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SCREENING OF GREEN GRAM (*VIGNA RADIATA*) GENOTYPES UNDER OPEN FIELD CONDITIONS AGAINST MAJOR SUCKING PESTS

Kishore S.M.[1]*, Rajashekarappa K.[2] and Yogesh L.N.[3]
[1]Department of Entomology, Keladi Shivappa Nayaka University of Agricultural and Horticultural Sciences, Shivamogga-577204, Karnataka, India.
[2]Department of Entomology, ZAHRS, Keladi Shivappa Nayaka University of Agricultural and Horticultural Sciences-Shivamogga-577204, Karnataka, India.
[3] Department of Genetics and Plant breeding, ZAHRS, Keladi Shivappa Nayaka University of Agricultural and Horticultural Sciences, Shivamogga-577204, Karnataka, India.
*Corresponding author E-mail: kishoresm@uahs.edu.in
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ABSTRACT

A field experiment was conducted during the *Rabi,* season of 2024-25 at the Zonal Agricultural and Horticultural Research Station, College of Agriculture, Navule, Shivamogga, to evaluate green gram genotypes for resistance against sucking pests. A total of 17 genotypes, including the susceptible check DCGV-2, were screened. The study revealed that the mean whitefly population varied between 1.10 and 13.33 per trifoliate leaf, with the highest count observed in NVL-1 and the lowest in GG-1. Aphid populations mean ranged from 9.05 (GG-7) to 45.1 (NVL-1) per 10 cm of the terminal shoot. Mean Thrips infestation varied across genotypes, with IPM-2-14 recording the lowest population (4.62) and AMULYA the highest (23.94) per three leaves per plant. Leaf hopper mean infestation ranges from 4.30 to 7.78 per 3 randomly selected plants in weekly interval.
Keywords**:** Green gram, sucking pests, whitefly, aphid, thrips, leafhopper and pest resistance.

Introduction

Green gram (*Vigna radiata*), commonly referred to as mung bean, is an important pulse crop in India, ranking 3rd in significance after chickpea and pigeon pea. It contains approximately 24-25% protein, which is considerably higher than that of cereals, along with 56% carbohydrates, fibre and essential minerals (Tiwari & Shivhare, 2016). As a major protein source for India's vegetarian population, green gram also plays a vital role in soil enrichment through nitrogen fixation, benefiting subsequent crops (Hafeez *et al.*, 1988). In India, green gram is grown over an area of about 46.07 lakh hectares, yielding 24.48 lakh tonnes annually, with an average productivity of 531 kg per hectare (Directorate of Pulses Development, 2021-2022). However, its production is significantly affected by various insect pests, with around 64 species reported to cause damage. Sucking pests, including whiteflies (*Bemisia tabaci*), thrips and aphids, are particularly harmful during the early stages of crop growth (Khattak *et al.*, 2004). Thrips (*Megalurothrips typicus*, *Thrips palmi*) and aphids (*Aphis craccivora*) further threaten productivity by deforming plants and reducing photosynthesis through honeydew secretion, ultimately lowering yields (Satyapriya *et al.*, 2017). To address these pest challenges, implementing integrated pest management (IPM) strategies, including the cultivation of resistant varieties, is crucial. Environmentally sustainable approaches must be prioritized to reduce reliance on chemical pesticides, which can have detrimental effects on both human health and the ecosystem. Effective pest control measures can significantly reduce yield losses, which are estimated at around 30% annually (Duraimurugan and Tyagi, 2014). Given the crop's importance in Indian agriculture and nutrition, continued research on resistance breeding and sustainable pest management is essential for improving productivity and ensuring longterm viability in pulse cultivation (Singh and Singh, 2014).

