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Study the response of different genotypes of sesame against larval population of leaf webber and capsule borer [*Antigastra catalaunalis*, Dup.]

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Abstract
A study was conducted at experimental farm of PC Unit, Sesame and Niger, College of Agriculture, JNKVV, Jabalpur, Madhya Pradesh, during *Kharif* 2021. Seventy five diverse genotypes of sesame were screened against leaf webber and capsule borer (*Antigastra catalaunalis* Dup.). The larval population of leaf webber and capsule borer was recorded at weekly intervals started from one week after germination to till maturity of the crop. The highest mean number of larvae per plant was recorded in genotype Prachi (3.10 larvae/plant/week) followed by JTS-8 (2.67 larvae/plant/week) and IC-204200 (2.47 larvae/plant/week). The average number of larvae (0.60 larvae/plant/week) was recorded lowest in SI-250 followed by IS-1672 (1.03 larvae/plant/week) and TKG-306 (1.23 larvae/plant/week). The observation recorded at an interval of seven days varied significantly from each other in respect of average number of larvae per plant. The highest larval population was recorded in between 49th (3.50 larvae/plant) and 56th (3.07 larvae/plant) day after sowing which was coincide with the flowering and capsule formation stage of the crop.

Keywords: Screening of sesame genotypes**,** leaf webber and capsule bore, larval population, resistance/susceptible genotypes, *Antigastra catalaunalis*

Introduction
Sesame (*Sesamum indicum* L.), known as the "queen of oil seeds," is one of the oldest oilseed crop known globally and is cultivated extensively throughout the India. It belongs to the family Pedaliaceae. Both East Africa and India are considered its native regions (Nayar and Mehra, 1970; Bedigian, 1985) [5, 1]. The crop popularity has increased due to its high-quality edible oil and its rich content of carbohydrates, protein, calcium, and phosphorus (Seegeler, 1983) [7]. However, sesame faces significant challenges from various insect pests, more than 67 species of insect pests reported to damage the crop from germination to maturity. Among these, leaf webber and capsule borer, *Antigastra catalaunalis* (Dup.) is the most critical pest, which attacks on sesame at all growth stages starting about two weeks post-emergence (Suliman *et al*., 2004) [9]. This pest affects almost all parts of the plant (Shoot, leaf, flower, and capsule) and under severe early-stage attacks, it can cause complete crop failure (Karuppaiah, 2014) [3]. The damage is notably more severe during dry seasons and after flowering has begun. To manage *A. catalaunalis* effectively, cultivar resistance is seen as the most desirable and economical tactic. This approach is an excellent alternative to synthetic insecticides, offering an eco-friendly and environmentally safe strategy. Therefore, identifying resistant sesame genotypes to *A. catalaunalis* is essential for sustainable pest management.

Materials and Methods
The experiment was conducted at the Experimental farm ICAR-Project Coordinating Unit Sesame and Niger, College of Agriculture, Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur (Madhya Pradesh) during the *Kharif* season of 2021 aimed to evaluate 75 different genotypes of sesame against leaf webber and capsule borer. Jabalpur, situated in the agro-climatic zone of Kymore Plateau and Satpura Hills, has specific geographical coordinates and altitude that influence its agricultural characteristics.

Sesame seeds were sown in rows of three-meter length, replicated thrice using a randomized block design. The spacing between rows was maintained at 30 cm, while the distance between individual plants within a row was kept at 10 cm. This arrangement allows for systematic observation and assessment of each genotype's performance. To monitor the infestation of insect pests, particularly the larval populations of the leaf webber and capsule borer, weekly observations were conducted starting from one week after germination and continuing until crop maturity. Larval populations were recorded from five randomly selected plants representing each genotype. This rigorous monitoring process provides valuable data on the susceptibility of different genotypes to pest infestations and helps in identifying potentially resistant varieties/donor. Overall, this experiment will helps to provides valuable insights for evaluation of different sesame genotypes against leaf webber and capsule borer and providing resistance donor for the development of improved cultivars for sustainable sesame cultivation.

