

TRIAL REPORT

Envirowet Weed Control in Fallow
Horsham, Victoria, 2024



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SUMMARY

A small plot trial was established near Horsham, Victoria in 2024 compare the effectiveness of Envirowet Multi-Phase Surfactant with industry standard wetting agents when used with Glyphosate and Paraquat herbicides to control weeds in fallow.

Treatments were compared with an untreated control (UTC) and included Glyphosate 450 or Paraquat 360, each applied at 1.5 L/ha, either solo, or with Envirowet at 25, 50, or 100 mL/100 L, Axiwetta at 100 mL/100 L, or LI700 at 250mL/ha.

Treatments were applied as a single broadcast foliar spray to sowthistle(*Sonchus oleraceus*) at the three leaf growth stage (BBCH 13), annual ryegrass (*Lolium rigidum*) at the four-tiller growth stage (BBCH 24), field pea (*Pisum sativum*) at the two side shoot growth stage (BBCH 22), prickly lettuce (*Lactuca serriola*) at the four leaf growth stage (BBCH 14), and vetch (*Vicia sativa*) at the first side shoot growth stage (BBCH 21). Treatments were applied using a hand-held boom fitted with TeeJet® AIXR flat fan air induction nozzles delivering 100 L/ha and generating coarse spray droplets (ASABE 572.1).

Seasonal conditions were characterised by below-average rainfall. However, this did not compromise of the results of the trial.

Weed counts were conducted by species across the UTC plots prior to treatment application and across all plots at 28 days after application (DA-A). Weed control was visually assessed by species at 8, 17 and 28 DA-A.

Factorial analysis showed Envirowet at 100 mL/100 L displayed greater visual control of sowthistle at 17 DA-A than nil adjuvant or all other adjuvants, however this was not significant when compared with Envirowet at 25 mL/100 L and was not observed at 28 DA-A.

Factorial analysis showed that Envirowet at 50 or 100 mL/100 L, Axiwetta, or LI700 displayed significantly greater visual control of annual ryegrass at 8 DA-A than the plots that were not treated with an adjuvant, however, this was not observed at 17 or 28 DA-A.

Factorial analysis showed no significant differences in the level of visual field pea control provided by Envirowet at 25-100 mL/100 L, Axiwetta, LI700, or nil adjuvant between 8 and 28 DA-A.

Factorial analysis showed that all adjuvants displayed a higher level of mean visual prickly lettuce control at 17 DA-A than the plots that were not treated with an adjuvant, however this was not observed at 28 DA-A.

There were no significant differences in the level of visual control of vetch provided by Envirowet at 25-100 mL/100 L, Axiwetta, LI700, or nil adjuvant between 8 and 28 DA-A.

INTRODUCTION

Aims

1. To compare the effectiveness of Envirowet Multi-Phase Surfactant with industry standard wetting agents when used with glyphosate 450 and paraquat 360 herbicides to control weeds in fallow.

Chronology of events

Date	Days after application A (DA-A)	Weed growth stage		Event
		BBCH scale	Description	
29-Jul-2024	-1	10-17 (sow thistle) 21-28 (annual ryegrass) 12-26 (field pea) 11-16 (Prickly lettuce) 14-27 (vetch)	Leaf development – formation of side shoots	Weed counts conducted.
30-Jul-2024	0			Treatments applied (timing A).
7-Aug-2024	8			Weed control assessed.
16-Aug-2024	17			Weed control assessed.
27-Aug-2024	28			Weed control assessed. Weed counts conducted.

Products

Product	Active ingredient	Active ingredient concentration	Form type	Batch no.
Glyphosate 450	Glyphosate	450 g/L	SL	Not provided
Envirowet	-	-	SL	2012239842
Axiwetta	Alcohol alkoxylate	1000 g/L	L	37841
LI700	Soyal phospholipids + propionic acid	350 g/L + 350 g/L	SL	Not provided
Paraquat 360	Paraquat	360 g/L		378251

Treatments

Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code
Factor A (Herbicide)						
1	Glyphosate 450	1.5L/ha		675g ai/ha		A
2	Paraquat 360	1.5L/ha		540g ai/ha		A
Factor B (Adjuvant)						
1	Nil					A
2	Envirowet 25	25mL/100 L				A
3	Envirowet 50	50mL/100 L				A
4	Envirowet 100	100mL/100 L				A
5	Axiwetta	100mL/100 L		100g ai/ha		A
6	LI700	250mL/100 L		175g ai/ha		A
Comparison Treatments						
1	Untreated Control					

Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code
1	Untreated Control					
2	Glyphosate 450	1.5L/ha		675g ai/ha		A
	Nil					A
3	Glyphosate 450	1.5L/ha		675g ai/ha		A
	Envirowet 25	25mL/100 L				A
4	Glyphosate 450	1.5L/ha		675g ai/ha		A
	Envirowet 50	50mL/100 L				A
5	Glyphosate 450	1.5L/ha		675g ai/ha		A
	Envirowet 100	100mL/100 L				A
6	Glyphosate 450	1.5L/ha		675g ai/ha		A
	Axiwetta	100mL/100 L		100g ai/ha		A
7	Glyphosate 450	1.5L/ha		675g ai/ha		A
	LI700	250mL/100 L		175g ai/ha		A
8	Paraquat 360	1.5L/ha		540g ai/ha		A
	Nil					A
9	Paraquat 360	1.5L/ha		540g ai/ha		A
	Envirowet 25	25mL/100 L				A
10	Paraquat 360	1.5L/ha		540g ai/ha		A
	Envirowet 50	50mL/100 L				A
11	Paraquat 360	1.5L/ha		540g ai/ha		A
	Envirowet 100	100mL/100 L				A
12	Paraquat 360	1.5L/ha		540g ai/ha		A
	Axiwetta	100mL/100 L		100g ai/ha		A
13	Paraquat 360	1.5L/ha		540g ai/ha		A
	LI700	250mL/100 L		175g ai/ha		A

Factor	Description
A	Herbicide
B	Adjuvant

RESULTS

Table 1 – Sowthistle (*Sonchus oleraceus*) count per m² at -1 and 28 DA-A (ANOVA)

Assessment Date		29-Jul-2024	27-Aug-2024
Part Assessed		PLANT, P	PLANT, P
Assessment Type		COUNT	COUNT
Assessment Unit		NUMBER	NUMBER
Reporting Basis		1 m2	1 m2
Number of Subsamples		2	2
Pest Stage Majority/Min/Max		13, 10, 17	13, 10, 17
Trt-Eval Interval		-1 DA-A	28 DA-A
ARM Action Codes		T1	&AL T8
Trt No.	Treatment Name	Rate	Rate Unit
		2	34
1	Untreated Control	63.0-	55.5a
2	Glyphosate 450 Nil	1.5L/ha 57.5-	0.5bc
3	Glyphosate 450 Envirowet 25	1.5L/ha 25mL/100 L 56.0-	3.0bc
4	Glyphosate 450 Envirowet 50	1.5L/ha 50mL/100 L 44.6-	0.5bc
5	Glyphosate 450 Envirowet 100	1.5L/ha 100mL/100 L 68.5-	0.5bc
6	Glyphosate 450 Axiwetta	1.5L/ha 100mL/100 L 69.5-	1.5bc
7	Glyphosate 450 LI700	1.5L/ha 250mL/100 L 77.0-	0.5bc
8	Paraquat 360 Nil	1.5L/ha 51.3-	0.0c
9	Paraquat 360 Envirowet 25	1.5L/ha 25mL/100 L 71.5-	1.5bc
10	Paraquat 360 Envirowet 50	1.5L/ha 50mL/100 L 55.5-	3.0bc
11	Paraquat 360 Envirowet 100	1.5L/ha 100mL/100 L 59.0-	3.0b
12	Paraquat 360 Axiwetta	1.5L/ha 100mL/100 L 58.5-	0.5bc
13	Paraquat 360 LI700	1.5L/ha 250mL/100 L 52.0-	0.5bc
LSD P=.05		23.36	NA
Standard Deviation		16.26	0.32t
CV		26.96	95.02t
Levene's F		0.999	1.137
Skewness		0.2974	1.6416*
Kurtosis		-0.3466	2.0586*
Replicate F		1.631	1.541
Replicate Prob(F)		0.2004	0.2217
Treatment F		1.279	8.029
Treatment Prob(F)		0.2747	0.0001

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

Missing data estimates (Yates) are included in columns 2, 34.

AL = Data transformed using log transformation of X+1 with resulting letters of separation applied to original means.

&=Transformation applied to 'Plot' experimental unit means of subsamples

T1 = [C1]*4

T8 = [C33]/0.25

Table 2 – Sowthistle (*Sonchus oleraceus*) count per m² at -1 and 28 DA-A (Factorial)

Assessment Date	29-Jul-2024	27-Aug-2024
Part Assessed	PLANT, P	PLANT, P
Assessment Type	COUNT	COUNT
Assessment Unit	NUMBER	NUMBER
Reporting Basis	1 m2	1 m2
Number of Subsamples	2	2
Pest Stage Majority/Min/Max	13, 10, 17	13, 10, 17
Trt-Eval Interval	-1 DA-A	28 DA-A
ARM Action Codes	T1	T8
Trt Treatment		
No. Name Rate Unit	2	34
TABLE OF R MEANS		
Replicate 1	66.7	0.8
Replicate 2	60.2	2.0
Replicate 3	54.3	1.4
Replicate 4	58.8	0.8
TABLE OF A (Herbicide) MEANS		
1 Glyphosate 450 1.5L/ha	62.1-	1.1-
2 Paraquat 360 1.5L/ha	57.9-	1.4-
LSD P=.05	8.95	1.34
Standard Deviation	15.21	2.28
CV	25.35	179.22
TABLE OF B (Adjuvant) MEANS		
1 Nil	54.1-	0.3-
2 Envirowet 25 25mL/100 L	63.8-	2.3-
3 Envirowet 50 50mL/100 L	49.8-	1.9-
4 Envirowet 100 100mL/100 L	63.8-	1.8-
5 Axiwetta 100mL/100 L	64.0-	1.0-
6 LI700 250mL/100 L	64.5-	0.5-
LSD P=.05	15.51	2.33
Standard Deviation	15.21	2.28
CV	25.35	179.22
TABLE OF A (Herbicide) B (Adjuvant) MEANS		
1 Glyphosate 450 1.5L/ha	57.5-	0.5-
1 Nil		
2 Paraquat 360 1.5L/ha	50.8-	0.1-
1 Nil		
1 Glyphosate 450 1.5L/ha	56.0-	3.0-
2 Envirowet 25 25mL/100 L		
2 Paraquat 360 1.5L/ha	71.5-	1.5-
2 Envirowet 25 25mL/100 L		
1 Glyphosate 450 1.5L/ha	44.1-	0.7-
3 Envirowet 50 50mL/100 L		
2 Paraquat 360 1.5L/ha	55.5-	3.0-
3 Envirowet 50 50mL/100 L		
1 Glyphosate 450 1.5L/ha	68.5-	0.5-
4 Envirowet 100 100mL/100 L		
2 Paraquat 360 1.5L/ha	59.0-	3.0-
4 Envirowet 100 100mL/100 L		
1 Glyphosate 450 1.5L/ha	69.5-	1.5-
5 Axiwetta 100mL/100 L		
2 Paraquat 360 1.5L/ha	58.5-	0.5-
5 Axiwetta 100mL/100 L		
1 Glyphosate 450 1.5L/ha	77.0-	0.5-
6 LI700 250mL/100 L		
2 Paraquat 360 1.5L/ha	52.0-	0.5-
6 LI700 250mL/100 L		
LSD P=.05	21.93	3.29
Standard Deviation	15.21	2.28
CV	25.35	179.22

Means followed by same symbol do not significantly differ (P=.05, LSD).

T1 = [C1]*4

T8 = [C33]/0.25

FACTORIAL/POOLED ERROR Least square estimation AOV For 29-Jul-2024 PLANT P COUNT NUMBER 1 m2
2 13 10 17 -1 DA-A T1 (Data Column 2)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	11723.826087				
R	3	624.226087	208.075362	0.900	0.4524	
A	1	253.565217	253.565217	1.096	0.3031	9.0
B	5	1263.042190	252.608438	1.092	0.3843	15.5
AB	5	2413.888889	482.777778	2.088	0.0937	21.9
ERROR	31	7169.103704	231.261410			

FACTORIAL/POOLED ERROR Least square estimation AOV For 27-Aug-2024 PLANT P COUNT NUMBER 1
m2 2 13 10 17 28 DA-A T8 (Data Column 34)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	233.739130				
R	3	12.005797	4.001932	0.770	0.5197	
A	1	1.391304	1.391304	0.268	0.6086	1.3
B	5	24.621659	4.924332	0.947	0.4648	2.3
AB	5	34.555556	6.911111	1.329	0.2778	3.3
ERROR	31	161.164815	5.198865			

Table 3 – Sowthistle (*Sonchus oleraceus*) control at 8, 17 and 28 DA-A (ANOVA)

Assessment Date	7-Aug-2024	16-Aug-2024	27-Aug-2024
Part Assessed	PLOT, P	PLOT, P	PLOT, P
Assessment Type	CONTRO	CONTRO	CONTRO
Assessment Unit	%UNCK	%UNCK	%UNCK
Reporting Basis	1 PLOT	1 PLOT	1 PLOT
Number of Subsamples	1	1	1
Pest Stage Majority/Min/Max	13, 10, 17	13, 10, 17	13, 10, 17
Trt-Eval Interval	8 DA-A	17 DA-A	28 DA-A
Trt Treatment	14	20	26
No. Name Rate Unit			
1 Untreated Control	0.0	0.0e	0.0
2 Glyphosate 450 Nil 1.5L/ha	15.0	42.5cd	100.0
3 Glyphosate 450 Envirowet 25 1.5L/ha 25mL/100 L	5.0	52.5c	98.8
4 Glyphosate 450 Envirowet 50 1.5L/ha 50mL/100 L	8.1	39.6d	100.0
5 Glyphosate 450 Envirowet 100 1.5L/ha 100mL/100 L	10.0	65.0b	100.0
6 Glyphosate 450 Axiwetta 1.5L/ha 100mL/100 L	7.5	45.0cd	100.0
7 Glyphosate 450 LI700 1.5L/ha 250mL/100 L	27.5	47.5cd	100.0
8 Paraquat 360 Nil 1.5L/ha	99.8	99.6a	100.0
9 Paraquat 360 Envirowet 25 1.5L/ha 25mL/100 L	100.0	100.0a	100.0
10 Paraquat 360 Envirowet 50 1.5L/ha 50mL/100 L	100.0	100.0a	100.0
11 Paraquat 360 Envirowet 100 1.5L/ha 100mL/100 L	98.8	100.0a	100.0
12 Paraquat 360 Axiwetta 1.5L/ha 100mL/100 L	98.8	100.0a	100.0
13 Paraquat 360 LI700 1.5L/ha 250mL/100 L	100.0	100.0a	100.0
LSD P=.05	11.11	10.41	1.03
Standard Deviation	7.73	7.25	0.71
CV	14.99	10.56	0.77
Levene's F	7.143*	1.482	
Skewness	0.0692	-0.5205	-3.1892*
Kurtosis	-1.9908*	-0.8897	8.5191*
Replicate F	0.696	1.542	0.944
Replicate Prob(F)	0.5609	0.2215	0.4300
Treatment F	145.755	85.011	6032.797
Treatment Prob(F)	0.0001	0.0001	0.0001

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

Missing data estimates (Yates) are included in columns 14,20,26.

* An asterisk next to the Levene's statistic indicates that homogeneity of variance cannot be assumed, and no statistical differences can be confirmed.

Where no Levene's statistic is reported, the test of homogenous variance has failed, and no statistical differences can be confirmed.

