

**The effect of preharvest herbicide treatments on weed control in dry beans**

Trial ID: DB01-17 Study Dir.:  
 Conducted: SVREC Investigator: Christy Sprague

**Planting Date:** Jun-8-2017 **Row Spacing:** 30 IN  
**Variety:** 'Merlin' Navy bean **No. of Reps:** 4  
**Population:** 109000 S/A **% OM:** 7.0  
**Soil Type:** CL clay loam **pH:** 2.7  
**Plot Size:** 10 X 30 FT **Study Design:** Randomized Complete Block (RCB)

**Tillage/Previous Crops:** Fall primary tillage followed by spring soil finish  
**Fertilizer:** 130 lb/A (60 lb N) of urea was broadcast and incorporated prior to planting.

**Crop and Weed Description**

Weed	Code	Common Name	Scientific Name
1	CHEAL	lambsquarters, common	Chenopodium album
Crop	Code	Common Name	
1	PHSVX	Dry bean	

**Application Description**

**A**  
**Application Timing:** PREHARV  
**Date Treated:** Aug-25-2017  
**Time Treated:** 1:30 PM  
**% Cloud Cover:** 10  
**Air Temp., Unit:** 66 F  
**% Relative Humidity:** 45  
**Wind Speed/Unit/Dir:** 6 mph NW  
**Soil Temp, Unit:** 68 F  
**Leaf Moist/Dew Presence (Y/N):** 5  
**Soil Moist:** 5

**Crop Stage at Each Application**

**A**  
**Crop 1 Name:** PHSVX  
**Height:** 18 "  
**Stage:** 70% mat

**Weed Stage at Each Application**

**A**  
**Weed 1 Name:** CHEAL  
**Height:** 48 "  
**Stage:** flower

**Weed Density**

**1**  
**Date:** Aug-25-2017  
**Weed Name:** CHEAL  
**Density:** 1 FT2

**Application Equipment**

Appl	Sprayer Type	Ground Speed	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	Spray Volume	Carrier	Operation Pressure
A	CUB	3.8 MPH	AIXR	11003	41 "	20 "	100 "	19 GPA	WATER	30 PSI

**Comments:** Navy beans were at 70% leaf and pod yellowing

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Pest Code	CHEAL		CHEAL		CHEAL	
Crop Code	PHSVX	CHEAL	PHSVX	CHEAL	PHSVX	CHEAL
Rating Date	Aug-28-2017	Aug-28-2017	Sep-1-2017	Sep-1-2017	Sep-8-2017	Sep-8-2017
Rating Type	DESICC	control	DESICC	control	DESICC	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	3 DA-A	3 DA-A	7 DA-A	7 DA-A	14 DA-A	14 DA-A
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*	*
1	Sharpen	2.85	L	1 fl oz/a		A	65	18	97	22	97	37
1	MSO		L	1 % v/v		A						
1	AMS		WG	17 lb/100 gal		A						
2	Gramoxone SL	2	L	2 pt/a		A	68	34	90	29	94	37
2	Surfactant		L	0.25 % v/v		A						
3	Valor	51	WG	1.5 oz/a		A	60	3	82	0	92	0
3	MSO		L	1 % v/v		A						
4	Roundup PowerMax	4.5	SL	22 fl oz/a		A	61	5	86	15	96	58
4	AMS		WG	17 lb/100 gal		A						
5	Untreated						48	0	66	0	86	0
6	Untreated						44	0	67	0	85	0
7	Aim	2	L	2 fl oz/a		A	66	4	84	13	90	20
7	MSO		L	1 % v/v		A						
8	Sharpen	2.85	L	2 fl oz/a		A	73	20	97	30	99	50
8	MSO		L	1 % v/v		A						
8	AMS		WG	17 lb/100 gal		A						
9	Sharpen	2.85	L	1 fl oz/a		A	67	11	98	45	100	88
9	Roundup PowerMax	4.5	SL	22 fl oz/a		A						
9	MSO		L	1 % v/v		A						
9	AMS		WG	17 lb/100 gal		A						
10	Sharpen	2.85	L	1 fl oz/a		A	73	46	98	86	99	93
10	Gramoxone SL	2	L	2 pt/a		A						
10	MSO		L	1 % v/v		A						
10	AMS		WG	17 lb/100 gal		A						
11	Valor	51	WG	1.5 oz/a		A	66	43	95	56	99	92
11	Roundup PowerMax	4.5	SL	22 fl oz/a		A						
11	MSO		L	1 % v/v		A						
11	AMS		WG	17 lb/100 gal		A						
12	Valor	51	WG	1.5 oz/a		A	71	36	91	56	93	75
12	Gramoxone SL	2	L	2 pt/a		A						
12	MSO		L	1 % v/v		A						
12	AMS		WG	17 lb/100 gal		A						
13	Aim	2	L	2 fl oz/a		A	68	30	95	47	100	93
13	Roundup PowerMax	4.5	SL	22 fl oz/a		A						
13	MSO		L	1 % v/v		A						
13	AMS		WG	17 lb/100 gal		A						

