

Farm Mechanization FACTSHEET

ORCHARD SPRAY DRIFT MANAGEMENT

Spray drift is generally considered to be spray droplets carried by wind off-target during pesticide application. Small droplets in warm, dry weather may evaporate causing vapour drift. These conditions must be avoided. Drift from pesticide application is an issue growers must be aware of on a continuous basis. This factsheet is a reminder of some points to consider both throughout the year (advance planning) and during spraying. Drift sensitive areas are described in [Factsheet 234.006-1](#)

Advance Planning and Preparation :

- ❑ Read pesticide labels, especially sections on buffer zones and specific precautions for sensitive areas, plants and animals. Buffer zones on pesticide labels are for sensitive areas downwind of the sprayer.
- ❑ Identify sensitive areas on and around your orchard and plan to spray near them during the best weather and circumstances (human activity etc.).
- ❑ Plan spraying programs to provide adequate time and equipment to spray under good conditions (especially near sensitive areas).
- ❑ Consider removing trees where it is difficult to spray under good conditions.
- ❑ Consider handguns or tower and tunnel sprayers to spray trees near sensitive areas to reduce spray drift.
- ❑ Develop orchard field spray cards (setup summary) to make spraying easier (request assistance from packing house field representative).
- ❑ Train spray applicators about spraying and about sensitive areas and spray drift.
- ❑ Carryout a thorough maintenance, repairs, and setup of your sprayer well in advance of the spraying season.

- ❑ Ensure that the nozzle arrangements and air deflectors can match the tree canopies in each of your tree blocks.
- ❑ Is your spray program meeting legal, environmental and safety issues?
- ❑ Introduce yourself to your neighbours and develop relationships...as a result they may come to you first with their complaints. Discuss your drift management plan with them.
- ❑ Plan how to spray trees near rental houses before renting the house or leasing the orchard.
- ❑ Object to land zoning changes and new developments around your orchard that will make it more difficult to spray. Request greater separation for neighbouring buildings and that buffers be installed.

When spraying :

(especially near sensitive areas)

- ❑ Advise appropriate neighbours that you will be spraying.
- ❑ Monitor your spray drift as you spray to observe changes in wind direction and speed. Ensure drift is contained within your orchard and especially that drift does not reach sensitive areas.
- ❑ Monitor wind speed, direction, temperature and relative humidity. Wind must blow away from sensitive areas unless buffer zones are observed. Buffer zones must be large enough to prevent spray deposits in sensitive areas.
- ❑ Remember that higher wind speeds will increase drift. Small spray droplets will evaporate and drift farther under higher temperatures and lower relative humidities. Early mornings and late evenings generally have better spraying conditions such as lower wind speeds, lower temperatures and higher humidities.

- ❑ **DO NOT spray under dead calm conditions.**
- ❑ Consider using dilute sprays with higher water volumes and larger nozzles (shut off concentrate spray nozzles) to create larger droplets which drift less (this may impact on how the pesticide performs).
- ❑ Use a handgun with high water volumes and coarse spray droplets near downwind sensitive areas.
- ❑ Use only one side of the sprayer when spraying the outside row of the orchard, turn the away-side off (occasionally complaints about this are received).
- ❑ Turn the sprayer off at row ends and cross alleys...vegetation intercepts drift (occasionally complaints about this are received).
- ❑ Keep spray pressures low and use an accurate pressure gauge.
- ❑ Ensure nozzles and deflectors are properly set to match tree canopy in each block as you spray.

Drift Management Plan

By reviewing the preceding checklist a drift management plan is created. Recording the plan on paper demonstrates your commitment to drift management should a conflict over spray drift arise.

Legislation

Federal legislation requires that pesticides be applied in a safe manner, that does not endanger human health or safety or the environment.

Provincial legislation requires that pesticides be used in a manner that does not cause an unreasonable adverse effect.

For further information on related topics, please visit our website

Resource Management Branch

www.agf.gov.bc.ca/resmgmt

Linking to our

[Publications and Conceptual Plans](#)

FOR FURTHER INFORMATION CONTACT

Bert van Daltsen, Mechanization Engineer
Phone: (604) 556-3109
Email: Bert.vandaltsen@gems4.gov.bc.ca

RESOURCE MANAGEMENT BRANCH

Ministry of Agriculture, Food and Fisheries
1767 Angus Campbell Road
Abbotsford, BC CANADA V3G 2M3