Results and Discussion

Seventy five diverse genotypes of sesame were screened against leaf webber and capsule borer on the basis larval population per plant under natural infestation condition (Field condition). The data on larval population are presented in (Table 1). The significant differences among the genotypes in terms of average number of larvae per plant per week were observed. The larval population of leaf webber and capsule borer was observed from 10 days after sowing (14 DAS) but the incidence on almost all the entries at this stage of the crop growth was low and varying from 0.00 to 2.67 larvae/plant. The incidence of leaf webber and capsule borer was increased as the crop age was increasing. At initial stage (14th DAS) the mean weekly larval population per plant was very low 0.34 larvae/plant, which was gradually increased as the crop age was increased as 10.3 larvae/plant to 1.85, 2.20 and 2.84 larvae/plant at 21, 28, 35, 42 days after sowing respectively. The highest weekly mean population (3.50 and 3.07 larvae/plant) of leaf webber and capsule borer was observed on 49 to 56th days after sowing and coincide with the flowering to capsule formation stage of the crop. At this stage, 42nd and 49th days after sowing the larval population was varied from 1.00 to 4.33 and 0.67 to 5.00 larvae/plant respectively. Present findings are corroborated with the findings of Makwana *et al*., (2021) [4] they screened different genotypes of sesame on the basis of number of larvae/plant/week. They observed the maximum incidence on 56th DAS (1.82 larvae/ plant) and minimum was recorded on 14th DAS (0.28 larvae/ plant). 56th days after sowing the declined trend in weekly mean population of leaf webber and capsule borer was observed.

The results of overall mean larval population observed in different weeks on different genotypes revealed that all the genotypes were differed significantly to each other in respect to record the overall mean larval population of *A. catalaunalis* per plant per week. The average larval population of leaf webber and capsule borer recorded on different genotypes were ranged from 0.60 to 3.10 larvae/plant/week. Among the screened genotypes the lowest mean larval population (0.75 larvae/plant/week) was recorded on genotype SI-250 followed by (1.03 larvae/plant/week) IS-1672 and TKG-22 (1.15 larvae/plant/week). The highest mean number of larvae per plant per week was recorded on genotype Prachi (2.98 larvae/plant/week) followed by (2.47 larvae/plant/week) IC-204200 and JTS-8 (2.27 larvae/plant/week). The findings reported by Choudhary *et al*., (2018) [2] regarding the mean larval population of *A. catalaunalis*, ranging from 3.04 to 6.58 per five plants across different genotypes, support the observations made in the present study. These findings indicate the variability in susceptibility to infestation by the sesame leaf webber and capsule borer among different sesame genotypes. Other entries which recorded less larval population of leaf webber and capsule borer were BM-59 (1.30 larvae/plant/week), T_{71} -TKG-21 (1.32 larvae/plant/week), S-0644 (1.33 larvae/plant). Present findings are corroborated with the findings of Makwana *et al*., (2021) [4] they screened different genotypes of sesame on the basis of number of larvae/plant/week. They also recorded the least larval population (0.26 larvae/ plant/ week) on SI-250 followed by IS-178-C (0.36 larvae/ plant/ week). Among the screened genotypes, the genotypes *viz*., SI- 250 RC (0.75 larvae/plant/week), IS-1672 (1.03 larvae/plant/week), TKG-22 (1.15 larvae/plant/week), were found promising against leaf webber and capsule borer and may be utilized in resistance breeding programme for the development of resistant variety against leaf webber and capsule borer.

