

Treatments may include both registered and currently unregistered applications.
Always consult a current label prior to making any pesticide application.

Dry Bean Herbicide Efficacy - Arlington, WI - 2019

Jed B. Colquhoun / Daniel J. Heider / Richard A. Rittmeyer
University of Wisconsin Horticulture Department

Location: Arlington Agricultural Research Station, field 623

Plot Information:

Soil Type: Plano Silt Loam, 9% sand - 62% silt - 28 % clay, OM 3.4%, pH 6.4

Variety: 'Cabernet' | type: dark red kidney

Date Planted: 5-31-2019

Row Spacing: 30 inches

Plant Spacing: 1.5" in row

Date Harvested: 10-17-2019 (yield standardized to 18% moisture)

Plot Size-Design: 10' x 30', 4 reps

Rating Dates: 6-10, 6-26, 7-2, 7-12

Phytotoxicity (PHYGEN) Rating Scale: 0% = no crop injury, 100% = dead crop plants

Phytotoxicity (PHYSTU) Rating Scale: % stunting relative to Handweeded Check

Weed Control Rating Scale: 0% = no control, 100% = complete control

Application Equipment: Tractor Mounted Compressed Air pressure sprayer. GPA 20, PSI 27, MPH 3.3,
Nozzle (PPI & PRE) - 20 GPA Appl. AIXR8003VS, Nozzle spacing 20", Height 18".

Nozzle (EAPOCR & POSPOS) - 20 GPA Appl. XR8003VS, Nozzle spacing 20", Height 18".

Herbicide Application Data:

Date	5-31-19	5-31-19	6-26-19	7-2-19	<i>Summary:</i> The excessive frequency and duration of rainfall made for a challenging dry bean production season. Broadleaf weed pressure was very high, resulting in zero yields in the UTC. Sonalan + Eptam PPI followed by Permit PRE was a solid foundational program for the weed spectrum observed and provided season long control even with excessive rainfall. No crop injury was observed from any of the PPI or PRE treatments (data not presented here) and only minimal injury was observed from one of the POST treatments.
Time	11:00 am	2:15 pm	4:15 PM	2:30 PM	
Treatment	PRPLIN	PREPRE	EAPOCR	POSPOS	
Application Timing	A	B	C	D	
Soil Moisture					
SF	moist	dry	moist	moist	
1"	moist	moist	moist	moist	
3"	wet	moist	moist	moist	
Soil Temp (F°)					
SF	77.1	76.8	87.4	97.2	
3"	67.1	69.9	81.2	87.5	
Air Temp (F°)	78.4	87.1	84.9	89	
Wind (mph/dir.)	4.2 W	5.4 W	1.8 W	2.9 W	
%RH	59.6%	41.1%	34.1%	51.3%	
Sky Condition (% clouds)	15%	50%	50%	30%	
Crop Stage	-----	-----	1-2 Trif.	4-5 Trif.	
Weed & Size	-----	-----		COLQ 1-3"	
				RRPW 1-3"	
				VELE 1-4"	
				EBNS 1-3"	
				LTSW 1-5"	
				GRFT 1-3"	

Notes: Brigade 2EC @ 5 oz/A for PLH control

Weed Abbreviations

COLQ = Common Lambsquarter
RRPW = Redroot Pigweed

VELE = Velvetleaf
EBNS = Eastern Black Nightshade

LTSW = Ladysthumb Smartweed
GRFT = Green Foxtail