GRAIN MARKET ACCESS AND CHEMICAL RESIDUES

FACT SHEET

GRDC
GRAINS RESEARCH & DEVELOPMENT CORPORATION

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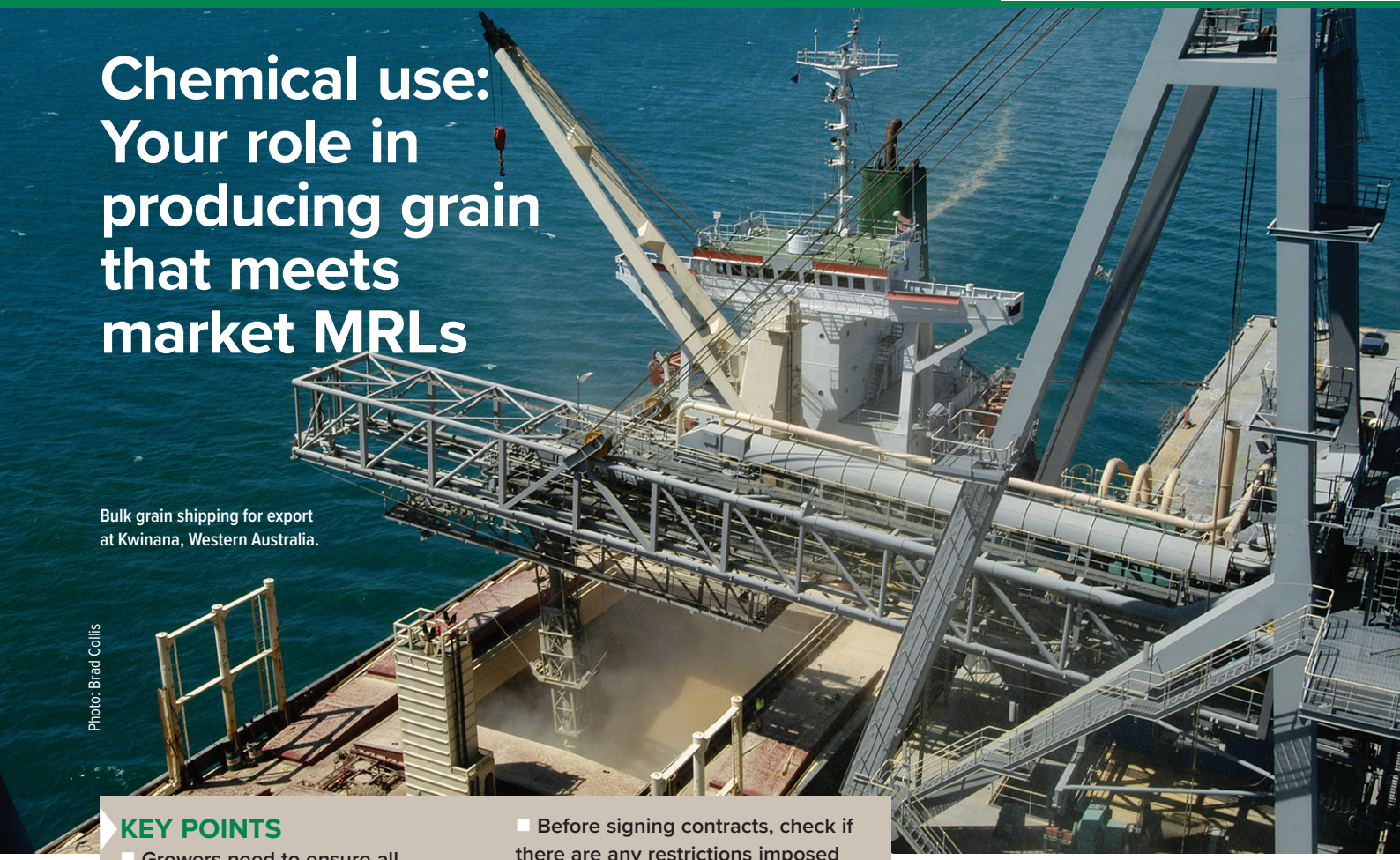
Chemical use: Your role in producing grain that meets market MRLs



Bulk grain shipping for export at Kwinana, Western Australia.

