

# gro

## Inside

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Buffering the impact of new  
spray drift regulations

Vigilance needed as  
hoppers hatch

Syngenta Connections link  
Australia and India



**Capitalising on  
emerging market  
opportunities in Asia Pacific**

# Welcome

Syngenta is one of the world's leading companies with more than 25,000 employees in over 90 countries dedicated to the purpose of Bringing plant potential to life. Through world-class science, global reach and commitment to customers, Syngenta helps to increase crop productivity, protect the environment and improve health and quality of life. For more information visit [www.syngenta.com](http://www.syngenta.com).

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Sometimes it's important to sit back, reflect, and take stock of the world. The world is a dynamic and exciting place.

With every year that goes by, we seem to get busier and busier. We get bogged down in the details: focusing on the "here and now". We hardly get a chance to put everything into perspective.

In this edition of Gro, we take a step back and look at the Asia Pacific region, and consider the role that Australian growers are set to play in its agricultural landscape in the years ahead. In another 40 years or so we will see more than half of the world's population — some five billion people — living in our region.

To support this population growth, food security must be on the agenda. Luckily for those in the Australian agricultural community, this is an outstanding business opportunity.

Australians are fortunate in that food security (or more to the point, insecurity) is rarely an issue. No matter what challenges we face — be they floods, pest invasions or years of drought — most Australians have never lived a day where there hasn't been enough food on the supermarket shelves.

But as responsible global citizens, we can't merely focus on ourselves. We can support sustainable population growth by growing more from less, and aiding our neighbours in the Asia Pacific region to do the same.

Our cover story focuses on ways Australian growers and agricultural exporters can capitalise on emerging market opportunities in Asia Pacific. By monitoring population trends, we can align

our research and development investments with market opportunities — and come up with innovative ways of satisfying the market's needs.

In this edition we also look at the Syngenta Connections program. The program supports the exchange of skills and knowledge between agricultural groups and contributes to helping the Asia Pacific region grow more from less and meet its food security challenges. The program's inaugural project involved students and agronomists from Australia visiting India to train farmers in agricultural practices and technologies capable of saving water.

Meanwhile, just as this magazine is being put together, we are reminded that the dynamics of agriculture can be shaped not only by the changing global market, but also by what Mother Nature throws at us.

Growers across eastern Australia are preparing for the biggest locust plague in years (read more about this in our article on page 14), while Victorian farmers are recovering from serious flooding. Across the ditch, our friends in New Zealand are continuing the cleanup after the devastating earthquake that hit Christchurch in the early hours of September 4th. Such events are unavoidable. What matters is how we recover from them.

I hope you enjoy reading this edition of Gro. If you receive Gro in the mail, please take the time to return our Readers' Survey, which will help us to improve the magazine.

A handwritten signature in black ink that reads "P. C. Luxton".

Paul Luxton  
**General Manager**

# Contents

This edition of Gro is about making the most of the changing agricultural industry, in particular, capitalising on the emerging Asia Pacific market

- 4 Feedback**  
Letters about this year's SPRAY Awards
- 5 Queensland tomato growers face a new challenge**  
The race is on for vegetable seed companies to develop new varieties
- 6 Spill drill goes like clockwork**  
Blind exercise shows team members are well-prepared
- 7 Guest Editorial**  
Selling Australian produce to the world
- 8 Cover Story: Bridging the gap**  
Capitalising on emerging market opportunities in Asia Pacific
- 12 A revolution in crop protection is launched**  
DURIVO provides a powerful tool to enhance crop performance
- 14 Vigilance needed as hoppers hatch**  
Prepare for this year's locust plague
- 16 Buffering the impact**  
Practical implications of the APVMA's spray drift risk review
- 18 Syngenta Connections:**  
Water use efficiency project links Australia and India
- 20 Being named SPRAY makes Doug's day**  
2010 winner announced, while 2009 winner takes his prize
- 22 Risk pays off for Grower of the Year**  
Learn about Jim Trandos' farming operation
- 22 Innovative workshop series earns award for Syngenta**  
Productivity Partner Award recognises work in WA



- 23 Aussie growers meet Syngenta scientists**  
IUPAC conference
- 24 Comp offers stepping stone to the real agricultural world**



## We value your feedback

Tell us what you think of Gro, suggest a topic for a future issue or simply voice your opinion on a subject that affects you.

The best letters will be published, with permission, on our Reader Feedback page that can be found on Page 4.

Send your comments, along with your name, address and telephone number to:

Editor: Gro Magazine  
PO Box 886, NORTH RYDE NSW 1670  
Or email [gro.magazine@syngenta.com](mailto:gro.magazine@syngenta.com)

# Feedback

This edition we would like to share some of the feedback we received about the 2010 SPRAY Awards. For more information about the SPRAY Awards, check out the story on page 20.



## SPRAY AWARDS

### SPRAY Awards experience inspiring

The SPRAY Awards competition is a great opportunity for anybody involved in chemical application to showcase their skills.

It is a really good way to reach out to like-minded people within the industry. There is no other competition like this for applicators, and the prospect of winning a study tour is a really great incentive.

For anyone who is fortunate enough to make it to the finals, the reward of networking and speaking to the other competitors from all over Australia is a fantastic learning curve in itself.

The effort that Syngenta puts in to the SPRAY Awards experience is truly inspiring. I would really like to see so many more people involved in the industry have a go at entering this competition and reaping the rewards.

**Andrew Kennedy**  
**Kennedy Spraying Services**  
**2010 SPRAY Awards SA winner and national runner-up, Mount Gambier, SA**

### Industry demands sustainability and responsibility

The SPRAY Awards competition is a great way to lift awareness of spraying accountability and to reward those that are prepared to do what is necessary to be a responsible sprayer operator.

It's great to see that Syngenta is offering a study tour as the prize so that the winning operator can further their knowledge of spraying concepts and gain ideas from other industries that maybe they would not have necessarily been exposed to.

Spraying can remain a sustainable and profitable practice, in any environment, if care and responsibility are taken with the application of chemicals. From a sprayer manufacturer's perspective, the demand to be sustainable, productive and responsible can push future developments of spray rigs in the right direction.

Having an award for an operator meeting these goals brings into the spotlight all the physical functions required of a sprayer and processes that we are trying to maintain and achieve.

Well done to the Syngenta team and all the SPRAY Awards competitors for striving to set a high standard of operational responsibility and level of professionalism for the spraying industry.

**Justin Fisher**  
**Amazone Product Manager**  
**Landpower Australia, Altona, Vic**

**Please send your feedback, story ideas and opinions on topics that interest you to:**

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### Share your views

Share your views on the articles and topics we cover each edition, and if your letter is published in the next issue of Gro, you will be eligible to receive a \$50 R.M. Williams gift card.

The opinions expressed in letters and reader feedback may not necessarily represent the views of Syngenta. All letters published in this magazine are done so with permission of the authors.

# Queensland tomato growers face a new challenge



Close up of typical TYLCV symptoms

Tomato growers around the world face constant pressure from a vast array of plant pests and diseases. It seems as soon as a solution to one pathogen is found, a new pathogen emerges to threaten the industry. Over the years, Queensland tomato growers have dealt with many issues that threaten their livelihood.

Increasing pressure from Silverleaf Whitefly, nematodes, *Fusarium oxysporum* (3 races), Tomato Spotted Wilt Virus (TSWV) spread by thrips, Powdery Mildew and now recent outbreaks of Tomato Yellow Leaf Curl Virus (TYLCV), have forced growers to change their management practices and driven tomato breeders to develop new varieties that carry resistance to disease as well as improving fruit quality and yields.

Over the past decade, TYLCV has developed into a major global problem, with outbreaks in many key tomato production areas. Spain, Turkey, China, Japan and Mexico are all massive tomato producers and the virus has caused huge economic losses.

In Queensland, the increasing population of the vector (whitefly), and the proximity of host plants that harbour the virus have created an environment where TYLCV can proliferate.

Fortunately, as this virus has become such a major problem worldwide, plant breeders have been able to develop varieties that carry genes with resistance that will perform well in our Australian conditions.

