

Best-practice use of crops on the GMO Register

A CropLife Australia Stewardship First Guide





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About this strategy

This document only relates to older genetically modified (GM) crops unsupported by commercial licencing provisions that have been approved for cultivation on the Office of the Gene Technology Regulator (OGTR) administered GMO Register. A complete list of these can be viewed on the on the OGTR website - '<https://www.ogtr.gov.au/what-weve-approved/gmo-register>'.

CropLife Australia acknowledges that stewardship of all OGTR licensed GMO products have commonality. This document is not intended to replace or supersede directions contained in licences issued by the OGTR or agreements with GM technology owners that support commercially licenced products.

This document only provides basic guidance and information to ensure minimum effective stewardship, preserve effective crop protection and facilitate trade. It does not replace specific best-practice. It is important to work with reputable seed suppliers in developing a comprehensive cultivation plan.

Who is this document for?

This best-practice guide has been developed for farmers and agricultural practitioners who use or manage GM crops that are no longer supported by a commercial licence, such as those that may be added to the GMO Register.

For farmers experienced with the cultivation of biotech crops or those just beginning to explore the possibilities and benefits of these innovations, this guide provides practical insights, stewardship considerations, and helpful information to make informed decisions, implement minimum responsible stewardship of GM crops for farming operations. However, this guide is only one piece of an effective stewardship program. It is critical that seed be purchased from reputable suppliers that have effective stewardship programs. Moreover, growers should consider that crops included on the GMO Register will likely represent older varieties and therefore they may not perform as well as modern products.

About 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, formulators and suppliers of organic and synthetic chemical and biological crop protection products (pesticides) and crop biotechnology innovations. 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 achieving global food and nutritional security by supporting the sustainable increased production of food, feed and fibre.

CropLife Australia member companies contribute millions of dollars every year to product stewardship activities, which helps ensure their products are sustainably managed for the benefit of users, consumers and the environment.



SUMITOMO CHEMICAL



Foreword

A whole-of-lifecycle approach to crop biotechnology stewardship is crucial to maximising the benefits while ensuring the safe and effective long-term use of biotechnology-derived plants and plant products. These approaches includes research and gene discovery, to their use in crop production and right through to the end of their commercial life.

CropLife Australia is a proud associate member of the Excellence Through Stewardship program, a global industry coordinated organisation that promotes the universal adoption of stewardship programs and quality management systems for the full lifecycle of agricultural biotechnology products.

This document is part of CropLife Australia's StewardshipFirst suite of best-practice resources, initiatives and programs that support a whole-of-lifecycle approach to the plant science industry's stewardship of its products.

The StewardshipFirst suite includes CropLife's mandatory Members' Code of Conduct, its comprehensive Fungicide, Insecticide and Herbicide Resistance Management Strategies, best-practice product application guides, the Pollinator Protection Initiative and collection and recycling programs drumMUSTER®, bagMUSTER® and ChemClear®, which are run by CropLife's stewardship organisation, Agsafe.

Matthew Cossey
Chief Executive Officer
CropLife Australia



Stewardship for agricultural biotechnology

STEWARDSHIP

'Stewardship' is the responsible planning and utilisation of resources.

The CropLife Members' Code of Conduct guarantees member activities embody the principles of stewardship for the responsible and ethical management of industry products.

The main aims of agricultural biotechnology stewardship are to:

- **maximise the benefits of use** - for all stakeholders, including farmers, the value chain and consumers
- **support access** - to beneficial and high-quality products that maintain consumer and stakeholder confidence
- **minimise and manage potential adverse impacts** - if any, to human and animal health and the environment.

Stewardship is critical at all stages of the supply chain for preserving the long-term prosperity of Australian agriculture. It is central to ensuring global food security and sustainable development.

CropLife's stewardship guidelines are designed to support farmers in their obligations and ensure users benefit fully from their investment by:

- maximising cost-effective pest, weed and disease control
- enhancing compliance with legislative and regulatory requirements
- demonstrating due diligence
- increasing the life-span of pest, weed and disease management products
- enhancing positive public perceptions with the broader community.





GM canola has been grown commercially in Australia since 2008. In 2023 GM canola covered almost one million hectares of Australian farmland.

The GMO register

The GMO Register is a list of GM innovations that can be safely used by anyone without a licence. The Gene Technology Regulator may place specific innovations on the GMO Register if confident of their safety and after public consultation.

Dealings with a GMO may be entered on the GMO Register when:

- they have been previously assessed and licensed by the OGTR, and
- the Gene Technology Regulator (GTR) is satisfied listed dealings can be safely undertaken by anyone without the need for oversight by the original licence holder.