Photo: Brad Collis

KEY POINTS

- Growers need to ensure all in-crop and post-harvest chemical applications adhere to the Grain Producers Australia *Growing Australian Grain* and the Australian Grain Industry Code of Practice
- Growers must only use registered or permitted products for each crop commodity and adhere to all label directions, including application rates and withholding periods
- Compliance with an Australian MRL does not guarantee the grain will meet an importing country's MRL (which may be nil)
- If industry has advised there are restrictions on the use of a chemical for a particular market, talk to your marketer – where possible – to determine if you should use that chemical
- Before signing contracts, check if there are any restrictions imposed on the type of chemical(s) that are permitted for use on the crop commodity, as conditions of the contract
- Trucks and augers that have been used to transport treated seed or fertiliser can be a source of potential contamination of grain subsequently handled. Pay particular attention to storage and transport hygiene
- Grain samples are collected from all bulk shipments, container consignments and a range of domestic supplies for chemical residue testing to ensure grain is within the MRL
- A single MRL violation in one country can lead to punitive measures on all Australian grain exported to that country and damage Australia's reputation internationally

Violations of maximum residue limits (MRLs) affect the marketability of Australian grain destined for domestic and export markets. By observing several precautions, growers can ensure that grain coming off their farm is compliant

Grain is tested for chemical residues at various locations along the supply chain. Testing is based on a range of factors, including the risk of residues being present and the destination market MRLs. If market MRLs are lower than those for Australia, increased testing will often occur.

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While residue testing over the past decade has indicated a very high level of compliance with Australian MRLs – on average 99.8 per cent of bulk shipments – violations of Australian and importing countries' MRLs have been detected.

These violations have several causes, including contamination of grain through poor hygiene, inappropriate chemical use and failure to understand the market MRLs.

Incorrect chemical use in-crop or post-harvest

Use of a chemical not registered or permitted for that crop commodity, at any stage, is illegal and will result in an increased risk of MRL violations. This includes not following all label directions, using higher rates of application or not following timing of application directions as directed on the label. Withholding periods following chemical application must be followed.

Poor farm storage and transport hygiene

While most growers understand the importance of grain storage hygiene, trucks and augers used to transport fungicide-treated seed or fertiliser are often overlooked as a source of potential contamination for grain subsequently transported.

Importing countries' MRLs

Australian MRLs are set based on the application of the pesticide under Australian use patterns (label rates) and Australian dietary intake. Where there is a lower or nil MRL overseas, even following label directions could cause a MRL violation in the overseas country.

Growers must follow all label directions and provide advice on what chemicals they applied, if asked, via a Commodity Vendor Declaration (CVD). This allows grain marketers and exporters to understand what chemical residues may be expected, to determine the suitability of that grain for supplying to a market.

Traceback

If a sample is found to contain a chemical residue above the Australian MRL, a traceback investigation is undertaken to determine the cause. The findings are reported to the Australian Government National Residue Survey. This traceback investigation may occur on grain samples taken and analysed from grain delivered to country receival sites. Where appropriate, the information is forwarded to industry and government authorities for action.

This feedback can highlight potential problems such as inappropriate chemical use. State departments of agriculture will then work with industry bodies to educate growers about appropriate chemical use practices.

It is important to note that all grain sold by growers must comply with Australian regulations.

What happens if an MRL is exceeded at a foreign port?

Where an importing country detects a residue violation in a shipment, consequences vary.

- The grain may be embargoed or rejected outright.
- The exporter may face a price reduction, resulting in lower prices for grain to that market.
- All future cargoes of all exports from Australia to that market may face increased scrutiny via sampling and testing for a lengthy period.
- If repeated violations are detected, Australian shipments may be banned until industry can prove its credentials of meeting market requirements.

