



Australian Government
**Australian Pesticides and
Veterinary Medicines Authority**



**Guidelines for updating spray drift instructions on labels
when a full spray drift risk assessment has not been
undertaken**

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INTRODUCTION

In July 2019, the Australian Pesticides and Veterinary Medicines Authority (APVMA) implemented a new approach to spray drift management.

This [spray drift policy](#) is now being applied to all applications for products containing new active constituents and active constituents under chemical review. It will also be used for all new applications where spray drift assessment is required. The policy may be extended to existing registered products on a priority and risk basis and registrants may also choose to use the new policy for their existing registered products.

The following guidance covers situations where a full spray drift assessment for all sensitive areas has not been undertaken for existing registered products but the spray drift instructions appearing on the label should nevertheless be updated to be aligned with the spray drift policy.

Objective

To provide guidance to product registration holders as to how their product labels will be updated to reflect current spray drift policy.

Scope of this guideline

This guidance applies to product registration applications (Items 5, 6, 7, 8 and 10) and product variation applications (Items 12, 13 and 14), where:

- a registrant requests updated spray drift restraints as part of an application, or
- during assessment of an application the APVMA identifies that the spray drift restraints need to be updated in order to reflect the new spray drift policy.

General principles

1. Whenever spray drift restraints are required, the general spray drift instructions in Box 1 should be added.

Box 1: Spray drift instructions**SPRAY DRIFT RESTRAINTS**

Specific definitions for terms used in this section of the label can be found at apvma.gov.au/spraydrift

DO NOT allow bystanders to come into contact with the spray cloud.

DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. **The buffer zones in the relevant buffer zone table/s below provide guidance but may not be sufficient in all situations***. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

DO NOT apply unless the wind speed is between 3 and 20** kilometres per hour at the application site during the time of application.

DO NOT apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.

* The sentence referring to buffer zones should be removed or modified if buffers are not required for the product.

** Wind speeds may be varied according to approved ranges

2. Buffer zones and distances will not be added or modified unless the change is determined to be required through an assessment.
3. The spray drift record keeping requirement need no longer appear on the label.
4. APVMA compliance instructions for mandatory COARSE or larger droplet size categories are no longer required in the general instructions. Some of the additional detail such as spray droplet size categories is now in the [glossary](#) of the spray drift manual.
5. Specific droplet size classification standards, for example ASAE S572, should not to be included on the label since this is now covered in the definitions given on the website.
6. Where possible, recommended droplet size for spray applications that are given as VMD (Volume Median Diameter) in microns (μm) should be replaced by the equivalent droplet size classification.
7. Any current restraints that are not superseded by the new instructions should remain.

Droplet size classification

The following are the range of VMD for each size category that are used in the spray drift policy July 2019.

| | | |
|------------------|----|--------------------------|
| Very Fine | VF | <126 μm |
| Fine | F | 126 to 225 μm |
| Medium | M | 225 to 329 μm |
| Coarse | C | 329 to 440 μm |
| Very Coarse | VC | 440 to 524 μm |
| Extremely Coarse | XC | 524 to 646 μm |
| Ultra Coarse | UC | > 646 μm |

The above size range gives a guide to changing VMD in microns to droplet size classification, however it is acknowledged that these ranges vary depending on the source of the measurements. The following rounded conversions have historically been used and it is recommended that in general these be maintained.

| | |
|-------------------|--------------------|
| 300 µm or greater | → Coarse* |
| 250 to 300 µm | → Medium to Coarse |
| 200 to 250 µm | → Medium |
| 100 to 200 µm | → Fine |
| less than 100 µm | → Very Fine |

* Prior to the 2019 policy there was no droplet size classification larger than Coarse recognised.

