SPRING 2024

CropLinks

THE LATEST PLANT SCIENCE INDUSTRY NEWS

Drums-to-Drums
A plastic recycling breakthrough

In an Australian-first, the pioneering *drum*MUSTER® chemical container collection and recycling program started by CropLife Australia will now recycle almost one million plastic agricultural chemical containers back into new agricultural chemical containers each year. This initiative is further to the millions of pesticide containers already being recycled by *drum*MUSTER.

Over the first 25 years of its operation, ***drum***MUSTER has been responsible for the collection of 43 million agricultural and veterinary chemical containers. It has turned what otherwise would have been waste into valuable resources. This has underpinned the biggest recycling effort of Australian agriculture; accounting for almost half of all recycling undertaken by the sector.

Through collaboration between CropLife, its not-for-profit stewardship subsidiary, Agsafe and leading plastic recycler and packaging manufacturer, Pact Group, the new Drums-to-Drums initiative will take these recycling efforts even further. The technology developed in Drums-to-Drums will for the first time allow plastic from "empties" collected through ***drum***MUSTER to be reused in a new range of industrial-grade AgriG8 chemical drums empowering the plant science industry to drive more sustainable outcomes.

Drums-to-Drums is another example of how a combined commitment to a circular economy, a long-standing pedigree in national collection infrastructure and advanced recycling technology can fast track tailored sustainable solutions for agriculture and enhance our nation's productivity at the same time.

Launching the Drums-to-Drums initiative and new range of AgriG8 containers at the Pact recycling facility in Victoria. Left to right: Pact Group General Manager, Ben Andrews, Pact Group Managing Director and CEO, Sanjay Dayal, Federal Senator for Victoria, Raff Ciccone, CropLife Australia CEO, Matthew Cossey, Pact Group Non-Executive Chair, Raphael Geminder, Agsafe General Manager, Alicia Garden.

Inside this issue

REPRESENTING THE BEST OF THE PLANT SCIENCE INDUSTRY

CropLife Australia

From the CEO

In the modern marketplace, consumers are bombarded with an overwhelming number of decisions to make around cost, convenience, nutrition and environmental impact.

Matthew Cossey
Chief Executive Officer, CropLife Australia

CropLife acknowledges the original farmers and custodians of the lands we live on.

Labels such as “organic,” “natural,” “regenerative agriculture,” and many more are often marketed as the gold standard for healthy, sustainable food. Despite their appeal, these buzzwords often mislead consumers, oversimplifying the complexity of agricultural practices and distracting from what truly matters: science-based best-practice that ensures quality, sustainability, productivity and safety in our food supply.

Organic farming for instance is marketed around an ethos of food produced without synthetic pesticides and fertilisers. In reality this practice often requires more land and resources to produce the same yield as conventional farming, leading to a larger environmental footprint.

Similarly, the label “natural” is one of the most ambiguous and misleading marketing gimmicks in the food industry, playing on consumers’ desires for wholesome products. With no standardised definition for what constitutes “natural”, such a label does not mean a product is better in quality or nutrition or that it was produced using environmentally friendly methods.

Growing consumer awareness about how their food is produced should be encouraged and supported with evidence-based guidance. Broadly applying well-meaning terms like “Regenerative agriculture” as a solution to mitigating climate change, obscures the fact that not all regenerative methods are equally effective or scientifically validated.

The success of regenerative agriculture depends on the specific practices implemented to a specific environmental context as being part of a modern comprehensive farming program.

These practices include the judicious use of advanced technologies for precision agriculture, integrated pest management, and genetically modified crops developed to reduce the need for inputs. These methods are rooted in decades of research and have been proven to increase crop yields, reduce environmental impact, and enhance food safety and quality.

Ultimately consumers can’t be expected to weigh up the scientific pros and cons of every food choice made in a weekly shop. However, if we are serious about improving environmental outcomes in food and farming, it’s crucial that consumers are brought along on the journey. Rather than getting swept up in the latest marketing trends and farming methods, consumers can focus on supporting farmers and producers who prioritise scientifically validated practices that deliver high-quality, safe, and truly sustainable products. By doing so, we can make informed choices that benefit both our health and the planet.

