

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

General Trial Information

Study Director: Dustin Johnson **Title:** Research Associate
Investigator: Dr. Bill Johnson **Title:** Professor

Discipline: H herbicide
Trial Status: E established
Initiation Date: Nov-10-2015

Trial Location

City: Butlerville **Country:** USA United States
State/Prov.: Indiana
Postal Code: 47723

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Dustin Johnson **Title:** Research Associate
Organization: Purdue University
Address: 915 W. State Street
City+State/Prov: West Lafayette, IN
Postal Code: 47907 **E-mail:** john1357@purdue.edu
Country: USA United States

Investigator: Dr. Bill Johnson **Title:** Professor
Organization: Purdue University
Address: 915 W. State Street
City+State/Prov: West Lafayette, IN
Postal Code: 47907 **E-mail:** wgj@purdue.edu
Country: USA United States

Cooperator/Landowner

Cooperator: Southeast Purdue Ag Center
Organization: Purdue University
Address 1: 4425 E County Rd. 250 N.
City: Butlerville **Phone No.:** (812) 458-6977
State/Prov: IN
Postal Code: 47723
Country: USA United States

Crop Description

Crop 1: GLXMA Glycine max
Variety: Round Ready Extend AG 30X6 **BBCH Scale:** BSOY
Description: Dicamba+Glyphosate Tolerant
Planting Rate, Unit: 140000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN
Soil Temperature, Unit: 69 F
Soil Moisture: SLIWET slightly wet, moist
Planting Date: May-26-2016
Planting Method: PLANTD planted
Planting Equipment: PP Plot Planter
Emergence Date: May-31-2016

Pest Description

Pest 1 Type: W **Code:** ERICA *Conyza canadensis*
Common Name: Canada horseweed

Pest 2 Type: W **Code:** TARSS *Taraxacum* sp.
Common Name: Dandelion

Pest 3 Type: W **Code:** SENGL *Senecio glabellus*
Common Name: Cressleaf groundsel

Pest 4 Type: W **Code:** PANDI *Panicum dichotomiflorum*
Common Name: Fall panicum

Pest 5 Type: W **Code:** DIGSA *Digitaria sanguinalis*
Common Name: large crabgrass

Site and Design

Treated Plot Width: 6.67 FT
Treated Plot Length: 30 FT
Treated Plot Area: 200.1 FT² **Treatments:** 16
Replications: 4
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: NOTILL no-till
Study Design: RACOB Randomized Complete Block (RCB)

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Maintenance

No.	Date	Maintenance Product Name	Form Conc	Form Type	Rate	Rate Unit	Tank Mix
1.	May-23-2016	Select Max	0.97	L	16	FL OZ/A	no

Comment: 5/23/16 M. Zimmer applied Select Max at 16 fl oz/a, AMS (2.5%) and NIS (.25%) to control grasses that over ran trial. 7/1/16 Sprayed alley ways.

Soil Description

Description Name: SEPAC-Field U4
% Sand: 20 **% OM:** 1.8 **Texture:** SIL silt loam
% Silt: 65 **pH:** 5.6 **Soil Name:** Avonburg
% Clay: 15 **CEC:** 6.7 **Fert. Level:** G good
Soil Drainage: P poor

Application Description

	A	B	C	D
Application Date:	Nov-10-2015	May-13-2016	May-27-2016	Jun-24-2016
Appl. Start Time:	1:00 PM	11:05 AM	9:30 AM	1:30 PM
Appl. Stop Time:	1:40 PM	11:15 AM	10:20 AM	2:30 PM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	FALL	7 DPP "B"	PRE "C"	POST "D"
Application Placement:	BROADC	BROADC	BROADC	BROADC
Applied By:	D. JOHNSON	D. JOHNSON	T. CAMPBELL	D. SPAUNHOR
Air Temperature, Unit:	46 F	59 F	74 F	82 F
% Relative Humidity:	93	62		
Wind Velocity, Unit:	3 MPH	8 MPH	8 MPH	6 MPH
Wind Direction:	WSW	WNW	S	N
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	58 F	64 F	66 F	88 F
Soil Moisture:	WET	WET	SLIWET	SLIWET
% Cloud Cover:	95	40	50	50