Application methods

Depending on the application methods (boom sprayer, vertical sprayer, aircraft) the appropriate spray drift restraints can be added. Some judgement may be needed to identify what the application method is if this is not already on the label. Generally it is unlikely that vertical sprayers would be used instead of boom sprayers or boom sprayers instead of vertical sprayers in broad acre crops or orchards and vineyards respectively. Aerial application is assumed for broad acre crops including cereals, field vegetables, sugar cane, canola, cotton, turf, pasture, forage and forestry. Where known practice would preclude the use of a certain type of application method it is not considered necessary to include a boom, vertical sprayer or aerial restraint unless the applicant specifically requested the APVMA to do so.

Some crops (for example, tomatoes) can be grown either on ground (where boom spraying is used) or trellis (where vertical spraying is used). Similarly, some crops (for example, blueberries) have to be sprayed by boom sprayer in early growth stages but then need to switch to a vertical sprayer at later growth stages. It would be expected that the use of different application equipment would be reflected in the directions for use as different operating parameters would apply. In cases where this is apparent, both boom and vertical spray drift risk assessments will be undertaken and the relevant 'DO NOT' statement applied only if an unacceptable spray drift assessment arose as a consequence.

1 EXAMPLES

Each application needs to be considered on a case by case basis, however the following examples demonstrate how the general principles may be applied when a product holder applies for updated spray drift information on their product label:

1. No new assessment – label compliant with previous policy
2. No new assessment – mandatory buffer zones in text not tables
3. No new assessment – spray drift restraints but no buffers required
4. New/updated buffers for some sensitive areas but not all assessed
5. No spray drift restraints

Note: In each of these scenarios, a holder may apply for the change as part of a variation application seeking only this change, or as part of a larger variation application seeking other changes to the product. For a new product registration relying on an existing registered reference product, the applicant may request updated spray drift instructions even if this is not on the reference product label.

1.1 No new assessment – label compliant with previous policy

A holder applies to the APVMA to update the approved label for their product to include updated spray drift instructions only. No change to assessment or buffers is required.

Box 2: Example 1 – current label instructions

SPRAY DRIFT RESTRAINTS

DO NOT apply with spray droplets smaller than a COARSE spray droplet size category according to ‘APVMA compliance instructions for mandatory COARSE or larger droplet size categories’ located under this title in the GENERAL INSTRUCTIONS section of this label.

DO NOT apply when wind speed is less than 3 or more than 20 kilometres per hour, as measured at the application site.

DO NOT apply during surface temperature inversion conditions at the application site.

Users of this product **MUST** make an accurate written record of the details of each spray application within 24 hours following application, and must **KEEP** this record for at least 2 years. The spray application details that must be recorded are:

1. date with start and finish times of application, 2. location address and paddock(s) sprayed, 3. full name of this product, 4. amount of product used per hectare and number of hectares applied to, 5. crop or situation and weed or pest, 6. wind speed and direction during application, 7. air temperature and relative humidity during application, 8. nozzle brand, type, spray angle, nozzle capacity and spray system pressure measured during application, 9. name and address of person applying this product (additional record details may be required by the state or territory where this product is used).

MANDATORY NO-SPRAY ZONES

DO NOT apply if there are aquatic and wetland areas including aquacultural ponds, surface streams and rivers downwind from the application area and within the mandatory no-spray zones shown in Table 1 below.

Table 1: No-spray zones for protection of the aquatic environment

| For aerial application | | |
|---|----------------------------------|------------|
| Wind speed range at time of application | Downwind mandatory no-spray zone | |
| | Fixed-wing | Helicopter |
| from 3 to 8 kilometres per hour | 110 metres | 80 metres |
| from 8 to 14 kilometres per hour | 120 metres | 90 metres |
| from 15 to 20 kilometres per hour | 120 metres | 90 metres |
| For ground application | | |
| from 3 to 20 kilometres per hour | 10 metres | |

DO NOT apply if there are sensitive crops, gardens, landscaping vegetation, protected native vegetation or protected animal habitat downwind from the application area and within the mandatory no-spray zones shown in Table 2 below.

