

MSU Weed Science Research Program

Weed Control in Black Beans

Trial ID: DB02-06
 Conducted: Campus

Study Dir.: Sprague, Powell
 Investigator: Christy Sprague

Date Planted: 6/13/2006
Variety: Jaguar
Population: 116,000 2" spacing
Soil Type: Loam
Plot Size: 10 X 35 FT
Row Spacing: 30 IN
No. of Reps: 3
% OM: 2.7
pH: 7.1
Design: RANDOMIZED COMPLETE BLOCK

Tillage: Spring Chisel
 Disk 6/12
 Soil Finish 6/13
Fertilizer: 200 lbs. per acre 19-19-19

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	ANGR	Annual grass	mainly foxtail, panicum
2.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
3.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA
4.	BRAKA/SINAR	MUSTARD, WILD	BRASSICA KABER
5.	SOLPT	NIGHTSHADE, EASTERN BLACK	SOLANUM PTYCANTHUM DUNAL
6.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
7.	AMASS	Redroot pigweed, Powell amaranth	Amaranthus sp.
8.	POROL	PURSLANE, COMMON	PORTULACA OLERACEA L.
9.	THLAR	PENNYCRESS, FIELD	THLASPI ARVENSE L.
Crop	Code	Common Name	
1.	GLXMA	SOYBEAN	

Application Description

	A	B	C
Application Timing:	PPI	PRE	POST
Date Treated:	6/13/2006	6/13/2006	7/6/2006
Time Treated:	11:45 am	4:00 pm	2:30 pm
% Cloud Cover:	95	90	20
Air Temp., Unit:	73 F	81 F	78 F
% Relative Humidity:	36	34	41
Wind Speed/Unit/Dir:	1 mph W	1 mph W	4 mph N
Soil Temp., Unit:	65 F	68 F	81 F
Soil/Leaf Surface M:	5 5	5 5	5 5
Soil Moist (1=w 5=d):	5	5	5

Crop Stage at Each Application

	A	B	C
Crop Name:	GLXMA	GLXMA	GLXMA
Height (In.):	-	-	6-8"
Stage (L):	-	-	2 V

MSU Weed Science Research Program

Weed Control in Black Beans

Trial ID: DB02-06
 Conducted: Campus

Study Dir.: Sprague, Powell
 Investigator: Christy Sprague

Weed Stage at Each Application

	A	B	C
Weed 1 Name:	ANGR	ANGR	ANGR
Height (In.):	-	-	0.5-3"
Stage (L):	-	-	2-4
Weed 2 Name:	ABUTH	ABUTH	ABUTH
Height (In.):	-	-	0.5-1"
Stage (L):	-	-	coty-3
Weed 3 Name:	AMBEL	AMBEL	AMBEL
Height (In.):	-	-	1-2"
Stage (L):	-	-	4-8
Weed 4 Name:	BRAKA/SINAR	BRAKA/SINAR	BRAKA/SINAR
Height (In.):	-	-	0.5-1"
Stage (L):	-	-	2-6
Weed 5 Name:	SOLPT	SOLPT	SOLPT
Height (In.):	-	-	0.5"
Stage (L):	-	-	4
Weed 6 Name:	CHEAL	CHEAL	CHEAL
Height (In.):	-	-	0.5-1"
Stage (L):	-	-	2-6
Weed 7 Name:	AMASS	AMASS	AMASS
Height (In.):	-	-	0.5-1.5"
Stage (L):	-	-	4-6
Weed 8 Name:	POROL	POROL	POROL
Height (In.):	-	-	0.5"
Stage (L):	-	-	4-8
Weed 9 Name:	THLAR	THLAR	THLAR
Height (In.):	-	-	0.5"
Stage (L):	-	-	2-6

Weed Density (plants/sq. ft.)

