

MSU Weed Science Research Program

Comparison of Sequential Herbicide Programs with Total POST Programs

Trial ID: SOY07-06  
 Conducted: T-12 east

Study Dir.: Sprague, Powell  
 Investigator: Christy Sprague

**Date Planted:** 5/9/2006  
**Variety:** Garst 1827 RR/STS  
**Population:** 155,000 seed/acre  
**Soil Type:** Loam  
**Plot Size:** 10 X 35 FT  
**Row Spacing:** 30 IN  
**No. of Reps:** 4  
**% OM:** 3.4  
**pH:** 7.2  
**Design:** RANDOMIZED COMPLETE BLOCK

**Tillage:** Fall moldboard plow  
 Soil finish 5/8/06, 5/9/06  
**Fertilizer:** None at planting

**Crop and Weed Description**

Weed	Code	Common Name	Scientific Name
1.	BRAKA/SINAR	MUSTARD, WILD	BRASSICA KABER
2.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
3.	ANGR	Annual grass	mainly foxtail, panicum
4.	AMARE	PIGWEEED, REDROOT	AMARANTHUS RETROFLEXUS L.
5.	AMBEL	RAGWEED, COMMON	AMBROSIA ELATIOR L.
6.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
7.	STEME	CHICKWEED, COMMON	STELLARIA MEDIA (L.) VILL./CYR.
8.	SOLPT	NIGHTSHADE, EASTERN BLACK	SOLANUM PTYCANTHUM DUNAL
Crop	Code	Common Name	
1.	GLXMA	SOYBEAN	

**Application Description**

	A	B	C	D
<b>Application Timing:</b>	PRE	POST	POST	L Post
<b>Date Treated:</b>	5/9/2006	6/9/2006	6/14/2006	6/20/2006
<b>Time Treated:</b>	9:00 pm	11:15 am	11:15 am	11:00 am
<b>% Cloud Cover:</b>	90	100	0	5
<b>Air Temp., Unit:</b>	65 F	65 F	72 F	70 F
<b>% Relative Humidity:</b>	59	50	32	54
<b>Wind Speed/Unit/Dir:</b>	6 mph SE	6 mph SE	2 mph E	4 mph N
<b>Soil Temp., Unit:</b>	64 F	64 F	69 F	65 F
<b>Soil/Leaf Surface M:</b>	5 -	5 5	5 5	3 5
<b>Soil Moist (1=w 5=d):</b>	4	5	5	3

**Crop Stage at Each Application**

	A	B	C	D
<b>Crop Name:</b>	GLXMA	GLXMA	GLXMA	GLXMA
<b>Height (In.):</b>	-	4-6"	6-8"	5"-9"
<b>Stage (L):</b>	-	1-2 tri	2-3 tri	2-3 tri

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**Weed Stage at Each Application**

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
<b>Weed 1 Name:</b>	BRAKA/SINAR	BRAKA/SINAR	BRAKA/SINAR	BRAKA/SINAR
<b>Height (In.):</b>	-	1-6"	1-14"	22"
<b>Stage (L):</b>	-	6-10	4-flower	flowering
<b>Weed 2 Name:</b>	CHEAL	CHEAL	CHEAL	CHEAL
<b>Height (In.):</b>	-	1-3"	1-13"	1/2"-10"
<b>Stage (L):</b>	-	6-12	4-16	4-many
<b>Weed 3 Name:</b>	ANGR	ANGR	ANGR	ANGR
<b>Height (In.):</b>	-	2-4"	-	4"-9"
<b>Stage (L):</b>	-	2-5	-	4-7
<b>Weed 4 Name:</b>	AMARE	AMARE	AMARE	AMARE
<b>Height (In.):</b>	-	1-3"	.5-2"	-
<b>Stage (L):</b>	-	4-8	4-8	-
<b>Weed 5 Name:</b>	AMBEL	AMBEL	AMBEL	AMBEL
<b>Height (In.):</b>	-	1-4"	1-4"	2"-10"
<b>Stage (L):</b>	-	4-8	4-8	4-many
<b>Weed 6 Name:</b>	ABUTH	ABUTH	ABUTH	ABUTH
<b>Height (In.):</b>	-	1-3"	1-2"	2"-5"
<b>Stage (L):</b>	-	2-4	2	2-6
<b>Weed 7 Name:</b>	STEME	STEME	STEME	STEME
<b>Height (In.):</b>	-	.5-1"	-	1/2"-4"
<b>Stage (L):</b>	-	4-6	-	6-many
<b>Weed 8 Name:</b>	SOLPT	SOLPT	SOLPT	SOLPT
<b>Height (In.):</b>	-	.5-1.5"	.5"	-
<b>Stage (L):</b>	-	2-4	4	-

