

August 2013

RURAL CHEMICALS OPERATIONS

FS 009-2013RCO

BIOSECURITY SA  
PIRSA

## Working together to minimise chemical spray drift

### Introduction

Changing land-uses and rural-urban boundaries are potential hotspots for “spray drift” conflicts.

Agricultural chemicals must always be used

**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).

in accordance with label directions. Labels provide information on the correct use, application, safety, storage and disposal of the product and product container.

This fact sheet highlights 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.

### Communication

Communicating with your neighbours about when you're going to spray and how you intend to minimise drift, can help to reduce the likelihood of misunderstanding and future conflicts regarding chemical use.

#### Communication Tips:

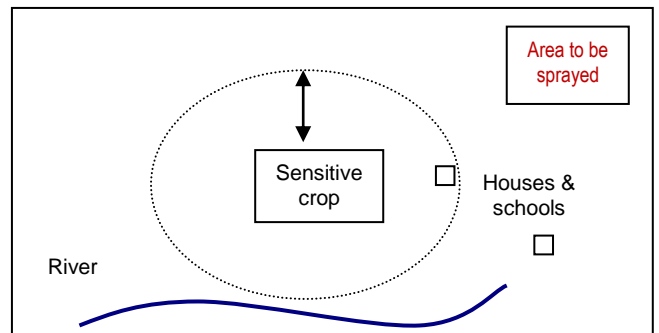
- Talk to your neighbours.
- Discuss sensitive areas, chemicals to be used and times of spraying.



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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.

### Spray Drift Awareness Zone



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.

### 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. Spraying in 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.



### ***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.

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

### **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.

### **Spray Equipment**

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 preferred as they fall to the ground faster 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.

## 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.

### **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*.

## Training and user awareness programs

There are a number of initiatives by State and Territory departments and the wider chemical industry to raise user awareness of how to manage risks when spraying pesticides.



## Further Information

Agricultural Chemicals – Chemical Resellers, Manufacturers and Private Consultants.

Training Courses –

- **ARO SafeChem** Phone 08 8339 1066.
- **AusChem** Training Victoria, Phone 03 5622 2055.
- **ChemCert SA** accreditation Phone 1800 444 228.
- **TAFE SA** Chemical Training Card. Phone 1800 882 661
- **SMARTtrain**. Phone 1800 138 351.
- **Smith and Georg Chemical Accreditation**. Phone 08 8389 1856.
- **Spray Solutions** accreditation. Phone 08 8835 1362.

Reporting spray drift incidents –

Biosecurity SA Rural Chemicals Operations

Ph: 1300 799 684 or email: [PIRSA.RuralChemicals@sa.gov.au](mailto:PIRSA.RuralChemicals@sa.gov.au)

PIRSA Rural Chemicals fact sheets: [www.pir.sa.gov.au/ruralchem](http://www.pir.sa.gov.au/ruralchem)