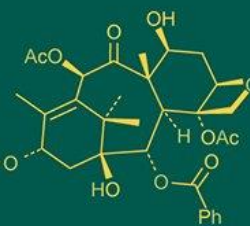
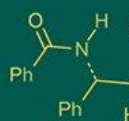


International Journal of Advanced Biochemistry Research



ISSN Print: 2617-4693
ISSN Online: 2617-4707
NAAS Rating (2026): 5.29
IJABR 2026; SP-10(8): 1676-1680
www.biochemjournal.com
Received: 02-06-2026
Accepted: 05-07-2026

K Balavenkat
Acharya N.G. Ranga
Agricultural University, Lam,
Guntur, Andhra Pradesh,
India

N Sambasiva Rao
Acharya N.G. Ranga
Agricultural University, Lam,
Guntur, Andhra Pradesh,
India

I Paramasiva
Acharya N.G. Ranga
Agricultural University, Lam,
Guntur, Andhra Pradesh,
India

P Udayababu
Acharya N.G. Ranga
Agricultural University, Lam,
Guntur, Andhra Pradesh,
India

Screening of rice genotypes for resistance to gall midge, *Orseolia oryzae* (Wood-Mason)

K Balavenkat, N Sambasiva Rao, I Paramasiva and P Udayababu

DOI: <https://www.doi.org/10.33545/26174693.2026.v10.i8Sr.9649>

Abstract

A total of 62 rice genotypes were evaluated for their reaction to gall midge, *Orseolia oryzae* at College Farm, Agricultural College, Bapatla, Andhra Pradesh, India and the genotypes were classified into six categories under 0-9 scale based on percent incidence of silver shoots at 30 and 50 days after transplanting using the Standard Evaluation System (SES). Among the tested genotypes at 50 DAT, silver shoot incidence ranged from 0.00 to 18.0% and plant damage ranged from 35.00 to 100.0%. The entry NLR-5942-10-2-1-1-1 recorded nil damage with 0% silver shoots and 0% plant damage was ranked with "0" scale and categorized as Highly resistant and none of the variety occupied resistant category to gall midge. A total of 21 entries viz., NLR 3127, NLR 3795, NLR 3807, NLR 3830, NLR 5927, NLR-11-3-8-1-1, NLR-5913-3-1-2-2-2, NLR-5927-11-3-1-3-1-1, NLR-5942-11-2-1-1-1, NLR-5942-13-1-1-1-1, NLR-5942-36-3-3-1-5, CLM 101, CLM 116, RGL 7002, RGL 7006, RGL 7016, RGL 7025, RGL 11414, BPT 2677, BPT 2758 and BPT 3469 occupied moderately resistant category with silver shoot incidence ranged from 1.93 to 5.32. All the above 21 entries are ranked with "3" scale (1-5% SS) and found to be Moderately resistant (MR) category to gall midge with PTB 33 used as a resistant check (3.34% silver shoot incidence) and TN 1 used as a susceptible check (15.49% silver shoot incidence) at 50 DAT. The highest silver shoot incidence 4.30% and plant damage 60.00% was recorded in genotype CLM 101. Similarly, the lowest silver shoot incidence of 1.93% and plant damage 35.00% was recorded in RGL 7006 at 50 DAT.

Keywords: Gall midge, *Oryza sativa*, rice genotypes, screening, silver shoots

Introduction

Rice is the staple food crop for most of the world population particularly in Asian countries, 2.9 billion people depend on rice and it is grown in 117 countries. An estimated yield of 787 million metric tonnes was produced every year from 162 million hectares of rice grown worldwide. Asia contributes for 90% of the world's rice production and consumption (FAO, 2024) [3]. The majority of people in India rely on rice as their main source of nutrition. With 27.8% of the world's rice production, India is one of the biggest producers of white rice and has the greatest area under rice cultivation worldwide. India produces 146.7 million tonnes of rice annually on an area of 47.8 million hectares (IRRISTAT, 2017) [5].

