

Herbicide Injury Impacts on Snap Bean Evaluation - Arlington - 2012

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Location: Arlington Ag Research Station - Horticulture Farm Field 617

Plot Information:

Soil Type: Plano Silt Loam; pH 6.8; OM 3.6%.

Variety: 'Hercules' - Seminis

Date Planted: 6/1/12

Row Spacing: 30 Inches

Plant Spacing: 1.5 inches

Date Harvested: 8/3

Plot Size-Design: 10' x 20', 4 Reps

Rating Dates: 7/3, 7/10, 7/18

Application Equipment: Tractor mounted air pressure sprayer.GPA 20, PSI 27, MPH 3.3,
Nozzle - XR8003VS, Nozzle spacing 18", Height 18".

Incorporation Equipment: N/A

Herbicide Application Data:

Date	6/26/12		
Time	6:00 am		
Treatment	PO1		
Soil Moisture			
SF	dry		
1"	dry		
3"	moist		
Soil Temp (F°)			
SF	70.6		
3"	68.8		
Air Temp (F°)	65.5		
Wind	1.2 E		
%RH	55.6%		
Sky Condition	10% clouds		
Crop Stage	1-2 trif.		
Weed & Size	-----		

Comments: 2012 was a challenging year for Wisconsin snap bean production. Inconsistent moisture coupled with extreme heat resulted in a poor and often split set of beans which severely reduced yields. For a second year, dicamba at all rates significantly injured snap beans resulting in yield losses of 84-98%. Injury symptoms from 2,4-d and glyphosate simulated drift were not nearly as severe as the dicamba drift and did not affect harvested yield, but were nonetheless unmarketable due to no pesticide tolerances existing for these herbicides on snap bean.

Fertilization and other pesticides:

Fall 2011 - dairy replacement pack manure, 160 lb N/A.

6/4/12 - Dual Magnum 1 pt/A + Reflex 1 pt/A

Irrigation:

7/8 - 0.75"

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Trt No.	Treatment Name	Rate	Grow Unit	Stage	% Injury 7/3/12	% Injury 7/10/12	% Injury 7/18/12	Yield 8/3/12 (tons/A)		
								Sieve 1-3	Sieve 4-5	Total Yield
1	Untreated Check				0 d	0 d	0 d	0.817 a	1.122 a	1.938 a
2	Clarity	0 OZ/A		PO1	6.3 c	37.5 b	27.5 b	0.256 b	0.065 b	0.321 b
3	Clarity	0.1 OZ/A		PO1	10 ab	47.5 a	40 a	0.054 b	0 b	0.054 b
4	Clarity	0.2 OZ/A		PO1	11.3 a	42.5 ab	28.8 b	0.044 b	0.005 b	0.049 b
5	2,4-D Amine	0 OZ/A		PO1	7.5 bc	6.3 cd	5 cd	0.909 a	1.187 a	2.096 a
6	2,4-D Amine	0.1 OZ/A		PO1	7.5 bc	6.3 cd	5 cd	0.839 a	1.051 a	1.889 a
7	2,4-D Amine	0.2 OZ/A		PO1	7.5 bc	11.3 c	10 c	0.855 a	0.969 a	1.824 a
8	Roundup PowerMax	0.1 OZ/A		PO1	5 c	8.75 cd	6.3 cd	0.828 a	1.241 a	2.069 a
LSD (P=.05)					3.11	9.25	9.74	0.223	0.4079	0.5964

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

Note: Research results only. Some treatments in this trial are not currently registered on the crop