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

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Date:</b>	7/21/2006	7/21/2006	7/21/2006	7/21/2006	7/21/2006
<b>Weed Name:</b>	CHEAL	ABUTH	ANGR	BRAKA	AMBEL
<b>Density:</b>	4	1	6	2	5

**Application Equipment**

<b>Appl</b>	<b>Sprayer</b>	<b>Speed</b>	<b>Nozzle</b>	<b>Nozzle</b>	<b>Nozzle</b>	<b>Boom</b>				
	<b>Type</b>	<b>MPH</b>	<b>Type</b>	<b>Size</b>	<b>Height</b>	<b>Spacing</b>	<b>Width</b>	<b>GPA</b>	<b>Carrier</b>	<b>PSI</b>
<b>A</b>	CUB	3.8	AirMix	11003	20"	20"	100"	19	water	27
<b>B</b>	CUB	3.8	AirMix	11003	22"	20"	100"	19	water	27
<b>C</b>	CUB	3.8	AirMix	11003	22"	20"	100"	19	water	27
<b>D</b>	CUB	3.8	AirMix	11003	22"	20"	100"	19	water	27

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Weed Code								ANGR	CHEAL	AMARE	AMBEL	ABUTH	BRAKA
Crop Code						GLXMA							
Rating Data Type						injury		injury	injury	injury	injury	injury	injury
Rating Unit						percent		percent	percent	percent	percent	percent	percent
Rating Date						6/22/2006		6/22/2006	6/22/2006	6/22/2006	6/22/2006	6/22/2006	6/22/2006
Trt-Eval Interval						44 DA-A		44 DA-A	44 DA-A	44 DA-A	44 DA-A	44 DA-A	44 DA-A
Trt No.	Treatment Name	Form Conc	Rate	Unit	Grow Stg	Appl Code							
1	Prowl H2O	3.8	2.5	pt/a	PRE	A	15	97	99	99	91	96	88
1	Buccaneer Plus	3	32	fl oz/a	POST	C							
1	AMS		17	lb/100 gal	POST	C							
2	Outlook	6	12	fl oz/a	PRE	A	33	99	94	99	94	96	89
2	Buccaneer Plus	3	32	fl oz/a	POST	C							
2	AMS		17	lb/100 gal	POST	C							
3	Untreated						0	0	0	0	0	0	0
4	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	B	12	96	84	98	88	96	96
4	Activator 90		0.125	% v/v	MPOS	B							
4	AMS		17	lb/100 gal	MPOS	B							
5	Extreme	2.17	3	pt/a	MPOS	B	38	96	85	99	87	94	98
5	Activator 90		0.25	% v/v	MPOS	B							
5	AMS		17	lb/100 gal	MPOS	B							
6	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	B	13	96	87	99	95	94	97
6	Activator 90		0.125	% v/v	MPOS	B							
6	AMS		17	lb/100 gal	MPOS	B							
6	Roundup OriginalMAX	4.5	22	fl oz/a	LPOS	D							
6	Activator 90		0.125	% v/v	LPOS	D							
6	AMS		17	lb/100 gal	LPOS	D							
7	Extreme	2.17	3	pt/a	MPOS	B	29	98	82	99	89	97	97
7	Activator 90		0.25	% v/v	MPOS	B							
7	AMS		17	lb/100 gal	MPOS	B							
7	Buccaneer Plus	3	32	fl oz/a	LPOS	D							
7	AMS		17	lb/100 gal	LPOS	D							
8	Roundup OriginalMAX	4.5	22	fl oz/a	LPOS	D	0	0	0	0	0	0	0
8	Activator 90		0.125	% v/v	LPOS	D							
8	AMS		17	lb/100 gal	LPOS	D							
LSD (P=.05)							8.3	1.6	6.3	0.8	6.3	5.6	3.5
Standard Deviation							5.7	1.1	4.3	0.5	4.3	3.8	2.4
CV							32.64	1.54	6.48	0.7	6.28	5.27	3.36

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Weed Code								ANGR	CHEAL	AMARE	AMBEL	ABUTH	BRAKA	
Crop Code								GLXMA						GLXMA
Rating Data Type								injury	control	control	control	control	control	control
Rating Unit								percent	percent	percent	percent	percent	percent	moisture
Rating Date								7/7/2006	7/7/2006	7/7/2006	7/7/2006	7/7/2006	7/7/2006	10/26/2006
Trt-Eval Interval								59 DA-A	59 DA-A	59 DA-A	59 DA-A	59 DA-A	59 DA-A	171 DA-A

