

SOILLESS AUSTRALIA

Protected Cropping Australia Industry Trade Magazine



**New PC Hub
opens at
La Trobe Uni**

**The ToBRFV story
in Australia**

**PCA2025
highlights**

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SINCE 1990

Looking to the future

across my desk

PCA2025 was a conference that offered the protected cropping industry a valuable opportunity to come together, exchange knowledge, and take stock of where we stand as a sector.

The mood onsite was vibrant, engaged and positive, with a huge amount of connection being the standout feature. We have taken many learnings from the event, about what industry values most and how we can make this bigger and better in the future. In 2025, we faced unusual circumstances, including the ongoing challenges of tomato brown rugose fruit virus (ToBRFV) and a crowded events calendar. PCA2025 was an important reminder of the power of collaboration and the work still ahead.

A moment of reflection

The conference highlighted both the strength and the fragility of our sector. Growers, suppliers, and researchers shared updates on the latest technologies, workforce challenges, and biosecurity risks, with ToBRFV never far from the discussion. At the same time, competing priorities across the industry and a proliferation of events at or around the same time reminded us that when we pull in different directions, we risk fragmenting our collective voice.

Rather than dividing the pie into smaller pieces, the lesson from PCA2025 is that we need to grow it – by working more often, more openly, and more strategically together. This applies not just to advocacy, but also to knowledge sharing, investment attraction, and building a resilient, forward-looking protected cropping sector.

Protected cropping mapping project

One of the strongest examples of how the industry can work together is the protected cropping mapping project. The first iteration of the map delivered a powerful baseline of data, giving growers, suppliers, policymakers, and researchers a clear picture of the size and distribution of protected cropping in Australia. This evidence has supported biosecurity planning, informed infrastructure investment, and strengthened PCA's advocacy with government.

The value of this initiative lies not just in the data itself, but in the fact that it was created collectively. It has shown what's possible when the industry contributes to a shared resource that benefits all.

PCA is now preparing to launch the next phase of the mapping project. This new iteration refines the existing data and broadens its scope to capture crop types, technology adoption, and regional growth trends. In doing so, it will offer the sector a dynamic resource that evolves over time, giving us the ability to track change, identify new opportunities, and respond to challenges with confidence.

Soon, PCA will announce opportunities for organisations and individuals to support the next stage of the mapping project. Those who come on board will not only help deliver robust, independent data for the sector but also align themselves with one of the most strategic initiatives in Australian horticulture.

Growing the pie

If there was one clear message from PCA2025, it is this: our strength lies in



APPN La Trobe University Node Business Manager, Sweetie Mathew (left) and APPN Australian National University Node Manager, Dr Richard Poire demonstrated the LITERAL plant phenotyping system for automated, high-throughput plant trait assessment at the PCA2025. This cutting-edge technology supports NCRIS funded efforts to enhance agricultural research and data infrastructure.

collaboration. When we combine our efforts, we can grow the opportunities available to everyone – whether through shared knowledge, joint advocacy, or collective investment in projects like the protected cropping map.

The road ahead will demand cooperation, but it also offers immense opportunity. Together, we can map not just where the industry is today, but where it can go tomorrow.

Julie Krieger
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Harvesting robots on show at GreenTech for strawberries and tomatoes.

GreenTech review

GreenTech held annually in Amsterdam is billed as the #1 horticulture technology event. Tony Bundock visited the large trade show in mid-June and says that it didn't disappoint.

To say GreenTech is large is something of an understatement! This year the three-day event attracted 11,800 visitors from 41 different countries, featured 550 trade stands and presented a packed three-day lecture program covering a wide range of topics. GreenTech is supported by AVAG, the industry association for the greenhouse technology sector in The Netherlands.

All the big players in protected cropping and horticulture from across the globe had stands showcasing their latest developments. Standout across the expo was AI in all its forms. The move towards a more AI driven way of thinking was evident and some of the technology was quite breathtaking to say the least.

Priva was showcasing the Priva One platform that allows growers to control multiple

cultivation departments simultaneously when necessary. When combined with instant insights into crop performance, 24/7 greenhouse climate control, and personnel management, Priva One aims to bring together everything growers need for their greenhouse, allowing them to manage, plan, and execute from a single solution.

The technology examples in equipment and machinery were also highlighted across many areas. Several companies were exhibiting automation in key crop work areas such as harvesting robots. This type of automation has now reached a high level of accuracy that allows growers to have faith in the reliability of such units.