Materials and Methods

A field study to assess the resistance of different green gram (*Vigna radiata*) genotypes against sucking pests was conducted at the Zonal Agricultural and Horticultural Research Station, College of Agriculture, Navule, Shivamogga, during the *Rabi*, season of 2024-25. As a legume crop, green gram requires only a small amount of nitrogen during its initial growth phase. To support early development, fertilizers were applied at a rate of 25 kg nitrogen per hectare as a starter dose, along with 45 kg phosphorus per hectare, which was incorporated into the soil before sowing. A total of seventeen green gram genotypes, including a susceptible check (DCGV-2), were collected and evaluated under field conditions. The experiment followed a simple Randomized Complete Block Design (RCBD) with two replications. Each genotype was directly sown by dibbling in 2 rows, each measuring 5 meters in length, with a plant spacing of 30 cm × 10 cm. To allow for natural pest infestation, no plant protection measures were implemented. Observations were recorded weekly from randomly selected 5 plants per genotype across both replications, beginning from 10 days after sowing and continuing until 45 days. The whitefly population was assessed using a magnifying lens during the early morning hours and evening hours, with counts taken from fully developed trifoliate leaves. The mean number of whiteflies per plant was then determined for each genotype (Salam *et al.*, 2009). Thrips populations were also recorded in early morning hours, by tapping the top, middle and lower leaves onto a white transparent paper and their numbers were recorded as thrips per three leaves per plant, following the method outlined by Rathore and Tiwari (1999). Aphid populations were counted from the terminal 10 cm shoot portion of the plant. Based on their numbers, genotypes were categorized into six groups using a 5-point rating scale established by Souleymane *et al.* (2013) (Table 1). Additionally, leafhoppers populations were recorded weekly from three randomly selected plants in each genotype.

Table 1 : Rating scale (0-5) for aphid population in Green gram

Score	No. of Aphids	Reaction
0	0-1	Very highly resistant
1	1-5	Highly resistant
2	5-20	Moderately resistant
3	20-100	Moderately susceptible
4	100-500	Susceptible
5	> 500	Highly susceptible

The recorded data was subjected to Analysis of Variance (ANOVA) using the Randomized Complete Block Design (RCBD) approach. To ensure accurate analysis, insect population data was transformed using the square root transformation method ($\sqrt{x} + 0.5$). The standard error of the mean (SEM) and the critical difference (CD) were calculated at a 5% probability level. The significance of differences among genotypes was assessed using R software.

Results and Discussion

Whitefly infestation

The screening of 17 Green gram genotypes for whitefly incidence during *Rabi*, 2024-25 revealed significant variation. The mean whitefly population ranged from 1.10 (GG-1) to 13.33 (NVL-1). The susceptible check, DCGV-2, recorded the highest mean (12.83), while NVL-1 also showed high incidence (13.33). Among resistant genotypes, IPM-2-14 (1.23), GG-7 (1.15), and GG-1 (1.10) had the lowest mean incidence. The overall mean population increased with crop age, peaking at 45 DAS (5.44). The coefficient of variation (CV) ranged from 107.85% to 127.41%, indicating high variability. The study highlights GG-1, GG-7, and IPM-2-14 as promising genotypes with tolerance to whitefly infestation, (Table.2).

The results were in accordance with the research findings of Ramarao, *et al.* (2021) who reported the varietal preference of insect pests on green gram genotypes under field conditions and reported that LGG 450 (susceptible check) was susceptible to whitefly infestation and Mounika, *et al.*, (2023), who reportedthe mean whitefly population ranged from 0.96 to 10.70/ trifoliate leaf with highest population in MH 18-181 and lowest in COGG-912.

