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Mitesh Makwana
Department of Entomology,
College of Agriculture,
Jawaharlal Nehru Krishi Vishwa
Vidyalaya, Jabalpur,
Madhya Pradesh, India

AK Panday
Department of Entomology,
College of Agriculture,
Jawaharlal Nehru Krishi Vishwa
Vidyalaya, Jabalpur,
Madhya Pradesh, India

Sanju Singh
Department of Entomology,
College of Agriculture,
Jawaharlal Nehru Krishi Vishwa
Vidyalaya, Jabalpur,
Madhya Pradesh, India

Rahul Patidar
Department of Entomology,
College of Agriculture, Rajmata
Vijayaraje Scindia Krishi Vishwa
Vidyalaya, Gwalior,
Madhya Pradesh, India

Corresponding Author:
Mitesh Makwana
Department of Entomology,
College of Agriculture,
Jawaharlal Nehru Krishi Vishwa
Vidyalaya, Jabalpur,
Madhya Pradesh, India

Screening different genotypes of sesame against leaf webber and capsule borer (*Antigastra catalaunalis*)

Mitesh Makwana, AK Panday, Sanju Singh and Rahul Patidar

Abstract
Field experiment was conducted to screen fifty four germplasms lines of sesame (*Sesamum indicum* L.) against leaf webber and capsule borer (*Antigastra catalaunalis* Duponchel). The weekly observations on larval population of leaf webber and capsule borer was recorded at 14 DAS (Days after Sowing) and continue till maturity of the crop. Among the screened genotypes the lowest population of leaf webber and capsule borer was observed in genotypes SI-250 (0.26 larvae/plant) followed by IS-178-C (0.36 larvae/plant), SI-2192 (0.42 larvae/plant) and IS-446-1-64 (0.52 larvae/plant). The highest population (3.03 larvae/plant) of leaf webber and capsule borer was recorded in genotypes Prachi followed by TC-25 (2.66 larvae/plant) and EC-334993 (2.17 larvae/plant). On the basis of overall performance the genotypes SI-250 (0.26 larvae/plant), IS-178-C (0.36 larvae/plant) and SI-2192(0.42 larvae/plant) were found promising against leaf webber and capsule borer.

Keywords: Sesame genotypes, screen, leaf webber and capsule borer, resistance susceptible

Introduction

India is one of the largest producers of oilseeds in the world and occupies an important position in the Indian agricultural economy (Rai *et al*., 2016) [12]. In India, nine important oilseeds crops are grown, out of which seven are of edible oils *viz*., soybean, groundnut, rapeseed mustard, sunflower, sesame, safflower and Niger and two are of non-edible oils *viz*., castor and linseed. Among the oil seeds crop sesame (*Sesamum indicum* Linnaeus) from family Pedaliaceae is an important oilseed crop grown mainly for Its seed contain 52 to 57 percent oil and 25 percent protein (Smith *et al*., 2000) [13]. The crop is mainly grown in tropics and sub-tropics and major producing countries are India, China, Turkey, Myanmar, Pakistan, Egypt, Sudan, Greece, Venezuela, Argentina, Colombia, Nicaragua, Elsalvador, Mexico and USA. India ranks first in area, production and export of sesame in the world. "Sesame is called the queen of oilseed crops" by virtue of oil it produces. In India, at present sesame occupies an area of about 17.78 lakh hectares with an annual production of 8.11 lakh tones and an average productivity of 456 kg/ha. (Anonymous, 2015-16) [4]. Sesame seeds are rich source of edible oil, carbohydrate, protein and minerals like calcium, iron, magnesium, manganese, phosphorus, zinc, copper, tryptophan, dietary fiber and thiamine. Sesame oil is not only used for edible purpose but also used in Ayurvedic medicine and as an antibacterial agent in preparation of mouthwash. Sesame seeds contain two phenolic antioxidants, sesamol and sesaminol, and have been shown to possess cholesterol-lowering effect in humans and increase vitamin E supplies in animals (Chakraborthy *et al*., 2008) [5]. The oil is used in the manufacture of soaps, cosmetics, perfumes, insecticides and pharmaceutical products. The growing domestic demand for edible oil, coupled with the emergence of sesame as a potential export crop, provides good opportunity for farmers to take up the cultivation of this crop and be assured of good market value. In India the yield potential of sesame has not been fully realized due to number of biotic and abiotic factors. Among the various biotic factors, the attack of insect pests is one of the major limiting factors in achieving higher productivity (Egonyu *et al*., 2005, Ahirwar *et al*., 2010a) [7, 1]. The crop is attacked by 67 species of insect pests at various stages of its growth (Ahirwar *et al*., 2009) [3] of which, sesame leaf webber and capsule borer, *A. catalaunalis* (Dup.) is one of the serious pests of sesame throughout India. It is an important pest because this attacks the cropin all the growth stages after about one week of emergence (Suliman *et al*., 2004) [14]. It feeds on tender foliage by webbing the top leaves, bores into the pods and shoots (Narayanan and Nadarajan, 2005) [9].

