

## Responsible Spray Application

The major cause of chemical drift is application during unsuitable weather conditions. Monitoring of meteorological conditions and reacting to changes in temperature, humidity, wind speed and direction are some of the easiest and most effective strategies for preventing spray drift.

At temperatures above 28 degrees and low humidity evaporation rates increase and droplets quickly lose size and mass, increasing drift risk. Up to **40 per cent** of the herbicide may not reach the intended target under these conditions which means it has ended up somewhere else, possibly causing damage to sensitive crops or areas.

### Recommended weather conditions

**Temperature** – Temperature should be 28°C or less.

**Humidity** – Relative humidity should be 45% or greater.

**Avoid** spraying when the difference between the wet and dry bulb is **greater** than 10°C.

**Wind speed** - Wind speeds of 3-15 km/hr are recommended (8-10 km/hr are ideal) for herbicide application by groundrig. Lighter or stronger winds cause variable results, increasing the drift potential.

Weather conditions should be monitored throughout the chemical application. Detailed 'Stop and Go' tables can be accessed through the Spraypak publication which is available free of charge from NSW DPI.

Growers have a legal responsibility to ensure that chemical applications do not drift and contaminate or damage other crops or sensitive areas.

While low drift nozzles reduce the number of 'driftable' droplets and therefore reduce risk, they are not a guarantee that a product will not drift if application set up and conditions are unsuitable.

Non-volatile formulations can drift as far as volatile formulations if the meteorological conditions and/or application set-up are unsuitable.

Assessment of atmospheric conditions, proximity to susceptible crops or sensitivity of the crops involved, equipment set-up, should all be basic considerations when planning a spray application.

It may be the case that a spray application **CANNOT BE DONE** should one or more of these conditions not be correct. This can be for parts of a day or for whole days at a time. Under the Pesticides Act weather conditions and relevant spray details must be recorded for each chemical application. To assist in record keeping for pesticide applications, Spray Log Books can be purchased from the QDPI&F. Cost is \$6.60 each plus

postage and handling. Contact Natalie Fletcher on 07 4688 1460 to order.

It should be noted that it is a legislative requirement in both QLD and NSW to read and then follow pesticide label directions.

### Phenoxy herbicides

Herbicides in the phenoxy group such as 2,4-D are a cost effective herbicide option. However, they have caused significant damage to cotton within the Gwydir and there have been recent occurrences of drift due to application under unsuitable weather conditions.

This herbicide is currently the subject of an APVMA Existing Chemical Review and it is most important that widespread damage to cotton as the result of improper use does not jeopardize the future availability of this product. It is therefore essential that appropriate controls are applied to its use and the product used responsibly by all members of the farming community.

Current label requirements for the use of 2,4-D herbicides limit application to **coarse to very coarse** spray droplets and within wind speeds of 3 - 15 kph.

Growers should check nozzle manufacturer's specifications for the nozzles they are using to ensure they meet the new requirement. Standard flat fan nozzles are generally not suitable for producing coarse and very coarse droplets.

Highly volatile ester (HVE) formulations of 2,4-D have been further restricted with a suspension of registration on these products for the next 12 months. This includes a no spray window from the beginning of September to the end of April. More information can be found on the APVMA website.

### Spray application workshops

Spray application workshops can be organised if there is sufficient interest. If anyone is interested in a spray workshop for themselves and/or their spray applicators and/or their consultant please let me know on 6752 5111 or return via fax (02 6752 4859) the expression of interest below.

#### Spray application workshop expression of interest

Name: \_\_\_\_\_

Phone: \_\_\_\_\_

*Note:* Cotton Tales is a forum for discussion of research and information. It does not endorse particular use of products that may have been involved in the research rather it is used for the presentation of science that addresses industry issues.