Short communication

Henosepilachna vigintiocpunctata (Coleoptera: Coccinellidae: Epilachninae) attacking cultivated and wild crops in Brazil

ABSTRACT

Henosepilachna vigintioctopunctata was recorded on *Solanum melongena* L. for the first time in cultivated crops areas in Espírito Santo State, southeastern Brazil, in the first semester of 2017. In an one-year research , *H. vigintioctopunctata* was recorded in eight plants, host of the families *Amaranthaceae* and *Solanaceae*. These new records represent a high potential establishment of this pest in Brazil.

Key words: 28-spot lady bird, *Solanum melongena*, Phytophagy, Plant Protection.

1. INTRODUCTION

Henosepilachna vigintioctopuntata (Fabricius, 1775) (Coleoptera: Coccinellidae: Epilachini), the 28-spot lady bird or hadda beetle has been reported as one of the most important pest of cultivated and wild Solanaceae and Cucurbitaceae plants in Asia, with records as pest in China [1], India [2-4], Indonesia [5,6], Japan [7,8] and Pakistan [9] and in Oceania, with records in Australia [10]. Cultivated plants in these regions include eggplants, potatos, tomatos, tobacco and cucumbers.

In Western Hemisphere, the first record of *H. vigintioctopunctata* was made in 1990 in Curitiba, Paraná State, Brazil, in an unidentified wild cucurbit. In 1991, in Paranaguaná, on *Piper nigrum* L. (Piperaceae) and in 1992, in Itajaí, Santa Catarina State, on *Solanum americanum* Mill. (Solanaceae) [11]. On the three mentioned records only adults were reported. *Henosepilachna vigiontioctopunctata* was probably introduced from Port of Paranaguá, Paraná State (L.M. Almeida, personal communication).

In 2002, adults and larvae were over again collected in *S. americanum* in Itajaí. In 2010, all development stages of *H. vigintioctopunctata* were collected on *Brugmansis suaveoleus* (Humb. and Bonpl. ex Willd.) (Solanaceae) in Campinas and São Paulo, São Paulo State [12].

During field researches at Instituto Federal do Espirito Santo, Campus Itapina, in Colatina, Espirito Santo State, in the first semester of 2017, adults and larvae were observed attacking eggplants *Solanum melongena* L. (Solanaceae). New records were made through one year in different host plants. Adults and larvae collected in July, 2018, in Colatina, in eggplants were sent to Dra. Lucia Massutti Almeida, Department of Zoology, Federal University of Paraná (UFPR), Curitiba, Brazil, to species identification. Vouchers specimens were deposited in Entomology Collection Prof. Dr. Pe. Jesus Santiago Moure, UFPR.

In a one-year survey, *H. vigintioctopunctata* was recorded in eight plants, host of the families Amaranthaceae and Solanaceae, five of them with all development stages of the pest (Table 1).

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Table 1. Host plant and development stages of *Henosepilachna vigintioctopunctata* found in Espirito Santo, Brazil, July 2017-Agost 2018.

Botanical family	Host plant	Development stage found			
		Egg	Larva	Pupa	Adult
Amaranthaceae	*Amaranthus viridis* L.	A	A	A	P
Solanaceae	*Brugmansia suaveolens* (Willd.)	P	P	P	P
	Physalis angulata L.	P	P	P	P
	Solanum aethiopicum L.	P	P	P	P
	Solanum lycopersicum L.	A	A	A	P
	Solanum melongena L.	P	P	P	P
	Solanum nigrum L.	P	P	P	P
	Solanum paniculatum L.	A	A	A	P

P – present, A – absent.

Attacked leaves showed typical symptoms mentioned to *H. vigintioctopuctata*, characterized by a network aspect due to scraped occasioned by larval and adults (Fig. 1.). According to [13], in *S. melongena* leaves, larvae feed on phloem, epidermal and parenchymal tissues, while adults scraped upper and lower sides of the leaves. Fruit reduction up to 60% in eggplants field has been reported in India [14].

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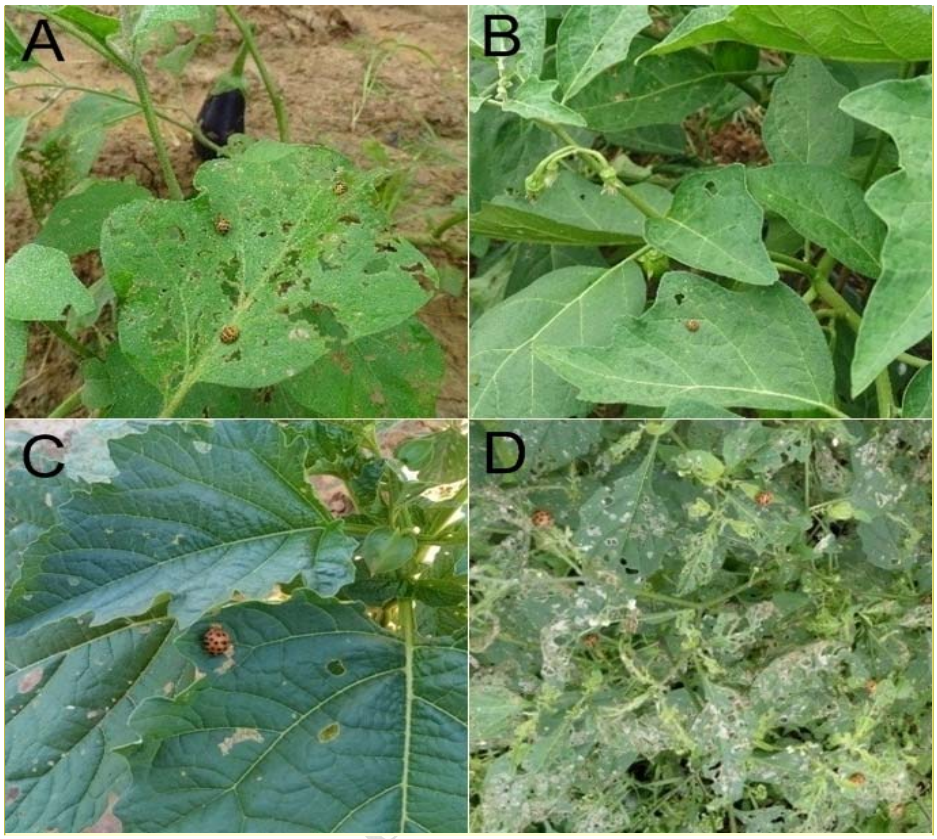

Fig. 1. Attacked plants for *Henosepilachna vigintioctopunctata*: *Solanum melongena* L. (A), *Solanum aethiopicum* L. (B), *Physalis angulata* L. (C) and *Solanum nigrum* L. (D) in Espirito Santo, Brazil, July 2017-Agost 2018.

2. Conclusion

Since its first record, *H. vigintioctopuctata* has not been mentioned in the list of quarantine pests of the Ministry of Agriculture. The new records of this present study, up to 1000 km from the first occurrence in Brazil, in agriculture areas and in eight hosts, represents a high potential of establishment of this pest in Brazil. The Brazilian Association of Seed and Seedling Trade (ABCSEM) estimated 820 thousand hectares of vegetable crop in 2016. Eggplant production has increased in Brazil in last year mainly due to its medicinal importance. Thus, efforts to avoid the spread of *H. vigintioctopunctata* should be made.

COMPETING INTERESTS DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of

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the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

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