Table 4 – Sowthistle (*Sonchus oleraceus*) control at 8, 17 and 28 DA-A (Factorial)

Assessment Date	7-Aug-2024	16-Aug-2024	27-Aug-2024
Part Assessed	PLOT, P	PLOT, P	PLOT, P
Assessment Type	CONTRO	CONTRO	CONTRO
Assessment Unit	%UNCK	%UNCK	%UNCK
Reporting Basis	1 PLOT	1 PLOT	1 PLOT
Number of Subsamples	1	1	1
Pest Stage Majority/Min/Max	13, 10, 17	13, 10, 17	13, 10, 17
Trt-Eval Interval	8 DA-A	17 DA-A	28 DA-A
Trt Treatment			
No. Name Rate Unit	14	20	26
TABLE OF R MEANS			
Replicate 1	55.0	73.3	100.0
Replicate 2	54.6	78.3	99.6
Replicate 3	55.1	73.1	100.0
Replicate 4	58.8	72.5	100.0
TABLE OF A (Herbicide) MEANS			
1 Glyphosate 450 1.5L/ha	12.2b	48.7b	99.8-
2 Paraquat 360 1.5L/ha	99.5a	99.9a	100.0-
LSD P=.05	4.72	4.33	0.44
Standard Deviation	8.02	7.35	0.74
CV	14.35	9.90	0.74
TABLE OF B (Adjuvant) MEANS			
1 Nil	57.4-	71.0b	100.0-
2 Envirowet 25 25mL/100 L	52.5-	76.3ab	99.4-
3 Envirowet 50 50mL/100 L	54.0-	69.8b	100.0-
4 Envirowet 100 100mL/100 L	54.4-	82.5a	100.0-
5 Axiwetta 100mL/100 L	53.1-	72.5b	100.0-
6 LI700 250mL/100 L	63.8-	73.8b	100.0-
LSD P=.05	8.17	7.50	0.76
Standard Deviation	8.02	7.35	0.74
CV	14.35	9.90	0.74
TABLE OF A (Herbicide) B (Adjuvant) MEANS			
1 Glyphosate 450 1.5L/ha	15.0-	42.5cd	100.0-
1 Nil			
2 Paraquat 360 1.5L/ha	99.8-	99.6a	100.0-
1 Nil			
1 Glyphosate 450 1.5L/ha	5.0-	52.5c	98.8-
2 Envirowet 25 25mL/100 L			
2 Paraquat 360 1.5L/ha	100.0-	100.0a	100.0-
2 Envirowet 25 25mL/100 L			
1 Glyphosate 450 1.5L/ha	8.1-	39.6d	100.0-
3 Envirowet 50 50mL/100 L			
2 Paraquat 360 1.5L/ha	100.0-	100.0a	100.0-
3 Envirowet 50 50mL/100 L			
1 Glyphosate 450 1.5L/ha	10.0-	65.0b	100.0-
4 Envirowet 100 100mL/100 L			
2 Paraquat 360 1.5L/ha	98.8-	100.0a	100.0-
4 Envirowet 100 100mL/100 L			
1 Glyphosate 450 1.5L/ha	7.5-	45.0cd	100.0-
5 Axiwetta 100mL/100 L			
2 Paraquat 360 1.5L/ha	98.8-	100.0a	100.0-
5 Axiwetta 100mL/100 L			
1 Glyphosate 450 1.5L/ha	27.5-	47.5cd	100.0-
6 LI700 250mL/100 L			
2 Paraquat 360 1.5L/ha	100.0-	100.0a	100.0-
6 LI700 250mL/100 L			
LSD P=.05	11.56	10.61	1.07
Standard Deviation	8.02	7.35	0.74
CV	14.35	9.90	0.74

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

FACTORIAL/POOLED ERROR Least square estimation AOV For 7-Aug-2024 PLOT P CONTRO % 1 PLOT 1 13 10 17 8 DA-A (Data Column 14)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	90880.978261				
R	3	129.311594	43.103865	0.671	0.5764	
A	1	87391.847826	87391.847826	1360.155	0.0001	4.7
B	5	701.010970	140.202194	2.182	0.0817	8.2
AB	5	667.013889	133.402778	2.076	0.0952	11.6
ERROR	31	1991.793981	64.251419			
FACTORIAL/POOLED ERROR Least square estimation AOV For 16-Aug-2024 PLOT P CONTRO % 1 PLOT 1 13 10 17 17 DA-A (Data Column 20)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	33341.304348				
R	3	242.971014	80.990338	1.497	0.2347	
A	1	29758.695652	29758.695652	550.135	0.0001	4.3
B	5	786.350644	157.270129	2.907	0.0289	7.5
AB	5	876.388889	175.277778	3.240	0.0181	10.6
ERROR	31	1676.898148	54.093489			
FACTORIAL/POOLED ERROR Least square estimation AOV For 27-Aug-2024 PLOT P CONTRO % 1 PLOT 1 13 10 17 28 DA-A (Data Column 26)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	24.456522				
R	3	1.539855	0.513285	0.933	0.4363	
A	1	0.543478	0.543478	0.988	0.3278	0.4
B	5	2.636499	0.527300	0.959	0.4578	0.8
AB	5	2.690972	0.538194	0.979	0.4462	1.1
ERROR	31	17.045718	0.549862			

Table 5 – Annual ryegrass (*Lolium rigidum*) count per m² at -1 and 28 DA-A (ANOVA)

Assessment Date				29-Jul-2024	27-Aug-2024
Part Assessed				PLANT, P	PLANT, P
Assessment Type				COUNT	COUNT
Assessment Unit				NUMBER	NUMBER
Reporting Basis				1 m2	1 m2
Number of Subsamples				2	2
Pest Stage Majority/Min/Max				24, 21, 28	24, 21, 28
Trt-Eval Interval				-1 DA-A	28 DA-A
ARM Action Codes				T2	T9
Trt No.	Treatment Name	Rate	Rate Unit	4	36
1	Untreated Control			1.0-	2.5-
2	Glyphosate 450 Nil	1.5L/ha		1.0-	0.0-
3	Glyphosate 450 Envirowet 25	1.5L/ha 25mL/100 L		1.0-	1.5-
4	Glyphosate 450 Envirowet 50	1.5L/ha 50mL/100 L		3.6-	1.7-
5	Glyphosate 450 Envirowet 100	1.5L/ha 100mL/100 L		4.0-	2.0-
6	Glyphosate 450 Axiwetta	1.5L/ha 100mL/100 L		1.0-	0.5-
7	Glyphosate 450 LI700	1.5L/ha 250mL/100 L		5.0-	4.0-
8	Paraquat 360 Nil	1.5L/ha		1.0-	0.5-
9	Paraquat 360 Envirowet 25	1.5L/ha 25mL/100 L		2.0-	0.0-
10	Paraquat 360 Envirowet 50	1.5L/ha 50mL/100 L		3.5-	0.0-
11	Paraquat 360 Envirowet 100	1.5L/ha 100mL/100 L		1.5-	0.0-
12	Paraquat 360 Axiwetta	1.5L/ha 100mL/100 L		2.0-	0.5-
13	Paraquat 360 LI700	1.5L/ha 250mL/100 L		2.5-	0.0-
LSD P=.05				4.75	3.60
Standard Deviation				3.31	2.51
CV				147.69	247.5
Levene's F				0.514	0.931
Skewness				2.6848*	4.4379*
Kurtosis				9.0467*	24.049*
Replicate F				3.612	1.840
Replicate Prob(F)				0.0229	0.1584
Treatment F				0.689	0.992
Treatment Prob(F)				0.7500	0.4766

Means followed by same symbol do not significantly differ (P=.05, LSD).

Missing data estimates (Yates) are included in columns 4, 36.

T2 = [C3]*4

T9 = [C35]/0.25

Table 6 – Annual ryegrass (*Lolium rigidum*) count per m² at -1 and 28 DA-A (Factorial)

Assessment Date	29-Jul-2024	27-Aug-2024
Part Assessed	PLANT, P	PLANT, P
Assessment Type	COUNT	COUNT
Assessment Unit	NUMBER	NUMBER
Reporting Basis	1 m2	1 m2
Number of Subsamples	2	2
Pest Stage Majority/Min/Max	24, 21, 28	24, 21, 28
Trt-Eval Interval	-1 DA-A	28 DA-A
ARM Action Codes	T2	T9
Trt Treatment		
No. Name Rate Unit	4	36
TABLE OF R MEANS		
Replicate 1	3.0	1.3
Replicate 2	0.5	0.2
Replicate 3	1.2	0.0
Replicate 4	4.7	2.0
TABLE OF A (Herbicide) MEANS		
1 Glyphosate 450 1.5L/ha	2.6-	1.6-
2 Paraquat 360 1.5L/ha	2.1-	0.1-
LSD P=.05	2.00	1.50
Standard Deviation	3.40	2.54
CV	145.46	287.90
TABLE OF B (Adjuvant) MEANS		
1 Nil	1.0-	0.2-
2 Envirowet 25 25mL/100 L	1.5-	0.8-
3 Envirowet 50 50mL/100 L	3.6-	0.9-
4 Envirowet 100 100mL/100 L	2.8-	1.0-
5 Axiwetta 100mL/100 L	1.5-	0.5-
6 LI700 250mL/100 L	3.8-	2.0-
LSD P=.05	3.47	2.59
Standard Deviation	3.40	2.54
CV	145.46	287.90
TABLE OF A (Herbicide) B (Adjuvant) MEANS		
1 Glyphosate 450 1.5L/ha	1.0-	0.0-
1 Nil		
2 Paraquat 360 1.5L/ha	1.0-	0.4-
1 Nil		
1 Glyphosate 450 1.5L/ha	1.0-	1.5-
2 Envirowet 25 25mL/100 L		
2 Paraquat 360 1.5L/ha	2.0-	0.0-
2 Envirowet 25 25mL/100 L		
1 Glyphosate 450 1.5L/ha	3.6-	1.7-
3 Envirowet 50 50mL/100 L		
2 Paraquat 360 1.5L/ha	3.5-	0.0-
3 Envirowet 50 50mL/100 L		
1 Glyphosate 450 1.5L/ha	4.0-	2.0-
4 Envirowet 100 100mL/100 L		
2 Paraquat 360 1.5L/ha	1.5-	0.0-
4 Envirowet 100 100mL/100 L		
1 Glyphosate 450 1.5L/ha	1.0-	0.5-
5 Axiwetta 100mL/100 L		
2 Paraquat 360 1.5L/ha	2.0-	0.5-
5 Axiwetta 100mL/100 L		
1 Glyphosate 450 1.5L/ha	5.0-	4.0-
6 LI700 250mL/100 L		
2 Paraquat 360 1.5L/ha	2.5-	0.0-
6 LI700 250mL/100 L		
LSD P=.05	4.91	3.67
Standard Deviation	3.40	2.54
CV	145.46	287.90

Means followed by same symbol do not significantly differ (P=.05, LSD).

T2 = [C3]*4

T9 = [C35]/0.25

FACTORIAL/POOLED ERROR Least square estimation AOV For 29-Jul-2024 PLANT P COUNT NUMBER 1 m2
2 24 21 28 -1 DA-A T2 (Data Column 4)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	564.956522				
R	3	123.689855	41.229952	3.562	0.0253	
A	1	2.173913	2.173913	0.188	0.6677	2.0
B	5	53.044605	10.608921	0.917	0.4833	3.5
AB	5	27.222222	5.444444	0.470	0.7954	4.9
ERROR	31	358.825926	11.575030			

FACTORIAL/POOLED ERROR Least square estimation AOV For 27-Aug-2024 PLANT P COUNT NUMBER 1
m2 2 24 21 28 28 DA-A T9 (Data Column 36)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	301.652174				
R	3	31.318841	10.439614	1.614	0.2061	
A	1	25.130435	25.130435	3.886	0.0577	1.5
B	5	16.282065	3.256413	0.504	0.7712	2.6
AB	5	28.430556	5.686111	0.879	0.5065	3.7
ERROR	31	200.490278	6.467428			

Table 7 – Annual ryegrass (*Lolium rigidum*) control at 8, 17 and 28 DA-A (ANOVA)

Assessment Date	7-Aug-2024	16-Aug-2024	27-Aug-2024
Part Assessed	PLOT, P	PLOT, P	PLOT, P
Assessment Type	CONTRO	CONTRO	CONTRO
Assessment Unit	%UNCK	%UNCK	%UNCK
Reporting Basis	1 PLOT	1 PLOT	1 PLOT
Number of Subsamples	1	1	1
Pest Stage Majority/Min/Max	24, 21, 28	24, 21, 28	24, 21, 28
Trt-Eval Interval	8 DA-A	17 DA-A	28 DA-A
Trt Treatment	15	21	27
No. Name Rate Unit			
1 Untreated Control	0.0e	0.0d	0.0e
2 Glyphosate 450 Nil	10.0d	42.5c	70.0d
3 Glyphosate 450 1.5L/ha	5.0de	40.0c	72.5cd
Envirowet 25 25mL/100 L			
4 Glyphosate 450 1.5L/ha	12.0d	49.2c	79.4a-d
Envirowet 50 50mL/100 L			
5 Glyphosate 450 1.5L/ha	7.5de	37.5c	75.0bcd
Envirowet 100 100mL/100 L			
6 Glyphosate 450 1.5L/ha	7.5de	47.5c	75.0bcd
Axiwetta 100mL/100 L			
7 Glyphosate 450 1.5L/ha	13.8d	40.0c	80.0a-d
LI700 250mL/100 L			
8 Paraquat 360 1.5L/ha	60.3c	72.5b	97.5ab
Nil			
9 Paraquat 360 1.5L/ha	76.3b	91.3ab	95.0abc
Envirowet 25 25mL/100 L			
10 Paraquat 360 1.5L/ha	85.0ab	85.0ab	97.5ab
Envirowet 50 50mL/100 L			
11 Paraquat 360 1.5L/ha	88.8a	93.8ab	98.8ab
Envirowet 100 100mL/100 L			
12 Paraquat 360 1.5L/ha	83.8ab	93.8ab	100.0a
Axiwetta 100mL/100 L			
13 Paraquat 360 1.5L/ha	86.3a	96.3a	100.0a
LI700 250mL/100 L			
LSD P=.05	9.12	22.00	23.96
Standard Deviation	6.35	15.31	16.67
CV	15.4	25.22	20.83
Levene's F	2.021	1.697	1.672
Skewness	0.2284	-0.5008	-1.6263*
Kurtosis	-1.8623*	-1.0151	1.4586*
Replicate F	2.005	0.159	5.036
Replicate Prob(F)	0.1318	0.9228	0.0054
Treatment F	144.467	15.398	10.306
Treatment Prob(F)	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD).

Missing data estimates (Yates) are included in columns 15, 21, 27.

Table 8 – Annual ryegrass (*Lolium rigidum*) control at 8, 17 and 28 DA-A (Factorial)

Assessment Date	7-Aug-2024	16-Aug-2024	27-Aug-2024
Part Assessed	PLOT, P	PLOT, P	PLOT, P
Assessment Type	CONTRO	CONTRO	CONTRO
Assessment Unit	%UNCK	%UNCK	%UNCK
Reporting Basis	1 PLOT	1 PLOT	1 PLOT
Number of Subsamples	1	1	1
Pest Stage Majority/Min/Max	24, 21, 28	24, 21, 28	24, 21, 28
Trt-Eval Interval	8 DA-A	17 DA-A	28 DA-A
Trt Treatment			
No. Name Rate Unit	15	21	27
TABLE OF R MEANS			
Replicate 1	40.8	66.3	70.4
Replicate 2	45.0	66.7	88.3
Replicate 3	45.8	63.0	96.1
Replicate 4	47.1	67.1	92.9
TABLE OF A (Herbicide) MEANS			
1 Glyphosate 450 1.5L/ha	9.3b	42.8b	75.4b
2 Paraquat 360 1.5L/ha	80.1a	88.7a	98.5a
LSD P=.05	3.82	9.85	10.07
Standard Deviation	6.50	16.72	17.10
CV	14.54	25.43	19.67
TABLE OF B (Adjuvant) MEANS			
1 Nil	35.2c	57.5-	84.9-
2 Envirowet 25 25mL/100 L	40.6bc	65.6-	83.8-
3 Envirowet 50 50mL/100 L	48.5a	67.0-	88.6-
4 Envirowet 100 100mL/100 L	48.1a	65.6-	86.9-
5 Axiwetta 100mL/100 L	45.6ab	70.6-	87.5-
6 LI700 250mL/100 L	50.0a	68.1-	90.0-
LSD P=.05	6.62	17.05	17.44
Standard Deviation	6.50	16.72	17.10
CV	14.54	25.43	19.67
TABLE OF A (Herbicide) B (Adjuvant) MEANS			
1 Glyphosate 450 1.5L/ha	10.0d	42.5-	70.0-
1 Nil			
2 Paraquat 360 1.5L/ha	60.4c	72.4-	99.7-
1 Nil			
1 Glyphosate 450 1.5L/ha	5.0d	40.0-	72.5-
2 Envirowet 25 25mL/100 L			
2 Paraquat 360 1.5L/ha	76.3b	91.3-	95.0-
2 Envirowet 25 25mL/100 L			
1 Glyphosate 450 1.5L/ha	12.0d	49.1-	79.7-
3 Envirowet 50 50mL/100 L			
2 Paraquat 360 1.5L/ha	85.0ab	85.0-	97.5-
3 Envirowet 50 50mL/100 L			
1 Glyphosate 450 1.5L/ha	7.5d	37.5-	75.0-
4 Envirowet 100 100mL/100 L			
2 Paraquat 360 1.5L/ha	88.8a	93.8-	98.8-
4 Envirowet 100 100mL/100 L			
1 Glyphosate 450 1.5L/ha	7.5d	47.5-	75.0-
5 Axiwetta 100mL/100 L			
2 Paraquat 360 1.5L/ha	83.8ab	93.8-	100.0-
5 Axiwetta 100mL/100 L			
1 Glyphosate 450 1.5L/ha	13.8d	40.0-	80.0-
6 LI700 250mL/100 L			
2 Paraquat 360 1.5L/ha	86.3a	96.3-	100.0-
6 LI700 250mL/100 L			
LSD P=.05	9.37	24.12	24.67
Standard Deviation	6.50	16.72	17.10
CV	14.54	25.43	19.67

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

FACTORIAL/POOLED ERROR Least square estimation AOV For 7-Aug-2024 PLOT P CONTRO % 1 PLOT 1 24 21 28 8 DA-A (Data Column 15)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	62850.000000				
R	3	322.916667	107.638889	2.551	0.0736	
A	1	59184.782609	59184.782609	1402.902	0.0001	3.8
B	5	998.814035	199.762807	4.735	0.0025	6.6
AB	5	1035.677083	207.135417	4.910	0.0020	9.4
ERROR	31	1307.809606	42.187407			
FACTORIAL/POOLED ERROR Least square estimation AOV For 16-Aug-2024 PLOT P CONTRO % 1 PLOT 1 24 21 28 17 DA-A (Data Column 21)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	35045.652174				
R	3	59.818841	19.939614	0.071	0.9749	
A	1	25356.521739	25356.521739	90.674	0.0001	9.8
B	5	579.728261	115.945652	0.415	0.8349	17.1
AB	5	380.555556	76.111111	0.272	0.9249	24.1
ERROR	31	8669.027778	279.646057			
FACTORIAL/POOLED ERROR Least square estimation AOV For 27-Aug-2024 PLOT P CONTRO % 1 PLOT 1 24 21 28 28 DA-A (Data Column 27)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	20083.152174				
R	3	4448.152174	1482.717391	5.069	0.0057	
A	1	6222.282609	6222.282609	21.272	0.0001	10.1
B	5	216.105701	43.221140	0.148	0.9792	17.4
AB	5	128.732639	25.746528	0.088	0.9936	24.7
ERROR	31	9067.879051	292.512227			

