

## POSTER SUMMARY

**EFFECT OF KNOWN PUSH-PULL PLANTS ON THE BEHAVIOUR OF *ELDANA SACCHARINA* MOTHS AND LARVAE**DENTINGER D<sup>1,2</sup>, CONLONG DE<sup>2,3</sup>, RUTHERFORD RS<sup>2,3</sup> AND HARRACA V<sup>2,3,4</sup>

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**Abstract**

In South Africa, *Eldana saccharina* Walker (Lepidoptera: Pyralidae) has been an important sugarcane pest for more than 40 years. SASRI advocates an Integrated Pest Management plan to limit the damage caused by this insect in sugarcane fields, which includes the 'push-pull' strategy. This method is based on using indigenous plants to attract (pull) or repel (push) a pest from a crop and is already successfully applied in Kenyan maize fields. The present laboratory study focused on the influence of the odours of three known host plants (the pull-plant *Cyperus papyrus*, and two sugarcane varieties) and three selected push-plants (*Melinis minutiflora*, *Desmodium intortum* and *D. uncinatum*) on the behaviour of *E. saccharina* moths and larvae. In a four-way olfactometer, volatiles from the three push-plants significantly repelled moths. However, none of the odours from the three push-plants significantly affected the exploratory behaviour of larvae. Similarly, the larvae did not show a preference between the odours of the three host plants. It was concluded that the first larval stage of *E. saccharina* does not seem to use olfaction to select its host plant. Nevertheless, these results suggest a broader choice of companion plants to combine with sugarcane in order to naturally reduce invasion by *E. saccharina* moths.

**Keywords:** chemical ecology, sugarcane, plant volatiles, push-pull, olfactometer