Table 2 : Screening of Green gram genotypes to whitefly incidence during *Rabi*, 2024-25

SL.NO	Genotypes	Whitefly (Mean no./Trifoliate leaf)						Mean
		10 DAS	17DAS	24DAS	31DAS	38DAS	45DAS	
1	GG-1	0.60 (1.05)	0.75 (1.12)	1.10 (1.26)	1.50 (1.41)	0.85 (1.16)	1.80 (1.52)	1.10 (1.25)
2	GG-2	0.50 (1.00)	0.80 (1.14)	1.30 (1.34)	1.00 (1.22)	2.50 (1.73)	2.00 (1.58)	1.35 (1.34)
3	GG-3	0.50 (1.00)	0.90 (1.18)	2.00 (1.58)	4.00 (2.12)	2.50 (1.73)	3.00 (1.87)	2.15 (1.58)
4	GG-4	0.60 (1.05)	1.00 (1.22)	1.20 (1.30)	1.20 (1.30)	2.00 (1.58)	1.80 (1.52)	1.30 (1.33)
5	GG-5	1.00 (1.22)	2.00 (1.58)	1.50 (1.41)	2.20 (1.64)	3.00 (1.87)	4.00 (2.12)	2.28 (1.64)
6	GG-6	0.00 (0.71)	0.65 (1.07)	1.11 (1.27)	1.90 (1.55)	2.13 (1.62)	2.00 (1.58)	1.30 (1.30)
7	GG-7	0.30 (0.89)	0.50 (1.00)	1.00 (1.22)	1.30 (1.34)	1.80 (1.52)	2.00 (1.58)	1.15 (1.26)
8	GG-8	0.80 (1.14)	1.20 (1.30)	1.87 (1.54)	2.25 (1.66)	4.00 (2.12)	6.00 (2.55)	2.69 (1.72)
9	GG-9	1.00 (1.22)	1.50 (1.41)	2.00 (1.58)	1.10 (1.26)	1.80 (1.52)	2.00 (1.58)	1.57 (1.43)
10	GG-10	1.20 (1.30)	1.00 (1.22)	2.20 (1.64)	3.00 (1.87)	2.20 (1.64)	3.00 (1.87)	2.10 (1.59)
11	DCGV-2 (SC)	5.00 (2.35)	10.00 (3.24)	16.00 (4.06)	19.00 (4.42)	10.00 (3.24)	20.00 (4.53)	12.83 (3.64)
12	AMULYA	3.00 (1.87)	7.00 (2.74)	5.00 (2.35)	4.00 (2.12)	9.00 (3.08)	11.00 (3.39)	6.50 (2.59)
13	SHAKTHI	1.00 (1.22)	0.90 (1.18)	2.00 (1.58)	1.90 (1.55)	2.00 (1.58)	3.00 (1.87)	1.80 (1.50)
14	AARADHANA	0.60 (1.05)	1.00 (1.22)	1.90 (1.55)	2.00 (1.58)	1.80 (1.52)	3.00 (1.87)	1.72 (1.47)
15	NVL-1	3.00 (1.87)	8.00 (2.92)	12.00 (3.54)	14.00 (3.81)	19.00 (4.42)	21.00 (4.64)	13.33 (3.53)
16	NVL-825	0.80 (1.14)	1.30 (1.34)	1.90 (1.55)	2.25 (1.66)	3.00 (1.87)	5.00 (2.35)	2.38 (1.65)
17	IPM-2-14	0.00 (0.71)	0.80 (1.14)	1.30 (1.34)	1.50 (1.41)	2.00 (1.58)	1.80 (1.52)	1.23 (1.28)
	Mean	1.17	2.31	3.26	3.77	4.09	5.44	3.34
	SD	1.26	2.86	4.08	4.80	4.44	5.93	3.76
	Sem	0.31	0.69	0.99	1.17	1.08	1.44	0.91
	Critical value	2.12	2.12	2.12	2.12	2.12	2.12	2.12
	CD	0.65	1.47	2.10	2.47	2.28	3.05	1.93

*Values in the brackets are square root transformed values, DAS -Days After Sowing, SC- Susceptible Check.