Table 9 – Field pea (*Pisum sativum*) count per m² at -1 and 28 DA-A (ANOVA)

Assessment Date				29-Jul-2024	27-Aug-2024
Part Assessed				PLANT, P	PLANT, P
Assessment Type				COUNT	COUNT
Assessment Unit				NUMBER	NUMBER
Reporting Basis				1 m2	1 m2
Number of Subsamples				2	2
Pest Stage Majority/Min/Max				22, 12, 26	22, 12, 26
Trt-Eval Interval				-1 DA-A	28 DA-A
ARM Action Codes				&AL T3	T7
Trt No.	Treatment Name	Rate	Rate Unit	6	32
1	Untreated Control			3.0-	5.0
2	Glyphosate 450 Nil	1.5L/ha		6.5-	0.0
3	Glyphosate 450 Envirowet 25	1.5L/ha 25mL/100 L		8.5-	0.5
4	Glyphosate 450 Envirowet 50	1.5L/ha 50mL/100 L		2.5-	0.0
5	Glyphosate 450 Envirowet 100	1.5L/ha 100mL/100 L		6.0-	0.0
6	Glyphosate 450 Axiwetta	1.5L/ha 100mL/100 L		7.0-	0.5
7	Glyphosate 450 LI700	1.5L/ha 250mL/100 L		5.0-	0.0
8	Paraquat 360 Nil	1.5L/ha		11.0-	0.5
9	Paraquat 360 Envirowet 25	1.5L/ha 25mL/100 L		4.5-	0.0
10	Paraquat 360 Envirowet 50	1.5L/ha 50mL/100 L		5.5-	0.0
11	Paraquat 360 Envirowet 100	1.5L/ha 100mL/100 L		7.5-	0.5
12	Paraquat 360 Axiwetta	1.5L/ha 100mL/100 L		10.0-	0.0
13	Paraquat 360 LI700	1.5L/ha 250mL/100 L		5.5-	0.0
LSD P=.05				NA	2.31
Standard Deviation				0.24t	1.61
CV				32.48t	296.94
Levene's F				0.702	4.911*
Skewness				-0.0864	4.8532*
Kurtosis				0.6068	26.1995*
Replicate F				13.718	1.062
Replicate Prob(F)				0.0001	0.3781
Treatment F				1.468	2.873
Treatment Prob(F)				0.1847	0.0077

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

Missing data estimates (Yates) are included in columns 6, 32.

* An asterisk next to the Levene's statistic indicates that homogeneity of variance cannot be assumed, and no statistical differences can be confirmed.

AL = Data transformed using log transformation of X+1 with resulting letters of separation applied to original means.

&=Transformation applied to 'Plot' experimental unit means of subsamples

T3 = [C5]*4

T7 = [C31]/0.25

Table 10 – Field pea (*Pisum sativum*) count at -1 and 28 DA-A (Factorial)

Assessment Date	29-Jul-2024	27-Aug-2024
Part Assessed	PLANT, P	PLANT, P
Assessment Type	COUNT	COUNT
Assessment Unit	NUMBER	NUMBER
Reporting Basis	1 m2	1 m2
Number of Subsamples	2	2
Pest Stage Majority/Min/Max	22, 12, 26	22, 12, 26
Trt-Eval Interval	-1 DA-A	28 DA-A
ARM Action Codes	T3	T7
Trt Treatment		
No. Name Rate Unit	6	32
TABLE OF R MEANS		
Replicate 1	5.8	0.3
Replicate 2	3.5	0.2
Replicate 3	3.4	0.0
Replicate 4	13.7	0.2
TABLE OF A (Herbicide) MEANS		
1 Glyphosate 450 1.5L/ha	5.9-	0.2-
2 Paraquat 360 1.5L/ha	7.3-	0.2-
LSD P=.05	3.17	0.35
Standard Deviation	5.38	0.60
CV	81.52	347.18
TABLE OF B (Adjuvant) MEANS		
1 Nil	8.7-	0.3-
2 Envirowet 25 25mL/100 L	6.5-	0.3-
3 Envirowet 50 50mL/100 L	3.9-	0.0-
4 Envirowet 100 100mL/100 L	6.8-	0.3-
5 Axiwetta 100mL/100 L	8.5-	0.3-
6 LI700 250mL/100 L	5.3-	0.0-
LSD P=.05	5.49	0.61
Standard Deviation	5.38	0.60
CV	81.52	347.18
TABLE OF A (Herbicide) B (Adjuvant) MEANS		
1 Glyphosate 450 1.5L/ha	6.5-	0.0-
1 Nil		
2 Paraquat 360 1.5L/ha	10.9-	0.6-
1 Nil		
1 Glyphosate 450 1.5L/ha	8.5-	0.5-
2 Envirowet 25 25mL/100 L		
2 Paraquat 360 1.5L/ha	4.5-	0.0-
2 Envirowet 25 25mL/100 L		
1 Glyphosate 450 1.5L/ha	2.3-	-0.1-
3 Envirowet 50 50mL/100 L		
2 Paraquat 360 1.5L/ha	5.5-	0.0-
3 Envirowet 50 50mL/100 L		
1 Glyphosate 450 1.5L/ha	6.0-	0.0-
4 Envirowet 100 100mL/100 L		
2 Paraquat 360 1.5L/ha	7.5-	0.5-
4 Envirowet 100 100mL/100 L		
1 Glyphosate 450 1.5L/ha	7.0-	0.5-
5 Axiwetta 100mL/100 L		
2 Paraquat 360 1.5L/ha	10.0-	0.0-
5 Axiwetta 100mL/100 L		
1 Glyphosate 450 1.5L/ha	5.0-	0.0-
6 LI700 250mL/100 L		
2 Paraquat 360 1.5L/ha	5.5-	0.0-
6 LI700 250mL/100 L		
LSD P=.05	7.76	0.86
Standard Deviation	5.38	0.60
CV	81.52	347.18

Means followed by same symbol do not significantly differ (P=.05, LSD).

T3 = [C5]*4

T7 = [C31]/0.25

FACTORIAL/POOLED ERROR Least square estimation AOV For 29-Jul-2024 PLANT P COUNT NUMBER 1 m2
2 22 12 26 -1 DA-A T3 (Data Column 6)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	1922.869565				
R	3	823.136232	274.378744	9.477	0.0001	
A	1	14.695652	14.695652	0.508	0.4815	3.2
B	5	115.054348	23.010870	0.795	0.5617	5.5
AB	5	72.500000	14.500000	0.501	0.7732	7.8
ERROR	31	897.483333	28.951075			

FACTORIAL/POOLED ERROR Least square estimation AOV For 27-Aug-2024 PLANT P COUNT NUMBER 1
m2 2 22 12 26 28 DA-A T7 (Data Column 32)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	14.608696				
R	3	0.608696	0.202899	0.568	0.6406	
A	1	0.000000	0.000000	0.000	1.0000	0.4
B	5	0.708796	0.141759	0.397	0.8474	0.6
AB	5	2.208333	0.441667	1.235	0.3164	0.9
ERROR	31	11.082870	0.357512			

Table 11 – Field pea (*Pisum sativum*) control at 8, 17 and 28 DA-A (ANOVA)

Assessment Date	7-Aug-2024	16-Aug-2024	27-Aug-2024
Part Assessed	PLOT, P	PLOT, P	PLOT, P
Assessment Type	CONTRO	CONTRO	CONTRO
Assessment Unit	%UNCK	%UNCK	%UNCK
Reporting Basis	1 PLOT	1 PLOT	1 PLOT
Number of Subsamples	1	1	1
Pest Stage Majority/Min/Max	22, 12, 26	22, 12, 26	22, 12, 26
Trt-Eval Interval	8 DA-A	17 DA-A	28 DA-A
Trt No.	13	19	25
Treatment Name			
Rate			
Unit			
1	Untreated Control	0.0d	0.0
2	Glyphosate 450 Nil	13.8c	83.8
3	Glyphosate 450 Envirowet 25	8.8c	85.0
4	Glyphosate 450 Envirowet 50	9.6c	94.4
5	Glyphosate 450 Envirowet 100	8.8c	85.0
6	Glyphosate 450 Axiwetta	8.8c	87.5
7	Glyphosate 450 LI700	10.0c	85.0
8	Paraquat 360 Nil	82.9b	84.4
9	Paraquat 360 Envirowet 25	88.8ab	98.8
10	Paraquat 360 Envirowet 50	92.5a	98.8
11	Paraquat 360 Envirowet 100	92.5a	100.0
12	Paraquat 360 Axiwetta	91.3a	100.0
13	Paraquat 360 LI700	93.8a	97.5
LSD P=.05	8.26	12.76	2.05
Standard Deviation	5.75	8.88	1.43
CV	12.43	10.49	1.55
Levene's F	1.221	2.728*	
Skewness	0.1435	-2.4993*	-3.1787*
Kurtosis	-1.987*	5.5029*	8.4728*
Replicate F	0.286	1.411	0.944
Replicate Prob(F)	0.8351	0.2566	0.4300
Treatment F	219.690	35.100	1505.759
Treatment Prob(F)	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD).

Missing data estimates (Yates) are included in columns 13, 19, 25.

* An asterisk next to the Levene's statistic indicates that homogeneity of variance cannot be assumed, and no statistical differences can be confirmed.

Where no Levene's statistic is reported, the test of homogenous variance has failed, and no statistical differences can be confirmed.

Table 12 – Field pea (*Pisum sativum*) control at 8, 17 and 28 DA-A (Factorial)

Assessment Date	7-Aug-2024	16-Aug-2024	27-Aug-2024
Part Assessed	PLOT, P	PLOT, P	PLOT, P
Assessment Type	CONTRO	CONTRO	CONTRO
Assessment Unit	%UNCK	%UNCK	%UNCK
Reporting Basis	1 PLOT	1 PLOT	1 PLOT
Number of Subsamples	1	1	1
Pest Stage Majority/Min/Max	22, 12, 26	22, 12, 26	22, 12, 26
Trt-Eval Interval	8 DA-A	17 DA-A	28 DA-A
Trt Treatment			
No. Name Rate Unit	13	19	25
TABLE OF R MEANS			
Replicate 1	50.4	87.5	100.0
Replicate 2	50.4	91.3	99.2
Replicate 3	48.7	95.1	100.1
Replicate 4	50.8	92.9	100.0
TABLE OF A (Herbicide) MEANS			
1 Glyphosate 450 1.5L/ha	9.9b	86.8b	99.6-
2 Paraquat 360 1.5L/ha	90.3a	96.6a	100.0-
LSD P=.05	3.48	5.54	0.85
Standard Deviation	5.91	9.41	1.44
CV	11.80	10.26	1.44
TABLE OF B (Adjuvant) MEANS			
1 Nil	48.3-	84.1-	98.8-
2 Envirowet 25 25mL/100 L	48.8-	91.9-	100.0-
3 Envirowet 50 50mL/100 L	51.0-	96.6-	100.0-
4 Envirowet 100 100mL/100 L	50.6-	92.5-	100.0-
5 Axiwetta 100mL/100 L	50.0-	93.8-	100.0-
6 LI700 250mL/100 L	51.9-	91.3-	100.0-
LSD P=.05	6.03	9.59	1.47
Standard Deviation	5.91	9.41	1.44
CV	11.80	10.26	1.44
TABLE OF A (Herbicide) B (Adjuvant) MEANS			
1 Glyphosate 450 1.5L/ha	13.8-	83.8-	97.5-
1 Nil			
2 Paraquat 360 1.5L/ha	82.9-	84.5-	100.1-
1 Nil			
1 Glyphosate 450 1.5L/ha	8.8-	85.0-	100.0-
2 Envirowet 25 25mL/100 L			
2 Paraquat 360 1.5L/ha	88.8-	98.8-	100.0-
2 Envirowet 25 25mL/100 L			
1 Glyphosate 450 1.5L/ha	9.5-	94.5-	100.1-
3 Envirowet 50 50mL/100 L			
2 Paraquat 360 1.5L/ha	92.5-	98.8-	100.0-
3 Envirowet 50 50mL/100 L			
1 Glyphosate 450 1.5L/ha	8.8-	85.0-	100.0-
4 Envirowet 100 100mL/100 L			
2 Paraquat 360 1.5L/ha	92.5-	100.0-	100.0-
4 Envirowet 100 100mL/100 L			
1 Glyphosate 450 1.5L/ha	8.8-	87.5-	100.0-
5 Axiwetta 100mL/100 L			
2 Paraquat 360 1.5L/ha	91.3-	100.0-	100.0-
5 Axiwetta 100mL/100 L			
1 Glyphosate 450 1.5L/ha	10.0-	85.0-	100.0-
6 LI700 250mL/100 L			
2 Paraquat 360 1.5L/ha	93.8-	97.5-	100.0-
6 LI700 250mL/100 L			
LSD P=.05	8.53	13.56	2.08
Standard Deviation	5.91	9.41	1.44
CV	11.80	10.26	1.44

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

FACTORIAL/POOLED ERROR Least square estimation AOV For 7-Aug-2024 PLOT P CONTRO % 1 PLOT 1 22 12 26 8 DA-A (Data Column 13)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	76270.108696				
R	3	10.108696	3.369565	0.096	0.9614	
A	1	74804.891304	74804.891304	2139.908	0.0001	3.5
B	5	55.467492	11.093498	0.317	0.8987	6.0
AB	5	315.972222	63.194444	1.808	0.1404	8.5
ERROR	31	1083.668981	34.957064			
FACTORIAL/POOLED ERROR Least square estimation AOV For 16-Aug-2024 PLOT P CONTRO % 1 PLOT 1 22 12 26 17 DA-A (Data Column 19)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	5152.717391				
R	3	376.050725	125.350242	1.417	0.2565	
A	1	1304.891304	1304.891304	14.750	0.0006	5.5
B	5	512.385895	102.477179	1.158	0.3516	9.6
AB	5	216.927083	43.385417	0.490	0.7808	13.6
ERROR	31	2742.462384	88.466529			
FACTORIAL/POOLED ERROR Least square estimation AOV For 27-Aug-2024 PLOT P CONTRO % 1 PLOT 1 22 12 26 28 DA-A (Data Column 25)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	97.826087				
R	3	6.159420	2.053140	0.988	0.4111	
A	1	2.173913	2.173913	1.046	0.3142	0.8
B	5	11.205717	2.241143	1.079	0.3912	1.5
AB	5	13.888889	2.777778	1.337	0.2748	2.1
ERROR	31	64.398148	2.077360			

Table 13 – Prickly lettuce (*Lactuca serriola*) count per m² at -1 and 28 DA-A (ANOVA)

Assessment Date		29-Jul-2024	27-Aug-2024
Part Assessed		PLANT, P	PLANT, P
Assessment Type		COUNT	COUNT
Assessment Unit		NUMBER	NUMBER
Reporting Basis		1 m2	1 m2
Number of Subsamples		2	2
Pest Stage Majority/Min/Max		14, 11, 16	14, 11, 16
Trt-Eval Interval		-1 DA-A	28 DA-A
ARM Action Codes		&AL T5	T10
Trt No.	Treatment Name	Rate	Unit
		10	38
1	Untreated Control	12.0-	12.0
2	Glyphosate 450 Nil	3.5-	0.0
3	Glyphosate 450 Envirowet 25	7.0-	1.5
4	Glyphosate 450 Envirowet 50	4.0-	1.1
5	Glyphosate 450 Envirowet 100	12.0-	0.0
6	Glyphosate 450 Axiwetta	7.0-	0.0
7	Glyphosate 450 LI700	6.0-	2.0
8	Paraquat 360 Nil	7.9-	0.0
9	Paraquat 360 Envirowet 25	11.0-	2.5
10	Paraquat 360 Envirowet 50	4.5-	0.5
11	Paraquat 360 Envirowet 100	6.5-	3.5
12	Paraquat 360 Axiwetta	5.5-	1.0
13	Paraquat 360 LI700	10.5-	7.5
LSD P=.05		NA	5.96
Standard Deviation		0.39t	4.15
CV		52.0t	170.36
Levene's F		0.423	2.91*
Skewness		-0.4459	3.3735*
Kurtosis		-0.5381	13.9104*
Replicate F		6.327	1.043
Replicate Prob(F)		0.0016	0.3861
Treatment F		0.423	2.920
Treatment Prob(F)		0.9433	0.0070

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

Missing data estimates (Yates) are included in columns 10,38.

* An asterisk next to the Levene's statistic indicates that homogeneity of variance cannot be assumed, and no statistical differences can be confirmed.

AL = Data transformed using log transformation of X+1 with resulting letters of separation applied to original means.

