

# Changes to 2,4-D registrations

By Bill Gordon

On 3 October 2018, the APVMA suspended the labels of all products containing the active ingredient 2,4-D and replaced them with a permit.

This action has been taken in response to widespread damage to sensitive crops over several years, including grapes, other horticultural crops, summer pulses and cotton.

The permit contains new Directions for Use including changes to application technique, spray quality, timing and the observance of mandatory no-spray buffer zones as well as the requirements for an increased level of record keeping. These changes do not restrict any other aspects of the currently approved use patterns as detailed by the product label.

### SUMMARY OF THE NEW DIRECTIONS

- Applicators must now use at least a very coarse (VC) spray quality.
- Downwind buffers now apply (typically less than 50 metres, subject to the rate and product being applied).
- Additional advisory statements have been added for use during the period between 3 October and 15 April:
  - to use an extremely coarse (XC) or ultra coarse (UC) spray quality; and
  - to take further steps to mitigate the risk of

- spray drift including increased water rates and slower application speeds.
- Clearer instructions have been added about identifying surface temperature inversions to help avoid spraying when they are present.
  - Additional requirements for detailed records to be made within 24 hours of application that must be kept for a minimum of two years.

### NOZZLES FOR VERY COARSE, EXTREMELY COARSE AND ULTRA COARSE

For many grain growers the requirement for using a very coarse (VC) spray quality or, where recommended, extremely coarse (XC) or ultra coarse (UC) spray quality, will require an additional set of nozzles.

Many low-pressure air induction nozzles such as the Teejet AIXR or Hardi Minidrift are not able to produce VC, XC or UC droplets at useful pressures in the orifice sizes most commonly used, which range from 02 (yellow), 025 (lilac) and 03 (blue).

Many spray operators will need to change to high-pressure air induction nozzles, such as the Hardi Injet, Teejet TTI or TTI-60, or the Agrotop TD-XL-D. These nozzles should be operated at pressures above 4 bar (ideally 5-6 bar), so their use may require increasing the application volume. See below for examples of nozzles that can produce VC (green), XC (white) and UC (black) spray qualities.

PHOTO: BRAD COLLIS



### NOZZLE OPTIONS FOR PULSE WIDTH MODULATION SYSTEMS

Very coarse spray qualities can be achieved on pulse width modulation systems using Wilger MR-04 or SR-06 nozzles at pressures below 2.4 bar. Other orifice sizes may be appropriate if using the Wilger DR nozzle types.
























To obtain extremely coarse or coarser spray qualities, operators should check with their suppliers on the availability of newer nozzle models that are suitable for this purpose.

### ADJUSTING APPLICATION VOLUMES

When increasing the droplet size, it is important to consider increasing the total application volume to maintain coverage and efficacy. In low stubble environments a minimum of 70 litres per hectare has been shown to provide acceptable efficacy when using XC spray qualities. In heavier stubbles this may need to be increased to 80L/ha or more. □

**Useful resources**  
'Maintaining efficacy with larger droplets' fact sheet:  
<https://grdc.com.au/maintaining-efficacy-with-larger-droplets>

TABLE 1 Spray qualities for common nozzle types and orifice sizes.

