

Minimising Chemical Residues

Main points

1. Good management practices can reduce the risk of residue violations
2. Off-label use may be permitted in Victoria if specific guidelines are followed
3. Use correct sampling procedures for representative residue testing
4. Observing the WHP doesn't always mean the MRL will be met when using chemicals off-label

Good Management Practices

can reduce risk of residue violations:

- If using chemicals 'off-label', it is important to analyse for residues {see *sampling procedure overleaf*}
- Observe and record interval between sprays
- Maintain a good decontamination program for spray equipment
- Keep comprehensive records of chemical use



Off-label use of chemicals

Off-label use is permitted in Victoria if the chemical intended for use is:

- Not prohibited or restricted** (Schedule 7 poisons must not be used off-label)
- Applied at or lower than the label rate
- Utilised at or less frequently than the intervals stated on the label
- Not contrary to a label restriction
- Used within product category



The responsibility for off-label use rests with the user

** Restricted horticultural chemicals include: the dangerous poisons (S7), ester formulations (MCPA, 2,4-D, 2,4-DB, Triclopyr), metham sodium, and atrazine.

Withholding Period (WHP)

Following the Withholding Period (WHP) advice ensures use will meet the acceptable Maximum Residue Limits (MRL) in Australia, but this may not be the case for other international markets where MRLs are different.

- The WHP is the time (days or weeks) stated on the label, between application of the chemical product and the harvest of the crop
- It is a legal requirement to observe the WHP in Victoria
- If the crop does not appear on the product label, there will be no WHP stated for that crop. In this instance, time between application and harvest should be based on the WHP for a similar crop with an extended WHP allowing for a margin of safety
- Growers will then need to confirm that residue levels are acceptable by sending samples to a laboratory for analysis for that particular chemical

Maximum Residue Limits (MRL)

- MRLs are established by the Australian Pesticide and Veterinary Medicines Authority (APVMA) and are then adopted by Food Standards Australia New Zealand (FSANZ)
- The FSANZ MRLs are observed under Victorian legislation, including the supermarkets
- There is often a delay before adoption of MRLs by FSANZ

If there is no MRL in place, any detection of an agricultural chemical above zero constitutes a residue violation.

Minor Use Permits

“Minor use” is a term applied to the use of a pesticide where the use would not provide sufficient return to the chemical manufacturer to meet the costs of registering the product for that particular use.

The process of permit issue is:

- Contact Vegetable Industry Development Officer, Patrick Ulloa, ph 03 9738 0574 (to discuss costs involved)
- Patrick progresses application through Crop Protection Approvals (CPA) ph 03 8371 0001
- CPA generates the data in cooperation with growers and sends to APVMA, phone 02 6271 6347
- APVMA issues permit after considering residues, MRLs, human health, efficacy, crop safety and environmental impacts

Use correct sampling procedure for representative residue testing

- Take samples from across the treated area
- Collect a 2 kilogram sample which represents the produce you will be selling
- Package in a large, clean polyethylene bag
- Clearly identify the sample and keep cool but not frozen
- Keep a record of treatment and harvest details
- Forward to a NATA accredited laboratory after discussing costs and submission details



The following table provides some recurrent causes of residue violations. All are easy to manage to prevent chemical residues from occurring. The Agriculture note “Feeding crop waste to livestock and the risk of chemical residues” provides valuable information to help manage the risk of chemical residue when feeding crop wastes to animals.

Issue	How can residues occur?	Risk can be managed by
Off label use	<ul style="list-style-type: none"> • without a WHP from the product label, it is difficult to determine a safe withholding margin • estimation of application rates and frequencies requires extrapolation from other crops. • off label use means there will generally be no MRLs 	<ul style="list-style-type: none"> • conduct analysis of crops at harvest to determine residue levels and confirm safe application rates and frequencies • consider the value of a Minor Use Permit
Off-target movement of chemicals	<ul style="list-style-type: none"> • from a neighbouring property • from an adjacent crop or paddock on the same property • leakage from application equipment 	<ul style="list-style-type: none"> • using trained, experienced operators • using appropriate, well-maintained equipment • applying only in appropriate weather conditions • providing comprehensive and accurate information to staff and contractors • planting vegetative barriers between crops & farms
Equipment contamination	<ul style="list-style-type: none"> • failing to decontaminate equipment between spray applications • chemicals will remain in equipment and cause carry-over problems for subsequent use if thorough decontamination is not practiced 	<ul style="list-style-type: none"> • cleaning filters and nozzles as well as the spray tank and lines • using decontamination procedures as listed on the product label • vegetable storage bins cleaned regularly

For more information please contact your local Veg Cheque facilitator.

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Chemical Advice

Department of Primary Industries

- Chemical Information Service 0392109379
- Regional Chemical Standards Officers

GIPPSLAND	Jim Stranger	03 51722174
SOUTH WEST	Les Toohey	03 55730715
NORTH WEST	Alan Roberts	03 54304416
NORTH EAST	David Stewart	03 57611532
- Chemical Standards website www.nre.vic.gov.au

Australian Pesticides and Veterinary Medicines Authority

- Telephone 0262725158
- Website www.apvma.gov.au

Crop Protection Approvals

- Telephone 038371 0001
- Website www.cpald.com.au



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