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

S. No.	Genotypes	Average larvae population *of A. catalaunalis*/plant/week Period of observations										
		14 *	21	28	35	42	49	56	63	70	77	Mean
1.	T_{1}- 75-120	0.00 (0.71)	0.33 (0.88)	1.67 (1.44)	2.00 (1.56)	2.33 (1.64)	3.33 (1.93)	2.00 (1.56)	1.33 (1.34)	0.67 (1.05)	0.33 (0.88)	1.40 (1.36)
2.	T_2 - BM-59	0.00 (0.71)	0.00 (0.71)	1.33 (1.34)	2.33 (1.68)	2.67 (1.77)	3.00 (1.86)	1.67 (1.46)	1.33 (1.34)	0.67 (1.05)	0.00 (0.71)	1.30 (1.34)
3.	T_3 –EC 303304	0.67 (1.05)	1.00 (1.22)	1.67 (1.46)	2.67 (1.76)	2.67 (1.74)	3.67 (2.03)	2.33 (1.68)	1.67 (1.46)	1.00 (1.22)	0.33 (0.88)	1.77 (1.50)
4.	T_4 -EC-303441-B	0.00 (0.71)	1.33 (1.34)	2.33 (1.68)	2.67 (1.77)	3.33 (1.95)	3.67 (2.00)	2.67 (1.76)	1.33 (1.34)	0.33 (0.88)	0.00 (0.71)	1.77 (1.50)
5.	T_5 - EC-334976	0.00 (0.71)	1.67 (1.46)	2.00 (1.56)	3.00 (1.86)	4.00 (2.11)	3.33 (1.93)	2.67 (1.76)	1.67 (1.44)	1.33 (1.34)	0.33 (0.88)	2.00 (1.57)
6.	T_6 -EC-334981-A	0.00 (0.71)	1.33 (1.34)	3.00 (1.86)	3.33 (1.94)	3.33 (1.90)	4.33 (2.20)	3.33 (1.95)	2.33 (1.68)	1.33 (1.34)	0.67 (1.05)	2.30 (1.67)
7.	T_7 -ES-47	0.00 (0.71)	0.00 (0.71)	2.00 (1.56)	2.67 (1.77)	3.00 (1.87)	3.33 (1.93)	2.33 (1.64)	1.67 (1.44)	1.00 (1.17)	0.33 (0.88)	1.63 (1.46)
8.	T_8 - ES-334974	1.67 (1.46)	2.00 (1.58)	3.00 (1.86)	3.67 (2.04)	3.00 (1.86)	3.67 (2.03)	2.00 (1.56)	1.33 (1.34)	0.33 (0.88)	0.33 (0.88)	2.10 (1.61)