		Low pressure air induction (RUN ABOVE 2-3 BAR)														High pressure air induction (RUN ABOVE 3-4 BAR)											
BRAND		Hypro	TeeJet	Lechler	Agrotop	Hypro	Hardi	Hardi	Lechler	TeeJet	Hypro	Belle-ricay	ARAG	Albuz		TeeJet	Lechler	Albuz	ARAG	Agrotop	Agrotop	Hardi	Teejet	TeeJet	TeeJet		
MODEL		Guardian Air Twin	AI3070 TwinJet	IDK-120	Airmix	Guardian Air	Minidrift-DUO TwinJet	Minidrift	IDKT TwinJet	AIXR	ULD-120	bubble-jet	CFA	CVI		AITTJ60 TwinJet	ID	AVI	CFA-ULTRA	Turbo Drop TD	Turbo Drop TD-XL-D	Injet	AI	TTI60 TwinJet	TTI		
Nozzle size	BAR														BAR												
015 GREEN	1.5		VC	C		UC		C		VC	UC		VC	VC	1.5										UC		
	2.0	not available in this size	C	C	XC	XC	not available in this size	C	not available in this size	C	XC	XC	?	VC	2.0	not available in this size							UC	not available in this size	UC		
	3.0		M	C	C	C		C		C	VC	VC	C	VC	3.0		VC	VC	VC						VC	XC	XC
	4.0		M	M	C	M		M		M	C	C	C		4.0		C	C	VC	C			VC		VC	XC	XC
	5.0		F	M	C	M		M		M	C	C	C		5.0		C	C	C	C			VC		VC	VC	XC
	6.0		F	F	M	M		M		M	C	C	C		6.0		C	C	C	C			VC		VC	VC	XC
	7.0		F			M						C	C		7.0		C	C	C	C			VC		C		VC
8.0					M				M		M			8.0	M	C	C	C	C	C	C						
02 YELLOW	1.5		VC	VC		XC	VC	VC	not available in this size	VC	UC	VC	XC	VC	1.5	XC						UC			UC	UC	
	2.0	C	VC	C	C	VC	C	C		VC	XC	C	?	VC	2.0	VC					UC		UC	UC	UC		
	3.0	M	C	C	C	M	C	C		C	C	C	C	C	3.0	C	VC	VC	VC		XC	VC	XC	UC	UC		
	4.0	M	M	M	M	M	C	C		M	C	M	C		4.0	C	C	C	VC	C	XC	VC	XC	VC	UC		
	5.0	M	M	M	M	M	M	M		M	M	M	C		5.0	M	C	C	C	C	XC	VC	VC	VC	XC		
	6.0	M	F	M	M	M	M	M		M	M	M	C		6.0	M	C	C	C	C	VC	VC	VC	VC	XC		
	7.0	F	F			M					M	M	C		7.0	M	C	C	C	C		VC	C	C	VC		
8.0	F								M		C			8.0		C	C	C	C		VC	C					
025 LILAC	1.5		XC	VC		XC	VC	VC	not available in this size	XC	XC	XC	XC	VC	1.5	XC						UC			UC	UC	
	2.0	UC	VC	VC	VC	VC	VC	VC		VC	XC	XC	?	VC	2.0	VC						UC		UC	UC	UC	
	3.0	VC	C	C	C	C	C	C		C	VC	C	VC	VC	C	3.0	C	VC	VC			XC	VC	XC	XC	UC	
	4.0	M	M	C	C	M	C	C		C	C	C	C	?		4.0	C	VC	C			VC	XC	VC	XC	UC	
	5.0	M	M	M	M	M	M	M		M	C	M	C	C		5.0	M	VC	C			VC	XC	VC	VC	XC	
	6.0	M	M	M	M	M	M	M		M	M	M	C	C		6.0	M	C	C			VC	VC	VC	VC	XC	
	7.0	M	M			M						M	C	C		7.0	M	C	C			VC	C	C	XC		
8.0	M									M		C		8.0		C	C			VC	C						
03 BLUE	1.5		XC	VC		UC	VC	VC	C	XC	XC	XC	XC	VC	1.5	UC						UC			UC	UC	
	2.0	VC	XC	VC	VC	XC	VC	VC	C	VC	XC	XC	?	VC	2.0	XC						UC		UC	UC		
	3.0	C	VC	C	C	C	VC	C	C	VC	C	VC	VC	C	3.0	VC	VC	XC	VC		UC	VC	XC	UC	UC		
	4.0	M	C	C	C	C	C	M	C	C	C	C	VC		4.0	C	VC	VC	VC	VC	XC	VC	VC	XC	UC		
	5.0	M	M	M	C	M	M	C	M	C	M	C	VC		5.0	C	VC	C	VC	C	XC	VC	VC	XC	UC		
	6.0	M	M	M	M	M	M	M	F	M	M	C	?		6.0	M	C	C	VC	C	XC	VC	VC	VC	XC		
	7.0	M	M		M	M					M	C	C		7.0	M	C	C	VC	C		VC	C	VC	XC		
8.0	M									M		C		8.0		C	C	C	C		VC	C					
04 RED	1.5		UC	VC		XC	VC	VC	VC	XC	UC	XC	XC	VC	1.5	UC									UC	UC	
	2.0	VC	XC	VC	VC	VC	C	VC	C	XC	UC	VC	XC	C	2.0	XC							UC	UC	UC		
	3.0	C	VC	VC	C	C	C	VC	C	VC	UC	C	XC	C	3.0	VC	XC	XC				VC	XC	UC	UC		
	4.0	M	VC	C	C	M	M	C	M	VC	XC	C	?		4.0	C	VC	VC			VC	VC	XC	UC	UC		
	5.0	M	C	C	C	M	M	C	M	C	XC	C	VC		5.0	C	VC	VC			VC	VC	XC	XC			
	6.0	M	C	M	M	M	M	C	M	C	VC	C	?		6.0	M	VC	VC			VC	VC	VC	XC			
	7.0	M	M			M					C	C	C		7.0	M	C	VC			VC	C	VC	XC			
8.0	M									C		C		8.0		C	VC			VC	C						