Practical travel speed, nozzle size and pressure options to apply Roundup Ultramax<sup>®</sup> between 50 and 80 L/ha as per label

## **On Coarse<sup>®</sup> DRA**

Size	Der	km/h													
Size	Bar	16	17	18	19	20	21	22							
N	3	59	56	53	50										
≥ S	4	68	64	61	58	55	52	50							
Yellow 02	5	76	72	68	64	61	58	56							
7	6		79	74	71	67	64	61							
2J	3	74	70	66	62	59	56	54							
02	4		80	76	72	68	65	62							
Lilac 025	5				80	76	73	69							
	6						80	76							
m	3			79	75	71	68	65							
Blue 03	4						78	75							
3lue	5														
	6														

## Notes

- 1. Nozzle spray quality was tested using a mixture of 3.8% Roundup Ultramax<sup>®</sup>, 1.6% Amicide Advance 700 and 2% Liaise according to the ASABE 572.1 standard at CPAS Gatton.
- 2. The herbicide spray mixture was chosen to be representative of the worst-case scenario effect on spray quality by ground boom applied broadcast spraying of glyphosate mixtures for broadacre use in general since:
  - Roundup Ultramax<sup>®</sup> is highly formulated with surfactants which have a marked effect on spray quality
  - · The highest labelled concentration for general broadacre use was used (1.9L/50L) at all pressures tested.
- 3. Accordingly, when using On Coarse® DRA at 0.25% in a mixture containing glyphosate at up to 3.8%, the applicator can be confident of the spray quality listed in the On Coarse spray chart.
- 4. FMC advises that:
  - Both lower concentrations of Roundup Ultramax<sup>®</sup> and different glyphosate formulations may have different effects on % fine droplets produced which could be sufficient to produce variation in spray quality from that listed in the chart where On Coarse DRA was not used.
- 5. Nozzles and spraying parameters used for testing were selected from the 2019 version of the GRDC Nozzle Selection Guide by:
  - Restricting travel speeds for application to between 16 and 22 km/h, then
  - Restricting application pressures to the optimum operating range for the pre-orifice nozzle group to between 2 and 4 bar; the low pressure air-induction nozzle group to between 3 and 4 bar; the high pressure air-induction group to between 4 and 6 bar, then
  - Restricting application volume to between 50 and 80 L/ha, then
  - Restricting combinations to those that produced VC, XC and UC spray qualities.

On Coarse<sup>®</sup> DRA gives boom spray applicators their best chance of producing VC, XC or UC spray qualities through a wide range of nozzles.

FMC developed On Coarse® DRA (Drift Reducing Adjuvant) to provide applicators with the confidence and knowledge to apply 2,4-D/glyphosate mixtures with a wide range of nozzles to produce genuine Very Coarse (VC), Extremely Coarse (XC) or Ultra Coarse (UC) spray qualities.

Through its research program using University of Queensland's CPAS wind tunnel facility at Gatton, FMC has built a new database of spray quality ratings achieved when applying mixtures containing glyphosate and 2,4-D. This information complements the existing manufacturer information compiled in the GRDC nozzle selection guide.

As is well known to the industry, tank mixes usually fine up nozzle spray qualities so that some rated as VC with water, can produce a medium quality with tank mix. In our study, no nozzle, not even the TTI, produced an UC spray quality for the base glyphosate/2,4-D mixture used - until On Coarse® was added to the mixture.

On Coarse® DRA is available in 20 L, 190 L and 960 L pack sizes.

## Features and Benefits

On Coarse<sup>®</sup> DRA, which has several important technical advances, will replace Dead Sure<sup>®</sup> in FMC's range. These advances include:

- Twice the active ingredient concentration
- Used at half the rate of Dead Sure<sup>®</sup> in the tank (now at 0.125 0.25% v/v)
- Significantly better value for money per hectare
- · Better and more comprehensive drift reduction performance over a wide range of VC to UC rated nozzles
- Better storage stability
- Broader label for use over a wide range of glyphosate tank mixtures and situations
- Labelled for use with paraguat products
- · Supported by a comprehensive spray quality database of nozzle/size/pressure combinations for applying 2,4-D containing glyphosate mixtures with a genuine VC, XC or UC spray quality
- At-a-glance nozzle chart that shows which nozzles and pressures can be used by applicators to responsibly apply 2,4-D containing glyphosate tank mixtures.

