

**University of Wisconsin-Madison**  
Weed Science Program

**Liberty Link Soybean Two Pass Programs**  
(Bayer)

**Trial ID:** 15-ARL-SB09, **Location:** Arlington, WI

**Site and Design:**

- A. Treated plot width: 10 FT
- B. Treated plot length: 28 FT

- C. Tillage type: conventional till
- D. Study design: Randomized Complete Block 4 reps

**Planting Date:** 5/19/15

**Application Description:**

	<b>A</b>	<b>B</b>	<b>C</b>
<b>Application Date:</b>	5/20/2015	6/23/2015	7/7/2015
<b>Type of Application</b>	PRE	POST	POST
<b>Crop Stage</b>	-	V3	V5
<b>Avg Weed Height</b>	-	0.5-4"	3-18"
<b>Days until Precipitation</b>	4	2	6
<b>Air Temperature, Unit:</b>	53.3 F	71 F	68 F
<b>% Relative Humidity:</b>	44.3	53	75
<b>Wind Velocity, Unit:</b>	1.5 MPH	8.6 MPH	5.9 MPH
<b>Soil Temperature, Unit:</b>	51 F	70 F	62 F
<b>% Cloud Cover:</b>	100	0	75

**Application Equipment:**

	<b>A</b>	<b>B</b>	<b>C</b>
<b>Appl. Equipment:</b>	CO2 Backpack	CO2 Backpack	CO2 Backpack
<b>Operating Pressure, Unit:</b>	25 PSI	25 PSI	25 PSI
<b>Nozzle Type:</b>	Flat Fan	Flat Fan	Flat Fan
<b>Nozzle Size:</b>	11002	11002	11002
<b>Boom Length, Unit:</b>	10 FT	10 FT	10 FT
<b>Boom Height, Unit:</b>	15 IN	15 IN	15 IN
<b>Ground Speed, Unit:</b>	3 MPH	3 MPH	3 MPH
<b>Carrier:</b>	WATER	WATER	WATER
<b>Spray Volume, Unit:</b>	15 GAL/AC	15 GAL/AC	15 GAL/AC
<b>Mix Size, Unit:</b>	1.89 L	1.89 L	1.89 L

**HOW DATA WERE SUMMARIZED:** Weed control, crop injury and yield were averaged among the 4 replications and values are provided in the tables. As variability in performance/safety can occur among replications we have provided standard deviations for each average. The standard deviation should be considered when comparing means among treatments as this provides users with an idea of how variable the response was observed in the field.

Pest Name					Common dandelion	E. black nightshade	Lambsquarters	velvetleaf	Common ragweed	Smooth crabgrass	Common dandelion	Lambsquarters
Rating Date					6/23	6/23	6/23	6/23	6/23	6/23	6/30	6/30
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl
Days After First/Last Applic.					34 34	34 34	34 34	34 34	34 34	34 34	41 7	41 7
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code								
1	NON-TREATED CHECK				avg	0	0	0	0	0	0	0
					stdev							
2	Authority First	6.5	oz/a	A	avg	99	100	100	100	95	95	99
	Liberty 280	29	fl oz/a	C	stdev	3	0	0	0	5	2	3
	AMS	1.27	lb/a	C								
	Liberty 280	29	fl oz/a	D								
	AMS	1.27	lb/a	D								
3	Fierce	3.5	oz/a	A	avg	100	100	100	100	99	100	100
	Liberty 280	29	fl oz/a	C	stdev	0	0	0	0	2	1	0
	AMS	1.27	lb/a	C								
	Liberty 280	29	fl oz/a	D								
	AMS	1.27	lb/a	D								
4	ValorXLT	3.5	oz/a	A	avg	100	100	100	100	100	96	100
	Liberty 280	29	fl oz/a	B	stdev	0	0	0	0	0	1	0
	Zidua	2.02	oz/a	B								
	AMS	1.27	lb/a	B								
	Liberty 280	29	fl oz/a	D								
	AMS	1.27	lb/a	D								
5	Liberty 280	29	fl oz/a	B	avg	77	87	82	90	83	88	93
	Prefix	32	fl oz/a	B	stdev	22	7	7	9	9	3	7
	AMS	1.27	lb/a	B								
	Liberty 280	29	fl oz/a	C								
	Warrant	14.1	fl oz/a	C								
	AMS	1.27	lb/a	C								
6	OpTill Co-Pack (OpTill)	2	oz/a	A	avg	97	100	100	100	95	99	85
	OpTill Co-Pack (Outlook)	10	fl oz/a	A	stdev	4	0	0	0	7	2	17
	Liberty 280	29	fl oz/a	C								
	AMS	1.27	lb/a	C								
	Liberty 280	29	fl oz/a	D								
	AMS	1.27	lb/a	D								
7	Envive	4	oz/a	A	avg	100	100	100	100	100	97	100
	Liberty 280	29	fl oz/a	B	stdev	0	0	0	0	0	1	0
	Outlook	14	fl oz/a	B								
	AMS	1.27	lb/a	B								
	Liberty 280	29	fl oz/a	D								
	AMS	1.27	lb/a	D								
8	Liberty 280	29	fl oz/a	B	avg	83	85	79	86	88	89	97







