

MSU Weed Science Research Program

F9324-9 adjuvant comparison in dry bean

Trial ID: DB02-12 Study Dir.: Sprague, Powell  
 Conducted: T-10 Campus Investigator: Christy Sprague

**Date Planted:** Jun/05/2012 **Row Spacing:** 30 IN  
**Variety:** Zorro **No. of Reps:** 4  
**Population:** 109,000 seeds/Acre **% OM:** 2.5  
**Soil Type:** Loam **pH:** 7.1  
**Plot Size:** 10 X 35 FT **Design:** RANDOMIZED COMPLETE BLOCK

**Tillage:** Fall chisel plow; spring soil finish  
**Fertilizer:** 175 lb/A 19-19-19 with planter

**Crop and Weed Description**

Weed	Code	Common Name	Scientific Name
1.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
2.	AMAPO	AMARANTH, POWELL	AMARANTHUS POWELLII S. WATS.
3.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
Crop	Code	Common Name	
1.	PHSVX	BEAN, DRY	

**Application Description**

	A	B	C
<b>Application Timing:</b>	PRE	V2	V4
<b>Date Treated:</b>	Jun/05/2012	Jun/26/2012	Jul/05/2012
<b>Time Treated:</b>	10:30 AM	9:45 AM	10:00 AM
<b>% Cloud Cover:</b>	50	0	50
<b>Air Temp., Unit:</b>	64 F	73 F	79 F
<b>% Relative Humidity:</b>	54	34	63
<b>Wind Speed/Unit/Dir:</b>	4 mph NE	2 mph NE	2 mph W
<b>Soil Temp., Unit:</b>	61 F	72 F	76 F
<b>Soil/Leaf Surface M:</b>	3 -	5 5	5 5
<b>Soil Moist (1=w 5=d):</b>	2	5	5

**Crop Stage at Each Application**

	A	B	C
<b>Crop Name:</b>	PHSVX	PHSVX	PHSVX
<b>Height (In.):</b>	-	6"	10"
<b>Stage (L):</b>	-	V2	V4

**Weed Stage at Each Application**

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

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

<b>1</b>	
<b>Date:</b>	Jul/09/2012
<b>Weed Name:</b>	CHEAL
<b>Density:</b>	6
<b>Date:</b>	Jul/09/2012
<b>Weed Name:</b>	AMAPO
<b>Density:</b>	16
<b>Date:</b>	Jul/09/2012
<b>Weed Name:</b>	AMBEL
<b>Density:</b>	2

**Application Equipment**

Appl	Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	GPA	Carrier	PSI
A	Cub	3.8	AIXR	11003	22"	20"	100"	19	Water	28
B	Cub	3.8	AIXR	11003	25"	20"	100"	19	Water	28
C	Cub	3.8	AIXR	11003	25"	20"	100"	19	Water	28

**Comments:** 6/22/12- SelectMax (9 oz/A) + COC (1% v/v) applied POST to all treatments

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Trial ID: DB02-12 Study Dir.: Sprague, Powell  
 Conducted: T-10 Campus Investigator: Christy Sprague