Denis Persley, Principal Plant Pathologist for DEEDI (the Queensland Department of Employment, Economic Development and Innovation) has worked on vegetable pests and



Des McGrath, Principal Plant Breeder, Agri-Science Queensland, inspects a severe outbreak of TYLCV in south Queensland. Photos: John Thomas and Denis Persley, Agri-Science Queensland

diseases and assisted Queensland growers for many years. He specialises in virology and had this to say when asked about TYLCV:

“The virus is certainly a major issue for tomato growers in south Queensland, particularly the Bundaberg area where the disease is widespread and often serious. In the last two years, around 50 to 100% of plants have been affected by harvest, with serious effects on yield and fruit quality.

“The main effect on fruit quality is a reduction in fruit size, particularly in cherry type cultivars.

“The virus has a considerable capacity to spread, even when whitefly control seems adequate,” Denis warned.

“The real answer to the problem is virus resistant, well-adapted cultivars for the region. TYLCV is also a real threat to the Bowen/Burdekin production area in north Queensland.”

The race is on for vegetable seed companies to develop new varieties that fit Australian grower and consumer requirements for fruit quality and eye appeal, as well as having the agronomic

characteristics that enable them to survive and flourish.

Seed companies with global breeding programs are best positioned to deliver the new disease resistance required by Queensland growers, as they have been focused on TYLCV resistance since it first became a global economic issue.

Syngenta Seeds is a global leader in tomato breeding, with breeders and research stations located in all the major tomato production areas around the world. An extensive germplasm base gives Syngenta a powerful platform for development of tomato varieties with excellent fruit quality and disease resistance packages.

In response to the needs of Queensland growers, in 2011 Syngenta will launch a high quality new tomato variety with resistance to TYLCV, nematodes, Tomato Spotted Wilt Virus and *Fusarium Wilt* races 1-3.

# Spill drill goes like clockwork

On Friday, 30 April, a suspicious liquid was seen leaking from a truck transporting chemicals to the Dubbo depot of Syngenta's freight partner, Freight Specialists. Staff on site sprang into action, plugging the leaking container, decontaminating the exposed personnel, calling emergency services and containing the spill.



Just a drill: but prepared for the real thing

What the staff of both Syngenta and Freight Specialists didn't know was that the 'chemical' spilled was actually coloured water and the whole incident was a carefully planned drill aimed at testing the response capabilities of both companies in the unlikely event of a real chemical spill.

The results were very positive, with the leaking container plugged and emergency services called within the first three minutes. Fire trucks were on the scene within five minutes of receiving the call.

Meanwhile, the truck driver and store person exposed to the liquid were 'decontaminated' on site. The spill was contained using specialist absorbent granules and the site was rendered completely safe within just over an hour.

In charge of overseeing the exercise was Syngenta's Health, Safety, Environment and Quality Manager, Mike Tremaine.

"Despite the fact that we have never experienced a major chemical spill at this facility, safety and stewardship remain a major focus of both our businesses. For this reason we are taking a proactive approach in testing our capabilities and emergency plans," Mike said.

"Developing and managing safety systems is a key part of that approach. Through running the drill as a blind exercise, where participants were not given any prior warning, we were able to get a clear picture of how the team members and organisations would behave in the event of a real emergency situation."

The drill involved the emergency response team at Syngenta's head office who liaised with Freight Specialists' staff on the ground to contain the incident, involving emergency services as appropriate.

The project was carefully managed in accordance with each of the participating organisation's safety policies and procedures as well as complying with the requirements of the New South Wales *Occupational Health and Safety Act 2000* (and associated regulations). The local council and nearby workers and residents were informed of the drill in advance to prevent any unnecessary alarm.

With the welfare of all participants paramount, Safety Access and Training, the organisers of the event, were given clear instructions to stop the drill should any team members become unduly

stressed during the exercise. Counsellors were also on standby for the duration of the event

"The drill went like clockwork and we were really encouraged to see that all the previous training and preparation had paid off. The individuals and organisations involved are very well positioned to deal with a potentially dangerous chemical spill — however unlikely such a spill may be," Mike said.

"This exercise provided an excellent opportunity for all participating organisations to consolidate the essential personal and organisational capabilities required to combat incidents of a significant and protracted nature.

"Being a multi-agency exercise, it gave us an opportunity to work together to limit the impact of an event on the environment, as well as on the community and their daily routines.

"We firmly believe this exercise will help ensure that, if a spill were to occur, everyone involved is very well prepared to respond safely and appropriately."



**Ian Harrison**  
Chief Executive, Australian Made,  
Australian Grown Campaign

# Selling Australian produce to the world

Primary producers across Australia have much to be proud of. Our produce is renowned for its high quality, great taste and the clean, green environment in which it is grown.

Consumers show a clear preference for Australian produce. This is a fact research has shown time and time again. Most recently a survey conducted by Roy Morgan Research found that 89% of consumers believe it to be 'very important' or 'important' that the fresh food they buy is Australian. Similarly, 82% of consumers believe it to be 'very important' or 'important' that the packaged food they buy is Australian.

And it's not just in domestic markets that Australian produce is sought after. Consumers around the world think highly of Australia, our products and produce. The Australian Bureau of Agriculture and Resource Economics forecasts the value of farm exports to grow by 2.5 percent to \$29.1 billion in 2010–11 alone.

And as you will read in the coming pages, significant opportunities continue to open up for farmers to sell their goods, particularly in the Asia Pacific region where economic and living conditions continue to rise.

Now, tackling international markets can be a challenging task for anyone. The decision to export brings with it the responsibilities of identifying key markets and potential buyers; finance; export marketing; freight and logistics and legal requirements — to mention a few.

An effective export tool available to primary producers is the Australian Made, Australian Grown (AMAG) logo. The famous green and gold certification trademark has been helping businesses promote genuine Australian products and produce, here and around the world, for almost 25 years. It has become one of the strongest nation brands in the world.

Over the last three years the AMAG logo has been promoted in key export markets, including the Asia Pacific — China, Hong Kong and Singapore — as part of a project partly funded by the federal government. During this time, figures have shown that the number of exporters using the logo has increased. For instance, the number of licensees exporting to China and Hong Kong grew 19% between 2007–08 and 2008–09. Promoting produce as Australian in foreign markets can have a positive impact on sales too.

The AMAG logo is now used by over 1700 businesses and can be found on over 10,000 products.



## The AMAG logo explained

As a registered certification trademark, the AMAG logo can only be used on products or produce that are registered with the not-for-profit Australian Made, Australian Grown Campaign and which meet the criteria set out in AMAG's own Code of Practice and the Trade Practices Act 1974.

It must always be used with one of the following three descriptors:

### Product of Australia

All of the product's significant ingredients come from Australia, and all or nearly all of the manufacturing or processing is also carried out in Australia.

### Australian Made

The product is substantially transformed in Australia and at least 50 percent of the cost of production has been incurred in Australia.

### Australian Grown

Each significant ingredient has been grown in Australia and all or virtually all of the production processes have occurred in Australia.

When the logo is used with the words 'Australian Grown' plus a name of an ingredient, e.g. 'Australian Grown Potatoes' it means that 100% of the named ingredients (e.g. the potatoes) were grown in Australia, and at least 90% of the whole product was grown here.

# Bridging the gap:

capitalising on emerging market opportunities in Asia Pacific



As economic and living conditions change and improve across Asia Pacific, new opportunities are emerging for Australia's primary producers. Australia's reputation for clean, high quality food products is paving the way for many farmers to realise significant benefits in trade with our neighbours, according to Syngenta General Manager, Paul Luxton.

The Asia Pacific region will represent more than half of the world's population by 2050.

"Population growth of this magnitude presents enormous challenges in terms of infrastructure, services and, of course, food security," Paul said.

"Luckily for Australian producers, one country's food security challenge is another country's market opportunity. The opportunity in Asia Pacific is nothing short of astounding."

One of the strongest population trends being observed in Asia Pacific is urbanisation, which will see key farming land in these countries being subsumed by cities, further reducing the extent to which they can grow their own food. It can also affect dietary preferences, with urban consumers increasingly seeking convenience.

Urban residents also tend to reflect another emerging trend in the region — growing affluence. Higher incomes mean consumers tend to reduce consumption of traditional staples such as rice in favour of meat, seafood and high quality vegetables. This growing affluence increasingly allows consumers to consider other factors including cleanliness, quality and the origin of their food, rather than simply price and availability.

Food availability is increasing rapidly with the traditional produce markets of Asia being replaced by supermarkets. Asian supermarkets are establishing private standards for fruit, vegetables and other products along with preferred supplier arrangements. Chemical residue compliance is a central focus of such schemes.