Scouting robots were also on display. These devices can perform many tasks including crop forecasting and monitoring of pest and disease levels. There were also de-leafing robots, designed to ultimately reduce labour costs.

The ever-present drones were featured by various companies, who highlighted the developments in this exciting technology. The focus shown for drones was in pollination and scouting applications.

Many of the trade stands also allowed growers to not only see new developments but also have a try at some of the same. Spreading predators in an efficient way across a growing area is always challenging, but Koppert had their electric fan assisted spreader on hand to highlight the simplicity and effectiveness of their units, and to allow prospective end users to try the system!

In tandem to the displays, a comprehensive lecture and presentation program ran across the three days featuring well-known industry identities. The talks were presented across These interactive sessions gave some great insights into current and developing issues within the industry.

A chance to visit GreenTech 2026

If we have whetted your appetite for this event, GreenTech 2026 is scheduled for the June 9-11, 2026. PCA is exploring the possibility of running a farm tour program in The Netherlands after next year's GreenTech. Get the dates in the diary and we'll update you all on developments in this area across the next few months!

Meet Ion Staunton

For more years than he cares to admit to, Ion Staunton from Pestech, has been sharing his knowledge of pesky critters and their control through words and illustrations with *Soilless Australia* readers. He's decided to put aside his keyboard and put down his pen for a well-earned retirement. He spoke to Jennifer Stackhouse about his long career.



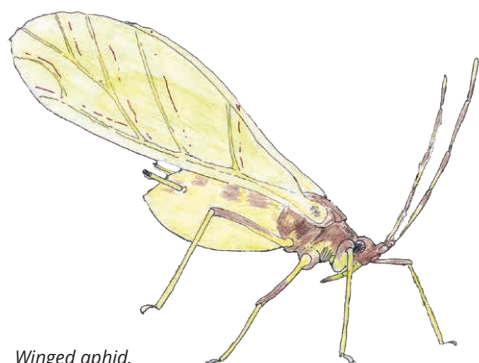
Ion Staunton in his home office working on an illustration of an insect pest on his iPad.

SA How did you get interested in insects? Where you one of those kids who kept an ant farm or snails?

IS No ant farms or such like! I was too busy being an outer suburban barefoot kid with his big brother's cast-off pony because he'd got a bigger one. I really started to be interested in insects when I went to agriculture college.

SA When did you start drawing them?

IS I actually went to ag college to become a wool classer. It was during the Korean War (in the early 1950s) and the price of wool had skyrocketed to a pound (money) a pound (weight). I also studied entomology, botany and soil physics at college (where we wore shoes but no uniform). The alternate lined and blank pages in my workbook meant you were supposed to write about what you'd drawn in pencil on the no-longer-blank pages. So that's when I started drawing and being interested in insects.



Winged aphid.

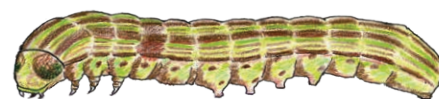
SA Tell me more about your background?

IS After about three seasons in shearing sheds and working in a wool store in Pyrmont, Sydney, I changed tack to be a forester at the New South Wales Forestry Commission. Guess what? I had to learn about termites and borers during my studies... and to draw them.

As I was newly married, being in the bush all week no longer suited me so I became a Flickman. I went to Sydney Tech and spent a year doing lots of drawings of all manner of insects in my hand-in workbook and topped the year. The teacher, Phil Hadlington, thought my drawings were good enough to ask me to join him in writing and illustrating a much-needed first textbook for the industry. Soon after, I joined him teaching some of the subjects and that often meant doing chalk illustrations to emphasise a distinguishing feature of insects, rodents, weeds, etc on the blackboard. Does anyone else remember blackboards?

In 1963 a new pest control association was formed. I became the Honorary Secretary, a position I held for the next 25 years. Somehow, I squeezed in time to become a proper entomologist, studying at the University of NSW.

Then I saw an opportunity to start the first business to supply the pest control industry, not only with pesticides but also equipment and safety gear. When I sold out of that business I went to Queensland because, when I went to the Brisbane Expo in 1988, I thought it would be a pretty good place to retire to so that's why I'm here on the Gold Coast.



Armyworm.

SA How and when did your business come about with its focus on pyrethrum?

