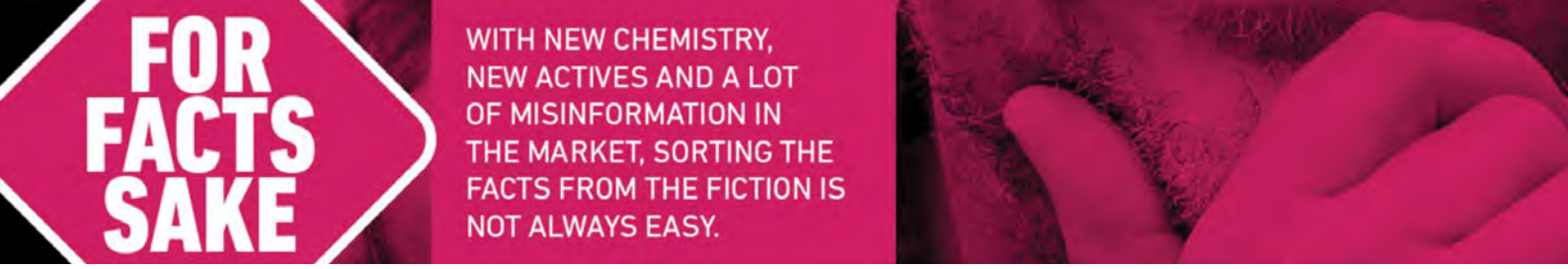

For Facts Sake - Don't Drift

What is Spray Drift

Many crop protection products are applied as a spray of liquid droplets typically from a height of less than 1 metre above the soil surface. Some of these droplets can be carried by air currents to locations away from the target area during and shortly after application. Crop protection products can also move away from the intended area of application by being carried on soil particles moved by wind, water runoff or by volatilisation. This fact sheet aims to provide an understanding of spray drift while also promoting responsible spray application practices. For information on volatilisation please refer to fact sheet **Overwatch® Herbicide – volatility versus spray drift** here.

Spray drift occurs when spray droplets are carried away from the intended target area by wind. It is influenced by various factors, including droplet size, wind speed and direction, equipment setup, application technique, and weather conditions. Understanding these factors is crucial in mitigating spray drift risks.

When spray drift occurs, all products that are mixed in the spray unit will be contained in all spray droplets that move away from the intended target area. The difference between the properties of individual products can mean that the movement of some is more noticeable than others. For example, some products may have a noticeable odour, some can have a marked visual effect on plants, while others may just slow down plant growth.

In some cases, surface temperature inversion can carry the spray droplet many kilometres away from the intended target area. Under inversion conditions spray drift can be highly unpredictable and vary due to factors including wind speed, landscape, and the duration and intensity of the inversion.

Spray drift can have many consequences. Spray drift not only leads to economic and productivity losses, but this practice may also threaten access to crop protection products through prohibitive regulation.

Further, spray drift may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities.

Potential Consequences of Spray Drift involving Overwatch® Herbicide

If Overwatch® Herbicide is involved in a spray drift incident, sensitive plants can show a whitening effect that appears as a 'bleaching' of the plant's foliage (For more information on the mode of action of Overwatch® Herbicide refer to the fact sheet **Bleachers Bleach** here). This effect is typically temporary, and under normal growing conditions plants will recover. Overwatch® Herbicide is rarely applied alone and other products that were added to the spray solution at the same time may be less obvious. These other products may be identified through different effects such as yellowing, spotting, burning or twisting effects on plants.

The Australian Pesticides and Veterinary Medicines Authority (APVMA) is the national government regulator responsible for ensuring that off-target spray drift does not harm human health, the environment or Australia's international trade. The APVMA and the Department of Health independently determined that Overwatch® Herbicide has a very low toxicity profile and has no discernible odour. If any small amount of spray drift were to contact drinking water collection areas or passing motorists, the risk from Overwatch® Herbicide would be extremely low due to its exceptionally low toxicity to humans.

