WINTER 2025

CropLinks

THE LATEST PLANT SCIENCE INDUSTRY NEWS

How to bag ag's soft plastics problem

Up to 60,000 tonnes of soft plastic will be diverted from landfill each year with the launch of CropLife's bagMUSTER program. Australia's first not-for-profit, industry-led collection and recycling program for agricultural plastic bags.

bagMUSTER®

Purchase products from participating brands

Return bags to a local collection point

Bags are recycled into new products on shore

Developed by CropLife Australia in partnership with the Australian Seed Federation, **bag**MUSTER is targeting soft plastic waste on-farm. With start-up funding from CropLife and its stewardship subsidiary Agsafe, phase one of the program was recently launched in Victoria. While the program will be rolled out nationally, CropLife is calling for funding commitments from state and federal governments to fast track the establishment of hundreds of collection points across Australia. This will provide farmers all over Australia with the option to recycle soft plastic bags used for pesticide, seed and other agricultural uses.

Support from government is needed to address the logistical challenges of servicing rural Australia and to ensure our regional communities are included in Australia's ambitions to be a circular economy by 2030. This world-leading initiative will improve on-farm sustainability and strengthen domestic manufacturing right here in Australia.

bagMUSTER is part of CropLife's StewardshipFirst® suite of industry-led product stewardship initiatives. To find a collection point visit **bagmuster.org.au**

Inside this issue

REPRESENTING THE BEST OF THE PLANT SCIENCE INDUSTRY

CropLife Australia

From the CEO

The recently released National Food Security Preparedness Green Paper developed by the Australian Strategic Policy Institute (ASPI) has declared that food security is as important as defence in protecting Australia's national security.

Matthew Cossey
Chief Executive Officer, CropLife Australia

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

CropLife Australia partnered with ASPI to see this critical work come to life and has welcomed the report's urgent call for proactive measures. Without such actions, Australia faces an agricultural policy and production crisis within a decade. This is something that CropLife Australia has sought to highlight over many years.

The Green Paper highlights the fragility of Australia's food system, which relies on 'just-in-time' supply chains and faces threats from global shocks, climate change, and rising inequality. It stresses the importance of maintaining access to essential tools like modern crop protection products and agricultural biotechnologies, warning against regulatory risks that could leave farmers without the means to protect crops and improve productivity and sustainability.

Our agricultural productivity, not only feeds Australians but is also the basis of the food trade with our neighbours that supports our regional stability. It relies on our farmers having access to technologies that science has demonstrated are used safely. Unnecessary calls to remove these tools, combined with current policy settings that restrict access to innovative alternatives, risk sleepwalking Australia into an agricultural policy and production crisis.

Europe's ongoing struggle with food security provides an important warning of the consequences if we keep removing safe and effective agricultural chemical innovations. Likewise, new technologies are essential to help farmers and environmental land managers tackle emerging threats and better manage longstanding issues.

Strengthening Australia's self-sufficiency and protecting its farmers from global shocks requires access to global innovation, incentives for domestic manufacturing, diversified and de-risked supply chains, and streamlined, science-based regulation.

The plant science industry has welcomed the Government's election commitment to develop a strategic approach to food security in its Feeding Australia strategy; however, this commitment should not be used as an excuse for delaying actions that can be taken now.

Key initiatives include supporting the APVMA with Government funding to perform public good functions; reforming its minor use chemical access program to enable high-value horticulture to benefit from the latest innovations of the plant science industry; and urgently implementing long-overdue reforms to Australia's gene technology framework (after a ridiculous seven year process by the Department of Health) to drive greater productivity and sustainability across the farming sector.

bagMUSTER®

A new life for soft plastic

There are two main types of soft plastic used in agriculture: polypropylene (PP) and polyethylene (PE). Now, technologies like mechanical recycling and new innovative advanced recycling can process plastic waste into new plastic products.

bagMUSTER is designed by industry for industry's product packaging to divert thousands of tonnes of plastic from landfill, reduce virgin plastic production and strengthen the commercial viability of new advanced recycling technologies by providing a guaranteed and consistent source of feedstock.