"This increasing focus on quality, cleanliness and convenience is serving to create real opportunities for Australian food producers in the Asia Pacific region, however such opportunities have been mooted for years. But how can we bridge the gap between opportunity and reality? What can we learn from those leading Australian growers already succeeding in key export markets?" Paul said.

"Australian producers are already doing a great job in a highly competitive marketplace, but it's essential to consolidate what we do well and to

look at doing some things differently, including embracing new technologies and approaches.

"Firstly, we must focus on improving productivity and competitiveness — finding ways to grow more from less. Secondly, we must remain vigilant in our production practices, embrace softer and lower risk crop protection solutions and maintain systems to provide consumers with the assurance they seek. And thirdly, we need to develop a deep understanding of the evolving needs of consumers, allowing us to identify emerging market opportunities and to tune our production systems to secure them."

Syngenta is investing considerable effort and money in helping growers to bridge the gap. Meanwhile there are some outstanding examples of growers who have already found ways to make the most of the emerging opportunities.

**"One country's food security challenge is another country's market opportunity."**



We need to develop a deeper understanding of the evolving needs of consumers

In 2000, a group of farming families in the Flinders Ranges decided to get together to explore export opportunities as a company, calling themselves Flinders Ranges Premium Grain (FRPG).

At around the same time, a new variety of wheat was released. Called Kukri, its properties closely resembled those of prime hard wheat, and testing done by the Grains Research Development Corporation (GRDC) showed it could be grown effectively in the Flinders Ranges.

“The Japanese market was paying a premium for prime hard wheat but the AWB (Australian Wheat Board) controlled classifications at that stage and they refused to allow Kukri to be classified as such,” said FRPG CEO, Peter Barrie. “With that opportunity no longer possible, we learned that there was demand for a grain that could produce a frozen bakery product that could keep for up to 16 weeks without any additives or preservatives. After three years of trials and testing on the flour

milled from Kukri wheat through Adelaide’s TAFE Regency School of Baking, we knew we had a winner. But we didn’t have our market yet.”

FRPG still had its eyes on the Japanese market, but breaking in was proving to be prohibitively expensive. Then an Indian company called Bakers Circle approached the South Australian Department of Trade and Economic Development, looking for help in the production of frozen dough. It was a serendipitous event that led to many months of meetings, demonstrations and trials before Bakers Circle signed a contract to source flour milled from Kukri wheat grown by the farmers of FRPG.

“We were able to prove that our flour technology worked and we were able to satisfy them that we could reliably provide the quantities of flour they were looking for,” said Peter. “Importantly, this allowed the Indian company to produce high quality bakery products using frozen dough technology, and this would put them in a strong market position to supply to companies like Subway. This original contract has opened up plenty of doors for us in India and elsewhere. But, of course, it has also exposed the niche in the market and now Bakers Circle is often approached by other companies claiming to be able to provide the same quality flour at a lower price.”

Having developed the market, FRPG continues to work hard to defend it, working to consolidate its relationship with Bakers Circle by providing technical back-up as well as generating new ideas and trials to help improve production efficiencies. An extremely important aspect of this value adding is the fact that the flour FRPG provides is completely traceable from ‘paddock to plate’, ensuring for Bakers Circle that they will get the quality and consistency in their flour that they expect and rely on.

Peter’s advice for other growers looking to take advantage of unexplored market opportunities is to find an area that is under-researched.

“It’s expensive, time consuming and difficult to make it happen, but the benefits are there if you can find the right opportunity,” he said. “It’s been a huge learning curve, but we laid a solid foundation when we trialed the product extensively to see where its strengths and weaknesses were, so we knew our product inside out. Gaining credibility in the international marketplace is also hard and it takes time.”

Peter recommends working with government organisations and taking help where you can get it. This sentiment is echoed by Better Research & Innovation’s (BRI) Business Manager, Milling and Baking, Dr Michael Southan. Michael says the opportunities in Asia Pacific are getting bigger and bigger, so it comes down to knowing what you can produce consistently, then looking at where the market opportunities may be.

“Sometimes the variety of wheat you can reliably grow may not be a high yield variety but, like the Kukri wheat, it may attract a premium. So you need to do your research and consider your options carefully,” said Michael.

“Premium products need to be traceable and consistent. It’s essential to maintain the integrity of your product rather than allowing it to be treated as a bulk commodity and blended at port. To achieve this, many growers are choosing to export their wheat in containers, which gives more control. We also recommend direct shipping if you can, as well as creating a system to ensure any contractors who deliver your wheat to a silo don’t accidentally mis-declare the variety. The deregulation of the wheat market has created many opportunities for smart exporters and it’s just a matter of finding and claiming your niche.”

## R&D reflects dynamic market

As the market leading crop protection company in Asia Pacific, Syngenta is closely monitoring key demand trends within these emerging markets and drawing on these insights to inform its R&D and product and variety development. For example:

**DURIVO®** — delivers major productivity improvements through eliminating up to eight conventional foliar sprays over the first 40 days of a vegetable crop and delivering more even establishment, potentially allowing growers to reduce the number of picks of their crop, delivering significant labour savings.

**AMISTAR® XTRA** and **TILT® XTRA** — provide enhanced grain quality due to their unrivalled disease control, better meeting the exacting standards of export customers including maltsters.

**SCHOLAR®** — is an innovative post-harvest fungicide which delivers export growers peace of mind that their fruit will remain disease-free while in storage or transit, and remain in a top condition when it arrives in export markets.



Researching niche markets can create opportunities for Australian growers

Unlike Australia's grains industry, our vegetable and other horticultural industries remain predominantly focused on local markets. However, faced with increasing pressure from imported produce, the high value opportunities are more and more likely to be found in key export markets such as South East Asia.

Western Australia's Center West Exports (CWE) started exporting fresh fruit and vegetables to Asia Pacific countries in 1984. Soon after, the founder of CWE, Frank Tedesco, started Sun City Farms on 150 acres about 100km from Perth, growing carrots for a mainly export market.

"When you have a market for your product, it's essential that you supply them regularly because the relationship builds to be a symbiotic one — you really depend on each other," CWE's Sales and Marketing Manager, Peter Wauchope explained.

"You can't go flitting from one potential opportunity to the next if it means you'll leave your regular customers in the lurch. Our plan for the future is to continue to supply a high quality product to our existing markets, which include Singapore, Malaysia, Indonesia, Hong Kong, Thailand, Taiwan, Korea, Japan and — increasingly — the Middle East."

Peter said the requirements for traceability and chemical residue compliance vary with each market, so CWE ensures they adhere to the strictest of those requirements at all times, regardless of which market they're exporting to.

"We test for chemical residues regularly and have never had a positive result," said Peter. "It's definitely a selling point that our carrots come from Australia with its reputation for clean and quality produce. So we ensure full traceability from seed to ship to maintain that reputation. As well as focusing on quality, we also keep costs down to ensure profitability. Overseas suppliers are always nipping at our heels, so we have to do what we can to remain competitive."

One of the ways CWE does this is to invest in new equipment whenever possible. The company recently purchased an automated carton filler, which replaced the previous process of manual filling. The carton filler is 10 times more efficient than manual filling and the company now saves approximately \$12,000 in wages per month.



High value opportunities exist for Australian producers in markets like South East Asia

**"Overseas suppliers are always nipping at our heels, so we have to do what we can to remain competitive."**

"This makes the cost per carton much lower and allows us to continue to achieve good margins, since we know we can't increase our prices because of the competition with Chinese growers," said Peter. "Our focus is squarely on gaining more and more efficiencies with automation while always maintaining the philosophy of quality over quantity. This approach has seen the business go from strength to strength over the past three decades and, we believe, will serve us well in the future."

Consistent with this philosophy, Syngenta is committed to helping growers improve the efficiency and performance through initiatives like Syngenta Product Plus and with new products based on innovative chemistry.

"Syngenta is focused on supporting Australian growers by providing them with innovative seed and crop protection solutions, knowledge and tools required to bridge the gap and to ensure their continued success," Paul Luxton said.

"Identifying high value export opportunities is not simple but the phenomenal growth in the Asia Pacific region means that more and more opportunities are emerging. There are

an increasing number of successful Australian growers who are identifying such opportunities across a number of sectors and succeeding.

"Syngenta is playing a key role in helping growers by providing them with the solutions, knowledge and tools required to bridge the gap and to realise success in the dynamic and growing Asia Pacific region."



