OUR IMPACT 2025

A series of **case studies** that capture the unique impact of the Southern NSW Drought Resilience Adoption and Innovation Hub

SOUTHERN NSW
Innovation Hub
SUSTAINABLE AGRICULTURE, LANDSCAPES AND COMMUNITIES

Citrus, almond and wine grape growers in southern NSW gained new skills and knowledge to manage drought and optimise production through demonstrations and on-farm training at digital irrigation masterclasses.

Irrigation efficiency boosts horticultural drought resilience

ON-FARM CHANGE

At the 600-hectare Super Seasons citrus orchard near Hillston in the Riverina, Peter Ceccato has an ambitious goal to reduce his water use to half that needed using traditional irrigation methods without impacting yields.

Peter and his employees took part in a digital irrigation master-class which included on-farm demonstration sites that showed 0.6 to 2.2 megalitres of water could be saved by using modern irrigation practices and principles. Super Seasons made chang-es on-farm as a result of the training including adjusting sprinkler heads and driplines for improved water efficiency, pressure changes and implementing more effective monitoring of irriga-tion.

Peter said taking part had significantly improved his orchard's drought resilience, bridging the gap between technology and on-ground practices to understand irrigation data.

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We really would like to see how far we could push it and save water, which also translates into power usage reduction.

PETER CECCATO
SUPER SEASONS CITRUS ORCHARD

BACKGROUND

Working with the then NSW Department of Primary Industries (DPI) as the delivery partner, Southern NSW Innovation Hub engaged with 60 local citrus, almond and wine grape orchardists to co-design and deliver digital irrigation masterclasses across southern NSW in 2022 and 2023.

The masterclasses focused on equipping growers with new knowledge, skills and confidence to boost production and manage and prepare for drought. Topics covered included:

- Modern irrigation practices and equipment, and how to measure irrigation system performance
- How plants use water and how to calculate how much they need
- Available sensors and monitor plant available water, and how to interpret the data
- Growers discussing their experiences and learning from each other.

Each masterclass comprised five, three-quarter day workshops and 33 days of follow up on-farm activities to build grower confidence. Growers worked directly with the technical experts from NSW DPI to test soils and irrigation systems on their own orchards, practice learned skills and build their confidence to run the tests and interpret the results.

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Another organisation to benefit from taking part in the masterclass is nut producer Stahmann Webster, which has 2600 hectares of walnuts in the Riverina.

The company's technical officer Mariano Gallardo said his team discovered a wide variability in the root area due to drainage problems, causing over-irrigation in some sectors of the orchard and since the masterclass they have now adjusted their approach to ensure they only irrigate to the root zone.

He recommended the learning experience to other growers.

Griffith citrus grower John Bisetto is committed to remaining up to date with new technologies and best practices in irrigation which led him to participate in the masterclasses, which he found extremely valuable.

"I wanted to be better and more efficient with my water because it's not a resource that's unlimited. I've got to produce a good crop but do it with less water." John said.

The changes John has implemented as a result of the masterclasses, including accurate interpretation of the data from his soil moisture monitoring equipment, have led to significant improvements in water and power efficiency on his farm. He also improved his understanding of soil conditions which has allowed him to make better-informed irrigation decisions.

If growers are more efficient with water during the drought, then this means there is more for everyone to share and benefit.

MARIANO GALLARDO
TECHNICAL OFFICER | STAHMANN WEBSTER

IMPROVING HORTICULTURE INDUSTRIES' DROUGHT PREPAREDNESS

The provision of practical tools for irrigation management to growers across southern NSW was a significant achievement and part of a long-term learning process that will improve the horticulture industry's irrigation management and drought preparedness.

The outcomes of the project are impressive. 60 growers attended workshops and 250 training days over the past two years. On-farm follow up helped 17 growers analyse 288 irrigated horticulture blocks, taking in 1440 hectares.

In addition, Southern NSW Innovation Hub partnering with NSW DPI created links between this project and the NSW DPI Climate Smart Pilots – Demonstrating Adaptation Program, which supported agtech for selected growers who completed the masterclasses and participated in on-farm engagement activities.

The southern NSW irrigation masterclasses were a crucial extension component of the cross-hub Drought Management for the Health and Longevity of Perennial Horticulture Plants project, led by the SA Drought Hub with involvement from Southern NSW Innovation Hub, Vic Drought and Innovation Hub and the Tas Farm Innovation Hub. This project was funded by the Australian Government's Future Drought Fund.

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