

RESEARCH ARTICLE

Screening of soybean varieties against girdle beetle and other pests

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ABSTRACT

The experiment was conducted on Randomized Block Design in entomology field with plot size of 1m x 5m, row to row spacing 30 cm, replicated three times and date of sowing of this crop 5th July 2010. Total numbers of girdle beetle affected plants were recorded in each plot at ten days interval. In a screening trial with 12 genotypes including three check varieties, girdle beetle infestation ranged from 1.7 damaged plants in L129, H₂ P₂ and F5 02-2 Sel-3 to 3.7 damaged plants per meter row in genotype G₄ P₁₅. L129 with 3.1 larvae per meter row was least infested by lepidopterous pests and F₁ P₂₁ with 5.3 larval/meter row was most damaged by caterpillar pests. Similarly, genotype L129 with 2.8 insects/plant was least preferred and F₄ P₂₀ with 3.7 sucking pests/ plant was most preferred by white flies and jassids. Based on overall pest incidence, genotype L129 with least number of girdle beetle damaged plants and lepidopterous larvae per meter row and minimum density of sucking pests per plant was least preferred by these insects recording 31.1 q/ha grain yield.

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INTRODUCTION

Soybean is a wonder crop of twentieth century. It is an excellent source of protein and oil. It is a two dimensional crop as it contains about 40-42 per cent high quality protein and 20-22 per cent oil. It also contains 20-30 per cent carbohydrates. The protein quality of soybean is equivalent to that of meat, milk products and eggs. Hence, it is well established fact that soybean is cheap source of protein and edible oil. These characteristics have made soybean to fit well in sustainable agriculture. During the late sixties and early seventies, the soybean crop was considered to be comparatively safe crop as regards to insect pest attack. However, Gangrade (1976) reported over 99 insect species attacking soybean crop at Jabalpur. but now the situation has changed and as many as 275 insect species have been recorded attacking soybean crop in India. Researchers in many parts of India have confirmed that seed yield and seed quality are being adversely affected by major insect pests viz., girdle

beetle, tobacco caterpillar, green semilooper, *Helicoverpa armigera*, jassids and white fly.

MATERIALS AND METHODS

Twelve advanced genotypes of soybean were screened against girdle beetle and other pests under randomized block design in which plot size was 1m x 5m, row to row spacing 30 cm, replicated three times. The crop was sown on 5th July 2010 to evaluate the incidence of girdle beetle and other pests during *Kharif* season. Screening of nine genotypes of soybean along with three check entries, was carried out in randomized block design with plot size of 1m x 5m, row to row spacing 30 cm, replicated three times The entries were sown on 4th July, 2010.

Observations recorded :

The observations were taken at ten days interval by counting the total numbers of plants and number of plants