Preharvest herbicides for weed desiccation in dry beans

Trial ID: DB04-18 Study Dir.: Sprague, Powell, Stiles
Conducted: SVREC Investigator: Christy Sprague

Planting Date:	Jun-19-2018	**Row Spacing:**	30 IN
Variety:	'Merlin' navy bean	**No. of Reps:**	4
Population:	109000 S/A	**% OM:**	2.5
Soil Type:	SCL sandy clay loam	**pH:**	7.7
Plot Size:	10 X 30 FT	**Study Design:**	Randomized Complete Block (RCB)

Tillage/Previous Crops: Fall primary tillage followed by spring soil finish
Fertilizer:

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1	CHEAL	lambsquarters, common	Chenopodium album

Crop	Code	Common Name
1	PHSVX	Dry edible bean

Application Description

	A	B
Application Timing:	80% Yellow	+3-5 days
Date Treated:	Sep-27-2018	Oct-3-2018
Time Treated:	10:30 PM	2:30 PM
% Cloud Cover:	35	55
Air Temp., Unit:	58 F	76 F
% Relative Humidity:	35	55
Wind Speed/Unit/Dir:	6 mph S	12 mph SE
Soil Temp, Unit:	70 F	70 F
Leaf Moist/Dew Presence (Y/N):		
Soil Moist:	5	1

Crop Stage at Each Application

	A	B
Crop 1 Name:	PHSVX	PHSVX
Height:		
Stage:		

Weed Stage at Each Application

	A	B
Weed 1 Name:	CHEAL	CHEAL
Height:	50-83 " (50)	50-83 " (50)
Stage:		

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	50 "	20 "	100 "	19 GPA	water	30 psi
B	Cub	3.8 mph	AIXR	11003	50 "	20 "	100 "	19 GPA	water	30 psi

Comments: All leaves were yellow and a majority of leaf drop had occurred at the time of the preharvest treatments. This trial was mostly looking at common lambsquarters desiccation.

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code				
Pest Code									CHEAL		CHEAL
Crop Code								PHSVX		PHSVX	
Rating Date								Oct-3-2018	Oct-3-2018	Oct-9-2018	Oct-9-2018
Rating Type								desiccation	control	desiccation	control
Rating Unit								percent	percent	percent	percent
Trt-Eval Interval								6 DA-A	6 DA-A	12 DA-A	12 DA-A
Number of Decimals								0	0	0	0
1	Sharpen	2.85	L	1	fl oz/a	PREHARV	A	100	61	100	70
1	MSO		L	1	% v/v	PREHARV	A				
1	AMS		WG	17	lb/100 gal	PREHARV	A				
2	Gramoxone SL	2	L	2	pt/a	PREHARV	A	96	91	100	91
2	Surfactant		L	0.25	% v/v	PREHARV	A				
3	Valor	51	WG	1.5	oz/a	PREHARV	A	100	68	100	77
3	MSO		L	1	% v/v	PREHARV	A				
4	Roundup PowerMax	4.5	SL	22	fl oz/a	PREHARV	A	92	75	100	85
4	AMS		WG	17	lb/100 gal	PREHARV	A				
5	Untreated							77	37	80	30
6	Untreated							75	45	71	43
7	Aim	2	L	2	fl oz/a	PREHARV	A	99	61	100	58
7	MSO		L	1	% v/v	PREHARV	A				
8	Sharpen	2.85	L	2	fl oz/a	PREHARV	A	100	71	100	73
8	MSO		L	1	% v/v	PREHARV	A				
8	AMS		WG	17	lb/100 gal	PREHARV	A				
9	Sharpen	2.85	L	1	fl oz/a	PREHARV	A	100	90	100	84
9	Roundup PowerMax	4.5	SL	22	fl oz/a	PREHARV	A				
9	MSO		L	1	% v/v	PREHARV	A				
9	AMS		WG	17	lb/100 gal	PREHARV	A				
10	Sharpen	2.85	L	1	fl oz/a	PREHARV	A	100	90	100	98
10	Gramoxone SL	2	L	2	pt/a	PREHARV	A				
10	MSO		L	1	% v/v	PREHARV	A				
10	AMS		WG	17	lb/100 gal	PREHARV	A				
11	Valor	51	WG	1.5	oz/a	PREHARV	A	100	78	100	82
11	Roundup PowerMax	4.5	SL	22	fl oz/a	PREHARV	A				
11	MSO		L	1	% v/v	PREHARV	A				
11	AMS		WG	17	lb/100 gal	PREHARV	A				
12	Valor	51	WG	1.5	oz/a	PREHARV	A	99	96	100	97
12	Gramoxone SL	2	L	2	pt/a	PREHARV	A				
12	MSO		L	1	% v/v	PREHARV	A				
12	AMS		WG	17	lb/100 gal	PREHARV	A				
13	Aim	2	L	2	fl oz/a	PREHARV	A	100	76	100	80
13	Roundup PowerMax	4.5	SL	22	fl oz/a	PREHARV	A				
13	MSO		L	1	% v/v	PREHARV	A				
13	AMS		WG	17	lb/100 gal	PREHARV	A				