Buy best-practice

Not buzzwords

Over history, many buzzwords that promise the next big thing in food and farming have come and gone. The misappropriation and misuse of terms like "natural", "organic" and "regenerative" that are not bound by clear standards and definitions, have clouded the true meaning of sustainable farming practices rather than help consumers make informed choices. The truth is, one farming practice alone won't save the planet, but best-practice farming guided by genuine outcomes just might.

It's the word on everyone's lips. "Regenerative agriculture" (regen ag) has captured the imagination of farmers, policy makers and consumers alike as a solution to our climate woes and growing food insecurity. Then again, what's in a name?

With farmers under pressure to meet arbitrary 'criteria', have we missed the point?

The CSIRO recently investigated this very question to shed light on the essential characteristics of regen ag and bridge the gap between a romanticised ideology and agricultural science. It found that what was most important was science-based outcomes informed by the Australian context.

Unlike North America and Europe, Australia's approach to regen ag focuses on genuine positive outcomes for soil health, biodiversity, farm productivity and profitability rather than dictating specific farming practices.

If the goal is to provide truly sustainable food choices, then we must acknowledge the role of plant science innovations in achieving sustainable outcomes. If preserving natural resources, reducing soil erosion and increasing soil carbon is the goal, many (95 per cent) of Australian farmers already employ conservation practices like no-till farming which is enabled by herbicides, including glyphosate.

In fact, technologies like GM crops and pesticides have enabled farmers to produce more food on less land and optimise inputs, reduce carbon emissions and conserving natural resources.

Ultimately, the practices used in regenerative agriculture that are proven to create environmental benefit are already considered best-practice across Australian agriculture. Using plant science innovations as one tool in the toolkit to employ best-practice isn't just sustainable – it's good business. Regardless of what we call it, what matters most are the outcomes for environmental stewardship, biodiversity conservation and food security.

A focus on actions rather than clever marketing will be crucial to ensuring farmers have the tools and support they need long-term, to manage their land and produce food responsibly for future generations.

The MRL myth

Skip your socials, not your salads

Food is more than mere sustenance; It's a way we express ourselves, find comfort, social connection and nourishment. However, a shadow of fear and mistrust looms over our plates when concerns about food safety arise, fueled by activist rhetoric and disinformation discouraging consumption of vital fruits, vegetables and wholegrains.

Pesticide residues, commonly incorrectly asserted as harmful, are frequently wielded as ammunition by fear-mongering activists. The truth is far from these sensationalised claims, that ignore the central, crucial point – the presence of a pesticide residue doesn't tell us anything about safety. It's like saying we shouldn't eat apples because the seeds contain cyanide. Rather, Maximum Residue Limits (MRLs) serve as regulatory tools, that ensure adherence to best farming practices to manage damaging, toxic or invasive pests, in accordance with product labels.

MRLs are set to ensure that the minimum necessary amount of pesticide is used to combat pests, thus minimising residue levels. The MRL then becomes the highest amount of residue that would be present from this application. This is why MRLs vary from country to country – different pests and diseases in different environmental contexts require different treatments.

These limits are set far below any conceivable health risk...

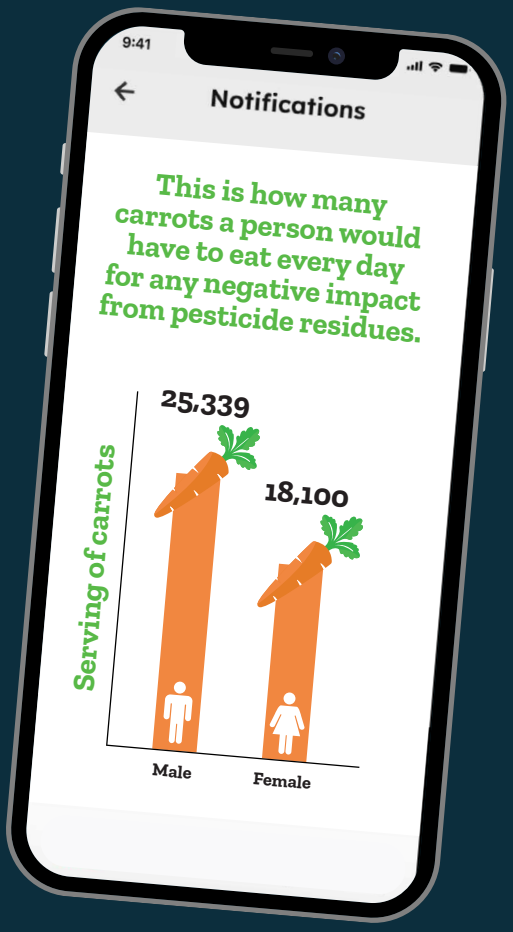
These limits are set far below any conceivable health risk, meticulously evaluated by expert public scientists, and calibrated to be hundreds or thousands of times lower than the Acceptable Daily Intake (ADI). The ADI is determined by rigorous safety studies and is set at a level where no harm could be measured, if that amount were consumed every day, forever.

