

MSc STUDY OPPORTUNITY

CROP BIOLOGY RESOURCE CENTRE

Field trials using indigenous entomopathogens against *Eldana saccharina* and white grubs, two sugarcane insect pests in South Africa

● The Problem

The sugarcane stalk borer *Eldana saccharina* (Lepidoptera: Pyralidae) and numerous soil inhabiting white grub species (Coleoptera: Scarabaeidae) are continuing pest insect species in the South African sugarcane industry. In the development of an Area-Wide Integrated Pest Management strategy against them, increasingly more environmentally friendly pest control techniques are being developed, which are compatible with and sometimes increase efficacy of more conventional control measures. The use of endophytes and entomopathogens as bio-insecticides is one of these newer methodologies.

● The Projects

Two MSc study opportunities are currently available, running from April 2009-March 2012. Entomopathogens are used commercially for white grub control in Australia, and for froghopper control in Brazil. These commercial formulations have been developed from pathogens indigenous to these countries and to the particular insect groups. A number of insect pathogens have been isolated from soil, *E. saccharina* and white grub adult and larval cadavers in South Africa, which could be useful for their control, and SASRI have isolated numerous plant endophytes that may serve the same purpose. A number of these showed promising pathogenicity in laboratory bioassays against these two groups of insect pests. These projects, one against *E. saccharina*, and the other against white grubs, thus aim to further develop these local entomopathogen isolates into commercial products.

● The Candidate

Ideal candidates should hold a BSc Honours degree in Entomology and/or Ecology and be enthusiastic about field work and insects and their population biology and ecology, and diligent in the application of bioassays. This is a team-orientated project and the ability to get on with others is essential.

● The Position

Successful candidates will be provided with a competitive bursary and a dynamic, well-resourced and friendly working environment based at SASRI. Candidates who have secured or applied for NRF funding are strongly encouraged to apply.

● The Contact

A resumé and covering letter, outlining why the candidate is suited to the position, should be sent as soon as possible, to:

Dr. D.E. Conlong, Crop Biology Resource Centre, SASRI, Private Bag X02, Mt Edgecombe, 4300. KZN. South Africa. (des.conlong@sugar.org.za).