&=Transformation applied to 'Plot' experimental unit means of subsamples

T5 = [C9]*4

T10 = [C37]/0.25

Table 14 – Prickly lettuce (*Lactuca serriola*) count per m² at -1 and 28 DA-A (Factorial)

Assessment Date	29-Jul-2024	27-Aug-2024
Part Assessed	PLANT, P	PLANT, P
Assessment Type	COUNT	COUNT
Assessment Unit	NUMBER	NUMBER
Reporting Basis	1 m2	1 m2
Number of Subsamples	2	2
Pest Stage Majority/Min/Max	14, 11, 16	14, 11, 16
Trt-Eval Interval	-1 DA-A	28 DA-A
ARM Action Codes	T5	T10
Trt Treatment		
No. Name Rate Unit	10	38
TABLE OF R MEANS		
Replicate 1	9.2	1.3
Replicate 2	4.5	1.3
Replicate 3	3.6	1.8
Replicate 4	11.3	2.2
TABLE OF A (Herbicide) MEANS		
1 Glyphosate 450 1.5L/ha	6.6-	0.8-
2 Paraquat 360 1.5L/ha	7.7-	2.5-
LSD P=.05	3.37	1.71
Standard Deviation	5.73	2.90
CV	80.16	174.81
TABLE OF B (Adjuvant) MEANS		
1 Nil	5.8-	0.0b
2 Envirowet 25 25mL/100 L	9.0-	2.0ab
3 Envirowet 50 50mL/100 L	4.3-	0.9b
4 Envirowet 100 100mL/100 L	9.3-	1.8b
5 Axiwetta 100mL/100 L	6.3-	0.5b
6 LI700 250mL/100 L	8.3-	4.8a
LSD P=.05	5.84	2.96
Standard Deviation	5.73	2.90
CV	80.16	174.81
TABLE OF A (Herbicide) B (Adjuvant) MEANS		
1 Glyphosate 450 1.5L/ha	3.5-	0.0-
1 Nil		
2 Paraquat 360 1.5L/ha	8.2-	0.1-
1 Nil		
1 Glyphosate 450 1.5L/ha	7.0-	1.5-
2 Envirowet 25 25mL/100 L		
2 Paraquat 360 1.5L/ha	11.0-	2.5-
2 Envirowet 25 25mL/100 L		
1 Glyphosate 450 1.5L/ha	4.2-	1.4-
3 Envirowet 50 50mL/100 L		
2 Paraquat 360 1.5L/ha	4.5-	0.5-
3 Envirowet 50 50mL/100 L		
1 Glyphosate 450 1.5L/ha	12.0-	0.0-
4 Envirowet 100 100mL/100 L		
2 Paraquat 360 1.5L/ha	6.5-	3.5-
4 Envirowet 100 100mL/100 L		
1 Glyphosate 450 1.5L/ha	7.0-	0.0-
5 Axiwetta 100mL/100 L		
2 Paraquat 360 1.5L/ha	5.5-	1.0-
5 Axiwetta 100mL/100 L		
1 Glyphosate 450 1.5L/ha	6.0-	2.0-
6 LI700 250mL/100 L		
2 Paraquat 360 1.5L/ha	10.5-	7.5-
6 LI700 250mL/100 L		
LSD P=.05	8.27	4.19
Standard Deviation	5.73	2.90
CV	80.16	174.81

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

T5 = [C9]*4

T10 = [C37]/0.25

FACTORIAL/POOLED ERROR Least square estimation AOV For 29-Jul-2024 PLANT P COUNT NUMBER 1 m2 2 14 11 16 -1 DA-A T5 (Data Column 10)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	1840.434783				
R	3	453.501449	151.167150	4.602	0.0089	
A	1	10.521739	10.521739	0.320	0.5755	3.4
B	5	154.157428	30.831486	0.939	0.4699	5.8
AB	5	203.875000	40.775000	1.241	0.3139	8.3
ERROR	31	1018.379167	32.850941			

FACTORIAL/POOLED ERROR Least square estimation AOV For 27-Aug-2024 PLANT P COUNT NUMBER 1 m2 2 14 11 16 28 DA-A T10 (Data Column 38)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	455.739130				
R	3	6.739130	2.246377	0.266	0.8491	
A	1	38.347826	38.347826	4.548	0.0410	1.7
B	5	109.548470	21.909694	2.599	0.0448	3.0
AB	5	39.722222	7.944444	0.942	0.4677	4.2
ERROR	31	261.381481	8.431661			

Table 15 – Prickly lettuce (*Lactuca serriola*) control at 8, 17 and 28 DA-A (ANOVA)

Assessment Date	7-Aug-2024	16-Aug-2024	27-Aug-2024
Part Assessed	PLOT, P	PLOT, P	PLOT, P
Assessment Type	CONTRO	CONTRO	CONTRO
Assessment Unit	%UNCK	%UNCK	%UNCK
Reporting Basis	1 PLOT	1 PLOT	1 PLOT
Number of Subsamples	1	1	1
Pest Stage Majority/Min/Max	14, 11, 16	14, 11, 16	14, 11, 16
Trt-Eval Interval	8 DA-A	17 DA-A	28 DA-A
Trt	16	22	28
Treatment			
No. Name Rate Unit			
1 Untreated Control	0.0e	0.0g	0.0c
2 Glyphosate 450 1.5L/ha Nil	8.8cd	42.5ef	95.0ab
3 Glyphosate 450 1.5L/ha Envirowet 25 25mL/100 L	5.0de	62.5cd	98.8ab
4 Glyphosate 450 1.5L/ha Envirowet 50 50mL/100 L	11.2bcd	35.8f	100.0a
5 Glyphosate 450 1.5L/ha Envirowet 100 100mL/100 L	10.0bcd	62.5cd	88.8b
6 Glyphosate 450 1.5L/ha Axiwetta 100mL/100 L	12.5bc	50.0def	92.5ab
7 Glyphosate 450 1.5L/ha LI700 250mL/100 L	16.3b	52.5de	96.3ab
8 Paraquat 360 1.5L/ha Nil	94.5a	75.8bc	100.0a
9 Paraquat 360 1.5L/ha Envirowet 25 25mL/100 L	93.8a	91.3ab	91.3ab
10 Paraquat 360 1.5L/ha Envirowet 50 50mL/100 L	97.5a	97.5a	100.0a
11 Paraquat 360 1.5L/ha Envirowet 100 100mL/100 L	93.8a	98.8a	100.0a
12 Paraquat 360 1.5L/ha Axiwetta 100mL/100 L	98.8a	100.0a	100.0a
13 Paraquat 360 1.5L/ha LI700 250mL/100 L	95.0a	95.0a	95.0ab
LSD P=.05	7.10	16.44	11.18
Standard Deviation	4.94	11.44	7.78
CV	10.09	17.21	8.74
Levene's F	0.779	1.11	1.237
Skewness	0.1294	-0.5903	-2.7951*
Kurtosis	-1.995*	-0.5589	6.6735*
Replicate F	1.163	1.050	2.423
Replicate Prob(F)	0.3382	0.3832	0.0827
Treatment F	331.869	28.202	48.220
Treatment Prob(F)	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD).

Missing data estimates (Yates) are included in columns 16, 22, 28.

Table 16 – Prickly lettuce (*Lactuca serriola*) control at 8, 17 and 28 DA-A (Factorial)

Assessment Date	7-Aug-2024	16-Aug-2024	27-Aug-2024
Part Assessed	PLOT, P	PLOT, P	PLOT, P
Assessment Type	CONTRO	CONTRO	CONTRO
Assessment Unit	%UNCK	%UNCK	%UNCK
Reporting Basis	1 PLOT	1 PLOT	1 PLOT
Number of Subsamples	1	1	1
Pest Stage Majority/Min/Max	14, 11, 16	14, 11, 16	14, 11, 16
Trt-Eval Interval	8 DA-A	17 DA-A	28 DA-A
Trt Treatment			
No. Name Rate Unit	16	22	28
TABLE OF R MEANS			
Replicate 1	53.8	68.8	91.3
Replicate 2	52.1	75.8	96.7
Replicate 3	51.4	69.3	99.4
Replicate 4	55.0	74.2	99.2
TABLE OF A (Herbicide) MEANS			
1 Glyphosate 450 1.5L/ha	10.6b	51.0b	95.4-
2 Paraquat 360 1.5L/ha	95.5a	93.0a	97.9-
LSD P=.05	3.01	7.24	4.74
Standard Deviation	5.12	12.30	8.05
CV	9.64	17.08	8.33
TABLE OF B (Adjuvant) MEANS			
1 Nil	51.6-	59.1c	98.0-
2 Envirowet 25 25mL/100 L	49.4-	76.9ab	95.0-
3 Envirowet 50 50mL/100 L	54.3-	66.6bc	100.5-
4 Envirowet 100 100mL/100 L	51.9-	80.6a	94.4-
5 Axiwetta 100mL/100 L	55.6-	75.0ab	96.3-
6 LI700 250mL/100 L	55.6-	73.8ab	95.6-
LSD P=.05	5.22	12.54	8.21
Standard Deviation	5.12	12.30	8.05
CV	9.64	17.08	8.33
TABLE OF A (Herbicide) B (Adjuvant) MEANS			
1 Glyphosate 450 1.5L/ha	8.8-	42.5-	95.0-
1 Nil			
2 Paraquat 360 1.5L/ha	94.5-	75.8-	100.9-
1 Nil			
1 Glyphosate 450 1.5L/ha	5.0-	62.5-	98.8-
2 Envirowet 25 25mL/100 L			
2 Paraquat 360 1.5L/ha	93.8-	91.3-	91.3-
2 Envirowet 25 25mL/100 L			
1 Glyphosate 450 1.5L/ha	11.1-	35.8-	100.9-
3 Envirowet 50 50mL/100 L			
2 Paraquat 360 1.5L/ha	97.5-	97.5-	100.0-
3 Envirowet 50 50mL/100 L			
1 Glyphosate 450 1.5L/ha	10.0-	62.5-	88.8-
4 Envirowet 100 100mL/100 L			
2 Paraquat 360 1.5L/ha	93.8-	98.8-	100.0-
4 Envirowet 100 100mL/100 L			
1 Glyphosate 450 1.5L/ha	12.5-	50.0-	92.5-
5 Axiwetta 100mL/100 L			
2 Paraquat 360 1.5L/ha	98.8-	100.0-	100.0-
5 Axiwetta 100mL/100 L			
1 Glyphosate 450 1.5L/ha	16.3-	52.5-	96.3-
6 LI700 250mL/100 L			
2 Paraquat 360 1.5L/ha	95.0-	95.0-	95.0-
6 LI700 250mL/100 L			
LSD P=.05	7.38	17.74	11.61
Standard Deviation	5.12	12.30	8.05
CV	9.64	17.08	8.33

Means followed by same letter or symbol do not significantly differ ($P=0.05$, LSD).

FACTORIAL/POOLED ERROR Least square estimation AOV For 7-Aug-2024 PLOT P CONTRO % 1 PLOT 1 14 11 16 8 DA-A (Data Column 16)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	84367.934783				
R	3	86.268116	28.756039	1.098	0.3647	
A	1	83087.500000	83087.500000	3173.001	0.0001	3.0
B	5	253.935185	50.787037	1.939	0.1161	5.2
AB	5	128.472222	25.694444	0.981	0.4448	7.4
ERROR	31	811.759259	26.185783			

FACTORIAL/POOLED ERROR Least square estimation AOV For 16-Aug-2024 PLOT P CONTRO % 1 PLOT 1 14 11 16 17 DA-A (Data Column 22)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	28482.608696				
R	3	330.525362	110.175121	0.728	0.5429	
A	1	20454.347826	20454.347826	135.208	0.0001	7.2
B	5	1955.964674	391.192935	2.586	0.0457	12.5
AB	5	1052.083333	210.416667	1.391	0.2548	17.7
ERROR	31	4689.687500	151.280242			

FACTORIAL/POOLED ERROR Least square estimation AOV For 27-Aug-2024 PLOT P CONTRO % 1 PLOT 1 14 11 16 28 DA-A (Data Column 28)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	3171.739130				
R	3	454.655797	151.551932	2.339	0.0927	
A	1	78.260870	78.260870	1.208	0.2802	4.7
B	5	162.549316	32.509863	0.502	0.7725	8.2
AB	5	467.708333	93.541667	1.444	0.2366	11.6
ERROR	31	2008.564815	64.792413			

Table 17 – Vetch (*Vicia sativa*) count per m² at -1 and 28 DA-A (ANOVA)

Assessment Date				29-Jul-2024	27-Aug-2024
Part Assessed				PLANT, P	PLANT, P
Assessment Type				COUNT	COUNT
Assessment Unit				NUMBER	NUMBER
Reporting Basis				1 m2	1 m2
Number of Subsamples				2	2
Pest Stage Majority/Min/Max				21, 14, 27	21, 14, 27
Trt-Eval Interval				-1 DA-A	28 DA-A
ARM Action Codes				&AS T6	T11
Trt No.	Treatment Name	Rate	Rate Unit	12	40
1	Untreated Control			9.0-	11.5-
2	Glyphosate 450 Nil	1.5L/ha		5.0-	5.0-
3	Glyphosate 450 Envirowet 25	1.5L/ha 25mL/100 L		6.5-	11.0-
4	Glyphosate 450 Envirowet 50	1.5L/ha 50mL/100 L		8.7-	8.6-
5	Glyphosate 450 Envirowet 100	1.5L/ha 100mL/100 L		7.5-	11.5-
6	Glyphosate 450 Axiwetta	1.5L/ha 100mL/100 L		9.0-	8.5-
7	Glyphosate 450 LI700	1.5L/ha 250mL/100 L		4.5-	5.5-
8	Paraquat 360 Nil	1.5L/ha		14.1-	15.3-
9	Paraquat 360 Envirowet 25	1.5L/ha 25mL/100 L		8.0-	8.5-
10	Paraquat 360 Envirowet 50	1.5L/ha 50mL/100 L		8.5-	8.0-
11	Paraquat 360 Envirowet 100	1.5L/ha 100mL/100 L		4.0-	9.0-
12	Paraquat 360 Axiwetta	1.5L/ha 100mL/100 L		3.0-	8.0-
13	Paraquat 360 LI700	1.5L/ha 250mL/100 L		8.5-	8.0-
LSD P=.05				NA	10.85
Standard Deviation				1.22t	7.55
CV				47.96t	82.97
Levene's F				0.707	0.928
Skewness				0.0274	0.6528
Kurtosis				-0.9595	-0.5277
Replicate F				1.854	2.099
Replicate Prob(F)				0.1561	0.1186
Treatment F				0.828	0.511
Treatment Prob(F)				0.6219	0.8929

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

Missing data estimates (Yates) are included in columns 12, 40.

AS = Data transformed using square root transformation of X+0.5 with resulting letters of separation applied to original means.

&=Transformation applied to 'Plot' experimental unit means of subsamples

T6 = [C11]*4

T11 = [39]/0.25

Table 18 – Vetch (*Vicia sativa*) count per m² at -1 and 28 DA-A (Factorial)

Assessment Date	29-Jul-2024	27-Aug-2024
Part Assessed	PLANT, P	PLANT, P
Assessment Type	COUNT	COUNT
Assessment Unit	NUMBER	NUMBER
Reporting Basis	1 m2	1 m2
Number of Subsamples	2	2
Pest Stage Majority/Min/Max	21, 14, 27	21, 14, 27
Trt-Eval Interval	-1 DA-A	28 DA-A
ARM Action Codes	T6	T11
Trt Treatment		
No. Name Rate Unit	12	40
TABLE OF R MEANS		
Replicate 1	9.3	10.7
Replicate 2	3.3	5.3
Replicate 3	7.4	7.2
Replicate 4	9.0	12.5
TABLE OF A (Herbicide) MEANS		
1 Glyphosate 450 1.5L/ha	6.9-	8.4-
2 Paraquat 360 1.5L/ha	7.7-	9.5-
LSD P=.05	3.82	4.36
Standard Deviation	6.49	7.40
CV	89.19	82.85
TABLE OF B (Adjuvant) MEANS		
1 Nil	9.5-	10.2-
2 Envirowet 25 25mL/100 L	7.3-	9.8-
3 Envirowet 50 50mL/100 L	8.6-	8.4-
4 Envirowet 100 100mL/100 L	5.8-	10.3-
5 Axiwetta 100mL/100 L	6.0-	8.3-
6 LI700 250mL/100 L	6.5-	6.8-
LSD P=.05	6.61	7.55
Standard Deviation	6.49	7.40
CV	89.19	82.85
TABLE OF A (Herbicide) B (Adjuvant) MEANS		
1 Glyphosate 450 1.5L/ha	5.0-	5.0-
1 Nil		
2 Paraquat 360 1.5L/ha	14.1-	15.4-
1 Nil		
1 Glyphosate 450 1.5L/ha	6.5-	11.0-
2 Envirowet 25 25mL/100 L		
2 Paraquat 360 1.5L/ha	8.0-	8.5-
2 Envirowet 25 25mL/100 L		
1 Glyphosate 450 1.5L/ha	8.7-	8.8-
3 Envirowet 50 50mL/100 L		
2 Paraquat 360 1.5L/ha	8.5-	8.0-
3 Envirowet 50 50mL/100 L		
1 Glyphosate 450 1.5L/ha	7.5-	11.5-
4 Envirowet 100 100mL/100 L		
2 Paraquat 360 1.5L/ha	4.0-	9.0-
4 Envirowet 100 100mL/100 L		
1 Glyphosate 450 1.5L/ha	9.0-	8.5-
5 Axiwetta 100mL/100 L		
2 Paraquat 360 1.5L/ha	3.0-	8.0-
5 Axiwetta 100mL/100 L		
1 Glyphosate 450 1.5L/ha	4.5-	5.5-
6 LI700 250mL/100 L		
2 Paraquat 360 1.5L/ha	8.5-	8.0-
6 LI700 250mL/100 L		
LSD P=.05	9.35	10.67
Standard Deviation	6.49	7.40
CV	89.19	82.85

Means followed by same symbol do not significantly differ (P=.05, LSD).

