

Winegrape producers learn from own trials

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About this Project

Why

A reliable supply of high-quality fruit from Tasmania is needed to sustain and grow premium wine brands.

Processed value could be at least 20% higher if costs due to botrytis disease were recuperated, i.e., less crop and juice loss, labour, processing costs and more high-value wines for which Tasmania is known.

Producers need a means to tailor disease management to each production site, seasonal conditions, and wine business goals.

How

Adoption or adaption of viticultural practices can be accelerated when producers conduct their own trials effectively and efficiently.

Collaborative **On-Farm Experimentation (OFE)** is being introduced and adapted to address producers' needs from their own trials. This will support direct in-business learning and knowledge sharing among businesses.

What

In 2023-24, the project team collaborated with nine wine businesses who conducted eleven trials about managing botrytis bunch rot or powdery mildew as a predisposing risk factor.

Trials were conducted in the North-West, Tamar Valley, East Coast and Huon Valley regions of Tasmania.

Knowledge exchanges among participants are being facilitated through face-to-face workshops and WhatsApp discussions. Changes in knowledge, learning and actions are being tracked.



Kathy Evans discusses trial progress with participating producers. All were shown how TIA staff sampled grape bunches and assessed disease – a process they felt confident to do themselves if resources were available.

KEY POINTS

- Effective on-farm trials can answer a producer's questions about site-specific adjustments to crop input amounts, timing, placement and/or application technique.
- Wine producers introduced to collaborative On-Farm Experimentation are learning together about efficient and robust ways to test and evaluate disease management tactics that address viticultural objectives and integrate well with existing operations.

We acknowledge support from the Tasmanian Government's Agricultural Development Fund (Project ADF001).

Extension to other production issues and crops

The importance of qualitative research.

We learned from previous research that a producer-led trial must fit well with existing operations, be simple and efficient to implement and produce robust and easy-to-interpret results.

As on-farm experimentation (OFE) methodology is scaled out in wine grapes, it is vital to understand how trial collaborators experience the process and how they interpret the value of the trials.

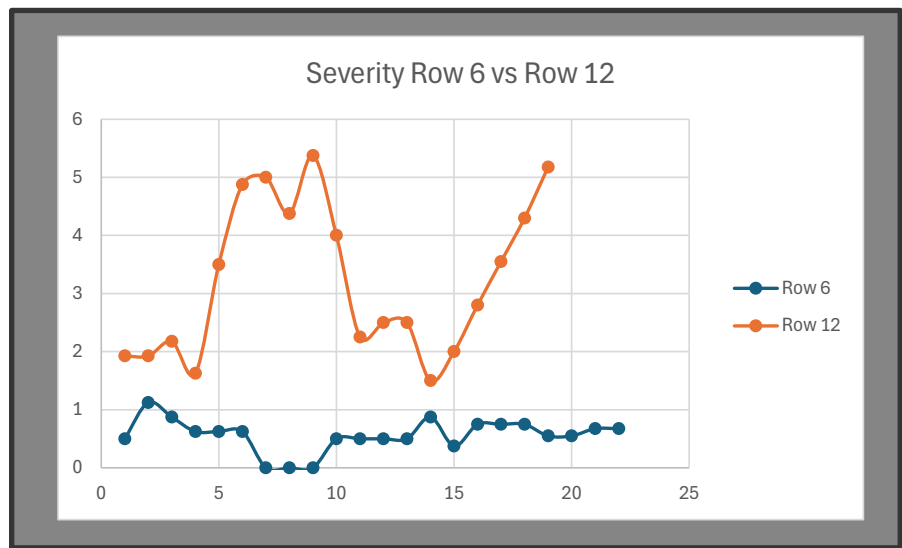
Case studies

Participant case studies are being developed from qualitative research to understand participants' current approaches to disease management. The case studies reveal how participants collaborate and learn and the actions they undertook as a consequence of their involvement in the project.

Qualitative research is thus vital to inform how OFE methodology can be improved, extended and sustained for other production issues in winegrapes and for other crops.



Botrytis bunch rot developed at 7 of 11 trial sites in 2023/24 even though the weather was less favourable for botrytis than in other years.



Visualisation of trial results: An example of a trial displaying a clear difference between the test treatment in one row (Row 6) and current practice in another (Row 12). Each data point is a moving window average of botrytis bunch rot severity (%) for five sample vines at equivalent locations in vineyard rows selected to capture a broad range in potential treatment responses. Graphical presentation of results allows the producer to assess if the magnitude of the difference is useful in practice.

Trial process and outcomes

In 2023/24, each trial collaborator received guidance on setting a trial question relevant to them. This was done via regional focus groups working with a Botrytis Checklist or through one-on-one conversations.

Each producer applied their own 'test' treatment/s and were involved in data collection and interpretation. They tested various degrees or types of leaf removal, spray timings or product substitutions or removal, and/or spray targets (whole canopy or bunch zone.)

At a post-harvest workshop, participants appreciated the open discussions to share knowledge, which also aided the design of and commitment to next trials. They also felt confident to assess their own trials if resources are available for this task.

Knowledge sharing revealed to participants the nuances in which a disease management tactic (e.g. leaf plucking) might be implemented. They also learned how to interpret trial results for scenarios where there was significant spatial variability in botrytis severity.

One participant said: *"The process shows the strong result of highly considered but minimal expert interaction with industry".*



Kathy Evans and Claudio Radenti of Freycinet Wines discuss a potential trial.

Future work

In 2024/25, it is expected that many trials will be repeated or expanded to confirm results and/or explore seasonal effects. Some participants will adapt treatments based on what they learned in 23/24, and/or pay more attention to the basics, such as testing for adequate spray coverage.

Participants also expressed interest in an ongoing community-of-practice and use of specific weather variables to describe the inherent botrytis risk associated with any given trial or season.

The research team is now preparing a 'How to' Guide to On-Farm Experimentation for the benefit of a broader audience.

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