The APVMA reviews the human health safety data and made that conclusion which can be reviewed here.

The Department of health scheduled Bixlozone, the active ingredient in Overwatch® Herbicide in schedule B of the poisons standard. Schedule B is for chemicals considered not to require control by scheduling. The reason for this decision was based on the low toxicity profile of Bixlozone. For more information click here.

Photo: (right) Juvenile olive trees exhibiting bleaching from spray drift. Plant residue testing confirmed the presence of three other herbicides commonly mixed with Overwatch® Herbicide.

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Best Practices for Minimising Spray Drift:

To minimise spray drift, applicators must adhere to the product label as these are reviewed, vetted and approved by the APVMA and are a legal requirement, and follow best application practices:

- **Equipment Selection:** Use sprayers with technologies designed to minimise drift, such as low-drift nozzles, air-assisted systems, or drift-reducing shields.
- **Nozzle Selection:** Choose nozzles that produce larger droplets, as they are less prone to drift. Consider factors such as spray pattern, flow rate, application pressure and speed when selecting nozzles.
- **Sprayer Calibration:** Regularly calibrate sprayers to ensure correct application rates and minimise wastage. Proper calibration helps achieve the desired droplet size and deposition.
- **Weather Conditions:** Avoid spraying during windy conditions. Pay attention to wind speed and direction before and during application. DO NOT spray when a surface temperature inversion is present and DO NOT spray unless wind speed is between 3 and 20 kilometres per hour. ALWAYS follow label instructions.
- **Buffer Zones:** Adhere to the product label buffer zones between treated areas and sensitive sites, such as water bodies, neighbouring crops, residential areas, or protected wildlife habitats. Ensure the down wind buffer zone is the maximum buffer zone of all the tank mix partners.
- **Application Technique:** Apply using appropriate techniques, such as keeping the boom height low, maintaining appropriate nozzle spacing, and utilising proper pressure and travelling speed.
- **Drift-Reducing Adjuvants:** Consider the use of drift-retardant adjuvants such as On-Coarse® DRA that can help reduce drift potential.
- **Record-Keeping:** Maintain detailed records of all applications, including dates, weather conditions, products used, and target areas. Keeping records is a regulatory requirement and can demonstrate good application practices were adhered to.

What to do if you Notice Spray Drift

Despite best efforts, spray drift incidents may still occur. If you notice spray drift during or after an application, here are the recommended actions to take:

- Immediately halt the application to prevent further drift.
- Assess the extent of the drift and identify affected areas or crops.
- Notify neighbouring landowners or relevant authorities, if necessary.
- Document the incident with photographs, detailed observations, and relevant information such as weather conditions, application parameters, and product used.
- Implement measures to prevent future occurrences, such as avoiding spraying in similar weather condition's, adjusting application techniques, modifying equipment, or using additional drift-reducing technologies.

Reporting Spray Drift Incidents

State and territory governments are responsible for addressing incidents of off-target spray drift. The following points of contact will help you commence the process for reporting a spray drift incident in your state or territory:

- Australian Capital Territory – Contact the Environment Protection Authority by calling Canberra Connect on 13 22 81
- New South Wales – Refer to the How to respond to pesticide misuse web page and call the environment line on 131 555, or email info@environment.nsw.gov.au
- Northern Territory – Refer to the NTWorkSafe Chemical Spray Drift bulletin or call the pollution response line on 1800 064 567
- Queensland – Refer to the Reporting chemical spray drift web page
- South Australia – Refer to the Chemical misuse (including spray drift) web page and call the biosecurity SA agricultural and veterinary chemicals hotline on 1300 799 684 or email PIRSA.RuralChemicals@sa.gov.au
- Tasmania – Refer to the Spray Drift and Reporting Incidents web page
- Victoria – Refer to the Reporting spray drift of agricultural chemicals web page
- Western Australia – Refer to various documents on the Guides on pesticide use for industry and local government.

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