

**Generation of
Pesticide Residue
Data for Vegetable
Minor-Use Permit
Applications-Serve-Ag**

Ian McLeod
Peracto Pty Ltd

Project Number: VG05097

VG05097

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FINAL REPORT

Generation of pesticides residues in vegetables to support minor-use permits

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Media Summary

In Australia, before an agrochemical product can be sold or used, the Australian Pesticides and Veterinary Medicines Authority (APVMA) must first register it. In order for a manufacturer to register a product they are required to submit a comprehensive data package to the APVMA. The costs for generating and collating such data are high and unfortunately many horticultural crops are too small individually for agrochemical manufacturers to bear the high cost of registering products for use. As a result, horticulturalists are often placed in situations where they risk severe crop losses from insects, weeds and diseases. On the other hand, they risk buyers rejecting their produce and other penalties if they are detected using products that are not registered.

The need to gain minor-use permits and new registrations has come about due to loss of some agrochemicals and/or uses due to chemical reviews and product rationalisation. Horticultural produce must meet minimum standards relating to quality, safety and consumer expectation. Quality Assurance programs, dealing with the whole production process including agrochemical use, residues, and withholding periods, demand that growers only exercise Good Management Practices. The introduction of new and emerging crops, pesticide resistance, integrated pest management, the continual vigilance of horticultural industries for improved agrochemical choices and the disinclination of manufacturers to register for minor crops led to the need for this project.

The APVMA's National Permit System adds some flexibility to the lengthy registration process and legalises the availability of products for minor-use purposes, not specified on the product label. However, off-label permits issued by the APVMA still must be applied for along with information/data that verifies that the permitted use will be effective and will not have any harmful effects on humans, the crops or the environment.

A total of 30 residue trials were conducted, during the 2006-07 year, in specified regions throughout Australia. All the data from this project has been submitted to the APVMA together with the relevant Applications for Permits/Permit Renewals.

Technical Summary

This project generated pesticide residue data in a range of vegetable crops to support minor-use permit applications to the APVMA. The list of studies undertaken and completed is as follows:

| Study ID | Problem | Crop | Product | Active | State |
|----------|--|-------------------------|-------------------|-------------------|-------|
| AVG1067 | Silverleaf whitefly | beans | Talstar | bifenthrin | WA |
| | Silverleaf whitefly | beans | | bifenthrin | QLD |
| HAL1212 | Downy Mildew | broccoli | Agri-fos | phosphorous acid | TAS |
| | Downy Mildew | cauliflower | | phosphorous acid | VIC |
| AVG987 | Botrytis | brussels sprouts | Rovral Aquaflo | iprodione | TAS |
| | Botrytis | brussels sprouts | | iprodione | SA |
| HAL1307 | Sclerotinia rot & Botrytis rot | endive | Rovral Aquaflo | iprodione | QLD |
| | Sclerotinia rot & Botrytis rot | chicory | | iprodione | VIC |
| HAL1259 | Botrytis & Sclerotinia | cucumber | Rovral Aquaflo | iprodione | QLD |
| | Botrytis & Sclerotinia | cucumber | | iprodione | TAS |
| AVG44 | Weeds | leeks | Linuron | linuron | TAS |
| | Weeds | leeks | | linuron | VIC |
| AVG19 | Weeds | leeks | Totril | ioxynil octanoate | TAS |
| AVG20 | Purple blotch, downy mildew | shallots | Dithane | mancozeb | TAS |
| | Purple blotch, downy mildew | leeks | | mancozeb | QLD |
| AVG1152 | Silverleaf whitefly | fancy lettuce | Talstar | bifenthrin | QLD |
| | Silverleaf whitefly | plain leaf lettuce | | bifenthrin | WA |
| AVG738 | Onion maggot & Vegetable weevil | parsley | Lorsban | chlorpyrifos | TAS |
| | Onion maggot & Vegetable weevil | parsley | | chlorpyrifos | VIC |
| AVG798 | Thrips - Plague and Western Flower | parsley | Lannate | methomyl | TAS |
| | Thrips - Plague and Western Flower | coriander | | methomyl | VIC |
| AVG359 | Redlegged Earth Mite & Blue Oat Mite | peas | Talstar | bifenthrin | QLD |
| | Redlegged Earth Mite & Blue Oat Mite | peas | | bifenthrin | TAS |
| AVG851 | Stemphyllium spp. & Gey mould (Botrytis fabae) | snow peas | Amistar | azoxystrobin | QLD |
| | Stemphyllium spp. & Gey mould (Botrytis fabae) | sugar snap peas | | azoxystrobin | TAS |
| HAL1379 | Mites | sugar snap or snow peas | Acramite | bifenazate | QLD |