Table 2: No-spray zones for protection of the terrestrial environment

| For aerial application | | |
|---|----------------------------------|------------|
| Wind speed range at time of application | Downwind mandatory no-spray zone | |
| | Fixed-wing | Helicopter |
| from 3 to 8 kilometres per hour | 450 metres | 250 metres |
| from 8 to 14 kilometres per hour | 650 metres | 400 metres |
| from 15 to 20 kilometres per hour | 750 metres | 500 metres |
| For ground application | | |
| from 3 to 20 kilometres per hour | 40 metres | |

GENERAL INSTRUCTIONS

APVMA compliance instructions for mandatory **COARSE** or larger droplet size categories

Important information

These instructions inform those using this chemical product how to lawfully comply with the requirement of a COARSE or larger spray droplet size category for spray application.

Spray droplet size categories are defined in the ASAE S572 Standard (newer name may also be shown as ASABE) or the BCPC guideline. Nozzle manufacturers may refer to one or both of these documents, to identify droplet size categories; however, for a nozzle to comply with this requirement, the manufacturer must refer to at least one.

Complying with the label requirement to use a specific droplet size category means using the correct nozzle that will deliver that droplet size category under the spray operation conditions being used. The APVMA has approved only the following specific methods for choosing the correct nozzle. Use one of the methods specified in these instructions to select a correct nozzle to deliver a COARSE or larger droplet size category.

Instructions for ground application—for COARSE droplet size or larger categories Mandatory instructions for ground applications

USE ONLY nozzles that the nozzles' manufacturer has rated to deliver a COARSE, a VERY COARSE or an EXTREMELY COARSE droplet size category, as referenced in ASAE S572 or BCPC. Choose a nozzle that is specified to provide the droplet size category required in the label Spray Drift Restraints.

DO NOT use a higher spray system pressure than the maximum the manufacturer specifies for the selected nozzle to deliver the droplet size category required in the label Spray Drift Restraint.

Instructions for fixed-wing aerial application—for COARSE droplet size or larger categories

Instructions in this section apply to fixed-wing aerial application of products for which the label Spray Drift Restraint requires a COARSE or a VERY COARSE spray droplet category.

Nozzle choices must be made using Option 1, 2 or 3 below. Option 1 nozzles are limited to a maximum aircraft speed of 110 knots and are for COARSE droplets only. Option 2 nozzles are limited to a maximum aircraft speed of 120 knots and are also for COARSE droplets only. Option 3 nozzles have their use conditions (maximum airspeed, nozzle spray angle, product used, orifice size and spray system pressure) specified in the APVMA Approved Aerial Agricultural Association of Australia (AAAA) Nozzle Calculator (described in Option 3). Depending on those use conditions, the calculator can identify a correct nozzle for either a COARSE or a VERY COARSE spray droplet category. (To use Option 3, aerial applicators must contact the AAAA for access to their approved nozzle calculator.)

Mandatory instructions for fixed-wing aerial applications Option 1

For up to a maximum aircraft speed of 110 knots and a COARSE droplet size category, **USE ONLY** solid stream 0° nozzles with orifice diameter greater than or equal to 1.5 mm and oriented straight back to the flight direction. **USE ONLY** a spray system pressure greater than or equal to 3 bar.

Mandatory instructions for fixed-wing aerial applications (continued) Option 2

For up to a maximum aircraft speed of 120 knots and a COARSE droplet size category, **USE ONLY** narrow angle flat fan nozzles with spray angle less than or equal to 40° and oriented straight back to the flight direction. **USE ONLY** a spray system pressure greater than or equal to 4 bar.

Mandatory instructions for fixed-wing aerial applications (continued) Option 3

USE ONLY nozzles rated by the APVMA Approved AAAA Nozzle Calculator as COARSE or VERY COARSE to comply with a product label's requirement for a COARSE or a VERY COARSE spray droplet size category. Use the AAAA Nozzle Calculator, and follow the additional instructions below in a), b) and c).

To identify a nozzle to comply with the required spray droplet category, aerial applicators must use only the droplet size category given in the nozzle calculator at the DV(0.1) position. The categories shown at the DV(0.5) and the DV(0.9) positions in the calculator must not be used for making a nozzle selection.

