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RESEARCH ARTICLE

Screening of soybean genotypes against stem fly, *Melenogromyza sojae* (Zehntner)

■ S.N. JADHAV*[1], L. KRISHNA NAIK[2], G. T. BASAVARAJ[3] AND S.S. CHAVAN[1]

[1]Department of Agricultural Entomology, University of Agricultural Sciences, DHARWAD (KARANATAKA) INDIA
[2]Directorate of Extension, University of Agricultural Sciences, DHARWAD (KARANATAKA) INDIA
(E-mail: naikkl@yahoo.com)
[3]AICRP on Soybean, University of Agricultural Sciences, DHARWAD (KARANATAKA) INDIA

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*Corresponding author:
jadhav2007j@rediffmail.com

ABSTRACT

Thirty seven genotypes were screened against stem fly during *Kharif* 2006 and 2007 seasons. The genotypes NRC-55, NRC-51, NRC-52 and DSb-101 were recorded significantly lower stem fly incidence and stem tunnelling per cent compared to rest of the genotypes. The promising MACS-798, MACS-740, MACS-817 and DSb-102 were also recorded stem fly incidence and stem tunnelling and found next best to NRC's and DSb-101 genotypes but proved superior over national check. The genotypes MAS-2000-1 and KHSb-2 were recorded higher stem fly incidence and stem tunnelling and found significantly inferior among the genotypes. Among the genotype NRC-55, NRC-51, and Dsb-101 were categorized as resistant. Moderately resistant genotypes include, MACS-798, MACS-740, MACS-817, NRC-52 and DSb-102 and susceptible genotypes includes MAS-2000-1 and KHSb-2. Further remaining twenty seven genotypes were categorized as moderately susceptible.

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INTRODUCTION

Soybean [*Glycine max* (L.) Merrill] is an important pulse and oilseed crop. With its luxuriant growth of soybean accompanied by green, soft and succulent foliage, provide an ultimate source of food, space and shelter to insects. The stem fly, *Melenogromyza sojae* (Zehntner) is considered as a one of the major pests attacking the crop throughout the year causing cent per cent infestation at different growth stages (Singh and Singh, 1990). Further, it has also been reported more than 90 per cent of plants infested during *Kharif* season (Gain and Kundu, 1988).

The maggot enters the stem through the leaf petiole and bores both upward and downward which results in to tunnel in the affected plant. Its infestation significantly reduces the plant hight, number of branches / plant, number of trifoliate leaves, leaf area / plant and dry matter accumulation (Talekar, 1980). Indiscriminate use of chemicals in soybean plant has led to the problems like pest resurgence, pest outbreak development of resistance to insecticides eliminator of natural enemies, risks to human and animal health besides environmental pollution (Rao *et al.*, 2000). However, the management of pest in soybean only through chemicals, there is a need to explore the most eco-friendly method of pest control by developing pest resistant varieties therefore, the present study was undertaken to screen the soybean genotypes against stem fly.

MATERIALS AND METHODS

Thirty seven soybean genotypes were obtained from All India Coordinated Research Project on Soybean, Indore and Breeder, AICRP, Soybean Dharwad centre for evaluation in the field to find out the genotype resistance to the stem fly,