	1	2	3	4
Date:	7/21/2006	7/21/2006	7/21/2006	7/21/2006
Weed Name:	CHEAL	ABUTH	ANGR	AMBEL
Density:	1	1	3	3

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom			
	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI
A	Cub	3.8	AirMix	11003	20"	20"	100"	19	water	27
B	Cub	3.8	AirMix	11003	20"	20"	120"	19	water	27
C	Cub	3.8	AirMix	11003	22"	20"	120"	19	water	27

MSU Weed Science Research Program

Weed Control in Black Beans

Trial ID: DB02-06
 Conducted: Campus

Study Dir.: Sprague, Powell
 Investigator: Christy Sprague

Weed Code								ANGR	AMBEL	AMARE	ABUTH		
Crop Code								control	control	control	control		
Rating Data Type								percent	percent	percent	percent		
Rating Unit								6/29/2006	7/13/2006	7/21/2006	7/21/2006		
Rating Date								38 DA-A	38 DA-A	38 DA-A	38 DA-A		
Trt-Eval Interval								16 DA-A	30 DA-A	38 DA-A	38 DA-A		
Trt No.	Treatment Name	Form Conc	Rate	Unit	Grow Stg	Appl Code							
1	Eptam 7-E	7	2.5	pt/a	PPI	A	0	7	7	99	23	99	86
2	Eptam 7-E	7	2.5	pt/a	PPI	A	0	3	3	99	27	96	90
2	Sonalan HFP	3	2	pt/a	PPI	A							
3	Eptam 7-E	7	2.5	pt/a	PPI	A	0	2	2	99	25	99	93
3	Treflan	4	1	pt/a	PPI	A							
4	Eptam 7-E	7	2.5	pt/a	PPI	A	2	8	8	95	94	99	99
4	Permit	75	0.66	oz/a	PPI	A							
5	Pursuit Plus	2.9	20	fl oz/a	PPI	A	0	17	10	89	96	99	99
5	Permit	75	0.66	oz/a	POST	C							
5	Activator 90 NIS		0.25	% v/v	POST	C							
6	Untreated						0	0	0	0	0	0	0
7	Permit	75	0.66	oz/a	PRE	B	23	23	20	98	98	99	98
7	Outlook	6	12	fl oz/a	PRE	B							
8	Permit	75	0.66	oz/a	PRE	B	17	18	17	99	99	99	96
8	Dual II Magnum	7.64	1.33	pt/a	PRE	B							
9	Permit	75	0.66	oz/a	PRE	B	5	5	6	98	91	99	86
9	Targa	0.88	5	fl oz/a	POST	C							
9	Crop Oil Concentrate		1	% v/v	POST	C							
10	Permit	75	0.66	oz/a	PRE	B	5	12	10	98	93	99	82
10	Targa	0.88	8	fl oz/a	POST	C							
10	Crop Oil Concentrate		1	% v/v	POST	C							
11	Permit	75	0.66	oz/a	PRE	B	3	13	12	98	96	99	83
11	Select	2	6	fl oz/a	POST	C							
11	Crop Oil Concentrate		1	% v/v	POST	C							
12	Dual II Magnum	7.64	1.33	pt/a	PRE	B	17	19	6	98	99	99	85
12	Reflex	2	1	pt/a	POST	C							
12	Basagran	4	1	pt/a	POST	C							
12	Crop Oil Concentrate		1	% v/v	POST	C							
13	Stalwart	8	1.33	pt/a	PRE	B	5	18	2	99	99	99	92
13	Reflex	2	1	pt/a	POST	C							
13	Basagran	4	1	pt/a	POST	C							
13	Crop Oil Concentrate		1	% v/v	POST	C							
14	Raptor	1	4	fl oz/a	POST	C	0	10	7	78	79	99	99
14	Basagran	4	8	fl oz/a	POST	C							
14	Crop Oil Concentrate		1	% v/v	POST	C							
14	Ammonium sulfate		12	lb/100 gal	POST	C							
15	Raptor	1	4	fl oz/a	POST	C	0	15	10	86	97	99	88
15	Reflex	2	1	pt/a	POST	C							
15	Activator 90 NIS		0.25	% v/v	POST	C							
16	Raptor	1	4	fl oz/a	POST	C	0	13	8	81	79	99	98
16	Basagran	2	16	fl oz/a	POST	C							
16	Crop Oil Concentrate		1	% v/v	POST	C							
16	Ammonium sulfate		12	lb/100 gal	POST	C							
LSD (P=.05)							5.4	6.8	8.0	6.4	10.4	2.2	15.0
Standard Deviation							3.2	4.1	4.8	3.9	6.3	1.3	9.0
CV							67.8	35.42	60.81	4.38	8.37	1.4	10.43