T6 = [C11]*4

T11 = [39]/0.25

FACTORIAL/POOLED ERROR Least square estimation AOV For 29-Jul-2024 PLANT P COUNT NUMBER 1 m2
2 21 14 27 -1 DA-A T6 (Data Column 12)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	1893.652174				
R	3	275.918841	91.972947	2.186	0.1096	
A	1	4.260870	4.260870	0.101	0.7524	3.8
B	5	62.018760	12.403752	0.295	0.9121	6.6
AB	5	247.222222	49.444444	1.175	0.3436	9.4
ERROR	31	1304.231481	42.071983			

FACTORIAL/POOLED ERROR Least square estimation AOV For 27-Aug-2024 PLANT P COUNT NUMBER 1
m2 2 21 14 27 28 DA-A T11 (Data Column 40)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	2373.217391				
R	3	398.484058	132.828019	2.425	0.0844	
A	1	8.695652	8.695652	0.159	0.6931	4.4
B	5	65.721014	13.144203	0.240	0.9417	7.5
AB	5	202.000000	40.400000	0.737	0.6011	10.7
ERROR	31	1698.316667	54.784409			

Table 19 – Vetch (*Vicia sativa*) control at 8, 17 and 28 DA-A (ANOVA)

Assessment Date	7-Aug-2024	16-Aug-2024	27-Aug-2024
Part Assessed	PLOT, P	PLOT, P	PLOT, P
Assessment Type	CONTRO	CONTRO	CONTRO
Assessment Unit	%UNCK	%UNCK	%UNCK
Reporting Basis	1 PLOT	1 PLOT	1 PLOT
Number of Subsamples	1	1	1
Pest Stage Majority/Min/Max	21, 14, 27	21, 14, 27	21, 14, 27
Trt-Eval Interval	8 DA-A	17 DA-A	28 DA-A
ARM Action Codes	AS	AA	
Trt No.	17	23	29
Treatment Name			
Rate			
Unit			
1	Untreated Control	0.0c	0.0c
2	Glyphosate 450 Nil	7.5b	80.0a
3	Glyphosate 450 Envirowet 25	8.8b	67.5ab
4	Glyphosate 450 Envirowet 50	11.5b	62.7ab
5	Glyphosate 450 Envirowet 100	8.8b	71.3ab
6	Glyphosate 450 Axiwetta	10.0b	58.8ab
7	Glyphosate 450 LI700	12.5b	67.5ab
8	Paraquat 360 Nil	49.8a	66.1ab
9	Paraquat 360 Envirowet 25	52.5a	60.0ab
10	Paraquat 360 Envirowet 50	60.0a	40.0b
11	Paraquat 360 Envirowet 100	55.0a	55.0ab
12	Paraquat 360 Axiwetta	50.0a	70.0ab
13	Paraquat 360 LI700	60.0a	65.0ab
LSD P=.05	NA	NA	33.97
Standard Deviation	0.81t	10.50t	23.64
CV	16.51t	32.79t	40.23
Levene's F	1.239	0.931	1.198
Skewness	-0.0472	0.2848	-0.5719
Kurtosis	-1.3594*	3.0538*	-0.951
Replicate F	4.284	2.319	3.388
Replicate Prob(F)	0.0114	0.0929	0.0291
Treatment F	38.292	4.127	2.872
Treatment Prob(F)	0.0001	0.0005	0.0078

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

Missing data estimates (Yates) are included in columns 17, 23, 29.

AS = Data transformed using square root transformation of X+0.5 with resulting letters of separation applied to original means.

AA = Data transformed using arcsine square root % transformation with resulting letters of separation applied to original means.

Table 20 – Vetch (*Vicia sativa*) control at 8, 17 and 28 DA-A (Factorial)

Assessment Date	7-Aug-2024	16-Aug-2024	27-Aug-2024
Part Assessed	PLOT, P	PLOT, P	PLOT, P
Assessment Type	CONTRO	CONTRO	CONTRO
Assessment Unit	%UNCK	%UNCK	%UNCK
Reporting Basis	1 PLOT	1 PLOT	1 PLOT
Number of Subsamples	1	1	1
Pest Stage Majority/Min/Max	21, 14, 27	21, 14, 27	21, 14, 27
Trt-Eval Interval	8 DA-A	17 DA-A	28 DA-A
Trt Treatment			
No. Name Rate Unit	17	23	29
TABLE OF R MEANS			
Replicate 1	29.6	36.7	54.2
Replicate 2	27.9	41.3	72.5
Replicate 3	31.7	27.8	50.6
Replicate 4	39.6	25.0	77.1
TABLE OF A (Herbicide) MEANS			
1 Glyphosate 450 1.5L/ha	9.8b	33.8-	67.9-
2 Paraquat 360 1.5L/ha	54.6a	31.6-	59.3-
LSD P=.05	5.54	9.88	14.45
Standard Deviation	9.41	16.78	24.55
CV	29.22	51.35	38.60
TABLE OF B (Adjuvant) MEANS			
1 Nil	28.7-	26.7-	72.8-
2 Envirowet 25 25mL/100 L	30.6-	31.3-	63.8-
3 Envirowet 50 50mL/100 L	35.8-	28.8-	51.2-
4 Envirowet 100 100mL/100 L	31.9-	40.0-	63.1-
5 Axiwetta 100mL/100 L	30.0-	38.1-	64.4-
6 LI700 250mL/100 L	36.3-	31.3-	66.3-
LSD P=.05	9.59	17.11	25.03
Standard Deviation	9.41	16.78	24.55
CV	29.22	51.35	38.60
TABLE OF A (Herbicide) B (Adjuvant) MEANS			
1 Glyphosate 450 1.5L/ha	7.5-	25.0-	80.0-
1 Nil			
2 Paraquat 360 1.5L/ha	49.8-	28.4-	65.7-
1 Nil			
1 Glyphosate 450 1.5L/ha	8.8-	37.5-	67.5-
2 Envirowet 25 25mL/100 L			
2 Paraquat 360 1.5L/ha	52.5-	25.0-	60.0-
2 Envirowet 25 25mL/100 L			
1 Glyphosate 450 1.5L/ha	11.5-	25.0-	62.3-
3 Envirowet 50 50mL/100 L			
2 Paraquat 360 1.5L/ha	60.0-	32.5-	40.0-
3 Envirowet 50 50mL/100 L			
1 Glyphosate 450 1.5L/ha	8.8-	42.5-	71.3-
4 Envirowet 100 100mL/100 L			
2 Paraquat 360 1.5L/ha	55.0-	37.5-	55.0-
4 Envirowet 100 100mL/100 L			
1 Glyphosate 450 1.5L/ha	10.0-	32.5-	58.8-
5 Axiwetta 100mL/100 L			
2 Paraquat 360 1.5L/ha	50.0-	43.8-	70.0-
5 Axiwetta 100mL/100 L			
1 Glyphosate 450 1.5L/ha	12.5-	40.0-	67.5-
6 LI700 250mL/100 L			
2 Paraquat 360 1.5L/ha	60.0-	22.5-	65.0-
6 LI700 250mL/100 L			
LSD P=.05	13.57	24.20	35.40
Standard Deviation	9.41	16.78	24.55
CV	29.22	51.35	38.60

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

FACTORIAL/POOLED ERROR Least square estimation AOV For 7-Aug-2024 PLOT P CONTRO % 1 PLOT 1
21 14 27 8 DA-A (Data Column 17)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	27435.326087				
R	3	956.576087	318.858696	3.603	0.0242	
A	1	23287.500000	23287.500000	263.173	0.0001	5.5
B	5	371.053241	74.210648	0.839	0.5326	9.6
AB	5	77.083333	15.416667	0.174	0.9702	13.6
ERROR	31	2743.113426	88.487530			

FACTORIAL/POOLED ERROR Least square estimation AOV For 16-Aug-2024 PLOT P CONTRO % 1 PLOT 1
21 14 27 17 DA-A (Data Column 23)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	13167.934783				
R	3	1905.018116	635.006039	2.254	0.1017	
A	1	65.760870	65.760870	0.233	0.6324	9.9
B	5	1043.946885	208.789377	0.741	0.5985	17.1
AB	5	1421.440972	284.288194	1.009	0.4289	24.2
ERROR	31	8731.767940	281.669934			

FACTORIAL/POOLED ERROR Least square estimation AOV For 27-Aug-2024 PLOT P CONTRO % 1 PLOT 1
21 14 27 28 DA-A (Data Column 29)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.05)
Total	45	28715.217391				
R	3	5903.134058	1967.711353	3.266	0.0344	
A	1	958.695652	958.695652	1.591	0.2166	14.5
B	5	1974.221014	394.844203	0.655	0.6597	25.0
AB	5	1202.430556	240.486111	0.399	0.8456	35.4
ERROR	31	18676.736111	602.475358			

DISCUSSION

A small plot trial was established near Horsham, Victoria in 2024 compare the effectiveness of Envirowet Multi-Phase Surfactant with industry standard wetting agents when used with Glyphosate and Paraquat herbicides to control weeds in fallow.

Treatments were applied as a single broadcast foliar spray to sowthistle (*Sonchus oleraceus*) at the three leaf growth stage (BBCH 13), annual ryegrass (*Lolium rigidum*) at the four-tiller growth stage (BBCH 24), field pea (*Pisum sativum*) at the two side shoot growth stage (BBCH 22), prickly lettuce (*Lactuca serriola*) at the four leaf growth stage (BBCH 14), and vetch (*Vicia sativa*) at the first side shoot growth stage (BBCH 21). Treatments were applied using a hand-held boom fitted with TeeJet® AIXR flat fan air induction nozzles delivering 100 L/ha and generating coarse spray droplets (ASABE 572.1).

Seasonal conditions were characterised by below-average rainfall. However, this did not compromise of the results of the trial.

Weed counts were conducted by species across the UTC plots prior to treatment application and across all plots at 28 days after application (DA-A). Weed control was visually assessed by species at 8, 17 and 28 DA-A.

Sowthistle control (Tables 1-4)

Factorial analysis showed Envirowet at 100 mL/100 L displayed greater visual control of sowthistle at 17 DA-A than nil adjuvant or all other adjuvants, however this was not significant when compared with Envirowet at 25 mL/100 L and was not observed at 28 DA-A; there were no significant differences in sowthistle densities or visual control between Envirowet at 25-100 mL/100 L, Axiwetta, LI700, or nil adjuvant at 28 DA-A.

Annual ryegrass control (Tables 5-8)

Factorial analysis showed that Envirowet at 50 or 100 mL/100 L, Axiwetta, or LI700 displayed significantly greater visual control of annual ryegrass at 8 DA-A than the plots that were not treated with an adjuvant, however, at 17 and 28 DA-A, factorial analysis showed that there were no significant differences in the level of visual control of annual ryegrass provided by Envirowet at 25-100 mL/100 L, Axiwetta, LI700, or nil adjuvant. Factorial analysis of count data also showed no significant differences in annual ryegrass densities between adjuvant treatments at 28 DA-A.

Field pea control (Tables 9-12)

Factorial analysis showed that there were no significant differences in the level of visual field pea control provided by Envirowet at 25-100 mL/100 L, Axiwetta, LI700, or nil adjuvant between 8 and 28 DA-A. Count data collected at 28 DA-A, also showed no significant differences in field pea densities between adjuvant treatments.

Prickly lettuce control (Tables 17-20)

Factorial analysis showed that there were no significant differences in prickly lettuce control across adjuvants at 8 DA-A. At 17 DA-A, all adjuvants displayed a higher level of mean visual prickly lettuce control than the plots that were not treated with an adjuvant, however this was not significant across the plots treated with Envirowet at 50 mL/ha. At 28 DA-A, there were no significant differences in the level of visual prickly lettuce control provided by Envirowet at 25-100 mL/100 L, Axiwetta, LI700, or nil adjuvant. However, count data showed that there were more prickly lettuce plants across the plots treated with LI700 when compared with all other

adjuvants or nil adjuvant, although this was not significant when compared with Envirowet at 25 mL/100 L.

Vetch control (Tables 21-24)

Factorial analysis showed that there were no significant differences in the level of visual control of vetch provided by Envirowet at 25-100 mL/100 L, Axiwetta, LI700, or nil adjuvant between 8 and 28 DA-A. Count data collected at 28 DA-A, also showed no significant differences in vetch densities between adjuvant treatments.

CONCLUSIONS

Factorial analysis showed Envirowet at 100 mL/100 L displayed greater visual control of sowthistle at 17 DA-A than nil adjuvant or all other adjuvants, however this was not significant when compared with Envirowet at 25 mL/100 L and was not observed at 28 DA-A.

Factorial analysis showed that Envirowet at 50 or 100 mL/100 L, Axiwetta, or LI700 displayed significantly greater visual control of annual ryegrass at 8 DA-A than the plots that were not treated with an adjuvant, however, this was not observed at 17 or 28 DA-A.

Factorial analysis showed no significant differences in the level of visual field pea control provided by Envirowet at 25-100 mL/100 L, Axiwetta, LI700, or nil adjuvant between 8 and 28 DA-A.

Factorial analysis showed that all adjuvants displayed a higher level of mean visual prickly lettuce control at 17 DA-A than the plots that were not treated with an adjuvant, however this was not observed at 28 DA-A.

There were no significant differences in the level of visual control of vetch provided by Envirowet at 25-100 mL/100 L, Axiwetta, LI700, or nil adjuvant between 8 and 28 DA-A.

APPENDICES

Appendix i - Trial details

Trial Site Information

Location	Horsham, Victoria, Australia
GPS Co-ordinates	-36.74057, 142.10484
Treated Plot Width	2 m
Treated Plot Length	10 m
Treated Plot Area	20 m ²
Replications	4
Treatments	13
Site Type	Field
Experimental Unit	1 Plot
Study Design	Factorial (RCB)

Cooperator

Name	Darryl Blair
Address	Plant Breeding Centre, 180 Horsham-Noradjuha Road, Lower Norton, VIC 3400
Mobile	0419 361 720
E-Mail	darryl.blair@agriculture.vic.gov.au

Crop Description

Common Name	Fallow
ARM Code	YBRAC

Pest Description

Scientific Name	<i>Sonchus oleraceus</i>	<i>Lolium rigidum</i>	<i>Pisum sativum</i>
Common Name	Sowthistle	Annual ryegrass	Field pea
ARM Code	SONOL	LOLRI	PIBSX
Scientific Name	<i>Lactuca serriola</i>	<i>Vicia sativa</i>	
Common Name	Prickly lettuce	Vetch	
ARM Code	LACSE	VICSA	

Application Description

Code	A
Date	30-Jul-2024
Start Time	11:00 AM
End Time	12:40 PM
Method	SPRAY
Timing	ATGRST
Placement	FOLIAR
Air Temperature	13.8 C
Relative Humidity %	57
Wind Velocity	9 KPH
Wind Direction	N
Dew Presence	N, no
Soil Moisture	SLIWET
Cloud Cover %	20

Application Equipment

Code	A
Equipment Name	HBM049
Equipment Type	SPRBAC
Operation Pressure	200 kPa
Nozzle Type	FLAFAI
Nozzle Trade Name	Teejet 110-015
Nozzle Calibration	480 ML/MIN
Boom Height	50.0 cm
Ground Speed	5.28 KPH
Application Amount	100 L/ha
Mix Size	2.0 L

Pest Stage at Each Application

Code	A	A	A
ARM Code	SLYMA	LOLRI	PIBSX
Majority	13	24	22
Minimum	10	21	12
Maximum	17	28	26
Code	A	A	A
ARM Code	CADDR	LACSE	VICSA
Majority	15	14	21
Minimum	11	11	14
Maximum	19	16	27

Notes

Date	30-Jul-2024
Description	Plot 301 was accidentally sprayed a bit from Treatment 2 while spraying 302. Bottle leaked halfway through plot 312, sprayed whole plot again. Plots will be removed from this date onwards.

