#### Who we are

We are a scientific team dedicated to making the grains industry more resilient to pest outbreaks. We are planning a new project, supported by the GRDC, entitled 'Assessing aphid control with parasitoid wasps in canola' – led by Cesar Australia, in collaboration with PEARG at the University of Melbourne, Crop Capsules, Bugs for Bugs and Biological Services.

#### What are we hoping to achieve?

Research indicates that parasitoid wasps (aka parasitoids) play a crucial role in naturally reducing aphid populations in canola, highlighting the potential for biological control strategies. As such, we are seeking 60 canola paddocks across New South Wales, Victoria, and South Australia, to help us run a network of field trials aimed at measuring the ecological and economic benefits of controlling aphids with parasitoids. Parasitoids lay their eggs in aphids and in turn the developing offspring feed on the aphids' insides, resulting in their death. We will be looking at the benefits of the resident parasitoids already present on farms, as well as the benefits provided by introducing more parasitoids through targeted releases. In short, we want to know, how much aphid damage can be reduced by parasitoids and understand the economics of integrating these parasitoids into existing control strategies. This research can't be achieved using laboratory or glasshouse studies, and so we need field data to understand those naturally occurring aphid parasitoid populations.

### What are we asking of participating growers?

Contribute one 10 ha experimental plot for the three years of field trials (2024-2026):

- Option A (one paddock): The 10-ha plot is to be established within a single paddock over the three years of the field trials (2024-2026). At least half of the paddock is sown with canola every year of the trials.
- Option B (two adjacent paddocks): The plot is established within a paddock sown with canola in 2024 and rotated back to canola in 2026. In 2025, it's established in an adjacent paddock sown with canola.





# You are invited to participate in our new project: Investigating aphid control with parasitoid wasps

Ideally, the paddock(s) would have a neighbouring refuge (e.g. shelterbelt, riparian area, or a native vegetation patch).

2. Agree to not apply foliar broad-spectrum insecticides to the 10-ha plot and the crop immediately surrounding the plot to prevent chemical drift effects. Note: there is a compensation fund available to growers to cover any incurred costs from participating in these trials (e.g. yield loss, using a softer insecticide to treat non-aphid pests).

3. Support us to conduct our trials - In a nutshell:

- We will release commercially reared parasitoids in the experimental plot.

- We will survey the paddock(s) twice per season for aphids, parasitoids, and other insects, mites, and spiders. [Please note researchers will be adhering to biosecurity requirement's when on growers' land].

4. Assist us in capturing the costs associated with managing the paddock(s) and agree to share yield data from the 10-ha plot.

## How can this help?

In addition to helping the broader grains industry, we will provide participating growers with observations and key findings throughout the trial. We are also planning a beneficial insect workshop in 2025, and field walks in two states in 2026 demonstrating parasitoid deployment and monitoring. Growers and their advisers involved in the project will be given priority access to these events.

We'd love to hear from you! If you are interested, please email Dr Samantha Ward from Cesar Australia at sward@cesaraustralia.com or call/SMS on 0426 091 108.

More information on the project can be found on our website <u>here</u>.

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