A GM crop moved to the GMO Register remains a GMO. As the crop remains the same despite inclusion on the GMO Register, consistent stewardship measures are required to maximise crop value, delay resistance to crop protection products and ensure co-existence with non-GM crops. GMO Register listed innovations have unique identifiers that may be used for trade purposes.

Products on the GMO Register may have OGTR-mandated conditions for cultivation and / or use, which should be confirmed with your seed supplier and the OGTR.

It is recommended that growers purchase seed only from reputable suppliers and continue to follow best practices for the cultivation and use of all GM products.

The OGTR may be contacted via email (ogtr@health.gov.au) or phone (1800 181 030) if any concerns arise regarding the cultivation of GM crops including those on the GMO Register. However, it is important to note that as the regulator, the OGTR is not responsible for performance of a given crop. In such cases, a grower should contact their seed supplier.

If you are unsure if a crop or variety you are growing is included on the GMO Register, please contact your supplier.

Crops on the GMO Register are also likely to be older varieties. As newer varieties typically offer significant advantages, it is important to note that these varieties may not perform as well as newer varieties.

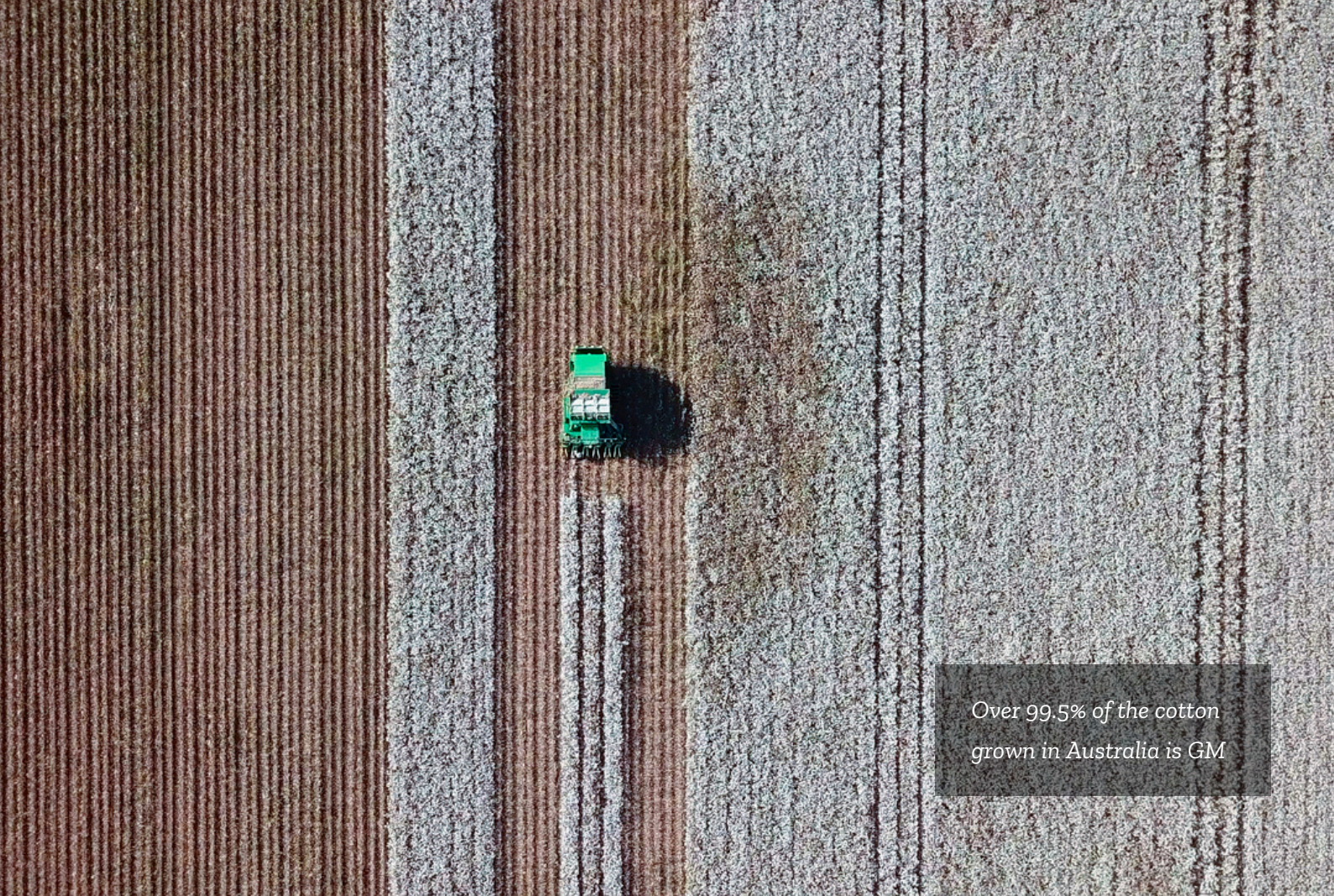
Commercial GM licensing

Complementing an OGTR-issued GMO licence, GM crops in Australia are supported by stewardship programs incorporated into commercial licensing.