Trial plan

Rep	Blk													
4	4	401 7 A1 B6	402 10 A2 B3	403 6 A1 B5	404 3 A1 B2	405 2 A1 B1	406 12 A2 B5	407 11 A2 B4	408 9 A2 B2	409 8 A2 B1	410 5 A1 B4	411 4 A1 B3	412 13 A2 B6	413 1
3	3	301 4 A1 B3	302 3 A1 B2	303 2 A1 B1	304 1	305 13 A2 B6	306 9 A2 B2	307 5 A1 B4	308 12 A2 B5	309 7 A1 B6	310 10 A2 B3	311 11 A2 B4	312 8 A2 B1	313 6 A1 B5
2	2	201 13 A2 B6	202 8 A2 B1	203 11 A2 B4	204 9 A2 B2	205 5 A1 B4	206 10 A2 B3	207 3 A1 B2	208 1	209 4 A1 B3	210 2 A1 B1	211 6 A1 B5	212 7 A1 B6	213 12 A2 B5
1	1	101 2 A1 B1	102 12 A2 B5	103 1	104 7 A1 B6	105 4 A1 B3	106 13 A2 B6	107 9 A2 B2	108 6 A1 B5	109 11 A2 B4	110 3 A1 B2	111 8 A2 B1	112 5 A1 B4	113 10 A2 B3

Factor	Description
A	Herbicide
B	Adjuvant

Assessment Techniques

Assessment type	Scale	Method
Weed Count	plants/m ²	The number of weeds in 2 x 0.25m ² quadrats per plot was counted by species and converted to the number of weeds per m ² .
Weed Control	%UNCK	Percent weed control was visually assessed in each plot relative to the untreated in the same replicate whereby: 0 = No control, weed healthy 10 = Some slight discolouration of leaves 20 = Some slight discolouration of leaves; 10% biomass reduction 30 = Some discolouration of leaves; 20% biomass reduction 40 = Some distinct yellowing of leaves; 30% biomass reduction 50 = Most plants yellowing; some plant distortion (if present); some necrosis; 40 % biomass reduction 60 = Most plants yellowing; some plant distortion (if present); some necrosis; 50% biomass reduction 70 = Most plants yellowing; some plant distortion (if present); some necrosis; 60% biomass reduction 80 = Most plants dying; significant plant distortion (if present); 70% biomass reduction 90 = Most plants dead or dying; significant plant distortion (if present); 80% biomass reduction 100 = All plants dead

Statistical interpretation

All data from this trial was analysed using a confidence limit of 95%, unless otherwise specified. Mean comparisons were performed only when the treatment probability of F that was calculated during analysis of variance was significant at the observed significance level specified for the mean comparison test. All mention of significant differences contained within this report refer to statistically significant differences. Levene's test was used to test for homogeneity.

If ANOVA assumptions (homogeneity of variance and normality) were not met, where possible, the data was transformed using the appropriate transformation. The ANOVA table provides the original means with the transformed letters of separation. The calculation of F values is developed from transformed data units and as the LSD is calculated from these values it will also apply to the transformed data. This means that comparison of treatment means needs to rely on the letters of significance and not the LSD and that treatment data with the same number and different letters of separation can result from statistics relying on transformed data.

Abbreviation guide

Trial Details

ATGRST = at growing stage
SLIWET = slightly wet, moist
SPRBAC = sprayer - backpack, knapsack, hand-held
FLAFAL = flat - fan air induction
ML/MIN = milliliter per minute
APPEQP = Appl. Equipment

Data Tables

Part Assessed
PLANT = plant
PLOT = plot
P = Pest is Part Rated

Assessment Type
COUNT = count
CONTRO = control / burndown or knockdown

Assessment Unit
NUMBER, 0 = number
%, 0, 100 = percent
m2 = square meter
PLOT = total plot

ARM Action Codes

AL = Automatic log transformation of X+1
AS = Automatic square root transformation of X+0.5
AA = Automatic arcsine square root % transformation
&=Transformation applied to 'Plot' experimental unit means of subsamples.

Appendix ii - Plot data**Table 1 - Sowthistle (*Sonchus oleraceus*) count at -1 and 28 DA-A**

Assessment Date					29-Jul-2024	27-Aug-2024
Part Assessed					PLANT, P	PLANT, P
Assessment Type					COUNT	COUNT
Assessment Unit					NUMBER	NUMBER
Reporting Basis					0.25 m2	0.25 m2
Number of Subsamples					2	2
Pest Stage Majority/Min/Max					13, 10, 17	13, 10, 17
Trt-Eval Interval					-1 DA-A	28 DA-A
Trt No.	Treatment Name	Rate	Rate Unit	Plot	1	33
1	Untreated Control			103	23.0	19.0
				208	13.5	10.0
				304	18.5	12.0
				413	8.0	14.5
				Mean =	15.8	13.9
2	Glyphosate 450	1.5L/ha		101	17.0	0.0
	Nil			210	15.0	0.5
				303	14.5	0.0
				405	11.0	0.0
				Mean =	14.4	0.1
3	Glyphosate 450	1.5L/ha		110	6.5	0.0
	Envirowet 25	25mL/100 L		207	20.0	1.0
				302	13.0	2.0
				404	16.5	0.0
				Mean =	14.0	0.8
4	Glyphosate 450	1.5L/ha		105	13.5	0.0
	Envirowet 50	50mL/100 L		209	9.0	0.5
				301	10.1*	0.0*
				411	12.0	0.0
				Mean =	11.2	0.1
5	Glyphosate 450	1.5L/ha		112	22.5	0.0
	Envirowet 100	100mL/100 L		205	13.0	0.5
				307	16.0	0.0
				410	17.0	0.0
				Mean =	17.1	0.1
6	Glyphosate 450	1.5L/ha		108	20.0	0.0
	Axiwetta	100mL/100 L		211	21.0	1.5
				313	12.5	0.0
				403	16.0	0.0
				Mean =	17.4	0.4
7	Glyphosate 450	1.5L/ha		104	25.0	0.0
	LI700	250mL/100 L		212	21.0	0.5
				309	19.0	0.0
				401	12.0	0.0
				Mean =	19.3	0.1
8	Paraquat 360	1.5L/ha		111	12.5	0.0
	Nil			202	12.5	0.0
				312	11.8*	0.0*
				409	14.5	0.0
				Mean =	12.8	0.0
9	Paraquat 360	1.5L/ha		107	23.0	0.0
	Envirowet 25	25mL/100 L		204	15.0	0.0
				306	19.5	1.0
				408	14.0	0.5
				Mean =	17.9	0.4
10	Paraquat 360	1.5L/ha		113	18.0	2.0
	Envirowet 50	50mL/100 L		206	13.0	1.0
				310	9.5	0.0
				402	15.0	0.0
				Mean =	13.9	0.8
11	Paraquat 360	1.5L/ha		109	14.0	0.0
	Envirowet 100	100mL/100 L		203	15.0	0.5

			311	11.0	0.5
			407	19.0	2.0
			Mean =	14.8	0.8
12	Paraquat 360	1.5L/ha	102	12.5	0.5
	Axiwetta	100mL/100 L	213	10.5	0.0
			308	15.5	0.0
			406	20.0	0.0
			Mean =	14.6	0.1
13	Paraquat 360	1.5L/ha	106	15.5	0.0
	LI700	250mL/100 L	201	15.5	0.0
			305	11.5	0.5
			412	9.5	0.0
			Mean =	13.0	0.1

Missing data estimates (Yates) are included in columns 1, 33.

Table 2 - Sowthistle (*Sonchus oleraceus*) control at 8, 17 and 28 DA-A

Assessment Date					7-Aug-2024	16-Aug-2024	27-Aug-2024
Part Assessed					PLOT, P	PLOT, P	PLOT, P
Assessment Type					CONTRO	CONTRO	CONTRO
Assessment Unit					%UNCK	%UNCK	%UNCK
Reporting Basis					1 PLOT	1 PLOT	1 PLOT
Number of Subsamples					1	1	1
Pest Stage Majority/Min/Max					13, 10, 17	13, 10, 17	13, 10, 17
Trt-Eval Interval					8 DA-A	17 DA-A	28 DA-A
Trt	Treatment	Rate	Plot				
No.	Name	Rate	Unit	Plot	14	20	26
1	Untreated Control			103	0.0	0.0	0.0
				208	0.0	0.0	0.0
				304	0.0	0.0	0.0
				413	0.0	0.0	0.0
				Mean =	0.0	0.0	0.0
2	Glyphosate 450	1.5L/ha		101	20.0	30.0	100.0
	Nil			210	5.0	50.0	100.0
				303	5.0	50.0	100.0
				405	30.0	40.0	100.0
				Mean =	15.0	42.5	100.0
3	Glyphosate 450	1.5L/ha		110	5.0	70.0	100.0
	Envirowet 25	25mL/100 L		207	5.0	50.0	95.0
				302	5.0	50.0	100.0
				404	5.0	40.0	100.0
				Mean =	5.0	52.5	98.8
4	Glyphosate 450	1.5L/ha		105	15.0	40.0	100.0
	Envirowet 50	50mL/100 L		209	5.0	40.0	100.0
				301	7.4*	38.5*	100.0*
				411	5.0	40.0	100.0
				Mean =	8.1	39.6	100.0
5	Glyphosate 450	1.5L/ha		112	5.0	50.0	100.0
	Envirowet 100	100mL/100 L		205	25.0	90.0	100.0
				307	5.0	60.0	100.0
				410	5.0	60.0	100.0
				Mean =	10.0	65.0	100.0
6	Glyphosate 450	1.5L/ha		108	10.0	40.0	100.0
	Axiwetta	100mL/100 L		211	5.0	60.0	100.0
				313	5.0	40.0	100.0
				403	10.0	40.0	100.0
				Mean =	7.5	45.0	100.0
7	Glyphosate 450	1.5L/ha		104	10.0	50.0	100.0
	LI700	250mL/100 L		212	10.0	50.0	100.0
				309	40.0	40.0	100.0
				401	50.0	50.0	100.0
				Mean =	27.5	47.5	100.0
8	Paraquat 360	1.5L/ha		111	100.0	100.0	100.0
	Nil			202	100.0	100.0	100.0
				312	99.1*	98.5*	100.0*
				409	100.0	100.0	100.0
				Mean =	99.8	99.6	100.0
9	Paraquat 360	1.5L/ha		107	100.0	100.0	100.0
	Envirowet 25	25mL/100 L		204	100.0	100.0	100.0
				306	100.0	100.0	100.0
				408	100.0	100.0	100.0
				Mean =	100.0	100.0	100.0
10	Paraquat 360	1.5L/ha		113	100.0	100.0	100.0
	Envirowet 50	50mL/100 L		206	100.0	100.0	100.0
				310	100.0	100.0	100.0
				402	100.0	100.0	100.0
				Mean =	100.0	100.0	100.0
11	Paraquat 360	1.5L/ha		109	100.0	100.0	100.0
	Envirowet 100	100mL/100 L		203	100.0	100.0	100.0
				311	95.0	100.0	100.0
				407	100.0	100.0	100.0

			Mean =	98.8	100.0	100.0
12	Paraquat 360	1.5L/ha	102	95.0	100.0	100.0
	Axiwetta	100mL/100 L	213	100.0	100.0	100.0
			308	100.0	100.0	100.0
			406	100.0	100.0	100.0
			Mean =	98.8	100.0	100.0
13	Paraquat 360	1.5L/ha	106	100.0	100.0	100.0
	LI700	250mL/100 L	201	100.0	100.0	100.0
			305	100.0	100.0	100.0
			412	100.0	100.0	100.0
			Mean =	100.0	100.0	100.0

Missing data estimates (Yates) are included in columns 14,20,26.

Table 3 - Annual ryegrass (*Lolium rigidum*) count at -1 and 28 DA-A

Assessment Date					29-Jul-2024	27-Aug-2024
Part Assessed					PLANT, P	PLANT, P
Assessment Type					COUNT	COUNT
Assessment Unit					NUMBER	NUMBER
Reporting Basis					0.25 m2	0.25 m2
Number of Subsamples					2	2
Pest Stage Majority/Min/Max					24, 21, 28	24, 21, 28
Trt-Eval Interval					-1 DA-A	28 DA-A
Trt	Treatment	Rate	Rate	Plot		
No.	Name		Unit		3	35
1	Untreated Control			103	0.0	0.5
				208	0.5	1.0
				304	0.0	0.0
				413	0.5	1.0
				Mean =	0.3	0.6
2	Glyphosate 450	1.5L/ha		101	0.5	0.0
	Nil			210	0.0	0.0
				303	0.5	0.0
				405	0.0	0.0
				Mean =	0.3	0.0
3	Glyphosate 450	1.5L/ha		110	0.5	1.0
	Envirowet 25	25mL/100 L		207	0.0	0.0
				302	0.0	0.0
				404	0.5	0.5
				Mean =	0.3	0.4
4	Glyphosate 450	1.5L/ha		105	0.5	0.5
	Envirowet 50	50mL/100 L		209	0.5	0.5
				301	0.6*	0.2*
				411	2.0	0.5
				Mean =	0.9	0.4
5	Glyphosate 450	1.5L/ha		112	3.0	1.5
	Envirowet 100	100mL/100 L		205	0.0	0.0
				307	0.5	0.0
				410	0.5	0.5
				Mean =	1.0	0.5
6	Glyphosate 450	1.5L/ha		108	0.5	0.5
	Axiwetta	100mL/100 L		211	0.0	0.0
				313	0.5	0.0
				403	0.0	0.0
				Mean =	0.3	0.1
7	Glyphosate 450	1.5L/ha		104	0.0	0.0
	LI700	250mL/100 L		212	0.5	0.0
				309	0.0	0.0
				401	4.5	4.0
				Mean =	1.3	1.0
8	Paraquat 360	1.5L/ha		111	1.0	0.5
	Nil			202	0.0	0.0
				312	0.0*	0.0*
				409	0.0	0.0
				Mean =	0.3	0.1
9	Paraquat 360	1.5L/ha		107	1.5	0.0
	Envirowet 25	25mL/100 L		204	0.0	0.0
				306	0.0	0.0
				408	0.5	0.0
				Mean =	0.5	0.0
10	Paraquat 360	1.5L/ha		113	1.0	0.0
	Envirowet 50	50mL/100 L		206	0.0	0.0
				310	1.0	0.0
				402	1.5	0.0
				Mean =	0.9	0.0
11	Paraquat 360	1.5L/ha		109	0.5	0.0
	Envirowet 100	100mL/100 L		203	0.0	0.0
				311	0.0	0.0
				407	1.0	0.0

			Mean =	0.4	0.0
12	Paraquat 360	1.5L/ha	102	0.0	0.0
	Axiwetta	100mL/100 L	213	0.5	0.0
			308	0.0	0.0
			406	1.5	0.5
			Mean =	0.5	0.1
13	Paraquat 360	1.5L/ha	106	0.0	0.0
	LI700	250mL/100 L	201	0.0	0.0
			305	0.5	0.0
			412	2.0	0.0
			Mean =	0.6	0.0

Missing data estimates (Yates) are included in columns 3, 35.

Table 4 - Annual ryegrass (*Lolium rigidum*) control at 8, 17 and 28 DA-A

Assessment Date					7-Aug-2024	16-Aug-2024	27-Aug-2024
Part Assessed					PLOT, P	PLOT, P	PLOT, P
Assessment Type					CONTRO	CONTRO	CONTRO
Assessment Unit					%UNCK	%UNCK	%UNCK
Reporting Basis					1 PLOT	1 PLOT	1 PLOT
Number of Subsamples					1	1	1
Pest Stage Majority/Min/Max					24, 21, 28	24, 21, 28	24, 21, 28
Trt-Eval Interval					8 DA-A	17 DA-A	28 DA-A
Trt	Treatment	Rate	Plot		15	21	27
No.	Name	Rate	Unit				
1	Untreated Control			103	0.0	0.0	0.0
				208	0.0	0.0	0.0
				304	0.0	0.0	0.0
				413	0.0	0.0	0.0
				Mean =	0.0	0.0	0.0
2	Glyphosate 450	1.5L/ha		101	10.0	40.0	40.0
	Nil			210	10.0	20.0	80.0
				303	0.0	60.0	70.0
				405	20.0	50.0	90.0
				Mean =	10.0	42.5	70.0
3	Glyphosate 450	1.5L/ha		110	5.0	40.0	20.0
	Envirowet 25	25mL/100 L		207	5.0	10.0	80.0
				302	5.0	60.0	95.0
				404	5.0	50.0	95.0
				Mean =	5.0	40.0	72.5
4	Glyphosate 450	1.5L/ha		105	20.0	60.0	70.0
	Envirowet 50	50mL/100 L		209	10.0	70.0	90.0
				301	13.0*	46.7*	87.7*
				411	5.0	20.0	70.0
				Mean =	12.0	49.2	79.4
5	Glyphosate 450	1.5L/ha		112	5.0	40.0	30.0
	Envirowet 100	100mL/100 L		205	15.0	50.0	100.0
				307	5.0	30.0	100.0
				410	5.0	30.0	70.0
				Mean =	7.5	37.5	75.0
6	Glyphosate 450	1.5L/ha		108	5.0	50.0	40.0
	Axiwetta	100mL/100 L		211	5.0	50.0	70.0
				313	5.0	10.0	90.0
				403	15.0	80.0	100.0
				Mean =	7.5	47.5	75.0
7	Glyphosate 450	1.5L/ha		104	5.0	20.0	90.0
	LI700	250mL/100 L		212	15.0	60.0	40.0
				309	20.0	30.0	100.0
				401	15.0	50.0	90.0
				Mean =	13.8	40.0	80.0
8	Paraquat 360	1.5L/ha		111	50.0	80.0	90.0
	Nil			202	60.0	70.0	100.0
				312	61.4*	70.0*	100.0*
				409	70.0	70.0	100.0
				Mean =	60.3	72.5	97.5
9	Paraquat 360	1.5L/ha		107	60.0	95.0	80.0
	Envirowet 25	25mL/100 L		204	70.0	95.0	100.0
				306	90.0	95.0	100.0
				408	85.0	80.0	100.0
				Mean =	76.3	91.3	95.0
10	Paraquat 360	1.5L/ha		113	85.0	95.0	90.0
	Envirowet 50	50mL/100 L		206	90.0	85.0	100.0
				310	80.0	70.0	100.0
				402	85.0	90.0	100.0
				Mean =	85.0	85.0	97.5
11	Paraquat 360	1.5L/ha		109	80.0	90.0	95.0
	Envirowet 100	100mL/100 L		203	95.0	95.0	100.0
				311	90.0	95.0	100.0
				407	90.0	95.0	100.0

			Mean =	88.8	93.8	98.8
12	Paraquat 360	1.5L/ha	102	80.0	90.0	100.0
	Axiwetta	100mL/100 L	213	80.0	95.0	100.0
			308	90.0	95.0	100.0
			406	85.0	95.0	100.0
			Mean =	83.8	93.8	100.0
13	Paraquat 360	1.5L/ha	106	85.0	95.0	100.0
	LI700	250mL/100 L	201	85.0	100.0	100.0
			305	90.0	95.0	100.0
			412	85.0	95.0	100.0
			Mean =	86.3	96.3	100.0

Missing data estimates (Yates) are included in columns 15, 21, 27.