This safety margin is a testament to the exhaustive scrutiny and precautionary measures undertaken to ensure a safe, affordable and reliable food supply chain.

Australia's agricultural sector has a global reputation for high food safety standards and responsible use of advanced crop protection technologies. Continuous monitoring shows that the use of these highly regulated products continues to safely minimise dangerous toxins caused by fungus and insect damage.

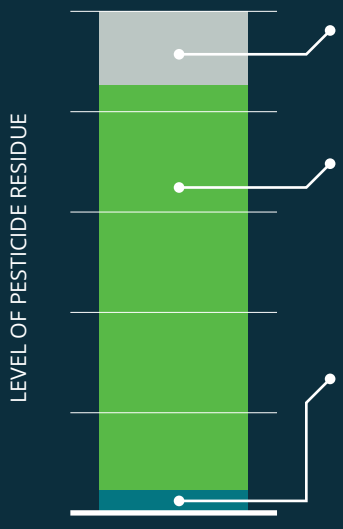
Most reported food borne illness cases in Australia are due to bacterial contamination or poor food hygiene practices. Around 4.7 million cases occur each year.

The best thing consumers can do for their health is to clean out their social media feeds and put down the guilt. Let's focus on what really matters, which is eating plenty of fresh fruit, vegetables and grains prepared using proper hygiene practices.



MRL vs ADI

The MRL is used to monitor minimum product use according to the label not as an indicator of safety



NO OBSERVED ADVERSE EFFECT LEVEL (NOAL)

The highest level of pesticide residue that does not cause any negative effects in test animals.

ACCEPTABLE DAILY INTAKE (ADI)

The amount of pesticide residue a person could eat every day without any negative health effects. The ADI is set well below the level at which there would be any safety concern. Often at least 100x lower than the adverse effect level.

MAXIMUM RESIDUE LIMIT (MRL)

The highest level of pesticide residue that could be found in a food product when a pesticide is used according to label directions. MRLs are not a safety limit.

Crop Protection

Courts weigh in, science stands firm on glyphosate

A recent Federal Court verdict that glyphosate is not carcinogenic reflects what science and independent expert assessment has confirmed for decades. Glyphosate is safe to use. It also confirms the appropriateness of the independent science-based regulatory system overseen by the Australian Pesticides and Veterinary Medicines Authority (APVMA).

Australia is fortunate to have a regulatory system based on risk-based assessment of scientific data rather than assuming that one thing causes another merely because the first thing preceded the other. Maintaining this system and independent approach is crucial to ensuring that investment continues to bolster R&D programs that are essential to solving some of the world's most important problems.