# A revolution in crop protection is launched

In line with its mission to create value through world-class research and technology, Syngenta's release of DURIVO® will provide Australian vegetable growers and nursery operators with a powerful tool to enhance the performance of their crops.

For over two years, Syngenta has been paving the way for DURIVO to enter the Australian marketplace. Through a series of commercial demonstration trials and discussions with potential customers, the product's recent release has attracted widespread attention.

According to Syngenta Crop Manager, Sean Richardson, DURIVO is set to be a leader in crop protection for vegetable producers due to its unparalleled performance, wide pest spectrum, length of control and innovative application timing.

"DURIVO is the only soil-applied, broad spectrum, systemic insecticide that controls key chewing and sucking pests like Lepidoptera, and aphids and many others in brassicas, fruiting vegetables and leafy vegetables," Sean said.

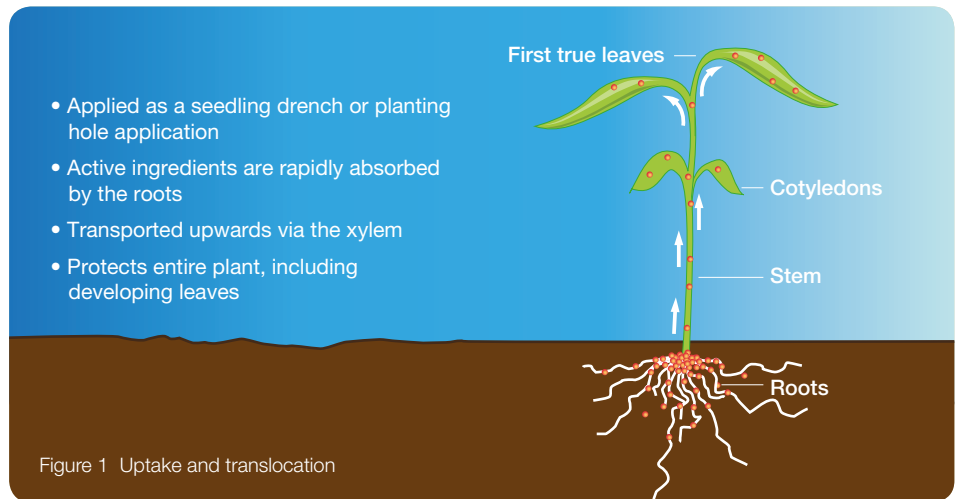
"DURIVO can be applied as a seedling tray drench or as a planting hole treatment. Its low application rates and single usage per season minimises the risk of active ingredient entering the environment."

### Mode of action

After application, seedling roots absorb the product, which is translocated upwards throughout the plant through the xylem (see Figure 1).

Provided the soil has enough moisture for the plant to grow, DURIVO will be absorbed into the plant roots and move into the plant.

The active ingredients are slowly metabolised in plants, providing lasting protection against target insect pests for up to 40 days.



"This long-term protection is an additional bonus for growers," Sean said.

"The ability of DURIVO to provide sustained protection to seedlings reduces the reliance upon additional crop protection products as the seedling matures," added Scott Mathew, Syngenta Technical Services Lead.

"Trials have indicated that DURIVO application at the seedling stage can eliminate the need for up to eight conventional foliar insecticide sprays."

### Hard on pests — soft on the environment

DURIVO is applied to the root zone of a plant in the nursery or at the time of transplanting

in the paddock. Sucking and chewing pests ingest the active ingredients during their normal feeding behaviour.

"This means that beneficial species resting on the plant do not come into direct contact with the active ingredients," Scott explained.

Assessment using International Organisation for Biological Control standards has shown that DURIVO is rated as having low impact on beneficial arthropods and is therefore compatible with IPM strategies (see Figure 2).

### Productivity powerhouse

One of the aspects of the new product Sean and Scott are particularly enthusiastic about is its

Species	Harmful (75%)	Slightly harmful (25 – 75%)	Harmless (<25%)
Predatory Mites ( <i>Phytoseiidae</i> )			
Pirate Bugs ( <i>Anthocoridae</i> )			
Mirid Bugs ( <i>Miridae</i> )			
Big-Eyed Bugs ( <i>Geocoridae</i> )			
Damsel Bugs ( <i>Nabidae</i> )			
Lady Beetles ( <i>Coccinellidae</i> )			
Ground Beetles ( <i>Carabidae</i> )			
Rove Beetles ( <i>Staphylinidae</i> )			
Lacewings ( <i>Chrysopidae</i> )			
Hymenopteran Parasitoids			
Hover Flies ( <i>Syrphidae</i> )			
Spiders ( <i>Araneae</i> )			

(Based on International Organisation for Biological Control ratings for thiamethoxam)

Figure 2 Impact of DURIVO upon beneficial species

Note: DURIVO is not registered for use as a foliar spray, to minimise the potential effect on foraging bees.

## DURIVO gives young plant raisers the edge

Victorian seedling grower, Boomaroo Nurseries, is at the very edge of a major revolution in the way vegetables are grown in Australia thanks to its early adoption of DURIVO, which slashes insecticide use in young plants.

Boomaroo Nurseries, which supplies nearly 300 million seedlings to vegetable growers throughout Australia each year, is one of the first operations to gain first-hand experience with DURIVO.

Operations Manager, Ian Willert, said DURIVO will give growers a 'technical edge'.

"Growers don't want to be spraying chemicals every week — they're looking at new technology that lasts longer in the field and reduces their spraying footprint," he said.

"DURIVO fits that need exactly.

"Until now, growers just haven't had access to that kind of residual and flexibility in a single product.

"We were really surprised by how it covers such a wide range of pests in so many different crops," Ian said. "The trials we completed with DURIVO in cabbage were remarkable.

"As a seedling raiser, growers expect us to present an even, healthy line of plants that's ready for transplanting and capable of meeting its genetic potential... seedlings that will grow on and achieve maximum marketable yield.

"However, we want to be more than just another seedling raiser.

"We want to meet growers' requirements for new technology that helps to give them an edge.

"DURIVO provides this sort of technology and Syngenta provides the technical support they want.



"Boomaroo then applies the product accurately and then offers it to growers as something that will fit their needs."

ability to provide a positive impact on crop yield in addition to its crop protection characteristics.

"DURIVO often produces a visible vigour effect on plant biomass and root development, improving crop uniformity, harvesting efficiency and marketable yields," Scott explained.

"This aspect helps realise the genetic potential of seedlings and delivers a robust start to each and every plant's life," added Sean.

### Paving the way

"Because of its long-acting nature, DURIVO provides opportunities for vegetable growers, but also the nurseries that supply seedling stock to those growers," Sean said.

"Commercial demonstration trials and technical evaluations have given us a great understanding of how the product performs across a variety of vegetable-growing locations and conditions across Australia.

"Now that the process of registration is complete, our growers will have a powerful protection tool in their toolbox."

## A perfect solution for perfect lettuce

Leading Queensland lettuce grower, Anthony Staatz, said DURIVO will change the way he grows his crops for supermarkets.

Anthony and his wife, Diane, grow about eight million lettuces and two million Cos lettuces each year on two 80 hectare properties at Gatton in the Lockyer Valley and Cambooya on the Darling Downs.

Anthony didn't hesitate when he was offered the opportunity to participate in a preregistration trial with DURIVO last August.

He elected to apply the product as a planting hole treatment on 10,000 seedlings.

"Supermarkets have a zero-tolerance policy for *Heliothis* larvae," he said. "Just one grub-infested lettuce head is enough to cause an entire pallet of lettuce to be rejected.

"Currently we have to treat each crop with up to eight sprays of insecticide. With DURIVO, we won't have to spray any insecticide at all during the first 30 days of plant growth.

"We'll still have to apply fungicide but we'll get away with a total of just three or four passes over the crop with a boom spray.

Anthony also sees tremendous environmental benefits arising from the at-planting application method at an application rate of only 0.03mL of DURIVO per plant.

"For a start, we would expect more beneficial pests, which will enable us to better utilise integrated pest management strategies," he said.

"DURIVO will reduce the risk of exposure to crop protection products that we have used in the past.

"We live on our farm and we've got a town quite close as well, so any reduction in chemical use has to be good for us and the community."



# Vigilance needed as hoppers hatch



Vigilant monitoring up to and after hopper hatching dates and a well-planned management approach is essential as locusts emerge this spring.