Table 5 - Field pea (*Pisum sativum*) count at -1 and 28 DA-A

Assessment Date					29-Jul-2024	27-Aug-2024
Part Assessed					PLANT, P	PLANT, P
Assessment Type					COUNT	COUNT
Assessment Unit					NUMBER	NUMBER
Reporting Basis					0.25 m2	0.25 m2
Number of Subsamples					2	2
Pest Stage Majority/Min/Max					22, 12, 26	22, 12, 26
Trt-Eval Interval					-1 DA-A	28 DA-A
Trt	Treatment	Rate	Unit	Plot	5	31
No.	Name					
1	Untreated Control			103	0.5	1.5
				208	0.0	0.0
				304	0.5	0.5
				413	2.0	3.0
				Mean =	0.8	1.3
2	Glyphosate 450	1.5L/ha		101	1.5	0.0
	Nil			210	1.5	0.0
				303	0.5	0.0
				405	3.0	0.0
				Mean =	1.6	0.0
3	Glyphosate 450	1.5L/ha		110	2.5	0.5
	Envirowet 25	25mL/100 L		207	0.5	0.0
				302	1.5	0.0
				404	4.0	0.0
				Mean =	2.1	0.1
4	Glyphosate 450	1.5L/ha		105	1.0	0.0
	Envirowet 50	50mL/100 L		209	0.5	0.0
				301	0.0*	0.0*
				411	1.0	0.0
				Mean =	0.6	0.0
5	Glyphosate 450	1.5L/ha		112	2.5	0.0
	Envirowet 100	100mL/100 L		205	0.5	0.0
				307	1.5	0.0
				410	1.5	0.0
				Mean =	1.5	0.0
6	Glyphosate 450	1.5L/ha		108	2.0	0.0
	Axiwetta	100mL/100 L		211	1.5	0.5
				313	1.0	0.0
				403	2.5	0.0
				Mean =	1.8	0.1
7	Glyphosate 450	1.5L/ha		104	1.0	0.0
	LI700	250mL/100 L		212	2.0	0.0
				309	1.0	0.0
				401	1.0	0.0
				Mean =	1.3	0.0
8	Paraquat 360	1.5L/ha		111	1.0	0.0
	Nil			202	0.5	0.0
				312	2.0*	0.0*
				409	7.5	0.5
				Mean =	2.8	0.1
9	Paraquat 360	1.5L/ha		107	0.5	0.0
	Envirowet 25	25mL/100 L		204	0.5	0.0
				306	0.0	0.0
				408	3.5	0.0
				Mean =	1.1	0.0
10	Paraquat 360	1.5L/ha		113	1.0	0.0
	Envirowet 50	50mL/100 L		206	0.5	0.0
				310	0.0	0.0
				402	4.0	0.0
				Mean =	1.4	0.0
11	Paraquat 360	1.5L/ha		109	2.5	0.5
	Envirowet 100	100mL/100 L		203	1.0	0.0
				311	1.0	0.0
				407	3.0	0.0

			Mean =	1.9	0.1
12	Paraquat 360	1.5L/ha	102	0.5	0.0
	Axiwetta	100mL/100 L	213	0.5	0.0
			308	1.0	0.0
			406	8.0	0.0
			Mean =	2.5	0.0
13	Paraquat 360	1.5L/ha	106	1.5	0.0
	LI700	250mL/100 L	201	1.0	0.0
			305	1.0	0.0
			412	2.0	0.0
			Mean =	1.4	0.0

Missing data estimates (Yates) are included in columns 5, 31.

Table 6 - Field pea (*Pisum sativum*) control at 8, 17 and 28 DA-A

Assessment Date					7-Aug-2024	16-Aug-2024	27-Aug-2024
Part Assessed					PLOT, P	PLOT, P	PLOT, P
Assessment Type					CONTRO	CONTRO	CONTRO
Assessment Unit					%UNCK	%UNCK	%UNCK
Reporting Basis					1 PLOT	1 PLOT	1 PLOT
Number of Subsamples					1	1	1
Pest Stage Majority/Min/Max					22, 12, 26	22, 12, 26	22, 12, 26
Trt-Eval Interval					8 DA-A	17 DA-A	28 DA-A
Trt	Treatment	Rate	Plot				
No.	Name	Rate	Unit	Plot	13	19	25
1	Untreated Control			103	0.0	0.0	0.0
				208	0.0	0.0	0.0
				304	0.0	0.0	0.0
				413	0.0	0.0	0.0
				Mean =	0.0	0.0	0.0
2	Glyphosate 450	1.5L/ha		101	30.0	90.0	100.0
	Nil			210	5.0	80.0	90.0
				303	5.0	95.0	100.0
				405	15.0	70.0	100.0
				Mean =	13.8	83.8	97.5
3	Glyphosate 450	1.5L/ha		110	5.0	80.0	100.0
	Envirowet 25	25mL/100 L		207	10.0	85.0	100.0
				302	15.0	95.0	100.0
				404	5.0	80.0	100.0
				Mean =	8.8	85.0	100.0
4	Glyphosate 450	1.5L/ha		105	10.0	90.0	100.0
	Envirowet 50	50mL/100 L		209	10.0	95.0	100.0
				301	8.3*	97.4*	100.0*
				411	10.0	95.0	100.0
				Mean =	9.6	94.4	100.0
5	Glyphosate 450	1.5L/ha		112	5.0	70.0	100.0
	Envirowet 100	100mL/100 L		205	20.0	95.0	100.0
				307	5.0	80.0	100.0
				410	5.0	95.0	100.0
				Mean =	8.8	85.0	100.0
6	Glyphosate 450	1.5L/ha		108	10.0	85.0	100.0
	Axiwetta	100mL/100 L		211	10.0	90.0	100.0
				313	5.0	95.0	100.0
				403	10.0	80.0	100.0
				Mean =	8.8	87.5	100.0
7	Glyphosate 450	1.5L/ha		104	10.0	85.0	100.0
	LI700	250mL/100 L		212	5.0	60.0	100.0
				309	5.0	95.0	100.0
				401	20.0	100.0	100.0
				Mean =	10.0	85.0	100.0
8	Paraquat 360	1.5L/ha		111	90.0	60.0	100.0
	Nil			202	80.0	90.0	100.0
				312	81.7*	87.4*	100.0*
				409	80.0	100.0	100.0
				Mean =	82.9	84.4	100.0
9	Paraquat 360	1.5L/ha		107	80.0	95.0	100.0
	Envirowet 25	25mL/100 L		204	90.0	100.0	100.0
				306	90.0	100.0	100.0
				408	95.0	100.0	100.0
				Mean =	88.8	98.8	100.0
10	Paraquat 360	1.5L/ha		113	95.0	100.0	100.0
	Envirowet 50	50mL/100 L		206	90.0	100.0	100.0
				310	90.0	95.0	100.0
				402	95.0	100.0	100.0
				Mean =	92.5	98.8	100.0
11	Paraquat 360	1.5L/ha		109	90.0	100.0	100.0
	Envirowet 100	100mL/100 L		203	95.0	100.0	100.0
				311	90.0	100.0	100.0
				407	95.0	100.0	100.0

			Mean =	92.5	100.0	100.0
12	Paraquat 360	1.5L/ha	102	90.0	100.0	100.0
	Axiwetta	100mL/100 L	213	95.0	100.0	100.0
			308	95.0	100.0	100.0
			406	85.0	100.0	100.0
			Mean =	91.3	100.0	100.0
13	Paraquat 360	1.5L/ha	106	90.0	95.0	100.0
	LI700	250mL/100 L	201	95.0	100.0	100.0
			305	95.0	100.0	100.0
			412	95.0	95.0	100.0
			Mean =	93.8	97.5	100.0

Missing data estimates (Yates) are included in columns 13, 19, 25.

Table 7 - Prickly lettuce (*Lactuca serriola*) count at -1 and 28 DA-A

Assessment Date					29-Jul-2024	27-Aug-2024
Part Assessed					PLANT, P	PLANT, P
Assessment Type					COUNT	COUNT
Assessment Unit					NUMBER	NUMBER
Reporting Basis					0.25 m2	0.25 m2
Number of Subsamples					2	2
Pest Stage Majority/Min/Max					14, 11, 16	14, 11, 16
Trt-Eval Interval					-1 DA-A	28 DA-A
Trt	Treatment	Rate	Rate	Plot		
No.	Name		Unit		9	37
1	Untreated Control			103	3.0	3.0
				208	0.5	1.0
				304	0.0	1.0
				413	8.5	7.0
				Mean =	3.0	3.0
2	Glyphosate 450	1.5L/ha		101	0.5	0.0
	Nil			210	0.0	0.0
				303	1.0	0.0
				405	2.0	0.0
				Mean =	0.9	0.0
3	Glyphosate 450	1.5L/ha		110	2.0	1.5
	Envirowet 25	25mL/100 L		207	0.5	0.0
				302	1.0	0.0
				404	3.5	0.0
				Mean =	1.8	0.4
4	Glyphosate 450	1.5L/ha		105	1.0	1.0
	Envirowet 50	50mL/100 L		209	0.5	0.0
				301	0.0*	0.1*
				411	2.5	0.0
				Mean =	1.0	0.3
5	Glyphosate 450	1.5L/ha		112	4.5	0.0
	Envirowet 100	100mL/100 L		205	3.0	0.0
				307	0.0	0.0
				410	4.5	0.0
				Mean =	3.0	0.0
6	Glyphosate 450	1.5L/ha		108	3.5	0.0
	Axiwetta	100mL/100 L		211	2.0	0.0
				313	0.0	0.0
				403	1.5	0.0
				Mean =	1.8	0.0
7	Glyphosate 450	1.5L/ha		104	2.5	0.5
	LI700	250mL/100 L		212	2.5	1.5
				309	0.0	0.0
				401	1.0	0.0
				Mean =	1.5	0.5
8	Paraquat 360	1.5L/ha		111	5.5	0.0
	Nil			202	0.5	0.0
				312	0.9*	0.0*
				409	1.0	0.0
				Mean =	2.0	0.0
9	Paraquat 360	1.5L/ha		107	1.0	0.0
	Envirowet 25	25mL/100 L		204	1.5	0.0
				306	3.0	1.0
				408	5.5	1.5
				Mean =	2.8	0.6
10	Paraquat 360	1.5L/ha		113	2.5	0.5
	Envirowet 50	50mL/100 L		206	1.5	0.0
				310	0.5	0.0
				402	0.0	0.0
				Mean =	1.1	0.1
11	Paraquat 360	1.5L/ha		109	1.5	0.0
	Envirowet 100	100mL/100 L		203	0.5	1.5
				311	0.5	1.0
				407	4.0	1.0

12	Paraquat 360 Axiwetta	1.5L/ha 100mL/100 L	Mean =	1.6	0.9
			102	1.5	0.0
			213	1.0	0.5
			308	0.5	0.5
			406	2.5	0.0
13	Paraquat 360 LI700	1.5L/ha 250mL/100 L	Mean =	1.4	0.3
			106	1.5	0.5
			201	0.0	0.5
			305	3.0	2.5
			412	6.0	4.0
			Mean =	2.6	1.9

Missing data estimates (Yates) are included in columns 9,37.

Table 8 - Prickly lettuce (*Lactuca serriola*) control at 8, 17 and 28 DA-A

Assessment Date					7-Aug-2024	16-Aug-2024	27-Aug-2024
Part Assessed					PLOT, P	PLOT, P	PLOT, P
Assessment Type					CONTRO	CONTRO	CONTRO
Assessment Unit					%UNCK	%UNCK	%UNCK
Reporting Basis					1 PLOT	1 PLOT	1 PLOT
Number of Subsamples					1	1	1
Pest Stage Majority/Min/Max					14, 11, 16	14, 11, 16	14, 11, 16
Trt-Eval Interval					8 DA-A	17 DA-A	28 DA-A
Trt	Treatment	Rate	Plot				
No.	Name	Rate	Unit	Plot	16	22	28
1	Untreated Control			103	0.0	0.0	0.0
				208	0.0	0.0	0.0
				304	0.0	0.0	0.0
				413	0.0	0.0	0.0
				Mean =	0.0	0.0	0.0
2	Glyphosate 450	1.5L/ha		101	5.0	30.0	100.0
	Nil			210	5.0	40.0	80.0
				303	5.0	50.0	100.0
				405	20.0	50.0	100.0
				Mean =	8.8	42.5	95.0
3	Glyphosate 450	1.5L/ha		110	5.0	70.0	95.0
	Envirowet 25	25mL/100 L		207	5.0	60.0	100.0
				302	0.0	50.0	100.0
				404	10.0	70.0	100.0
				Mean =	5.0	62.5	98.8
4	Glyphosate 450	1.5L/ha		105	20.0	40.0	100.0
	Envirowet 50	50mL/100 L		209	5.0	30.0	100.0
				301	9.7*	33.3*	100.0*
				411	10.0	40.0	100.0
				Mean =	11.2	35.8	100.0
5	Glyphosate 450	1.5L/ha		112	10.0	60.0	60.0
	Envirowet 100	100mL/100 L		205	20.0	70.0	95.0
				307	0.0	60.0	100.0
				410	10.0	60.0	100.0
				Mean =	10.0	62.5	88.8
6	Glyphosate 450	1.5L/ha		108	20.0	50.0	80.0
	Axiwetta	100mL/100 L		211	5.0	50.0	90.0
				313	10.0	40.0	100.0
				403	15.0	60.0	100.0
				Mean =	12.5	50.0	92.5
7	Glyphosate 450	1.5L/ha		104	15.0	50.0	90.0
	LI700	250mL/100 L		212	10.0	60.0	95.0
				309	20.0	60.0	100.0
				401	20.0	40.0	100.0
				Mean =	16.3	52.5	96.3
8	Paraquat 360	1.5L/ha		111	90.0	30.0	100.0
	Nil			202	95.0	100.0	100.0
				312	93.0*	73.3*	100.0*
				409	100.0	100.0	100.0
				Mean =	94.5	75.8	100.0
9	Paraquat 360	1.5L/ha		107	95.0	95.0	70.0
	Envirowet 25	25mL/100 L		204	90.0	100.0	100.0
				306	95.0	80.0	95.0
				408	95.0	90.0	100.0
				Mean =	93.8	91.3	91.3
10	Paraquat 360	1.5L/ha		113	100.0	100.0	100.0
	Envirowet 50	50mL/100 L		206	100.0	100.0	100.0
				310	95.0	100.0	100.0
				402	95.0	90.0	100.0
				Mean =	97.5	97.5	100.0
11	Paraquat 360	1.5L/ha		109	95.0	100.0	100.0
	Envirowet 100	100mL/100 L		203	90.0	100.0	100.0
				311	95.0	95.0	100.0
				407	95.0	100.0	100.0

			Mean =	93.8	98.8	100.0
12	Paraquat 360	1.5L/ha	102	95.0	100.0	100.0
	Axiwetta	100mL/100 L	213	100.0	100.0	100.0
			308	100.0	100.0	100.0
			406	100.0	100.0	100.0
			Mean =	98.8	100.0	100.0
13	Paraquat 360	1.5L/ha	106	95.0	100.0	100.0
	LI700	250mL/100 L	201	100.0	100.0	100.0
			305	95.0	90.0	90.0
			412	90.0	90.0	90.0
			Mean =	95.0	95.0	95.0

Missing data estimates (Yates) are included in columns 16, 22, 28.