The longevity and effectiveness of specific GM traits (e.g. herbicide tolerance, insect protection), have been ensured through well-established stewardship and cultivation guidelines developed by seed suppliers and/or trait owners. These provisions are typically the core component of a commercial licence.

Growers who purchase and plant licensed GM varieties benefit from following conditions of use that include specific cultivation, stewardship, and commercial obligations outlined by the seed supplier and/or trait owner.

These guidelines ensure that all obligations of relevant OGTR licences are met, promoting sustainable and responsible agricultural practices. These varieties also include the latest innovations in plant breeding.



Over 99.5% of the cotton grown in Australia is GM

StewardshipFirst[®]

Developed by industry for industry

CropLife Australia and its members are committed to the responsible use of plant science industry products and innovations throughout their whole lifecycle.

StewardshipFirst is CropLife Australia's suite of world-leading product stewardship initiatives, programs, and management guides. CropLife's free-to-use programs, apps and resources support farmers, agronomists, environmental land managers and others in the responsible and sustainable use of these essential plant science innovations to ensure they remain effective for as long as possible.



stewardshipfirst.com.au

Crop management planning

Crop management details on-farm strategies that help ensure supply chain integrity and sustainable Australian agricultural production.

Core recommendations for effective management include:

- purchase seed from reputable producers experienced with best-practice
- communicate early and regularly with owners of neighbouring properties
- ensure appropriate spacing between GM and non-GM crops depending on the crop cultivated
- maintain appropriate management of weeds and resistance.



Effective communication and understanding between neighbours are critical for effective crop management. When planning to grow a GM crop, engage with neighbours early in the process. This should include explaining which crops will be grown and, when possible, where and when they will be sown.

Tips to growing GM crops responsibly

- 1 Familiarise yourself with local, national, and international regulations related to the cultivation, labelling, handling and trade of GM crops.
- 2 Choose varieties that are suitable for your specific growth conditions and agricultural practices.
- 3 Select suppliers with a record of providing reliable products to ensure high quality seed and crop protection products.
- 4 Work with qualified professionals, when needed, to establish appropriate plans for cultivation.
- 5 Engage with your neighbours and all members of your crop supply chain about the crop grown.
- 6 As part of your integrated pest management plan, develop and employ an effective weed and pest management plan that considers herbicide tolerance or insecticidal traits of any GM crops.
- 7 Establish and follow a plan for resistance management. This needs to include a management strategy for both herbicide and insecticide resistance.
- 8 Ensure GM crops are planted in way that adheres to the resistance management plan and prevents co-mingling of GM and non-GM crops.

Coexistence of crops

Best-practice coexistence is cultivation of multiple crops with distinct characteristics or markets for sale without co-mingling throughout growing, harvesting or handling. For example, growing both GM and non-GM varieties of the same crop on the same property. Coexistence prevents compromising the economic value of both crop types.

Varietal segregation is a long-standing practice in Australian bulk grain transport. Years of experience have demonstrated that crop coexistence, using a wide range of production methods, is not a problem, provided guidelines are carefully followed. There is nothing unique about GM crops that makes them any more difficult to manage than their conventional equivalents.

Efficiently segregating GM and non-GM products, if desired by the grower or end market, is no different to any other varietal segregation and has been business as usual for the industry for over 20 years.

GM and non-GM crop coexistence can be managed at every step of the production and supply chain. At the farm level, when working with crops that are licensed with the supplier, growers follow guidelines set by individual technology providers and in accordance with regulatory requirements. Crop management plans contain strategies that are implemented on-farm to manage the integrity of supply chains and the sustainability of agricultural production more broadly. The same guidelines can and should be followed when working with crops that are included on the GMO Register.

Coexistence management plan

To manage any impacts of outcrossing, and inter-property dispersal, appropriate spacing is required. However, spacing is specific to the circumstances of each crop grown.