Time for government support to fast track national roll-out

Phase 1 has commenced in North-West Victoria with other states being brought on-line over the coming years. With full national coverage by 2029.

To learn more about **bag**MUSTER or find collection sites visit

bagmuster.org.au

How it works

Crop Protection

Crop PROTECTION

The Cost of Neglect

Who pays the price when the Government doesn't fund the APVMA?

Australia is the only OECD nation with an agricultural chemical regulator entirely funded through an industry fees and levies cost recovery model.

Despite this, the Australian Government is not meeting its funding obligations to the APVMA in a way that reflects growing demands on the Regulator to deliver public good functions such as chemical reviews, compliance and enforcement. Ultimately this leaves farmers footing the bill which means consumers will pay.

As fruit and vegetable prices soar (up 6.3 per cent year-on-year), 35 per cent of horticultural farms report major crop losses to pests and disease before produce even reaches supermarket shelves. CropLife members invest tens of billions of dollars annually in research, development and commercialisation of innovations that underpin the productivity and sustainability of farming.

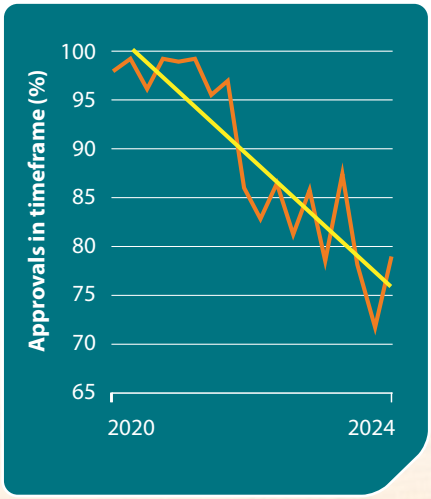
Yet, consecutive governments have failed to implement policies that support regulatory efficiency to bring these technologies to market. While the APVMA has implemented operational reforms to maintain public confidence, this increased focus on delivering public good outcomes is missing long-term sustainable funding.

The Government's recent $5.2 million boost is welcome, but permanent funding is needed to fix the structural funding flaw.

Unlike other global regulators, the APVMA is funded almost entirely by industry through application fees and levies on sales. Without action, this will drive up input costs and impact farm productivity needed to drive down cost of living pressures at the checkout.

It's not fixed until the Government provides funding.

APVMA processing times drop below minimum statutory requirements



On-time assessment of major pesticide applications continue to drop due to Government not funding the demands it's putting on the APVMA.

The Productivity Divide

Australia's two-speed agricultural economy

Recent figures released by ABARES indicate that productivity growth in Australia's broadacre industry is slowing.

However, a closer look reveals a two-speed agricultural economy, with continued strong growth in the cropping sector. The difference? Adoption of new, evidence-based farming practices using technologies such as innovative crop protection products.

Across the broadacre sector, productivity grew steadily at almost 2.2 per cent through the 1980s and 90s driven by policy reform, the removal of market support, farm consolidation and uptake of science and technology.

Since 2000, growth slumped to 0.72 per cent with an assumption that gains became harder to find, with fewer technological breakthroughs, smaller marginal returns associated with farm aggregation and growing headwinds from climate change.