The costs incurred from these violations, and from this increased sampling and testing activity, affect the price offered to growers in the future, as costs may be passed on from the exporter to growers. In the worst-case scenario, returning the violative consignment to Australia, or seeking an alternative market, incurs significant freight charges.

In addition to the material costs to the parties involved, the reputation of Australian grain is significantly damaged. It is important to maintain Australia's current reputation as a reliable exporter of clean grain to ensure ongoing international market access.

Maintaining grain hygiene

There are several ways in which growers can ensure that their grain complies with MRLs.

1 Use only chemical products pre-sowing, in-crop or during grain storage that are registered or permitted for each crop commodity. Comply with all label directions, including application rates and withholding periods.

Storage silos.

Photo: Sophie Clayton

2 Maintain and clean storage sites and equipment, in particular silos, augers, trucks, etc. that have held treated fertiliser or other products such as pickled grain. Where possible, use different storages and augers to handle and store these products.

3 Ensure any contractors involved in the transportation of your grain comply with the industry or buyer – see 'Useful resources'.

4 As required under legislation, keep accurate records of all chemical applications (including treatment of fertilisers), chemical storage and cleaning activities on storages, trucks and handling equipment. When requested, provide accurate information on a Commodity Vendor Declaration (CVD) form based only on those records.

5 If possible, talk to your marketer to determine if there are any restrictions on the type of chemicals that are permitted on the crop. Importing countries may have lower MRLs than Australia. This is extremely important where growers are signing contracts (including forward contracts). The contract may state that the grower is not to exceed MRLs of the importing country. In some cases, this means you will be unable to use particular pesticides on that crop.

Cleaning

Cleaning of transport, grain handling and storage equipment should be done to manage hygiene issues. Always wear appropriate personal protective equipment (PPE). The goal of cleaning is to not only remove foreign material, but also to remove any residual dust or chemicals to acceptable levels.

There are three methods of doing so.

- Sweeping or using compressed air, followed by washing with water or a suitable food-grade cleaning solution, is the best option to safeguard grain transport and storage equipment.
- Compressed air by itself may also be effective.
- Sweeping out with a broom is acceptable but is unlikely to be as thorough.

Unless appropriate washing methods are used, the above methods will not adequately remove residues of fungicide-treated fertiliser.

If using contractors for grain transport, ensure they provide a declaration of cleanliness. The Grain Transport Code of Practice requires that the carrier retain records of cleaning and prior loads to determine the risk of chemicals contaminating the truck.

See 'Useful resources' for more truck cleaning information.

USEFUL RESOURCES

Australia Grain Industry – *Code of Practice* graintrade.org.au/grain-industry-code-practice

Grain Producers Australia – *Growing Australian Grain*
grainproducers.com.au/australian-grains-guide

Grain Trade Australia – *Technical Guideline Document No. 10 – Truck Cleaning* – May 2018
graintrade.org.au/sites/default/files/file/Codes/Grain%20Industry%20Code%20of%20Practice/Technical%20Guidance%20Documents/TGD%20No_10%20-%20Truck%20Cleaning_May2018.pdf

Grain Trade Australia – *Grain Commodity Truck Cleanliness and Prior Load Declaration*
graintrade.org.au/sites/default/files/Grain%20Commodity%20truck%20cleanliness%20and%20prior%20load%20declaration%20FORM.pdf

National Working Party on Grain Protection – Chemical Regulation and Market MRLs
graintrade.org.au/nwpgp

Grain Trade Australia – *Grain Industry Transport Code of Practice 2021*
graintrade.org.au/sites/default/files/Transport%20Code%20Of%20Practice.pdf

Department of Agriculture, Fisheries and Forestry – National Residue Survey
agriculture.gov.au/ag-farm-food/food/nrs

MRL Databases agriculture.gov.au/agriculture-land/farm-food-drought/food/nrs/databases

National Residue Survey Results and Publications
agriculture.gov.au/ag-farm-food/food/nrs/nrs-results-publications

MORE INFORMATION

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