



Screening of snake gourd genotypes for low infestation against semilooper, *Anadevidia peponis* F. (Lepiptera: Noctuidae)

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ABSTRACT: Fifty snake gourd genotypes were evaluated to screen for low infestation against semilooper during 2011-2012 under field condition. The low infestation of semilooper was observed in Kulithalai local short, Kumbakonam local short, Kumbakonam local long, Madurai local long and PKM-1 types (43 to 49.70 larvae per vine). While the genotypes viz., IC418478, IC411877, IC411878 and IC410160 recorded a higher semilooper infestation (91.0, 84.7, 77.0 and 72.0 larvae per vine respectively) and the yields recorded from these genotypes were significantly lower than the local types. © 2017 Association for Advancement of Entomology

KEY WORDS: Snake Gourd, Semilooper, *Anadevidia peponis*, genotypes

Snake gourd (*Trichosanthes anguina* L.) is a common Cucurbitaceous vegetable and it is an important summer vegetable, cultivated throughout the year except in extreme winter. It is a popular vegetable with high nutritive value. It is as important as a good source of minerals, fibers and other nutrients to make the food wholesome and healthy (Rahman *et al.*, 2002). The plant is regarded as a blood purifier and used in curing skin diseases. The snake gourd is regularly attacked by the semilooper, (*Anadevidia peponis*). (Lepiptera: Noctuidae). Several chemicals are tried to combat this pest. However, in the changing scenario of pest management programme, host plant resistance plays an important role (Sandhya *et al.*, 2010). In view of above, an attempt was made to evaluate certain newly identified snake gourd genotypes against semilooper under field condition.

The present investigation was conducted in the Department of Horticulture, Agricultural College

and Research Institute, Madurai during the period 2011-12 (*Rabi* and *Kharif* 2012). Fifty genotypes were collected from different geographical locations and utilized for the study. Among them, 40 genotypes from NBPGR, New Delhi, three from Tamil Nadu Agricultural University, Coimbatore and seven local types respectively from Kulithalai, Kumbakonam, Palayajeyamkondam, Nagappattinam, Jeyamkondam, Madurai and Coimbatore were collected for evaluation. The experiment was laid out in a Randomized Block Design with three replications. The seeds were sown at a spacing of 2m x 2m with recommended package of practices for the state of Tamil Nadu without plant protection measures. The data on semilooper incidence were recorded from first appearance to peak infestation during February 2012. Observations were recorded at weekly intervals between 7.00 to 10.00 AM. The semilooper comprising of all instars were counted from each plant in each replication. The data were

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Table 1. Incidence of the Semilooper, *Anadevidia peponis* on snake gourd genotypes (average of Rabi 2011 and Kharif 2012)

Genotypes	No. of insect/ vine	Yieldtonnes / hactare
IC202158	59.00	29.25
IC 413027	65.00	33.15
IC212416	58.00	28.63
IC333314	55.00	42.84
IC347377	61.00	14.75
IC410159	60.00	15.67
IC410160	72.00	30.37
IC284753	63.30	18.45
IC202159	58.70	30.00
IC411877	84.70	20.18
IC413589	63.70	17.57
IC418478	91.00	18.90
IC470904	56.33	22.23
IC212474	60.33	26.12
IC539825	65.00	20.90
IC212465	59.70	34.83
IC202155	55.00	28.83
IC433526	64.00	29.16
IC212475	54.00	26.12
IC411878	77.00	20.18
IC308557	55.00	24.00
IC212509	58.30	28.00
IC410142	61.00	21.37
IC212512	64.00	25.20
IC202157	53.00	32.92
IC212527	56.30	28.64
IC410146	60.00	21.75
IC284875	65.00	19.00
IC426984	59.00	16.12
IC321016	56.00	23.77
IC277390	63.00	20.23
IC546083	65.00	31.64
IC321019	59.00	26.82
IC212513	61.00	23.85
IC265568	69.00	22.19
IC265646	53.00	29.92
IC427743	58.00	26.12
Nagapattinum local	59.00	11.62
Kumbakonam local long	49.00	32.81
Kumbakonum local short	47.00	23.75
Jeyamkondam local short	51.00	26.25
Kulithalai local	43.00	36.64
Coimbatore local	59.00	42.00
Co2	55.00	22.55
MDU-1	54.00	33.75
PKM-1	49.70	23.52
Madurai local long	49.00	33.62
Madurai local short	63.00	32.55
Palayajeyamkondam local	51.00	41.10
SE.d	2.82	2.99
CD	5.59	6.02

suitably analyzed and used for interpretation of results (Gomez and Gomez, 1984).

The results on incidence of semilooper, *Anadevidia peponis* in field revealed that the 50 germplasms evaluated had different levels of infestation at peak vegetative growth stage of snake gourd (Patil and Bhole, 1993). The semilooper infestation in snake gourd envisaged that significant lowest semilooper infestations were found in the Kulithalai local and Kumbakonam local short types ranging from 43 to 47 larvae per vine. This was followed by Kumbakonam local long, Madurai local long and PKM-1 ranging from 49 to 49.70 larvae per vine. However, all the germplasms were found to be on par for the infestation to semilooper. The germplasms IC418478, IC411877, IC411878 and IC410160 were found to be highly susceptible to semilooper which registered a significantly higher population of semiloopers compared to rest of the genotypes (Table 1). The highest yield observed in IC333314 (42.84 t/ha), Palayajeyamkondam local (41.10 t/ha), Kulithalai local (36.64 t/ha) IC212465 (34.83 t/ha) and IC202151 (32.92 t/ha) may be due to the genetic potential of the germplasm even though they recorded considerable population of semilooper. The results indicated that the snake gourd local varieties viz., Kulithalai local short, Kumbakonam local short, Kumbakonam local long, Madurai local long and PKM-1 recorded low

infestation by semilooper besides registering higher yield and may be utilized for further improvement in breeding programme.

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