This insect causes 10 to 70 percent infestation of leaves, 34 to 62 percent of flower buds/ flowers and 10 to 44 percent infestation of pods resulting in up to 72 percent loss in yield (Ahirwar *et al.*, 2010) [2]. If the infestation occurs at very early stage, the plant dies. If infestation occurs at a later stage, infested shoot remains without further growth (Karuppaiah, 2014) [8]. In a country like India, the production of sesame is already much below the expectation and therefore the damage due to *Antigastra* is undesirable. It is therefore, extremely important to devise means to reduce the extent of damage due to this insect pest without adversely affecting the agro-ecosystem (Rai *et al*., 2002) [11].

Materials and Methods

Experiment with 54 genotypes was carried out at the Experimental farm ICAR- Project Coordinating Unit Sesame and Niger College of Agriculture, Jawaharlal Neharu Krishi Vishwa Vidyalaya, Jabalpur (Madhya Pradesh) during *Kharif,* 2017-2018. Jabalpur is in the agro-climatic zone of Kymore Plateau and Satpura Hills and is situated between 22 ° 49" and 24° 8" North latitude and 78° 21" and 80 ° 58" East longitude and at an altitude of 411.78 m. above the mean sea level. The seeds of sesame were sown in rows of three meter length, replicated thrice with randomized block design. The spacing between row to row and plant to plant was kept 30 cm and 10 cm, respectively. The observations on larval population of leaf webber and capsule borer wasrecorded at weekly intervals, started from one week after germination and continue till maturity of the crop. The larval populations were recorded on five randomly selected plants from each genotype.