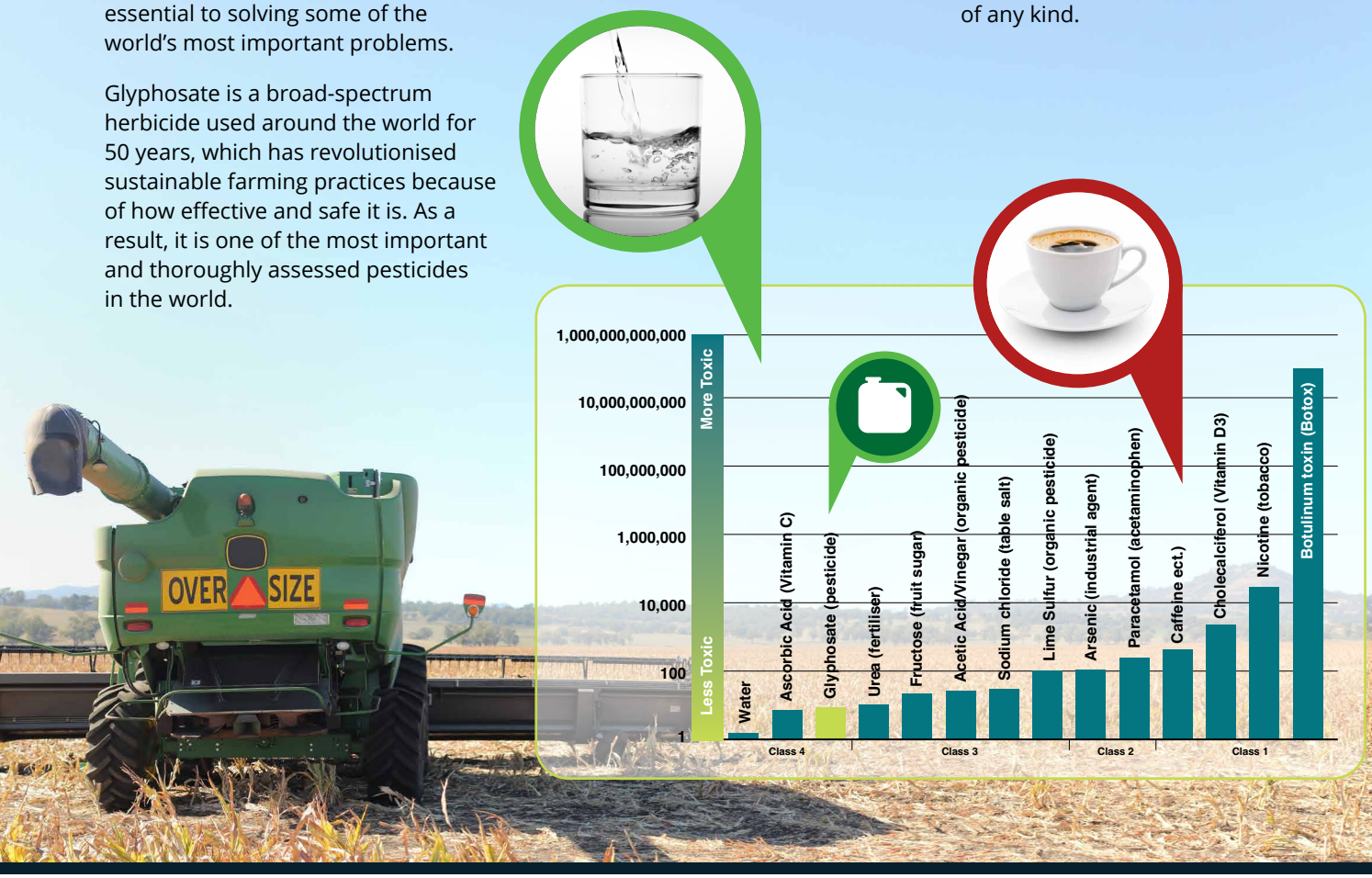
Glyphosate is a broad-spectrum herbicide used around the world for 50 years, which has revolutionised sustainable farming practices because of how effective and safe it is. As a result, it is one of the most important and thoroughly assessed pesticides in the world.

As part of its mandate, the APVMA continues to amass decades of global literature on the subject. Since the start of 2023, it has assessed 600 newly published studies on glyphosate. This is part of the 5,300 peer-reviewed articles and datasets that support continued registration, any one of which could have either triggered a full review, or a cancellation of the chemical if there were any plausible risk to farmers, consumers, or the environment.

The decision of the APVMA is consistent with that of its global peers

Most recently the New Zealand Environmental Protection Agency in July 2024 reached the same conclusion as the EU decision of July 2023, when glyphosate was re-approved in Europe. Both regulators 'did not identify any critical areas of concern' impacting public health or the environment.

Aside from this overwhelming amount of scientific data, there are decades of lived experience documented in the US Agricultural Health Study, which reinforces the reams of smaller studies, and is arguably the most robust evidence that glyphosate is safe. Since 1993 the US study has followed over 57,000 farmers and licensed pesticide applicators and confirmed that there is no association between glyphosate use and cancer of any kind.