Rice gall midge, *Orseolia oryzae* (Wood-Mason) is one of the major insect pests, causing extensive damage in several rice growing countries of Asia viz., Thailand, China, Sri Lanka, India, Bangladesh, Pakistan, Burma, Kampuchea, Indonesia, Laos, Nepal and Vietnam. Earlier reports have documented prevalence of rice gall midge in African countries such as Sudan, Cameroon, Mali, Upper Volta, Ivory Coast, Senegal, New Guinea, Guinea-Bissau and Nigeria. Gall midge causes an average of US \$80 million in crop losses each year in India (Bentur *et al.*, 2003) [2]. The pest is endemic in parts of Jharkhand and the damage caused by it typically ranged from 10 to 70%, with an annual production loss of 20 to 70% depending on climatic conditions and varietal susceptibility (Prasad, 2011) [9]. It has been reported from southern Karnataka districts such as Kodagu, Mysuru, and Hassan and the infestation level in these areas ranged from 10 to 15 percent (Vijay Kumar *et al.*, 2008) [11]. The present study was undertaken to assess the extent of gall midge infestation among rice varieties and to identify sources of resistance.

Corresponding Author:
K Balavenkat
Acharya N.G. Ranga
Agricultural University, Lam,
Guntur, Andhra Pradesh,
India

Materials and Methods

A total of 62 genotypes (20 from Ragolu, 25 from Nellore, 14 from Bapatla) along with one resistant variety PTB 33 and two susceptible checks TN 1 and BPT 5204 were studied during late *kharif*, 2024-2025. Nursery was sown in second fortnight of September, 2024 at Agriculture college farm, Bapatla and transplanted in second fortnight of October, 2024. Each entry was transplanted in two rows of 13 hills/row with a spacing of 20 cm between the rows and 15 cm within the row and two such replications were maintained. Normal agronomic practices were followed for raising the crop. Manual weeding operation was carried out twice in tillering stage. No herbicides and insecticides were applied to experimental field. The Observations on gall midge damaged plants (hills) out of 10 plants (hills), number of silver shoots in a maximum of 10 plants (hills/entry) and calculated percent damaged plants and percent silver shoots per entry at 30 Days After Transplanting (30 DAT) and 50 DAT. The data was analysed by using ANOVA in SPSS 20.0 software.

$$\text{Plant damage (\%)} = \frac{\text{Total no. of damaged plants (hills)}}{\text{Total no. of plants (hills)}} \times 100$$

$$\text{Silver shoot (\%)} = \frac{\text{Total no. of silver shoots (SS) in 10 hills}}{\text{Total no. of tillers in 10 hills}} \times 100$$

Table 1: Standard Evaluation Systems for evaluating rice for resistance to gall midge (IRRI, 2013)

Scale	Silver shoots (%)	Reaction
0	No damage	Highly resistant (HR)
1	Less than 1%	Resistant (R)
3	1-5%	Moderately Resistant (MR)
5	6-10%	Moderately Susceptible (MS)
7	11-25%	Susceptible (S)
9	More than 25	Highly Susceptible (HS)

Results and Discussion

Incidence of gall midge, *O. oryzae* at 30 DAT

At 30 DAT, the plant damage ranged from 0.00 (NLR 5942-36-3-3-1-5) to 55.0% (NLR 5928, NLR 34242, RGL 7033 & BPT 2835) among the test entries, while silver shoot incidence ranged from 0.00 (NLR 5942-36-3-3-1-5 & NLR-5942-10-2-1-1-1) to 4.80% (NLR 5928). The maximum plant damage of 44 to 47% and silver shoot incidence of 4.0 to 4.8% was recorded in NLR 5928, NLR 3595, NLR 3821, NLR 3795, RGL 7033, NLR 34242, CLM 101. The test entries NLR 3817, NLR 3836, NLR-5980-1-2-3, CLM 111, CLM 119, RGL 7037, BPT 2644, BPT 2758, BPT 2835, RGL 7036, NLR-5942-11-2-1-1-1, BPT 2933, recorded plant damage 40.0 to 55.0% with silver shoot incidence of 3.0 to 3.8%. The test entries NLR 3418, NLR 3590, NLR 3731, NLR 3807, NLR 3880, NLR-5927-11-3-1-3-1-1, NLR-5942-13-1-1-1-1, NLR-5951-66-2-2-1-1, CLM 103, CLM 109, CLM 132, RGL 7004, RGL 7025, RGL 7034, RGL 7038, RGL 7039, RGL 11414, BPT 2658, BPT 2677, BPT 2845 and BPT 2943 were recorded plant damage percentage of 25.0 to 45.0% with silver shoot incidence of 2.0 to 2.9%. The lowest incidence of plant damage (15.0 to 40.0) and silver shoot (1.0 to 1.9%) was recorded in NLR 3127, NLR 3754, NLR 830, NLR 5927, NLR-11-3-8-1-1, NLR-5913-3-1-2-2-2, CLM 112, CLM 116, RGL 7002,

