

Biological Control of Aphids in Australian Native Rice

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Introduction

In Australian native rice (*Oryza* spp.) nursery trials insect pests can rapidly build up their populations and can be a major cause of poor growth of the plants, unhealthy inflorescences, and empty florets. Pests found on the native rice included: melon aphids, white fly, grasshopper, and ginger ants. At the beginning of wet season (September & October) when the temperature was rising, and rainfall started, there was an infestation of aphids. Empty florets were found in the most affected inflorescences. Control measures were trialled.

Aim

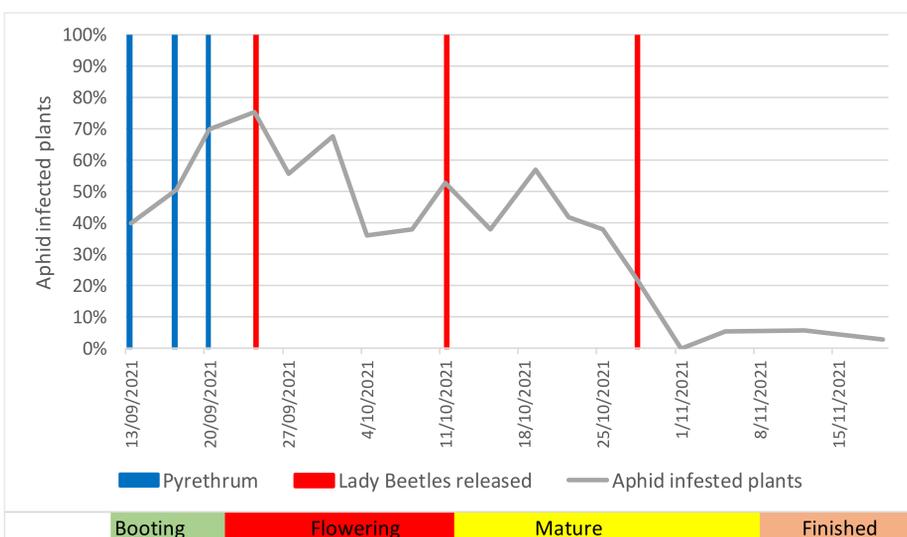
Our aim was to manage the pests without causing harm to the plants or the environment.



Lady beetle larva on a host plant used to maintain larva when they are not being used for biological control on the native rice plants.



Aphids eating Australian native rice plants during a nursery trial at Charles Darwin University.



Aphid infested native rice plants after chemical (pyrethrum) and biological (lady beetle) treatments.



Aphids being controlled by the lady beetle larva and adults on Australian native rice plants.

Key points

- In Australian native rice (*Oryza australiensis*, *O. meridionalis*, *O. rufipogon*) nursery trials, pests can cause poor growth of plants, unhealthy inflorescences, and empty seeds.
- Aphids were first seen on the native rice plants at the booting stage.
- At flowering and milk stages, aphids were not being controlled by chemical control with pyrethrum.
- Pyrethrum was sprayed up to the point of runoff (as per instructions for use on the bottle) from the leaves.
- Biological control was trialled. Lady beetles (*Harmonia conformis*) were released. The larva and adults quickly consumed the aphids.
- Lady beetles consumed substantial proportion of aphids within a short time without causing any damage to the plants.
- Biological control of aphids in the native rice plants was found to be a most effective way to control aphids.

Acknowledgements

This work is a part of Australian native rice trial at Charles Darwin University, nursery area. This Future Food Systems CRC project is funded by the Commonwealth Government of Australia, Charles Darwin University, Northern Territory Government, Queensland University of Technology and Myera Group. Pudukul Aboriginal Cultural Tours are also partners.

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