Spring 2010 is shaping up to be reminiscent of the 2004–2005 locust plague across south-east Australia — and it could even be worse.

During autumn, swarming Australian plague locusts (*Chortoicetes terminifera*) moved across southern Queensland, New South Wales and northern Victoria and South Australia, leaving extensive crop damage in their wake. But that's not all; they also left widespread eggbeds, with the next generation of hoppers due to start hatching during early- to mid-spring.

The Australian Plague Locust Commission (APLC) advises farmers to be vigilant in monitoring any locust activity on farm, including egg beds, hatching and banding nymphs (juvenile locusts) and report any sighting to their local pest authority.

“However, before egg beds or hatching nymphs have been identified, the decision-making



Growers need to have a management plan in place well before hoppers hatch

process for management needs to incorporate a number of factors,” the APLC advised.

“In cropping situations growers will need to assess growth stage and ability to harvest early, risks from chemical residues and the ability to remove locust contamination from harvested grain.”

Not all management options involve chemical controls — windrowing can be carried out to hasten crop ripening and harvest. But when chemicals are the best option, growers need to first assess the extent of potential damage.

Crops that have completely dried off are usually not at risk.

However in immature crops, where a cost-benefit assessment has indicated control is worthwhile, immediate action with ground spraying is likely to be the best option.

It is also important to keep in mind that none of the registered chemicals are effective as repellents. It is not possible to protect crops merely by spraying before locusts have entered the canopy.

The most effective time to spray for locusts is about two weeks after the egg beds have hatched (nymph stage), when they are immature, unable to fly and are grouped together in thick bands across the ground.

## Flexible option has locusts covered

According to Syngenta Portfolio Manager — Cereals, Jock Leys, the minor use permit given to KARATE® with ZEON technology insecticide, is a boon for farmers looking for a locust control option.

“KARATE with ZEON technology provides a safe, flexible control option for farmers facing this year's locust plague,” Jock said.

“While there will be a range of synthetic pyrethroids available for locust control, KARATE has a unique water-based encapsulation technology.”

“This technology results in strong target adhesion, superior UV protection and enhanced performance and safety, with longer persistence in the field providing a powerful residual effect.”

Unlike many other options, KARATE has a broad field crop registration, providing flexibility for the many growers already using it for pulse crops, canola and winter cereals.

In particular, Jock sees KARATE as a valuable choice for lentil growers, who have precious few options as locusts emerge.

And for wheat and barley growers, KARATE has the added benefit of compatibility with the complete range of Syngenta cereal fungicides such as TILT®, TILT® XTRA and AMISTAR® XTRA and a range of other fungicides.

Growers facing late-season inundations of fungal diseases, such as Stripe Rust and Yellow Leaf Spot at the same time as locusts need only carry out a single, timely application.

### Holding back

Livestock producers selling into the domestic market can expect to benefit from shorter withholding periods than many of the chemicals available for locust control, but Jock has warned producers aiming for the export market that all synthetic pyrethroids under the minor use permit have lengthy export intervals.

Jock explained that like many farmers across south-eastern Australia, Syngenta is prepared in advance for the upcoming locust onslaught, with in excess of 300% more KARATE available than usual.

“While we have excellent stocks available, I still recommend farmers take a proactive approach and get in early with their orders,” he said.



It will be critical to have a management plan in place to capitalise on the narrow window of opportunity for control during spring.

### Pests in pastures

Livestock producers will be at risk of losing a significant amount of feed pasture to locusts during spring. The APLC estimates that juvenile locusts can consume about 50 percent of their bodyweight per day (0.15 grams/day). Adults can consume about 70% of their bodyweight per day (0.2g/day for males and 0.45g/day for females).

Actively-growing pastures will be at greater risk than dry pasture.

Not only will locusts consume valuable feed, but remaining feed quality will also be affected (due to desiccation caused by the feeding locusts). Producers need to evaluate which pastures will be at most risk and which are a priority for protection.

### Export market protection

Lost pasture is not the only concern for farmers, a significant issue to consider when looking at control options will be withholding periods and export slaughter intervals following chemical application.

Livestock grazing stubble or failed crops treated with chemicals are also at risk from chemical residues.

During 2008–2009 Australia exported 67 percent of its total beef production, with an export value of \$5 billion and 62 percent of its sheepmeat production, with an export value of \$1.46 billion.

Livestock can become exposed to chemicals by:

- Direct overspraying of livestock
- Grazing pastures or crops that have been sprayed or onto which spray has drifted
- Consuming fodder (hay, silage or grain) that has been sprayed directly or exposed to spray drift.

## Understanding the jargon

Chemicals used for locust control have the potential to cause unacceptable residues in grazing livestock — residues that could threaten our export industries.

Understanding the difference between the various label withholding periods and export intervals can be challenging, but is important to ensure any chemical control option does not affect potential trade markets.

SAFEMEAT Australia has developed a handy brochure to help farmers understand their obligations.

Following is a quick outline of what the withholding period jargon means:

**Export Animal Feed Interval (EAFI)** — The minimum period that must pass between

applying a chemical and grazing or harvesting the crop or pasture for stockfeed.

**Export Slaughter Interval (ESI)** — The minimum period that must pass between the removal of grazing livestock to clean pasture or feed and slaughter, where livestock has been grazing pasture or crop before the EAFI. Livestock should be grazed on clean (unsprayed) feed for the appropriate ESI before export slaughter — unless they have already met the recommended EGI (see below).

**Export Grazing Interval (EGI)** — The minimum period that must pass between applying a chemical and slaughter in stock where grazing has continued directly during and/or after spraying.

**More information:** [www.safemeat.com.au](http://www.safemeat.com.au)

### State-by-State coordination

State Governments across South Australia, Victoria and New South Wales are taking a State-by-State approach to locust control. The support mechanisms for farmers in each State vary, but most will cover some, if not all of the cost of chemicals used to control nymphs as they band across properties. Check with your State department website for further details.

#### More information:

Australian Pesticides and Veterinary Medicines Authority (APVMA) — [www.apvma.gov.au/index.asp](http://www.apvma.gov.au/index.asp)

Australian Plague Locust Commission — [www.daff.gov.au/animal-plant-health/locusts](http://www.daff.gov.au/animal-plant-health/locusts)

Grain receival standards — [www.graintrade.org.au](http://www.graintrade.org.au)

Grains Research and Development Corporation (GRDC) locust control factsheet — [www.grdc.com.au/locust\\_factsheet](http://www.grdc.com.au/locust_factsheet)

SAFEMEAT Plague locust brochure — For further detailed information on withholding periods and slaughter intervals visit [www.safemeat.com.au](http://www.safemeat.com.au)

## Chemical consideration checklist

Consider the following factors when assessing insecticide options for control:

- Select only registered or permitted insecticides for locust control on crops and pastures
- Using unregistered or non-permitted products is illegal and can put export markets at risk from residues. Markets may have very low or nil-tolerance to insecticide residues — know the limits
- Check all withholding periods carefully (harvest and grazing) as they vary between products
- Always read the label and all instructions before buying and applying chemicals
- Take measures to minimise potential off-target impacts, including risks to nearby livestock, bees, aquaculture, organic production, dams and waterways.

# Buffering the impact of new spray drift regulations

The practical implications of the Australian Pesticide and Veterinary Medicines Authority's (APVMA) ongoing spray drift risk review process are starting to become apparent.

Concerns are growing over the potential impact of these new rules on growers' and spray operators' ability to manage weeds, pests and diseases on Australian farms.

Although the APVMA has been developing its spray drift risk assessment approach for a number of years, the recent release of the Authority's draft Scope Documents for MCPA and 2,4-D herbicides, with accompanying draft recommendations for the downwind no-spray zones (buffer zones) to be added to product labels, has given growers and applicators the first true insights into what these new laws will mean in the paddock (see Table 1) — and it's fair to say they're worried.

**Table 1 Draft APVMA required downwind no-spray zone recommendations**

Product	Ground application (m)	Aerial application (m)
MCPA	5–200	5–750
2,4-D	5– >300	20–850

But the question that needs to be asked is whether the APVMA's modelling actually reflects the potential risks associated with spray drift on Australian farms.

According to Joe Murrell, Chairman, Australian Groundsprayers' Association, the APVMA's approach doesn't reflect reality.

