CropLinks

THE LATEST PLANT SCIENCE INDUSTRY NEWS

AUTUMN EDITION 2017

The buzz around bees in Australia

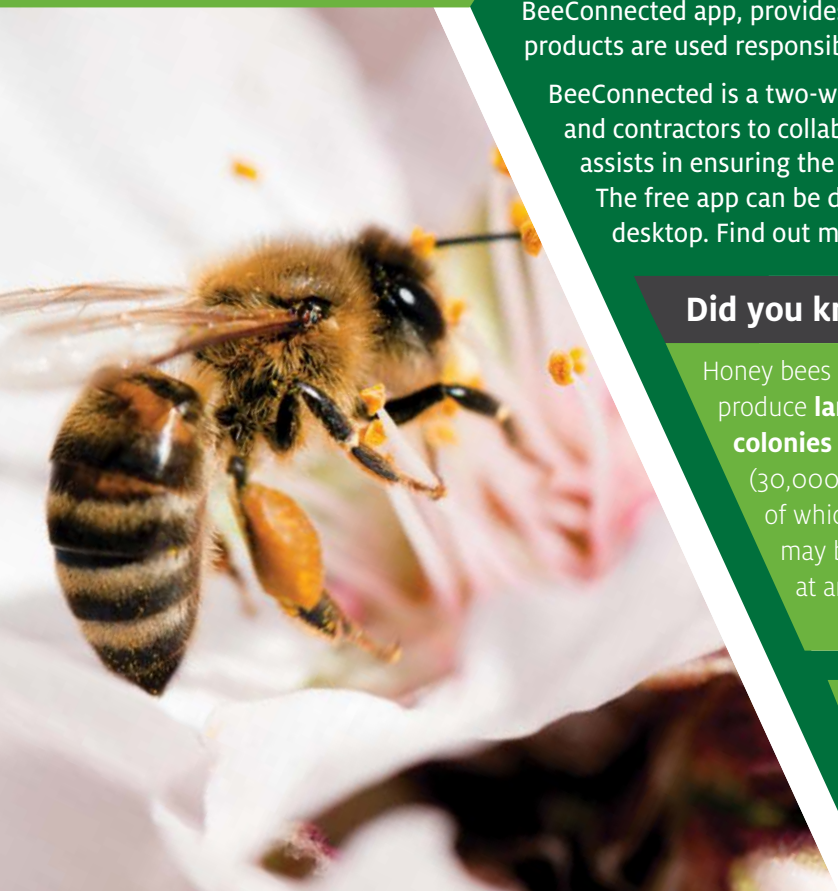
For several years, there has been a plethora of media articles and web blogs on the apparent decline of the world's European honey bee population. However, research proves the reality is something very different. Australia continues to have one of the healthiest honey bee colonies in the world, and year after year it has been growing.

Alongside the responsible management of hives and good farming practices, this is largely due to Australia being free of the parasitic mite Varroa destructor and Colony Collapse Disorder, which have devastated some bee colonies overseas.

Bees are very important to Australian agriculture, with 65 per cent of crops reliant on honey bees for pollination. This is why CropLife member companies continue to contribute millions every year to stewardship activities to ensure the safe and effective use of crop protection products, which include world's best stewardship practices in protecting pollinators.

CropLife's Pollinator Protection Initiative, which includes the award-winning BeeConnected app, provides resources to assist modern, innovative crop protection products are used responsibly and in a manner that minimises risk to pollinators.

BeeConnected is a two-way communication tool, enabling farmers, beekeepers and contractors to collaborate through an internal messaging system. BeeConnected assists in ensuring the safety of bees pollinating close to spraying activities. The free app can be downloaded on both Apple and Android, or accessed via desktop. Find out more at **croplife.org.au**.



Did you know?

Honey bees can produce **large colonies** of bees (30,000–50,000 bees) of which 5000–15,000 may be **foraging** at any time.

Once foraging behaviour is **trained** on a **specific crop**, honey bees generally continue foraging on the crop until the end of the **flowering period**.

The average lifespan of a worker honey bee is **42 days**.

Every **third mouthful** of food we eat **requires pollination** by honey bees.