Weed Code	CHEAL	AMAPO	AMBEL	PHSVX
Crop Code				PHSVX
Rating Data Type	injury	control	control	injury
Rating Unit	percent	percent	percent	percent
Rating Date	Jun/29/2012	Jun/29/2012	Jun/29/2012	Jul/03/2012
Trt-Eval Interval	3 DA-B	3 DA-B	3 DA-B	7 DA-B
# Subsamples, Dec.	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	PHSVX	CHEAL	AMAPO	AMBEL	PHSVX
1	Untreated							0	0	0	0	0
2	Weed-free							0	99	99	99	0
3	F9324-9	3	L	5	fl oz/a	V2	B	5	66	70	78	5
	Activator 90		L	0.25	% v/v	V2	B					
4	F9324-9	3	L	6	fl oz/a	V2	B	3	64	68	76	5
	Activator 90		L	0.25	% v/v	V2	B					
5	F9324-9	3	L	7	fl oz/a	V2	B	3	63	69	75	5
	Activator 90		L	0.25	% v/v	V2	B					
6	F9324-9	3	L	6	fl oz/a	V2	B	12	66	70	76	20
	Crop oil concentrate		L	1	% v/v	V2	B					
7	F9324-9	3	L	6	fl oz/a	V2	B	31	79	90	88	36
	MSO		L	1	% v/v	V2	B					
8	Reflex	2	L	1	pt/a	V2	B	8	71	90	85	6
	MSO		L	1	% v/v	V2	B					
9	Rezult B	5	L	1.2	pt/a	V2	B	4	11	19	43	1
	MSO		L	1	% v/v	V2	B					
10	Raptor	1	L	4	fl oz/a	V2	B	0	3	18	0	8
	Activator 90		L	0.25	% v/v	V2	B					
11	F9324-9	3	L	6	fl oz/a	V2	B	3	61	66	74	5
	Activator 90		L	0.25	% v/v	V2	B					
	F9324-9	3	L	6	fl oz/a	V4	C					
	Activator 90		L	0.25	% v/v	V4	C					
12	Broadaxe	7	L	20	fl oz/a	PRE	A	34	81	91	87	59
	F9324-9	3	L	6	fl oz/a	V2	B					
	MSO		L	1	% v/v	V2	B					
LSD (P=.05)								4.4	7.9	8.9	12.6	2.5
CV								36.23	9.88	9.83	13.48	14.06

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

## MSU Weed Science Research Program

Weed Code	CHEAL	AMAPO	AMBEL	PHSVX	CHEAL							
Crop Code												
Rating Data Type	control	control	control	injury	control							
Rating Unit	percent	percent	percent	percent	percent							
Rating Date	Jul/03/2012	Jul/03/2012	Jul/03/2012	Jul/09/2012	Jul/09/2012							
Trt-Eval Interval	7 DA-B	7 DA-B	7 DA-B	13 DA-B	13 DA-B							
# Subsamples, Dec.	0	0	0	0	0							
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit Unit	Grow Stg	Appl Code	CHEAL	AMAPO	AMBEL	PHSVX	CHEAL
1	Untreated							0	0	0	0	0
2	Weed-free							99	99	99	0	99
3	F9324-9	3	L	5	fl oz/a	V2	B	50	56	64	3	63
	Activator 90		L	0.25	% v/v	V2	B					
4	F9324-9	3	L	6	fl oz/a	V2	B	54	59	63	4	63
	Activator 90		L	0.25	% v/v	V2	B					
5	F9324-9	3	L	7	fl oz/a	V2	B	53	56	64	6	64
	Activator 90		L	0.25	% v/v	V2	B					
6	F9324-9	3	L	6	fl oz/a	V2	B	63	71	81	12	68
	Crop oil concentrate		L	1	% v/v	V2	B					
7	F9324-9	3	L	6	fl oz/a	V2	B	78	79	91	30	75
	MSO		L	1	% v/v	V2	B					
8	Reflex	2	L	1	pt/a	V2	B	48	89	97	9	59
	MSO		L	1	% v/v	V2	B					
9	Rezult B	5	L	1.2	pt/a	V2	B	83	10	82	4	81
	MSO		L	1	% v/v	V2	B					
10	Raptor	1	L	4	fl oz/a	V2	B	43	49	20	6	64
	Activator 90		L	0.25	% v/v	V2	B					
11	F9324-9	3	L	6	fl oz/a	V2	B	53	58	65	4	74
	Activator 90		L	0.25	% v/v	V2	B					
	F9324-9	3	L	6	fl oz/a	V4	C					
	Activator 90		L	0.25	% v/v	V4	C					
12	Broadaxe	7	L	20	fl oz/a	PRE	A	80	86	95	33	78
	F9324-9	3	L	6	fl oz/a	V2	B					
	MSO		L	1	% v/v	V2	B					
LSD (P=.05)								5.1	11.9	6.0	3.3	6.3
CV								6.09	13.92	6.12	25.39	6.65

