



## Working together to minimise chemical spray drift

### Rural Chemicals Program

### Introduction

Rural landscapes are changing significantly with vineyards, organic farms, aquaculture and tree plantations becoming more widespread, and the merging of urban and rural boundaries. Changing land-uses and rural-urban boundaries are potential hotspots for “spray drift” conflicts.

**Spray drift** is the movement of pesticide away from the target area during or after ground or aerial spraying (in the form of droplets, particles or vapour).

Spraying of agricultural chemicals is an important part of primary production. However, primary producers need to be aware of and understand the impact their chemical use can have on neighbouring rural and urban properties. Similarly, urban residents and producers with different land-use enterprises need to be aware of and understand the important role chemicals play in their neighbour’s production systems.

This fact sheet aims to highlight how chemical users and neighbouring landholders can work together to minimise spray drift problems. It outlines the importance of communication, weather conditions, product selection, spray equipment and planning issues in reducing the impact of chemical use.

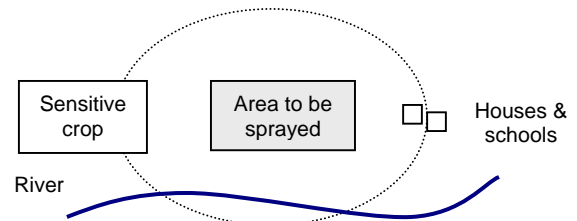
### 1. Communication

Communicating with your neighbours about when spraying is to occur and the measures that will be taken to minimise drift, can help to reduce the likelihood of misunderstanding and future conflicts regarding chemical use.

#### Communication tips:

- Talk to your neighbours.
- Discuss sensitive areas, chemicals to be used and times of spraying.
- Agree on how spray drift can be minimised.

### Spray Drift Awareness Zone



Chemical users should develop a spray drift awareness zone around the area to be sprayed. This zone should be used to highlight areas that may be sensitive to spray drift.

Neighbours should also make chemical users aware of their sensitive areas. These could include: crops, animals, aquaculture, beehives, organic enterprises, water sources, houses, gardens, schools and public areas.

### 2. Weather conditions

Chemical users should be aware of the key roles wind speed, wind direction, humidity and temperature play in reducing the potential for spray drift. Utilising appropriate weather conditions can mean the difference between a good spray operation with effective pest control, and one with off-target drift of chemical and poor pest control.

Spraying should be undertaken when the wind is blowing away from sensitive areas.

#### Weather condition tips:

- Prior to spraying assess and record wind speed and direction, temperature and humidity.
- Suitable weather considerations for spraying:
  - Consistent light winds (3-15km/hr)
  - Wind blowing away from sensitive areas
  - Mild temperatures and higher humidity
- Avoid spraying in still and inversion conditions, as the distance and direction of spray drift is unpredictable.

### 3. Product selection

The use of certain chemicals can present a significant hazard to neighbouring crops, waterways and desirable vegetation. If sensitive areas are nearby reduce the risk of off-target damage by selecting less hazardous chemicals. Further information: PIRSA Fact Sheet “Avoid Spray Drift” and product labels.

#### **Product selection tips:**

- Avoid using highly volatile herbicides (ester formulations of 2,4-D and MCPA) near susceptible crops. There is usually a suitable alternative.
- Some insecticides are highly toxic to fish, yabbies and marron (eg synthetic pyrethroids).
- Be aware that soil active herbicides can present a hazard when desirable vegetation is nearby
- When selecting herbicides for use on sloping land, consider the potential for run-off.

### 4. Spray equipment

Spray equipment should be operated with a view of reducing drift. Equipment is available to reduce spray drift, however operator expertise is also required to select the right nozzle size and type, spray pressure, spray height and type of equipment to suit the conditions and environment in which the chemical will be sprayed.

The two most important factors to consider are droplet size and spray pressure. Larger droplets are favoured as they fall to the ground more rapidly than small droplets. They are less affected by wind and less prone to drift away from the target. Low spray pressures produce less small drift-prone droplets than high spray pressures.

#### **Spray equipment tips:**

- Select nozzles that produce droplets that are “low drift” (eg > 200 microns in diameter) where possible.
- Select minimum spray pressure for the coverage required to ensure the majority of droplets are the optimum size.
- Air-blast sprayers can produce a high number of small droplets and extra care is required with set-up to reduce spray drift.
- Direct-headed, ducted or shielded spray equipment offer advantages in applying chemical directly to the target & reducing drift.
- The closer the boom to the target, the less the droplet has to fall, reducing the risk of drift.

### 5. Planning

If you are considering living in a rural area it is important to consider the impact that local agricultural practices may have on you and your family. These practices can include the spraying of chemicals, fertilisers and nutrients, and also the creation of dust, smoke and noise.

Plan to avoid adjacent incompatible activities, and avoid situating dwellings on property boundaries.

Vegetative buffers can reduce the impact of spray drift and some associated agricultural activities on nearby dwellings and rural enterprises. However, improving chemical application practices is considered the primary method of minimising spray drift.

#### **Planning tips:**

- Be considerate of legitimate local agricultural production practices (including chemical use).
- Be considerate to the location of sensitive areas.
- Avoid situating dwellings on property boundaries.
- Vegetative buffers can reduce the impact of spray drift on neighbouring houses and enterprises. Suggested plant species include Sheoaks, *Casuarinas*, Tea Trees and *Banksias*.

### Summary

Finally agricultural chemicals must always be used in accordance with label directions. Labels provide information on the correct use, application, safety, storage and disposal of the product and product container.

South Australian legislation encourages the safe, responsible and knowledgeable application of agricultural chemicals to minimise the risks associated with their use.

### Further information

- Agricultural Chemicals – Chemical Resellers, Manufacturers and Private Consultants.
- Training Courses – ChemCert, SMARTtrain and Spray Solutions.
- Reporting spray drift incidents – PIRSA Rural Chemicals Program  
Ph: 8226 0528 or email:  
[PIRSA.ChemicalTrespass@saugov.sa.gov.au](mailto:PIRSA.ChemicalTrespass@saugov.sa.gov.au)
- PIRSA Rural Chemicals fact sheets:  
[www.pir.sa.gov.au/ruralchem](http://www.pir.sa.gov.au/ruralchem)

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