INSIDE THIS ISSUE

Matthew Cossey
Chief Executive Officer, CropLife Australia

From the Chief Executive

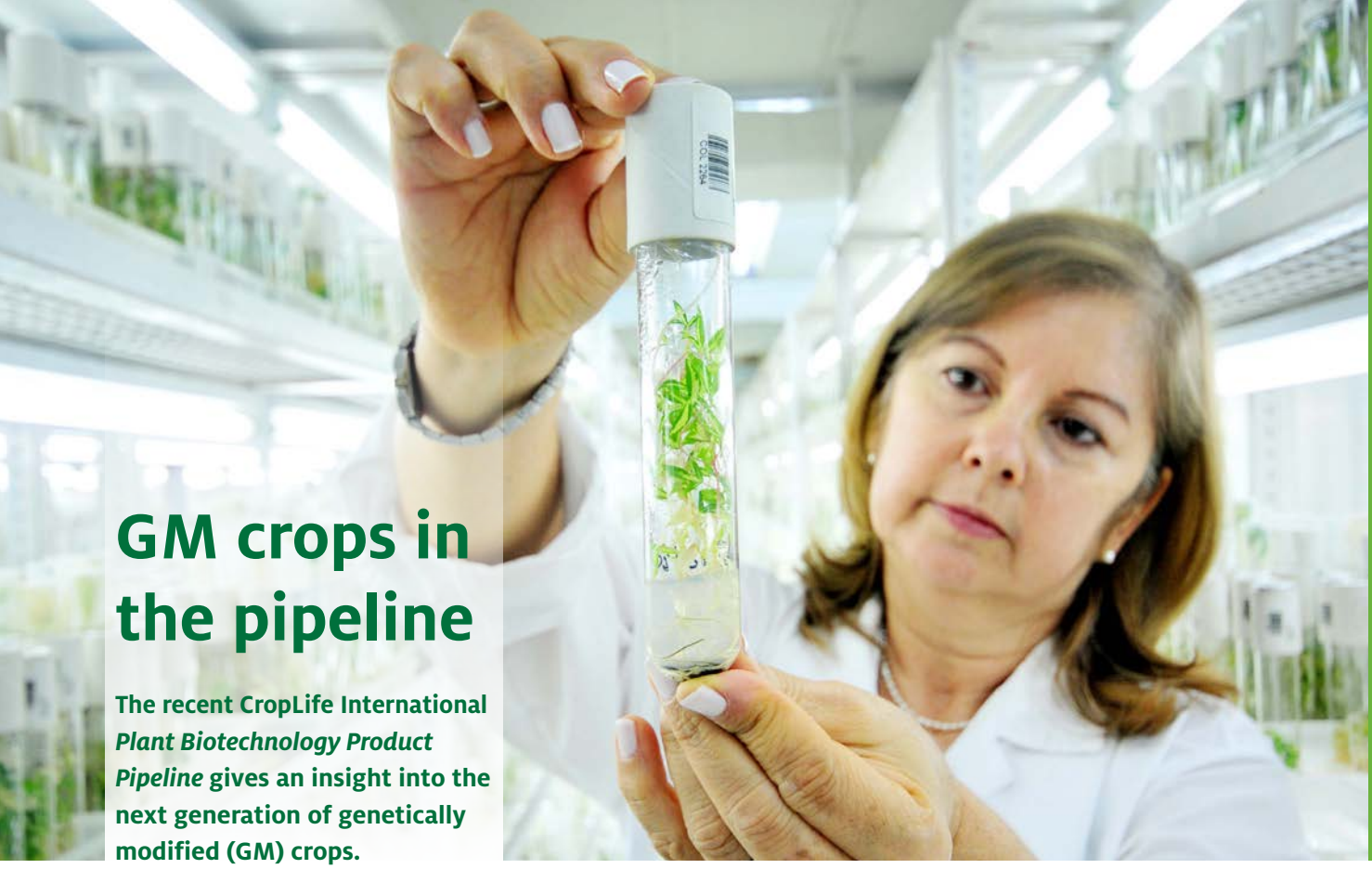
Never before in human history have we had such a peak interest in food, as shown by the multitude of TV shows and magazines dedicated to cooking, and yet at the same time such a peak ignorance, by the significant majority of Australians, about agriculture and what it actually takes to deliver all that safe, disease free, nutritious and affordable produce to a growing urban based population. It is a population that has become disconnected with the reality of farming and shows no regard for the consequences on the sustainability of food production of their short-term lifestyle fad-driven food choices.

That ignorance poses a real threat to the sustainability and growth of our farming sector and security of our food supply. Nowhere more do we see that ignorance displayed than when it comes to the issues of the importance of chemistry in modern farming and the adoption of new agricultural innovations, such as GM crops.

The development and introduction of modern chemistry through crop protection products to farming has seen the doubling of crop production off the same amount of land. The introduction of crop biotechnology innovations has seen massive leaps in the sustainability of farming. Yet we see people, predominantly those in the developed world who have taken the greatest advantage from these advances, adopting views and supporting activist campaigns against such innovations that have no basis in fact or science.

It is incumbent on us all, consumers, industry and government, to be a little more circumspect in the decisions and actions we take regarding food and farming, because while we are fortunate to live in a country with more than enough food, feed and fibre, if we allow agricultural policy to be held ransom to false activist campaigns, or regulatory decisions made on an ill-considered political whim, it will not just be Australia's farmers and broader agricultural sector that will suffer. It takes a massive effort from farmers and the supporting agricultural industries to grow and produce what consumers now seem to take for granted. The very least that consumers and governments can do is ensure that their choices and decisions support that effort, not undermine it.

CropLife Australia



GM crops in the pipeline

The recent CropLife International *Plant Biotechnology Product Pipeline* gives an insight into the next generation of genetically modified (GM) crops.

The Pipeline outlines both early development research and advanced developments that could be in the marketplace within the next five to seven years. Some of these developments include drought tolerant corn, health benefit soybeans with modified fat profiles, Vitamin A enriched rice (Golden Rice) and virus resistant eggplant. These new developments will assist farmers in protecting crops against disease.

For Australia, the Pipeline provides a peek into the future of agricultural biotechnology and the new innovations that could help Australian farmers provide high-quality food, feed and fibre for the world.