| Study ID | Problem | Crop | Product | Active | State |
|----------|------------------|-------------------------|----------|------------|-------|
| | Mites | snow or sugar snap peas | | bifenazate | VIC |
| | Mites | sugar snap or snow peas | | bifenazate | TAS |
| AVG643 | Two spotted mite | greenhouse snow peas | Vertimec | abamectin | WA |
| | Two spotted mite | greenhouse snow peas | | abamectin | TAS |

Introduction

A total of 30 residue trials were conducted, during the 2006-07 year, in specified regions throughout Australia. All the data from this project has been submitted to the APVMA together with the relevant Applications for Permits/Permit Renewals.

Materials and Methods

The field investigation phases of these studies were conducted using Peracto Pty Ltd's Standard Operating Procedures, which comply with the OECD Principles of Good Laboratory Practice Number 1 (revised 1997), Paris 1998 and Number 13, June 2002, GLP Facility No: 14609. All specimens were analysed by AgriSolutions Australia at their laboratory at Deception Bay in Brisbane, Facility No: 14951.

Results

For each study, a GLP compliant field trial report and analytical report, to GLP standard, was prepared. The results from these trials have been used in permit applications/renewals to the APVMA for the following:

| Problem | Crop | Product | Active | Permit Application/Renewal |
|--|-------------------------|----------------|-------------------|--|
| Silverleaf whitefly | beans | Talstar | bifenthrin | Permit renewal - Category 20 |
| Downy Mildew | broccoli | Agri-fos | phosphorous acid | Minor Use/Emergency Use Permit Application |
| Downy Mildew | cauliflower | Agri-fos | phosphorous acid | Minor Use/Emergency Use Permit Application |
| Botrytis | brussels sprouts | Rovral Aquaflo | iprodione | Permit renewal - Category 20 |
| Sclerotinia rot & Botrytis rot | Endive & chicory | Rovral Aquaflo | iprodione | Minor Use/Emergency Use Permit Application |
| Botrytis & Sclerotinia | cucumber | Rovral Aquaflo | iprodione | Minor Use/Emergency Use Permit Application |
| Weeds | leeks | Linuron | linuron | Permit renewal - Category 20 |
| Weeds | leeks | Totril | ioxynil octanoate | Minor Use/Emergency Use Permit Application |
| Purple blotch, downy mildew | shallots | Dithane | mancozeb | Permit renewal - Category 20 |
| Purple blotch, downy mildew | leeks | Dithane | mancozeb | Minor Use/Emergency Use Permit Application |
| Silverleaf whitefly | fancy lettuce | Talstar | bifenthrin | Permit renewal - Category 20 |
| Silverleaf whitefly | plain leaf lettuce | Talstar | bifenthrin | Permit renewal - Category 20 |
| Onion maggot & Vegetable weevil | parsley | Lorsban | chlorpyrifos | Permit renewal - Category 20 |
| Thrips - Plague and Western Flower | parsley & coriander | Lannate | methomyl | Permit renewal - Category 20 |
| Redlegged Earth Mite & Blue Oat Mite | peas | Talstar | bifenthrin | Permit renewal - Category 20 |
| Stemphyllium spp. & Gey mould (Botrytis fabae) | snow peas | Amistar | azoxystrobin | Permit renewal - Category 20 |
| Mites | sugar snap or snow peas | Acramite | bifenazate | Minor Use/Emergency Use Permit Application |
| Two spotted mite | greenhouse snow peas | Vertimec | abamectin | Permit renewal - Category 20 |

Discussion

Not applicable to this project.

Technology Transfer

AgAware Consulting Pty Ltd will notify the relevant interested parties upon issue/renewal of permits.

Recommendations

None applicable at this time.

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