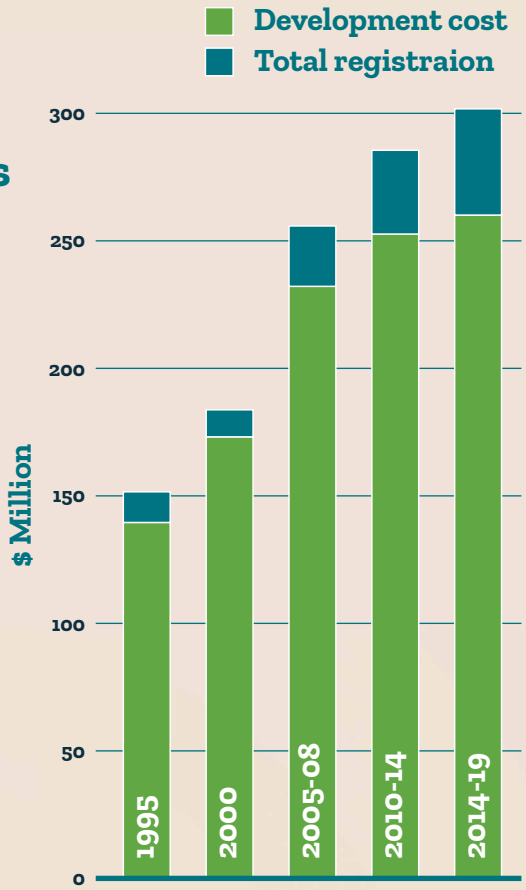
Australia missing out with rising costs of bringing a new product to market

A new report reveals the journey from discovery to market for just one crop protection chemical active constituent now exceeds 12 years and costs USD$301 million.

The global costs of research and development (R&D) into new active ingredients are climbing even faster with individual company **budgets soaring by 82% in 5 years**.

NEW **12 years** and

$301 million to get one chemical to market

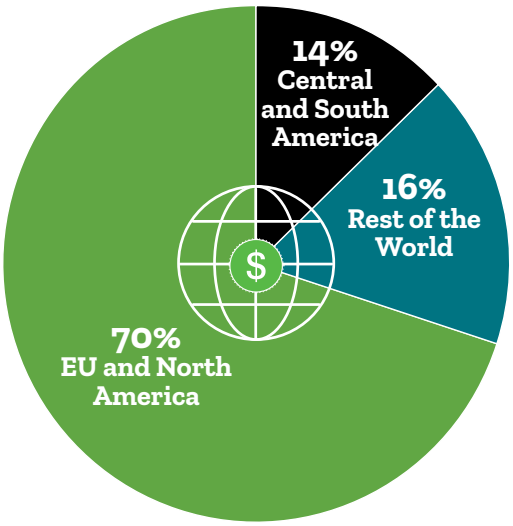


82% in 5 years

On top of that, Australia is facing higher regulatory costs to bring a product to market, meaning farmers could miss out on new innovations.

Australia accounts for a fraction of global R&D investment

Europe and North America collectively dominate global R&D, accounting for over 70 per cent of this investment, while Australia competes with the "Rest of the World" to attract investment from 16.7 per cent share of R&D resources allocated to these regions. Australia receives a fraction of new R&D initiatives due to the country's small market size and increasing regulatory costs. Efficient, predictable and adaptive regulation, supported by policy settings which expand intellectual property protection is crucial. This would encourage local investment necessary for improved commercialisation of new, innovative chemical products in Australia.



Crop Biotechnology

Crop BIOTECHNOLOGY

The economic imperative of biotech reform

In the lead up to the next federal election, the Albanese Government faces a pivotal moment: fostering economic growth while balancing budgetary demands. Embracing biotech reform will be key to propelling long-term prosperity.

In a recent address, Treasurer Jim Chalmers underscored the imperative of sustainable growth to strengthen the nation's economic foundations, outlining the need to shift towards policies that foster private sector investment, rather than a sole reliance on government initiatives. Ensuring the regulatory framework for gene technology incentivises commercial investment in Australia should be a key action by the Government as part of these efforts.

Growing Australia's bioeconomy not only brings economic stability through expertise in agricultural, medical and biological sciences but also aligns with the global surge in biotechnology innovation investment. Policies that encourage private investment for innovations in Australia would bring climate resilient crops, new food processing capabilities using synthetic biology and medical research leading to targeted treatments for cancer and other chronic disease.

