

The high-tech lettuce farm transforming creek water into premium produce

Commonwealth Bank · 2026-09-07 · English original

Key points

- Brombal's Fresh Produce is using desalination, hydroponics and automated monitoring to grow lettuce more efficiently.
- The Lismore family farm combines more than 40 years of growing experience with technology to improve crop quality.
- Purified creek water and crop-specific nutrient programs help create consistent growing conditions and produce high-quality crops year-round.

When most Australians picture a lettuce farm, they probably don't imagine desalination technology, internet-connected monitoring systems and crop-specific nutrient programs managed with the precision of a manufacturing plant.

But on the outskirts of Lismore, that's exactly what's happening.

At Brombal's Fresh Produce, third-generation lettuce farmer Jake Brombal is helping lead the evolution of his family's business, where advanced water treatment technology is transforming creek water into ultra-pure growing water for thousands of lettuce and herb crops destined for supermarket shelves across Australia.

For the Brombal family, innovation has become essential to meeting the growing expectations of consumers, retailers and an increasingly competitive fresh produce market.

The farm recently installed two desalination units that operate largely autonomously, constantly filtering and monitoring water quality before it enters the hydroponic growing system.

Connected through internet-enabled software, the technology can be monitored remotely from anywhere, providing real-time insights into one of the farm's most important assets.

"We can control it and see what it's doing, no matter what time of the day," Brombal said.

Since introducing the technology, the farm has become even more efficient, helping improve crop quality and consistency.

"It's helped make the growing operation even more efficient and really produced more lettuce and a better product in the end," he said.

Three generations of innovation

The technology powering Brombal's Fresh Produce today is built on more than 40 years of trial and error.

Brombal credits much of that work to his grandfather, who introduced hydroponic growing to the farm in 1983.

Over decades, the family refined everything from growing methods to nutrient formulations for different lettuce and herb varieties. What once involved constant experimentation has evolved into a highly tuned system.

While technology has transformed the operation, the workload remains demanding. During summer, the day starts at 3:30am as teams prepare orders before harvesting produce destined for customers the very same day.

The cycle doesn't stop once the lettuce leaves the farm.

"Everything we pick that day gets replanted the same day," Brombal said.

It's a pace that continues seven days a week.

"Not really," Brombal said when asked about days off. "It's a seven day a week operation."

The biggest change from his grandfather's era is the role technology now plays.

"My grandad worked really hard too. Everything was longer days and was hands on," Brombal said. "The technology wasn't there."

Today, automated monitoring systems track water quality, nutrient levels and infrastructure performance across the farm, allowing the team to focus on improving operations rather than routine checks.

"It takes us away from doing simple checks to things that make the farm better," he said.

Engineering the perfect growing environment

Step inside Brombal's Fresh Produce and it quickly becomes clear this isn't a conventional lettuce farm.

The entire growing operation sits beneath expansive shade-cloth structures that have been designed to filter sunlight, protect crops and create more consistent growing conditions year-round. Combined with hydroponic growing systems, purified water and tailored nutrient programs, the farm has evolved into a highly controlled production environment.

Ask Brombal what surprises visitors most and his answer isn't the desalination technology or the automated monitoring systems.

"I think the way we are so efficient with our growing," he said.

"We don't use as much water as ground. We're so quick at growing them. We use less fertiliser, less water, less human power, less diesel."

Every part of the system has been designed to maximise efficiency, from the way water is recycled through the hydroponic network to the nutrient formulations developed for specific crop varieties.

That focus on continuous improvement remains a key driver for the business.

"We're always thinking about how to do better, how to maybe reuse and what we can do better for the

environment too," Brombal said.

The result is a farming operation where technology, data and decades of growing knowledge work together to produce more food using fewer resources.

What comes next?

The Brombal family is already thinking about the next wave of innovation.

While robotics and artificial intelligence are still emerging technologies for many agricultural businesses, Brombal believes they could eventually help farms address labour shortages and improve productivity.

For now, the focus remains on producing high-quality lettuce and herbs while continuing to refine the systems that underpin the farm's success.

The business has recently attracted attention beyond the agricultural sector, featuring in a CHEP sustainability case study, highlighting its transition from single-use packaging to reusable plastic crates to reduce waste and improve supply chain efficiency, appearing on shows such as Farm to Fork and MasterChef.

Yet despite the growing profile, Brombal's Fresh Produce remains, at its core, a family farm that has spent decades adapting, experimenting and investing in new ways to grow food.

The CommBank Tour visited Lismore as part of a national initiative designed to enhance financial fitness in regional Australia and bring communities together. Visit The CommBank Tour to learn more.

- News
- CBA story
- Agribusiness

Newsroom

For the latest news and announcements from Commonwealth Bank.

The information presented is an extract of a Global Economic and Markets Research (GEMR) Economic Insights report. GEMR is a business unit of the Commonwealth Bank of Australia ABN 48 123 123 124 AFSL 234945. This extract provides only a summary of the named report. Please use the link provided to access the full report, and view all relevant disclosures, analyst certifications and the independence statement. The named report is not investment research and nor does it purport to make any recommendations. Rather, the named report is for informational purposes only and is not to be relied upon for any investment purposes. This extract has been prepared without taking into account your objectives, financial situation (including your capacity to bear loss), knowledge, experience or needs. It is not to be construed as an act of solicitation, or an offer to buy or sell any financial products, or as a recommendation and/or investment advice. You should not act on the information contained in this extract or named report. To the extent that you choose to make any investment decision after reading this extract and/or named report you should not rely on it but consider its appropriateness and suitability to your own objectives, financial situation and needs, and, if appropriate, seek professional or independent financial advice, including tax and legal advice.