RGL 7006, RGL 7016, BPT 2615, BPT 2660, BPT 2840, BPT 3241, BPT 3440 and BPT 3469. The susceptible check varieties TN 1 and BPT 5204 have recorded 95.0% and 90.0% plant damage with 11.70 and 10.33% silver shoot, respectively. The resistant check variety PTB 33 recorded the plant damage of 35.0% with 1.62% silver shoots (Table 2). The relative reaction of Nellore, Ragolu and Bapatla entries are depicted in Fig. 1, where it shows that, the Nellore germplasm possessed relatively more resistant entries when compared to Ragolu and Bapatla entries tested in this study.

Incidence of gall midge, *O. oryzae* at 50 DAT

At 50 DAT, the plant damage ranged from 0.00 (NLR-5942-10-2-1-1-1) to 100.0% (NLR 3836, CLM 112, CLM 119, RGL 7004, BPT 2845, BPT 2943 and BPT 3440) and silver shoot incidence ranged from 0.00 (NLR-5942-10-2-1-1-1) to 18.29% (BPT 2943) among the test entries. The test entry NLR-5942-10-2-1-1-1 recorded nil plant damage, nil silver shoots which ranked with “0” scale (0% SS) and categorized as highly resistant to gall midge. A total of 21 entries viz., NLR 3127, NLR 3795, NLR 3807, NLR 3830, NLR 5927, NLR-11-3-8-1-1, NLR-5913-3-1-2-2-2, NLR-5927-11-3-1-3-1-1, NLR-5942-11-2-1-1-1, NLR-5942-13-1-1-1-1, NLR-5942-36-3-3-1-5, CLM 101, CLM 116, RGL 7002, RGL 7006, RGL 7016, RGL 7025, RGL 11414, BPT 2677, BPT 2758 and BPT 3469 recorded 1.93 to 5.32% silver shoot incidence and occupied moderately resistant (MR) category and ranked with “3” scale (1-5% SS) to gall midge with PTB 33 used as a resistant check with percent silver shoot incidence of 3.34%.

A total of 31 entries viz., NLR 3418, NLR 3590, NLR 3731, NLR 3817, NLR 3821, NLR 3836, NLR 3880, NLR 5928, NLR 34242, NLR-5951-66-2-2-1-1, NLR-5980-1-2-3, CLM 103, CLM 109, CLM 111, CLM 112, CLM 119, CLM 132, RGL 7004, RGL 7033, RGL 7034, RGL 7036, RGL 7038, RGL 7039, BPT 2615, BPT 2644, BPT 2658, BPT 2660, BPT 2835, BPT 2840, BPT 2933 and BPT 3241 recorded silver shoot incidence from 6.03 to 10.5% and were categorized as moderately susceptible (MS) category and ranked with “5” scale (6-10% SS) to gall midge incidence. A total of six entries viz., NLR 3595, NLR 3754, RGL 7037, BPT 2845, BPT 2845 and BPT 2943 occupied susceptible category with percent silver shoot incidence ranged from 11.29 to 18.29%. These entries are ranked “7” (11-25% SS) scale and occupied susceptible category to gall midge incidence with TN 1 and BPT 5204 used as susceptible checks with silver shoot incidences of 16.33% and 15.49%, respectively (Table 2). At 50 DAT also, the relative reaction of Nellore, Ragolu and Bapatla entries are depicted in Fig. 2, where again it shows that, the Nellore germplasm possessed relatively more resistant entries when compared to Ragolu and Bapatla entries tested.