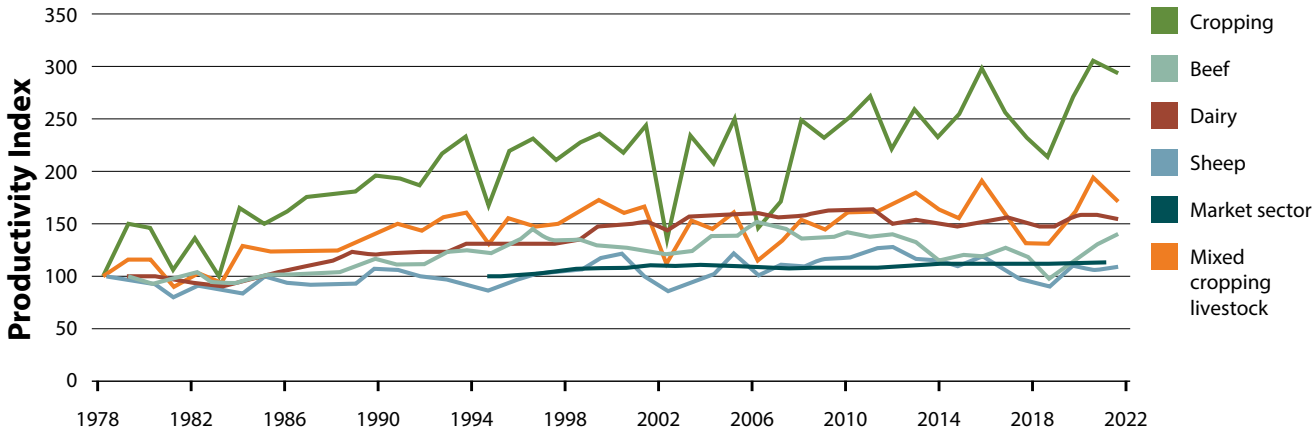
Yet, ABARES analysis shows cropping productivity still grew at 2.2 per cent annually over the past 20 years - driven by science-based practice change. While cropping is more exposed to climatic volatility than livestock, the industry is becoming more resilient in drier periods through no-till farming, improved weed control and climate adapted crop varieties.

Farmers are adopting GM crops to support moisture retention, pest management and improved crop rotation. Newer plant varieties are being developed through the use of new breeding techniques that will tolerate harsher environments and need less fertiliser. These innovations will add to the suite of technologies to drive productivity further.

Sustaining growth depends on Australia's ability to adopt practical technologies in the paddock. A science-based, efficient and predictable regulatory system for innovations like crop protection and biotechnology is essential to ensuring farmers can access the next generation of tools being developed through focused investment by the global plant science industry.

The adoption of technologies, like innovative crop protection products, has seen productivity in the Australian cropping sector triple since the late 1970s.

Productivity by farm type



ABARES, 2024

Crop Biotechnology

New Zealand outpacing Australia in gene technology reform

In a historic shift, New Zealand is on track to lift its nearly 30-year ban on gene technology beyond the laboratory. From the end of 2025, the country is set to allow research and trials involving cutting-edge gene technologies and products including next-generation crops, medicines, and vaccines to proceed.

However, if it aspires to position itself at the forefront of innovation, its track record in regulating agricultural chemicals should serve as a cautionary tale.

The landmark bill was developed and introduced in just 12 months; closely modelled on Australia's own gene technology framework and the recommendations of the Third Review of the Australian Gene Technology Scheme.

Yet, seven years on, those same recommendations remain unimplemented in Australia. It's a stark reminder that Australia, once considered a global pioneer in gene technology, now risks falling significantly behind its international peers.

The regulation of New Zealand's new Gene Technology Bill will fall to the Environmental Protection Authority (EPA) to manage potential risks to human health and the environment. However, the EPA's performance in the agricultural chemistry sector raises red flags. The authority has earned a global reputation for inefficiency, plagued by prolonged delays, opaque decision-making, and inconsistent risk assessments.

These delays have already significantly eroded the plant science industry's confidence to invest in the New Zealand market. While urgent reform is needed to remove bureaucratic bottlenecks hindering the commercialisation of agricultural technologies, shifting responsibility for gene technology regulation to the EPA risks undermining the very objectives of these reforms.

To fully seize this opportunity, New Zealand must prioritise sufficient resourcing, scientific expertise, transparent governance, and timely, evidence-driven decision-making. By learning from past regulatory shortcomings and building on Australia's gene technology experience, New Zealand can leapfrog the innovation curve.