Aerial applicators must not apply the product at airspeeds greater than the speed used to select the nozzle. If an application airspeed that is slower than 100 knots (the minimum speed specified in the nozzle calculator) is planned, a nozzle identified as COARSE or VERY COARSE at 100 knots can also be used at these slower airspeeds, provided that the nozzle angle and system pressure are kept the same.

When a particular pesticide product is chosen within the nozzle calculator as one of the conditions set to select a nozzle, then aerial applicators must use that specific pesticide product with that nozzle. When a pesticide product is planned for use and is not available as a choice within the nozzle calculator, aerial applicators must use the category 'Other product' in the calculator to set the condition for selecting a nozzle.

Instructions for helicopter aerial application—for COARSE droplet size or larger categories

Instructions in this section apply to helicopter application of products where the label Spray Drift Restraint requires a COARSE, a VERY COARSE or an EXTREMELY COARSE spray droplet category.

Nozzle choices must be made using Option 1, 2 or 3 below.

Mandatory instructions for helicopter aerial application Option 1

For helicopter applications requiring a COARSE or a VERY COARSE spray droplet size category, **USE ONLY** nozzles selected with the methods previously specified for fixed-wing aircraft in Section 2.

Mandatory instructions for helicopter aerial application (continued) Option 2

When using Micronair controlled droplet applicators (Micron Sprayers Ltd), USE ONLY nozzles selected with the Micronair Droplet Size Prediction Models designed for Micronair products (and located on the company website) to choose a nozzle to satisfy the label requirement for a COARSE droplet size category. Important: to qualify for the COARSE category, the DV(0.1) value must be greater than 156 microns. Adjust parameters as necessary (e.g. lower the atomizer rotation rate) in order to achieve a DV(0.1) value greater than 156 microns.

Mandatory instructions for helicopter aerial application (continued) Option 3

When using Accu-Flo nozzles (Bishop Equipment Mfg Inc), USE ONLY nozzles rated according to the manufacturer's instructions to select the correct nozzle to apply a COARSE, a VERY COARSE or an EXTREMELY COARSE droplet size category to satisfy the label requirement for one of those specific droplet size categories.

Box 3: Example 1 – new label instructions

SPRAY DRIFT RESTRAINTS

Specific definitions for terms used in this section of the label can be found at www.apvma.gov.au/spraydrift

DO NOT allow bystanders to come into contact with the spray cloud.

DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. The buffer zones in the relevant buffer zone table/s below provide guidance but may not be sufficient in all situations. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

DO NOT apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.

DO NOT apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.

DO NOT apply by a boom sprayer unless the following requirements are met:

- Spray droplets not smaller than a Coarse spray droplet size category.
- Minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section) are observed.

DO NOT apply by aircraft unless the following requirements are met:

- Spray droplets not smaller than a Coarse spray droplet size category.
- Ror release heights 25% of wingspan or 25% of rotor diameter or lower above the target canopy, minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section) are observed.

MANDATORY BUFFER ZONES

DO NOT apply if there are aquatic and wetland areas including aquacultural ponds, surface streams and rivers downwind from the application area and within the mandatory buffer zones shown in Table 1 below.

Table 1: Buffer zones for protection of the aquatic environment

| For aerial application | | |
|---|---------------------------------|------------|
| Wind speed range at time of application | Mandatory downwind buffer zones | |
| | Fixed-wing | Helicopter |
| from 3 to 8 kilometres per hour | 110 metres | 80 metres |
| from 8 to 14 kilometres per hour | 120 metres | 90 metres |

| | | |
|-----------------------------------|------------|-----------|
| from 15 to 20 kilometres per hour | 120 metres | 90 metres |
| For ground application | | |
| from 3 to 20 kilometres per hour | 10 metres | |

DO NOT apply if there are sensitive crops, gardens, landscaping vegetation, protected native vegetation or protected animal habitat downwind from the application area and within the mandatory buffer zones shown in Table 2 below.

