



Nursery & Garden Industry
Australia

Case Study

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The Plantsmith: boosting nursery productivity the natural way

Working with nature to dramatically reduce chemical application has paid off for Simon Smith, who hasn't used a non-organic pesticide spray for more than eight years at his production nursery, 25km from Darwin in Australia's Top End.

'The Plantsmith' is set on an 8,000 square metre site with the majority of plants grown under protective cropping to exclude pests and help shield them from the extreme heat and intense rainfall for which the region's tropical climate is infamous.

The business employs seven permanent staff and supplies a range of nursery stock such as seedlings, edible plants, potted colour, shrubs and palms to some of the largest retailers and independents across the Northern Territory and the north-west of Western Australia.



As a first generation nursery grower, Mr Smith took over the site in 2006 with a clear vision to dramatically lower pesticide and fungicide use and to boost productivity while developing a business underpinned by clean, green principles.

Mr Smith is a strong advocate of growing nursery stock suited to the prevailing climate, and adopting crop lines to meet the needs of local customers and their preferences.

"We grow a range of plants tailored to the local climate and market including snake beans, paw paw and leafy greens such as the perennial hibiscus-like Aibika, which is a spinach grown throughout Papua New Guinea and the Pacific Islands," Mr Smith said.

"Growing these particular crop lines paired with best practice techniques makes good business sense and, consequently, enables us to produce a high quality product using the least amount of chemicals possible.

"Our philosophy is about finding natural solutions for common nursery problems and it's paid off, with yearly savings of nearly \$10,000 in labour and materials made by simply eliminating almost all chemicals."

With more than thirty years' experience in the nursery sector, Mr Smith said he made it his mission to dramatically lower inputs such as pesticides, fungicides, weedicides and



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growth regulants, and has been able to do so with the help of the nursery industry's farm management system.

The Plantsmith is accredited under the well-known best practice program, the Nursery Industry Accreditation Scheme (NIASA) and, more recently, the EcoHort certification, which is focused on boosting the environmental credentials of production nurseries.

"In my experience, NIASA businesses are more profitable," Mr Smith said.

"The Nursery Production Farm Management System – which includes both NIASA and EcoHort – has provided us with clear guidelines, to run the nursery in a more efficient, sustainable way, which has been positive for the business, our staff and our customers.

"Both programs have enabled us to make substantial improvements around the business such as nursery set up and plant nutrition - right through to staff training and plant dispatch logistics.



"In particular, our staff have undergone training to coincide with the implementation of these programs, and have benefited from the new knowledge and, importantly, from a safety point of view, with reduced handling of sprays and chemicals."

Mr Smith said the industry accreditations provide assurance to customers that plants are of a high standard and, at the same time, are grown safely and sustainably.

"For instance, I walk the nursery in a different way every day, to help find solutions to common problems we experience like pests, water or fungal issues, and to apply natural measures to deal with these," he said.

"This technique is part of the integrated pest management system encouraged under the NIASA certification, which is focussed on continuous improvement, whilst minimising inputs. By dealing with these issues naturally, we're able to promote this via our labels and merchandise.

"This in turn is a great selling point for the business."

The ability to operate without resorting to chemical intervention at the Plantsmith is underpinned by what Mr Smith calls his 'four pillars of success', including:

- **Water and light** - being responsive to prevailing weather through the likes of flexible irrigation programming and altering 'air quality' through shade levels and ventilation to minimise fungal issues
- **Good hygiene** - in particular, a zero tolerance to weeds which are vectors or refuges for most common nursery pests and diseases



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- **Growing media and nutrition** tested regularly
- Locally tailored **cultural practices**.

“Cultural practice is about knowing how to grow the best plants possible in your location and you need to be constantly looking for natural solutions not resorting to chemicals,” he said.

“Prevention is the key, so constant monitoring is important, such as reviewing your growing media, irrigation practices, light and air quality, together with layout factors like plants being elevated on benches and well-spaced.

“Too often, plants are crowded together and this can be a breeding ground for pests and disease.



“We’re constantly moving plants around the nursery according to the seasons to ensure we get optimum sunlight, air quality and, most importantly, shade cover which is grouped into three designated areas at 15 per cent, 25 per cent and 50 per cent cover.

Mr Smith said being in the business of nature means there is an increased focus on creating a holistic and healthy ecosystem, with the surrounding wetland attracting frogs and skinks, amongst other wildlife.

“We don’t recycle our water but instead direct all drainage and runoff towards the wetlands area, which NIASA has very strict guidelines about,” he said.

“This, in turn, has increased the range of beneficial native predators we have living here at the Plantsmith.

“And if we do come across something we can’t remedy we simply throw out the batch and start again so as to avoid using chemicals. If you suffer the loss early, more often than not you’ll come out ahead.

“I encourage every nursery owner to head down the NIASA path and to work towards natural pest and disease management.”

The Plantsmith is accredited under the Nursery Production Farm Management System (Nursery Production FMS), which is an industry developed on-farm system for production nurseries that encompasses best practice, biosecurity, environmental and natural resource management.

To find out more, visit: <http://nurseryproductionfms.com.au/>

To watch Simon’s video, please click visit: <https://www.youtube.com/user/ausngi>



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