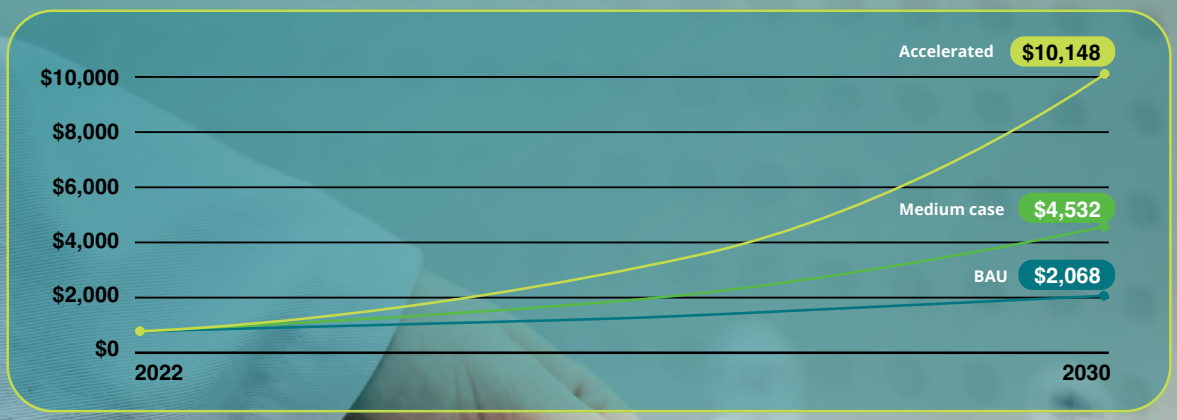
Despite the strategic advantages, Australia's regulatory inertia has dimmed its appeal as a biotechnology investment hub. While groundwork for a robust regulatory framework was laid three years ago, failure to implement the reforms have left Australia frozen in time.

Meanwhile, global counterparts have embraced flexible, risk-tiered science-based approaches to the regulation of gene technology, positioning themselves as attractive investment destinations.

Prioritising these legislative reforms is paramount to making Australia relevant again.

By swiftly enacting agreed-upon measures, the Government can reignite investor interest, revitalising Australia's bioeconomy and help drive long-term sustainable growth envisaged by the Treasurer.

Scenarios for increasing Australia's share of trade in the United States biotechnology industry



Source: KPMG analysis, US Census Bureau, Grand View Research

Industry Stewardship

Where land meets sea

Stewardship for a "Great" Barrier Reef

The Great Barrier Reef (GBR) stands as a testament to the delicate balance between land and sea. It is home to the world's largest coral reef ecosystem and supports some of Australia's most important agricultural food production areas for grazing, horticulture, cropping and dairy. Its a prime example of how best-practice farming, empowered by the plant science industry has supported a harmonious co-existence of agriculture and the environment.

The 2022 Reef Report Card revealed encouraging trends and shows improving adoption of best management practices. The misconception that the production of food, feed and fibre is inherently at odds with environmental conservation is increasingly challenged by emerging evidence and the adoption of innovation in the agricultural sector.

Take the Burdekin region in QLD, a hub of sugarcane production, for example. Since the introduction of industry-led stewardship initiatives in 2018, pesticide detections in flowing water have been reduced by up to 45 per cent.

CropLife Australia's StewardshipFirst® initiative is a real-world example of how industry-led stewardship has been instrumental in sustainable farming and productivity in regions like Burdekin. The adoption of on-farm best-practice management practices like increased buffer zones, filter strips and reducing soil erosion through no-till practices have curbed pesticide run-off and led to tangible improvements in water quality in the Reef catchment area.