Results and Discussion

The data of larval population recorded on different genotypes is presented in Table 1, showed that the average numbers of larvae population were ranged from 0.26 to 3.03 larvae/plant. Significant difference among the genotypes in terms of average number of larvae per plant per week was observed. The highest mean number of larvae per plant was recorded in genotype Prachi (3.03 larvae/plant/week) followed by TC-25 (2.66 larvae/plant/week), EC-334993 (2.17 larvae/plant) and SI-3237 (2.15 larvae/plant). The average number of larvae (0.26 larvae/plant/week) was recorded lowest in SI-250 followed by IS-178-C (0.36 larvae/plant/week).Present findings are corroborated with the findings of Panday *et al* (2021) [10] screened 197 entries including two checks (SI-250 Resistance check and TC-25 Susceptible check) of sesame(*Sesamum indicum* L.) against leaf webber and capsule and reported that none of the screened entry was found to be free from infestation by leaf webber and capsule borer. The average plant, flower and capsule damage over the locations varied from 6.58 to 27.17, 7.80 to 23.71 and 3.33 to 15.43%, respectively. At vegetative stage, the entries SI-0018-B (6.33%) and IS-353-A (6.58%) at flowering, the entry KMR-7 (7.80%) and at capsule stage, the entries SI-0018-B (3.33%), MT-67-25 (3.65%) and RJS- 56-A (3.80%) were recorded the lowest damage. Further, the response of promising entries under artificial pest load conditions over the locations showed that the entry SI-271-B was superior to others with respect to lowest plant and flower damage while at capsule stage; the entry NIC-8510-B was superior. The larval feeding preference studies showed that the entries SI-271-B, IS-178-C, MT-67-25 and S-OO-17-B were least preferred by the leaf webber and capsule borer and recorded the lowest leaf area damage. Other genotypes which recorded lowest number of larval population were SI-2192 (0.42 larvae/plant/week), IS-446-1-64 (0.52 larvae/plant/week) and EC-303440-B.Present findings are supported by the findings of Choudhary *et al.* (2017) they reported that the mean larval population of *A. catalaunalis* ranged from 3.04-6.58 per five plants on different genotypes. The minimum population was observed on RT-371(3.25/ five plants) RT370 (3.30/ five plants) and RT-358 (3.43/ five plants). The maximum population was observed on RT-46 (6.33/ five plants), LT-8 (5.81/ five plants) and TC-25 (6.58/ five plants). The larval population of leaf webber and capsule borer recorded at an interval of seven days (larval population recorded at weekly intervals) varied significantly from each other in respect of average number of larvae per plant.The average numbers of larvae per plant under different weeks of observations were ranged from 0.30 to 1.80 larvae/plant. The average number of larval population was recorded maximum in 56th DAS (1.80 larvae/plant) while minimum larval population was recorded on 14th DAS (0.30 larvae/plant). The larval population recorded at 14 DAS and 63 DAS was found at par to each other in respect to record the lowest larval population of leaf webber and capsule borer. Similarly the population received at 49th DAS and 56th DAS were found at par to each other in respect to record the highest population of leaf webber and capsule borer. From the above results it can be concluded that the attack of leaf webber and capsule borer was started from vegetative stage and the pest remained active till maturity of the crop. The 49th and 56th DAS is the most crucial time for the attack of leaf webber and capsule borer. Among the screened genotypes, the genotypes viz., SI-250, IS-178-C, SI-2192, and IS-446-1-64 were found promising against this pest. These promising lines further confirmation of resistance after screening under artificial pest load conditions can be utilized in resistance breeding programme.

Table 1: Screening of different genotypes of sesame against leaf webber and capsule borer (*Antigastra catalaunalis*)