9.	T_9 - ES-52-1-84	0.67 (1.05)	1.00 (1.17)	2.67 (1.76)	3.33 (1.94)	3.33 (1.95)	4.00 (2.11)	2.00 (1.56)	1.33 (1.34)	0.67 (1.05)	0.33 (0.88)	1.93 (1.55)
10.	T_{10} - GRT-8245	0.33 (0.88)	0.67 (1.05)	2.33 (1.68)	3.33 (1.95)	3.67 (2.04)	4.00 (2.11)	2.67 (1.77)	1.67 (1.46)	0.67 (1.05)	0.00 (0.71)	1.93 (1.56)
11.	T_{11} - GRT-839-A	0.00 (0.71)	0.67 (1.05)	2.67 (1.76)	3.00 (1.86)	3.33 (1.94)	3.00 (1.86)	2.33 (1.68)	1.67 (1.46)	1.00 (1.22)	0.33 (0.88)	1.80 (1.51)
12.	T_{12} - GRT-8330-B	0.00 (0.71)	0.67 (1.05)	2.00 (1.56)	1.33 (1.34)	2.67 (1.77)	5.00 (2.34)	3.67 (2.04)	2.33 (1.68)	1.33 (1.34)	0.33 (0.88)	1.93 (1.56)
13.	T_{13} - IC-1025-A	0.00 (0.71)	0.00 (0.71)	2.33 (1.64)	3.00 (1.86)	3.00 (1.86)	2.33 (1.60)	1.67 (1.44)	1.33 (1.34)	0.33 (0.88)	0.33 (0.88)	1.43 (1.38)
14.	T_{14} - IC-131943	0.00 (0.71)	1.33 (1.34)	3.00 (1.84)	3.33 (1.93)	3.00 (1.86)	4.67 (2.27)	2.67 (1.77)	2.00 (1.56)	0.67 (1.05)	0.33 (0.88)	2.10 (1.60)
15.	T_{15} - IC-204200	1.00 (1.22)	1.67 (1.44)	3.33 (1.95)	3.67 (2.04)	4.00 (2.11)	4.67 (2.26)	3.00 (1.86)	2.33 (1.68)	0.67 (1.05)	0.33 (0.88)	2.47 (1.72)
16.	T_{16} - IC-204550	0.33 (0.88)	1.33 (1.34)	3.00 (1.86)	3.33 (1.95)	3.33 (1.94)	3.33 (1.93)	2.00 (1.56)	1.67 (1.46)	1.00 (1.22)	0.33 (0.88)	1.97 (1.57)
17.	T_{17} - IC-132186-A	0.00 (0.71)	0.33 (0.88)	3.00 (1.86)	3.33 (1.95)	3.67 (2.04)	4.67 (2.26)	3.33 (1.95)	2.33 (1.68)	1.00 (1.17)	0.67 (1.05)	2.23 (1.65)
18.	T_{18} - IC-204832-A	0.00 (0.71)	1.67 (1.46)	3.33 (1.95)	3.33 (1.95)	3.33 (1.93)	3.67 (2.03)	2.33 (1.66)	1.67 (1.46)	0.67 (1.05)	0.33 (0.88)	2.03 (1.59)
19.	T_{19} - IS-245	0.00 (0.71)	1.00 (1.22)	2.67 (1.72)	3.00 (1.84)	2.67 (1.76)	4.00 (2.12)	2.67 (1.77)	1.67 (1.46)	0.00 (0.71)	0.00 (0.71)	1.77 (1.50)
20.	T_{20} - IS-294	0.33 (0.88)	1.67 (1.44)	2.33 (1.68)	3.33 (1.95)	3.67 (2.03)	2.67 (1.77)	2.33 (1.68)	1.33 (1.34)	0.33 (0.88)	0.33 (0.88)	1.83 (1.53)
21.	T_{21} - IS-722-1	1.00 (1.17)	1.33 (1.34)	2.00 (1.56)	2.67 (1.77)	2.67 (1.77)	2.00 (1.56)	1.67 (1.46)	1.33 (1.34)	0.67 (1.05)	0.33 (0.88)	1.57 (1.44)
22.	T_{22} - IS-1672	1.33 (1.34)	1.67 (1.46)	3.33 (1.95)	3.67 (2.04)	3.67 (2.02)	4.33 (2.20)	4.00 (2.11)	3.00 (1.86)	1.00 (1.17)	0.67 (1.05)	1.03 (1.24)
23.	T_{23} - IS-3051	0.00 (0.71)	1.00 (1.22)	1.67 (1.46)	2.67 (1.76)	2.33 (1.68)	4.00 (2.10)	2.33 (1.64)	1.33 (1.27)	0.33 (0.88)	0.00 (0.71)	1.57 (1.43)
24.	T_{24} - IS-3131	0.33 (0.88)	1.33 (1.34)	2.33 (1.68)	3.00 (1.86)	2.67 (1.77)	3.33 (1.95)	2.00 (1.56)	1.00 (1.22)	0.33 (0.88)	0.00 (0.71)	1.63 (1.46)
25.	T_{25} - IS-265-B	0.00 (0.71)	1.33 (1.34)	2.00 (1.56)	2.67 (1.77)	3.33 (1.95)	3.33 (1.95)	2.33 (1.68)	1.33 (1.34)	0.33 (0.88)	0.33 (0.88)	1.70 (1.48)
26.	T_{26} -IS-319-B	0.00 (0.71)	1.00 (1.22)	2.33 (1.68)	2.67 (1.77)	3.33 (1.93)	5.33 (2.41)	3.33 (1.95)	2.00 (1.56)	1.00 (1.17)	1.00 (1.17)	2.20 (1.64)
