



STUDY ON VARIETAL PREFERENCE OF TEA MOSQUITO BUG *HELOPELTIS ANTONII* SIGNORET IN GUAVA

K ARAVINTHRAJU*, K SURESH, S MANISEGARAN AND C RAJAMANICKAM¹

Department of Agricultural Entomology; ¹Department of Horticulture,
Agricultural College and Research Institute, TNAU, Madurai, 625104, Tamil Nadu, India

*Email: aravinth4697@gmail.com (corresponding author)

ABSTRACT

Different guava varieties in farmer's field at Kovilur village, Madurai district, Tamil Nadu, were screened for tea mosquito bug (TMB) *Helopeltis antonii* incidence. Five varieties were subjected to one month of observation for the incidence during the peak period viz., November- December, 2020. The varietal preference of the evaluated cultivars was- Arka Rashmi, Red Flush, Arka Kiran, Taiwan Red and Lucknow-49, with resistance ranging from 0.95 to 7.75 TMB/ 15 flush.

Key words: *Helopeltis antonii*, guava, varieties, Arka Rashmi, Red Flush, Arka Kiran, Taiwan Red and Lucknow-49, preference, non-preference

The tea mosquito bug (TMB) *Helopeltis antonii* Signoret (Miridae: Hemiptera) is emerging as a major pest in horticultural crops. The first record of TMB was in Java during 1847 on tea crop (Rao, 1970) and in India it was in Cachar District in Assam during 1968 (Aravinthraju, 2021). It is a major pest of tea, and also a major threat to cashew, moringa, neem, *Acacia*, cocoa, camphor, pepper and cardamom etc. Now, it is emerging as a pest on guava in many areas, besides having few alternate weed hosts to complete their lifecycle during off-season. The nymphs and adults insert their proboscis into the young leaves, buds, tender shoots, inflorescence and fruits to suck the plant sap. The toxin injected

through saliva causes the tissues around the punctured shoot to dry and die. The affected portion becomes brown and later black, with leaves having many such black spots shriveling and eventually falling off (Gundappa et al., 2018). The infested shoots and flowers also show such spots which may extend over young shoots. Damage to flowers leads to dropping (Haseeb, 2007). Fruits show symptoms like corky growth and pustules on its surface, which in severe cases will show cracks on its surface followed by drying and falling off. Hence, it is necessary to evaluate TMB incidence in guava varieties to incorporate these in IPM, and the present study evaluates the varietal preference.

Table 1. Preference to *H. antonii* in varieties of guava

S. No.	Varieties	TMB incidence (No./ 15 flush)*				Mean
		1 st week	2 nd week	3 rd week	4 th week	
1	Red Flush	2.00 (1.41) ^{ab}	2.80 (1.67) ^a	1.20 (1.10) ^a	3.40 (1.84) ^{ab}	2.35 (1.53) ^{ab}
2	Taiwan Red	6.40 (2.53) ^c	6.60 (2.57) ^{bc}	4.60 (2.14) ^{ab}	5.20 (2.28) ^{bc}	5.70 (2.39) ^c
3	Lucknow- 49	9.60 (3.10) ^c	7.20 (2.76) ^c	6.40 (2.53) ^b	7.80 (2.79) ^c	7.75 (2.78) ^c
4	Arka Kiran	3.20 (1.79) ^b	3.60 (1.90) ^{ab}	2.40 (1.55) ^{ab}	3.60 (1.90) ^b	3.20 (1.79) ^b
5	Arka Rashmi	0.60 (0.77) ^a	1.40 (1.18) ^a	0.60 (0.77) ^a	1.20 (1.10) ^a	0.95 (0.97) ^a
	SEd	0.28	0.47	0.41	0.40	0.21
	CD (p=0.05)	0.58	0.61	0.86	0.58	0.44

*Each value mean of five replications; Figures in parentheses square root transformed values $\sqrt{(x + 0.5)}$; Mean followed by same alphabets in a column not significantly different by LSD ($p < 0.05$)

MATERIALS AND METHODS

The field experiment was carried out in a farmer's field at Kovilur village, Madurai district during November- December (2020). Five varieties viz., Red flush, Taiwan Red, Lucknow-49, Arka Kiran and Arka Rashmi were observed for TMB incidence. The experiment was laid in randomized block design with five replications, each comprising of three trees, and maintained unsprayed. In these, five twigs were selected at random and observations on TMB were made at weekly intervals, and means of these were analyzed after square root transformation with AGRES statistical package, and means were compared (LSD, $p=0.05$).

RESULTS AND DISCUSSION

The results given in Table 1 reveal that there are significant differences in the feeding preference of TMB among the varieties. Arka Rashmi has recorded the least incidence (0.95 bugs/ 15 flush) indicating the non-preference nature, whereas the maximum incidence was in Lucknow- 49 (7.75 bugs/ 15 flush). The ascending

order of varietal preference was Arka Rashmi, Red Flush, Arka Kiran, Taiwan Red and Lucknow- 49. Earlier studies by Gopalan and Perumal (1973) revealed that Lucknow-47, Saharanpur seedless and Smooth green were resistant. The genotypes Bapatla, AC-10, Bangalore Seedless and Round were found tolerant (Pasupathy, 2000).

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