The Pipeline includes information on new innovations in agricultural biotechnology in development for a number of different crops, including new varieties of canola with built-in consumer benefits such as healthy fatty acids and improved oil quality. They also include new herbicide tolerant and insect resistant varieties of cotton, which could offer additional options to Australian cotton farmers who already primarily use GM cotton.

The Pipeline also showcases GM traits that could assist Australian farmers to meet the increased food demand of 9.7 billion people by 2050 in the face of limited arable land and changing climate conditions.

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In the last 20 years, GM technologies, specifically cotton and canola, have delivered Australian farmers more than A$1.37 billion in additional farm income.

For rice-dependent populations in developing countries, the availability of Golden Rice could provide sufficient Vitamin A to substantially reduce the 6,000 deaths caused every day by Vitamin A deficiency. Golden Rice can be grown and harvested under difficult climatic conditions. Not only could it give families an ongoing source of nutritious food, it could also generate a new source of income for farming families in developing countries.

It is crucial that Australian farmers continue to have access to plant science innovations such as GM crops to provide them with additional tools for the many challenges and opportunities ahead.

The *2016 Plant Biotechnology Product Pipeline* can be accessed at the CropLife Australia website **www.croplife.org.au**

Top 5 biotech triumphs

1. By growing biotech crops, farmers have increased crop yields by 22 per cent in the last 20 years.
2. Biotech has helped alleviate poverty for 16.5 million smallholder farmers and their families.
3. 18 million farmers are growing biotech crops on 181.5 million hectares.
4. Over the last 20 years, biotech crops have increased farmer profits globally by 68 per cent.
5. With biotech crops, farmers have reduced their pesticide applications by 37 per cent over the last 20 years.

A true centre of excellence in agriculture takes more than just relocating the APVMA

Productivity in Australian agriculture has been flat lining for more than a decade. Delays to the introduction of innovative products to market, due to regulatory inefficiency, not only impact the farmer, but the Australian community at large. Crop protection and genetically modified crop products are some of the core components of agricultural innovation enabling Australian farmers to be internationally competitive.

The government's recently announced centre of agricultural excellence, involving the relocation of the APVMA, intends to drive growth in agricultural productivity and deliver substantial economic benefits to regional Australia. The details on this new hub of agricultural excellence are still unclear. However, a greater focus on improving regulatory operations and introducing innovative initiatives is needed to minimise the very serious consequences of relocating the APVMA. This would involve leveraging technology to streamline APVMA and associated regulatory operations to create a next-generation regulator through more efficient data-sharing and digital assessment regulatory capabilities.

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It now takes over **11 years** of research and development, requiring the testing of more than **140,000 compounds**, costing more than **US$286 million** to bring just **one** new successful crop protection product to market.

With the Australian Federal Budget soon to be handed down, a greater investment in the regulatory system for agricultural chemicals is essential to ensure a true centre of excellence in agriculture is secured for Australia's future, not just a simple relocation of the regulator.

Agricultural chemicals are an invaluable part of Australian agriculture and are essential for both farmers and consumers. Without these products the long-term access to safe, affordable and nutritious food is compromised.

A truly productive, competitive and sustainable agricultural industry in Australia that provides market returns at the farm gate, and value to consumers, needs ongoing productivity improvements and investment in the plant science industry.

Happy Valentine's Day

Every year on Valentine's Day we shower our loved ones with gifts of roses, chocolates, strawberries and wine. Yet, before these special valentine treats come into your loved one's arms, farmers with the assistance of the plant science industry have to work hard to control the pests and diseases that threaten all crops and produce.

Did you know crop protection products, such as herbicides, fungicides and insecticides, are crucial to the commercial production of roses, strawberries, chocolate and wine grapes — the things that make Valentine's Day special?

Did you know **47 per cent** of the increase in global production of **cocoa** over the past decade is attributable to the use of **crop protection products** — meaning more chocolate for you!

Nothing says love like **a red rose**. Did you know **roses are susceptible to a range of fungal diseases and insect pests**, which are both effectively managed by Australia's farmers using **crop protection products**?

Did you know the production of ~38,000+ tonnes of **strawberries** and 1,500,000 tonnes of **wine grapes** grown by Australian farmers every year would not be commercially viable without **crop protection products?**

Plant science enabling farmers to grow the crops that make your Valentine's Day extra special.*

*2013 Deloitte Access Economics report *Economic activity attributable to crop protection products.*

Connecting regulation with practical application

What are plant breeding innovations?

In most cases, plant breeding innovations are improvements and refinements of traditional breeding methods used to optimise plant health, nutritional quality and yield. Throughout history, conventional breeding has continued to deliver varieties that are safe for human and animal consumption.

