

MSU Weed Science Research Program

Influence of weed size on glyphosate/dicamba mixtures - "Regulated"

Trial ID: SOY17-14  
 Conducted: Campus T-18

Study Dir.: Sprague and Powell  
 Investigator: Christy Sprague

**Date Planted:** May/22/2014      **Row Spacing:** 30 IN  
**Variety:** RR2 XTEND      **No. of Reps:** 4  
**Population:** 150,000 seeds/A      **% OM:** 3.3  
**Soil Type:** Loam      **pH:** 6.0  
**Plot Size:** 10 X 30 FT      **Design:** RANDOMIZED COMPLETE BLOCK

**Tillage:** Spring disk & chisel, spring soil finish.  
**Fertilizer:** None

**Crop and Weed Description**

Weed	Code	Common Name	Scientific Name
1.	ANGR	mainly foxtail species	SETARIA SP.
2.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
3.	AMAPO	AMARANTH, POWELL	AMARANTHUS POWELLII S.WATS.
4.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
5.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
Crop	Code	Common Name	
1.	GLXMA	SOYBEAN	

**Application Description**

	A	B	C
<b>Application Timing:</b>	PRE	4-6" wds	8-10" wds
<b>Date Treated:</b>	May/22/2014	Jun/27/2014	Jul/03/2014
<b>Time Treated:</b>	4:10 PM	12:45 PM	5:30 PM
<b>% Cloud Cover:</b>	50	50	10
<b>Air Temp., Unit:</b>	69 F	80 F	74 F
<b>% Relative Humidity:</b>	46	51	46
<b>wind Speed/Unit/Dir:</b>	9 mph NW	4 mph SE	7 mph W
<b>Soil Temp., Unit:</b>	60 F	70 F	67 F
<b>Soil/Leaf Surface M:</b>	5 -	4 5	3 5
<b>Soil Moist (1=w 5=d):</b>	5	3	3

**Crop Stage at Each Application**

	A	B	C
<b>Crop Name:</b>	GLXMA	GLXMA	GLXMA
<b>Height (In.):</b>	-	13"	14"
<b>Stage (L):</b>	-	V4	V6

**Weed Stage at Each Application**

	A	B	C
<b>Weed 1 Name:</b>	ANGR	ANGR	ANGR
<b>Height (In.):</b>	-	4-15"	8-15"
<b>Stage (L):</b>	-	4-18	3-5
<b>Weed 2 Name:</b>	CHEAL	CHEAL	CHEAL
<b>Height (In.):</b>	-	3-8"	8-16"
<b>Stage (L):</b>	-	7-many	12-16
<b>Weed 3 Name:</b>	AMAPO	AMAPO	AMAPO
<b>Height (In.):</b>	-	4-11"	5-10"
<b>Stage (L):</b>	-	10-many	10-16
<b>Weed 4 Name:</b>	AMBEL	AMBEL	AMBEL
<b>Height (In.):</b>	-	3-10"	7-12"
<b>Stage (L):</b>	-	8-16	10-16
<b>Weed 5 Name:</b>	ABUTH	ABUTH	ABUTH
<b>Height (In.):</b>	-	4-10"	8-14
<b>Stage (L):</b>	-	4-7	4-6

**Weed Density (plants/sq. ft.)**

	1	2	3	4	5
<b>Date:</b>	Jul/17/2014	Jul/17/2014	Jul/17/2014	Jul/17/2014	Jul/17/2014
<b>Weed Name:</b>	ANGR	CHEAL	AMAPO	AMBEL	ABUTH
<b>Density:</b>	6	8	1	<1	<1

**Application Equipment**

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom	GPA	Carrier	PSI
	Type	MPH	Type	Size	Height	Spacing	width			
A	Cub	3.8	TTI	11003	21"	20"	100"	19	Water	30
B	Cub	3.8	TTI	11003	30"	20"	100"	19	Water	30
C	Cub	3.8	TTI	11003	30"	20"	100"	19	Water	30

**Comments:** The fourth replicate was dropped from this study for demonstration purposes.

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Weed Code									ANGR	CHEAL	AMAPO
Crop Code									GLXMA		
Rating Data Type									injury	control	control
Rating Unit									percent	percent	percent
Rating Date									Jul/11/2014	Jul/11/2014	Jul/11/2014
Trt-Eval Interval									14 DA-B	14 DA-B	14 DA-B
# Subsamples, Dec.											

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code				
1	Roundup PowerMax	4.5	SL	28	fl oz/a	PRE	A	0	0	0	0
1	AMS		WG	17	lb/100 gal	PRE	A				
2	Engenia	5	SL	12.8	fl oz/a	PRE	A	0	0	37	47
2	Roundup PowerMax	4.5	SL	28	fl oz/a	PRE	A				
2	Preference		L	0.25	% v/v	PRE	A				
3	Roundup Xtend	3	SL	2	qt/a	PRE	A	0	0	37	47
3	MON 10		L	2	% v/v	PRE	A				
4	Roundup PowerMax	4.5	SL	28	fl oz/a	4-6" w	B	1	99	99	99
4	AMS		WG	17	lb/100 gal	4-6" w	B				
5	Engenia	5	SL	12.8	fl oz/a	4-6" w	B	2	99	99	99
5	Roundup PowerMax	4.5	SL	28	fl oz/a	4-6" w	B				
5	Preference		L	0.25	% v/v	4-6" w	B				
6	Roundup Xtend	3	SL	2	qt/a	4-6" w	B	4	99	99	99
6	MON 10		L	2	% v/v	4-6" w	B				
7	Roundup PowerMax	4.5	SL	28	fl oz/a	8-10" w	C	0	99	87	99
7	AMS		WG	17	lb/100 gal	8-10" w	C				
8	Engenia	5	SL	12.8	fl oz/a	8-10" w	C	0	99	89	98
8	Roundup PowerMax	4.5	SL	28	fl oz/a	8-10" w	C				
8	Preference		L	0.25	% v/v	8-10" w	C				
9	Roundup Xtend	3	SL	2	qt/a	8-10" w	C	1	99	91	98
9	MON 10		L	2	% v/v	8-10" w	C				
LSD (P=.05)								2.0	0.0	8.4	11.9
CV								122.52	0.0	6.86	9.03

