Short Communication

*Sphenophorus levis* detected in Mato Grosso do Sul, Brazil

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**ABSTRACT**

*Sphenophorus levis* (Vaurie) is an important soil pest of sugarcane crop, as it attacks the basal internodes of the plants and thus can reduce significantly the crop productivity. Its occurrence has been reported in the State of São Paulo since 1990, and more recently in its vicinity State of Minas Gerais. For the first time the occurrence of *S. levis* is recorded in sugarcane plantations in the State of Mato Grosso do Sul. Larvae of this pest were found in sugarcane in Maracaju county through soil samples made during 2010. The probable origins of introduction and possibilities of this pest expansion in the region are discussed in this paper.

**Keywords:** Insecta, damage, sugarcane billbug

**INTRODUCTION**

Brazil has an area of 8 million hectares cultivated with sugarcane with a production harvest of 588,915 tons, from which 49% will be used for sugar production and 51% for alcohol production (Conab, 2011). Mato Grosso do Sul State is one of the largest producing regions, wherein a significant increase in the area of sugarcane cultivation has been observed in recent years, (Conab, 2011). The increased acreage has however resulted in significant pests attack.

Despite the satisfactory productivity attained in this crop, pests attack is one of the factors which mostly affect its production. Among them, the species *Sphenophorus levis* (Vaurie) assumes great importance, as it attacks the underground parts of the plant and it has been spreading throughout other areas where its occurrence has not been registered before (Almeida, 2005).

The genus *Sphenophorus* contain a complex of species responsible for causing damages to several crops of economic importance, mainly to those belonging to the gramineus group (Woodruff, 1996). In North America, there are 75 species; in South America, 18 species (of which 14 are found in Brazil); in the North Africa, Europe and Asia, 6 species; and in other Africa and Pacific regions, 26 species (Vaurie, 1978). *S. levis* species is reported to occur only in South America, in Brazil, Argentina and Paraguay (Vaurie, 1978).

In Brazil, the importance of *S. levis* as a sugarcane pest was first noticed in 1977 and described as a new species in 1978 (Vanin, 1988). Initially, this species was considered restricted to the region of Piracicaba, State of São Paulo. However, in 2006, it could be found in sugarcane crop located in 53 counties of the States of São Paulo and Minas Gerais (Pinto *et al*., 2009).

The importance of this pest is related to the high damage that this species can cause to the sugarcane crop, since it is able to injury about 50 - 60% of the tillers of the plant (Precetti and Arrigoni, 1990). The damage is caused by the larvae which feed opening circular and longitudinal galleries in the plants’ basal internodes, making the leaves and tillers become yellow and dry (Precetti and Arrigoni 1990, Pinto *et al*., 2009).

**MATERIAL AND METHODS**

The survey of soil pests was conducted in sugarcane crops of Mato Grosso do Sul State, in Maracaju County, carried out from September 2009 to August 2010. The samples consisted of trenches in soil, with dimensions of 0,50m X 0,50m up to a depth of 0,30m, centralized in the...
Figure 1. Total number of larva, pupa and adult of Sphenophorus levis found in the period September 2009 to August 2010 in sugarcane crops of Maracaju, MS

row of sugarcane plant. The soil taken from the trenches as well as the plants’ roots and stalks were analyzed, being the insects found placed in plastic containers with moistened soil and taken to Embrapa Agropecuária Oeste entomology laboratory, in Dourados, Mato Grosso do Sul. There, the S. levis larvae were reared using sugarcane roots as food to obtain adult which were sent to identification.

RESULTS AND DISCUSSION

S. levis was registered for the first time in Maracaju county. Adults of this insect were found in the field in January, and they could be observed moving or stationary in the soil. The larvae and pupae were found in April, within the basal internodes of sugarcane plants. The larger larvae quantity was observed in July and August, similarly to what was observed by Precetti and Arrigoni, 1990, who found a larger amount of larvae during the months of June and July in the State of São Paulo (Figure 1.)

One can speculate that his first record of S. levis in sugarcane crop of MS, is probably due to the neglected insect-infested seedlings transportation from one region to another, since that insect generally presents a low rate of dispersal by its own (Degaspari et al., 1987). The presence this insect in MS represents a real worry to the sugarcane crop in that state, because new management practices must be implemented in the areas infested with this species. In addition, containment measures to prevent the insect spreading must be implemented as sugarcane is being expanding quickly throughout the state. For both strategies, control and containment, helps much a continuous monitoring of this pest in order to follow its occurrence and abundance in the region.

REFERENCES