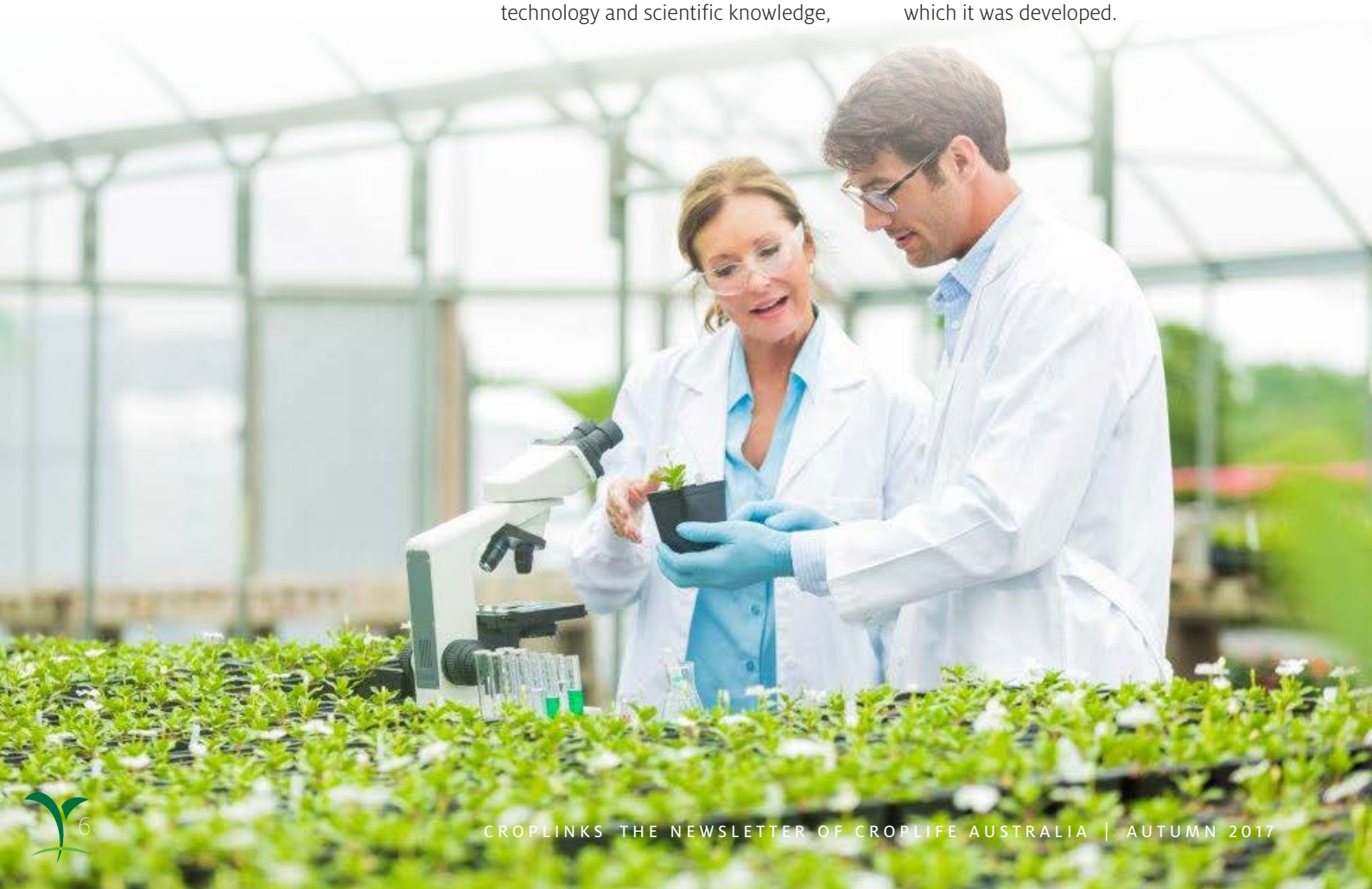
The Gene Technology Regulator has recently undertaken a technical review of the Gene Technology Regulations 2001. The review aims to update the regulations so that they are current and appropriate for the range of new breeding technologies as well as existing genetically modified organisms (GMOs).