Similar studies were conducted by Sumathi and Manickam (2013) ^[10] and reported that among 45 cultures screened, the cultures viz., RP 4683-29-2-645, RP 4683-30-1-648, RP 4686-49-1-943, RP 4687-52-2-1197, RP 4688-53-2-1258, RP 4688-53-2-1259, JGL 17025, JGL 17183, JGL 17187, JGL 1718917211 and JGL 17221 were recorded nil gall midge damage. The entries viz., RP 4683-32-1-684, RP 4686-48-1-935, SKL 3-22-7-8-34-12, RP 4686-48-1-940, SYE 3-89-49-7 and Phalguna recorded high damage and found highly susceptible to gall midge incidence. Check entry TN 1 was found highly susceptible. Malathi and

Shravan Kumar (2021) ^[7] reported that, among the test entries including varietal checks, at the time of peak infestation of gall midge, the plant damage percent ranged from 45% (JGL 20779, JGLH 6) to 100% (KNM 1616, WGL 823, JGLH 37, RNR 17462, HR 1-174) while silver shoots percent incidence ranged from 8.33% (JGL 20779) to 47.31% (HR 1-174). None of the entries have recorded resistance reaction against gall midge. Kumar *et al.* (2020) ^[6] reported that among the 173 rice entries screened only

three entries viz., IBT MRR 18, IBT MRR 23 and IBT MRR 24 were highly resistant with “nil” gall midge damage. Six entries viz., IBT MRR 17, IBT MRR 19, IBT MRR 20, IBT MRR 21, IBT MRR 22 and IBT MRR 28 had shown resistant reaction (< 1% silver shoots). Anusha *et al.* (2022) ^[1] showed high damage at 50 DAT for IR 79216-141-1-3-3 (45.0) and JGL 11470 (15.0). Meher *et al.* (2009) ^[8] reported that highest silver shoot damage in susceptible check TN-1 genotype.