Aphids infestation

The mean aphid population ranged from 9.05 (GG-7) to 45.10 (NVL-1). The susceptible check, DCGV-2, recorded the highest mean (33.28), while NVL-1 also exhibited high infestation (45.10). Moderately resistant (MR) genotypes included GG-6 (10.13), GG-7 (9.05), IPM-2-14 (14.85), and Shakthi (10.67), indicating tolerance. Moderately susceptible (MS) genotypes like GG-1 (25.83) and GG-3 (26.98) showed higher infestation, (Table.3). The overall mean population increased with crop age, peaking at 45 DAS (27.70). The study highlights GG-7, GG-6, and Shakthi as promising aphid-tolerant genotypes for future breeding programs. The results obtained in the present investigation are in accordance with Mahore *et al.*, (2022) who reported least aphid incidence on green gram genotypes of Virat (2.73), Shikha (2.77), TM-37 (2.89) and PDM-139 (2.91).

Table 3 : Screening of Green gram genotypes to aphid incidence during *Rabi*, 2024-25

SL.NO	Genotypes	Aphid Population (No./10 cm terminal shoot)						Mean	Reaction
		10 DAS	17DAS	24DAS	31DAS	38DAS	45DAS		
1	GG-1	15.00 (3.94)	19.00 (4.42)	25.00 (5.05)	30.00 (5.52)	36.00 (6.04)	30.00 (5.52)	25.83 (5.08)	MS
2	GG-2	10.00 (3.24)	25.00 (5.05)	23.00 (4.85)	17.00 (4.18)	29.00 (5.43)	21.00 (4.64)	20.83 (4.56)	MS
3	GG-3	18.00 (4.30)	21.40 (4.68)	29.90 (5.51)	30.50 (5.57)	32.00 (5.70)	30.10 (5.53)	26.98 (5.22)	MS
4	GG-4	12.00 (3.54)	19.70 (4.49)	22.20 (4.76)	30.30 (5.55)	37.00 (6.12)	31.00 (5.61)	25.37 (5.01)	MS
5	GG-5	12.00 (3.54)	10.00 (3.24)	19.60 (4.48)	22.10 (4.75)	20.00 (4.53)	21.80 (4.72)	17.58 (4.21)	MR
6	GG-6	6.00 (2.55)	11.00 (3.39)	8.00 (2.92)	9.80 (3.21)	11.00 (3.39)	15.00 (3.94)	10.13 (3.23)	MR
7	GG-7	8.00 (2.92)	7.90 (2.90)	5.60 (2.47)	6.80 (2.70)	11.00 (3.39)	15.00 (3.94)	9.05 (3.05)	MR
8	GG-8	11.00 (3.39)	13.30 (3.71)	15.10 (3.95)	14.50 (3.87)	17.00 (4.18)	12.00 (3.54)	13.82 (3.77)	MR
9	GG-9	7.20 (2.77)	9.10 (3.10)	14.70 (3.90)	21.10 (4.65)	30.00 (5.52)	29.00 (5.43)	18.52 (4.23)	MR
10	GG-10	5.00 (2.35)	7.90 (2.90)	13.80 (3.78)	15.00 (3.94)	22.10 (4.75)	15.00 (3.94)	13.13 (3.61)	MR
11	DCGV-2(SC)	21.10 (4.65)	28.90 (5.42)	41.20 (6.46)	49.50 (7.07)	64.00 (8.03)	67.00 (8.22)	33.28 (6.64)	MS
12	AMULYA	13.00 (3.67)	16.80 (4.16)	18.90 (4.40)	24.80 (5.03)	28.70 (5.40)	34.20 (5.89)	22.73 (4.76)	MS
13	SHAKTHI	6.00 (2.55)	10.89 (3.37)	8.00 (2.92)	10.90 (3.38)	13.20 (3.70)	15.00 (3.94)	10.67 (3.31)	MR
14	AARADHANA	3.00 (1.87)	13.00 (3.67)	15.00 (3.94)	20.10 (4.54)	22.30 (4.77)	18.80 (4.39)	15.37 (3.86)	MR
15	NVL-1	14.80 (3.91)	21.10 (4.65)	29.70 (5.50)	35.10 (5.97)	45.70 (6.80)	51.60 (7.22)	45.1 (5.67)	MS
16	NVL-825	13.00 (3.67)	14.80 (3.91)	13.90 (3.79)	18.90 (4.40)	25.80 (5.13)	41.10 (6.45)	21.25 (4.56)	MS
17	IPM-2-14	4.10 (2.14)	10.20 (3.27)	15.40 (3.99)	20.00 (4.53)	16.10 (4.07)	23.30 (4.88)	14.85 (3.81)	MR
	Mean	10.54	15.29	18.76	22.14	27.11	27.70	20.26	
	SD	4.91	6.11	8.83	10.27	13.19	14.21	8.99	
	Sem	1.19	1.48	2.14	2.49	3.20	3.45	2.18	
	Critical value	2.12	2.12	2.12	2.12	2.12	2.12	2.12	
	CD	2.52	3.14	4.54	5.28	6.78	7.30	4.62	

