wellas those people who are unaware of it. This study shows that in the Baramati area there are many useful or important weed species that are grown on sugarcane farms. The information about these commonly used weed species must be recorded for their usefulness or importance.

ACKNOWLEDGMENT:

I am grateful to the department of Botany, Principal and Management of Vidya Pratishthan's Supe Arts, Science, and Commerce College Supe Baramati, for their support. I am also thankful to the local people of Baramati who contributed and gave information about the Weed plants.

REFERENCES

1. COOKE, T. (1901- 1908) THE FLORA OF PRESIDENCY OF BOMBAY, LONDON 2 VOL. (REPR. ED. 1958. 3VOL. GOVT. OF INDIA).

2. COOKE, T. (1967) FLORA OF PRESIDENCY OF BOMBAY. VOL. 1 – 3. BOTANICAL SURVEY OF INDIA,CALCUTTA, INDIA

3. Bhagat, R. B., Shipale, N. B., &Deshmukh, R. B. (2008). The flora of Baramati District in Maharashtra. Rani Bhagat Publ., Pune

4. Abiodun, A. A., & Tunji, B. H. (2019). Medicinal weed diversity and ethno- medicinal weeds in Odigbo local government area, Ondo State, Nigeria. Journal of Medicinal Plants, 7(5), 81-85.

5. Anusha, & Rana, Surinder. (2016). 23.WEED MANAGEMENT IN SUGARCANE. 10.13140/RG.2.2.27589.14569.

6. Bhatti, I.M. and Soomro. A.H. (1996). Agriculture inputs and field crop production inSindh, Directorate General Agriculture Research Sindh, Hyderabad, 230-246.

7. Bhullar, M. S., Kaur, T., Kaur, S., & Yadav, R. (2015). Weed management in vegetable andFlowerscrop-based systems. Indian Journal of Weed Science, 47(3), 277-287.

8. Chauhan, R. S., & Srivastava, T. K. (2002). Influence of weed management practices onweed growth and yield of sugarcane. Indian Journal of Weed Science, 34(3and4), 318-319.

9. Cheema, M. S., Bashir, S., & Ahmad, F. (2010). Evaluation of integrated weed management practices for sugarcane. Pakistan Journal of Weed Science Research, 16(3).

10. Ediriweera, E. R. H. S. S. (2010). A review on Medicinal usess of weeds in Sri Lanka.TropicalAgricultural Research and Extension, 10.

11. Halilaj, Haxhi & Icka, Pirro & Bajrami, Avdyl & Robert, Damo. (2018). Ethnomedicinal aspects of some weeds of Rahovec region, Kosovo.

12. Kadam, M., & Khandekar, V. P. (2009). Weed population associated with dicot cropsaround Satara. BIOINFOLET-A Quarterly Journal of Life Sciences, 6(1), 74-76.

13. Khan, J., Khan, R., & Qureshi, R. A. (2013). Ethnobotanical study of commonly used weedsof District Bannu, Khyber Pakhtunkhwa (Pakistan). J Med Plants Stud, 1(6).

14. Memon, M.I. (1989-1990). Annual progress report, Sugarcane Research section,AgricultureResearch Institute, Tando Jam, Sindh.

15. Mulay, J. R., & Sharma, P. P. (2013). Some useful weeds from Ahemadnagar district, Maharashtra, India. International Multidisciplinary Research Journal, 2(12).

16. Panda, D., Pradhan, S., Palita, S. K., & Nayak, J. K. (2014). Medicinal weed diversity and ethnomedicinal weeds used by tribal's of Koraput, India.

17. Qureshi, R., Bhatti, G. R., & Jakhar, G. S. (2002). Floristic account of weeds of sugarcane crop in district Sukkur. Scientific Sindh, 7, 151-163.

18. Qureshi, R. (2004). A quantitative account of weeds of sugarcane (Saccharum officinarum)crop in District Sukker. Federal Seed Certification and Regestration Dept., Govt. of Pakistan. Rahim Yar Khan. Quarterly Science Vision, 9(1-2).

19. Rahmatullah, Q., Bhatti, G. R., & Ghanghro, A. S. (2001). Survey of weed communities ofsugarcane (Saccharum officinarum Linn.) crop in district Sukkur, Sindh, Pakistan. HamdardMedicus, 44(2), 107-111.

20. Sarma, H., Sarma, A. M., & Sarma, C. M. (2008). Traditional knowledge of weeds: a studyof herbalmedicines and vegetables used by the Assamese people [India]. Herba Polonica, 54(2), 80-88.

21. Srivastava, T. K., & Chauhan, R. S. (2006). Weed dynamies and control of weeds in relationto management practices under sugarcane (Saccharum species complex hybrid) multi- ratooningsyStems. Indian Journal of Agronomy, 51(3), 228-231.

22. Takim, F. O., Suleiman, M. A., & Osatuyi, O. O. (2019). Analysis of Weed Management Options on Weed Infestation and Cane Yield of Sugarcane. Pertanika Journal of Tropical Agricultural Science, 42(2).