How many Australian innovations have drifted offshore while we wait?

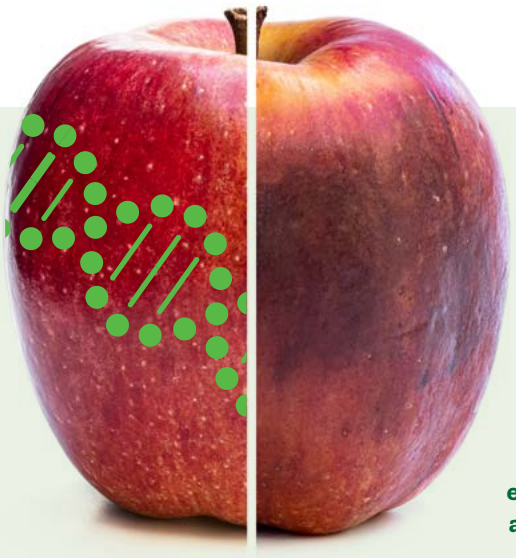
Since the Third Gene Technology Review began in July 2017, Australia has watched opportunity slip through its fingers. Three elections and more than 2,800 days later, a modern gene-editing framework remains frozen in time.

Start-ups are launching products overseas, investors are fleeing to jurisdictions with clear, science-based regulation, and universities see returns on taxpayer-funded research evaporate. While policymakers talk up the bioeconomy, innovation is stifled by regulatory paralysis.

The dream of homegrown breakthroughs like drought-tolerant canola, hypoallergenic peanuts and climate-resilient crops that could have been Australian success stories, are instead becoming imports.

How many more discoveries will slip away before we act? It's time to end the stalemate, implement the Third Review, and build a system that supports safe, efficient innovation. Without it, we're not just delaying progress - we're exporting it.

Ripe timing for gene-edited fruit and veg



Food produced using 25 million hectares of land is wasted

Gene edits that prolong shelf life and reduce bruising can slash food waste by up to 30%

On average food waste costs households around $2500 a year

Almost 50% of fruit and vegetables produced are discarded. That's the equivalent of throwing away 3.7 trillion apples

Australia is known for producing some of the best fruit and veg in the world, but we're also wasting far too much of it. Fruit is one of the top five most wasted foods in Australian homes, with billions of apples alone discarded globally each year. The reason? Often, it comes down to appearance.

Consumer research shows that up to 50 per cent of people would throw away a whole apple just because part of it has turned brown, even if it's still perfectly edible. This browning, caused by enzymes called polyphenol oxidases that react with oxygen, strongly influences how fresh we perceive food to be.

Plant scientists have been using conventional breeding and gene-editing to take fresher even further. By precisely silencing the genes producing these enzymes, they've created apple varieties that resist browning, without specialised sprays, packaging, or altering taste or nutrition.

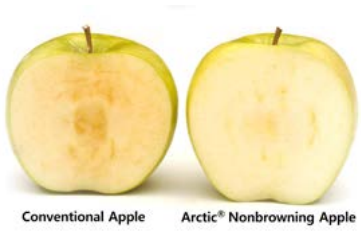
This small, precise genetic tweak can ripple through the supply chain, leading to fewer supermarket rejects, more lunchbox snacks eaten, and a dramatic cut in household food waste and spending.

In Queensland, researchers are applying similar technologies to tackle uneven ripening in tropical fruits like mangoes and bananas. By tweaking ripening hormones like ethylene, new trials are developing fruit that matures more evenly, with better colour and texture - traits essential for export markets and higher pack-out rates.

With collaboration among breeders, supply chains and regulators, new varieties like these could have a major economic impact on Australian agriculture.

Gene-editing isn't just a scientific curiosity, it's a practical solution to costly problems, helping growers reduce waste, boost profits, and deliver fresher produce that meets modern consumer expectations. Turning smart science into everyday savings.