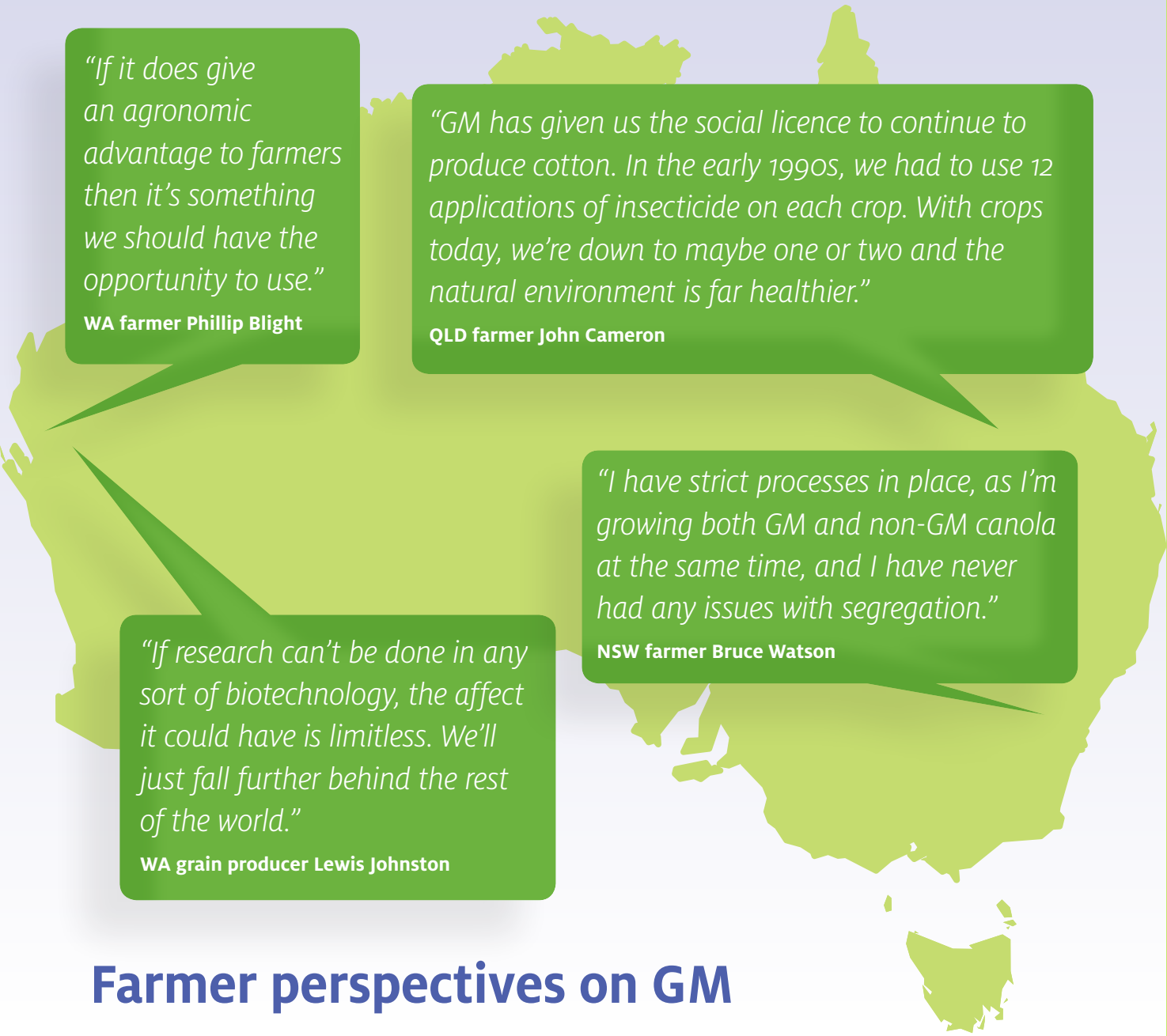
The object of the *Gene Technology Act 2000* is "to protect the health and safety of people, and to protect the environment, by identifying risks posed by or as a result of gene technology, and by managing those risks through regulating certain dealings with GMOs."

While it is important to ensure that regulation accurately reflects current technology and scientific knowledge, it is also important that this regulation is commensurate with the risk posed by the end product.

It's crucial for farming innovation that plant varieties developed through the latest breeding methods should not be regulated differently based on the techniques used during their development, particularly if they are similar to or indistinguishable from varieties that could have been produced through earlier breeding methods.

For the sake of Australia's farming future and community confidence in the regulatory system, new crop innovations should only properly be assessed in the end product, not by the process through which it was developed.





Farmer perspectives on GM

The use of biotechnology offers unique and exciting opportunities to Australian farmers.

Crop biotechnology has the potential to produce novel products from plants, improve their nutritional quality, increase productivity and adapt crops to environmental stresses resulting from a changing climate.

Even more impressive is the contribution of GM crops to the global food supply. The increased productivity of GM crops has meant an additional 274 million tonnes of corn, 138 million tonnes of soybeans, 21.7 million tonnes of cotton lint and 8 million tonnes of canola have been produced between 1996 and 2013, compared to the use of non-GM crops.

In the same period, crop biotechnology innovations have allowed a reduction of the equivalent of 28 billion kilograms of carbon dioxide in emissions from agriculture practices because of innovations allowing reduced fuel usage and additional soil carbon storage from reduced tillage with GM crops.

GM crops have helped to improve farming techniques and crop production around the world by increasing plants' resistance to diseases and pests, and improving the sustainable use of pesticides, as well as maintaining and improving crop yields.

In Australia the cultivation of GM insect resistant cotton has reduced the need for insecticide sprays by up to 85 per cent compared with conventional cotton. Cotton farmers have benefited from an average gain in net farm income of more than $180 per hectare.

A new tool for spray drift management

Pests, weeds and diseases are a constant threat to our nation's food, feed and fibre production making the use of crop protection products essential in Australia and around the world. Their safe and sustainable use is of critical importance to farmers, contractors and the Australian community at large.

With this in mind, CropLife Australia recently launched MyAgCHEMuse, a best practice reference guide that provides the most up-to-date advice and tools to help users of crop protection products manage spray drift.

This free digital reference guide consists of five key sections in an easy to navigate format, which makes it effective for information to be reviewed and updated in a developing industry such as plant science. This ensures MyAgCHEMuse is, and will continue to be the most relevant and up-to-date source of information on managing spray drift.

Australian farmers are excellent stewards of their land and now more than ever need to continue to deliver market and community confidence through best practice crop protection product use and demonstrated stewardship.

MyAgCHEMuse, is the latest instalment in CropLife Australia's StewardshipFirst program. Our StewardshipFirst program also includes BeeConnected, a nation-wide, user-driven smart-phone app that enables collaboration between beekeepers, farmers and spray contractors to facilitate best-practice pollinator protection.