\* Adjusted means

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Pest Code										
Crop Code										
Rating Date										
Rating Type										
Rating Unit										
Trt-Eval Interval										
Number of Decimals										

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*	*	*	*	*
14	Aim	2	L	2	fl oz/a	A	70	45	91	71	93	81
14	Gramoxone SL	2	L	2	pt/a	A						
14	MSO		L	1	% v/v	A						
14	AMS		WG	17	lb/100 gal	A						
15	Untreated						45	0	65	0	85	0
16	Untreated						46	0	65	0	83	0
20	Sharpen	2.85	L	2	fl oz/a	A	71	41	98	90	99	90
20	Gramoxone SL	2	L	2	pt/a	A						
20	MSO		L	1	% v/v	A						
20	AMS		WG	17	lb/100 gal	A						
	LSD P=.05						5.0	16.3	5.7	25.8	4.0	12.1
	Standard Deviation						3.5	11.5	4.0	18.1	2.8	8.5
	CV						5.65	58.52	4.67	54.56	2.99	17.72

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Study Director:

Pest Code			
Crop Code		PHSVX	PHSVX
Rating Date		Sep-12-2017	Sep-12-2017
Rating Type		moisture	yield
Rating Unit		percent	cwt/acre
Trt-Eval Interval		18 DA-A	at 18% M
Number of Decimals		1	1

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Appl Code	*	*
1	Sharpen	2.85	L	1 fl oz/a		A	17.6	16.4
1	MSO		L	1 % v/v		A		
1	AMS		WG	17 lb/100 gal		A		
2	Gramoxone SL	2	L	2 pt/a		A	19.0	19.1
2	Surfactant		L	0.25 % v/v		A		
3	Valor	51	WG	1.5 oz/a		A	19.5	19.9
3	MSO		L	1 % v/v		A		
4	Roundup PowerMax	4.5	SL	22 fl oz/a		A	18.1	18.7
4	AMS		WG	17 lb/100 gal		A		
5	Untreated						22.0	17.7
6	Untreated						22.3	17.8
7	Aim	2	L	2 fl oz/a		A	21.2	18.0
7	MSO		L	1 % v/v		A		
8	Sharpen	2.85	L	2 fl oz/a		A	17.5	17.4
8	MSO		L	1 % v/v		A		
8	AMS		WG	17 lb/100 gal		A		
9	Sharpen	2.85	L	1 fl oz/a		A	17.0	16.6
9	Roundup PowerMax	4.5	SL	22 fl oz/a		A		
9	MSO		L	1 % v/v		A		
9	AMS		WG	17 lb/100 gal		A		
10	Sharpen	2.85	L	1 fl oz/a		A	17.0	15.3
10	Gramoxone SL	2	L	2 pt/a		A		
10	MSO		L	1 % v/v		A		
10	AMS		WG	17 lb/100 gal		A		
11	Valor	51	WG	1.5 oz/a		A	17.2	16.1
11	Roundup PowerMax	4.5	SL	22 fl oz/a		A		
11	MSO		L	1 % v/v		A		
11	AMS		WG	17 lb/100 gal		A		
12	Valor	51	WG	1.5 oz/a		A	17.8	18.5
12	Gramoxone SL	2	L	2 pt/a		A		
12	MSO		L	1 % v/v		A		
12	AMS		WG	17 lb/100 gal		A		
13	Aim	2	L	2 fl oz/a		A	17.3	18.3
13	Roundup PowerMax	4.5	SL	22 fl oz/a		A		
13	MSO		L	1 % v/v		A		
13	AMS		WG	17 lb/100 gal		A		

\* Adjusted means

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Rating Type	moisture	yield
Rating Unit	percent	cwt/acre
Trt-Eval Interval	18 DA-A	at 18% M
Number of Decimals	1	1

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Appl Code	*	*
14	Aim	2	L	2	fl oz/a	A	17.6	17.0
14	Gramoxone SL	2	L	2	pt/a	A		
14	MSO		L	1	% v/v	A		
14	AMS		WG	17	lb/100 gal	A		
15	Untreated						22.0	16.6
16	Untreated						21.1	17.5
20	Sharpen	2.85	L	2	fl oz/a	A	15.7	17.0
20	Gramoxone SL	2	L	2	pt/a	A		
20	MSO		L	1	% v/v	A		
20	AMS		WG	17	lb/100 gal	A		
	LSD P=.05						2.99	3.01
	Standard Deviation						2.11	2.12
	CV						11.18	12.1

\* Adjusted means