S. No.	Treatments	Average larvae population of *A. catalaunalis*/plant/week											Mean
		Period of observations											
		14 DAS*	21 DAS	28 DAS	35 DAS	42 DAS	49 DAS	56 DAS	63 DAS	70 DAS	77 DAS	84 DAS	
1.	T_{1}- SI-3237	0.5 (1.0) **	1.7 (1.5)	1.2 (1.3)	1.7 (1.5)	2.5 (1.7)	4.2 (2.1)	4.0 (2.1)	2.8 (1.8)	2.2 (1.6)	1.8 (1.5)	1.2 (1.3)	2.15
2.	T_{2}- IC-131607	0.5 (1.0)	1.0 (1.2)	2.0 (1.6)	1.7 (1.5)	2.8 (1.8)	3.5 (2.0)	4.0 (2.1)	3.0 (1.8)	2.3 (1.7)	1.0 (1.2)	0.3 (0.9)	2.02
3.	T_{3}- SI-3179	0.3 (0.9)	1.0 (1.2)	1.3 (1.3)	1.7 (1.4)	2.0 (1.5)	2.7 (1.7)	3.0 (1.8)	2.3 (1.6)	2.0 (1.5)	1.7 (1.4)	1.3 (1.3)	1.76
4.	T_{4}- SI-3231	0.0 (0.7)	0.3 (0.9)	0.3 (0.9)	0.7 (1.1)	1.3 (1.3)	1.3 (1.3)	1.3 (1.3)	1.7 (1.4)	0.7 (1.0)	0.3 (0.9)	0.3 (0.9)	0.76
5.	T_{5}- EC-33507	0.0 (0.7)	0.3 (0.9)	0.7 (1.0)	0.7 (1.0)	0.7 (1.0)	1.0 (1.2)	1.3 (1.3)	1.0 (1.2)	0.7 (1.0)	0.7 (1.0)	0.3 (0.9)	0.67
6.	T_{6}- IS-321	0.3 (0.9)	0.7 (1.1)	1.0 (1.1)	1.0 (1.1)	1.3 (1.3)	2.0 (1.5)	2.0 (1.5)	2.3 (1.6)	1.7 (1.4)	1.3 (1.3)	1.0 (1.2)	1.33
7.	T_{7}- SI-1156	0.0 (0.7)	0.3 (0.9)	0.7 (1.0)	0.7 (1.0)	1.3 (1.3)	1.3 (1.3)	1.7 (1.4)	1.3 (1.3)	0.7 (1.0)	0.7 (1.0)	0.3 (0.9)	0.82
8.	T_{8}- EC-335011-A	0.3 (0.9)	0.3 (0.9)	0.7 (1.0)	1.3 (1.3)	2.3 (1.6)	2.3 (1.6)	2.0 (1.5)	2.0 (1.5)	1.3 (1.3	1.7 (1.4)	1.0 (1.2)	1.39
9.	T_{9}- EC-334990	0.0 (0.7)	0.3 (0.9)	0.5 (1.0)	0.8 (1.1)	1.0 (1.2)	1.5 (1.4)	1.2 (1.3)	0.8 (1.1)	0.7 (1.1)	0.2 (0.8)	0.0 (0.7)	0.64
10	T_{10}- EC-334989	0.0 (0.7)	0.3 (0.9)	0.3 (0.9)	0.7 (1.1)	1.0 (1.2)	1.3 (1.3)	1.3 (1.3)	1.0 (1.2	0.7 (1.0)	0.3 (0.9)	0.3 (0.9)	0.67
11	T_{11}- ICA-14146-A	0.3 (0.9)	0.3 (0.9)	0.7 (1.1)	0.7 (1.1)	1.3 (1.3)	1.3 (1.3)	1.7 (1.4)	1.0 (1.2)	1.3 (1.3)	1.0 (1.2)	0.7 (1.1)	0.94
12	T_{12}- BC-303427	0.7 (1.0)	0.7 (1.0)	1.3 (1.3)	1.7 (1.4)	2.0 (1.5)	2.3 (1.6)	2.7 (1.7)	1.7 (1.5)	1.3 (1.3)	2.0 (1.5)	1.3 (1.3)	1.61