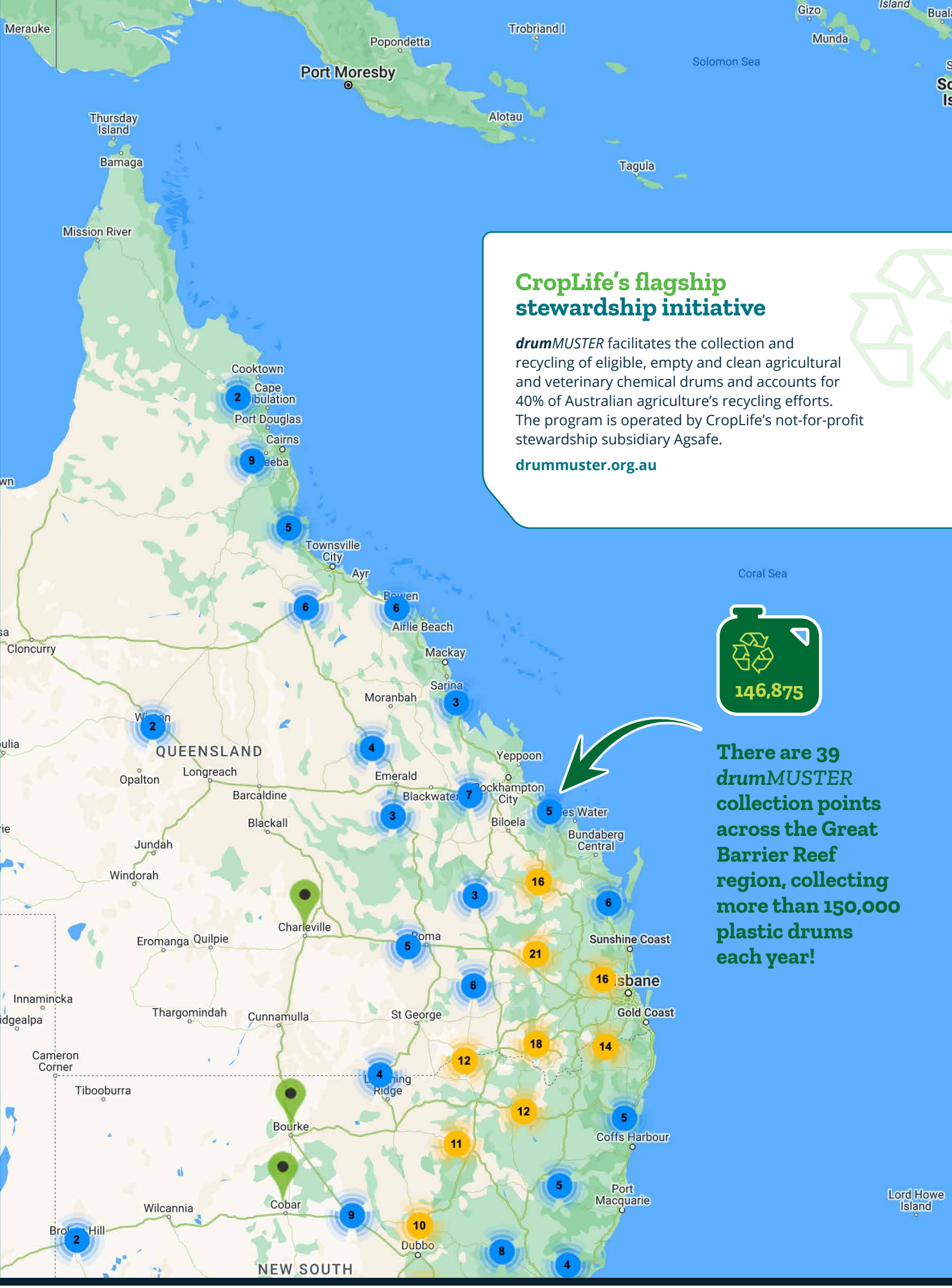
Climate change looms as the greatest threat to the Reef and exacerbates coral bleaching events. However, it is possible to safeguard this natural wonder through collective guardianship by government, industries, communities and individuals while sustaining a thriving agricultural sector.

By acknowledging industry stewardship efforts and supporting its adoption by farmers in the region, we can ensure a legacy of coexistence and conservation for generations to come.

CropLife's flagship stewardship initiative

***drum**MUSTER* facilitates the collection and recycling of eligible, empty and clean agricultural and veterinary chemical drums and accounts for 40% of Australian agriculture's recycling efforts. The program is operated by CropLife's not-for-profit stewardship subsidiary Agsafe.

drummuster.org.au



146,875

There are 39 *drumMUSTER* collection points across the Great Barrier Reef region, collecting more than 150,000 plastic drums each year!**

CropLife members' news and events

Earlier this year Syngenta held viticulture in-field demonstrations at its Learning Centres to provide networking and problem solving support within the industry. With effective and efficient disease control more important than ever, agronomists and grape growers evaluated three new fungicide innovations being launched by Syngenta this year.
syngenta.com.au

Nufarm Australia is thrilled to have been selected by WORK180 as one of Australia's top 101 workplaces for women in 2024! Being selected demonstrates a long-term commitment to gender equity and progress towards a diverse and inclusive workplace for everyone.
nufarm.com.au