Table 2: Buffer zones for protection of the terrestrial environment

| | | |
|---|---------------------------------|------------|
| For aerial application | | |
| | Mandatory downwind buffer zones | |
| Wind speed range at time of application | Fixed-wing | Helicopter |
| from 3 to 8 kilometres per hour | 450 metres | 250 metres |
| from 8 to 14 kilometres per hour | 650 metres | 400 metres |
| from 15 to 20 kilometres per hour | 750 metres | 500 metres |
| For ground application | | |

1.2 No new assessment – mandatory buffer zones in text not tables

Prior to the introduction of the spray drift operating principles in 2010, buffers were often included as text rather than tables. This example shows an update to label spray drift instructions only, where the mandatory buffer zone was included as a paragraph/text (no change to assessment or buffers).

Box 4: Example 2 – current label instructions

SPRAY DRIFT RESTRAINTS

DO NOT apply with spray droplets smaller than a **MEDIUM** spray droplet size category according to ‘the ASAE S572 definition for standard nozzles.

DO NOT apply when wind speed is less than 3 or more than 20 kilometres per hour, as measured at the application site.

DO NOT apply during surface temperature inversion conditions at the application site.

Users of this product **MUST** make an accurate written record of the details of each spray application within 24 hours following application, and must **KEEP** this record for at least 2 years. The spray application details that must be recorded are:

1. date with start and finish times of application, 2. location address and paddock(s) sprayed, 3. full name of this product, 4. amount of product used per hectare and number of hectares applied to, 5. crop or situation and weed or pest, 6. wind speed and direction during application, 7. air temperature and relative humidity during application, 8. nozzle brand, type, spray angle, nozzle capacity and spray system pressure measured during application, 9. name and address of person applying this product (additional record details may be required by the state or territory where this product is used).

MANDATORY NO-SPRAY ZONES

DO NOT apply if there are aquatic or wetland areas including aquacultural ponds, surface streams and rivers within 40 m downwind from the application area.

DO NOT apply if there are sensitive crops, gardens, landscaping vegetation, protected native vegetation or protected animal habitat within 30 m downwind from the application area.

Box 5: Example 2 – new label instructions

SPRAY DRIFT RESTRAINTS

Specific definitions for terms used in this section of the label can be found at apvma.gov.au/spraydrift

DO NOT allow bystanders to come into contact with the spray cloud.

DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. The buffer zones in the relevant buffer zone table/s below provide guidance but may not be sufficient in all situations. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

DO NOT apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.

DO NOT apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.

DO NOT apply by a boom sprayer unless the following requirements are met:

- Spray droplets not smaller than a **MEDIUM** spray droplet size category.
- Minimum distances between the application site and downwind sensitive areas (see ‘Mandatory buffer zones’ section of the following table titled ‘Buffer zones for boom sprayers’) are observed.

Buffer zones for boom sprayers

| Application rate | Mandatory downwind buffer zones | |
|--------------------------|---------------------------------|------------------|
| | Natural aquatic areas | Vegetation areas |
| Up to maximum label rate | 40 metres | 30 metres |

1.3 No new assessment – spray drift restraints but no buffers required

For some products spray drift restraints may be required, (for example, specify a minimum droplet size) but if these restraints are followed then no buffers are required.

Box 6: Example 3 – current label instructions

SPRAY DRIFT RESTRAINTS

DO NOT apply with spray droplets smaller than a **MEDIUM** spray droplet size category according to ‘the ASAE S572 definition for standard nozzles.

DO NOT apply when wind speed is less than 3 or more than 20 kilometres per hour, as measured at the application site.

DO NOT apply during surface temperature inversion conditions at the application site.