13	T_{13}- IS-665	0.3 (0.9)	0.3 (0.9)	0.7 (1.1)	1.3 (1.3)	1.7 (1.4)	2.0 (1.5)	2.3 (1.6)	2.0 (1.5)	1.3 (1.3)	1.3 (1.3)	1.0 (1.2)	1.30
14	T_{14}- SI-3234	0. 7 (1.1)	0.7 (1.1)	1.0 (1.2)	1.7 (1.4)	2.3 (1.6)	2.7 (1.7)	2.7 (1.7)	2.3 (1.6)	1.7 (1.4)	2.0 (1.5)	1.0 (1.2)	1.70
15	T_{15}- EC-334280	0.3 (0.9)	0.3 (0.9)	0.7 (1.1)	1.0 (1.2)	1.3 (1.3)	1.7 (1.4)	1.3 (1.3)	1.3 (1.3)	1.0 (1.2)	0.7 (1.1)	0.3 (0.9)	0.91
16	T_{16}- S-0182-I	0.3 (0.9)	0.3 (0.9)	0.7 (1.0)	1.0 (1.2)	1.3 (1.3)	1.7 (1.4)	1.7 (1.4)	1.3 (1.3)	1.0 (1.2)	0.7 (1.0)	0.3 (0.9)	0.94
17	T_{17}- IS-475	0.3 (0.9)	0.3 (0.9)	0.7 (1.0)	0.7 (1.0)	1.0 (1.2)	1.0 (1.2)	1.3 (1.3)	0.7 (1.0)	0.3 (0.9)	0.7 (1.0)	0.7 (1.0)	0.70
18	T_{18}- EC-334983	0.0 (0.7)	0.3 (0.9)	0.3 (0.9)	0.3 (0.9)	0.7 (1.0)	1.0 (1.2)	1.0 (1.2)	0.7 (1.0)	1.0 (1.2)	0.3 (0.9)	0.3 (0.9)	0.55
19	T_{19}- KIS-375	0.3 (0.9)	0.3 (0.9)	0.7 (1.1)	1.0 (1.2)	1.3 (1.3)	1.7 (1.4)	1.7 (1.4)	1.3 (1.3)	1.7 (1.4)	1.3 (1.3)	1.0 (1.2)	1.12
20	T_{20}- Agra-balik	0.0 (0.7)	0.3 (0.9)	0.7 (1.0)	0.3 (0.9)	0.7 (1.0)	1.0 (1.2)	1.3 (1.3)	1.3 (1.3)	1.0 (1.2)	0.3 (0.9)	0.3 (0.9)	0.67
21	T_{21}- IS-100-8	0.3 (0.9)	0.3 (0.9)	0.3 (0.9)	0.7 (1.0)	1.0 (1.2)	1.3 (1.2)	1.7 (1.4)	1.0 (1.2)	0.7 (1.0)	0.7 (1.0)	0.7 (1.0)	0.79
22	T_{22}- SI-1679	0.3 (0.9)	0.3 (0.9)	0.7 (1.1)	1.0 (1.2)	1.3 (1.3)	2.0 (1.5)	2.0 (1.5)	1.7 (1.4)	1.0 (1.2)	1.3 (1.3)	0.7 (1.1)	1.12
23	T_{23}- SI-76-1	0.3 (0.9)	0.3 (0.9)	0.3 (0.9)	0.7 (1.0)	1.0 (1.2)	1.3 (1.3)	1.0 (1.2)	1.0 (1.2)	0.7 (1.0)	0.7 (1.0)	0.7 (1.0)	0.73
24	T_{24}- EC-334984	0.0 (0.7)	0.3 (0.9)	0.3 (0.9)	0.7 (1.0)	0.7 (1.0)	1.0 (1.2)	1.3 (1.3)	1.3 (1.3)	0.7 (1.1)	1.0 (1.2)	0.7 (1.0)	0.73
25	T_{25}- SP-1144	0.3 (0.9)	0.3 (0.9)	0.7 (1.0)	1.0 (1.2)	1.0 (1.2)	1.3 (1.3)	1.3 (1.3)	1.3 (1.3)	1.0 (1.2)	0.7 (1.0)	0.7 (1.0)	0.88
26	T_{26}-IS-723	0.3 (0.9)	0.3 (0.9)	0.7 (1.1)	1.0 (1.2)	1.3 (1.3)	1.7 (1.4)	2.0 (1.5)	2.0 (1.5)	1.3 (1.3)	1.0 (1.2)	0.7 (1.1)	1.12