With its mission Health for All, Hunger for None, Bayer is involved in a range of community programs like the Bayer Big Fish Challenge, tackling mental resilience across regional Australia, and the Red Cross Baby Hub program, providing vital education and resources for mothers and babies in the remote indigenous Galiwin'ku community in NT. Learn more via Bayer's Better Agriculture podcast.
bayer.com.au

Sumitomo sponsored the Future Orchards® 2024 International Grower Tour of New Zealand. The tour covered both South and North islands with AgFirst consultants leading orchard walks in their home regions, while Sumitomo Australia employees had the opportunity to take the group to visit Sumitomo's trials of new apple thinning technology under development.
sumitomo-chem.com.au

Corteva Agriscience is proud to be a founding partner of a new Zero Net Emissions research centre to help Australia reduce agricultural emissions and advance the sector's reputation in sustainability. The partnership with Agriculture Cooperative Research Centre (ZNE-Ag CRC) will pursue research on input products for managing nutrition efficiency to reduce GHG emissions from fertiliser losses.
corteva.com.au

Nutrien Ag agronomists from across Southern and Central NSW recently gathered in Griffith to discuss the latest in research and technology. Nutrien agronomists are focused on adopting the right information, products, and services to improve the overall production, profitability, and sustainability on farm for growers.
nutrienagsolutions.com.au

Philstic Labels have developed an intriguing label solution. A resealable outer shell, housing a multi-page booklet all constructed with waterproof synthetic materials so important information on farm is kept safe, dry, and intact.
philstic.com.au

Over 250 growers, consultants, and agronomists attended FMC's Spray Application workshops in South Australia and Victoria. Training included strategies for safer spraying, the impact of nozzle choice, synergy with adjuvants, tips for weather monitoring, hazards posed by inversions, and regulatory compliance related to spray drift.
ag.fmc.com.au

On 1 March 2024 BASF Agricultural Solutions Australia and New Zealand celebrated its 10 year anniversary since re-entering the Australian agriculture market. In that time BASF Ag Solutions team have launched innovative products including tearless onions, hybrid canola varieties and world-first active ingredients, and continue to expand its footprint across the country.
basf.com.au

Eurofins Agroscience Services faced several challenging climatic conditions at the beginning of 2024 in northern Australia. Tropical cyclone Kirrily posed significant risk to several research studies in the region. Despite this, Eurofins has maintained high quality research outcomes for clients through the agility and effective communication of our researchers.
eurofins.com.au

ADAMA brand turns 10! Celebrating a decade since its transition from Farmoz with Identity, Culture and Global Brand. Grounded in a legacy of over 75 years, ADAMA's focus remains on farming, with a commitment to providing value and innovation for growers around the world.
adama.com/australia

Sipcam Australia has launched a new video series on YouTube to deal with important topics such as herbicide resistance, volunteer barley control, varieties, and using Aggressor herbicide successfully.
sipcam.com.au

Supporting the future of Australian agriculture, UPL Australia is excited to continue the ongoing partnership with Longerenong Agriculture College in Victoria. The Platinum sponsorship commitment commenced in 2022 and is the most direct way UPL can influence a positive outcome for the future of the Australian Agriculture workforce.
upl-ltd.com

As the demand for biosolutions continues to increase, Gowan has established the largest bio-input extraction and formulation plant in Colombia with an investment of over $6 million for production capabilities and research and development. The plant would serve as a hub for bio-rational products across 80 countries, meeting international demand for their biological portfolio.
gowanco.com

CropLife Australia

CropLife Australia is the national peak industry organisation representing the plant science sector in Australia.

CropLife's members are the world-leading innovators, developers, manufacturers, suppliers and formulators of crop protection and crop biotechnology products. The plant science industry, worth more than $31.6 billion a year to Australian agricultural production, provides products to protect crops against pests, weeds and diseases, as well as developing crop biotechnologies key to the nation's agricultural productivity, profitability and sustainability. CropLife is a part of the plant science industry's 91 country international federation.

Representing the best of the plant science industry

Nufarm · Bayer · syngenta · ADAMA · Nutrien Ag Solutions · FMC · Corteva agriscience · BASF We create chemistry · UPL OpenAg · SIPCAM Innovation Not Imitation · Sumitomo Chemical · accensi · AgNova · autopa · Intergrain · DGL · Gowan · ISK · nuseed · eurofins · Philstic

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CropLife Australia