



## SQUASH BUG: *Anasa tristis* (DeGeer)

# Effects of Selective Hemipteran-Targeting Insecticides and One Broad-Spectrum Insecticide on Squash Bug, 2018

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Yellow squash fruit | *Cucurbita pepo*

Squash bug | *Anasa tristis* (DeGeer)

Squash bug, *Anasa tristis* (DeGeer) (Hemiptera: Coreidae), is an important pest of cucurbit crops in the United States. Bioassay experiments were conducted to evaluate the mortality caused by several selective (reduced risk) and broad-spectrum insecticides on squash bug nymphs. Treatments included Lambda-cy, Harvanta 50SL, Transform WG, Sivanto HL 400SL, Sivanto Prime 200SL, PQZ, Beleaf 50SL, Sefina, Assail 30SG, and a water-only check (Table 1). Squash bug nymphs (4th–5th instars) were collected from field plots of summer squash (*Cucurbita pepo*) at Virginia Tech's Kentland Research Farm in Whitethorne, VA in Aug 2018. Fresh cut discs (8–10 cm diameter) of summer squash fruit were dipped in insecticide solution for 5 s, then placed into 150 × 15 mm Petri

dishes along with 10 nymphs per dish. Nymphal mortality was recorded at 24, 48, and 72 h after treatment. Four repetitions were conducted for each insecticide treatment. Proportion mortality data were arcsine-square root transformed to normalize variances, then analyzed using a one-way ANOVA followed by Fisher's protected LSD to separate means.

There was a significant effect of treatment on mortality of squash bug nymphs at 24, 48, and 72 h. At each time interval, Assail and Lambda-cy had the highest mortality followed by Transform, then Sivanto HL 400SL. The aforementioned four treatments were the only insecticides to result in effective (>80%) mortality by 72 h.<sup>1</sup>

Table 1.

Treatment	Rate/acre	Mortality (%)		
		24 h	48 h	72 h
Assail 30SG	6.0 <sup>b</sup>	72.5a	82.5a	100.0a
Lambda-cy	16.4 <sup>a</sup>	67.5a	80.0a	97.5a
Transform WG	1.0 <sup>b</sup>	22.5bc	60.0ab	95.0a
Sivanto HL 400SL	7.0 <sup>a</sup>	27.5b	50.0bc	87.5ab
Harvanta 50SL	10.9	22.5bc	25.0cde	67.5bc
Beleaf	2.4 <sup>b</sup>	10.0bcd	35.0bcd	57.5cd
Sivanto Prime 200SL	14.0 <sup>a</sup>	2.5cd	37.5bcd	50.0cd
PQZ	3.2 <sup>a</sup>	12.5bcd	17.5de	32.5de
Sefina	14.0 <sup>a</sup>	12.5bcd	12.5de	20.0ef
Water	—	0.0d	0.0e	5.0f

Data within columns followed by a letter in common are not significantly different;  $P < 0.05$ .

<sup>a</sup>fl oz of product per acre.

<sup>b</sup>oz of product per acre.

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