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Roadside Weeds in Bilha Block of Bilaspur District

Shobhana Koshle¹, Dr. Raghunandan Prasad Sharma², Dr. Amit Sharma³

¹M. Phil Student Dr.C.V. Raman University Kota Bilaspur (C.G.)

^{2,3}Asst. professor (Botany) D.P. Vipra PG College Bilaspur (C.G.)

Abstract: Bilha block is situated in 21°57' north latitude and 82°03' east longitude in bilaspur district. Climate and edaphic condition of the block is favorable for weeds growth. Average minimum and maximum temperature of the district is 24°C and 44°C. The total rainfall is 129.2cm. More than 40 species obtained in road side area of bilaspur district. The work is done in peak period of weed growth in the month of november-december. Weed were identified in the help of standard flora and their flowering period are also recorded. Study of road side weeds are helpful for the ethenobotanical studies and the study of local plant biodiversity. identified potential weed species are - cassia tora, xanthium strumarium, sida acuta, acacia tortilis, solanum viarum, parthenium hysterophorus, cynodon dactylon, amaranthus spinosus, geranium dissectum, senna alata.

Key words: Road Side Weed, Unwanted Plants, Pic-Period, Dominant, Crop Yield.

I. INTRODUCTION

Bilaspur district is situated in the northern region of chhattisgarh state and bilha is a block of bilaspur district. It lies between 21°47" to 23°8" North latitude and 81°14" to 83°15" East longitude. The climatic and edaphic condition are favourable for weed growth in this district. Weeds are unwanted plants which grow automatically. Many workers such as Shukla, R.V. Dubey, V. Sharma R.P. etc. has been obtained many weed species in different cropland field. Road side weeds are important for the floristic diversity of weeds and many weeds are ethenomedicinal. Weeds cause over crowding and depletion of the soil nutrients and moisture. They interface with agricultural operations, increase labour cost and reduce crop yields. They compete with crop plant for water, light, nutrients and space. They reduce farm and forest productivity. Many weed species have moved out of their natural geographic ranges and spread around the world in tandem with human migration and commerce. Human are a vector of transport as well as a producer of the disturbed environment. Weed species are well adapted, resulting in many weeds having a close association with human activities. General survey for identification of weeds in road side are done in pic-period of weed growth in month of October-November 2016.

II. MATERIAL AND METHOD

Study areas: For this investigation three study site are selected. These sites are situated approximately 25km distance from each other and the centre of Bilaspur city (old bus stand). The sites are Khamtari village, Ghuru Ameri village and Sakri village and they are separate Gram Panchayat.

A. Methodology

Weed plants are collected and their herbarium are prepared by the help of standard flora. For the calculation of phytosociological parameters formulae used given by mishra et al 1968 and the size of quadrat is 50 x 50 cm.sq. For the study of weeds general survey was done in year 2016 at regular interval and recorded

- 1) **Climatic condition** – The climatic conditions of the district is favourable for weed growth. Summer is very hot but winter is cold. Average rainfall of the district is 1259mm. During summer season the temperature varies from 40-42.5°C. The edaphic condition is favourable of vegetational growth
- 2) **Observation And Result** -The phytosociological analysis of 40 weeds were recorded from khamtarai village, Ghuru-Ameri village and Sakri area of Bilaspur district state Chhattisgarh by quadrat method calculating various parameters %Frequency, Density, Abundance, IVI were noted and found that Cassia tora shows maximum IVI 15.944 and minimum was seen in Senna alata with IVI 8.822. Flowering period of Cassia tora is Aug to Nov. and of Senna alata is Mid Summer.

Table – 1 : weeds in road side area

S.No	Botanical Name	Local Name	Family	Flowering period
1.	<i>Cynodon dactylon</i>	Dhoob grass	Poaceae	March to Sept.
2.	<i>Tridax procumbens</i>	Gharma	Asteraceae	May to Dec.
3.	<i>Cassia tora</i>	Charota	Fabaceae	Aug to Nov

