

## **Appendix VII: Good agrichemical spray management practices**



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This Appendix is based on information contained in New Zealand Standard 8409: 2004 Management of Agrichemicals, produced by Agrichemical Education Trust and Standards New Zealand and the Growsafe Introductory Manual 2007, developed by the New Zealand Agrichemical Education Trust. It has been included in the Plan in a simple and convenient form for general public information and education purposes. The information contained in this Appendix also provides general guidance on the best practicable option for preventing or minimising adverse effects on the environment of agrichemical spraying. It also provides a general indication of the nature of the conditions that might be attached to a resource consent for the spraying of agrichemicals.

Nothing in this Appendix shall amend or detract from any responsibility or requirement applying under the Hazardous Substances and New Organisms Act 1996 or the Agricultural Compounds and Veterinary Medicines Act 1997 or any amendment or regulation made under those Acts.

Compliance with Section 6 to 10 of the Growsafe Introductory Manual 2007, or with other documented instructions on discharge of agrichemicals giving an equivalent degree of environmental protection that are provided to the Taranaki Regional Council, will be taken as demonstrating the adoption of best practicable option to prevent or minimise any adverse effects of spray beyond the boundary of the target property or other non-target areas or species within the boundary of the property.

Any person discharging agrichemical sprays:

- Should undertake an accredited or recognised course in the use of agrichemical sprays, such as a GROWSAFE® Introductory Certificate (for ground based applications), or a GROWSAFE® Registered Chemical Applicator's Certificate (for commercial spray operators), and any pilot undertaking aerial application shall hold as a minimum, a current Pilot Chemical Rating Certificate issued by Civil Aviation Authority (CAA), or other similar qualifications that meet the requirements of Appendix VI .
- Should not spray if the wind speed over the area to be sprayed is less than one metre per second (3 kilometres per hour) and droplet size is less than 50 micron, or greater than six metres per second (15 kilometres per hour).
- Should not spray upwind of the following sensitive areas:
  - occupied dwellinghouse
  - public amenity areas
  - places of public assembly
  - water bodies used for public water supply
  - sensitive crops or farming systems such as organic farms
  - places, areas or features of special significance to tangata whenua

- wetlands
- other water bodies
- public roads

unless the buffer zones set out in this Appendix are observed and unless additional techniques for minimising spray drift beyond the boundary of the property or other non-target areas, as set out in this Appendix, are given effect to (refer to Table 1 page 180).

- Should have particular regard to wind speed and direction during the application of spray.
- Should discharge sprays during periods of positive air movement away from sensitive receiving environments (as described above).
- Should have particular regard to selection of nozzle size and pressure of spray units, to prevent or minimise the potential for spray drift.
- Should dilute spray solutions to the proper concentration for application.
- Should dispose of surplus spray solution and spray containers according to recommendations of the manufacturer or supplier, as stated in the directions on the product container label.
- Should keep specific records of the type of each spray applied, the volume of spray used, the volume of product concentrate used, the date, and the locality.
- Should maintain boundary shelter belts in good condition to a height of at least 3.5 - 4 metres and a depth of at least 1.0 metre at any time spraying is undertaken of shrubs, trees, or vines.
- Should use only those agrichemicals currently licensed for use.
- Should apply sprays strictly in accordance with the manufacturer's instructions, as stated on the product container label.
- Should preferably use sprays of low volatility or low toxicity.
- In the case of discharge from a vehicle or by a pedestrian, should discharge at a height less than 1.5 metres above the target, and preferably less than 0.5 metres above the target.
- Should use equipment generating a droplet size greater than 50 microns in diameter, and preferably greater than 200 microns.

- Should observe the minimum buffer zones set out in Table 1 (below), in conjunction with the other methods outlined in this Appendix.

It is vital that the guidelines given in Table 1 below are regarded as that – guidelines, which represent the best estimate for three typical application types. Buffer zones, with or without shelter belts, merely provide an opportunity for concentrations of agrichemicals to fall sufficiently so that the risk to sensitive areas beyond the buffer zone becomes acceptable (i.e. environmental exposure levels are not exceeded). Depending on the particular circumstances however, there is no guarantee that this can be achieved. Therefore buffer zones are only one of many methods to manage and reduce drift hazards.

Table 1 gives suggested distances between downwind edge of the target area and the sensitive area. These are for guidance only.

**Table 1:** Minimum buffer zones

Application method	Buffer zone	
	With shelter	Without shelter
Spray discharge direction vertically downwards	2m	10m
Spray discharge direction horizontal or upwards or from air blast or vortex sprayers	10m	30m
Aerial application	100m	300m

**Note:** This table is a guide only. The suggested distances are minimum distances and are subject to:

- a) the proper calibration and use of the spray equipment, and
- b) all other appropriate strategies being observed to reduce spray drift hazard.