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

## MSU Weed Science Research Program

Weed Code							AMAPO	AMBEL	PHSVX	CHEAL	AMAPO	
Crop Code							control	control	injury	control	control	
Rating Data Type							percent	percent	percent	percent	percent	
Rating Unit							percent	percent	percent	percent	percent	
Rating Date							Jul/09/2012	Jul/09/2012	Jul/24/2012	Jul/24/2012	Jul/24/2012	
Trt-Eval Interval							13 DA-B	13 DA-B	28 DA-B	28 DA-B	28 DA-B	
# Subsamples, Dec.							0	0	0	0	0	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	Untreated							0	0	0	0	
2	Weed-free							99	99	0	99	
3	F9324-9	3	L	5	fl oz/a	V2	B	61	69	0	33	
	Activator 90		L	0.25	% v/v	V2	B					
4	F9324-9	3	L	6	fl oz/a	V2	B	59	70	0	28	
	Activator 90		L	0.25	% v/v	V2	B					
5	F9324-9	3	L	7	fl oz/a	V2	B	55	73	0	30	
	Activator 90		L	0.25	% v/v	V2	B					
6	F9324-9	3	L	6	fl oz/a	V2	B	65	75	0	35	
	Crop oil concentrate		L	1	% v/v	V2	B					
7	F9324-9	3	L	6	fl oz/a	V2	B	73	85	0	58	
	MSO		L	1	% v/v	V2	B					
8	Reflex	2	L	1	pt/a	V2	B	71	87	0	23	
	MSO		L	1	% v/v	V2	B					
9	Rezult B	5	L	1.2	pt/a	V2	B	10	85	0	79	
	MSO		L	1	% v/v	V2	B					
10	Raptor	1	L	4	fl oz/a	V2	B	78	71	0	41	
	Activator 90		L	0.25	% v/v	V2	B					
11	F9324-9	3	L	6	fl oz/a	V2	B	75	79	3	43	
	Activator 90		L	0.25	% v/v	V2	B					
	F9324-9	3	L	6	fl oz/a	V4	C					
	Activator 90		L	0.25	% v/v	V4	C					
12	Broadaxe	7	L	20	fl oz/a	PRE	A	73	85	5	68	
	F9324-9	3	L	6	fl oz/a	V2	B					
	MSO		L	1	% v/v	V2	B					
LSD (P=.05)								7.7	7.4	1.0	15.2	13.3
CV								8.88	7.03	99.22	23.63	21.6

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

## MSU Weed Science Research Program

Weed Code AMBEL  
 Crop Code  
 Rating Data Type control  
 Rating Unit percent  
 Rating Date Jul/24/2012  
 Trt-Eval Interval 28 DA-B  
 # Subsamples, Dec. 0

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code	
1	Untreated							0
2	Weed-free							99
3	F9324-9	3	L	5	fl oz/a	V2	B	43
	Activator 90		L	0.25	% v/v	V2	B	
4	F9324-9	3	L	6	fl oz/a	V2	B	43
	Activator 90		L	0.25	% v/v	V2	B	
5	F9324-9	3	L	7	fl oz/a	V2	B	50
	Activator 90		L	0.25	% v/v	V2	B	
6	F9324-9	3	L	6	fl oz/a	V2	B	43
	Crop oil concentrate		L	1	% v/v	V2	B	
7	F9324-9	3	L	6	fl oz/a	V2	B	66
	MSO		L	1	% v/v	V2	B	
8	Reflex	2	L	1	pt/a	V2	B	69
	MSO		L	1	% v/v	V2	B	
9	Rezult B	5	L	1.2	pt/a	V2	B	80
	MSO		L	1	% v/v	V2	B	
10	Raptor	1	L	4	fl oz/a	V2	B	75
	Activator 90		L	0.25	% v/v	V2	B	
11	F9324-9	3	L	6	fl oz/a	V2	B	65
	Activator 90		L	0.25	% v/v	V2	B	
	F9324-9	3	L	6	fl oz/a	V4	C	
	Activator 90		L	0.25	% v/v	V4	C	
12	Broadaxe	7	L	20	fl oz/a	PRE	A	74
	F9324-9	3	L	6	fl oz/a	V2	B	
	MSO		L	1	% v/v	V2	B	
LSD (P=.05)								13.2
CV								15.57

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