Spacing will be determined as part of your crop management plan and in consultation with your seed supplier and/or trait owner. For example, the minimum of five meters is recommended between GM and non-GM canola crops.

Although crops like canola have limited pollen dispersal, a buffer zone between crops helps to prevent cross-contamination. Moreover, harvests of any GM crop should be identified for trucking contractors and at delivery points. This ensures appropriate segregation.

As mentioned earlier, a GM crop that has been moved to the GMO Register remains a GMO and must be handled as such for the purpose of sale.



The CSIRO developed GM safflower contains over 92% oleic acid. This makes it a prime candidate as a feedstock for biofuels.

Weed and crop volunteer management plan

Many crops are highly susceptible to weed competition during the early stages of development. Therefore, early weed control is essential to maximise yield. In addition, weeds present at harvest can cause excessive weed seed contamination reducing harvest quality. Uncontrolled weeds will also add to the seed bank, creating an ongoing problem.

Volunteer crops can compete with desired crops for resources, reducing overall yields, or may contaminate harvests, lowering overall quality. Moreover, GM volunteers in non-GM varieties of the same crop can reduce purity and impact sale. Additionally, herbicide resistant volunteers can complicate weed management, necessitating alternative control methods.

Growers should develop and follow a weed management plan, taking into consideration the weeds present and their herbicide resistance status as well as their farming system and crop rotation. Diversifying weed management practices and having a long-term, integrated approach will help keep herbicides effective.

Always follow the label of crop protection products, use personal protective equipment according to the label and only use registered herbicides.



Resistance management plan

The build-up of insect, fungi and weed resistance to agricultural chemicals is a reality of farming. No agricultural chemical is immune. However, even though this is a significant issue, it is also manageable. Adopting a Resistance Management Plan (RMP) and following best practices can help reduce the likelihood of resistant weed, insect and fungi populations developing. This prolongs the effective life of these technologies for Australian farmers.

RMPs are available from seed providers. [CropLife Australia's Resistance Management Strategies](#) for fungicides, herbicides and insecticides, offer best-practice strategies for product users to ensure important crop protection products remain viable and effective tools into the future.

It is recommended that growers assess their paddocks' resistance risk profile before planting.

Growers should strictly adhere to the maximum application rate and frequency of herbicides, insecticides and fungicides that can be used within a growing season, and escapees should be managed.

Always check labels and only use registered crop protection products.

Insecticidal GM crops, such as those that rely on *Bacillus thuringiensis* (Bt) proteins, also require consideration when developing an RMP. An appropriate plan should be provided by your seed supplier and/or trait owner. To ensure the long-term efficacy of GM insecticidal technologies, several elements may need to be included in your resistance management plan. This can include restrictions on planting times, establishment of refuge crops, control of volunteers, practices to ensure pupae destruction, and limitations on spraying with conventional insecticides.



CropLife Australia Resistance Management Strategies can be found at croplife.org.au/resistance

Links to more information

Useful crop biotechnology resources:

- The Official Australian Reference Guide to Agricultural Biotechnology and GM Crops (4th ed)
abca.com.au

Crop management plans are available from seed providers. Other resources of interest include:

- GRDC GrowNotes™
<https://grdc.com.au/resources-and-publications/grownotes/crop-agronomy>
- NSW DPI Canola growth and development
https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0004/516181/Procrop-canola-growth-and-development.pdf
- NSW DPI Weed control in winter crops guide
<https://www.dpi.nsw.gov.au/agriculture/broadacre-crops/guides/publications/weed-control-winter-crops>

Disclaimer

This strategy is a guide only and does not endorse particular products, groups of products or cultural methods in terms of their performance. Always follow the product label for specific use instructions. While all effort has been taken with the information supplied in this document, no responsibility, actual or implied, is taken for the day-to-day accuracy of product or active constituent specific information. Readers should check with the Australian regulator's — the Office of the Gene Technology Regulator (OGTR) — product database for contemporary information on products and actives. The OGTR's database can be accessed at www.ogtr.gov.au. The information given in this strategy is provided in good faith and without any liability for loss or damage suffered as a result of its application and use. Advice given in this strategy is valid as at August 2024.

Weed and herbicide resistance management plans are available from seed providers. Other useful resources include:

- CropLife Australia resistance management strategies
croplife.org.au/resources/programs/resistance-management-strategies/
- Weedsmart
weedsmart.org.au
- WA DPIRD Chemical weed control in canola
agric.wa.gov.au/sites/gateway/files/Weed%20Control%20in%20Canola.pdf
- The Australian Oilseeds Federation – technical support/information page
australianoilseeds.com/Technical_Info



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