



Introduction

Bemisia tabaci transmits viruses that cause cassava mosaic and cassava brown streak diseases in cassava (Fig. 1).

Developing effective and sustainable IPM strategies against the whitefly vector is critical for virus management.

Entomopathogens are a component of some IPM programs for management of pests such as mites, scales, aphids and other whitefly species but these are yet to be tested on cassava whiteflies.

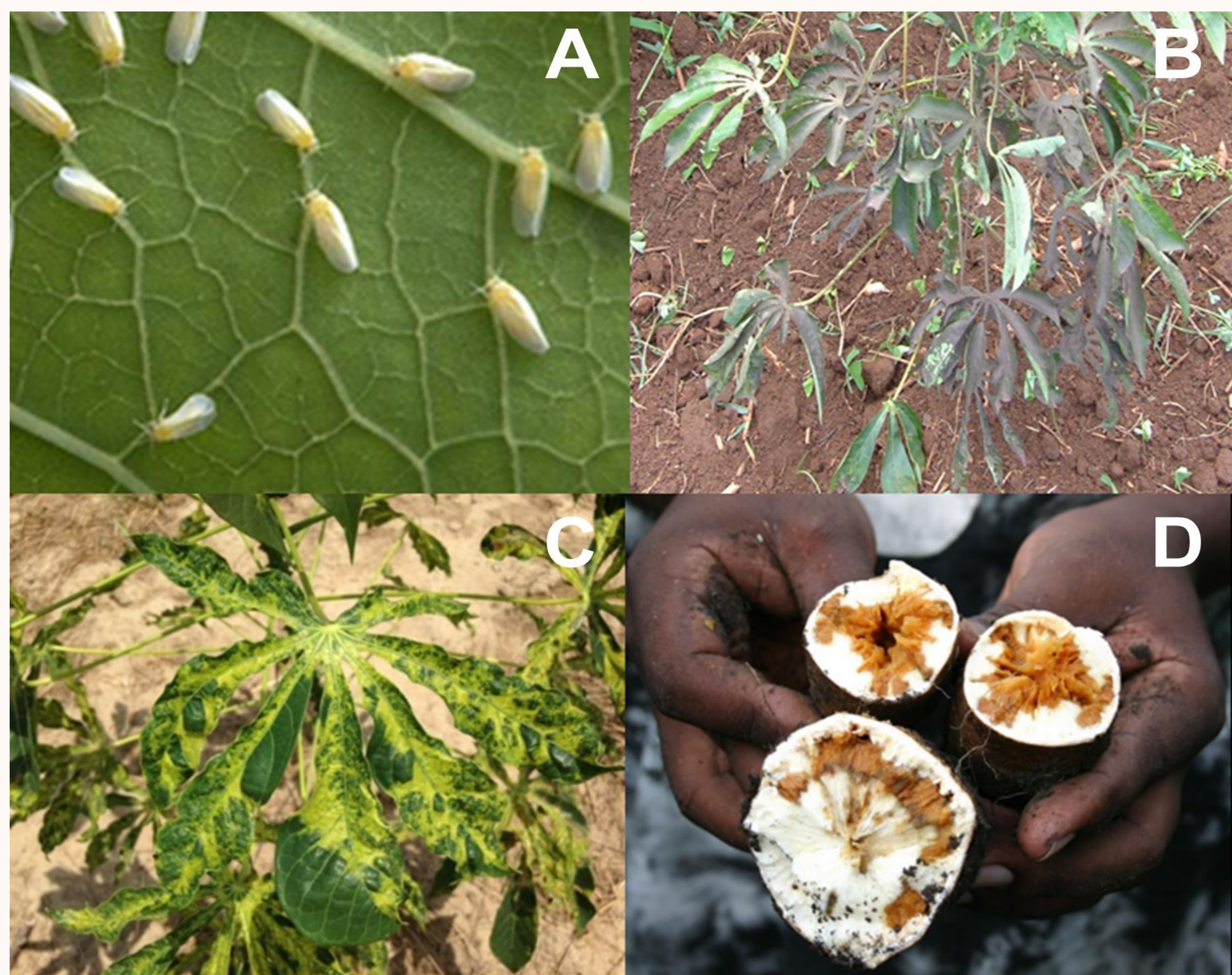


Fig. 1. Whiteflies colonizing cassava (A), Stunted plant with sooty mould (B), Cassava mosaic disease (C), Cassava brown streak disease (D). Source : IITA

Materials and Methods

- Commercial fungal biopesticides (Beauvitech, Lecatech, Met69, Mycotal) at recommended rate.
- Lab: The 2nd/3rd instar nymph on single leaf cassava plants sprayed and enclosed in polythene bags, nymphs and adults counted at 14d (Fig. 2).
- Field: Plants were sprayed every month, and dead nymphs on the 14th leaf from top recorded for 6 months at two sites.



Fig. 2. Experimental set up.

Objectives

To test the efficacy of commercial fungal biopesticides against cassava *Bemisia tabaci* whiteflies.

