

GRAIN MARKET ACCESS AND CHEMICAL RESIDUES FACT SHEET



GRDC
GRAINS RESEARCH
& DEVELOPMENT
CORPORATION

NATIONAL
JUNE 2020

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

Violations of Maximum Residue Limits (MRLs) affect the marketability of Australian domestic and export grain. By observing several precautions growers can ensure that grain coming off their farm is compliant.

KEY POINTS

- Growers need to ensure both pre-harvest and post-harvest chemical applications adhere to the Australian Grain Industry On-farm Stewardship Guide and the Australian Grain Industry Code of Practice.
- Growers should only use registered products 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).
- Know your grain destination. When signing contracts, check the importing countries' MRLs to determine what chemicals are permitted on that crop.
- Trucks or augers that have been used to transport treated seed or fertiliser can be a source of potential contamination. Pay particular attention to storage and transport hygiene.
- Grain samples are collected from from all bulk shipments, container consignments and a range of domestic supplies for chemical residues to ensure it is within MRLs.
- 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.
- Consequences may include costs awarded against the exporter and/or grower resulting in a lower price per tonne paid for the grain. If repeated violations are detected with one chemical, that chemical may be banned.

Inadequate cleaning of transport trucks can result in chemicals being transferred to clean grain and MRLs being exceeded.

Based on a range of factors including the risk of residues being present and whether destined for either the domestic or export market, grain is tested for chemical residues.

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

These violations have several causes, including poor hygiene, inappropriate chemical use and failure to understand the importing countries' MRLs.

Poor farm 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.

Inappropriate chemical use

Not following label directions is illegal and can result in MRL violations. This includes using higher rates or not following timing of application directions as directed on the label. Withholding periods must be followed.

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, following label directions could cause a MRL violation in the overseas country.

Traceback

If a sample is found to contain a chemical residue above the prescribed Australian MRL, a traceback investigation is undertaken to determine the cause and the findings are reported to the National Residue Survey office. This traceback investigation is carried out on grain samples taken and analysed from grain delivered to receival sites around the country. 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 will 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.

PHOTO: PAUL JONES



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

Where an importing country detects a residue violation in a shipment, the grain may be embargoed or rejected outright. All future cargoes from Australia may face increased scrutiny via sampling and testing for a lengthy period.

The costs incurred from this from this increased sampling and testing activity are then passed on to the exporter and in some cases the importer in the destination country may also bear some of the cost.

If contamination is detected in a single container, the grain will be embargoed at the (overseas) port, incurring costs in the form of demurrage and damages. These costs can be in the vicinity of \$40,000 to \$50,000. The exporter may also be required to organise the retrieval of that container and return it to the country of origin.

In both instances, the Australian exporter may then endeavour to recover costs from the handler or from the individual grower.

In addition to the material costs to the

parties involved, it is important to maintain Australia's current reputation as a reliable exporter to 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 for that commodity. Comply with all label directions including application rates and withholding periods.
- 2** Maintain and clean storage sites and equipment, in particular silos, augers, trucks, etc. that have held treated fertiliser or alternate products such as pickled grain. Where possible, use different storages and augers to handle and store these products – see below.
- 3** Ensure any contractors involved in the transportation of your grain comply with the Grain

Carriers' or Australian Grain Industry Code of Practice – see Useful Resources.

- 4** 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 which market your grain is going into. 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

Always wear appropriate personal protective equipment (PPE). The goal of cleaning is to remove any residual dust or chemicals, to acceptable levels, and there are three methods of doing so.

- Sweeping or using compressed air followed by washing is the best option to safeguard grain transport and storage equipment.
- Compressed air by itself is also 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 Carriers' Code of Practice requires that the carrier retain records of cleaning and prior loads to determine the risk of chemicals contaminating the truck.

USEFUL RESOURCES

Truck Cleaning - May 2018

https://www.graintrade.org.au/sites/default/files/GTA_Technical_Guidelines/TGD%20No.10%20-%20Truck%20Cleaning_May2018.pdf

Grain Trade Australia

Food Safety; NWPGP; NRS; Codex

Department of Agriculture, Water and the Environment National Residue Survey

<https://www.agriculture.gov.au/ag-farm-food/food/nrs>

MRL Databases

<https://www.agriculture.gov.au/ag-farm-food/nr/databases>

National Residue Survey Results and Publications

<https://www.agriculture.gov.au/ag-farm-food/food/nrs/nrs-results-publications>

Contact - National Residue Survey

<https://www.agriculture.gov.au/ag-farm-food/food/nrs/contact>

MORE INFORMATION

Gerard McMullen

Chair, National Working Party on Grain Protection, 0419 156 065
gerardmcmullen@optusnet.com.au

GRDC RESEARCH CODE

MCM00003 (9167818)

Acknowledgements: Gerard McMullen

DISCLAIMER

Any recommendations, suggestions or opinions contained in this publication do not necessarily represent the policy or views of the Grains Research and Development Corporation. No person should act on the basis of the contents of this publication without first obtaining specific, independent, professional advice. The Corporation and contributors to this Fact Sheet may identify products by proprietary or trade names to help readers identify particular types of products. We do not endorse or recommend the products of any manufacturer referred to. Other products may perform as well as or better than those specifically referred to. GRDC will not be liable for any loss, damage, cost or expense incurred or arising by reason of any person using or relying on the information in this publication.