*Values in the brackets are square root transformed values, DAS - Days After Sowing, SC- Susceptible Check, RC- Resistant Check VHR=Very Highly Resistant, HR= Highly Resistant, MR=Moderately Resistant and MS=Moderately Susceptible

Thrips Infestation

The screening of 17 Green gram genotypes for thrips incidence during *Rabi*, 2024-25 revealed significant variations. The mean thrips population ranged from 4.62 (IPM-2-14) to 18.35 (NVL-1). The susceptible check, DCGV-2, recorded the highest infestation (14.43). Genotypes like IPM-2-14 (4.62), Shakthi (6.30) and GG-6 (6.27) showed lower thrips incidence, indicating possible tolerance. Higher thrips populations were observed in NVL-1 (18.35) and GG-10 (13.08), suggesting susceptibility. The mean population increased with crop age, peaking at 38 DAS (13.48) before declining, (Table. 4). This study highlights IPM-2-14 and Shakthi as promising thrips-tolerant genotypes for further breeding and pest management strategies. The results are in accordance with Kumar *et al.*, (2019) who reported that LGG 460 (2.93 thrips/ 10 flowers) recorded maximum infestation of flower thrips among the varieties screened and Mounika, *et al.*, (2023), who reported the mean population of thrips ranged from 2.54 (VGG 17-106) to 26.00 (MH 18-181)/three leaves per plant.

Table 4 : Screening of Green gram genotypes to thrips incidence during *Rabi*, 2024-25

