

Rubus IPM: Project update

Dr Jon Finch, Tasmanian Institute of Agriculture

RB21000: Integrated pest management approaches to address pest challenges in raspberry and blackberry

RB21001: Using pheromones and traps in the management of mirids and vegetable bugs

Our national \$2.4 million research program aims to improve integrated pest management (IPM) for raspberry and blackberry crops. The project will develop strategies that minimise chemical use and costs, whilst effectively managing pests. The Hort Innovation funded program, partnering the University of Tasmania, NSW Department of Primary Industries and Regional Development, and Agriculture Victoria, will create region-specific pest management solutions across Australia. The research will explore four core approaches: monitoring, biological control, pheromones, and trap cropping. **More detailed information can be found by reading our digital newsletters at bit.ly/Rubus-IPM**

Welcome, Justin

We are thrilled to welcome Dr. Justin Cappadonna to our team at the University of Tasmania's Launceston campus, situated near many of Tassies largest Rubus crops.

Justin brings valuable expertise in managing mirids, a key pest in Rubus crops, and has made fascinating discoveries about their movement and nocturnal behaviour.

In this project, he will be working with Burlington Berries on conservation biocontrol and trap cropping techniques. Don't hesitate to reach out to Justin for all things related to integrated pest management (IPM).

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Conservation biological control strips being trialled to promote predators at Piñata Farm, Orielton, Tasmania

Photo credit: Tasmanian Institute of Agriculture

Very hungry caterpillars

Last season, raspberry and blackberry crops in NSW faced significant caterpillar pest pressures. Saleh Adnan (NSW DPIRD) and University of Tasmania PhD candidate Jaher Ahmed are collaborating with Costa Berries on a 2-hectare trial testing three complimentary strategies to manage caterpillars pests, including *Helicoverpa armigera* (cotton bollworm), *Helicoverpa punctigera* (native budworm), and *Spodoptera litura* (cluster caterpillar). Saleh and Jaher's trials are currently ongoing.

The strategies being tested include:

- **Mass trapping:**
Using species-specific pheromone lures and traps to capture moths before they can breed and lay eggs
- **Conservation biocontrol:**
Planting zinnias, sunflowers, marigolds, and buckwheat to attract and support predators and parasitoids
- **Biological control agents:**
Releasing *Trichogramma pretiosum*, a parasitic wasp, to control caterpillar populations



UTAS PhD candidate Jaher Ahmed deploying pheromone traps at Costa Berry, Corindi

Photo credit: Tasmanian Institute of Agriculture

Tracking *Trichopoda*

Hasan Rahmani (Agriculture Victoria) is seeking help to track the distribution of *Trichopoda giacomellii*, a biocontrol agent for green vegetable bug. A fly species from central America, *T. giacomellii* was released in northern NSW in the 90's but its current distribution is unknown. Knowing the pest's distribution will help us to understand the potential of *T. giacomellii* to control green vegetable bug in temperate berry production areas like Victoria and Tasmania. Contact Hasan directly if you'd like to participate in specimen collection.

Hasan.Rahmani@agriculture.vic.gov.au | 0417 940 012



Green vegetable bug wearing a very fashionable *Trichopoda giacomellii* egg 'hat'

Photo credit: Jean and Fred Hort

Sexy solutions

UTAS PhD Candidate Seeger Van Kints is also conducting research on green vegetable bug. Seeger is currently synthesising green vegetable bug sex pheromones at the university. These will then be trialled as tools for monitoring and potentially trapping these problematic pests in raspberry crops.

Seeger also aims discover the pheromones of the Australian crop mirid. Doing this may ultimately allow us to develop novel monitoring and management options for growers.



UTAS PhD candidate Seeger van Kints searching for mirids in our flowering strips at Piñata Farm, Orielton, Tasmania. Photo credit: Tasmanian Institute of Agriculture

Counting the cost of crop mirids

PhD candidate Kiran Bhusal is estimating action thresholds for the Australian crop mirid in raspberries. He is studying the damage caused by adult mirids to raspberry fruits and flowers. We hope this will help to develop better decision tools for growers in the future.

Kiran has also recently completed an experiment investigating the impact of temperature on crop mirid development. This data may then be used to help predict the appearance of mirids in raspberry and blackberry crops.



UTAS PhD candidate Kiran Bhusal deploying cages to study the impact of crop mirids on fruit set
Photo credit: Tasmanian Institute of Agriculture

Goodbye, Michele Buntain

It is with a heavy heart that we say goodbye to UTAS horticultural and extension guru, Michele Buntain. Michele was instrumental in the development and implementation of this programme. She has led much of our extension efforts including planning field days, writing newsletters and developing the project website.

Her knowledge of horticulture, boundless enthusiasm and impressive networking abilities have been pivotal in our success to date. No doubt she will be equally missed by the scientific and horticultural communities that she did so much to bring together!

We wish Michele all the best in her future adventures, mainly caravanning around Australia. Thank you, Michele! You will be missed.

Acknowledgement

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Hort Innovation RASPBERRY AND BLACKBERRY FUND