IS Good question, because one of the pesticides I formulated earlier was based on natural pyrethrum extract. I owned the registration and was already selling Py-Bo Natural Pyrethrum Insecticidal Concentrate to some growers as a sort of sideline. Natural pyrethrum has been in use for a thousand or so years but at that time I was the only one selling it to growers in Australia.

In the early 2000s I came up with the idea for a do-it-yourself TermiTrap and a bait for sale to homeowners. That put a few noses out of joint at the pest manager's association but none of them lost much business because of my product.

SA You are retiring from your role with *Soilless*, but your son is continuing to run the company. Tell me about that transition.

IS I've really enjoyed writing articles and doing those drawings for *Soilless* these past few years. My drawing technique has definitely improved... mostly because I now do it on my iPad instead of using pen, ink and coloured pencils.

When I turned 88, I asked my son, Shannon, to help me sell my two businesses: TermiKill and Pestech probably, maybe, to two different people. He enquired about the market through



Asian vegies growing hydroponically outdoors.

Nutrient basics

Whatever crop we are growing there is a need to provide a balanced nutrient supply to enable the chosen plants to thrive. Tony Bundock gets down to basics.

In protected cropping, nutrients are commonly provided in a liquid form, but what exactly do plants need? We often talk about a 'balanced' fertiliser recipe that in essence provides all the nutritional needs for the plants. 'Balanced' food for plants is no different to how we look at our own food intake. Yes, you can survive on a diet of donuts and ice cream, but your body most certainly won't keep in a trim form! Hence why we look at a diet that has an even balance.

Plants need various nutrients for growth, categorised as macronutrients and micronutrients. The primary macronutrients are nitrogen (N), phosphorus (P), and potassium (K), often referred to as NPK. These are needed in large quantities and are crucial for leaf development, root growth, and flowering. Other macronutrients include calcium, magnesium, and sulfur. Micronutrients, also known as trace elements, are needed in smaller amounts and include iron, manganese, zinc, copper, boron, molybdenum, and chlorine.

Macronutrients

What exactly does each element provide for the plant?

- **Nitrogen (N)** This is a key component of chlorophyll, proteins, and amino acids, essential for overall plant growth and development. In simple terms nitrogen will facilitate green growth in the plant.
- **Phosphorus (P)** Plays a vital role in root development, seed formation, and energy transfer within the plant. Basically, this is the element that stimulates and promotes root growth in the plant.
- **Potassium (K)** Regulates water balance, activates enzymes, and enhances disease resistance. Potassium also plays a major part in flower and fruit development.

When buying fertiliser, the ratio of these three units (N, P, K) is stated on the bag such as 20:10:10. This ratio signifies the percentage by weight of the three primary macronutrients present in the fertiliser. In this example we will have a ratio of 20 per cent nitrogen, 10 per cent phosphorus and 10 per cent potassium. This makes for a simple recognition of the percentage of each element in the fertiliser bag.

Micronutrients

Micronutrients are vital to plants to ensure even and sustained growth and plant development. Just because they are termed 'micro' doesn't make their role any less in the overall growth of the plant! So, what exactly does each element contribute?

- **Calcium (Ca)** Is important for cell wall development and maintaining cell structure.

- **Magnesium (Mg)** Is a component of chlorophyll and essential for photosynthesis.
- **Sulphur (S)** Is involved in protein and enzyme synthesis.
- **Iron (Fe)** Crucial for chlorophyll synthesis and enzyme activation.
- **Manganese (Mn)** Involved in photosynthesis and enzyme activation.
- **Zinc (Zn)** Important for growth hormone production and enzyme function.
- **Copper (Cu)** Plays a role in enzyme activity and chlorophyll synthesis.
- **Boron (B)** Involved in cell wall development and sugar transport.
- **Molybdenum (Mo)** Essential for nitrogen metabolism.
- **Chlorine (Cl)** Involved in water balance and photosynthesis.

Applying fertiliser

When applying a fertiliser, it's important to initially match the percentage of the major elements to the intended growth stage of the crop. For example, if you want to promote vegetative growth then a higher percentage of nitrogen will be required, whereas, if you want to encourage flowering, a higher level of potassium will be needed.

But with hydroponic growing, most of the fertiliser application is achieved via a liquid fertiliser solution using an A and B tank. In simple terms the A tank contains calcium nitrate only, and the B tank contains a mixture of all the other elements. So why don't we