

**The effect of perharvest herbicide treatments on three classes of dry beans**

Trial ID: DB01-16 Study Dir.: Sprague, Powell, Stiles  
 Conducted: SVREC Investigator: Christy Sprague

**Planting Date:** Jun-14-2016 **Row Spacing:** 30 IN  
**Variety:** see treatments **No. of Reps:** 4  
**Population:** 109000 seeds/acre **% OM:** 2.3  
**Soil Type:** SCL sandy clay loam **pH:** 7.8  
**Plot Size:** 10 X 30 FT **Study Design:** Randomized Complete Block (RCB)

**Tillage/Previous Crops:**  
**Fertilizer:**

**Crop and Weed Description**

Weed	Code	Common Name	Scientific Name
1			
Crop	Code	Common Name	
1	PHSVX	Zorro black bean	
2	PHSVX	Merlin navy bean	
3	PHSVX	El Dorado pinto bean	

**Application Description**

	A	B
<b>Application Timing:</b>	DESICC	DESICC
<b>Date Treated:</b>	Sep-2-2016	Sep-12-2016
<b>Time Treated:</b>	3:00 PM	12:00 PM
<b>% Cloud Cover:</b>	40	10
<b>Air Temp., Unit:</b>	72 F	76 F
<b>% Relative Humidity:</b>	56	47
<b>Wind Speed/Unit/Dir:</b>	5 mph E	5 mph SW
<b>Soil Temp, Unit:</b>	70 F	69 F
<b>Leaf Moist/Dew Presence (Y/N):</b>	N	N
<b>Soil Moist:</b>	4 - dry	3 - moist

**Crop Stage at Each Application**

	A	B
<b>Crop 1 Name:</b>	PHSVX	PHSVX
<b>Height:</b>	22 IN	
<b>Stage:</b>		
<b>Crop 2 Name:</b>	PHSVX	PHSVX
<b>Height:</b>	22 IN	
<b>Stage:</b>		
<b>Crop 3 Name:</b>	PHSVX	PHSVX
<b>Height:</b>		22 IN
<b>Stage:</b>		

**Weed Stage at Each Application**

	A	B
<b>Weed 1 Name:</b>		
<b>Height:</b>		
<b>Stage:</b>		

**Application Equipment**

Appl	Sprayer	Ground	Nozzle	Nozzle	Nozzle	Nozzle	Boom	Spray	Carrier	Operation
	Type	Speed	Type	Size	Height	Spacing	Width	Volume		Pressure
A	CUB	3.8 MPH	AIXR	11003	42 "	20 "	100 "	19 GAL/AC	WATER	30 PSI
B	CUB	3.8 MPH	AIXR	11003	41 "	20 "	100 "	19 GAL/AC	WATER	30 PSI

**Comments:**

Dry bean stage at application: 'Zorro' black bean: 60% leaf yellowing, 75% pod yellowing, and 45.1% seed moisture. 'Merlin' navy bean: 50% leaf yellowing, 60% pod yellowing, and 26.6% seed moisture. 'El Dorado' pinto bean: 50% leaf yellowing, 75% pod yellowing, and 27.1% seed moisture.

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Pest Code					
Crop Code	PHSVX	PHSVX	PHSVX	PHSVX	PHSVX
Rating Date					
Rating Type	desiccation	desiccation	desiccation	moisture	yield
Rating Unit	percent	percent	percent	percent	cwt/acre
Trt-Eval Interval	3 DAT	7 DAT	14 DAT	14 DAT	at 18% M
Number of Decimals	0	0	0	1	1

Trt No.	Treatment Name	Rate	Unit	Appl Code					
1	'Zorro' - black bean				77	97	100	17.3	21.3
1	Sharpen	1 fl oz/a		A					
1	MSO	1 % v/v		A					
1	AMS	17 lb/100 gal		A					
2	'Zorro' - black bean				87	94	99	17.2	23.0
2	Gramoxone SL	2 pt/a		A					
2	Surfactant	0.25 % v/v		A					
3	'Zorro' - black bean				72	95	100	17.2	24.4
3	Valor	1.5 oz/a		A					
3	MSO	1 % v/v		A					
4	'Zorro' - black bean				57	88	98	17.4	25.6
4	Roundup PowerMax	22 fl oz/a		A					
4	AMS	17 lb/100 gal		A					
5	'Zorro' - black bean				51	62	81	17.7	25.4
5	Untreated								
6	'Zorro' - black bean				55	61	77	17.4	26.2
6	Untreated								
7	'Zorro' - black bean				69	76	96	17.4	24.7
7	Aim	2 fl oz/a		A					
7	MSO	1 % v/v		A					
8	'Zorro' - black bean				80	100	100	17.1	23.5
8	Sharpen	2 fl oz/a		A					
8	MSO	1 % v/v		A					
8	AMS	17 lb/100 gal		A					
9	'Zorro' - black bean				80	100	100	17.0	22.5
9	Sharpen	1 fl oz/a		A					
9	Roundup PowerMax	22 fl oz/a		A					
9	MSO	1 % v/v		A					
9	AMS	17 lb/100 gal		A					
10	'Zorro' - black bean				92	99	100	16.6	21.6
10	Sharpen	1 fl oz/a		A					
10	Gramoxone SL	2 pt/a		A					
10	MSO	1 % v/v		A					
10	AMS	17 lb/100 gal		A					

