



Know-how for Horticulture™

**Generation of
pesticide residue data
in vegetables to
support minor-use
permits - Region 2**

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Serve-Ag Research Pty Ltd

Project Number: VG04072

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FINAL REPORT

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

Victoria, Queensland, Western
Australia, South Australia and
Tasmania

2005/2006

Clients:

Horticulture Australia Limited and the
Australian Vegetable and Potato Growers
Federation

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Background

In Australia, before an agrochemical product can be sold or used, the (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 pests, 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. The introduction of 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 has led to the need for this project.

The selective use of pesticides to control pests, weeds and diseases plays an important role in increasing production, improving the quality of Australia's horticultural crops and enabling growers to earn reasonable returns on their investments. At the same time, today's health conscious society is extremely sensitive to issues relating to chemical use and it is essential that consumers be protected by adequate regulations governing the use of agrochemicals.

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.

This project generated pesticide residue data in a range of vegetable crops to support minor-use permit applications to the APVMA.

General Summary

Twenty-six trials were carried out across Australia in Victoria, Queensland, Western Australia, South Australia and Tasmania - The list of studies undertaken were as follows:

Trial Identification	Problem	Crop	Product	Active	State
AVG1064	Powdery mildew, sclerotinia rot and Botrytis rot	Asian Fruiting Veg	Amistar	azoxystrobin	Qld
AVG1064		Asian Fruiting Veg	Amistar	azoxystrobin	Qld
AVG606	Powdery mildew	Beetroot	Topas	penconazole	Qld
AVG606		Beetroot	Topas	penconazole	WA
AVG1175	Leaf spot	Beetroot	Tilt	propiconazole	Qld
AVG1175		Beetroot	Tilt	propiconazole	WA
AVG1173	Grass weeds, especially winter grass	Beetroot	Select	clethodim	Qld
AVG1173		Beetroot	Select	clethodim	WA
AVG1172	Grasses including winter grass	Radish	Select	clethodim	Vic
AVG1172		Radish	Select	clethodim	Qld
AVG706	White blister rust (Albugo candida)	Radish	Amistar	azoxystrobin	Vic
AVG706		Radish	Amistar	azoxystrobin	Qld
AVG768	Leaf spot	Spinach	Tilt	propiconazole	Qld
AVG768		Spinach	Tilt	propiconazole	Vic
AVG352	Capeweed and clover	Cauliflower	Lontrel	clopyralid	WA
AVG352		Cauliflower	Lontrel	clopyralid	WA
AVG1147	Downy mildew and purple blotch	Fennel	Bravo	chlorothalonil	Vic
AVG1147		Fennel	Bravo	chlorothalonil	WA
AVG1146	Grass weeds	Fennel	Select	clethodim	Vic
AVG1146		Fennel	Select	clethodim	WA
AVG342	Grass weeds	Leeks	Select	clethodim	Tas
AVG342		Leeks	Select	clethodim	Vic
AVG525	Onion fly	Leeks	Diazinon	diazinon	Tas
AVG525		Leeks	Diazinon	diazinon	Vic
AVG270	Greenhouse whitefly and silverleaf whitefly	Cucumber	Applaud	buprofezin	Tas
AVG270		Cucumber	Applaud	buprofezin	SA

All trials were carried out in compliance with the Principles of Good Laboratory Practice (GLP). The project progressed as follows:

- Field trials commenced in March 2005;
- Field trials completed in August 2005;
- Analyses were carried out by AgriSolutions Australia at their Brisbane laboratory;
- Individual field reports and relevant analytical reports completed;
- APVMA minor use permit applications prepared.

The first permit application was lodged with the APVMA on 28th October 2005 and the final permit application was lodged on 20th February 2006. At the time of writing this report all permits were being evaluated by APVMA.

Technology Transfer

Serve-Ag Research Pty Ltd will include an article in its company newsletter, notifying recipients, including Industry Development Officers, of our successful completion of this project. As permit applications are granted these will be circulated to industry stakeholders using current HAL minor use projects that relate to this area.

Appendices

Copies of Permit Applications as submitted to APVMA.

Pest or Purpose	Crop	Product	Active Ingredient	Rate/Dose	Permit Application Date
Control of Powdery mildew, Sclerotinia rot and Botrytis rot	Asian Fruiting Veg	Amistar 500 WG	azoxystrobin	500 g/kg	28/10/05
Control of Powdery mildew	Beetroot	Topas 100 EC	penconazole	100 g/L	18/01/06
Control of Leaf spot	Beetroot	Tilt 250 EC	propiconazole	250 g/L	16/01/06
Control of Grass weeds, especially winter grass	Beetroot	Select 240 EC	clethodim	240 g/L	Proposed use registered prior to trial completion. Data produced held by AgAware Consulting
Control of Grasses including Silver grass and Winter grass	Radish	Select 240 EC	clethodim	240 g/L	06/01/06
Control of White rust, White blister (Albugo candida)	Radish	Amistar 500 WG	azoxystrobin	500 g/kg	Supporting Data for Per 8694 14/10/05
Control of Leaf spot (Cercospora spp.)	Spinach	Tilt 250 EC	propiconazole	250 g/L	06/01/06
Control of Capeweed and clover	Cauliflower	Lontrel 300 SL	clopyralid	300 g/L	20/02/06
Control of Downy mildew and Purple blotch	Fennel	Bravo 720 SC	chlorothalonil	720 g/L	24/02/06
Control of Grass weeds	Fennel	Select 240 EC	clethodim	240 g/L	Supporting Data for Per 7101 05/01/06
Control of Grass weeds	Leeks	Select 240 EC	clethodim	240 g/L	16/01/06
Onion fly	Leeks	Diazinon 800 EC	diazinon	800 g/L	Supporting Data for Per 8051 05/01/06
Control of Greenhouse whitefly and silverleaf whitefly	Greenhouse Cucumber	Applaud 440 SC	buprofezin	440 g/L	28/10/05

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