Table 2: Screening of different rice genotypes against gall midge, *O. oryzae*

S. No	Test entries	Mean Damage				Reaction
		30 DAT		50 DAT		
		Plant Damage (%PD)*	Silver shoot (%SS)*	Plant damage (%PD)*	Silver shoot (%SS)*	
1	NLR 3127	25.00 (29.8)	1.84 (7.7) defghij	50.00 (44.9) hi	3.60 (10.9) pqrstuvw	MR
2	NLR 3418	45.00 (42.0)	2.14 (8.3) bcdefghij	75.00 (60.0) defgh	8.46 (16.9) defghijkl	MS
3	NLR 3590	45.00 (42.0)	2.02 (7.9) defghij	75.00 (60.0) defgh	7.36 (15.7) ghijklmnop	MS
4	NLR 3595	45.00 (41.9)	4.19 (11.4) bcde	95.00 (80.7) ab	12.82 (20.9) abcde	S
5	NLR 3731	25.00 (29.8)	2.07 (8.2) bcdefghij	85.00 (67.4) bcde	10.51 (18.8) cdefghi	MS
6	NLR 3754	15.00 (22.4)	1.77 (7.2) efghij	90.00 (71.5) bcd	12.57 (20.6) abcdef	S
7	NLR 3795	45.00 (42.0)	4.60 (12.2) bc	65.00 {53.7}efgh	4.87 (12.7) klmnopqrstuv	MR
8	NLR 3807	25.00 (29.8)	2.14 (8.3) bcdefghij	60.00 (50.8) fghi	5.11 (13.0) jklmnopqrstuv	MR
9	NLR 3817	40.00 (39.0)	3.69 (10.8) bcdefgh	90.00 (71.5) bcd	7.56 (15.9) fghijklmno	MS
10	NLR 3821	50.00 (44.9)	4.66 (12.2) ^b	85.00 (67.4) bcde	6.27 (14.4) ijklmnopqrs	MS
11	NLR 3830	15.00 (22.4)	1.13 (6.0) ^j	60.00 (50.8) fghi	4.38 (11.9) mnopqrstuvw	MR
12	NLR 3836	50.00 (44.9)	3.83 (11.2) bcdefg	100.00 (90) ^a	8.22 (16.6) efghijklm	MS
13	NLR 3880	35.00 (36.2)	2.91 (9.8)	85.00 (67.4) bcde	8.08 (16.4) efghijklm	MS
14	NLR 5927	15.00 (22.4)	1.34 (6.4)	50.00 (44.9) ^{hi}	5.32 (13.2) jklmnopqrstuv	MR
15	NLR 5928	55.00 (47.9)	4.80 (12.3)	80.00 (63.4) cdfg	8.76 (17.2) defghijk	MS
16	NLR 34242	55.00 (47.8)	4.16 (11.7)	65.00 (54.1) efgh	6.05 (13.8) jklmnopqrstu	MS
17	NLR-11-3-8-1-1	20.00 (25.8)	1.58 (6.9)	55.00 (47.8) ghi	3.43 (10.6) rstuvw	MR
18	NLR-5913-3-1-2-2-2	25.00 (29.8)	1.46 (6.9)	55.00 (47.9) ghi	3.03 (9.8) stuvw	MR
19	NLR-5927-11-3-1-3-1-1	35.00 (36.2)	2.82 (9.6)	60.00 (50.7) fghi	3.85 (11.3) nopqrstuvw	MR
20	NLR-5942-10-2-1-1-1	0.00 (0)	0.00 (0) ^k	0.00 (0.00) ^j	0.00 (0) ^x	HR
21	NLR-5942-11-2-1-1-1	45.00 (42.0)	3.14 (10.6)	65.00 (53.7) efgh	3.87 (11.2) nopqrstuvw	MR
22	NLR-5942-13-1-1-1-1	45.00 (42.0)	2.97 (9.9)	50.00 (44.9) ^{hi}	2.60 (9.2) uvw	MR
23	NLR-5942-36-3-3-1-5	0.00 (0.00)	0.00 (0.00)	60.00 (50.7) fghi	3.13 (10.1) rstuvw	MR
24	NLR-5951-66-2-2-1-1	25.00 (29.8) cdef	2.20 (8.4) bcdefghij	70.00 (58.2) defgh	6.35 (14.1) ijklmnopqrstu	MS
25	NLR-5980-1-2-3	30.00 (33.1) bcdef	3.53 (10.7) bcdefgh	95.00 (80.7) ab	8.12 (16.4) efghijklm	MS
26	CLM 101	45.00 (42.0) bcd	4.04 (11.5) bcde	60.00 (50.7) fghi	4.35 (12.0) lmnopqrstuvw	MR
27	CLM 103	30.00 (32.8) bcdef	2.23 (8.5) bcdefghij	90.00 (76.7) abc	7.54 (15.9) fghijklmno	MS
28	CLM 109	45.00 (42.0) bcd	2.72 (9.4) bcdefghij	85.00 (67.4) bcde	8.30 (16.7) efghijklm	MS
29	CLM 111	45.00 (42.0) bcd	3.56 (10.8) bcdefgh	90.00 (76.7) abc	8.09 (16.5) efghijklm	MS

