



FACTSHEET 1: Maximum Residue Limits

Agricultural chemicals leave ‘residues’ in fruit

A maximum residue limit (MRL) is the highest amount of chemical residue legally allowed in food produced and sold in Australia.

MRLs are expressed in milligrams per kilogram (mg/kg). That is equal to parts per million (ppm).

Enforcement agencies like Agriculture Victoria use MRLs to ensure agricultural chemicals are used as per label instructions. In other words, MRLs are based on good agricultural practice in using chemicals. Importantly, they are set well below levels that pose health and safety risks.

APVMA

The Australian Pesticide and Veterinary Medicine Authority (APVMA) determines MRLs for Australian-grown produce and regularly reviews them to account for new chemicals. It relies on scientific data like:

- how much chemical was used in controlling pests and/or diseases
- a pesticide’s chemical characteristics
- residue field tests
- dietary exposure evaluations.

FSANZ

Food Standards Australia New Zealand (FSANZ) publishes a list of MRLs of chemical residue limits for food sold in Australia, whether produced domestically or imported. FSANZ’s list includes MRLs for chemicals registered or permitted for use by Australian growers as well as imported foods.

EXPORT MARKETS

Every country has its own MRL list, which can differ greatly to Australia’s. The big risk for Australian summerfruit exporters is exceeding another export market’s MRL (even if it is less than APVMA’s) and being rejected, resulting in obvious, major economic impacts. For example, in March 2021, Taiwan stopped US and Chilean blueberries, apples and kiwifruit because pesticide residues exceeded its MRLs.



CHEMICAL SELECTION

Overseas summerfruit MRLs are a good guide for picking which chemicals to use to control pest and diseases. Below we have listed the chemicals Victoria uses for Carpophilus beetle and Queensland fruit fly as well as the MRLs for some overseas markets for nectarines.

Suppose you are exporting to China and their test for bifenthrin finds Talstar® residue in your fruit (listed below as “Not Set”), it will likely be rejected. However, MRLs for the other three pesticides are higher. The MRL for Astound® in China is higher than Australia’s but the UAE’s is a lot lower.

Product / Chemical	Australia	China	Hong Kong	Singapore	Canada	UAE
Astound® (cypermethrin)	1	2	2	1	0.1	0.01
Talstar® (bifenthrin)	1	Not Set	1	1	0.1	0.01
Samurai® (clothianidin)	3	0.2	0.2	0.2	0.8	0.2
Lannate® (methomyl)	1	0.2	0.2	5	0.1	0.2



Further Information

Get more on MRLs here:

- Australian MRLs at apvma.gov.au
- www.fao.org
- www.bryantchristie.com (a subscription service)
- www.mpi.govt.nz (links to various countries' MRLs)

The members' section of summerfruit.com.au lists the MRLs of most export destinations plus the right pests and disease chemicals to meet differing MRL requirements.

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