

Quali-Pro Preemergence herbicide comparison

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Cooperator: Quali-Pro

Application Description		
	A	B
Application Date:	4/25/2013	6/25/2013
Time of Day:	9am	8am
Application Method:	spray	spray
Application Timing:	pre	post
Application Placement:	broad	broad
Air Temperature, Unit:	51 F	75 F
% Relative Humidity:	59	80
Wind Velocity, Unit:	3.6 mph	5.2 mph
Soil Temperature, Unit:	46 F	76 F
Soil Moisture:	NORMAL	NORMAL
Site and Design		
Plot Width, Unit:	5	FT
Plot Length, Unit:	5	FT
Plot Area, Unit:	25	FT ²
Replications:	3	
Study Design: Randomized Complete Block (RCB)		

This study was done at the John Seaton Anderson Research Center at Mead, NE on a Kentucky bluegrass stand with high populations of large crabgrass. The stand was mowed at 1.5 inches to encourage crabgrass growth and irrigated to prevent drought stress. Plots were sprayed with a CO2 backpack sprayer using a 3 nozzle boom with 8002vs tips at 30 PSI. Initial application took place on 25 April followed by 25 June application made at the 3-5 leaf stage of crabgrass. No damage/phytotoxicity was observed throughout this study to Kentucky bluegrass.

Results: All treatments reduced crabgrass cover compared to the untreated plots (16-47%). All treatments except single applications of dithiopyr (16 fl oz) resulted in < 5.3% crabgrass cover throughout this study (Table 1). All treatments resulted in > 88 % control of crabgrass by the end of this study except treatment 2 (80% control) and treatment 5 (71% control), (Table 2). Little to no differences were seen between split or single applications at the high rate. (Table 2).

Conclusion: Both Quali-Pro formulations resulted in great control of crabgrass similar to Dimension and Barricade at all rates and application regimes.

Table 1. Effect of various herbicides on percent cover of large crabgrass

Description					Large Crabgr	Large Crabgra	Large Crabgra	
Rating Date					7/12/2013	7/24/2013	8/19/2013	
Rating Type					Cover	Cover	Cover	
Rating Unit					%	%	%	
Days After First/Last Applic.					78 17	90 29	116 55	
Trt	Treatment	Rate	Appl	Appl				
No.	Name	Rate	Unit	Code	Description	1	2	3
1	Untreated Check					16.7 a	33.3 a	46.7 a
2	QP Dithiopyr 2l	16 fl oz/a	A			1.7 b	4.7 bc	8.7 bc
3	QP Dithiopyr 2l	16 fl oz/a	AB	+5-10 week		1.3 b	3 bc	5.3 cd
4	QP Dithiopyr 2l	32 fl oz/a	A			1 b	1.7 c	3.7 cd
5	Dimension 2EW	16 fl oz/a	A			1 b	7 b	13.3 b
6	Dimension 2EW	16 fl oz/a	AB	+5-10 week		1 b	3 bc	2.7 d
7	Dimension 2EW	32 fl oz/a	A			1.3 b	1.7 c	3 d
8	QP Prodiamine L	12 fl oz/a	A			2 b	3 bc	4.3 cd
9	QP Prodiamine L	12 fl oz/a	AB	+5-10 week		1 b	1 c	1 d
10	QP Prodiamine L	24 fl oz/a	A			1 b	1.3 c	1.3 d
11	Barricade 4 FL	12 fl oz/a	A			1 b	3 bc	4 cd
12	Barricade 4 FL	12 fl oz/a	AB	+5-10 week		1.7 b	2 c	3.3 cd
13	Barricade 4 FL	24 fl oz/a	A			1 b	1 c	1.3 d
LSD (P=.05)						1.57	4.2	5.42
Standard Deviation						0.93	2.49	3.22
Treatment Prob(F)						0.0001	0.0001	0.0001

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

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Table 2. Effect of various herbicides on percent control of large crabgrass

Description				Large Crabgr Large Crabgra Large Crabgra					
Rating Date				7/12/2013		7/24/2013		8/19/2013	
Rating Type				CONTRO		CONTRO		CONTRO	
Rating Unit				%UNCK		%UNCK		%UNCK	
Days After First/Last Applic.				78 17		90 29		116 55	
Trt	Treatment	Rate	Appl	Appl					
No.	Name	Rate	Unit	Code	Description	4	5	6	
1	Untreated Check					0 c	0 d	0 d	
2	QP Dithiopyr 2l	16 fl oz/a	A			91 ab	85 bc	81 bc	
3	QP Dithiopyr 2l	16 fl oz/a	AB		+5-10 week	92 ab	91 ab	89 ab	
4	QP Dithiopyr 2l	32 fl oz/a	A			94 a	95 a	92 ab	
5	Dimension 2EW	16 fl oz/a	A			94 a	79 c	71 c	
6	Dimension 2EW	16 fl oz/a	AB		+5-10 week	94 a	91 ab	94 a	
7	Dimension 2EW	32 fl oz/a	A			92 ab	95 a	94 a	
8	QP Prodiamine L	12 fl oz/a	A			88 b	91 ab	91 ab	
9	QP Prodiamine L	12 fl oz/a	AB		+5-10 week	94 a	97 a	98 a	
10	QP Prodiamine L	24 fl oz/a	A			94 a	96 a	97 a	
11	Barricade 4 FL	12 fl oz/a	A			94 a	91 ab	91 ab	
12	Barricade 4 FL	12 fl oz/a	AB		+5-10 week	89 ab	94 a	93 a	
13	Barricade 4 FL	24 fl oz/a	A			94 a	97 a	97 a	
LSD (P=.05)						5.08	7.29	11.34	
Standard Deviation						3.02	4.33	6.73	
Treatment Prob(F)						0.0001	0.0001	0.0001	

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

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Rating Type

CONTRO = control / burndown or knockdown

Rating Unit

% = percent

%UNCK = percent of untreated check