27	T_{27}- IS-253	0.0 (0.7)	0.3 (0.9)	0.3 (0.9)	0.7 (1.0)	1.0 (1.2)	1.0 (1.2)	1.3 (1.3)	1.3 (1.3)	1.0 (1.2)	0.3 (0.9)	0.3 (0.9)	0.70
28	T_{28}– S-0388	0.3 (0.9)	0.7 (1.0)	0.7 (1.0)	1.3 (1.3)	1.7 (1.4)	2.0 (1.5)	2.3 (1.6)	1.7 (1.4)	1.0 (1.2)	1.7 (1.4)	1.0 (1.2)	1.30
29	T_{29}–ES-75-2-84	0.3(0.9)	0.3(0.9)	0.3(0.9)	0.7(1.0)	1.0(1.2)	1.3(1.3)	1.7(1.4)	1.3(1.3)	1.0(1.2)	0.7(1.0)	0.7(1.0)	0.85
30	T_{30}–ES-334966	0.3(0.9)	0.3(0.9)	0.3(0.9)	0.7(1.0)	1.0(1.2)	1.3(1.3)	1.3(1.3)	1.0(1.2)	0.7(1.1)	0.7(1.0)	0.7(1.0)	0.76
31	T_{31}–ES-81	0.0(0.7)	0.3(0.9)	0.3(0.9)	0.3(0.9)	0.7(1.1)	1.3(1.3)	1.3(1.3)	1.0(1.2)	0.7(1.1)	0.7(1.0)	0.3(0.9)	0.64
32	T_{32}-IC-199443	0.3(0.9)	0.7(1.0)	0.7(1.0)	1.0(1.2)	1.0(1.2)	1.3(1.3)	1.7(1.4)	1.0(1.2)	0.7(1.1)	1.0(1.2)	0.7(1.1)	0.91
33	T_{33}-EC-334995	0.0(0.7)	0.7(1.0)	0.0(0.7)	0.3(0.9)	0.7(1.0)	1.0(1.2)	1.3(1.3)	0.7(1.0)	0.7(1.0)	0.3(0.9)	0.3(0.9)	0.55
34	T_{34}–EC-3349997	0.7(1.1)	1.0(1.2)	1.3(1.3)	1.3(1.3)	2.3(1.6)	2.3(1.6)	2.3(1.6)	2.7(1.7)	1.7(1.4)	2.0(1.5)	1.0(1.2)	1.70
35	T_{35}–KMR-1	0.0(0.7)	0.3(0.9)	0.3(0.9)	0.7(1.1)	1.0(1.2)	1.0(1.2)	1.3(1.3)	1.0(1.2)	1.0(1.2)	0.7(1.1)	0.7(1.1)	0.73
36	T_{36}–ES-62	0.3(0.9)	0.3(0.9)	0.3(0.9)	0.7(1.1)	1.0(1.2)	1.3(1.3)	1.0(1.2)	1.0(1.2)	0.7(1.0)	0.3(0.9)	0.3(0.9)	0.67
37	T_{37}–SI-2192	0.0(0.7)	0.3(0.9)	0.3(0.9)	0.3(0.9)	0.7(1.1)	0.7(1.1)	1.0(1.2)	0.3(0.9)	0.3(0.9)	0.3(0.9)	0.3(0.9)	0.42
38	T_{38}–IS-17	0.3(0.9)	0.3(0.9)	0.7(1.1)	1.0(1.2)	1.0(1.2)	1.3(1.3)	1.7(1.4)	1.3(1.3)	1.3(1.3)	1.0(1.2)	0.7(1.0)	0.97
39	T_{39}–IS-722-2-84	0.7(1.0)	1.0(1.2)	1.3(1.3)	1.7(1.4)	2.0(1.5)	2.3(1.6)	2.3(1.6)	2.7(1.7)	1.7(1.5)	2.0(1.5)	1.0(1.2)	1.70
40	T_{40}–IS-3179	0.3(0.9)	0.3(0.9)	0.7(1.1)	1.0(1.2)	1.0(1.2)	1.3(1.3)	1.7(1.4)	1.0(1.2)	0.7(1.0)	0.7(1.1)	0.7(1.1)	0.85
41	T_{41}-IS-446-1-64	0.0(0.7)	0.3(0.9)	0.3(0.9)	0.7(1.1)	0.7(1.1)	1.0(1.2)	1.0(1.2)	0.7(1.0)	0.3(0.9)	0.3(0.9)	0.3(0.9)	0.52
