Knockdown Control of Wild Oats in Chickpeas

Trial ID: LB1807 **Location:** Mt Tyson **Trial Year:** 2018
Investigator: Linda Bailey

Objective:	**To evaluate strategies for selective spray top management of wild oats in Chickpea**		
Situation:	**Chickpeas cv. Kyabra**		
Planting Date:	**8/06/2018**		
Row Spacing:	**32cm**		
Application Code:	**A**	**B**	**C**
Application Date:	**30/8/2018**	**20/9/2018**	**10/9/2018**
Application Timing:	**Early Post Emergent**	**Early Post Emergent**	**Late Post Emergent**
Weed Stage at Application (Wild Oats):	**GS24 - 4 Tillers**	**GS31 - 1st Node**	**GS39 – Flag Leaf fully emerged**
Weed Stage at Application (Phalaris):	**GS24 - 4 Tillers**	**GS31 - 1st Node**	**GS39 – Flag Leaf fully emerged**
Crop Stage at Application:	**6-10 Node**	**6-10 Node**	**Flowering**
Keywords:	**Wild oats, knockdown, chickpea**		

NB: No useful data was obtained from this trial re: selective spray topping of wild oats

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Trt No.	Treatment	Product Rate	Appln. Code	*Avena spp* Wild Oats 13/09/018 BURNDOWN % 14 DAA	*Phalaris paradoxa* Phalaris 10/11/2018 COUNT /m² 72 DAA AA T1	*Avena spp* Wild Oats 10/11/2018 COUNT /m² 72 DAA AA T2
1	Status	500ml/ha	A	95.0a	0.06b	0.02-
	Liase	1% v/v				
	Uptake	0.5% v/v				
2	Status	500ml/ha	A	95.0a	0.10b	0.01-
	Verdict 520	100ml/ha				
	Liase	1% v/v				
	Uptake	0.5% v/v				
3	Oat Master	1250ml/ha	A	0.0b	1.53a	0.00-
	Uptake	0.5% v/v				
4	Oat Master	1875ml/ha	A	0.0b	1.71a	0.04-
	Uptake	0.5% v/v				
5	Oat Master	1250ml/ha	B		1.26a	0.02-
	Uptake	0.5% v/v				
6	Oat Master	1875ml/ha	B		1.39a	0.05-
	Uptake	0.5% v/v				
7	Oat Master	1250ml/ha	C		1.95a	0.06-
	Uptake	0.5% v/v				
8	Oat Master	1875ml/ha	C		1.26a	0.02-
	Uptake	0.5% v/v				
9	Status	500ml/ha	A	95.0a	0.26b	0.00-
	Liase	1% v/v	A			
	Uptake	0.5% v/v	A			
	Oat Master	1875ml/ha	B			
	Uptake	0.5% v/v	B			
10	Status	500ml/ha	A	95.0a	0.16b	0.00-
	Verdict 520	100ml/ha	A			
	Liase	1% v/v	A			
	Uptake	0.5% v/v	A			
	Oat Master	1875ml/ha	B			
	Uptake	0.5% v/v	B			
11	Status	500ml/ha	A	95.0a	0.03b	0.00-
	Liase	1% v/v	A			
	Uptake	0.5% v/v	A			
	Oat Master	1875ml/ha	C			
	Uptake	0.5% v/v	C			
12	Status	500ml/ha	A	95.0a	0.07b	0.00-
	Verdict 520	100ml/ha	A			
	Liase	1% v/v	A			
	Uptake	0.5% v/v	A			
	Oat Master	1875ml/ha	C			
	Uptake	0.5% v/v	C			
			LSD P=.05	0.00	2.361t	1.606t
			Treatment Prob.(F)=	1.0000	0.0001	0.7002

Means followed by same letter do not significantly differ (P=.05, LSD)
t=Mean descriptions are reported in transformed data units, and are not de-transformed.
Mean comparisons performed only when AOV Treatment P (F) is significant at mean comparison OSL.

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Assessment Type
BURNDOWN = % Burndown/brown out
Pest Stage Majority
65 = Full flowering: 50% of flowers open, first petals may be fallen
ARM Action Codes
AA = Automatic arcsine square root % transformation
T1 = Arcsine square root percent ([4])
T2 = Arcsine square root percent ([6])

DAA = Days after Application

Conclusions:

This trial was established to evaluate the efficacy of Oat Master, alone or following early post-emergent herbicide application. The first application timing was on a mixed phalaris and wild oats population of ~4/m2 at ~GS24 (~90% at 10 cm diameter). At the second and third application timings, the grasses were at ~GS31 and ~GS39 respectively.

Burndown for the first application timing was assessed at 14 days after application. High levels of burndown (~95%) were evident from all treatments including Status or Status + Verdict with no significant differences between treatments. There was no obvious burndown from Oat Master Treatments.

Final weed counts were conducted ~5 weeks after the third application. The wild oats population was very low with no sound data generated. All treatments that included Status or Status + Verdict provided good levels of control of phalaris with no activity evident from Oat Master.

Unfortunately this trial did not provide any data on the original objective.

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Application Description			
	A	B	C
Application Date:	30/08/2018	20/08/2018	9/10/2018
Application Start Time:	1:30 PM	11:00 AM	11:00 AM
Application Stop Time:	1:50 PM	11:25 AM	11:24 AM
Application Method:	SPRAY		
Application Timing:	EARLY POST-EM	EARLY POST-EM	LATE POST-EM
Application Placement:	FOLIAR		
Air Temperature, Unit:	26 C	26 C	16 C
% Relative Humidity:	23	27	53
Wind Velocity, Unit:	4 km/h	10 km/h	9 km/h
Wind Direction:	NE	SW	NW
Dew Presence (Y/N):	No		
Soil Moisture:	DRY	DRY	DAMP
% Cloud Cover:	0	5	90
Next Moisture Occurred On:	1/09/2018	4/10/2018	12/10/2018

Crop Stage at Each Application			
	A	B	C
Crop:	Chickpea		
Stage Scale Used:	GRDC		
Stage Majority, %:	06 V6-10 6-10 Node	06 V6-10 6-10 Node	10 R3 Flowering
Height, Unit:	10 cm	10 cm	10 cm

Pest Stage at Each Application			
	A	B	C
Pest 1:	*Avena spp* – Wild Oats		
Stage Majority, %:	GS24 90 %	GS31 90 %	GS39 90%
Stage Minimum, %:	GS14 5 %	GS29 5 %	GS37 5 %
Stage Maximum, %:	GS26 5 %	GS32 5 %	GS43 5 %
Diameter, Unit:	10 cm	15 cm	20 cm
Pest 2:	*Phalaris paradoxa* - Phalaris		
Stage Majority, %:	GS24 90 %	GS31 90 %	GS39 90%
Stage Minimum, %:	GS14 5 %	GS29 5 %	GS37 5 %
Stage Maximum, %:	GS26 5 %	GS32 5 %	GS43 5 %
Diameter, Unit:	10 cm	15 cm	25 cm
Density, Unit:	3.8 m^2		

Application Equipment			
	A	B	C
Operation Pressure, Unit:	350 kPa		
Nozzle Type:	AIXR		
Nozzle Size:	110015		
Nozzle Spacing, Unit:	50 cm		
Boom Length, Unit:	4 m		
Boom Height, Unit:	65 cm	65 cm	70 cm
Ground Speed, Unit:	10.3 km/h		
Carrier:	Water		
Spray Volume, Unit:	70 L/ha		