

# Entomopathogenic nematodes for the biocontrol of white grubs in forestry and sugarcane plantations in South Africa

## INTRODUCTION

- White grubs are root feeding larvae of the Scarabid beetles
- Their control is difficult because of their soil dwelling nature and resistance to chemical insecticides
- In South Africa, white grubs are the most important insect pests of sugarcane and establishment pests of wattle plantations
- Biological control using entomopathogenic nematodes is a viable option

## METHODOLOGY

Using standard bioassays, eleven locally isolated entomopathogenic nematodes were used to test for their efficacy against four of the most prevalent white grubs

### Insect collection and rearing



Digging

Sorting

Separation

Rearing

### Experimental set up



Pre-selection

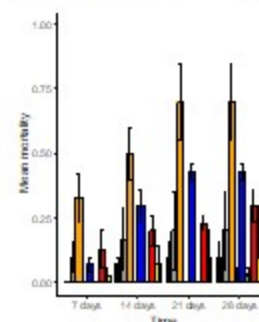
Set up (10\*3)

Inoculation

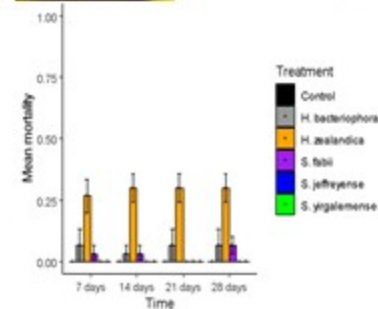
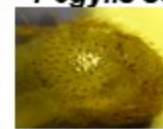
Incubation

## RESULTS

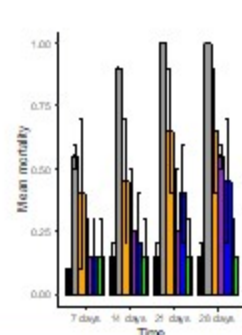
### *Schizonycha affinis*



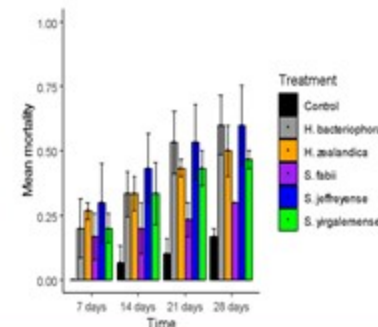
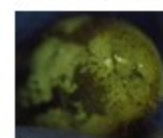
### *Pegylis sommerri*



### *Maladera sp. 4*



### *Monochelus spp.*



Most white grubs were relatively susceptible to *H. zealandica*. *Pegylis sommerri* was the most resistant white grub while *Maladera sp. 4* was the least resistant. Highest increase in mortality was achieved at 3 weeks post inoculation

## CONCLUSION