Gene-silencing and the Artic Apple



Apple browning is caused by a reaction between oxygen and the enzymes polyphenol oxidases (PPO). CSIRO scientists discovered anti-polyphenol oxidase – a gene that when inserted into a fruit's DNA, reduces the production of PPO and stops it browning. This CRISPR technology has been commercialised in apples, bananas, potatoes and mushrooms and is now being used in new innovative ways to improve fruit and vegetable consumption and reduce waste.

Industry Stewardship

The weeds of tomorrow are sold as the garden bargains of today

Every year, Australian home gardeners unknowingly introduce plants into their backyards that become multi-million-dollar biosecurity threats. Escaped ornamentals make up more than 70 per cent of Australia's environmental weeds. Once they escape backyards, these garden 'bargains' end up costing much more.

Nurseries across the country continue to sell ornamental species, like gazania, English ivy, and mock orange, declared high-risk invasive in several states and linked to biodiversity loss and habitat decline.

Our current system relies on self-regulation, where Australians can legally buy plants banned in neighbouring states. At the same time, the cost of control measures and lost productivity in agriculture exceeds $5 billion annually.

Plant science: A first line defense

When invasive weeds spread, land managers need fast, effective tools:

- **Herbicides like glyphosate** quickly contain outbreaks
- **Resistance strategies** preserve their long-term use
- **Pre-emergent herbicides** suppress weed germination in native revegetation areas without disturbing soil
- **AI-driven tech** enables early detection and precision spraying
- **Stewardship programs** provide important application advice for all users

Without access to effective herbicides, eradication from Australia's native ecosystems will become nearly impossible.

Help stop the spread

Gardening is booming, but so are the risks. Since COVID, online seed sales have surged. Alarmingly, **75 per cent of seeds bought online from overseas contain viruses and pathogens not previously detected in Australia.**

Good gardening habits to help stop the spread:

- Buy seeds from reputable, local suppliers.
- Avoid known invasive species.
- Use only registered, safe pest control products.

Your backyard choices matter. Make them count.

Escaped gazania growing wild in WA

Gazania jumping the fence

From beloved garden ornamental to crop scourge

In the Victorian Mallee, the spread of gazania, a hardy "ornamental" from South Africa is now spreading rapidly through bushland and farmland. Sold for as little as $5.50 at nurseries, gazania is listed as "highly invasive by the Victorian Government. New research by La Trobe University shows a trend of 'jumping the fence' has also been observed in recent years, infesting grain crop production fields in low-rainfall regions of South Australia rendering farmland unproductive in competition with the drought hardy and vigorous weed.

It is not only crops in danger, but precious remnant grasslands ranging from coastal sand dunes, stream banks, wastelands, open grasslands, along roadsides and on cultivated and irrigated sites in Southern Australia and parts of Western Australia. The Invasive Species Council is calling for a national ban of the plant and many others imported into Australia.

CropLife Australia

Are you putting Stewardship...First?

CropLife members invest billions of dollars each year into the development of new products and the refinement of existing ones.

To ensure these products remain effective and viable tools into the future, CropLife Australia's StewardshipFirst program supports end users like Australian farmers, spray contractors and environmental land managers with free-to-use best-practice guides for responsible safe and effective use.

Scan for the latest info

- **Not-for-profit collection, disposal and recycling programs for farmers**
- **Science-based, best-practice advice in pesticide resistance management**
- **Pollinator protection programs**
- **Spray drift mitigation**

StewardshipFirst®

Pollinator Protection Initiative

BeeConnected®

SEED TREATMENT STEWARDSHIP

MyAgCHEMuse®

Resistance Management STRATEGIES

SprayBest

Agsafe

drumMUSTER®

ChemClear®

bagMUSTER®

For the complete stewardship suite visit **stewardshipfirst.com.au**

CropLife members' news and events

In a celebration of the best in Australian horticulture, Hort Innovation has announced the winners of the coveted Horticulture Awards for Excellence for 2025. Congratualtions to Jeremy Haw from Hussey & Co who won the Syngenta Grower of the Year which recognises outstanding achievement in sustainable farming practices, innovation in crop management, and contribution to the broader horticultural community.
syngenta.com.au

