

# A fully-funded PhD scholarship in the Integrated Pest Management of macadamia felted coccid (*Acanthococcus ironsidei*)

## Macadamia Protection Programme

We invite applications for a full-time study of a **PhD in Entomology** at the University of Pretoria within the Forestry and Agricultural Biotechnology Institute (FABI).

### Study background

*Acanthococcus ironsidei* Williams (Hemiptera: Eriococcidae), commonly known as macadamia felted coccid (MFC) is a sap-sucking insect that is naturally found in Australia. Its host range is restricted to the Macadamia genus, and it is currently the only scale insect that can cause serious damage to macadamia. It was recorded in South Africa in 2017 and has adverse effects on tree health and nut yield. Currently, farmers rely on a limited number of insecticides to control the invasive pest. Designing an integrated pest management programme for macadamia felted coccid is essential for sustainable farming.

To design an integrated pest management programme, this study will focus on:

- investigate the phenology of MFC in South African orchards
- determine its degree-days
- determine its economic injury levels (EIL's)
- investigate the toxicity of insecticides of MFC on its biological control agent, *Metaphycus macadamiae*

### Supervisors

Dr. Rosali Moffat, Prof. Gerda Fourie, Anthony King

### Bursary details

A full bursary (incl. tuition costs) for three years

Start date: January 2026

Performance will be reviewed after 12 months

The candidate will be based at the University of Pretoria. The study will be conducted in the field and laboratory and will include interactions with farm managers and the macadamia industry.

### Application requirements

- A MSc degree in Entomology or a related field
- Demonstrated analytical/statistical abilities and writing skills
- High attention to detail and self-motivated
- Valid South African driver's license
- Willingness to plan and execute field trips
- Willingness to assist with rearing of the study insects
- Willingness to work over weekends and after hours when necessary

Please submit your CV, contact information of two references and a cover letter to **Dr. Rosali Moffat** ([rosali.moffat@fabi.up.ac.za](mailto:rosali.moffat@fabi.up.ac.za)) or **Prof. Gerda Fourie** ([gerda1.fourie@fabi.up.ac.za](mailto:gerda1.fourie@fabi.up.ac.za)) before

**31 October 2025.**

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