






Orchard & Vine Spray Drift Management

August 2021

Introduction

Spray drift is generally considered to be spray droplets carried by wind off-target during pesticide application. These conditions must be avoided. Drift from pesticide application is an issue growers must be aware of and address on a continuous basis. This factsheet is a reminder of some points to consider both throughout the year (advance planning) and when spraying.

Advance Planning and Preparation

- Read pesticide labels, especially sections on buffer zones. The buffer zones on pesticide labels are for sensitive areas downwind of the sprayer.
- Identify sensitive areas on and around your property and plan to spray near them during the time when the spray drift will not cross the property boundary and impact neighbours, schools, human activity, waterways, etc.
- A tall hedge row or climbing vine on the fence, on the property boundary will help reduce drift across the property boundary.
- Train spray applicators about spraying and how to avoid spray drift. Obtaining a pesticide applicators certificate is recommended. [Pesticide Certification & Training Website](#)
- Carry out thorough maintenance, repairs, and calibration of your sprayer well in advance of the spraying season. [Calibrating an Airblast Sprayer Factsheet](#)
- Ensure that the nozzle arrangements and air deflectors on the airblast sprayer match the crop canopy.
- Introduce yourself to your neighbours and develop a relationship with them. Discuss your drift management plan with them. A colour-coded flag system can indicate the nature of the sprays to be applied and can be used based on the product toxicity.
 - **Red** for Very toxic,  or  on label
 - **yellow** for Moderately toxic  on label
 - **green** for Low toxicity, no warning symbol on label

When Spraying

- Advise appropriate neighbours when you will be spraying.
- Check weather forecast for:
 - wind speed and direction. What is downwind that could be affected by drift?
 - Temperature and relative humidity. Pesticide can drift farther in higher temperatures and dry conditions.
- Monitor the weather for changes in wind speed and direction while spraying. Ensure that the drift is contained within your field and does not move onto the neighbour's property.
- Buffer zones that are listed on the label must be followed for the downwind direction toward sensitive habitat.
- DO NOT spray under dead calm conditions. There is a high likelihood of temperature inversions during late evening, night, and early-morning hours making spray droplets more prone to drift.
- Larger droplets are less prone to drift. Use nozzles that will produce larger droplets but still provide the coverage, such as air induction or drift guard nozzles.
- Turn off nozzles that are above the crop canopy. Early in the season fewer nozzles are required to achieve full coverage.
- Turn the sprayer off at row ends when turning.
- Use only one side of the sprayer when spraying the outside crop row, turn off the side of the sprayer towards the property boundary.
- With airblast sprayers set the air speed according to the crop canopy. Air should not be carrying the pesticide past the crop canopy (refer to [Calibrating an Airblast Sprayer Factsheet](#)).
- Keep spray records that include:
 - Pest targeted
 - Pesticide used, rate and water volume applied
 - Time of day of application
 - Weather conditions, temperature, wind speed and direction, relative humidity
 - You may also want to record nozzles used, travel speed, total volume applied, as this will help for future applications.

Legislation

- Federal legislation requires that pesticides be applied in a safe manner, that does not endanger human health or safety or the environment and that the pesticide label is followed.
- Provincial legislation under the Integrated Pest Management (IPM) Act states that a person must not “use, handle, release, transport, store, dispose of or sell a pesticide in a manner that causes or is likely to cause an unreasonable adverse effect.”
- The IPM act also requires any person who applies a restricted product (RESTRICTED is on the label) must have a Pesticide Applicators Certificate
- The other provincial legislation, [Code of Practice for Agricultural Environmental Management](#) (AEM Code) states; When applying pesticides, all agricultural operators must incorporate a basic level of environmental protection. This includes:
 1. Preventing runoff contaminated with pesticides from entering watercourses, groundwater, or crossing property boundaries;
 2. Ensuring pesticide spray drift does not enter watercourses or groundwater;
 3. Taking precautions to prevent the unreasonable release of pesticide spray drift from crossing property boundaries; and,
 4. Keeping records to show how you are meeting the requirements of the AEM Code.