

Your Levy At Work



First national nursery benchmark puts emissions and efficiency in focus

With input costs remaining high, a new national benchmark is helping nursery businesses understand where their greenhouse gas emissions come from and identify opportunities to use materials and energy more efficiently, which may help reduce costs over time.

Delivered in collaboration with thinkstep-anz, Hort Innovation and the Australian Government, the first national benchmark of its kind for the sector draws on FY2025 data collected from seven nurseries across five Australian states.

The benchmark covers environmental impacts from producing the materials used by nurseries through to the point a product leaves the nursery, providing a clearer picture of where emissions occur across production.

The study identified four main contributors to the carbon footprint of nursery products: packaging, electricity, growing media and fuel used on site. Using these inputs more efficiently could reduce emissions and may also lower costs.

"Our footprint is much smaller than many other sectors in agriculture, but it's still important to know our numbers," Greenlife Industry Australia (GIA) CEO Sean Cole said.

"Most nurseries will fall outside the Commonwealth's mandatory emissions-reporting thresholds, but as large councils, developers and retailers begin reporting their Scope 1, 2 and 3 emissions, nurseries may start seeing more requests for basic emissions data from customers captured under the new framework.

"This is where sustainability and profitability can go hand in hand. Understanding where emissions occur helps businesses improve efficiency, reduce operating costs and respond to changing customer expectations as supply-chain reporting matures."

Benchmarking released today by Greenlife Industry Australia shows the cradle-to-gate carbon footprint of Australian nursery products is 0.42 kg CO₂e per litre, based on pot or container size and including packaging. CO₂e, or carbon dioxide equivalent, is a standard way of measuring the effect of different greenhouse gases.

For a product in a 10-litre container, this is equivalent to an average cradle-to-gate footprint of around 4.2 kg CO₂e. The result does not include carbon stored in the plant itself.

"Packaging materials and growing media are key drivers of emissions in the nursery sector, along with electricity for irrigation, lighting and processing, and fuel use including diesel, LPG and gas," Mr Cole said.

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“Understanding these drivers gives growers a starting point to look at where materials and energy are being used and where there may be opportunities to improve efficiency.

“It’s also important to recognise what this reporting doesn’t capture: nursery plants store carbon over their entire life, long after they leave the gate. They also provide cooling, biodiversity and other ecosystem benefits.”

Reducing costs through better data

As sustainability expectations continue to evolve across supply chains, businesses are looking for practical ways to improve efficiency, demonstrate environmental performance and remain competitive.

Major retailers, local government procurement teams, infrastructure projects and large corporate buyers are increasingly seeking sustainability information from suppliers.

“This is the first time Australian nurseries have had a national reference point built from real operational data,” Mr Cole said.

“The benchmark gives growers a clearer picture of where emissions are coming from and can help them identify areas to investigate further.”

Understanding major drivers

Packaging was one of the most significant contributors to the carbon footprint of nursery products.

Polypropylene pots and polystyrene plug trays were identified as major contributors due to the volume of materials used across nursery production. The findings highlight how material selection and procurement decisions can help reduce emissions and may also provide opportunities to manage costs.

Electricity was also a major contributor when viewed across whole-of-operation systems, including irrigation, climate control, lighting and processing.

Nurseries that have assessed energy use across systems have identified opportunities to improve efficiency through scheduling changes, without capital investment, with additional potential from on-site solar and renewable energy procurement.

What the benchmark means in practice

The benchmark gives nurseries a national reference point to help understand their emissions and identify opportunities to improve efficiency.

It can also help growers respond to increasing requests for environmental information from customers and supply-chain partners.

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To help growers better understand their performance, Greenlife Industry Australia will release a benchmarking tool and the full industry benchmarking report in late 2026.

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About Greenlife Industry Australia Greenlife Industry Australia (GIA) is the peak body representing Australia's nursery, garden and greenlife industry.