Results and Discussion

- Lab 10 days - The four biopesticides caused significantly higher ($P < 0.0001$) nymph mortality compared to control with Mycotal at 80% (Fig. 3A).
- Lab 14 days - Mycotal caused 82% nymph mortality which was significantly higher ($P < 0.0001$) compared to other biopesticides (16-28%) (Fig 3B).
- Chambezi - Lecatech and Mycotal significantly reduced nymphs by 10-65% ($P < 0.05$) compared to control (Fig 3C).
- Mkuranga - Mycotal reduced whitefly nymphs by 25-80%, which was greater than Lecatech which reduced numbers by 25-40%. These

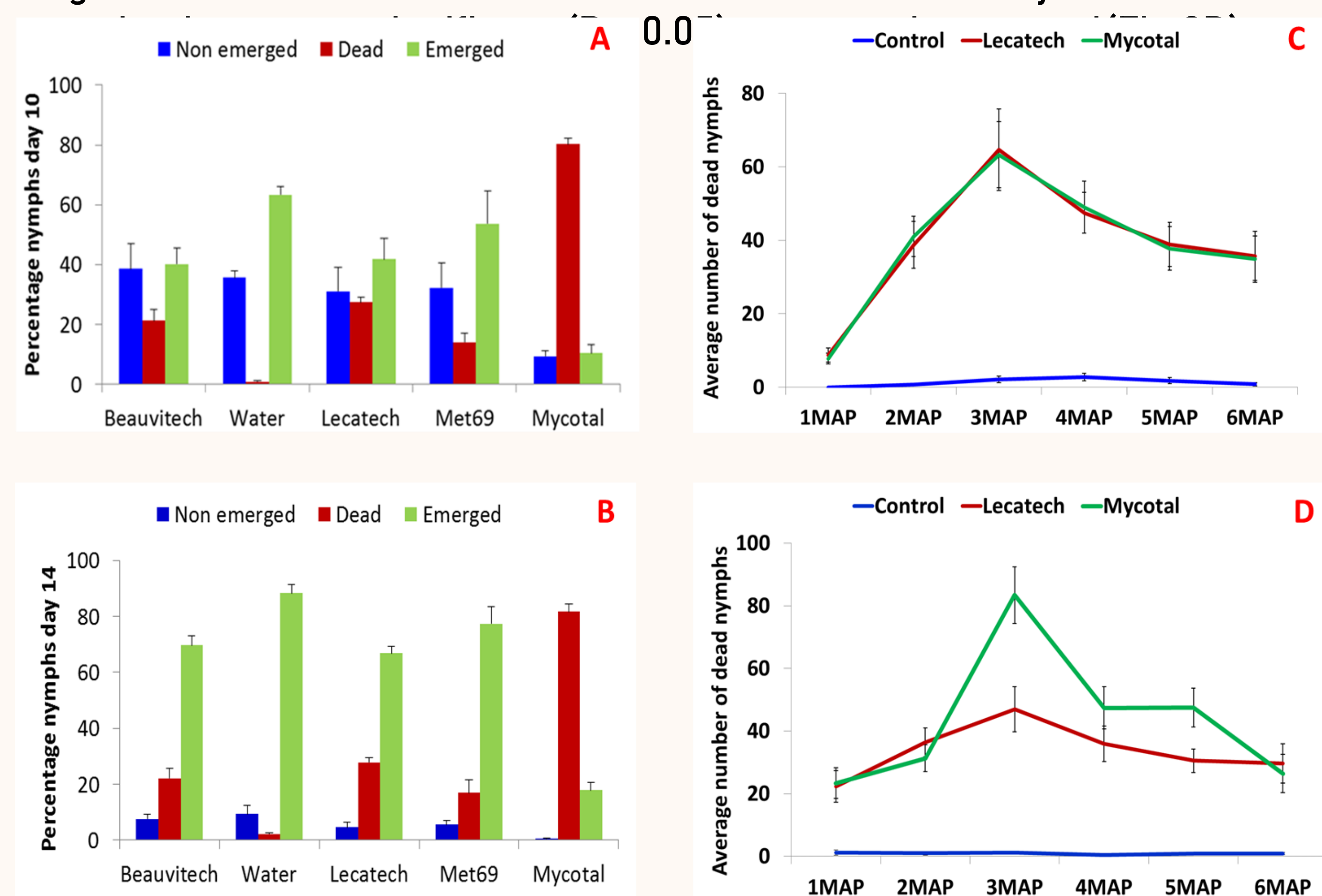


Fig. 3. Percentage of nymphs at 10 days (A) and 14 days (B) for laboratory, Number of dead nymphs at Chambezi (C), and Mkuranga (D) for field experiments.

Conclusion

Fungal biopesticides have potential to control cassava whiteflies based on laboratory and field experiments.

Mycotal was the most effective compared to other biopesticides under laboratory conditions.

Mycotal and Lecatech are both effective under field conditions though Mycotal performed better at Mkuranga, and it should be considered for farmer participatory trials and integration in IPM packages against whiteflies.

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