Pest Name					Common dandelion	Common ragweed	E. black nightshade	hairy fingergrass	Giant foxtail	Lambquarters	Common ragweed	velvetleaf
Rating Date					7/7	7/7	7/7	7/7	7/23	7/23	7/23	7/23
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	% cntrl
Days After First/Last Applic.					48 14	48 14	48 14	48 14	64 16	64 16	64 16	64 16
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code								
1	NON-TREATED CHECK				avg	0	0	0	0	0	0	0
					stdev							
2	Authority First	6.5	oz/a	A	avg	100	95	100	100	100	100	98
	Liberty 280	29	fl oz/a	C	stdev	0	6	0	0	0	0	4
	AMS	1.27	lb/a	C								
	Liberty 280	29	fl oz/a	D								
	AMS	1.27	lb/a	D								
3	Fierce	3.5	oz/a	A	avg	98	100	100	100	100	100	100
	Liberty 280	29	fl oz/a	C	stdev	3	1	0	0	0	0	0
	AMS	1.27	lb/a	C								
	Liberty 280	29	fl oz/a	D								
	AMS	1.27	lb/a	D								
4	ValorXLT	3.5	oz/a	A	avg	100	100	100	100	100	100	100
	Liberty 280	29	fl oz/a	B	stdev	0	0	0	0	1	0	0
	Zidua	2.02	oz/a	B								
	AMS	1.27	lb/a	B								
	Liberty 280	29	fl oz/a	D								
	AMS	1.27	lb/a	D								
5	Liberty 280	29	fl oz/a	B	avg	94	100	99	100	100	100	100
	Prefix	32	fl oz/a	B	stdev	5	0	2	0	0	0	0
	AMS	1.27	lb/a	B								
	Liberty 280	29	fl oz/a	C								
	Warrant	14.1	fl oz/a	C								
	AMS	1.27	lb/a	C								
6	OpTill Co-Pack (OpTill)	2	oz/a	A	avg	90	96	100	100	100	100	100
	OpTill Co-Pack (Outlook)	10	fl oz/a	A	stdev	7	6	0	0	0	0	1
	Liberty 280	29	fl oz/a	C								
	AMS	1.27	lb/a	C								
	Liberty 280	29	fl oz/a	D								
	AMS	1.27	lb/a	D								
7	Envive	4	oz/a	A	avg	100	100	100	100	100	100	100
	Liberty 280	29	fl oz/a	B	stdev	0	0	0	0	0	0	1
	Outlook	14	fl oz/a	B								
	AMS	1.27	lb/a	B								
	Liberty 280	29	fl oz/a	D								
	AMS	1.27	lb/a	D								
8	Liberty 280	29	fl oz/a	B	avg	98	100	100	100	100	100	100