42	T_{42}-IS-391	0.3(0.9)	0.3(0.9)	0.7(1.1)	1.0(1.2)	1.3(1.3)	1.7(1.4)	1.7(1.4)	1.3(1.3)	1.3(1.3)	1.0(1.2)	0.7(1.1)	1.03
43	T_{43}-EC-303440-B	0.0(0.7)	0.3(0.9)	0.3(0.9)	0.3(0.9)	0.7(1.0)	1.0(1.2)	1.3(1.3)	0.7(1.1)	0.3(0.9)	0.3(0.9)	0.3(0.9)	0.52
44	T_{44}-IS-461-1-84-I	0.3(0.9)	0.7(1.1)	1.0(1.2)	1.7(1.4)	2.0(1.5)	2.0(1.5)	2.0(1.5)	2.0(1.5)	1.0(1.2)	1.3(1.3)	1.0(1.2)	1.36
45	T_{45}-ES-335005	0.0(0.7)	0.3(0.9)	0.3(0.9)	0.7(1.1)	0.7(1.1)	1.0(1.2)	1.0(1.2)	1.0(1.2)	0.7(1.1)	0.7(1.1)	0.3(0.9)	0.61
46	T_{46}-NIC-163-88	0.3(0.9)	0.7(1.0)	1.0(1.2)	1.3(1.3)	2.0(1.5)	2.3(1.6)	2.0(1.5)	2.3(1.6)	1.7(1.4)	1.7(1.4)	1.0(1.2)	1.48
47	T_{47}-SI-995	0.0(0.7)	0.3(0.9)	0.3(0.9)	0.7(1.0)	0.7(1.0)	1.0(1.2)	1.0(1.2)	0.7(1.1)	0.3(0.9)	0.7(1.0)	0.3(0.9)	0.55
48	T_{48}-SI-1345	0.3(0.9)	0.3(0.9)	0.3(0.9)	0.7(1.0)	1.3(1.3)	1.3(1.3)	1.3(1.3)	1.3(1.3)	1.0(1.2)	1.3(1.3)	0.7(1.0)	0.91
49	T_{49}-SI-63	0.7(1.0)	0.7(1.0)	1.0(1.2)	1.7(1.4)	2.3(1.6)	2.3(1.6)	2.7(1.7)	2.7(1.7)	2.0(1.5)	1.7(1.4)	1.3(1.3)	1.73
50	T_{50}-EC-334993	0.7(1.1)	0.7(1.1)	1.2(1.3)	2.2(1.6)	2.3(1.7)	3.5(2.0)	3.7(2.0)	2.7(1.8)	2.7(1.7)	2.3(1.6)	2.0(1.6)	2.17
51	T_{51}-SI-250(RC)	0.0(0.7)	0.2(0.8)	0.2(0.8)	0.2(0.8)	0.3(0.9)	0.8(1.1)	0.3(0.9)	0.5(1.0)	0.2(0.8)	0.2(0.8)	0.0(0.7)	0.26
52	T_{52}-IS-178-C	0.0(0.7)	0.2(0.8)	0.3(0.9)	0.5(1.0)	0.7(1.1)	0.8(1.1)	0.3(0.9)	0.7(1.0)	0.2(0.8)	0.2(0.8)	0.2(0.8)	0.36
53	T_{53}-Prachi	1.2(1.3)	1.5(1.4)	2.8(1.8)	1.5(1.4)	5.0(2.3)	4.8(2.2)	4.3(2.2)	4.3(2.2)	3.5(2.0)	2.7(1.8)	1.7(1.5)	3.03
54	T_{54}-TC-25(SC)	0.8(1.1)	1.3(1.3)	2.3(1.7)	1.7(1.5)	3.7(2.0)	4.4(2.2)	4.7(2.3)	3.3(1.9)	2.5(1.7)	2.3(1.7)	2.2(1.6)	2.66
Mean		0.3	0.5	0.7	1.0	1.4	1.7	1.8	1.5	1.1	1.0	0.7	
DifferencebetweenTreatments					SEm±		0.10		CD (P=0.05%)		0.28		
Differencebetween Periodsof observation					SEm±		0.05		CD (P=0.05%)		0.13		
DifferencebetweenTreatments xPeriods ofobservation					SEm±		0.35		CD (P=0.05%)		0.97		