27.	T_{27} - IS-526-2-84-B	1.67 (1.46)	1.67 (1.46)	2.00 (1.56)	2.00 (1.56)	1.67 (1.46)	3.33 (1.93)	2.00 (1.56)	1.33 (1.34)	1.33 (1.34)	1.33 (1.34)	1.83 (1.52)
28.	T_{28} - KIS-306	0.00 (0.71)	1.33 (1.34)	2.00 (1.56)	2.67 (1.77)	3.33 (1.90)	4.00 (2.11)	2.67 (1.77)	1.33 (1.34)	0.33 (0.88)	0.33 (0.88)	1.80 (1.51)
29.	T_{29} - KMR-48-A	0.00 (0.71)	1.00 (1.22)	2.33 (1.68)	2.67 (1.77)	3.33 (1.93)	3.00 (1.81)	2.00 (1.56)	1.33 (1.34)	0.67 (1.05)	0.33 (0.88)	1.67 (1.47)
30.	T_{30} - KMR-49	0.00 (0.71)	0.33 (0.88)	3.00 (1.86)	3.33 (1.95)	3.67 (2.04)	4.33 (2.20)	3.00 (1.86)	1.67 (1.46)	0.67 (1.05)	0.67 (1.05)	2.07 (1.60)
31.	T_{31} -KMR-53	0.00 (0.71)	0.67 (1.05)	2.00 (1.56)	2.33 (1.68)	1.33 (1.34)	3.00 (1.86)	2.33 (1.68)	1.67 (1.46)	0.33 (0.88)	0.33 (0.88)	1.40 (1.38)
32.	T_{32} - KMR- 74	0.67 (1.05)	1.33 (1.34)	3.33 (1.95)	2.00 (1.56)	3.00 (1.86)	3.67 (2.04)	2.33 (1.68)	2.00 (1.58)	0.67 (1.05)	0.67 (1.05)	1.97 (1.57)
33.	T_{33} - KMR-79-B	0.00 (0.71)	0.67 (1.05	3.67 (2.04)	3.33 (1.95)	2.33 (1.66)	3.33 (1.95)	2.00 (1.56)	1.33 (1.34)	0.33 (0.88)	0.33 (0.88)	1.73 (1.49)
34.	T_{34} - KMR-83-A	0.00 (0.71)	0.67 (1.05)	3.00 (1.86)	3.00 (1.86)	3.00 (1.86)	4.33 (2.18)	2.67 (1.77)	1.67 (1.46)	0.33 (0.88)	0.00 (0.71)	1.87 (1.54)
35.	T_{35} - NAL/78/3041431/2	0.33 (0.88)	1.00 (1.17)	2.00 (1.52)	2.67 (1.76)	3.00 (1.81)	4.33 (2.20)	2.33 (1.68)	1.67 (1.46)	0.00 (0.71)	0.00 (0.71)	1.73 (1.48)
36.	T_{36} - NIC-7935	0.67 (1.05)	1.33 (1.27)	3.00 (1.86)	3.00 (1.86)	2.67 (1.74)	3.33 (1.95)	2.00 (1.56)	1.00 (1.17)	0.67 (1.05)	0.67 (1.05)	1.83 (1.52)
37.	T_{37} - NIC-8164	0.00 (0.71)	1.00 (1.22)	1.33 (1.34)	2.33 (1.68)	3.33 (1.95)	4.33 (2.18)	2.00 (1.56)	1.67 (1.46)	0.67 (1.05)	0.33 (0.88)	1.70 (1.48)
38.	T_{38} - NIC-8368	0.00 (0.71)	1.00 (1.17)	1.33 (1.34)	2.33 (1.68)	3.33 (1.95)	3.00 (1.82)	2.00 (1.56)	1.67 (1.46)	0.33 (0.88)	0.33 (0.88)	1.53 (1.42)
39.	T_{39} - NIC-8463	1.33 (1.34)	1.33 (1.34)	2.67 (1.77)	3.00 (1.86)	3.33 (1.95)	3.00 (1.84)	2.33 (1.64)	2.00 (1.58)	0.67 (1.05)	0.33 (0.88)	2.00 (1.57)
40.	T_{40} - NIC-8473	0.67 (1.05)	1.00 (1.22)	1.33 (1.34)	2.33 (1.68)	1.33 (1.34)	3.00 (1.86)	2.67 (1.77)	1.67 (1.46)	0.33 (0.88)	0.33 (0.88)	1.47 (1.40)
41.	T_{41} - NIC-8502	0.33 (0.88)	1.33 (1.34)	1.67 (1.46)	2.33 (1.68)	3.00 (1.86)	3.00 (1.86)	2.67 (1.76)	2.00 (1.58)	0.67 (1.05)	0.67 (1.05)	1.77 (1.50)
42.	T_{42} - NIC-16248	0.33 (0.88)	0.67 (1.05)	1.67 (1.46)	2.33 (1.68)	2.67 (1.77)	2.67 (1.72)	2.00 (1.56)	1.33 (1.34)	0.33 (0.88)	0.33 (0.88)	1.43 (1.39)
43.	T_{43} - NIC-16256	0.33 (0.88)	0.67 (1.05)	1.33 (1.34)	2.33 (1.68)	3.00 (1.86)	3.33 (1.95)	2.33 (1.68)	2.00 (1.58)	1.00 (1.22)	0.33 (0.88)	1.67 (1.47)