Pest Name					Lambsquarters	Common dandelion	Common ragweed	velvetleaf	Giant foxtail		
Rating Date					8/4	8/4	8/4	8/4	8/4	10/20	
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	YIELD Bu/A	
Days After First/Last Applic.					76 28	76 28	76 28	76 28	76 28	153 105	
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code							
1	NON-TREATED CHECK				avg	0	0	0	0	0	28
					stdev						5
2	Authority First	6.5	oz/a	A	avg	100	100	95	100	99	46
	Liberty 280	29	fl oz/a	C	stdev	0	1	10	0	2	9
	AMS	1.27	lb/a	C							
	Liberty 280	29	fl oz/a	D							
	AMS	1.27	lb/a	D							
3	Fierce	3.5	oz/a	A	avg	100	100	100	100	100	47
	Liberty 280	29	fl oz/a	C	stdev	0	1	0	0	1	7
	AMS	1.27	lb/a	C							
	Liberty 280	29	fl oz/a	D							
	AMS	1.27	lb/a	D							
4	ValorXLT	3.5	oz/a	A	avg	100	100	100	100	98	48
	Liberty 280	29	fl oz/a	B	stdev	0	0	0	0	2	8
	Zidua	2.02	oz/a	B							
	AMS	1.27	lb/a	B							
	Liberty 280	29	fl oz/a	D							
	AMS	1.27	lb/a	D							
5	Liberty 280	29	fl oz/a	B	avg	100	78	100	100	100	41
	Prefix	32	fl oz/a	B	stdev	0	45	0	0	0	11
	AMS	1.27	lb/a	B							
	Liberty 280	29	fl oz/a	C							
	Warrant	14.1	fl oz/a	C							
	AMS	1.27	lb/a	C							
6	OpTill Co-Pack (OpTill)	2	oz/a	A	avg	100	96	100	100	99	47
	OpTill Co-Pack (Outlook)	10	fl oz/a	A	stdev	0	4	0	0	3	7
	Liberty 280	29	fl oz/a	C							
	AMS	1.27	lb/a	C							
	Liberty 280	29	fl oz/a	D							
	AMS	1.27	lb/a	D							
7	Envive	4	oz/a	A	avg	100	100	100	100	100	49
	Liberty 280	29	fl oz/a	B	stdev	0	1	0	0	1	5
	Outlook	14	fl oz/a	B							
	AMS	1.27	lb/a	B							
	Liberty 280	29	fl oz/a	D							
	AMS	1.27	lb/a	D							
8	Liberty 280	29	fl oz/a	B	avg	100	100	100	100	100	48



Pest Name					Lambsquarters	Common dandelion	Common ragweed	velvetleaf	Giant foxtail		
Rating Date					8/4	8/4	8/4	8/4	8/4	10/20	
Rating Type					% cntrl	% cntrl	% cntrl	% cntrl	% cntrl	YIELD Bu/A	
Days After First/Last Applic.					76 28	76 28	76 28	76 28	76 28	153 105	
Trt No.	Treatment Name	Rate	Rate Unit	Appl. Code							
	Outlook	14	fl oz/a	B	stdev	0	0	0	0	0	10
	AMS	1.27	lb/a	B							
	Liberty 280	29	fl oz/a	C							
	Warrant	14	fl oz/a	C							
	AMS	1.27	lb/a	C							
9	AUTHORITY MTZ	12	oz/a	A	avg	100	95	98	100	99	48
	Liberty 280	29	fl oz/a	C	stdev	0	4	5	0	3	8
	AMS	1.27	lb/a	C							
	Liberty 280	29	fl oz/a	D							
	AMS	1.27	lb/a	D							
10	Dual II Magnum	1.67	pt/a	A	avg	100	97	100	100	100	48
	TRICOR DF	5.3	oz/a	A	stdev	0	3	0	0	0	9
	Liberty 280	29	fl oz/a	C							
	AMS	1.27	lb/a	C							
	Liberty 280	29	fl oz/a	D							
	AMS	1.27	lb/a	D							
11	BOUNDARY	1.8	pt/a	A	avg	100	98	97	100	100	48
	Liberty 280	29	fl oz/a	C	stdev	1	2	5	0	0	9
	AMS	1.27	lb/a	C							
	Liberty 280	29	fl oz/a	D							
	AMS	1.27	lb/a	D							