



## ECONOMIC IMPORTANCE OF FARMER FRIENDLY WEED *AMARANTHUS BLITUM* L. IN NON IRRIGATED AGRONOMIC PATTERN OF SATARA DISTRICT.

**Bhosale R. S.\* and Salve K. M.<sup>1</sup>**

\*Arts, Commerce and Science College, Narayangaon, Savitribai Phule Pune University, Pune 410504.

<sup>1</sup> Pemraj Sarada College, Ahmednagar, Savitribai Phule Pune University, Pune, (M.S.)

\*Corresponding author: [rahul.bhosale3@gmail.com](mailto:rahul.bhosale3@gmail.com)

### ABSTRACT:

*A blitum* is an annual species, reproducing by seed. The flowers are small, green and unattractive. Flowering time generally ranges from summer to winter. *Amaranthus blitum* L. is predominantly wind-pollinated. In *Amaranthus blitum* L., seed production is high. Germination occurs after imbibition, when the radicle penetrates the micropyle and emerges from the seed. The hypocotyl then elongates, pushing the seed out of the soil. During movement through the soil the cotyledons and the epicotyl are protected by the seed coat. It is a well known edible weed in khandala taluka of Maharashtra. It is eradicated in well irrigated agriculture zones where modern farming is carried out. Same weed serves as a food source in non irrigated zones as well as it is been sold in local market for economic benefits. Economically it is equally or sometimes more beneficial than regular leaf vegetables sold in local market.

**Key Words:** Wind pollination, edible weed, economic benefit, *Amaranthus blitum* L.

### INTRODUCTION:

In Maharashtra agriculture is gaining benefits of modern agriculture as a result of acceptability of farmers to innovative techniques. Efforts of state governments have led to development of many agricultural zones by providing technology and agro literacy. Major regions in state are proved to be benefited with cumulative efforts of farmers and government agencies. This scenario is more or less similar all over Maharashtra except some non irrigated regions. Present work aims to study Agronomic pattern of Satara district in non irrigated and low rainfall zones. Several regions like Maan, Khatav and Khandala are facing similar tribulations which have forced to adapt environment friendly patterns of agriculture. The agro economy for these regions depends on first shower of Monsoon and winter. This pattern has made many farmers utilize some weed crops as a gift of nature. Present survey aims at study of a farmer friendly weed *Amaranthus blitum* L. and its economic contribution from local market. *Amaranthus blitum* is an annual growing to 1 m (3ft 3in). It flowers in August, and the seeds ripen in September. The flowers are monoecious and are pollinated by Wind or self. Leaves are eaten raw or cooked as leaf vegetable. The leaves contain about 3.88% protein, 1.1% fat, 9.38% carbohydrate. They are very rich in Vitamins A & C, rich in vitamin B1. (<http://www.cabi.org/isc/overview>). *Amaranthus blitum* L. is well known weed in Maharashtra. Most of the times this weed is eradicated but not thrown away, rather it is used as a fresh leaf

vegetable. Many farmers from Khandala block let the weed grow along with their crops and sell them in weekend bazaar (local market). It serves to be economically beneficial for minor farmers.

### MATERIALS AND METHODS :

**Site of study** – Agriculture zones of Khandala Block, (Pargaon) Dist Satara. Near about 56 farmers from 5 zones were selected for following survey.

**Duration** – following survey was carried out for two years (2011-12 and 2012-13) during Monsoon and growth span of selected weed plant.

The local villages that reported conserved *Amaranthus* growth was surveyed for last two years. Farmers with non irrigated traditional farms and minor land were mostly sort out. Data from farmers engaged in *Amaranthus* growth was acquired from Grampanchayats and several other local sources. Meetings were held regularly with several farmers and group of farmers. More than 5 weekly markets were surveyed for studying market value of the edible weed. Financial calculations were made on basis of input cost and market values.

### RESULT & DISCUSSION :

Many protozoans feed on bacteria-sized particles and thereby utilize a size class of bacteria and detritus generally not utilized by large

zooplankton, most rotifers are sessile they form major parts of the zooplankton.

The zooplankton community of Dhanora water Resiver identified 23 species belonging to three major orders Cladocera, (10) Rotifers (07), Copepods (06) the relative occurrence of the waterbodies is shown in the Table -1. The Cladocerans dominated having ten species followed by Rotifers with seven and copepods six species

The study of diversity of zooplanktons during study periods there are 16 genera observed which belonging groups Rotifers, Cladocera, and Copepods. The Cladocerans was the most dominating, diversified group representative of six genera, *Ceriodaphnia*, *Daphnia*, *Bosmina*, *Diaphanosoma*, and *Moina Macrotrix*. The Rotifers was the another dominating, diversified group which includes six genera *Brachionus*, *Keratella*, *Asplanchna*, *Trichocera*, *Lecane*, *Testudinella*. Copepods with four genera *Mesocyclops*, *Eucyclops*, *Mysis*, *Nauplius*

The maximum zooplankton diversity observed in the months of winter. The population of the rotifers maximum during the month of Winter (Rotifers.  $\geq$  Cladocerans  $\geq$  Copepod) whereas the populations of copepods during the month of Summer increased (Copepod  $\geq$  Rotifers  $\geq$  Cladocerans). The population occurrence in the order of maximum to minimum as Rotifers – Cladocera – Copepods. Like results was observed by Chavan (2003), Abdar M.R. (2007) Thomas (1999). The more counts of copepods were seen in summer (February, March, and April) this is due to the abundant amount of their favorite food such as ages and diatoms.

## BIBLIOGRAPHY :

- Bhosale RS. (2013) Decline in Traditional Millet farming in Tribal Trace Areas of Mahabaleshwar Taluka a Hazard to Ecosystem, Int. Res. J. of Sci. & Engg,1 (2):69-70.
- Jansen, P.C.M., (2004). *Amaranthus viridis* L. In: Grubben, G.J.H. & Denton, O.A. (Editors). PROTA 2: Vegetables/Légumes. [CD-Rom]. PROTA, Wageningen, Netherlands.
- Paola Vanzani, Monica Rossetto, Veronica De Marco, Linda E. Sacchetti, Maurizio G. Paoletti, Adelio Rigo (2011) Wild Mediterranean Plants as Traditional Food: A Valuable Source of Antioxidants Journal of Food Science 1750-3841.
- Patil, M.V. and Patil, D.A. (2000) Some more Wild Edible Plants of Nasik District (Maharashtra) Ancient Science of Life Vol. No Xix (3&4).
- Rouhollah A, Faezeh M, Kazem G, Adel D Mohammadi-Nasab1 and Parisa Z (2012) Allelopathic assessment of common amaranth by ECAM International Research Journal of Applied and Basic Sciences, Science Explorer Publications, Available online at www.irjabs.com Vol, 3 (11): 2268-2272.
- Sasi R, Rajendran A and Maharajan M. (2011) Wild edible plant Diversity of Kotagiri Hills - a Part of Nilgiri Biosphere Reserve, Southern India. Journal of research in Biology 2: 80-87.