



## Golden Grove Nursery optimizing efficiency with smart technology

**Golden Grove Nursery is one of Australia's leading citrus production nurseries, providing commercial citrus growers with exceptional quality products at affordable prices. Golden Grove Nursery must continuously be at the forefront of new technology trends and invest in innovation to maintain this position.**

That's according to Wayne Parr, Director of Golden Grove Queensland Pty Ltd, a fourth-generation citrus grower with vast practical experience spanning over 40 years as a commercial grower of horticultural and agriculture crops.

Golden Grove Nursery has been family owned since 1988 and is firmly established in the Queensland horticulture Industry.

The production nursery is a dominant supplier in the fruit tree industry and holds exclusive licenses with breeders and importers to produce protected and Plant Breeders Rights (PBR) cultivars for supply to commercial orchards.

To date, the business has excelled and is considered a leader in the production and supply of citrus trees to the citrus industry. However, production has been designed to effectively capture the full potential of changing market demands for a diverse range of crops, including avocado, macadamia, and ornamental plant production.

The production nursery currently supplies over 200,000 nursery trees per year (with the capacity to provide 240,000 nursery trees) into the Queensland Citrus Industry and other fruit tree industries.

Owing to its dedication to innovation, Golden Grove Nursery has been an ideal participant in the strategic levy-funded project *'Digital remote monitoring to improve horticulture's environmental performance'* (ST19024).

This innovative pilot project funded by Hort Innovation and the Australian Government's National Landcare Program aims to encourage adoption of technology which helps Australian horticultural businesses improve decision-making skills, production efficiencies, optimal labour use and environmental performance.



The project has identified and supported Golden Grove Nursery in implementing a new innovative irrigation control system, installing new environmental measuring devices, and redesigning growing media for horticultural tree stock.

"With a firm focus on innovation, we are incredibly excited to be a part of this project. It will provide Golden Grove Nursery with the tools and knowledge to implement the latest technology and trendsetting ideas to transform our growing processes," Wayne said.

"A key goal for this project is to improve our water management processes, reduce the overheads of water usage and decrease the environmental impact through runoff catchment and recycling.

"Improving labour efficiency is another critical area of focus; by adopting innovative technology, we hope to create more streamlined nursery operations and growing practises.

"These new processes will help to reduce crop growth cycle times and provide commercial growers with a higher quality uniform crop."

"Since starting this project, we have already made big changes. We installed a free-standing weather station within the shade house to monitor the microclimate."

"There are pH, EC and Redox sensors installed in the dam and drain to monitor water quality.

"We've also installed four networked cameras to monitor dam overflow, pest activity via sticky traps, stem length and crop growth.



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"Another significant change was the installation of a leachate monitor to identify nutrient runoff, weight scales and soil moisture sensors to measure the growing media moisture content and the crop water use.

"Since incorporating new information and communication technology into our day-to-day processes, we have begun to optimise our productivity and labour efficiency," Wayne said.

"With the help of smart technology, data is now uploaded to the cloud using modern communication technologies and presented live on a screen in the office, which removes the need to manually record the data in spreadsheets."

"We've also found the monitoring sensors are starting to give the nursery staff a good overview of the crop requirements through the different growth stages and weather events.

"As a result of this project, we have reimagined our entire business operation and are incredibly excited to reap the rewards of investing in innovative technology, creating a thriving, sustainable business.

The project involves collaborators including Hort Innovation, Applied Horticultural Research, Freshcare, Hitachi Consulting, Landcare and industry bodies Greenlife Industry Australia, AUSVEG, the Australian Banana Growers' Council, the Australian Macadamia Society and Growcom.

*Hort Innovation funded project 'Digital remote monitoring to improve horticulture's environmental performance' (ST19024) using the Hort Innovation nursery products research and development levy and the Australian Government's National Landcare Program.*

**ENDS**

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This project has been funded by Hort Innovation using the nursery research and development levy and funds from the Australian Government. For more information on the fund and strategic levy investment visit [horticulture.com.au](http://horticulture.com.au)