The purpose of these guides is to foster the responsible and sustainable use of crop protection products, thereby assisting in their safe and proper use, and also extending the life of these vital farming tools, which continue to be crucial to the economic and environmental sustainability of Australian agriculture.

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You can download MyAgCHEMuse for free on the CropLife Australia website which can be accessed here: **www.croplife.org.au/myagchemuse**.

Agsafe's ChemClear program smashing records in NSW

CropLife Australia's stewardship organisation, Agsafe, broke records in November and December 2016, collecting a staggering 42.5 tonnes of unwanted agvet chemicals in NSW through it's ChemClear program.

The biggest waste round up in NSW since 2005 saw 135 registered waste holders hand over more than 42,000L/kg of obsolete products.

Local government hosted 83 collection sites across the state in support of ChemClear environmental targets while the NSW Office of Environment and Heritage helped 104 farmers to meet the cost of the safe destruction of over 17,000L/kg of products.

Ongoing and increased support from state governments is essential in ensuring the success of important environmental and recycling programs.

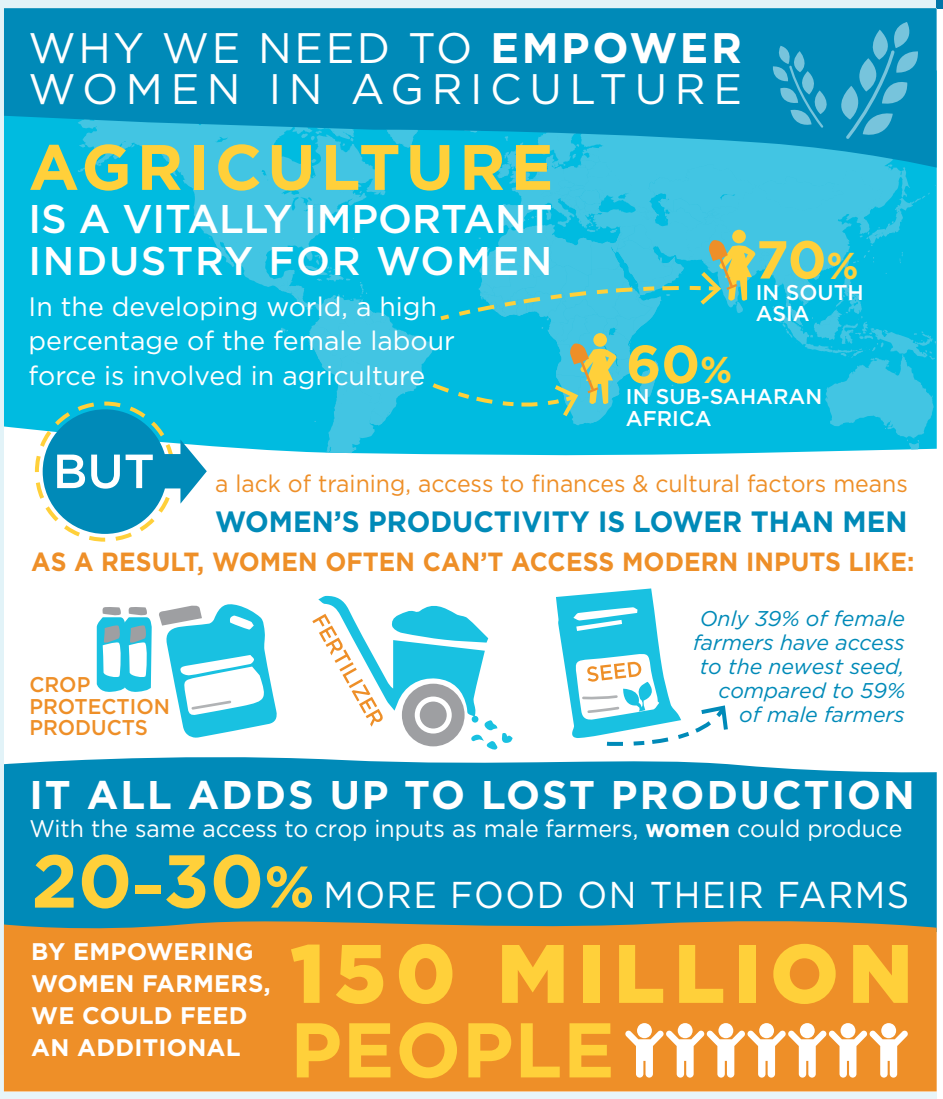
Farmers are encouraged to continue checking their chemical labels and products, and registering unwanted, obsolete or damaged chemicals for future pick-up by phoning ChemClear on **1800 008 182**.

International Women's Day: Supporting women in agriculture #BeBoldForChange

More than one billion people work in agriculture around the world. In developing countries, 43 per cent of those workers are women. International Women's Day 2017 provides an important opportunity to acknowledge the important role women play in feeding the world.

CropLife International President and CEO Howard Minigh said, "the plant science industry is committed to helping female farmers and agricultural scientists in the developing world develop and access the latest innovations — from new agronomic methods to agricultural technologies — that reduce backbreaking labor and improve yields, income and nutrition for farm workers and their communities."

As the international community commits to the UN's Sustainable Development Goals and to protecting the world's natural resources while alleviating poverty, women in agriculture will be at the forefront, driving meaningful change in the developing world.



