RESEARCH ARTICLE

**PHALARIS MINOR RETZ. FIRST TIME REPORTED FROM WHEAT FIELDS OF BHOPAL DISTRICT MADHYA PRADESH INDIA. A CASE STUDY.**

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**Abstract**

"Phalaris minor Retz. (Poaceae) is a non-native winter annual grassy weed, which is largely constrained to wheat fields and has negative effects on growth and yield of wheat (Kaushik et al 2005). This weed is a native of Mediterranean region, but now it makes its distribution worldwide and spared to 60 countries (Singh et al 1999). Phalaris minor was reported to be a major weed in Latin America and probably reached India through the import of Mexican wheat it was becoming a problem by the 1970s Bhan and Choday 1976). However Anderson indicates Phalaris minor infestations during 1961 in some parts of india. According to surveys of wheat crops in the states of Punjab (Bir and Sindhu 1979; Zahir and Gupta 1979) and in Haryana (Malik et al 1981, 1985; Singh et al 1995a) realized that P. minor as the most dominant weed of wheat in northwest belt of India. However its presence in central India has sighted only by Mishra (2008) in Jabalpur district. But as far as Bhopal district is concerned no..."
one before has mentioned its presence our article is the pioneer which highlighted its presence in wheat field of the district.

**Materials and Methods:-**
Field survey of different wheat fields across Bhopal district were conducted during the rabi season. Its collection and identification by comparing it with the available monographs and its fresh plant material has been identified with using available taxonomic literature.

**Taxonomical classification**
- Kingdom……….Plantae-plants
- Sub-kingdom ....Tracheobionta-Vascular plants
- Super-division….Spermatophyte-Seed plants
- Division ........Magnoliophyta-Flowering plant
- Class ...........Liliopsida-Monocotyledons
- Sub-class .......Commelinidae
- Order ............Cyperales
- Family ...........Poaceae-Grass family
- Genus ...........Phalaris L.-canarygrass
- Species...........Phalaris minor Retz.-littleseed Canarygrass

**Nomenclature**
- English name: Small canary grass, Littleseed canary grass,
- Hindi name: gulidanda, genhunka mama.
- Botanical name: Phalaris minor Retz. (Synonym: Phalaris canariensis L.)

**Description:-**
Our survey during the years between 2012 -2015 revealed that the different crop fields of Bhopal district were got contaminated with *Phalaris minor*. Total survey of wheat fields (Figure 1) were 62 and out of them 21 fields confirm it presence, along the saliya village its infestation was more as compared to the other areas of district. And it is difficult for the general people to identify it because it completely resembles with the wheat crop plant until the flowering period at that time its pinnacle looks like the foxtail and thus distinguished itself from the rest of wheat crop. However, if we look carefully, at the plant we notice some differences like its stem is much jointed due to presence of many nodes and internodes the main Colum may be branched/unbranched, plants height ranges from 90-120cm. the leaves of *Phalaris minor* are light green in colour while that of wheat are dark green and two internodes are joined by an node clearly visible and it makes the upper internodes slightly bended and thus gives the node an elbow structure, basal portion of plant is pink as compared to basal portion of wheat plants. *P. minor* has prominent white and pointed ligule and very short auricle. Contrary to this, wheat has prominent auricle and very poorly developed ligule. During the flowering period the pinnacle looks like that snowflakes wrapped the pinnacle which is due to anthers oozes from the flower (spikelet), flowering period starts from February and lasts upto first week of March and earhead length is 6-9cm.
Conclusion:

Survey of the crop field are important so that there will be assessment of new invaded weed species that if remains unnoticed for the long time they will flourish well in that condition becomes problematic and may cause huge loss to the crop production, besides this before introduction of any kind of seed stock or plant we should check it carefully so that any kind of unwanted material should not be accompanied with it otherwise will become problematic in the newly inhabitant places as *Phalaris minor* that was not sighted before seven decades in India, but now-a-days it is considered one of the leading problematic weed in the wheat fields especially rice-wheat cropping system and continuously invade the new areas, like Bhopal was the newly inhabited area as far as its distribution is concerned in India.
Fig 2:- *Phalaris minor* Retz. a, close glimpse of pinnacle shows oozes of anther; b, Infestation in wheat field; c, interaction with farmers about it presence; d, Tilling of *P. minor*; e, White colour ligule and nodes; f, *Phalaris minor* Retz.

Acknowledgement:-
We are highly thankful to local farmers for allowing us to visit their wheat fields.

References:-