30	CLM 112	15.00 (22.4) ^f	1.18 (6.2) ^{ij}	100.00 (90.0) ^a	7.64 (16.0) ^{fghijklmno}	MS
31	CLM 116	30.00 (33.1) ^{bcdef}	1.79 (7.4) ^{defghij}	70.00 (57.0) ^{defgh}	3.94 (11.4) ^{nopqrstuvw}	MR
32	CLM 119	50.00 (44.8) ^{bc}	3.18 (10.2) ^{bcdefghij}	100.00 (90.0) ^a	7.58 (15.9) ^{fghijklmno}	MS
33	CLM 132	40.00 (39.2) ^{bcde}	2.74 (9.5) ^{bcdefghij}	90.00 (76.7) ^{abc}	6.63 (14.8) ^{hijklmnopqr}	MS
34	RGL 7002	25.00 (29.8) ^{bc}	1.99 (8.0) ^{bcdefghij}	65.00 (61.5) ^{cdefg}	4.86 (12.1) ^{lmnopqrstuvw}	MR
35	RGL 7004	25.00 (29.8) ^{cdef}	2.20 (8.4) ^{bcdefghij}	100.00 (90.0) ^a	8.76 (17.2) ^{defghijk}	MS
36	RGL 7006	25.00 (29.8) ^{cdef}	1.90 (7.9) ^{cdefghij}	35.00 (35.7) ⁱ	1.93 (7.6) ^w	MR
37	RGL 7016	25.00 (28.8) ^{def}	1.75 (7.3) ^{efghij}	50.00 (44.9) ^{hi}	3.46 (10.7) ^{qrstuvw}	MS
38	RGL 7025	30.00 (32.8) ^{bcdef}	2.56 (9.1) ^{bcdefghij}	60.00 (50.8) ^{fghi}	3.69 (10.8) ^{pqrstuvw}	MS
39	RGL 7033	55.00 (47.8) ^b	4.53 (12.2) ^{bc}	85.00 (67.4) ^{bcde}	9.46 (17.6) ^{defghij}	MS
40	RGL 7034	30.00 (32.8) ^{bcdef}	2.36 (8.6) ^{bcdefghij}	80.00 (64.1) ^{cdef}	6.98 (15.3) ^{hijklmnopq}	MS
41	RGL 7036	45.00 (42.0) ^{bcd}	3.35 (10.5) ^{bcdefghi}	90.00 (71.5) ^{bcd}	9.34 (17.6) ^{defghij}	MS
42	RGL 7037	40.00 (39.0) ^{bcde}	3.37 (10.5) ^{bcdefghi}	85.00 (67.4) ^{bcde}	11.29 (19.6) ^{bcdefgh}	S
43	RGL 7038	40.00 (39.0) ^{bcde}	2.99 (9.9) ^{bcdefghi}	85.00 (67.4) ^{bcde}	7.35 (15.6) ^{ghijklmnop}	MS
44	RGL 7039	30.00 (32.2) ^{bcdef}	2.17 (8.3) ^{bcdefghi}	75.00 (60.0) ^{defgh}	6.33 (14.5) ^{ijklmnopqrs}	MS
45	RGL 11414	35.00 (36.2) ^{bdcef}	2.18 (8.4) ^{bcdefghi}	50.00 (44.9) ^{hi}	2.44 (8.9) ^{vw}	MR
46	BPT 2615	40.00 (39.0) ^{bcde}	1.44 (6.7) ^{hij}	75.00 (60.0) ^{defgh}	6.03 (14.2) ^{ijklmnopqrst}	MS
47	BPT 2644	25.00 (29.8) ^b	3.61 (10.8) ^{bcdefgh}	75.00 (60.0) ^{defgh}	9.27 (17.6) ^{defghij}	MS
48	BPT 2658	35.00 (36.2) ^{bcdef}	2.84 (9.6) ^{bcdefghij}	95.00 (80.7) ^{ab}	9.12 (17.5) ^{defghijk}	MS
49	BPT 2660	35.00 (36.2) ^{bcdef}	1.53 (7.0) ^{fghij}	85.00 (67.4) ^{bcde}	8.93 (17.2) ^{defghijk}	MS
50	BPT 2677	25.00 (29.8) ^{cdef}	2.09 (8.2) ^{bcdefghij}	50.00 (44.9) ^{hi}	2.81 (9.5) ^{tuvw}	MR
51	BPT 2758	50.00 (47.8) ^{bc}	3.53 (10.7) ^{bcdefgh}	55.00 (47.8) ^{ghi}	3.77 (11.1) ^{opqrstuvw}	MR
52	BPT 2835	55.00 (22.4) ^b	3.89 (11.3) ^{bcdef}	90.00 (71.5) ^{bcd}	7.74 (16.1) ^{efghijklmn}	MS
53	BPT 2840	25.00 (29.8) ^{cdef}	1.59 (7.2) ^{efghij}	85.00 (67.4) ^{bcde}	6.50 (14.7) ^{hijklmnopqrs}	MS
54	BPT 2845	30.00 (33.1) ^{bcdef}	2.18 (8.4) ^{bcdefghij}	100.00 (90.0) ^a	13.67 (21.6) ^{abcd}	S
55	BPT 2933	40.00 (39.0) ^{bcde}	3.40 (10.4) ^{bcdefghi}	85.00 (67.4) ^{bcde}	7.74 (16.0) ^{fghijklmno}	MS
56	BPT 2943	35.00 (36.2) ^{bcdef}	2.44 (8.9) ^{bcdefghij}	100.00 (90.0) ^a	18.29 (25.0) ^a	S
57	BPT 3241	30.00 (33.1) ^{bcdef}	1.67 (7.4) ^{defghij}	90.00 (71.5) ^{bcd}	7.41 (15.7) ^{fghijklmnop}	MS
58	BPT 3440	15.00 (22.4) ^f	1.50 (6.7) ^{hij}	100.00 (90.0) ^a	12.28 (20.4) ^{bcdefg}	S
59	BPT 3469	25.00 (29.0) ^{cdef}	1.84 (7.6) ^{defghij}	65.00 (53.7) ^{efgh}	4.86 (12.7) ^{klmnopqrstuv}	MR
60	TN 1	95.00 (80.7) ^a	11.7 (22.8) ^a	100.00 (90.0) ^a	16.33 (23.4) ^{ab}	S
61	PTB 33	35.00 (35.7) ^{bcdef}	1.62 (7.3) ^{efghij}	55.00 (47.8) ^{ghi}	3.34 (10.4) ^{qrstuvw}	MR
62	BPT 5204	90.00 (80.4) ^{bcdef}	10.3 (21.4) ^a	100.0 (90.0) ^a	15.49 (23.7) ^{abc}	S
	C.D(5%)	12.94	3.56	18.93	4.15	
	SE(m)	4.57	1.25	6.68	1.46	
	SE(d)	6.46	1.77	9.45	2.07	
	C.V(%)	19.84	19.27	14.91	14.14	