"Their spray drift modelling hasn't taken into account any of the modern technology being currently used to manage drift such as air induction nozzles and spray additives," Joe said.

"As operators in high-value horticultural crops, we are spraying crops such as onions every 10 days within one metre of adjacent sensitive crops, such as carrots, peas and broccoli, with no drift implications because we have the technology and we understand the principles behind safe spraying."

According to Joe, the problem lies in a lack of understanding by some operators of the principles involved in managing drift.

In addition to more realistic risk assessment, Joe believes machinery manufacturers and dealers have a responsibility to provide better training and sales support to help applicators to set-up their machinery correctly to control drift.

"Large-scale operators can walk into a dealership and buy an enormous new spray rig and walk out again without understanding how to set it up and operate it appropriately," Joe said.

"Instead of harsher regulations, we would also like to see improved training and spray licensing across the industry."

"We would like a system that provides a base licence that allows you to handle certain products





under certain conditions. As you want to handle more dangerous products or those susceptible to drift, the licensing should be more rigorous.”

### Review process

Although the review process has started with 2,4-D and MCPA, over time it also will cover a priority list of currently-registered products and will incorporate revised assessments for each of the active ingredients on the list. This means it is critical to get the system right from the start. Similarly, all new product registrations are now subject to the spray drift risk assessment requirements.

### Towards a workable solution

The APVMA's recommended buffer zones for 2,4-D and MCPA are not set in stone, with the

use through drift reduction technologies, such as air-induction spray nozzles and shrouds.

As part of this industry response, the Grains Research and Development Corporation (GRDC) has invested \$100,000 during 2009–10 for national stakeholder meetings, industry consultations and to extend the ground-based drift model to bridge the immediate knowledge gap. The GRDC-funded research is currently underway and should be completed by the end of 2010.

Dr Andrew Hewitt, Director of the Centre for Pesticide Application and Safety at the University of Queensland and Science Fellow to APVMA on spray application technology is leading the GRDC project.

in terms of possible drift management buffer zone reduction options,” he said.

Andrew also noted that as long as we only assess spray drift exposure using field study data, rather than a fully predictive model, regulators such as APVMA will always tend to favour the use of worst-case ‘90th percentile’ statistical fits to such data.

“This type of approach tends to produce larger buffers than would be needed for most applications.

“To achieve a sustainable and workable solution we need to work towards fully predictive drift models for spraying row, broadacre, tree, vine and other ground-based systems.”

Andrew has a leading role in the international effort to develop such models, helping to coordinate the research efforts across Australia, New Zealand and North America, a global approach which in the long run will deliver a fully-flexible drift management approach that encourages the use of better application techniques and technologies.

“The best approach would be one which offers shorter no-spray zones through many different user options — potentially including DRTs, coarser sprays, lower boom heights, lower active ingredient application rates, natural or artificial barriers and so on.”

### Recognising best practice in drift reduction

According to Syngenta's Stewardship Manager, Peter Arkle, Australian growers and chemical users are among the world's leaders in embracing drift reduction technologies.

“For this reason they deserve a world-class regulatory system which takes into account contemporary knowledge about spray drift and its practical management,” Peter said.

“Syngenta looks forward to continuing to work with the NWPPA and the APVMA as we strive to achieve such a system.”

**“We have the opportunity to offer the ‘best of the best’ to Australian applicators, providing choice in terms of possible drift management buffer zone reduction options.”**

Authority calling for public comment on the recommendations, and their spray drift risk assessment approach in general. The industry is pulling together to respond and try to find a workable solution.

A National Working Party on Pesticide Application (NWPPA) has been established. The NWPPA is currently scoping the research required to respond to the APVMA's spray drift operating principles, and has commissioned a project to develop additional deposition curves (model inputs) for AgDRIFT (the model underpinning the APVMA's approach) which will reflect ground application using Very Coarse and Extremely Coarse droplets.

The Working Party is also aware that current data is limited on the impact of modern drift reduction technologies (DRTs) for ground-based spray application, in particular the knowledge gap regarding the impact of improved herbicide

Andrew commented that without GRDC's leadership in this area, and the full support of other key groups through a national approach, excessively large no-spray buffer zones would be hard to challenge.

“Through using the best available science, we can propose greater flexibility and choice for applicators and growers to safely use shorter no-spray zones as appropriate”.

The main focus of the project is to provide the analysis of essential data to allow industry to propose reduced no spray zones for Very Coarse and Extremely Coarse sprays, however the work will also consider the role of at least two other DRTs in reducing no-spray buffer zones.

“By working with other groups around the world, we have the opportunity to offer the ‘best of the best’ to Australian applicators, providing choice

# Syngenta Connections: Water use efficiency project links Australia and India

The Syngenta Connections program, the first of its kind in Asia, aims to support the exchange of skills and knowledge between agricultural groups. By encouraging the exchange of innovative solutions and ideas, Syngenta contributes to helping the region grow more from less and meet its food security challenges.

With a clear focus on raising the awareness of the need for water conservation, the first Syngenta Connections program kicked off in early July in the Punjab region of India.

The team, consisting of Australian agricultural students and agronomists and Punjab Agricultural University (PAU) students, demonstrated how to use a panpipe in combination with an alternate wetting and drying (AWD) technique, and a tensiometer, to 200 North Indian rice farmers. They set up more than eighty trial plots in surrounding villages during these sessions.

A panpipe, a simple technology developed by the International Rice Research Institute, and the AWD enable growers to determine when it is necessary to irrigate, and subsequently reduce their overall level of water use while improving their farming efficiency and sustainability of rice growing. Syngenta has already worked with IRRI in Bangladesh to introduce this simple water saving device and technique to farmers.

A tensiometer-based irrigation scheduling for rice, an innovation by Punjab Agricultural University, continuously monitors soil water content which is effective for scheduling irrigation.

Both tools are proven to save farmers irrigation costs, conserve groundwater, and reduce the diesel fuel required to pump water. The



Syngenta Connections in India: the first project team

“As well as sharing knowledge and skills with farmers, the participants have enhanced their own learning and developed networks.”

Connections program provides an opportunity for farmers to be exposed to both technologies and techniques.

“Projects like this are part of Syngenta’s commitment to help address global food security challenges. As well as sharing knowledge and skills with farmers, the participants have enhanced their own learning and developed networks, making the program extremely beneficial for everyone involved,” said Andrew McConville, Syngenta Head of Corporate Affairs Asia Pacific.

During the eleven-day period, the team also held farmer meetings and set up trial plots in selected villages so that the farmers and scientists could monitor the efficacy of these tools. This not only showed how simple they are to use, but also provided first-hand examples of two valuable solutions available for sustainable rice farming.

The project simultaneously enhanced the knowledge and skills of the agricultural university students, who worked with Syngenta to implement training and demonstrations for the local farmers.

One of the selected students, Ally Dingjan from Charles Sturt University, said the trip was a valuable, eye-opening experience.

“It provided some really good insights. Because we’ve all grown up on Australian farms, we don’t know what things are like in other parts of the world.

“The program was really beneficial to everyone involved. The Indian farmers we met were able to learn some sustainable farming techniques and we students were able to see a different side to farming practice and meet some great people.”



Ally said that unlike the large holdings in Australia, most farms in the Punjab region are small plots where family farmers grow rice and wheat in rotation. The average farm size in the region is 5–10 hectares.

“There are serious water issues in the region, where the water table has dropped pretty dramatically because groundwater is pumped for irrigation,” Ally said. “About 80 percent of the region’s water is used in agriculture, which is concerning, especially considering that the population is growing.

“The tools we demonstrated should make it easier for farmers to use water more efficiently and produce their yields with less inputs. I’m really

grateful to have had the opportunity to be involved in a program working on practical ways to help address global food and water security issues.”

Michael Gangi, a La Trobe University student who also participated in the Connections program, agreed that the trip was valuable not only for the farming insight but for the future opportunities it would help create.

“The program provided us with some great networking opportunities through Syngenta and Landmark. We also got to meet students from other universities. You never know where those connections will lead. The program also shows that Syngenta is committed to investing in the future of agriculture.



The Syngenta Connections program was beneficial for everyone involved

“The availability of jobs in the ag sector helps to attract students but supporting them into the industry is really important too.”

Ally and Michael were among 12 Australian students to participate in the program, with the remainder from Charles Sturt, La Trobe and Melbourne Universities. The group underwent training with Syngenta in Singapore before heading on to India, where they demonstrated the tools to farmers in about 30 villages. They were accompanied by two Landmark agronomists: Scott Thomson from Merredin in Western Australia and Ashley Perkins from Bannockburn, Victoria.