SL.NO	Genotypes	Thrips Population (No./three leaves/plant)						Mean
		10 DAS	17DAS	24DAS	31DAS	38DAS	45DAS	
1	GG-1	5.40 (2.43)	4.10 (2.14)	6.10 (2.57)	8.30 (2.97)	7.40 (2.81)	6.90 (2.72)	6.37 (2.61)
2	GG-2	7.10 (2.76)	5.20 (2.39)	6.50 (2.65)	4.60 (2.26)	5.90 (2.53)	4.87 (2.32)	5.70 (2.48)
3	GG-3	6.20 (2.59)	12.90 (3.66)	11.60 (3.48)	13.10 (3.69)	15.80 (4.04)	10.20 (3.27)	11.63 (3.45)
4	GG-4	5.20 (2.39)	4.10 (2.14)	11.40 (3.45)	10.11 (3.26)	9.01 (3.08)	6.70 (2.68)	7.75 (2.83)
5	GG-5	7.20 (2.77)	11.20 (3.42)	10.30 (3.29)	9.10 (3.10)	11.90 (3.52)	10.20 (3.27)	9.98 (3.23)
6	GG-6	3.00 (1.87)	4.80 (2.30)	2.90 (1.84)	7.00 (2.74)	11.00 (3.39)	8.90 (3.07)	6.27 (2.54)
7	GG-7	4.10 (2.14)	6.70 (2.68)	5.40 (2.43)	7.20 (2.77)	6.90 (2.72)	7.20 (2.77)	6.25 (2.59)
8	GG-8	6.70 (2.68)	8.90 (3.07)	9.40 (3.15)	11.27 (3.43)	16.10 (4.07)	11.60 (3.48)	10.66 (3.31)
9	GG-9	5.90 (2.53)	9.10 (3.10)	8.00 (2.92)	14.00 (3.81)	16.10 (4.07)	12.10 (3.55)	10.87 (3.33)
10	GG-10	8.10 (2.93)	12.30 (3.58)	13.80 (3.78)	10.10 (3.26)	20.10 (4.54)	14.10 (3.82)	13.08 (3.65)
11	DCGV-2(SC)	13.00 (3.67)	19.80 (4.51)	28.10 (5.35)	35.50 (6.00)	29.11 (5.44)	18.10 (4.31)	14.43 (4.88)
12	AMULYA	7.10 (2.76)	10.20 (3.27)	16.20 (4.09)	23.10 (4.86)	15.60 (4.01)	14.40 (3.86)	23.94 (3.81)
13	SHAKTHI	4.10 (2.14)	6.70 (2.68)	5.40 (2.43)	7.20 (2.77)	10.20 (3.27)	4.20 (2.17)	6.30 (2.58)
14	AARADHANA	7.10 (2.76)	5.30 (2.41)	8.20 (2.95)	12.60 (3.62)	10.30 (3.29)	4.87 (2.32)	8.06 (2.89)
15	NVL-1	10.20 (3.27)	15.10 (3.95)	19.90 (4.52)	23.80 (4.93)	26.00 (5.15)	15.10 (3.95)	18.35 (4.29)
16	NVL-825	5.20 (2.39)	7.30 (2.79)	11.40 (3.45)	15.11 (3.95)	12.10 (3.55)	8.80 (3.05)	9.99 (3.20)
17	IPM-2-14	0.00 (0.71)	3.20 (1.92)	5.00 (2.35)	10.10 (3.26)	5.60 (2.47)	3.80 (2.07)	4.62 (2.13)
	Mean	6.21	8.64	10.56	13.07	13.48	9.53	10.25
	SD	2.76	4.37	6.10	7.55	6.51	4.11	4.89
	Sem	0.67	1.06	1.48	1.83	1.58	1.00	1.19
	Critical value	2.12	2.12	2.12	2.12	2.12	2.12	2.12
	CD	1.42	2.25	3.14	3.88	3.35	2.11	2.52

*Values in the brackets are square root transformed values, DAS -Days After Sowing, SC- Susceptible Check.

Leaf hoppers infestation

The screening of 17 Green gram genotypes for leafhopper incidence during Rabi 2024-25 showed significant variations in pest infestation. The mean leafhopper population ranged from 4.30 (GG-1) to 7.78 (IPM-2-14). The susceptible check, DCGV-2, recorded a high infestation of 6.22. Among the genotypes, GG-1 (4.30), GG-10 (4.61), and Shakthi (4.86) exhibited lower incidence, suggesting tolerance. Higher populations were observed in IPM-2-14 (7.78) and NVL-1 (6.49), indicating susceptibility. The mean infestation increased over time, peaking at 38 DAS (10.17) before declining. These results suggest that GG-1 and Shakthi are promising for further breeding and integrated pest management strategies, (Table.5).

Table 5 : Screening of Green gram genotypes to Leafhoppers incidence during *Rabi*, 2024-25