Note: * values in the parathesis are Angular transformed

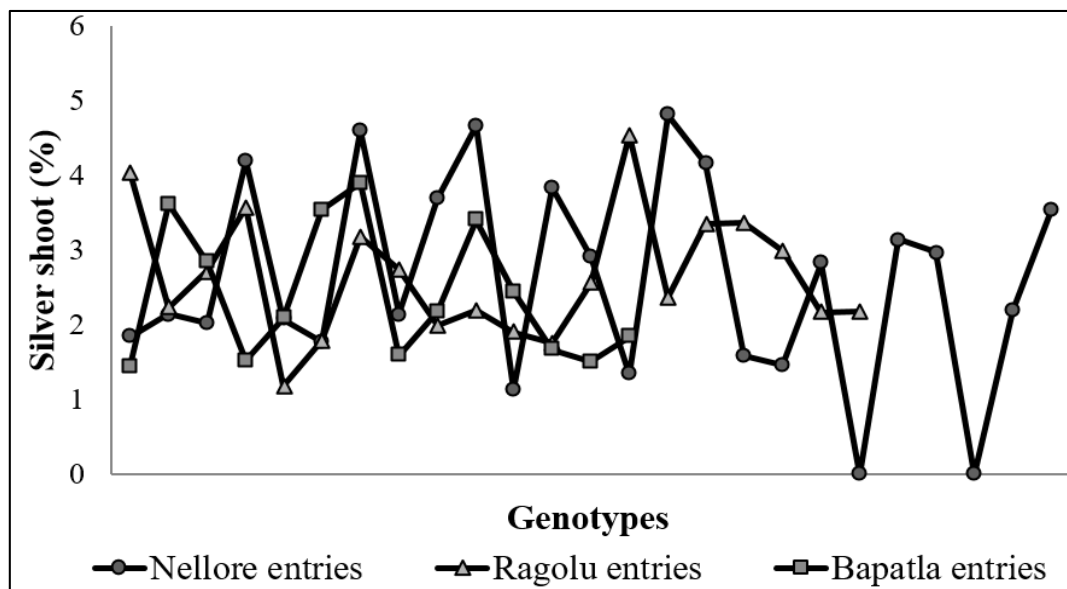


Fig 1: Reaction of rice genotypes collected from different research stations against gall midge, *O. oryzae* at 30 DAT