Users of this product **MUST** make an accurate written record of the details of each spray application within 24 hours following application, and must **KEEP** this record for at least 2 years. The spray application details that must be recorded are:

1. date with start and finish times of application, 2. location address and paddock(s) sprayed, 3. full name of this product, 4. amount of product used per hectare and number of hectares applied to, 5. crop or situation and weed or pest, 6. wind speed and direction during application, 7. air temperature and relative humidity during application, 8. nozzle brand, type, spray angle, nozzle capacity and spray system pressure measured during application, 9. name and address of person applying this product (additional record details may be required by the state or territory where this product is used).

Box 7: Example 3 – new label instructions

SPRAY DRIFT RESTRAINTS

Specific definitions for terms used in this section of the label can be found at apvma.gov.au/spraydrift

DO NOT allow bystanders to come into contact with the spray cloud.

DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

DO NOT apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.

DO NOT apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.

DO NOT apply by a boom sprayer unless the following requirements are met:

- Spray droplets not smaller than a **MEDIUM** spray droplet size category.

1.4 New/updated buffers for some sensitive areas but not all assessed

In this example an environmental assessment was completed with revised buffers recommended based on the new policy, but health and residues assessment was not required on the basis of existing precedent and therefore no bystander or trade buffer zone is required.

Box 8: Example 4 – current label instructions

SPRAY DRIFT RESTRAINTS

DO NOT apply with spray droplets smaller than a MEDIUM spray droplet size category according to ‘the ASAE S572 definition for standard nozzles.

DO NOT apply when wind speed is less than 3 or more than 20 kilometres per hour, as measured at the application site.

DO NOT apply during surface temperature inversion conditions at the application site.

Users of this product **MUST** make an accurate written record of the details of each spray application within 24 hours following application, and must **KEEP** this record for at least 2 years. The spray application details that must be recorded are:

1. date with start and finish times of application, 2. location address and paddock(s) sprayed, 3. full name of this product, 4. amount of product used per hectare and number of hectares applied to, 5. crop or situation and weed or pest, 6. wind speed and direction during application, 7. air temperature and relative humidity during application, 8. nozzle brand, type, spray angle, nozzle capacity and spray system pressure measured during application, 9. name and address of person applying this product (additional record details may be required by the state or territory where this product is used).

MANDATORY NO-SPRAY ZONES

DO NOT apply if there are aquatic and wetland areas including aquacultural ponds, surface streams and rivers downwind from the application area and within the mandatory no-spray zones shown in Table 1 below.

Table 1: No-spray zones for protection of the aquatic environment

| For aerial application | | |
|---|----------------------------------|------------|
| Wind speed range at time of application | Downwind mandatory no-spray zone | |
| | Fixed-wing | Helicopter |
| from 3 to 8 kilometres per hour | 110 metres | 80 metres |
| from 8 to 14 kilometres per hour | 120 metres | 90 metres |
| from 15 to 20 kilometres per hour | 120 metres | 90 metres |
| For ground application | | |
| from 3 to 20 kilometres per hour | 10 metres | |

DO NOT apply if there are sensitive crops, gardens, landscaping vegetation, protected native vegetation or protected animal habitat downwind from the application area and within the mandatory no-spray zones shown in Table 2 below.

Table 2: No-spray zones for protection of the terrestrial environment

| For aerial application | | |
|---|----------------------------------|------------|
| Wind speed range at time of application | Downwind mandatory no-spray zone | |
| | Fixed-wing | Helicopter |
| from 3 to 8 kilometres per hour | 450 metres | 250 metres |
| from 8 to 14 kilometres per hour | 650 metres | 400 metres |

| | | |
|-----------------------------------|------------|------------|
| from 15 to 20 kilometres per hour | 750 metres | 500 metres |
| For ground application | | |
| from 3 to 20 kilometres per hour | 40 metres | |

Box 9: Example 4 – new label instructions**SPRAY DRIFT RESTRAINTS**

Specific definitions for terms used in this section of the label can be found at apvma.gov.au/spraydrift

DO NOT allow bystanders to come into contact with the spray cloud.

DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. The buffer zones in the relevant buffer zone table/s below provide guidance but may not be sufficient in all situations. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

DO NOT apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.