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4.	<i>Euphorbia hirta</i>	<i>Bara duddhi</i>	<i>Euphorbiaceae</i>	Almost a year
5.	<i>Xanthium strumarium</i>	<i>Burdock datura</i>	<i>Asteraceae</i>	Throught a year
6.	<i>Cynodon infestante</i>	<i>Doob</i>	<i>Poaceae</i>	Winter season
7.	<i>Phyllanthus niruriall</i>	<i>Bhumi amla</i>	<i>Phyllanthaceae</i>	Rainy season
8.	<i>Geranium dissectum</i>	<i>Ratanjot</i>	<i>Geraniaceae</i>	Late spring
9.	<i>Acacia tortilis</i>	<i>Babul</i>	<i>Fabaceae</i>	Apr-Aug
10.	<i>Sida acuta</i>	<i>Southern sida</i>	<i>malvaceae</i>	Sep-Dec
11.	<i>Ziziphus zuzuba</i>	<i>Ber</i>	<i>Rhamnaceae</i>	Late spring to summer
12.	<i>Parpheniun hyspertrophorus</i>	<i>Gajar ghans</i>	<i>Asteraceae</i>	Rainy season
13.	<i>Lantana camara</i>	<i>Lantana</i>	<i>Verbenaceae</i>	March & june –Aug, Sep.to Apr
14.	<i>Tagetes lucida</i>	<i>Genda</i>	<i>Asteraceae</i>	Free flowering
15.	<i>Mirabilis jalapa</i>	<i>Four o'clock</i>	<i>Nyctaginaceae</i>	Spring
16.	<i>Phyllanthus emblica</i>	<i>Amla</i>	<i>Phyllanthaceae</i>	March - May
17.	<i>Ficus neriifolia</i>	<i>Paras pipal</i>	<i>Moraceae</i>	Feb-Mar
18.	<i>Commelina suffruticosa</i>	<i>Knkkauwa</i>	<i>Commelinaceae</i>	After rain
19.	<i>Foeniculum vulgare</i>	<i>Fennal</i>	<i>Umbelliferaeaceae</i>	Winter season
20.	<i>Moringa oleilera</i>	<i>Drumstick</i>	<i>Moraceae</i>	Hot and humid
21.	<i>Sida rhombifolia</i>	<i>Arrowleaf sida</i>	<i>Malvaceae</i>	Warm season
22.	<i>Cyperus cyperoides</i>	<i>Morphula or motha</i>	<i>Cyperaceae</i>	Annual
23.	<i>Senna alata</i>	<i>Candle stick</i>	<i>Fabaceae</i>	Mid summer
24.	<i>Ricinus communis</i>	<i>Castor bean or arandi</i>	<i>Euphorbiaceae</i>	Late summer to early fall
25.	<i>Chenopodium album</i>	<i>Common lamsquarters</i>	<i>Amaranthaceae</i>	Summer annual
26.	<i>Argemone albiflora</i>	<i>Satayanashi</i>	<i>Papaveraceae</i>	Annual
27.	<i>Hydrocotyle bowlesioides</i>	<i>Largeleaf marshpennywort</i>	<i>Araliaceae</i>	Sunny and moisty weather
28.	<i>Cassia obtusifolia</i>	<i>Sicklepod</i>	<i>Fabaceae</i>	Summer
29.	<i>Solanum viarum</i>	<i>Tropical soda apple</i>	<i>Solanaceae</i>	Sept to may
30.	<i>Sida cordifolia</i>	<i>Bala</i>	<i>Malvaceae</i>	August to Decemeber
31.	<i>Ficus religiosa</i>	<i>Pipal</i>	<i>Moraceae</i>	Hot,humid day
32.	<i>Portulaca oleracea</i>	<i>Ghola</i>	<i>Portulacaceae</i>	Appear any time during the year
33.	<i>Amaranthus spinosus</i>	<i>Spiny pigweed</i>	<i>Amaranthaceae</i>	Summer or autumn
34.	<i>Urena lobata</i>	<i>Caesarweed</i>	<i>Malavaceae</i>	Annually
35.	<i>Acorus calamus</i>	<i>Sweet flag or calamus</i>	<i>Acoraceae</i>	Late spring or early summer
36.	<i>Ocimum sanctum</i>	<i>Tulsi</i>	<i>Lamiaceae</i>	Warm weather
37.	<i>Butea monosperma</i>	<i>Bastard teak</i>	<i>Fabaceae</i>	In summer
38.	<i>Gmelina arborea</i>	<i>Gamhar</i>	<i>Lamiaceae</i>	During rainfall
39.	<i>Vinca rosea</i>	<i>Sadabahar</i>	<i>Apocynaceae</i>	Spring-summer
40.	<i>Achyranthes aspera</i>	<i>Chaff flower</i>	<i>Amaranthaceae</i>	Summer or Autumn

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Table – 2: Distribution of Dominating weeds in road side

S.No.	Weed species	% frequency	Density	Abundance	IVI
1.	<i>Cassia tora</i>	60	1.800	3.000	15.944
2.	<i>Xanthium strumarium</i>	50	1.700	3.400	14.822
3.	<i>Sida acuta</i>	30	0.900	3.000	14.505
4.	<i>Acacia tortilis</i>	35	1.250	3.571	12.114
5.	<i>Solanum viarum</i>	20	0.300	1.500	11.675
6.	<i>Parthinium hysterophorus</i>	35	0.950	2.710	11.090
7.	<i>Cynadon dactylon</i>	55	1.300	2.360	11.004
8.	<i>Amaranthus spinosus</i>	35	0.700	2.000	10.236
9.	<i>Geranium dissectum</i>	45	1.000	2.220	9.199
10.	<i>Senna alata</i>	30	0.400	1.333	8.822

III. DISCUSSION

were noted and found that The phytosociological analysis of 40 weeds were recorded from khamtarai village, Ghuru-Ameri village and sakri area of bilaspur district state Chhattisgarh by quadrat method calculating various parameters %Frequency , Density ,Abundance , IVI *Cassia tora* shows maximum IVI 15.944 and minimum was seen in *Senna alata* with IVI 8.822.

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