## or further information

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FMC Australasia Pty Ltd one: 1800 066 355





# Spray drifting off course? **Use On Coarse®**

An Agricultural ices Compa



FMC Australasia Ptv Ltd Phone: 1800 066 355

%<	150um	Fine 24-69			Medium 10 - 24	4		Coarse 6 - 10			Very Coarse 3 - 6			Extra Coarse 1 - 3			Ultra Coarse < 1						
			Low Pressure Air Induction (run between 3 and 4 bar)						Low Pressure Air Induction (run between 3 and 4 bar)						High	n Pressi	ure Air Ir	nductior	n (run be	etween 4	4 and 6	bar)	
Br	and	Hypro®	TeeJet®	Hypro®	Hardi®	TeeJet®	Hypro®	Bellerkay	ARAG®		TeeJet®	Lechler®	ALBUZ®	ARAG®	HARDI®	ARAG®	Agrotop®	TeeJet®	TeeJet®	TeeJet®			
M	odel	Guardian Air Twin	Al3070 TwinJet	Guardian Air	Minidrift-Duo twinjet	AIXR	ULD-120	bubble-jet	CFA		AITTJ60 twinjet*	ID	AVI	CFA-ULTRA	Injet	TFA twin jet	Turbo-drop TD-XL-D	AI	TTI60 twinjet	тті			
Spray Qu	ality Standard	ASABE 572.1	ASABE 572.1	ASABE 572.1	ASAE/BCPC	ASABE 572.1	ASABE 572.1	ASABE 572.1	ASABE 572.1		ASABE 572.1	ASAE/BCPC	ASABE 572.1	ASABE 572.1	ASAE/BCPC	ASABE 572.1	ASABE 572.1	ASABE 572.1	ASABE 572.1	ASABE 572.1			
Size	Bar	<b>ANDRO</b>	<b>P</b>	7		T	Ţ	4940	1	Bar		Ţ		Carl				- the control of the	J				
Nozz	le type/	pressures the	at deliver VC, 2	XC, UC bas	ed on manuf	acturer tes	ts with w	ater only	(As compil	led fro	om man	ufacture	er specs	s and lis	ted on (	GRDC r	nozzle cł	nart)					
8	3									3													
Ň	4									4			VC	VC	VC	VC	XC	XC	UC	UC			
Yellow	5									5			VC		VC		XC	VC	VC	UC			
~	6									6			VC		VC		VC	VC	VC	XC			
25	3	VC				VC		VC	VC	3													
Lilac 025	4									4		VC			VC		XC	XC	XC	UC			
ilac	5									5		VC	VC		VC		XC	VC	VC	XC			
	6									6			VC		VC		VC	VC	VC	XC			
<b>സ</b>	3		VC	VC		VC		VC	VC	3	VC												
Blue 03	4								VC	4		VC	VC	VC	VC	XC	XC	VC	XC	UC			
Blu	5									5		VC	VC	VC	VC		XC	VC	XC	UC			
	6									6			VC	VC	VC	VC	XC	VC	VC	XC			

Actual spray qualities delivered by the nozzles/pressures above when tested with a robust rate of Roundup Ultramax<sup>®</sup> mixed with 2,4-D amine.

02	3						3										
	4						4			С	С	С	С	VC	С	VC	VC
Yellow	5						5			М		М		С	С	С	VC
×	6						6	_		М		М		С	М	С	VC
5 2	3	М		С	М	С	3										
025	4						4		VC	С		С		С	С	VC	XC
Lilac	5						5		VC	С		С		С	С	VC	XC
	6						6			М		М		М	М	С	VC
m	3		М	М	М	С	3	VC									
e 03	4					С	4		С	С	С	VC	VC	VC	С	XC	XC
Blue	5					М	5		С	С	С	VC	С	VC	С	VC	XC
	6						6			М	С	VC	С	С	С	VC	VC

Nozzle type/pressures that deliver VC, XC and UC when using On Coarse<sup>®</sup> Drift Reduction Adjuvant at 0.25% with a robust rate of Roundup Ultramax<sup>®</sup> and 2,4-D amine

02	3	VC			VC			3	VC									
≥	4							4	VC		С	VC	VC	XC	VC	XC	VC	XC
	5							5			С	VC	VC	VC	VC	VC	VC	XC
×	6							6			М		С		С	VC	С	XC
5	3			VC	VC	С	VC	3	VC									
: 025	4			VC			VC	4	VC	XC			VC		VC	VC	XC	UC
Lilao	5							5		XC			С		VC	VC	VC	UC
	6							6					С		С	С	VC	XC
m	3		VC		С	С	VC	3	XC	VC								
e 03	4						С	4	VC	VC	VC	VC	XC	XC	XC	XC	UC	UC
Blue	5						С	5			С	VC	XC	VC	XC	VC	XC	XC
	6							6			С	VC	VC	VC	VC	VC	XC	XC