

Label Changes and Legal Requirements

**They are the still the same whether
you use a boom sprayer
or a *WeedSeeker*®.**



APVMA Spray Drift Review and Label Changes

- In 2008 the APVMA released their 'Operating Principles in Relation to Spray Drift'.
- New Spray drift restraints on labels were foreshadowed, to protect:
 - The Environment
 - Human Health &
 - International Trade

Changes To Labeling

New mandatory and advisory statements on labels will affect application technique and timing for many products,

changes include;

- Required Spray Qualities (changes to definition of coarse)
- Defined Wind Speed Ranges
- No-spray zones / down wind buffer distances
- Additional Record Keeping (on some labels)

SPRAY DRIFT RESTRAINTS

DO NOT apply with spray droplets smaller than a **COARSE** spray droplet size category according to the “*APVMA compliance Instructions for Mandatory COARSE or larger Droplet Size Categories*” located under this title in the GENERAL INSTRUCTIONS section of this label.

There is a multi-page booklet that will form part of the label that will describe acceptable definitions of coarse droplets.

For ground application this will accept the ASAE S572 or the BCPC standard. For aircraft it will recognise appropriate droplet size models and will accept the $D_v 0.1$ value for coarse.

SPRAY DRIFT RESTRAINTS

Wind speed may change on some labels for ground application, and extra warnings about inversions.

- **DO NOT** apply when the 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

No Spray Zones

- These are a calculated distance downwind from the release point where the amount of product predicted to deposit must be below the APVMA level of concern.
- This is determined based on factors such as:
 - Droplet Size (Spray Quality)
 - Wind Speed
 - Amount of active in the tank
 - Formulation Effects
- Uses the Agdrift computer model developed by the US spray drift task force in the 1980's and 90's
- The upper limit of this model is 300m

Types of No Spray Zones

- Distances to terrestrial vegetation
- Distances to areas occupied by humans
- Distances to aquatic areas
- Distances to livestock or pastures

MANDATORY NO-SPRAY ZONES

DO NOT apply if there are people, structures that people occupy or parks and recreation areas within **xxx metres** downwind from the application area.

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

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

DO NOT apply if there are livestock, pasture or any land that is producing feed for livestock within **uuu metres** downwind from the application area.

Distances

No Spray Zone (Down wind Distances) will depend on:

- Level of concern of the product
- What is in the drum (formulation)
- Maximum label rates for the product
- Application method
 - Ground vs Aerial
 - Aerial (fixed wing vs helicopter & wind speed)

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 3 below.

Table 3 – 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	XXX metres	MMM metres
from 8 to 14 kilometres per hour	YYY metres	PPP metres
from 14 to 20 kilometres per hour	ZZZ metres	QQQ metres
FOR GROUND APPLICATION		
from 3 to 20 kilometres per hour	WWW metres	

MANDATORY NO-SPRAY ZONES

DO NOT apply if there are people, structures that people occupy or parks and recreation areas 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 Human Health		
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	XXX metres	MMM metres
from 8 to 14 kilometres per hour	YYY metres	PPP metres
from 14 to 20 kilometres per hour	ZZZ metres	QQQ metres
FOR GROUND APPLICATION		
from 3 to 20 kilometres per hour	WWW metres	

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 2 below.

Table 2 – 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	XXX metres	MMM metres
from 8 to 14 kilometres per hour	YYY metres	PPP metres
from 14 to 20 kilometres per hour	ZZZ metres	QQQ metres
FOR GROUND APPLICATION		
from 3 to 20 kilometres per hour	WWW metres	

DO NOT apply if there are livestock, pasture or any land that is producing feed for livestock downwind from the application area and within the **mandatory no-spray zones** shown in Table 4 below.

Table 4 – No-Spray Zones for Protection of International Trade		
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	XXX metres	MMM metres
from 8 to 14 kilometres per hour	YYY metres	PPP metres
from 14 to 20 kilometres per hour	ZZZ metres	QQQ metres
FOR GROUND APPLICATION		
from 3 to 20 kilometres per hour	WWW metres	

Record Keeping Requirements

- Some labels will include instructions on record keeping.
- These will be additional to State requirements

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

1. date with start and finish times of application;
2. locations 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/situation and weed/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.)

Agro's recommendations

- You must insure that your recommended rates of products are consistent with all label (or permit) requirements
- You cannot recommend that a product is applied above any label (or permit) rate.

WeedSeekers & Recommendations

- If you have clients using a weedseeker, make sure they know what rate it is delivering, and that their records reflect this (mixing etc).
- Based on field evaluations by Crop Optics and BGC the average sprayed width was 0.6metres for the 65 degree even nozzle.

Nozzle angle and height affect sprayed width.
Sprayed width affects applied rate (L/ha).

$$\text{L/ha} = \text{L/min/nozzle} \times 600 \div \text{speed (km/h)} \div \text{width (m)}$$



Weedseeker Rates (L/Ha) using TP 65 even nozzles

sprayed width (m)

0.6

nozzle size	pressure (bar)	flowrate (L/min/nozzle)	speed (km/h)				
			12	14	16	18	20
0 3	2	0.96	80	69	60	53	48
	2.5	1.08	90	77	68	60	54
	3	1.18	98	84	74	66	59
0 4	2	1.29	108	92	81	72	65
	2.5	1.44	120	103	90	80	72
	3	1.58	132	113	99	88	79
0 5	2	1.61	134	115	101	89	81
	2.5	1.80	150	129	113	100	90
	3	1.97	164	141	123	109	99

Spray quality for 65 degree events

Curve Fitted

BCPC Data

TP65__E	psi											
	20	25	30	35	40	45	50	60	70	80	90	100
TP6502E	C	C	M	M	M	M	M	F	F	F	F	F
TP6503E	C	C	C	C	C	C	M	M	M	M	F	F
TP6504E	C	C	C	C	C	C	M	M	M	M	M	F

USING TABULAR DATA (CURVE FITTED) OF ONE NOZZLE
TAKEN FROM WHEATON OXFORD LASER

TP65__E	bar											
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7
TP6502E	C	M	M	M	M	F	F	F	F	F	F	F
TP6503E	C	C	C	C	M	M	M	M	M	M	F	F
TP6504E	C	C	C	C	M	M	M	M	M	M	M	F

USING TABULAR DATA (CURVE FITTED) OF ONE NOZZLE
TAKEN FROM WHEATON OXFORD LASER

Summary

- Label changes will apply to all application methodsuntil more data becomes available (DRT's)
- Maximum label (or permit) rates also apply to the Weedseeker.
- Ensure your clients are complying with all label requirements:
 - spray quality, label rates, wind speeds, inversion warnings, and no spray zones (when they are included on the labels of products they are using).

Bill Gordon Consulting

PO Box 4197

Lawrence NSW 2460

bill.gordon@bigpond.com

Mobile: 0429 976 565

Website: ispray.com.au