

## INTERIM GUIDELINES FOR THE DISPOSAL OF WASTE FUNGICIDE PRODUCED BY APPLE AND PEAR GROWERS

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### INTRODUCTION

The state of our environment is fundamental to the production of quality produce – with respect to the actual quality and cleanliness of contamination-free produce and the ability to market ‘clean and green’ produce.

EPA, in co-operation with other government agencies and industry, encourages companies and primary producers to adopt cleaner production technologies and practices to ensure wastes are minimised and the environment is protected.

A key issue in the apple and pear growing industry is responsible management of spent fungicide dip.

Apple and pear growers use a number of post-harvest fungicides for the control of fungi. The fungicide is mixed in batches with water to make a dip solution. The fruit is immersed in the dip solution which kills existing fungi and provides a level of future protection for the fruit against fungi attack.

After fruit has been immersed in the fungicide dip, the dip – which has lost some of its effectiveness – is considered spent and becomes a waste product. The waste fungicide needs to be disposed of and a new solution prepared.

Waste fungicide dip can be harmful to the environment if not managed properly. Under the *Environment Protection Act 1970*, substantial penalties exist for causing pollution or improperly managing such wastes.

These guidelines have been prepared with reference to guidelines used in Washington State, USA, one of the world’s largest apple and pear

growing regions, and in consultation with Environment Australia and the Department of Natural Resources and Environment (DNRE).

The guidelines provide advice to growers using the following fungicides in accordance with manufacturers instructions:

- Diphenylamine (Chemly DPA, Colin Campbell DPA)
- Iprodione (Rovral Aquaflow)
- Carbendazim (Bavistin, Spin).

There is potential to reduce reliance on fungicides by using new and emerging fruit management technologies and techniques. EPA is working with DNRE, water authorities and the fruit industry to encourage the use and further development of such approaches.

### WASTE FUNGICIDE DIP MANAGEMENT

Fungicide dips containing the chemicals listed above degrade relatively quickly in soils that are exposed to sunlight and are well aerated.

### **Where can waste fungicide be disposed of?**

- Waste fungicide dip must be contained on the property on which it was generated.
- Waste fungicide dip should be sprayed onto a dry orchard floor or dry gravel road to allow natural chemical and physical degradation to occur.
- Waste fungicide dip should not be sprayed within 30 metres of the farm boundary, or on low lying areas subject to water-logging.
- Waste fungicide dip should not be sprayed on areas where groundwater is less than 1.5 metres from the surface.
- Waste fungicide dip must not be discharged to the domestic sewerage system without the written approval of the water authority.
- Waste fungicide must not be discharged within 30 metres of an irrigation channel or 100 metres of any other surface water system.

### **When should waste fungicide be disposed of?**

- Waste fungicide dip should not be sprayed on farm roads or the orchard floor:
  - ◆ when rain is expected within 24 hours
  - ◆ where such areas may be subject to heavy traffic within 24 hours, or
  - ◆ until the road is dry.
- Normal irrigation of the orchard floor should not occur within seven days of the waste fungicide dip being sprayed.

### **How should waste fungicide be applied?**

- The maximum daily rate of discharge of waste fungicide dip to either unmade farm roads or the orchard floor is 20 000 litres per hectare.
- The maximum annual discharge of fungicide active compound to either unmade farm roads or orchard floor is 600 kilograms per hectare.
- Waste application should not result in waste runoff or ponding of any kind.

### **Waste handling**

- Waste fungicide should be handled in accordance with the manufacturer's instructions and relevant occupational health and safety requirements. Contact the WorkCover Authority for further information.

### **General**

- Under no circumstances should waste fungicide dip be discharged to surface waters – including irrigation drains, irrigation channels, creeks, dams, billabongs or rivers. Such discharges can cause water pollution, harm public health and welfare, and cause agricultural damage.

### **FURTHER INFORMATION**

#### **EPA Information Centre**

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#### **EPA Regional Offices**

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##### ***South Metro***

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##### ***South-West***

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#### **EPA internet site**

[www.epa.vic.gov.au](http://www.epa.vic.gov.au)

#### **Department of Natural Resources and Environment (DNRE)**

Institute of Sustainable Irrigated Agriculture  
Ferguson Road, Tatura  
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#### **Northern Victorian Fruit Growers Association (NVEGA)**

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