

## Using multiple applications of Metsulfuron methyl (Ally) throughout the season when growing wheat – is there a yield effect?

**Co-operator** – Greg Creasy – Yuna.

**Soil Type** – yellow Eradu sandplain

**Variety** – EGA Bonnie Rock

**Treatment Application** – Metsulfuron methyl applied at 2.5g/ha - 1,2,3 or 4 times per plot to achieve the required rates/ha.

**Rainfall** – Jan-April 148mm,

**Paddock treatments** - 4g Metsulfuron in January, late Post emergent – 800ml 24d Ester 680 LVE, 40g Lontrel, 3g Ally.

GSR April-Oct 150mm

**Trial Layout** – 4 treatments replicated 3 times in a randomized block design. Plots 90m long by 18m wide, harvest width 10.8m.

**Table 1** : Trial design and plot layout

		Greg Creasy - Yuna													
		Wandin road - approx 5km east from Bindoo turnoff.													
		east													
Nth	gate	plot	1	2	3	4	5	6	7	8	9	10	11	12	
		JAN		4g	4g	4g	4g	4g	4g	4g	4g	4g	4g	4g	4g
		APR		<b>Ally 2.5g</b>	<b>Ally 5g</b>	<b>Ally 7.5g</b>	<b>Ally 10g</b>	7.5	2.5	5	10	7.5	5	2.5	10
		JUL		3g	3g	3g	3g	3g	3g	3g	3g	3g	3g	3g	3g
	Total g/ha		<b>9.5</b>	<b>12</b>	<b>14.5</b>	<b>17</b>	<b>14.5</b>	<b>9.5</b>	<b>12</b>	<b>17</b>	<b>14.5</b>	<b>12</b>	<b>9.5</b>	<b>17</b>	

The paddock had received 4g Ally in the summer spray prior to laying down this trial. The paddock (trial included) also received another 3g Ally in the post emergent in-crop broadleaf spray.

Hence, the total amounts applied for the year were 9.5g/ha, 12g/ha, 14.5g/ha and 17g/ha.

**Table 2: Results**

TREATMENTS		JAN rate	Apr rate	JULY rate	TOTAL	% of	Yield
		g/ha	g/ha	g/ha	g/ha	trt 1	kg/ha
1	Metsulfuron-methyl	4	2.5	3	9.5	100.0	2413.6
2	Metsulfuron-methyl	4	5	3	12	103.3	2493.4
3	Metsulfuron-methyl	4	7.5	3	14.5	104.5	2521.2
4	Metsulfuron-methyl	4	10	3	17	99.7	2406.7
		LSD 0.01				7.3	176.0
		LSD 0.05				4.8	116.1
		Coefficient of Variation				0.1	2.4

**Observations:**

There were no visual differences between any of the plots throughout the season. Visual observations on the harvester were that plots 7-12 were slightly affected by frost.

**Discussion:**

Due to the occurrence of some slight frost symptoms on the southern half of the trial, the trial results must be interpreted with some caution.

However, as the trial was replicated and randomized, the data still showed a good LSD and CV.

Very little difference in the yields of all treatments suggests that the difference in the total amount of Metsulfuron applied on the acidic yellow sandy soils had no effect on crop yields. If there was a nil Metsulfuron treatment, we could then assess if the presence or absence of Metsulfuron rather than the quantity applied was having an effect.

On a higher pH heavier clay soil type, some caution may be needed when applying this amount of Metsulfuron. Hydrolysis or breakdown of herbicides will vary with temperature, and so may have different results in cooler regions with less summer rain and lower soil temperatures.

As metsulfuron is relatively inexpensive and is a potent herbicide spike for many summer weeds, it is reassuring to know that using robust rates should have few adverse effects on wheat in this situation. Specific varietal tolerances to Metsulfuron (IBS) should be considered as only one variety, Bonnie Rock, was tested here.

**Acknowledgements –**

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