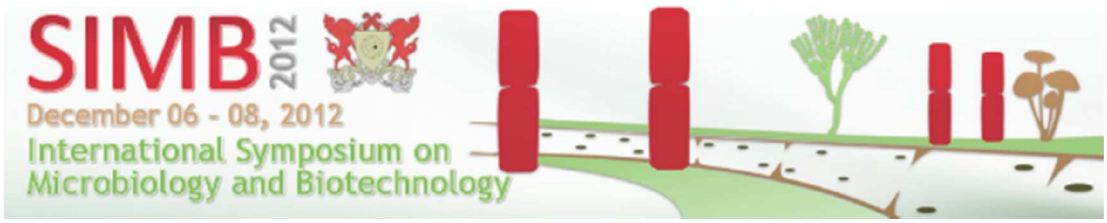

TOXICITY OF ISOLATED FROM *Bacillus thurigiensis* BERLINER IN THE BOLL WEEVIL (*Anthonomus grandis* BOHEMAN, 1883) (COLEOPTERA: CURCULIONIDAE) LARVAE

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The cotton plant is a crop of major economic interest worldwide. In most countries where cotton is grown, vulnerability to pests is the main problem of this culture, especially the boll weevil, Anthonomus grandis. Therefore, the use of transgenic cotton plants expressing genes from *Bacillus thuringiensis* (*Bt*) has many advantages, such as reduction in the application of chemical control agents, and resistance throughout the cotton production cycle, being also an economical, safe and non-polluting technology to the environment. The objective of this work was to evaluate the toxicity of beetle-specific isolates of *B. thuringiensis*, through bioassay against *A. grandis* larvae. 1078 *B. thuringiensis* isolates from the Bacterial Genetics Laboratory, at Faculdade de Ciências Agrárias e Veterinárias, Jaboticabal, SP, were characterized by PCR-RFLP. Initially, the isolates were selected, using primer specific PCRs, for the presence of the *Bt* genes cry3, vip1, vip2 and vip1/vip2, known as potentially toxic against of coleoptera larvae. Subsequently, the positive *Bt* genes from the selected isolates were characterized through PCR-RFLP using restriction enzymes to identify new genes into the subclasses isolated. 14 polymorphic profiles were observed, indicating the presence of different alleles and, consequently, distinct subclasses of these genes. Toxicity tests against *A. grandis* were conducted using nine polymorphic isolates of *B. thuringiensis*. The experimental design was randomized, consisting of 14 treatments and two replications with ten neonate larvae of *A. grandis* by repetition, totaling 20 larvae per treatment. The results of the bioassay were subjected to a discriminant analysis between treatments for the purpose of detecting differences in toxicity between proteins using "Statistica software". Of the nine isolates tested, the isolate I_02 appeared promising for more detailed studies on toxicity to the boll weevil larvae, with a mortality of about 65%. These results indicate that the genetic polymorphisms may present interference in the toxicity of the proteins, where the toxin Cry3 showed greater effectiveness in mortality of larvae *A. grandis*, when compared with the toxin Vip1/Vip2.

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