MSU Weed Science Research Program

Weed Control in Black Beans

Trial ID: DB02-06
 Conducted: Campus

Study Dir.: Sprague, Powell
 Investigator: Christy Sprague

Weed Code	SOLPT	ANGR	AMBEL	AMARE	ABUTH
Crop Code					
Rating Data Type	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent
Rating Date	7/21/2006	7/28/2006	7/28/2006	7/28/2006	7/28/2006
Trt-Eval Interval	38 DA-A	45 DA-A	45 DA-A	45 DA-A	45 DA-A

Trt No.	Treatment Name	Form Conc	Rate	Unit	Grow Stg	Appl Code					
1	Eptam 7-E	7	2.5	pt/a	PPI	A	99	99	18	99	83
2	Eptam 7-E	7	2.5	pt/a	PPI	A	99	99	30	96	91
2	Sonalan HFP	3	2	pt/a	PPI	A					
3	Eptam 7-E	7	2.5	pt/a	PPI	A	99	96	27	99	96
3	Treflan	4	1	pt/a	PPI	A					
4	Eptam 7-E	7	2.5	pt/a	PPI	A	91	93	91	99	99
4	Permit	75	0.66	oz/a	PPI	A					
5	Pursuit Plus	2.9	20	fl oz/a	PPI	A	99	86	93	99	99
5	Permit	75	0.66	oz/a	POST	C					
5	Activator 90 NIS		0.25	% v/v	POST	C					
6	Untreated						0	0	0	0	0
7	Permit	75	0.66	oz/a	PRE	B	99	98	98	99	98
7	Outlook	6	12	fl oz/a	PRE	B					
8	Permit	75	0.66	oz/a	PRE	B	99	99	96	99	96
8	Dual II Magnum	7.64	1.33	pt/a	PRE	B					
9	Permit	75	0.66	oz/a	PRE	B	91	96	88	99	87
9	Targa	0.88	5	fl oz/a	POST	C					
9	Crop Oil Concentrate		1	% v/v	POST	C					
10	Permit	75	0.66	oz/a	PRE	B	94	95	85	99	82
10	Targa	0.88	8	fl oz/a	POST	C					
10	Crop Oil Concentrate		1	% v/v	POST	C					
11	Permit	75	0.66	oz/a	PRE	B	98	98	82	99	83
11	Select	2	6	fl oz/a	POST	C					
11	Crop Oil Concentrate		1	% v/v	POST	C					
12	Dual II Magnum	7.64	1.33	pt/a	PRE	B	99	98	99	99	82
12	Reflex	2	1	pt/a	POST	C					
12	Basagran	4	1	pt/a	POST	C					
12	Crop Oil Concentrate		1	% v/v	POST	C					
13	Stalwart	8	1.33	pt/a	PRE	B	96	98	98	99	90
13	Reflex	2	1	pt/a	POST	C					
13	Basagran	4	1	pt/a	POST	C					
13	Crop Oil Concentrate		1	% v/v	POST	C					
14	Raptor	1	4	fl oz/a	POST	C	99	75	78	99	99
14	Basagran	4	8	fl oz/a	POST	C					
14	Crop Oil Concentrate		1	% v/v	POST	C					
14	Ammonium sulfate		12	lb/100 gal	POST	C					
15	Raptor	1	4	fl oz/a	POST	C	99	90	96	99	93
15	Reflex	2	1	pt/a	POST	C					
15	Activator 90 NIS		0.25	% v/v	POST	C					
16	Raptor	1	4	fl oz/a	POST	C	99	81	79	99	98
16	Basagran	2	16	fl oz/a	POST	C					
16	Crop Oil Concentrate		1	% v/v	POST	C					
16	Ammonium sulfate		12	lb/100 gal	POST	C					

LSD (P=.05)	9.0	6.6	8.9	2.2	12.9
Standard Deviation	5.4	3.9	5.3	1.3	7.7
CV	5.94	4.51	7.39	1.4	8.97