44.	T_{44} -NIC-17452	0.67 (1.05)	1.33 (1.34)	2.00 (1.58)	2.67 (1.76)	3.33 (1.95)	3.00 (1.84)	1.67 (1.44)	1.33 (1.34)	0.33 (0.88)	0.33 (0.88)	1.67 (1.46)
45.	T_{45} -NIC-17930	0.00 (0.71)	0.67 (1.05)	1.67 (1.46)	2.67 (1.77)	3.00 (1.86)	3.67 (2.04)	3.00 (1.86)	2.33 (1.68)	0.33 (0.88)	0.33 (0.88)	1.77 (1.50)
46.	T_{46} - NIC-16227-A	0.00 (0.71)	0.67 (1.05)	1.67 (1.46)	2.33 (1.68)	3.33 (1.95)	3.67 (2.02)	2.67 (1.74)	2.00 (1.56)	0.67 (1.05)	0.67 (1.05)	1.77 (1.50)
47	T_{47} - NIC-16387-A	0.00 (0.71)	0.67 (1.05)	2.00 (1.56	2.33 (1.68)	2.67 (1.74)	3.33 (1.94)	3.00 (1.86)	2.67 (1.74)	1.33 (1.29)	1.33 (1.29)	1.93 (1.54)
48.	T_{48} - NIC-8224-A	0.67 (1.05)	1.33 (1.34)	2.33 (1.68)	2.67 (1.77)	2.67 (1.77)	4.00 (2.10)	2.67 (1.76)	2.00 (1.56)	0.67 (1.05)	0.67 (1.05)	1.97 (1.57)
49.	T_{49} - NIC-8423-B	1.33 (1.34)	2.00 (1.56)	2.33 (1.68)	3.00 (1.87)	2.67 (1.74)	3.33 (1.90)	2.00 (1.56)	1.67 (1.46)	0.33 (0.88)	0.33 (0.88)	1.90 (1.55)
50.	T_{50} - NIC-B-240-A	0.00 (0.71)	0.67 (1.05)	1.33 (1.34)	2.67 (1.76)	3.33 (1.95)	3.33 (1.94)	2.00 (1.56)	1.67 (1.46)	0.00 (0.71)	0.00 (0.71)	1.50 (1.41)
51.	T_{51} - RJS-146-1-84	0.33 (0.88)	0.67 (1.05)	1.00 (1.22)	2.33 (1.68)	2.33 (1.68)	3.67 (2.04)	2.33 (1.68)	2.00 (1.58)	0.67 (1.05)	0.33 (0.88)	1.57 (1.44)
52.	T_{52} - RJS-147-1-84-B	0.00 (0.71)	0.67 (1.05)	1.33 (1.27)	1.67 (1.44)	3.67 (2.04)	4.00 (2.11)	2.00 (1.56)	1.67 (1.44)	1.00 (1.17)	0.67 (1.05)	1.67 (1.46)
53.	T_{53} - S-0271	0.67 (1.05)	1.33 (1.34)	2.33 (1.68)	2.00 (1.58)	3.67 (2.04)	3.00 (2.03)	2.00 (1.56)	1.33 (1.34)	0.33 (0.88)	0.33 (0.88)	1.77 (1.50)
54.	T_{54} - S-0292	0.00 (0.71)	0.67 (1.05)	1.67 (1.46)	2.67 (1.76)	3.33 (1.95)	3.33 (1.84)	2.00 (1.52)	1.67 (1.44)	0.33 (0.88)	0.33 (0.88)	1.57 (1.42)
55.	T_{55} - S-0301	0.33 (0.88)	0.67 (1.05)	1.67 (1.46)	2.33 (1.68)	3.00 (1.86)	3.33 (1.93)	2.00 (1.56)	1.33 (1.34)	0.67 (1.05)	0.67 (1.05)	1.60 (1.45)
56.	T_{56} - S-0314	0.00 (0.71)	0.67 (1.05)	1.33 (1.34)	2.67 (1.77)	3.00 (1.86)	3.67 (2.04)	2.33 (1.68)	2.00 (1.58)	0.67 (1.05)	0.67 (1.05)	1.70 (1.48)
57.	T_{57} - S-0351	0.67 (1.05)	1.33 (1.34)	1.67 (1.46)	2.67 (1.76)	2.33 (1.68)	3.33 (1.95)	1.67 (1.46)	1.33 (1.34)	0.67 (1.05)	0.67 (1.05)	1.63 (1.46)
58.	T_{58} - S-0484	0.67 (1.00)	1.33 (1.34)	2.00 (1.56)	2.33 (1.68)	3.33 (1.95)	4.00 (2.11)	2.67 (1.77)	1.67 (1.46)	0.33 (0.88)	0.33 (0.88)	1.87 (1.54)
59.	T_{59} - S-0644	0.67 (1.05)	0.67 (1.05)	1.33 (1.34)	2.67 (1.77)	1.67 (1.44)	2.67 (1.77)	1.67 (1.46)	1.33 (1.34)	0.33 (0.88)	0.33 (0.88)	1.33 (1.35)
60.	T_{60} - SI-3257	0.33 (0.88)	1.00 (1.22)	1.33 (1.34)	2.33 (1.68)	2.67 (1.77)	3.33 (1.95)	2.33 (1.66)	1.67 (1.46)	0.67 (1.05)	0.67 (1.05)	1.63 (1.46)