Nufarm was pleased to host NFF President David 'DJ' Jochinke and Agronomy Professor Carlos G.H. Diaz-Ambrona from the University of Madrid, Spain to show how farmers are adapting to current drought conditions in Australia. The tour was a valuable opportunity to share insights with counterparts in Spain facing similar challenges and demonstrate how the adoption of modern farm chemistry plays a pivotal role in improving agricultural resilience and productivity.
nufarm.com.au

Last year, Bayer gained approval to use the Australian Made logo on more than 60 of its crop protection products at its Pinkenba site in Queensland. During Australian Made Week in May, Bayer partnered with the Australian Made Campaign to be featured in its Australian Maker series, which highlights companies that support local employment and manufacturing.
crop.bayer.com.au

In support of the important work done by pollinators in agriculture, UPL Australia attended the 2025 Crop Pollination Association of Australia 2025 Annual General Meeting and Conference. The event brings together beekeepers, growers, researchers and industry leaders to share the latest in pollination science and crop productivity.
upl-ltd.com

FMC Australia remains committed to supporting rural and remote communities across the country. In partnership with Queensland rural retail stores, the company helped raise over $32,000 this year for the Royal Flying Doctor Service of Australia (Queensland Section). FMC has contributed a total of $230,000 to the RFDS over the past seven years.
fmccrop.com.au

Every minute counts at a traumatic incident, and those minutes are even more precious when medical services are hundreds of kilometres away in rural and regional Australia. Nutrien is proud to be partnering with CareFlight to host free Emergency Trauma Training workshops, providing the skills and confidence to deliver life-saving assistance in a traumatic situation.
nutrienagsolutions.com.au

Kalyx Australia & New Zealand has officially joined the Eurofins family. This marks an exciting new chapter combining Eurofins' global strength with Kalyx's local expertise and trusted quality services. The company is now proudly operating as Eurofins | Kalyx, and is excited about the opportunities ahead for staff, clients, and industry partners as we grow together.

While our ownership has changed, you'll still work with the same team, same systems, and same quality services — now with the added strength of a global agroscience leader behind us.
kalyx.com.au

BASF's Community Paddock initiative has returned again for its fourth consecutive year. This year, BASF has partnered with several growers and community groups across the country to showcase innovative farming practices and give back to local communities.

Throughout the growing season, BASF is providing its range of crop protection products suitable for use on the Community Paddock and to collaborate with local growers to see firsthand how crop protection products can help them gain more control and enhance their cropping programs.
basf.com.au/CommunityPaddocks

Corteva Agriscience has integrated Stoller Australia into its domestic operation as the newly branded Plant Performance segment. Uniting its crop protection and plant performance solutions under one banner will help drive further gains for growers looking to boost farm performance, build resilience and protect their crop's potential. The Plant Performance team's expertise in plant physiology and the range of innovative solutions have merged seamlessly with Corteva's mission to help farmers succeed.
corteva.com.au

On World Environment Day ADAMA highlighted Australia's High-Load project, designed to reduce packaging and transport needs without compromising on what matters in the field. Innovations like this are part of how ADAMA supports grower productivity and smarter resource use.
adama.com/australia

AgNova, was recently on site at Smart Berries learning about the product, checking the crop, and assessing berry flavour! Yield losses have reduced thanks to a combination of Fruition Nova traps and smaller netting. Fruition Nova traps are attracting and trapping fruit flies even in colder weather.
agnova.com.au

Late nights under red light? Not it's not a disco, it's R&D. Intergrain's glasshouses are lit for up to 22 hours to extend photoperiods and fast-track the development of future varieties. More light means more generations and faster gains.
intergrain.com.au

CropLife Australia

Representing the best of the plant science industry

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.

Support the companies that support Aussie farmers with world-leading innovation & industry stewardship.

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

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CropLife Australia