Research Paper :

Screening of Mustard Genotypes for Resistence to Leaf Webber, *Crodolomia binotalis* (Zeller)

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SUMMARY

Field studies were carried out to investigate the relative resistance of twenty genotypes/cultivars of mustard against leaf webber, *Crodolomia binotalis* during *rabi* 2007-08. The results revealed that the genotype SKM-0301 was found the least susceptible to the pest (0.99 larva/ five plants) and was followed by the genotypes SKM-0445, SKM-0513, SKM-0401, SKM-0533 and SKM-0518 with 1.02, 1.05, 1.32, 1.41 and 1.52 leaf webber larvae/ five plants, respectively.

Key words : Resistance, Mustard, Leaf webber, *C. binotalis*.

Mustard (*Brassica juncea* L.) is an important oilseed crop in Gujarat. It is rich in oil content (40%) and provides good source of edible oil in our country. According to Bakhetia and Sekhon (1992), thirty eight insect pests are now known to damage the crop. Among all the insect pests of mustard, the leaf webber, *C. binotalis* is a serious pest causing yield loss of 13.2 to 81.8 per cent (Reddy and Ali, 1977). Sole reliance on insecticides is not only ecologically unsustainable but is also becoming economically unviable. Host plant resistance is one of the major components of IPM as is eco-friendly, sustainable and easy to adopt. Therefore, the present study was conducted to identify the resistant sources of mustard crop against leaf webber, *C. binotalis*.

MATERIALS AND METHODS

Twenty genotypes of mustard were sown at Main Oilseeds Research Station, Junagadh Agricultural University, Junagadh during *Rabi* season of 2007-08. The crop was grown in plot of five meter length with single row each with 45 cm x 10 cm spacing and replicated twice in Randomized Block Design. All the recommended agronomical practices were adopted. Five plants from each genotype lines from each replication were randomly selected for observations. The observations on larval population were recorded at weekly interval after appearance of the pest till the pest disappeared. The data thus, obtained were subjected to statistical analysis for assessing the susceptibility.

RESULTS AND DISCUSSION

The results (Table 1) revealed that the genotype SKM-0301 was found least susceptible to leaf webber (0.99 larva/ five plants) and was followed by the genotypes SKM-0445, SKM-0513, SKM-0401, SKM-0533 and SKM-0518 that recorded the pest population of 1.02, 1.05, 1.32, 1.41 and 1.52 larvae/ five plants, respectively. However, among all the genotypes of mustard, GM-1 was found the most susceptible (3.96 larvae/five plants) and was followed by the genotypes GM-2, SKM-0523, SKM-0512, GM-3 and SKM-0109 with 3.92, 3.85, 3.81, 3.75 and 3.66 larvae/five plants, respectively. Whereas, rest of the genotypes showed moderately resistance to the pest with the population of 2.22 to 2.76 larvae/ five plants.

Earlier, Parsana (1999) and Kakade (2007) have also reported that the genotypes GM-1 and GM-were highly susceptible to this pest. Thus, the present finding collaborates with the results reported by earlier workers.

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Table 1 : Population of leaf webber, *C. binotalis* on different genotypes of mustard during *rabi* (2007-08)

Sr. No.	Genotypes	Larval population/five plants
1.	GM-1	2.11* (3.96)
2.	GM-2	2.10 (3.92)
3.	GM-3	2.06 (3.75)
4.	SKM-0109	2.04 (3.66)
5.	SKM-0219	1.74 (2.53)
6.	SKM-0301	1.22 (0.99)
7.	SKM-0401	1.35 (1.32)
8.	SKM-0445	1.23 (1.02)
9.	SKM-0518	1.41 (1.52)
10.	SKM-0506	1.81 (2.76)
11.	SKM-0507	1.65 (2.23)
12.	SKM-0508	1.70 (2.41)
13.	SKM-0512	2.08 (3.81)
14.	SKM-0513	1.24 (1.05)
15.	SKM-0523	2.09 (3.85)
16.	SKM-0526	1.78 (2.66)
17.	SKM-0529	1.80 (2.73)
18.	SKM-0531	1.69 (2.34)
19.	SKM-0532	1.65 (2.22)
20.	SKM-0533	1.38 (1.41)
	S.E. $\pm$	0.19
	C.D. (P=0.05)	0.57
	C.V. %	15.85

* Square root transformed value
Figures in the parentheses are original values

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