DO NOT apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.

DO NOT apply by a boom sprayer unless the following requirements are met:

- Spray droplets not smaller than a **MEDIUM** spray droplet size category.
- Minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section of the following table titled 'Buffer zones for boom sprayers') are observed.

Buffer zones for boom sprayers

| Application rate | Boom height above the target canopy | Mandatory downwind buffer zones | | |
|--------------------------|-------------------------------------|---------------------------------|------------------|------------------|
| | | Natural aquatic areas | Pollinator areas | Vegetation areas |
| Up to maximum label rate | 0.5 m or lower | 25 metres | 0 metres | 40 metres |
| | 1.0 m or lower | 65 metres | 0 metres | 110 metres |
| 2.1 L/ha or lower | 0.5 m or lower | 10 metres | 0 metres | 30 metres |
| | 1.0 m or lower | 40 metres | 0 metres | 65 metres |

DO NOT apply by aircraft unless the following requirements are met:

- Spray droplets not smaller than a **MEDIUM** spray droplet size category.
- For maximum release heights above the target canopy of 3m or 25% of wingspan or 25% of rotor diameter whichever is the greatest, minimum distances between the application site and downwind sensitive areas (see 'Buffer zones' section of the following table titled 'Buffer zones for aircraft') are observed.

| Buffer zones for aircraft | | | |
|---------------------------|---------------------------------|------------------|------------------|
| Type of aircraft | Mandatory downwind buffer zones | | |
| | Natural aquatic areas | Pollinator areas | Vegetation areas |
| Fixed-wing | 220 metres | 0 metres | 400 metres |
| Helicopter | 150 metres | 10 metres | 230 metres |

1.5 No spray drift restraints

If the current or reference product label does not contain any form of drift warning then the APVMA will not update the label with the new spray drift restraints unless requested to do so. If drift warnings appear in the protection statements or general instructions as shown in the example below then the label will be updated to reflect the new spray drift restraints.

Box 10: Example 5 – current or reference product label instructions (example of instructions)

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| <p>RESTRAINTS</p> <p>DO NOT ...</p> <p>PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS</p> <p>Drift Warning:</p> <p>DO NOT use unless wind speed is more than 3 kilometres per hour and less than 15 kilometres per hour as measured at the application site.</p> <p>Direct spray contact or even slight drift may cause severe injury or destruction of any growing crop or other desirable plants including trees and native vegetation.</p> <p>DO NOT use when breeze is blowing towards nearby desirable plants.</p> <p>DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants / crops, cropping lands or pastures.</p> <p>GENERAL INSTRUCTIONS</p> <p>Spray applications and drift risk assessment</p> <p>USE ONLY when wind speed is more than 3 km/hr and less than 15 km/hr as measured by an anemometer at the application site.</p> <p>DO NOT apply treatments by aircraft in situations where drift onto sensitive crops, pastures or desirable trees is likely to occur.</p> <p>Apply treatments using settings to produce a COARSE spray quality (ASAE S572).</p> |
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Box 11: Example 5 – new label instructions

The general spray drift restraints will be added and similar drift warnings appearing elsewhere on the label will be removed.

SPRAY DRIFT RESTRAINTS

Specific definitions for terms used in this section of the label can be found at apvma.gov.au/spraydrift

DO NOT allow bystanders to come into contact with the spray cloud.

DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

DO NOT apply unless the wind speed is between 3 and 15 kilometres per hour at the application site during the time of application.

DO NOT apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants / crops, cropping lands or pastures.

Direct spray contact or even slight drift may cause severe injury or destruction of any growing crop or other desirable plants including trees and native vegetation.

DO NOT use when breeze is blowing towards nearby desirable plants.

GENERAL INSTRUCTIONS

Spray applications and drift risk assessment

DO NOT apply treatments by aircraft in situations where drift onto sensitive crops, pastures or desirable trees is likely to occur.

Apply treatments using settings to produce a **COARSE** spray quality.