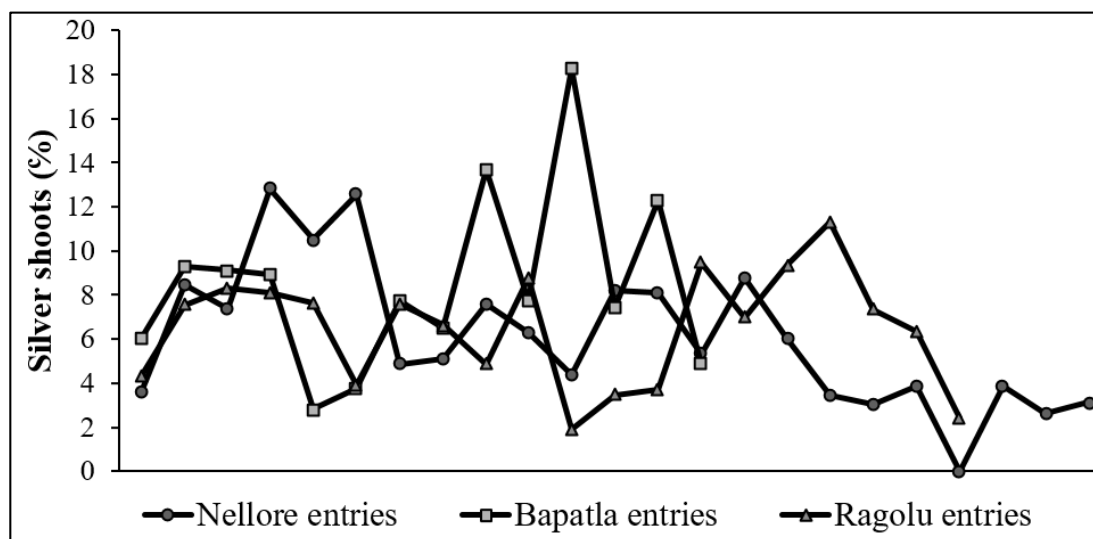


Fig 2: Reaction of rice genotypes collected from different research stations against gall midge, *O. oryzae* at 50 DAT

References

1. Anusha C, Maheswari TU, Raju CD, Malathi S, Padmakumari SOPA. Identification of new sources of resistance to rice gall midge biotypes prevailing in Telangana, India. *Journal of Experimental Zoology*. 2022;25:793-803.
2. Bentur JS, Pasalu IC, Sarma NP, Prasad Rao U, Mishra B. Gall midge resistance in rice. DRR Research Paper Series 01. Hyderabad: Directorate of Rice Research; 2003. p. 20.
3. FAO. Food and Agriculture Organisation of the United Nations. Rome: FAO; 2024.
4. IRRI. SES standard evaluation system for rice. Manila: International Rice Research Institute; 2013. p. 1099.
5. IRRISTAT [Internet]. 2017. Available from: <http://ricestat.irri.org:8080/wrsv3/entrypoint.htm>
6. Kumar RS, Malathi S, Rao PJM. Screening of certain rice entries against Asian rice gall midge, *Orseolia oryzae* (Wood-Mason) in Warangal, Telangana. *Journal of Entomology and Zoology Studies*. 2020;8(5):1888-1893.
7. Malathi S, Kumar RS. Screening of rice entries against Asian rice gall midge, *Orseolia oryzae* (Wood Mason) in Telangana, India. *The Andhra Agricultural Journal*. 2021;68(3):339-350.
8. Meher J, Dani RC, Subudhi HN. Field screening of improved rice genotypes against the Asian rice gall midge (*Orseolia oryzae* Wood-Mason). *Oryza*. 2009;46(1):48-52.
9. Prasad R. Status of the rice gall midge (*Orseolia oryzae* W.M.) in the State of Jharkhand. *Journal of Rice Research*. 2011;4(1-2):19-22.
10. Sumathi E, Manickam G. Field screening of rice accessions against rice gall midge (*Orseolia oryzae* Wood-Mason). *Crop Research*. 2013;45:54-58.
11. Vijay Kumar, Akshay KC, Thyagaraj NE. Detection of Asian rice gall midge (*Orseolia oryzae*) biotype 1 in the new locations of Karnataka, South India. *Bulletin of Insectology*. 2008;61(2):277-281.