SL.NO	Genotypes	Jassid Population						Mean
		10 DAS	17DAS	24DAS	31DAS	38DAS	45DAS	
1	GG-1	0.80 (1.14)	2.30 (1.67)	4.20 (2.17)	6.10 (2.57)	10.10 (3.26)	2.30 (1.67)	4.30 (2.08)
2	GG-2	0.97 (1.21)	2.10 (1.61)	5.10 (2.37)	5.90 (2.53)	9.80 (3.21)	6.60 (2.66)	5.08 (2.27)
3	GG-3	1.10 (1.26)	3.20 (1.92)	4.70 (2.28)	6.10 (2.57)	9.30 (3.13)	8.10 (2.93)	5.42 (2.35)
4	GG-4	1.50 (1.41)	3.40 (1.97)	3.00 (1.87)	4.80 (2.30)	8.90 (3.07)	6.70 (2.68)	4.72 (2.22)
5	GG-5	1.50 (1.41)	4.10 (2.14)	4.20 (2.17)	5.40 (2.43)	7.00 (2.74)	7.10 (2.76)	4.88 (2.28)
6	GG-6	1.10 (1.26)	4.30 (2.19)	3.60 (2.02)	7.80 (2.88)	8.00 (2.92)	5.70 (2.49)	5.08 (2.29)
7	GG-7	1.34 (1.36)	3.20 (1.92)	4.90 (2.32)	6.80 (2.70)	8.00 (2.92)	4.20 (2.17)	4.74 (2.23)
8	GG-8	1.10 (1.26)	2.90 (1.84)	5.10 (2.37)	4.50 (2.24)	12.20 (3.56)	4.80 (2.30)	5.10 (2.26)
9	GG-9	1.20 (1.30)	2.89 (1.84)	4.80 (2.30)	5.00 (2.35)	10.20 (3.27)	5.10 (2.37)	4.87 (2.24)
10	GG-10	1.00 (1.22)	2.45 (1.72)	3.40 (1.97)	4.70 (2.28)	9.40 (3.15)	6.70 (2.68)	4.61 (2.17)
11	DCGV-2(SC)	2.10 (1.61)	4.50 (2.24)	6.30 (2.61)	10.11 (3.26)	13.56 (3.75)	10.10 (3.26)	6.22 (2.79)
12	AMULYA	1.00 (1.22)	3.23 (1.93)	4.90 (2.32)	8.90 (3.07)	11.40 (3.45)	5.60 (2.47)	5.84 (2.41)
13	SHAKTHI	0.98 (1.22)	2.90 (1.84)	3.30 (1.95)	5.90 (2.53)	10.20 (3.27)	5.90 (2.53)	4.86 (2.22)
14	AARADHANA	0.89 (1.18)	2.78 (1.81)	5.00 (2.35)	6.90 (2.72)	8.78 (3.05)	7.10 (2.76)	5.24 (2.31)
15	NVL-1	1.10 (1.26)	3.61 (2.03)	5.10 (2.37)	9.90 (3.22)	11.00 (3.39)	8.20 (2.95)	6.49 (2.54)
16	NVL-825	1.50 (1.41)	2.90 (1.84)	4.90 (2.32)	7.69 (2.86)	8.90 (3.07)	7.40 (2.81)	5.55 (2.39)
17	IPM-2-14	1.00 (1.22)	2.13 (1.62)	3.12 (1.90)	8.73 (3.04)	16.10 (4.07)	6.23 (2.59)	7.78 (2.41)
	Mean	1.19	3.11	4.45	6.78	10.17	6.34	5.34
	SD	0.31	0.69	0.87	1.75	2.16	1.70	0.82
	Sem	0.07	0.17	0.21	0.42	0.52	0.41	0.20
	Critical value	2.12	2.12	2.12	2.12	2.12	2.12	2.12
	CD	0.16	0.35	0.45	0.90	1.11	0.88	0.42

*Values in the brackets are square root transformed values, DAS - Days After Sowing, SC- Susceptible Check.

Conclusion

The screening of 17 green gram genotypes during Rabi, 2024-25 revealed significant variations in pest incidence. GG-1, GG-7 and IPM-2-14 showed resistance to whiteflies, while GG-7, GG-6 and Shakthi exhibited tolerance to aphids. Thrips infestation was lowest in IPM-2-14, Shakthi and GG-6, indicating their resistance. For leafhoppers, GG-1 and Shakthi demonstrated tolerance, while IPM-2-14 and NVL-1 were more susceptible. The overall pest population increased with crop age before peaking at different growth stages. These findings highlight GG-1, GG-7, GG-6, IPM-2-14 and Shakthi as promising genotypes for pest-resistant breeding programs and integrated pest management strategies, contributing to sustainable green gram cultivation.

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