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Rating Unit	percent	percent	percent	percent	cwt/acre
Trt-Eval Interval	3 DAT	7 DAT	14 DAT	14 DAT	at 18% M
Number of Decimals	0	0	0	1	1

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code					
11	'Merlin' - navy bean				77	96	100	17.1	20.9
	11 Sharpen	1 fl oz/a		A					
	11 MSO	1 % v/v		A					
	11 AMS	17 lb/100 gal		A					
12	'Merlin' - navy bean				86	94	100	17.7	21.1
	12 Gramoxone SL	2 pt/a		A					
	12 Surfactant	0.25 % v/v		A					
13	'Merlin' - navy bean				76	92	100	17.7	22.1
	13 Valor	1.5 oz/a		A					
	13 MSO	1 % v/v		A					
14	'Merlin' - navy bean				64	87	99	18.1	23.9
	14 Roundup PowerMax	22 fl oz/a		A					
	14 AMS	17 lb/100 gal		A					
15	'Merlin' - navy bean				53	61	70	18.0	24.6
	15 Untreated								
16	'Merlin' - navy bean				51	60	66	19.4	24.5
	16 Untreated								
17	'Zorro' - black bean				66	74	87	18.1	22.6
	17 Aim	2 fl oz/a		A					
	17 MSO	1 % v/v		A					
18	'Merlin' - navy bean				76	100	100	17.6	20.8
	18 Sharpen	2 fl oz/a		A					
	18 MSO	1 % v/v		A					
	18 AMS	17 lb/100 gal		A					
19	'Merlin' - navy bean				76	98	100	15.4	20.9
	19 Sharpen	1 fl oz/a		A					
	19 Roundup PowerMax	22 fl oz/a		A					
	19 MSO	1 % v/v		A					
	19 AMS	17 lb/100 gal		A					
20	'Merlin' - navy bean				87	98	100	17.8	20.3
	20 Sharpen	1 fl oz/a		A					
	20 Gramoxone SL	2 pt/a		A					
	20 MSO	1 % v/v		A					
	20 AMS	17 lb/100 gal		A					
21	'Eldorado' - pinto bean				79	100	100	17.8	23.2
	21 Sharpen	1 fl oz/a		A					
	21 MSO	1 % v/v		A					
	21 AMS	17 lb/100 gal		A					

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Rating Unit	percent	percent	percent	percent	cwt/acre
Trt-Eval Interval	3 DAT	7 DAT	14 DAT	14 DAT	at 18% M
Number of Decimals	0	0	0	1	1

Trt No.	Treatment Name	Rate Unit	Appl Code					
22	'Eldorado' - pinto bean			69	86	93	18.2	23.3
	22 Gramoxone SL	2 pt/a	A					
	22 Surfactant	0.25 % v/v	A					
23	'Eldorado' - pinto bean			78	96	99	18.2	24.1
	23 Valor	1.5 oz/a	A					
	23 MSO	1 % v/v	A					
24	'Eldorado' - pinto bean			61	89	98	17.0	22.4
	24 Roundup PowerMax	22 fl oz/a	A					
	24 AMS	17 lb/100 gal	A					
25	'Eldorado' - pinto bean			64	77	79	19.2	23.9
	25 Untreated							
26	'Eldorado' - pinto bean			63	78	81	18.6	24.7
	26 Untreated							
27	'Eldorado' - pinto bean			71	91	96	19.0	24.5
	27 Aim	2 fl oz/a	A					
	27 MSO	1 % v/v	A					
28	'Eldorado' - pinto bean			80	100	100	18.0	22.2
	28 Sharpen	2 fl oz/a	A					
	28 MSO	1 % v/v	A					
	28 AMS	17 lb/100 gal	A					
29	'Eldorado' - pinto bean			83	100	100	17.8	23.2
	29 Sharpen	1 fl oz/a	A					
	29 Roundup PowerMax	22 fl oz/a	A					
	29 MSO	1 % v/v	A					
	29 AMS	17 lb/100 gal	A					
30	'Eldorado' - pinto bean			82	100	100	16.4	24.1
	30 Sharpen	1 fl oz/a	A					
	30 Gramoxone SL	2 pt/a	A					
	30 MSO	1 % v/v	A					
	30 AMS	17 lb/100 gal	A					
	LSD P=.05			7.3	3.6	2.8	1.36	2.61
	Standard Deviation			5.2	2.6	2.0	0.97	1.86
	CV			7.18	2.92	2.14	5.49	8.0