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

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Crop Code				
Rating Data Type	control	control	injury	control
Rating Unit	percent	percent	percent	percent
Rating Date	Jul/11/2014	Jul/11/2014	Jul/24/2014	Jul/24/2014
Trt-Eval Interval	14 DA-B	14 DA-B	21 DA-C	21 DA-C
# Subsamples, Dec.				

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code				
1	Roundup PowerMax	4.5	SL	28	fl oz/a	PRE	A	0	0	0	0
1	AMS		WG	17	lb/100 gal	PRE	A				
2	Engenia	5	SL	12.8	fl oz/a	PRE	A	47	33	0	0
2	Roundup PowerMax	4.5	SL	28	fl oz/a	PRE	A				
2	Preference		L	0.25	% v/v	PRE	A				
3	Roundup Xtend	3	SL	2	qt/a	PRE	A	40	33	0	0
3	MON 10		L	2	% v/v	PRE	A				
4	Roundup PowerMax	4.5	SL	28	fl oz/a	4-6" w	B	99	99	0	99
4	AMS		WG	17	lb/100 gal	4-6" w	B				
5	Engenia	5	SL	12.8	fl oz/a	4-6" w	B	99	96	0	99
5	Roundup PowerMax	4.5	SL	28	fl oz/a	4-6" w	B				
5	Preference		L	0.25	% v/v	4-6" w	B				
6	Roundup Xtend	3	SL	2	qt/a	4-6" w	B	99	99	0	99
6	MON 10		L	2	% v/v	4-6" w	B				
7	Roundup PowerMax	4.5	SL	28	fl oz/a	8-10" w	C	93	93	0	99
7	AMS		WG	17	lb/100 gal	8-10" w	C				
8	Engenia	5	SL	12.8	fl oz/a	8-10" w	C	94	87	0	99
8	Roundup PowerMax	4.5	SL	28	fl oz/a	8-10" w	C				
8	Preference		L	0.25	% v/v	8-10" w	C				
9	Roundup Xtend	3	SL	2	qt/a	8-10" w	C	91	82	0	99
9	MON 10		L	2	% v/v	8-10" w	C				
LSD (P=.05)								12.4	13.4	0.0	0.3
CV								9.73	11.23	0.0	0.29

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

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Weed Code	CHEAL	AMAPO	AMBEL	ABUTH
Crop Code				
Rating Data Type	control	control	control	control
Rating Unit	percent	percent	percent	percent
Rating Date	Jul/24/2014	Jul/24/2014	Jul/24/2014	Jul/24/2014
Trt-Eval Interval	21 DA-C	21 DA-C	21 DA-C	21 DA-C
# Subsamples, Dec.				

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code				
1	Roundup PowerMax	4.5	SL	28	fl oz/a	PRE	A	0	0	0	0
1	AMS		WG	17	lb/100 gal	PRE	A				
2	Engenia	5	SL	12.8	fl oz/a	PRE	A	75			
2	Roundup PowerMax	4.5	SL	28	fl oz/a	PRE	A				
2	Preference		L	0.25	% v/v	PRE	A				
3	Roundup Xtend	3	SL	2	qt/a	PRE	A	77			
3	MON 10		L	2	% v/v	PRE	A				
4	Roundup PowerMax	4.5	SL	28	fl oz/a	4-6" w	B	98	99	99	99
4	AMS		WG	17	lb/100 gal	4-6" w	B				
5	Engenia	5	SL	12.8	fl oz/a	4-6" w	B	98	99	99	99
5	Roundup PowerMax	4.5	SL	28	fl oz/a	4-6" w	B				
5	Preference		L	0.25	% v/v	4-6" w	B				
6	Roundup Xtend	3	SL	2	qt/a	4-6" w	B	99	99	99	99
6	MON 10		L	2	% v/v	4-6" w	B				
7	Roundup PowerMax	4.5	SL	28	fl oz/a	8-10" w	C	99	99	98	98
7	AMS		WG	17	lb/100 gal	8-10" w	C				
8	Engenia	5	SL	12.8	fl oz/a	8-10" w	C	99	98	98	94
8	Roundup PowerMax	4.5	SL	28	fl oz/a	8-10" w	C				
8	Preference		L	0.25	% v/v	8-10" w	C				
9	Roundup Xtend	3	SL	2	qt/a	8-10" w	C	99	99	99	90
9	MON 10		L	2	% v/v	8-10" w	C				
LSD (P=.05)								6.3	0.8	2.0	2.3
CV								4.42	0.51	1.33	1.55

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