

**P**esticide drift is a hazard to the environment and a waste of money, but what can we do to minimise the risk.

Pesticide drift contributes to environmental pollution, incites public concern, it wastes chemical and is often the cause of variable control of the spray target. What may not be realised however is that drift is not a local problem, in some instances pesticides can carry up to half a mile from the site of application if wind or application conditions are just right.

The two types of drift that are responsible for off-target application are – particle drift and vapour drift. To compare the difference between the two types just visualise a pile of dry leaves that have been raked together in a park. A gust of wind will easily scatter the leaves throughout the park but the majority will be blown downwind. This illustration describes particle drift; Just like the scattered leaves, pesticide particles are actually carried on the wind and land in a different, though usually localised area.

Particle drift is caused when the wind, and/or inaccurate application procedures, scatters the actual spray droplets away from the application target onto adjacent areas, including shrubberies, ornamental plantings and neighbouring domestic gardens.

Now consider that same pile of leaves, heaped together and set on fire. In this instance it is the smoke column, not the leaves that drifts over the park.

# Don't get my drift...



Like smoke from a fire, chemical vapour moves unpredictably and over a much greater distance.

Because of the high risk from Vapour drift, extreme caution is needed when applying highly volatile chemicals, such as those manufactured as ester formulations.

These formulations containing 2,4-D and dicamba were particularly volatile in the summer when temperatures exceeded the mid eighties.

Today, the majority of chemicals manufactured for the amenity industry, are formulated as low-volatile ester and amine formulations and are much less likely to evaporate during spraying. To prevent vapour drift it is essential to check the label to make sure the pesticide brands you select are amine or low-volatile ester formulations.

## Controlling Particle Drift

Unlike vapour drift, the formulation of the pesticide doesn't affect particle drift and spray operators can exercise control by following some basic principles and application procedures.

## Read the label

It is considered that the majority of drift cases are caused by operators not following the directions on the label or applying the spray through the wrong nozzle. To help ensure a safer, more accurate use of pesticides it is important to remind all operators to read the product label before each and every application.

## Check weather conditions

Wind speed and direction are the most critical factors affecting drift. Check both before spraying. If at all practical plan

the spray operation to take place early in the morning and late in the afternoon when the air is more still. Wind gusts of up to 3-4 metres per second (m/s) are manageable, but don't consider spraying if winds exceed 5 m/s. If the wind direction is likely to blow the spray towards sensitive areas, leave an area of at least a 60 metres as a buffer zone.

## Minimise fine droplets

Reducing the number of 'fines' in the spray is likely to be the single most important thing you can do to reduce particle drift. The larger the spray droplet, the less likely it is that pesticides will drift off-target.

## Select the right nozzle

Some manufacturers make available nozzles that have been designed to reduce drift during turf pesticide applications. To ensure the correct nozzle is selected it is important to understand the role of operating pressure.

The pressure exerted at the inlet valve is what causes the liquid going through the nozzle to atomise. At low pressures the result is the formation of heavier droplets, while at high pressure, smaller, more atomised droplets are formed.

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Marton Hall Lane, Macclesfield, Cheshire SK11 9HG  
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