

IS THE RESISTANCE OF SUGARCANE AGAINST *Diatraea saccharalis* RELATED TO THE EMISSION OF METABOLIC ORGANIC VOLATILES (MOVSS)?

Sheila dos Santos Tavares

Sheila dos Santos Tavares¹, Nadia Stefania Jelvez Serra¹, Alessandro Riffel²

Antônio Euzébio Goulart Santana¹, Eraldo Lima³.

¹Universidade Federal de Alagoas. ²Empresa Brasileira de Pesquisa Agropecuária, EMBRAPA, Brasil. ³Universidade Federal de Viçosa. scheyllast@hotmail.com

Sugarcane (*Saccharum sp.*) is originated from South-east Asian but has adapted to the soil and climate conditions of Brazil becoming the main source for both ethanol and sugar production. One of the main barriers within sugarcane farming is the attack of pests. Borers cause great damage to the sugarcane stem, in which the sugarcane borer *Diatraea saccharalis* (Fabricius, 1794) is the most harmful species. As a defense mechanism, plants synthesize metabolic organic volatiles MOVs that provides protection against various herbivores. It is know possible that MOVs are related to the oviposition and feeding preference of certain insects. If this is the case, MOVs could be used as a control strategy against insect pests. This study analyzed whether MOVs are involved in the sugarcane resistance mechanisms against *D. saccharalis*. Field observations have suggested that there is a difference between two varieties, SP81-3250 and SP89-1115 where one is resistant and the other susceptible to sugarcane borers, respectively. Plants with the correct phenological stage and seven perfectly developed leaves were used. Three different behavioral assays were conducted: wind tunnel assay, oviposition assay, and larval performance. The oviposition preference tests were conducted with choice and non-choice bioassays. Results showed that there was no significant difference between the different treatments thus showing that there were no feeding and oviposition preference in both sugarcane varieties analyzed.