High-tech Strawberry Trial Offers New Insights for Australian Growers

Folco Faber, CEO Apex Greenhouses

Australia's protected cropping sector is continuing to push into new territory, with a commercial-scale strawberry trial underway at Apex Greenhouses in South Australia. The trial, led by Apex Greenhouses with support from Applied Horticultural Research (AHR), forms part of the national *'Growing Horticulture through Protected Cropping Innovation (AS23001)'* project, funded by Hort Innovation and co-investors through the Hort Innovation Frontiers initiative.

The seven-year program is designed to accelerate innovation across Australia's protected cropping industry, helping growers improve productivity, sustainability, and profitability through advanced technologies and applied research.

Within this broader initiative, the strawberry trial aims to answer one of the most important questions currently facing berry producers: can high-tech greenhouse production deliver reliable yields and commercial viability under Australian conditions?

Testing strawberries in a high-tech environment

The trial is being conducted inside Apex Greenhouses' purpose-built research and training facility, a commercial-scale glasshouse designed to evaluate new production systems, crop genetics, and technologies in a controlled environment.

Three strawberry varieties are currently being assessed: '*Albion*', '*Arabella*', and a '*Limore One*' F1 hybrid seed variety. Each has been selected to explore how different genetics perform under intensive protected cropping conditions.

While high-tech glasshouse berry production has expanded in parts of Europe and North America, Australian growers have had limited local data on how strawberries respond in a fully climate-controlled environment. The trial aims to address that gap by generating robust yield data and practical production insights that growers can use when assessing the potential of advanced greenhouse systems.

Folco Faber, CEO of Apex Greenhouses, said the work is already attracting strong interest from across the industry.

"We're seeing increasing interest from growers who want to understand whether high-tech strawberry production can work commercially in Australia," Faber said. "This trial is about generating real data under Australian conditions. By comparing varieties and documenting the challenges we encounter along the way, we can give growers the information they need to make informed decisions about adopting these systems."

The demonstration glasshouse is also intended to serve as a collaborative platform where researchers, technology companies and growers can test new ideas and production approaches together.

Understanding yield potential and production challenges

More than eight months into the first growing season, the trial is already providing valuable insights. Researchers are closely monitoring yields, plant performance, and disease pressure across the different varieties to understand how each responds to the glasshouse environment.

Early observations suggest yield potential is promising, although there is clear variability between the varieties being tested. These differences are expected to play a key role in determining which cultivars may be best suited to high-tech protected cropping systems in Australia.

However, the trial has also highlighted challenges unique to growing strawberries under controlled conditions. Powdery mildew, a common disease affecting strawberry crops in protected environments, has been one of the issues encountered during the season.

Capturing this type of real-world production data is a core aim of the trial, helping the industry understand not only the opportunities but also the management requirements associated with high-tech berry production.

All photos credit: Apex Greenhouses

What comes next

As the current season progresses, researchers will continue to collect yield data and assess plant performance across the three varieties. The next planting cycle will introduce further adjustments to improve the trial design.

These changes will include varying and reducing plant densities to better understand how crop spacing influences productivity and plant health in the glasshouse environment.

There are also plans to investigate additional varieties in future plantings, expanding the dataset and identifying genetics that may be particularly well suited to controlled-environment production.

Given the seven-year timeframe of the broader Hort Frontiers program, the trial will contribute to a long-term body of research exploring the future role of protected cropping in Australia's horticulture sector.

For growers considering investment in high-tech greenhouse systems, access to credible local data is critical. Infrastructure costs can be significant, and decisions must be backed by clear evidence on productivity, crop performance and management requirements.

The program will help protected cropping growers maintain profitability by delivering key aspects of the Protected Cropping Strategic Investment Plan, specifically sustainability, advanced agronomy, automation to reduce labour costs, energy and improving staff skills and management.

To keep up-to-date with the program, contact Anita Chennell anita.chennell@ahr.com.au or visit ahr.com.au/protected-cropping

Acknowledgements: The *'Growing horticulture through protected cropping innovation program (AS23001)'* is funded through Hort Innovation Frontiers with co-investment from Applied Horticultural Research (AHR), Flavorite Hydroponic Tomatoes, The Costa Group, Apex Greenhouses, The Victorian Department of Energy, Environment and Climate Action (DEECA), PolyBee and contributions from the Australian Government.

Hort Innovation
Frontiers

Actinovate® is a biological fungicide that plays a critical role in integrated plant health and disease management programs.

Formulated with the beneficial microorganism *Streptomyces lydicus* WYEC 108, Actinovate actively suppresses a broad range of root and foliar diseases while supporting soil health and nutrient availability.

- Broad spectrum proven efficacy
- Multiple modes of action
- Excellent tool for IPM
- Safe for beneficial insects pollinators / bees
- Strong compatibility with commercial chemistry & fertiliser
- Application via drip, drench, in-furrow, foliar, basal direct

Actinovate is effective as a preventative biological control for soil-borne and foliar fungal diseases, with applications in both conventional and organic systems.

APVMA registered product and organically certified.

03 9008 6352
info@agreva.com.au

agreva.com

agreva® Sustainable Agriculture