Scott found that despite the huge differences in farming practices, the issues of most concern to Indian farmers were surprisingly familiar: grain prices and input prices.



Students Ally Dingjan and Michael Gangi said the trip was a valuable experience

## Did you know?

The panipipe, inserted into the ground vertically, allows farmers to monitor water level below ground, decreasing the need to flood rice fields? In Syngenta field trials, this has shown to lead to a 30 percent saving in water from the nearly 5,000 litres used traditionally to produce one kilogram of rough rice.

# Being named SPRAY makes Doug's day



Tasmanian farmer and professional spray applicator, Doug Clark, has taken out the top prize in this year's national SPRAY (Sustainable, Professional, Responsible Applicator of the Year) Awards.

Launched by Syngenta, along with partner, Rural Press, in 2009, the SPRAY Awards are now an annual event and aim to recognise outstanding sprayers from across the country. The major prize is a \$15,000 study tour of the UK, which will be tailored to reflect Doug's areas of interest.

Based on Tasmania's north-west coast, Doug is a contract sprayer covering approximately 8,000 hectares per year in crops ranging from pyrethrum and poppies to seed brassicas and potatoes. His focus on quality and getting the product to the target were key factors in his win.

"We have small paddock sizes so drift is an issue for us and in particular, preventing off-target damage," said Doug. "We focus on nozzles to make sure the droplet size is right

but if the wind changes and drift becomes possible, we stop. It costs money to stop spraying, but if the conditions aren't right then you simply can't continue.

"It's so exciting to win an award like this — it gives you a real buzz to have that tick of approval and to know what you've been doing for your customers is spot on. Our focus on the little details was one of the reasons we won this award and it's nice to know our efforts have paid off.

"I'm looking forward to going overseas and seeing the Syngenta facilities and learning more from others about application and working with seed crops."

Established four years ago, Doug's business has settled into a niche in the area and he recently purchased a second machine to meet demand. He now operates two Amazone UF1801 rear-mounted spray units carried on Massey Ferguson tractors, which he chose specifically for their accuracy, reliability and stability. The two units are fitted with 24-metre 'Super S' booms. Each section can be folded independently of the other, allowing the convenience of single-side or even partial-width spraying.

The judging process was conducted in several stages, including on-farm assessment reports and phone interviews. Machine accuracy, operational set-up and occupational health and safety standards were key elements in the judging process.

Doug's commitment to quality — he'll turn down a job if he feels he can't achieve the high standards he sets for himself — is shared by the other Awards finalists. Runner up, South Australia's Andrew Kennedy, was a finalist for the second year running. In third place was Peter Farrell, a New South Wales broadacre spraying contractor based at Moree. All three finalists agreed that monitoring the weather constantly and reacting to changes are key to being a responsible spray applicator.

According to Garth Wickson, Syngenta Technical Services Lead and judge for the SPRAY Awards, all the finalists demonstrated a high degree of understanding of the responsibility involved in spraying crop protection products and complemented this with technological solutions for safe tank filling, application and monitoring.

"The SPRAY Awards program is valuable because it gives due credit to great spray applicators and it also helps raise general awareness of the need to apply best practice strategies," he said.

"Growers and applicators embracing best practice strategies achieve more consistent results and are discovering that they can safely and effectively spray under a wider range of conditions, giving them far greater flexibility."

"These top sprayers think beyond product application and consider the whole process including timing, rig set-up and choice of nozzles and adjuvants.

"All of this year's SPRAY Awards finalists set themselves apart by looking at the big picture. In addition to advanced spraying skills, they share a commitment to sustainability and responsibility."



2010 SPRAY Awards national finalists. From left: Andrew Kennedy (SA), Russell Fuhlbohm (Qld), Doug Clark (Vic/Tas), Peter Farrell (NSW) and Kevin Davies (WA)

## UK study tour an amazing experience



Darren discusses nozzles with Tom Robinson, Syngenta Application Specialist in the UK

The inaugural SPRAY Awards winner, Darren Schreurs, recently returned from his \$15,000 UK study tour. He and his wife Anne-Maree spent two weeks in the UK, hosted by Garth Wickson.

On the trip, Darren visited Rob Cannell, the 2009 winner of the Syngenta Farm Sprayer Operator of the Year award in the UK (a similar competition to the SPRAY Awards, which has been running for over 25 years). Rob undertakes all the spraying across the 3,500 hectare Dennington Hall Farms in Suffolk, along with other contract-farmed land totalling over 10,000 spraying hectares a year.

Darren says he was especially impressed by the container rinsing system Rob built using an old cattle footbath. It involves a series of water pipes and upright spray nozzles, where empty cans can be placed over the nozzles and left to rinse and drain whilst Rob is out spraying; with an auto-timer designed for garden watering systems managing the rinse time. All the rinsing water is collected in a tank and can be sucked into the sprayer with the next load going out into the field.



Darren and Anne-Maree Schreurs, along with Syngenta Australia's Garth Wickson, check out the Jealott's Hill R&D station

Another top operator tip that impressed Darren was the fact that Rob keeps all necessary tools on his rig. For example, fixing two spring hose clips by the sprayer induction hopper, with one holding a knife for opening can seals, while the other holds a waterproof black marker pen to write on part-used cans when the product was used and how much is remaining.

As well as spending time with Rob, Darren visited a number of growers including Marshalls of Butterwick in Lincolnshire. The company manages brassica crop production across more than 4,600 hectares a year. Marshalls started as a family farming business but is now part of the Produce World group, and is Europe's largest brassica grower and the primary supplier for one of the leading UK supermarket chain. Marshalls undertake extensive trials work with Syngenta seeds company, S&G, to develop new brassica varieties.

Another trip highlight for Darren was being able to see firsthand the cutting edge technology in use at Syngenta's Jealott's Hill R&D station, including a new formulation robot that is unique in agrochemical development. The fully-automated robot will formulate and test hundreds of potential turf, amenity and crop protection products every day, at speeds that scientists can only dream of with existing technology. The system will help Syngenta scientists to be more innovative and productive than ever before when creating new products.

"The study tour was an amazing experience," Darren said. "It's always fascinating to see what other people are doing, learn from their experiences and see if there are any ideas we can take back.

"This trip was a great opportunity to reinforce the importance of the safety procedures we follow. I was particularly impressed with Rob Cannell's commitment to safety as he sets a great example for all farmers."

Darren farms 160 hectares at Devon Meadows, 50 kilometres outside Melbourne, with his brothers, Mark and Paul, and father, Peter. His farm exports around three tonnes of leeks and produces a further 40 tonnes of leeks for the local market per week and also produces five million cos lettuces a year, along with salad crops including radicchio, endive, kohlrabi and baby wombok.

He was named Australia's first Sustainable, Productive, Responsible Applicator of the Year (SPRAY) in 2009 after impressing the judging panel with his application techniques, record keeping and storage practices.

"To be recognised by Syngenta with the SPRAY Award felt like a real pat on the back for me personally — a reassurance that I am on the right track with my spraying. There's always more to learn but if I can be a role model to other sprayers, then that would be a great thing."

Darren is pleased that the SPRAY Award will help reinforce his family farm's good business reputation.

"The reputation of spraying in general can be ruined by one or two rogue sprayers out there who don't do the right thing," he said. "Being able to display this award on our website and business materials shows customers and business partners that we take our responsibilities very seriously. Hopefully that will translate to increased sales."



Darren meets Rob Cannell, 2009 winner of Syngenta Farm Sprayer Operator of the Year award in the UK

# Risk pays off for Grower of the Year



WA vegetable grower Jim Trandos was named Syngenta Grower of the Year at the AUSVEG Convention in May — although he's reluctant to take the credit.

Jim runs Trandos Farms with his father, uncles, brother and cousin, and said they've all been instrumental in the business's success, including the establishment of a bean and sweet corn farm in the untested region south of Broome.

"It's never one person on their own achieving success. We spent a lot of time around the table together talking about what would work and considering different approaches."

Trandos Farms currently operates three farms, including one 200km south of Broome, with

another in development. It's the innovative operation outside Broome that clinched the Grower of the Year Award.

"We farm around Perth during the summer and south of Broome during the winter. Ours was the first commercial corn crop in the Broome area. Before we got there, there had never been truly fresh product grown there."