Table 9 - Vetch (*Vicia sativa*) count at -1 and 28 DA-A

Assessment Date					29-Jul-2024	27-Aug-2024
Part Assessed					PLANT, P	PLANT, P
Assessment Type					COUNT	COUNT
Assessment Unit					NUMBER	NUMBER
Reporting Basis					0.25 m2	0.25 m2
Number of Subsamples					2	2
Pest Stage Majority/Min/Max					21, 14, 27	21, 14, 27
Trt-Eval Interval					-1 DA-A	28 DA-A
Trt No.	Treatment Name	Rate	Rate Unit	Plot	11	39
1	Untreated Control			103	1.0	1.0
				208	2.5	5.0
				304	2.5	1.0
				413	3.0	4.5
				Mean =	2.3	2.9
2	Glyphosate 450 Nil	1.5L/ha		101	0.0	0.0
				210	2.0	2.5
				303	1.0	0.5
				405	2.0	2.0
				Mean =	1.3	1.3
3	Glyphosate 450 Envirowet 25	1.5L/ha	25mL/100 L	110	5.0	6.0
				207	1.0	2.5
				302	0.0	0.0
				404	0.5	2.5
				Mean =	1.6	2.8
4	Glyphosate 450 Envirowet 50	1.5L/ha	50mL/100 L	105	1.0	1.0
				209	2.5	3.5
				301	2.2*	1.6*
				411	3.0	2.5
				Mean =	2.2	2.1
5	Glyphosate 450 Envirowet 100	1.5L/ha	100mL/100 L	112	1.5	4.0
				205	0.5	0.5
				307	0.5	1.0
				410	5.0	6.0
				Mean =	1.9	2.9
6	Glyphosate 450 Axiwetta	1.5L/ha	100mL/100 L	108	2.5	3.0
				211	1.0	1.0
				313	4.0	3.5
				403	1.5	1.0
				Mean =	2.3	2.1
7	Glyphosate 450 LI700	1.5L/ha	250mL/100 L	104	1.0	1.0
				212	1.5	2.0
				309	2.0	1.5
				401	0.0	1.0
				Mean =	1.1	1.4
8	Paraquat 360 Nil	1.5L/ha		111	5.5	6.0
				202	0.5	0.5
				312	3.6*	3.3*
				409	4.5	5.5
				Mean =	3.5	3.8
9	Paraquat 360 Envirowet 25	1.5L/ha	25mL/100 L	107	3.0	2.5
				204	0.0	0.0
				306	0.0	0.0
				408	5.0	6.0
				Mean =	2.0	2.1
10	Paraquat 360 Envirowet 50	1.5L/ha	50mL/100 L	113	4.0	3.0
				206	1.0	1.0
				310	2.5	2.5
				402	1.0	1.5
				Mean =	2.1	2.0
11	Paraquat 360 Envirowet 100	1.5L/ha	100mL/100 L	109	0.5	2.0
				203	0.0	0.0
				311	3.0	5.0
				407	0.5	2.0

			Mean =	1.0	2.3
12	Paraquat 360	1.5L/ha	102	0.0	0.0
	Axiwetta	100mL/100 L	213	0.0	2.5
			308	2.0	2.0
			406	1.0	3.5
			Mean =	0.8	2.0
13	Paraquat 360	1.5L/ha	106	4.0	3.5
	LI700	250mL/100 L	201	0.0	0.0
			305	1.5	0.5
			412	3.0	4.0
			Mean =	2.1	2.0

Missing data estimates (Yates) are included in columns 11, 39.

Table 10 - Vetch (*Vicia sativa*) control at 8, 17 and 28 DA-A

Assessment Date					7-Aug-2024	16-Aug-2024	27-Aug-2024
Part Assessed					PLOT, P	PLOT, P	PLOT, P
Assessment Type					CONTRO	CONTRO	CONTRO
Assessment Unit					%UNCK	%UNCK	%UNCK
Reporting Basis					1 PLOT	1 PLOT	1 PLOT
Number of Subsamples					1	1	1
Pest Stage Majority/Min/Max					21, 14, 27	21, 14, 27	21, 14, 27
Trt-Eval Interval					8 DA-A	17 DA-A	28 DA-A
Trt	Treatment		Rate	Plot	17	23	29
No.	Name	Rate	Unit				
1	Untreated Control			103	0.0	0.0	0.0
				208	0.0	0.0	0.0
				304	0.0	0.0	0.0
				413	0.0	0.0	0.0
				Mean =	0.0	0.0	0.0
2	Glyphosate 450	1.5L/ha		101	5.0	20.0	90.0
	Nil			210	10.0	30.0	60.0
				303	5.0	30.0	80.0
				405	10.0	20.0	90.0
				Mean =	7.5	25.0	80.0
3	Glyphosate 450	1.5L/ha		110	10.0	60.0	40.0
	Envirowet 25	25mL/100 L		207	5.0	20.0	50.0
				302	10.0	40.0	90.0
				404	10.0	30.0	90.0
				Mean =	8.8	37.5	67.5
4	Glyphosate 450	1.5L/ha		105	15.0	20.0	70.0
	Envirowet 50	50mL/100 L		209	5.0	40.0	80.0
				301	11.1*	20.8*	50.9*
				411	15.0	20.0	50.0
				Mean =	11.5	25.2	62.7
5	Glyphosate 450	1.5L/ha		112	5.0	40.0	40.0
	Envirowet 100	100mL/100 L		205	10.0	90.0	85.0
				307	5.0	20.0	80.0
				410	15.0	20.0	80.0
				Mean =	8.8	42.5	71.3
6	Glyphosate 450	1.5L/ha		108	10.0	40.0	40.0
	Axiwetta	100mL/100 L		211	5.0	50.0	80.0
				313	10.0	20.0	20.0
				403	15.0	20.0	95.0
				Mean =	10.0	32.5	58.8
7	Glyphosate 450	1.5L/ha		104	0.0	40.0	80.0
	LI700	250mL/100 L		212	10.0	60.0	70.0
				309	10.0	30.0	30.0
				401	30.0	30.0	90.0
				Mean =	12.5	40.0	67.5
8	Paraquat 360	1.5L/ha		111	50.0	30.0	40.0
	Nil			202	40.0	20.0	80.0
				312	49.4*	24.1*	54.2*
				409	60.0	40.0	90.0
				Mean =	49.8	28.5	66.1
9	Paraquat 360	1.5L/ha		107	40.0	30.0	40.0
	Envirowet 25	25mL/100 L		204	60.0	20.0	90.0
				306	40.0	30.0	50.0
				408	70.0	20.0	60.0
				Mean =	52.5	25.0	60.0
10	Paraquat 360	1.5L/ha		113	70.0	50.0	30.0
	Envirowet 50	50mL/100 L		206	50.0	20.0	20.0
				310	70.0	30.0	20.0
				402	50.0	30.0	90.0
				Mean =	60.0	32.5	40.0
11	Paraquat 360	1.5L/ha		109	60.0	50.0	30.0
	Envirowet 100	100mL/100 L		203	50.0	30.0	95.0
				311	60.0	50.0	15.0
				407	50.0	20.0	80.0

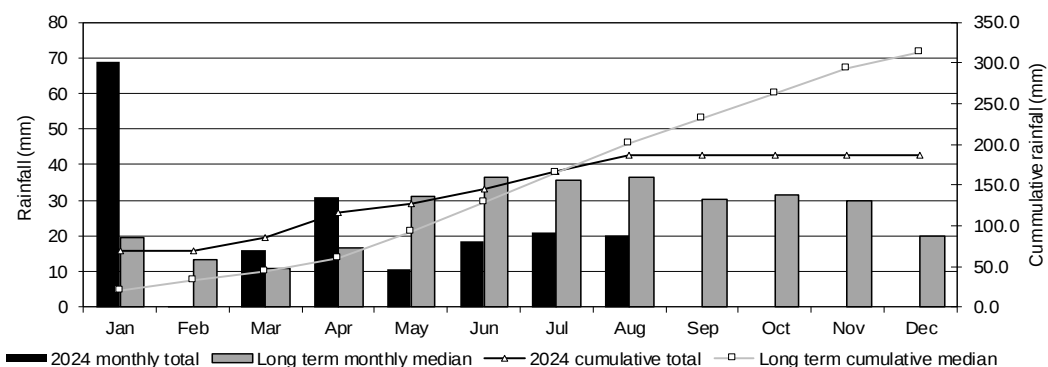
			Mean =	55.0	37.5	55.0
12	Paraquat 360	1.5L/ha	102	40.0	30.0	90.0
	Axiwetta	100mL/100 L	213	50.0	95.0	70.0
			308	50.0	20.0	40.0
			406	60.0	30.0	80.0
			Mean =	50.0	43.8	70.0
13	Paraquat 360	1.5L/ha	106	50.0	30.0	60.0
	LI700	250mL/100 L	201	40.0	20.0	90.0
			305	60.0	20.0	80.0
			412	90.0	20.0	30.0
			Mean =	60.0	22.5	65.0

Missing data estimates (Yates) are included in columns 17, 23, 29.

Appendix iii - Weather data

2024 rainfall data - Horsham Aerodrome, VIC

Observations were drawn from Horsham Aerodrome (station 79100).



2024 daily rainfall data - Horsham Aerodrome, VIC.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1						1.4	0.2		0.8			
2	6.6			24.2			0.2		1.4			
3	0.2								0.2			
4				0.2					0.2			
5												
6									0.6			
7	11.8								0.4			
8	15.8					0.2	1.0		0.2			
9	0.2			4.8		0.2	0.2	0.2	1.0			
10			0.2				0.2					
11						1.0						
12						1.6	1.0					
13					0.2							
14			0.4			0.8	1.6					
15						7.4	1.0	0.2				
16								1.0				
17	22.2					0.2		5.0				
18	0.2		15.4				0.4	1.0				
19				0.2								
20					0.8		9.4	3.4				
21					0.2		0.4	1.6				
22								2.0				
23							0.2	0.2				
24				1.4				1.4				
25							1.6					
26	11.4						1.4	0.8				
27	0.4					1.2						
28						0.2	2.2	0.6				
29		0.2				3.4		0.8				
30						1.0		0.6				
31					9.4			1.2				

Summary statistics												
2024 monthly total	68.8	0.2	16.0	30.8	10.6	18.6	21.0	20.0				
2024 cumulative total	68.8	69.0	85.0	115.8	126.4	145.0	166.0	186.0	186.0	186.0	186.0	186.0
Long term monthly median	19.6	13.4	11.0	16.6	31.2	36.6	35.8	36.4	30.3	31.6	30.0	20.0
Long term cumulative median	19.6	33.0	44.0	60.6	91.8	128.4	164.2	200.6	230.9	262.5	292.5	312.5

2024 maximum & minimum temperature data - Horsham Aerodrome, VIC

Observations were drawn from Horsham Aerodrome (station 79100).

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sept		Oct		Nov		Dec	
Date	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
1	11.4	32.4	11.3	29.9	11.1	30.2	15.4	23.6	2.5	19.8	0.9	14.5	2.2	11.9	-1.5	15.1	10.8	17.8						
2	16.1	30.6	14.3	29.4	11.5	26.7	12.2	19.7	4.3	19.4	1.4		0.7	12.2	1.0	14.4	6.3	13.8						
3	17.4	30.9	9.3	35.8	7.4	25.6	8.6	19.3	4.9	20.4	-3.0	12.7	-1.3	13.5	2.0	14.7	1.5	17.3						
4	18.3	31.9	14.7	40.7	6.8	28.5	7.1	20.3	9.2	20.1	-0.4	9.9	-1.2	14.8	-2.1	13.3	3.4	21.9						
5	13.1	34.4	17.7	25.5	8.1	32.4	4.8	24.3	4.3	21.5	3.5	15.5	-0.1	15.9	1.2	14.8	10.4	18.2						
6	19.2	34.9	8.3	25.7	14.5	34.1	9.4	23.3	5.7	20.7	3.3	18.3	0.9	15.6	-2.3	16.8	11.8	17.2						
7	20.0	25.0	8.7	27.4	11.9	31.4	13.0	22.7	2.2	21.6	1.4	17.5	1.2	15.3	-0.7	16.5	2.7	18.9						
8	17.2	24.4	8.6	30.3	7.1	33.0	6.5	18.7	3.8	21.2	-0.6	14.5	6.5	12.1	2.6	15.3	3.5	18.9						
9	12.5	29.9	10.2	30.1	12.8	40.2	5.5	17.4	10.8	22.9	3.4	16.0	8.4	16.4	5.0	15.1	7.3	16.7						
10	16.0	28.8	10.7	31.0	21.9	38.5	10.6	19.4	7.8	20.3	0.2	15.3	-0.7	13.8	-1.1	16.4	8.0							
11	10.5	33.0	13.2	35.6	16.8	37.8	10.3	18.8	10.0	20.1	5.3	16.9	1.3	11.0	-0.5	17.8								
12	13.7	35.8	13.5	38.3	21.1	31.9	7.3	18.9	4.6	22.1	8.2	13.8	4.0	14.8	2.0	20.2								
13	12.9	28.0	17.7	39.2	17.6	27.1	7.7	18.0	7.6	19.2	2.0	11.3	4.3	14.2	3.3	22.3								
14	11.3	29.2	8.8	24.5	15.0	25.0	5.8	21.3	3.3	16.5	6.0	8.1	2.3	12.5	5.5	24.2								
15	16.9	32.3	5.4	27.0	9.1	30.0	5.9	22.2	1.2	18.6	5.4	14.5	2.5	13.1	5.7	21.3								
16	18.8	32.5	8.0	31.0	14.2	31.5	7.3	21.0	2.2	21.3	-1.2	14.9	6.2	13.7	10.3	17.6								
17	15.8	23.1	10.2	32.6	15.7	25.0	9.5	20.3	4.8	18.5	0.5	13.5	9.5	15.5	8.7	15.6								
18	10.0	23.0	8.7	32.6	14.1	31.2	6.2	16.8	1.9	15.4	-1.8	12.1	4.3	12.3	4.4	17.6								
19	7.9	27.4	9.3	33.2	18.2	25.6	8.3	19.7	2.2	17.7	-1.0	11.4	4.4	11.0	6.8	18.9								
20	13.4	35.9	14.4	30.5	7.8	20.2	3.9	20.5	2.9	16.6	3.7	9.8	5.9	13.0	10.1	17.6								
21	13.3	26.9	18.4	36.8	3.5	23.4	0.4	21.0	2.6	15.1	1.8	13.7	4.4	16.4	10.4	17.6								
22	8.5	28.3	20.1	39.9	5.6	25.4	0.6	24.2	-0.8	16.3	-1.5	14.0	5.8	16.7	7.7	17.4								
23	9.2	35.2	11.8	23.3	8.3	23.9	3.4	28.2	-1.1	16.6	0.1	13.1	2.0	18.8	4.4	17.7								
24	18.6	33.3	7.5	28.3	4.5	23.8	3.9	16.8	0.5	16.8	0.7	14.8	3.1	17.1	7.1	20.6								
25	16.2	20.2	8.6	31.7	6.8	25.1	5.1	18.0	1.4	17.2	4.8	15.4	8.4	15.4	7.9	23.9								
26	13.6	25.1	12.9	28.9	7.7	23.8	8.8	17.3	-0.7	17.5	3.0	14.1	2.1	17.5	8.5	17.7								
27	9.0	25.0	8.4	33.0	6.8	25.0	9.0	16.9	-1.5	20.5	5.7	14.5	4.3	10.9	5.3	21.4								
28	11.6	28.9	15.7	41.5	7.8	24.5	2.9	21.5	1.0	21.0	2.2	16.6	-0.2	12.2	10.1	16.8								
29	13.5	32.9	15.7	29.7	5.9	27.6	9.1	19.9	2.7	20.4	6.5	10.9	-1.5	13.3	6.5	17.9								
30	11.1	30.3			8.4	31.9	2.0	17.0	6.6	16.7	0.9	12.4	-1.5	15.5	10.1	16.9								
31	8.9	28.4			9.9	33.6			6.9	16.3			-1.2	15.8	10.3	17.9								
Summary statistics																								
	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sept		Oct		Nov		Dec	
Min/Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
2024 monthly mean	13.7	29.6	11.8	31.8	10.9	28.8	7.0	20.2	3.7	19.0	2.0	13.8	2.8	14.3										
Longterm monthly mean	12.8	31.2	12.4	30.2	10.3	27.0	7.3	22.2	5.2	17.6	3.6	14.3	3.2	13.7	3.2	15.1	4.4	18.0	5.7	21.7	8.6	25.9	10.6	28.6

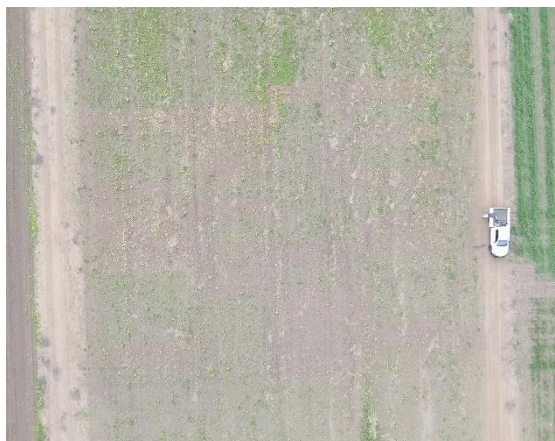
Appendix iv - Photographs

Photographs below are the trial site prior to application and drone images of the trial site after application.



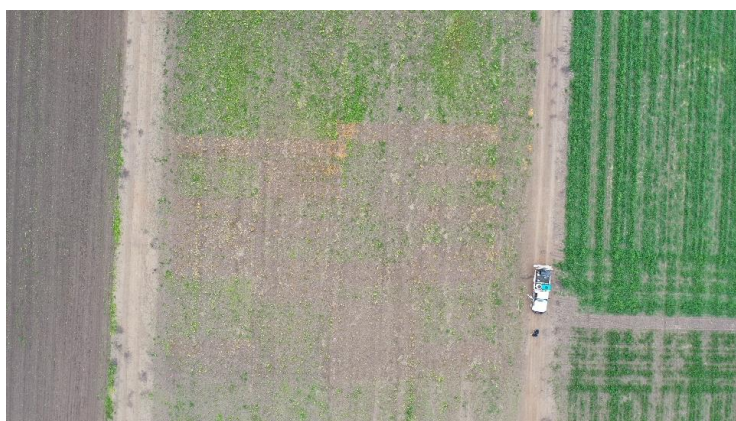
Photograph 1

The trial site, 17-Jul-24, (13 days prior to application).



Photograph 2

Drone image of the trial site (plot 101 bottom right), 2-Aug-24, (3 DA-A).



Photograph 3

Drone image of the trial site (plot 101 bottom right), 6-Aug-24, (7 DA-A).



Photograph 4

Drone image of the trial site (plot 101 bottom left), 12-Aug-24, (13 DA-A).



Photograph 5

Drone image of the trial site (plot 101 bottom left), 3-Sep-24, (35 DA-A).