"In Ghana, women like me cultivate most of our country's vegetables, cereals, and other food crops. Even with cash crops such as cocoa, which are mostly owned by men, we weed, harvest and transport the final product to marketplaces.

One major problem is that we don't benefit from the latest technologies. Throughout North and South America, farmers take genetically modified crops for granted. From Africa, we look on in envy, wishing we could use the same tools to overcome weeds, pests and drought. We don't need handouts from wealthy countries. We just need the same opportunities to succeed." **Lydia Sasu, farmer from Ghana**

News and Events

Nufarm has expanded its large Australian manufacturing presence with the launch of a new plant at its Pipe Road, Laverton, Victoria facility. The new plant adds the capability to manufacture Wettable Granule (WG) products. "This is another multi-million-dollar investment we have made in our Australian manufacturing facilities. Our investments are enabling us to competitively manufacture both established and innovative crop protection products to the highest standard," said Peter O'Keeffe, Nufarm's new ANZ Regional General Manager.

Bayer and Belgian youth farming associations, Groene Kring and Fédération des Jeunes Agriculteurs, will host 100 of the world's young thought leaders in Brussels, Belgium, for the 2017 Youth-Ag Summit (9–13 October 2017). Against a backdrop of increasing disconnection between young people and farming, and a world population that is forecast to soar to ten billion by 2050, visionary thinking, a long-term approach and creativity are urgently needed to develop solutions to safeguard food supply for future generations.

Dow AgroSciences

Dow AgroSciences, Professor German Spangenberg and colleagues at Agriculture Victoria Services in Melbourne have collaborated to develop Optimum Haploid Value™ (OHV) technology, which has application in many plant breeding systems including corn and canola. The organisations announced a royalty-free license to Boyce Thompson Institute/Cornell University for use of OHV to support cassava breeding. OHV and genomic selection could allow cassava lines with key agronomic benefits to be ready in as little as six years.

ADAMA

Now entering its third year, the *ADAMA Young Agronomist of the Year Award* has become a sought-after feather in the cap of Australia's up-and-coming agronomists under 30. As in 2015, a high-quality field in 2016 made selecting the finalists difficult, but selected they were, and the top ten young agronomists now await the announcement of the Young Agronomist of the Year 2016 and runners-up. The winner will receive an all-expenses paid overseas study tour, high praise, and invaluable professional recognition.

MONSANTO

The Australian cotton market and farmers have again declared confidence in a new GM cotton technology. Australian farmers planted 92 per cent of this season's 457,000-hectare crop to varieties containing new technologies. Furthermore, this season, 240 growers planted cotton for the first time or returned after a break. Monsanto said greater flexibility under a new Resistance Management Plan (RMP) helped entice new growers to the industry and expanded the cotton area. Changes to the RMP include a less restrictive planting window and reduced refuge and pupae busting requirements.

LANDMARK

Landmark marked another successful year in 2016, with the Landmark Leaders Conference held in Sydney. Award winners included: Franchise of the Year — Cummins Ag Services; profit share of the Year — Doust Agri-Services, WA; Member of the Year — DKT Rural Agencies, Kellerberrin & Cunderdin, WA; and Branch of the Year —Dubbo, NSW.

Sinochem Australia

Sinochem Australia has joined the best in the plant science industry by becoming a CropLife Australia member. Sinochem Australia is an Australian-based and managed company, manufacturing and supplying key agricultural chemicals into the Australian market. Exclusively distributing Roundup® brands in Australia, and their own KELPIE® product range, they are committed to delivering effective crop protection solutions to Australian agriculture.

BASF
We create chemistry

BASF are pleased to announce the appointment of Piero Castro as National Market Manager for new agricultural products. He joins from BASF Canada, with over 10 years of experience in the agriculture industry. He said it was the open fields yielding Australia's vast agricultural production was an exciting proposition to have as a regular office. It's set to be a busy role, with BASF launching around 25 new products across its portfolio of crop, pest and turf solutions over the next five years to the Australian market.

accensi

Accensi are pleased to announce that Craig Ellis recently assumed the role of General Manager – Operations and will take national responsibility for the running of all three of their crop protection products manufacturing plants. Craig has been with Accensi for 14 years and brings a wealth of industry experience to the role.

CropLife Australia elects new president

The CropLife Board has elected Mr Paul Luxton, Territory Head — ANZ and Managing Director Syngenta Australia, as the new President of the organisation.

With extensive experience in the plant science industry, agronomy, marketing and sales, and as General Manager for Syngenta, Paul brings more than 20 years of knowledge and a wealth of industry experience to this role.

Paul also has a longstanding involvement in a number of leading industry organisations, has been a Board Member of CropLife Australia since 2008, and has held the position of Vice-President of Crop Protection.

Mr Paul Luxton, newly elected President of CropLife.

Bringing together the best of the plant science industry

The CropLife National Forum was recently held at Old Parliament House, Canberra bringing together the senior executives and other thought leaders of the plant science industry.