Jim said the decision to set up in Broome was fuelled by necessity. He was having to source product from other growers to keep up with demand outside the summer season, and eventually he reached the conclusion that there was no alternative other than to look for land up north.

"The area had never been tested, the isolation's a killer and there wasn't much horticultural support in Broome. The biggest challenge was finding personnel who would stay on the farm."

Although there were many issues to overcome, Jim said there was simply no choice.

"We were sourcing product all the way up the coast trying to keep up with demand for year round produce. Broome has a truly longer season, with the wet season starting later, so for a genuine summer crop it was where we needed to be."

There were some upsides to the location, too.

"It's on the main highway, and, particularly during the peak tourist season, being on the south side of Broome means there's access to a lot of back freight. It's also close enough that I can leave home in the morning and be there by lunch time if I need to, so although it's remote, it's not so far that it's ridiculous."

Jim said moving to a new area has worked out well for Trandos Farms and that it's an approach worth considering for other growers.

## Innovative workshop series earns award for Syngenta

Syngenta was presented with the Productivity Partner Award at the AUSVEG National Convention recently.

The award recognises an individual or organisation that has developed new solutions for growers, contributed to the vegetable industry, shown commitment to the industry's productivity and has demonstrated tangible results. Syngenta earned the award for its work with vegetablesWA to present a series of workshops on optimising the performance of crop protection products.

The workshops focused on drift management, product stewardship and best practice

spray application. They were delivered as part of Syngenta's Potato Partners program, developed to provide Syngenta customers with access to tools and expertise to help them get the most out of their investment in crop protection products.

Richard Packard, Syngenta's Territory Manager for Horticulture in WA, said the program recognised the changing nature of the industry in WA.

"Many growers have been encroached upon by urban development, which means they're having to think more about product targeting and drift management.

"Through this partnership with vegetablesWA, we tried to deliver workshops that really addressed the specific issues growers were

facing in their own area. Each event started with a conversation about what the challenges were for the growers present. We took a look at their set ups to see if we could make suggestions that would help them reduce drift, discussed the different nozzles available and talked about getting the most out of a product.

"The response was very positive and the partnership with vegetablesWA proved really valuable. It was really great to see it recognised by the AUSVEG awards."

Potato Partners was the precursor to Syngenta's Product Plus program, which is now available across a range of industries Australia-wide.

Joining Product Plus gives growers access to detailed technical manuals and the opportunity

# Aussie growers meet Syngenta scientists

A major international chemistry conference in Melbourne recently attracted some of Syngenta's leading global researchers, creating the perfect opportunity for local growers, distribution partners and industry representatives to talk to them about the Australian agriculture market.

Fifteen key Syngenta staff from around the globe were in Australia for the 12th International Union of Pure & Applied Chemists (IUPAC) International Congress of Pesticide Chemistry. While they were here, they hosted an R&D Insights Dinner

with several distribution partners, industry representatives and growers.

According to Syngenta Stewardship Manager Australasia, Peter Arkle, the event was about bringing together people involved in the whole process from 'discovery to delivery'.

Andrew Plant, Head of Research Chemistry for Syngenta Crop Protection, based in Stein, Switzerland, felt the dinner event was a great way to hear views about the Australian market firsthand, and an opportunity to explain the Syngenta R&D process and the science behind some of the company's leading products.

"Syngenta strives to create an edge in the marketplace by deeply understanding our customers' needs. This evening was a great way to connect growers and distributors with the people who actually discover Syngenta's new



active ingredients and develop products to bring to market."

Topics of interest discussed during the night included the importance of the herbicide market in Australia, particularly given the rapid spread of glyphosate resistance and issues with Annual Ryegrass (*Lolium rigidum*) resistance.

There was also discussion about the need for novel herbicides with new modes of action, with guests gaining insights into how Syngenta is approaching this challenge. "As older products are withdrawn, it becomes increasingly important to offer new solutions to meet growers' needs," Andrew said.

Syngenta is working with Australian academics, including crop protection experts Professor Stephen Powles from the University of Western Australia and Dr Chris Preston from the University of Adelaide, to develop these solutions. Professor Powles and Dr Preston were both at the Insights Dinner.

Challenges facing Australian horticultural producers were also covered, including difficulties arising from products having a relatively narrow range of claims on the labels, which in some cases overlook minor crops.

The IUPAC conference theme was 'Chemistry for a Sustainable World' and the program explored topics including pest management, product formulation and environmental safety. Syngenta scientists led a number of sessions, including a forum to discuss the challenges faced when trying to get new products registered by regulatory authorities worldwide.



Syngenta's Richard Packard has earned praise from AUSVEG for his workshops with vegetablesWA

to receive specialist information, attend seminars and workshops or buy Syngenta nozzles designed specifically for their industry.

"We know that using the right product is an essential part of controlling disease, weed and insects in crops," Richard said. "But selecting the right product is just the first step. For optimal

results, growers need to consider timing, mechanical set up and which nozzles and adjuvants they choose."

The AUSVEG Productivity Partner Award was presented in front of 600 industry representatives at the convention, held on the Gold Coast in May.

# Comp offers stepping stone to the real agricultural world

Cindy Martin from Ceduna SA, representing the University of Adelaide, has won the 2010 Australian University Crops Competition (AUCC).

Over an intensive two days in Temora NSW, competitors' skills were tested in the areas of seed identification, pulses, grain grading, business strategy, live crop identification, weed and foliar disease identification, yield potential and production practices.

Forty one students representing six universities from across Australia went head-to-head in the laboratory and the paddock to test their knowledge.

The top five students (1st to 5th respectively) were: Cindy Martin, (Ceduna) University of Adelaide; Andrew Gillett, (Jerilderie) Charles Sturt University, Wagga Wagga; Max Baka-Koch, (Adelaide Hills) University of Adelaide; Samuel Malfroy, (Sydney) University of Sydney; and Dwayne Schubert, (Mt George) Charles Sturt University, Wagga Wagga.

Cindy has won a trip to the United States to attend the 'North American Colleges and Teachers of Agriculture (NACTA) Judging Conference' while the remaining winners will head to New Zealand for a fully-hosted study tour.

"The whole weekend was an amazing experience, especially networking with industry representatives and fellow competitors who will form the future of farming in Australia — the trip to the United States is pretty exciting as well," Cindy said.

Emma Robinson, an agronomist with Landmark in Temora and a competition judge, said the competition is a fantastic stepping stone for students entering the commercial world of agriculture.

"There were a number of students that still have a couple of years to go at university so to see them perform so well while under such pressure and tough competition was great. For competitors it was an invaluable experience for showcasing their skills in practice and theory, networking with fellow students and meeting potential employers for the future," Emma said.

The AUCC is an initiative of Grain Growers Association (GGA) with support from major sponsor GrainCorp and continued support from founding sponsor, Syngenta. Additional technical support was provided by Pulse Australia, Landmark, SASA, GRDC, Kondinin Group and BRI Australia.

Syngenta provided access to trial crops at the Syngenta Learning Centre with technical input for the competition provided by Stewardship Manager, Peter Arkle and Technical Services Lead, Garth Wickson. Garth was also an official judge for the competition.

For more information visit the AUCC website [www.unicropscomp.com.au](http://www.unicropscomp.com.au).



The 2010 AUCC top five. From left: Samuel Malfroy, Max Baka-Koch, Cindy Martin, Andrew Gillett and Dwayne Schubert



## BigRed blooms spring, summer and autumn

After 14 years in the making, the first true deep red geranium has now made its way downunder, direct from the USA, and is equipped to tackle our extreme variations in temperature and rainfall.

Known as 'BigRed' (Geranium Calliope), with its big red blooms and thick, strong, rich green mass of foliage, it can be planted as a border or groundcover and is great in a pot or hanging basket.

According to Ross Dunne, Key Account Manager — Syngenta Flowers, BigRed is a breakthrough product for Syngenta and has been a big hit globally.

"It's heat and drought tolerant, but it also blooms under low light conditions, which makes it perfect for Australian gardens," Ross said.

"BigRed has been the number one selling geranium in the US for the last two years, so we are expecting it to take Australia by storm."

BigRed geraniums are available now through selected Bunnings stores and will be available from other retailers from November.

For more information visit [www.bigredgeranium.com.au](http://www.bigredgeranium.com.au)



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