61.	T_{61} - SI-3274	0.33 (0.88)	0.67 (1.05)	2.00 (1.56)	2.67 (1.77)	3.33 (1.93)	3.67 (2.02)	2.00 (1.56)	1.33 (1.34)	0.67 (1.05)	0.33 (0.88)	1.70 (1.48)
62.	T_{62} - SI-3100	0.00 (0.71)	0.83 (1.15)	2.00 (1.57)	2.33 (1.68)	2.50 (1.71)	3.67 (2.04)	3.00 (1.87)	1.50 (1.41)	0.67 (1.05)	0.50 (0.98)	1.70 (1.48)
63.	T_{63} - SI-1004-B	0.00 (0.71)	0.83 (1.12)	1.50 (1.39)	2.17 (1.63)	3.00 (1.87)	3.67 (2.03)	3.50 (1.99)	1.33 (1.34)	0.83 (1.10)	0.17 (0.80)	1.70 (1.48)
64.	T_{64} - SI-3315-6-1	0.17 (0.80)	0.67 (1.07)	1.50 (1.41)	2.33 (1.68)	2.67 (1.76)	4.33 (2.20)	3.83 (2.08)	1.67 (1.46)	0.33 (0.88)	0.17 (0.80)	1.77 (1.50)
65.	T_{65} - SI-7817-B	0.50 (0.94)	1.00 (1.21)	1.83 (1.53)	1.83 (1.53)	2.83 (1.82)	3.17 (1.91)	3.33 (1.96)	1.67 (1.47)	0.67 (1.05)	0.50 (0.98)	1.73 (1.49)
66.	T_{66} - TC-30	0.00 (0.71)	0.83 (1.15)	1.17 (1.29)	1.67 (1.46)	1.50 (1.41)	2.83 (1.82)	1.50 (1.41)	1.83 (1.53)	0.67 (1.07)	0.50 (0.98)	1.82 (1.52)
67.	T_{67} - VCR/81/NO/80/NS/972	0.00 (0.71)	0.50 (0.98)	1.83 (1.53)	2.00 (1.58)	3.00 (1.87)	3.67 (2.04)	3.00 (1.87)	1.17 (1.29)	0.67 (1.05)	0.33 (0.90)	1.62 (1.45)
68.	T_{68} - SI- 250 RC	0.00 (0.71)	0.00 (0.71)	0.83 (1.15)	1.50 (1.39)	1.17 (1.29)	1.50 (1.41)	1.17 (1.29)	1.00 (1.22)	0.33 (0.88)	0.00 (0.71)	0.75 (1.12)
69.	T_{69} - TC-25 SC	1.50 (1.41)	1.33 (1.35)	1.67 (1.46)	1.83 (1.53)	2.00 (1.58)	1.83 (1.53)	2.17 (1.63)	0.50 (0.98)	0.67 (1.05)	0.17 (0.80)	2.50 (1.78)
70.	T_{70} - JTS-8	0.50 (0.98)	1.00 (1.21)	2.17 (1.63)	2.00 (1.58)	3.00 (1.87)	3.50 (1.99)	3.50 (1.99)	1.67 (1.46)	0.67 (1.00)	0.17 (0.80)	2.27 (1.66)
71.	T_{71} -TKG-21	1.50 (1.41)	1.33 (1.35)	1.33 (1.34)	2.17 (1.63)	2.17 (1.62)	1.33 (1.35)	1.33 (1.35)	1.17 (1.29)	0.67 (1.05)	0.17 (0.80)	1.32 (1.35)
72.	T_{72} -TKG-22	1.67 (1.47)	1.33 (1.35)	1.17 (1.29)	1.83 (1.53)	1.00 (1.22)	1.50 (1.41)	1.67 (1.46)	0.67 (1.07)	0.33 (0.88)	0.33 (0.88)	1.15 (1.28)
73.	T_{73} -TKG-306	1.67 (1.46)	1.17 (1.29)	1.17 (1.29)	2.00 (1.58)	1.83 (1.53)	1.00 (1.21)	1.67 (1.47)	0.67 (1.05)	0.33 (0.88)	0.17 (0.80)	2.07 (1.63)
74.	T_{74} - TKG-308	1.00 (1.22)	1.50 (1.41)	2.33 (1.68)	2.33 (1.68)	3.50 (1.99)	4.17 (2.16)	4.17 (2.16)	2.17 (1.63)	1.00 (1.17)	0.50 (0.98)	1.88 (1.54)
75.	T_{75} - Prachi	2.17 (1.62)	2.17 (1.62)	2.33 (1.68)	3.17 (1.87)	4.33 (2.20)	4.50 (2.23)	5.00 (2.34)	3.00 (1.87)	2.67 (1.77)	1.83 (1.50)	2.98 (1.87)
	Mean	0.34	1.03	1.85	2.20	2.84	3.50	3.07	1.51	0.64	0.33	1.73
	SEm±	0.10	0.11	0.12	0.11	0.12	0.14	0.11	0.10	0.14	0.13	0.05
	CD (p =0.05)	0.27	0.32	0.32	0.30	0.34	0.39	0.31	0.28	0.38	0.37	0.16