The Forum was officially opened by Senator the Hon. Anne Ruston, Assistant Minister for Agriculture and Water Resources, the Hon. Joel Fitzgibbon MP, Shadow Minister for Agriculture, Fisheries and Forestry and Shadow Minister for Rural and Regional Australia, Ms Kareena Arthy, Chief Executive Officer of the Australian Pesticides and Veterinary Medicines Authority and Dr Raj Bhula, Australia's Gene Technology Regulator.

Senior government and industry leaders also addressed the forum and covered topics such as the current state of agribusiness — trends and markets, risk and risk perceptions in an increasingly hungry world, plant speed breeding and recent advances. CropLife's annual agriculture industry reception followed the Forum and brought together key policy-makers, politicians, ambassadors, journalists, agribusiness leaders and industry stakeholders.

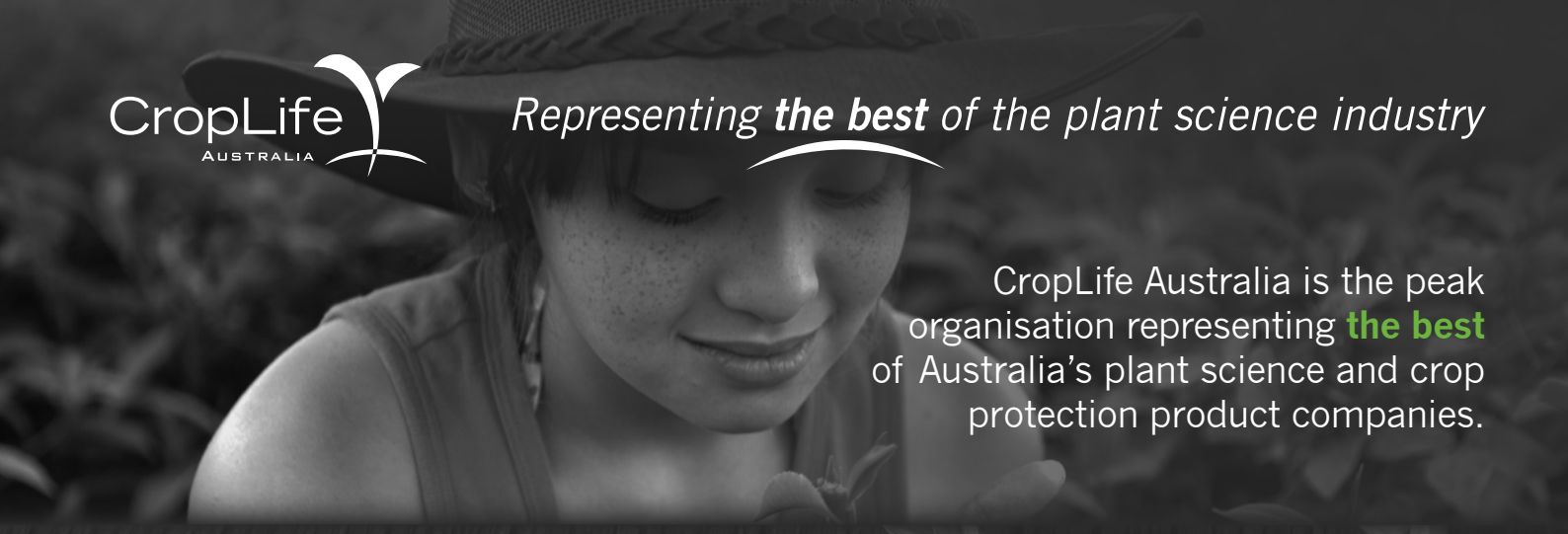
Richard Dickmann, Head of Public and Government Affairs ANZ for Bayer Australia, was recognised for his extraordinary contribution to the plant science industry with the CropLife President's Award.

Mr Matthew Cossey, Chief Executive Officer of CropLife Australia (left); Senator the Hon. Anne Ruston, Assistant Minister for Agriculture and Water Resources; and Ms Fiona Simson, then Vice President National Farmers' Federation.

Mr Richard Dickmann, Head of Public and Government Affairs ANZ for Bayer Australia (left), presented with the CropLife Australia President's Award by Mr Paul Luxton, newly elected President of CropLife Australia in recognition of his outstanding and distinguished contribution to the Australian plant science industry.

CropLife AUSTRALIA

*Representing **the best** of the plant science industry*



CropLife Australia is the peak organisation representing **the best** of Australia's plant science and crop protection product companies.

CropLife ensures world's best stewardship and responsible use of the industry's products through its conduct of conduct and has set a benchmark for industry stewardship through initiatives in the StewardshipFirst™ program such as ***drum**MUSTER*, ChemClear, Agsafe Accrediation and Training and the Pollinator Protection Initiative.

That is why you can have full confidence when dealing with a CropLife member company.

CropLife represents Australia's **leading** innovators, developers, manufacturers, formulators and registrants of crop protection and agricultural biotechnology products.

CropLife Australia is part of the CropLife International Federation, representing the plant science sector in 91 countries around the world.

accensi · ADAMA · Arysta LifeScience · BASF We create chemistry · BAYER · DOW Dow AgroSciences · DUPONT · FMC · LANDMARK · MONSANTO · Nufarm · nuSEED · Sinochem Australia · SIPCAM Innovation Not Imitation · SUMITOMO CHEMICAL · syngenta · AgNova Technologies · ISK · eurofins · PHIL STC Label Specialists

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