Missing data estimates are included in columns:Average=2,4

Michigan State University

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Pest Code								CHEAL		CHEAL
Crop Code							PHSVX		PHSVX	
Rating Date							Oct-3-2018	Oct-3-2018	Oct-9-2018	Oct-9-2018
Rating Type							desiccation	control	desiccation	control
Rating Unit							percent	percent	percent	percent
Trt-Eval Interval							6 DA-A	6 DA-A	12 DA-A	12 DA-A
Number of Decimals							0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code			
14	Aim	2	L	2	fl oz/a	PREHARV	A	100	93	100	96
14	Gramoxone SL	2	L	2	pt/a	PREHARV	A				
14	MSO		L	1	% v/v	PREHARV	A				
14	AMS		WG	17	lb/100 gal	PREHARV	A				
15	Untreated							81	38	78	35
16	Untreated							80	40	75	43
17	Sharpen	2.85	L	1	fl oz/a	PREHARV	A	100	73	100	84
17	MSO		L	1	% v/v	PREHARV	A				
17	AMS		WG	17	lb/100 gal	PREHARV	A				
17	Sharpen	2.85	L	1	fl oz/a	+3-5 d	B				
17	MSO		L	1	% v/v	+3-5 d	B				
17	AMS		WG	17	lb/100 gal	+3-5 d	B				
18	Sharpen	2.85	L	1	fl oz/a	PREHARV	A	100	73	100	83
18	MSO		L	1	% v/v	PREHARV	A				
18	AMS		WG	17	lb/100 gal	PREHARV	A				
18	Sharpen	2.85	L	1	fl oz/a	+3-5 d	B				
18	MSO		L	1	% v/v	+3-5 d	B				
18	AMS		WG	17	lb/100 gal	+3-5 d	B				
19	Gramoxone SL	2	L	2	pt/a	PREHARV	A	94	93	100	95
19	Surfactant		L	0.25	% v/v	PREHARV	A				
19	Sharpen	2.85	L	1	fl oz/a	+3-5 d	B				
19	MSO		L	1	% v/v	+3-5 d	B				
19	AMS		WG	17	lb/100 gal	+3-5 d	B				
20	Roundup PowerMax	4.5	SL	22	fl oz/a	PREHARV	A	83	58	100	65
20	AMS		WG	17	lb/100 gal	PREHARV	A				
20	Sharpen	2.85	L	1	fl oz/a	+3-5 d	B				
20	MSO		L	1	% v/v	+3-5 d	B				
20	AMS		WG	17	lb/100 gal	+3-5 d	B				
LSD P=.05								7.3	17.9	7.2	13.9
Standard Deviation								5.2	12.6	5.1	9.8
CV								5.52	18.0	5.37	13.35

Missing data estimates are included in columns:Average=2,4