*Figures within parentheses are square root transformed values, *Days after Sowing

Conclusion

The significant difference among the genotypes in terms of average number of larvae per plant per week was observed. The overall mean population of *A. catalaunalis* was ranged from 0.75 to 2.98 larvae/plant/week. At initial stage (14th DAS) the weekly mean larval population per plant was very low 0.34 larvae/plant, which was gradually increased as the crop age was increased and reached maximum (3.50 and 3.07 larvae/plant) 49 to 56th days after sowing and coincide with the flowering to capsule formation stage of the crop. Among the screened genotypes, the genotypes *viz*., SI- 250 RC (0.75 larvae/plant/week), IS-1672 (1.03 larvae/plant/week), TKG-22 (1.15 larvae/plant/week), were found promising against leaf webber and capsule borer and may be utilized in resistance breeding programme for the development of resistant variety against leaf webber and capsule borer.

References

1. Bedigian D. Sesamin, sesamolin and the origin of sesame. Biochem Syst Ecol. 1985;13:133-139.
2. Choudhary MD, Kumawat KC, Yadav MK, Samota RG. Host plant resistance in sesame genotypes to *Antigastra catalaunalis* Dup. J Entomol Zool Stud. 2018;6(1):1012-1015.
3. Karuppaiah V. Eco-friendly Management of Leaf Webber and Capsule Borer (*A. catalaunalis*) Menace in Sesame. Popular Kheti. 2014;2(2):127-130.
4. Makwana Mitesh, Panday A K, Sharma Kuldeep. Host Plant Resistance to Sesame leaf webber and capsule borer *Antigastra catalaunalis* (Dup.). Indian J Entomol; c2021. Ref. No. e21091. doi: 10.5958/IJE.2021.100.
5. Nayar NM, Mehra KL. Sesame: its uses, botany, cytogenetics and origin. Econ Bot. 1970;24(1):20-31.
6. Pandey S, Jaglan RS, Singh R. Evaluation of sesamum genotypes against leaf webber and capsule borer *Antigastra catalaunalis*. Indian J Entomol. 2020;82(4):649-652.
7. Seegeler CJP. Oil plants in Ethiopia, their taxonomy and agricultural significance. Wageningen: Centre for Agricultural Publishing and Documentation; c1983. p. 120-121.
8. Singh V. Reaction of sesame genotypes to leaf webber and capsule borer, *Antigastra catalaunalis* Dup. Sesame Safflower Newsl. 2002;17:52-53.
9. Suliman EH, Nabil BHH, Alawia OA. Evaluation of some insecticides for the control of sesame webworm, *Antigastra catalaunalis* (Dup.). In: Proceedings of the 2nd National Pest Management Conference in the Sudan, 6-9 December 2004. Faculty of Agricultural Sciences, University of Gezira, Sudan; c2004.