Trt No.	Treatment Name	Form Conc	Rate	Unit	Grow Stg	Appl Code								
1	Prowl H2O	3.8	2.5	pt/a	PRE	A	0	98	98	96	98	97	97	16.8
1	Buccaneer Plus	3	32	fl oz/a	POST	C								
1	AMS		17	lb/100 gal	POST	C								
2	Outlook	6	12	fl oz/a	PRE	A	9	98	93	92	98	92	97	16.7
2	Buccaneer Plus	3	32	fl oz/a	POST	C								
2	AMS		17	lb/100 gal	POST	C								
3	Untreated						0	0	0	0	0	0	0	18.6
4	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	B	1	94	80	89	95	90	97	16.8
4	Activator 90		0.125	% v/v	MPOS	B								
4	AMS		17	lb/100 gal	MPOS	B								
5	Extreme	2.17	3	pt/a	MPOS	B	8	96	85	98	95	96	97	16.3
5	Activator 90		0.25	% v/v	MPOS	B								
5	AMS		17	lb/100 gal	MPOS	B								
6	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	B	2	95	99	89	99	95	97	16.1
6	Activator 90		0.125	% v/v	MPOS	B								
6	AMS		17	lb/100 gal	MPOS	B								
6	Roundup OriginalMAX	4.5	22	fl oz/a	LPOS	D								
6	Activator 90		0.125	% v/v	LPOS	D								
6	AMS		17	lb/100 gal	LPOS	D								
7	Extreme	2.17	3	pt/a	MPOS	B	5	99	99	99	99	99	99	16.4
7	Activator 90		0.25	% v/v	MPOS	B								
7	AMS		17	lb/100 gal	MPOS	B								
7	Buccaneer Plus	3	32	fl oz/a	LPOS	D								
7	AMS		17	lb/100 gal	LPOS	D								
8	Roundup OriginalMAX	4.5	22	fl oz/a	LPOS	D	0	99	94	99	99	99	99	16.1
8	Activator 90		0.125	% v/v	LPOS	D								
8	AMS		17	lb/100 gal	LPOS	D								
LSD (P=.05)							4.4	3.6	6.3	3.5	4.2	5.6	4.1	1.39
Standard Deviation							3.0	2.4	4.3	2.4	2.8	3.8	2.8	0.95
CV							104.55	2.86	5.3	2.85	3.32	4.59	3.27	5.66

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Weed Code  
 Crop Code GLXMA  
 Rating Data Type yield  
 Rating Unit bu/acre  
 Rating Date 10/26/2006  
 Trt-Eval Interval at 13% M

Trt No.	Treatment Name	Form Conc	Rate	Unit	Grow Stg	Appl Code	
1	Prowl H2O	3.8	2.5	pt/a	PRE	A	59.1
1	Buccaneer Plus	3	32	fl oz/a	POST	C	
1	AMS		17	lb/100 gal	POST	C	
2	Outlook	6	12	fl oz/a	PRE	A	52.5
2	Buccaneer Plus	3	32	fl oz/a	POST	C	
2	AMS		17	lb/100 gal	POST	C	
3	Untreated						15.2
4	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	B	56.9
4	Activator 90		0.125	% v/v	MPOS	B	
4	AMS		17	lb/100 gal	MPOS	B	
5	Extreme	2.17	3	pt/a	MPOS	B	59.5
5	Activator 90		0.25	% v/v	MPOS	B	
5	AMS		17	lb/100 gal	MPOS	B	
6	Roundup OriginalMAX	4.5	22	fl oz/a	MPOS	B	63.4
6	Activator 90		0.125	% v/v	MPOS	B	
6	AMS		17	lb/100 gal	MPOS	B	
6	Roundup OriginalMAX	4.5	22	fl oz/a	LPOS	D	
6	Activator 90		0.125	% v/v	LPOS	D	
6	AMS		17	lb/100 gal	LPOS	D	
7	Extreme	2.17	3	pt/a	MPOS	B	61.7
7	Activator 90		0.25	% v/v	MPOS	B	
7	AMS		17	lb/100 gal	MPOS	B	
7	Buccaneer Plus	3	32	fl oz/a	LPOS	D	
7	AMS		17	lb/100 gal	LPOS	D	
8	Roundup OriginalMAX	4.5	22	fl oz/a	LPOS	D	57.6
8	Activator 90		0.125	% v/v	LPOS	D	
8	AMS		17	lb/100 gal	LPOS	D	

LSD (P=.05) 6.13  
 Standard Deviation 4.17  
 CV 7.83