DAS*= Days after Sowing; **figures in parentheses are square root transformed values.

Screening of sesame genotypes on the basis of larval population of *Antigastra catalaunalis*/plant/week

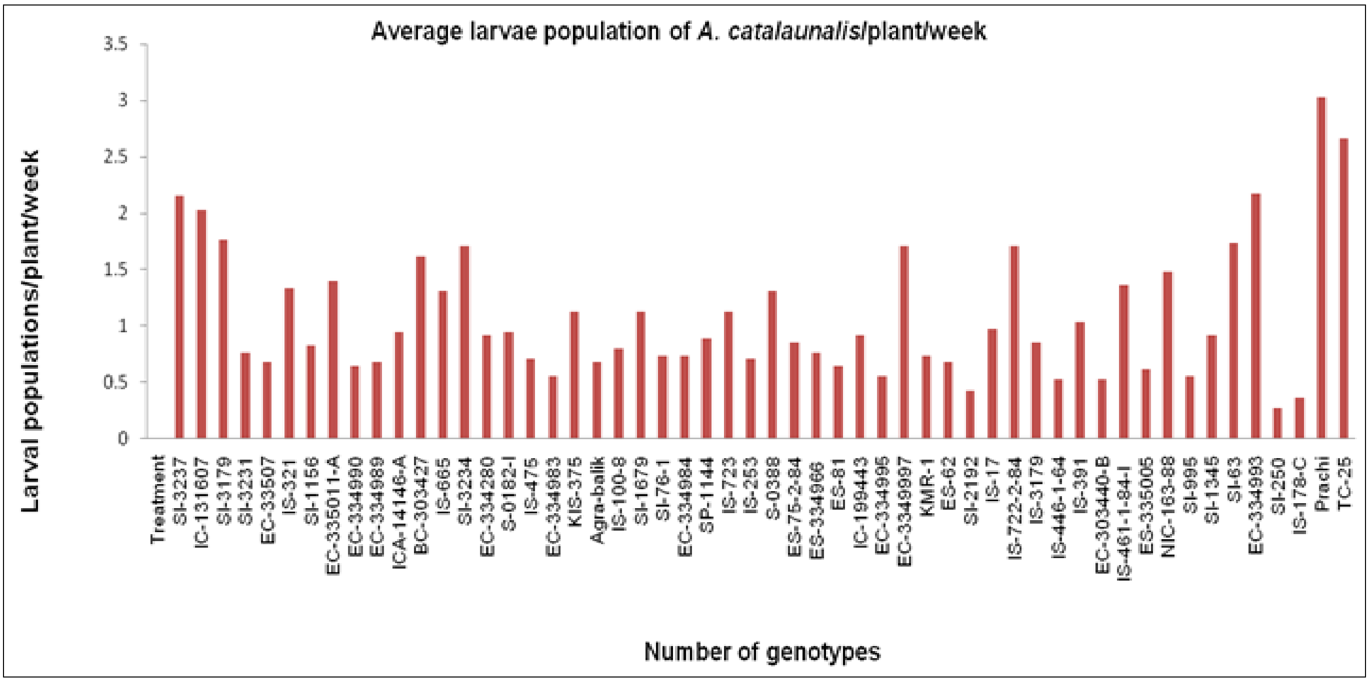

Fig. 1: Graphical representation of the mean number of larvae per plant in different sesame genotypes during Kharif, 2017-2018.

Conclusion

On the basis of above results it can be concluded that the entries SI-250, IS-178-C, SI-2192, IS-446-1-64 and EC-303440-B were found tolerant against leaf webber and capsule borer. These entries may be included in the resistance breeding programme after further screening under artificial pest load condition.

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