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:				BBCH
Stage Majority, Percent:				13
Stage Minimum, Percent:				12
Stage Maximum, Percent:				13
Height, Unit:				7 IN
Height Minimum, Maximum:				6 8

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Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	ERICA W	ERICA W	ERICA W	ERICA W
Stage Majority, Percent:		30		
Height, Unit:		2 IN	4.5 IN	5 IN
Height Minimum, Maximum:		1 3	3 6	2 8
Density, Unit:	0 YD2	18 YD2	108 YD2	189 YD2
Pest 2 Code, Type, Scale:	TARSS W	TARSS W	TARSS W	TARSS W
Stage Majority, Percent:	18	65	67	
Stage Minimum, Percent:	14			
Stage Maximum, Percent:	19			
Diameter, Unit:	3 IN			4 IN
Height, Unit:		6 IN	8 IN	
Height Minimum, Maximum:			6 10	
Density, Unit:	30 YD2	18 YD2	18 YD2	27 YD2
Pest 3 Code, Type, Scale:	SENGL W	SENGL W	SENGL W	SENGL W
Stage Majority, Percent:	17		67	
Stage Minimum, Percent:	14			
Stage Maximum, Percent:	19			
Diameter, Unit:	2 IN			
Height, Unit:			24 IN	
Height Minimum, Maximum:			12 36	
Density, Unit:	42 YD2		45 YD2	
Pest 4 Code, Type, Scale:	PANDI W	PANDI W	PANDI W	PANDI W
Stage Majority, Percent:	19			
Stage Minimum, Percent:	17			
Stage Maximum, Percent:	19			
Diameter, Unit:	4 IN			
Height, Unit:				3 IN
Height Minimum, Maximum:				0.5 6
Density, Unit:	5 YD2			148 YD2
Pest 5 Code, Type, Scale:	DIGSA W	DIGSA W	DIGSA W	DIGSA W
Height, Unit:				2 IN
Height Minimum, Maximum:				0.5 4
Density, Unit:				148 YD2

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 BACKPACK	CO2 BACKPACK	CO2 BACKPACK	CO2 BACKPACK
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	18 PSI	42 PSI	42 PSI	42 PSI
Nozzle Type:	FLAFXR	AIXR	AIXR	TTI
Nozzle Size:	XR11002	AIXR11001	AIXR11001	TTI110015
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN	20 IN
Nozzles/Row:	4	4	4	4
Boom Length, Unit:	6.67 FT	6.7 FT	6.7 FT	6.67 FT
Boom Height, Unit:	17 IN	17 IN	17 IN	17 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	15 GAL/AC	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Size, Unit:	119 mL	119 mL	1119 mL	1119 mL
Propellant:	COMCO2	COMCO2	COMCO2	COMCO2

Date By Notes
 Nov-10-2015 D. JOHNSON Setup Trial.

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Nov-25-2015 D. JOHNSON Rated Trial 14-DAT: Very low weed densities and patchy. Very few plants in check strips (No untreated checks). No horseweed.
 Dec-10-2015 D. JOHNSON Rated Trial 28-DAT: Warmer temps in between rating dates. There was new horseweed emergence.
 May-13-2016 M. ZIMMER Sprayed 7DPP Applications
 May-26-2016 T. LEGLIETE Planted: Was delayed due to excessive rain and moisture saturation.
 May-27-2016 D. JOHNSON Sprayed Pre "C" Application. Horseweed patchy 0-30 square foot. Most 7 DPP plots clean.
 Jun-24-2016 D. SPAUNHOR Sprayed: Post "D" Application. Horseweed in treatment 20 2-6". Average height 4".
 Jun-24-2016 T. CAMPBELL Rated Trial: 0-DAT"D". Weed efficacy and counts.
 Jul-8-2016 T. CAMPBELL Rated Trial: 14-DAT"D". Weed efficacy and counts.
 Jul-27-2016 T. CAMPBELL Rated Trial: 35-DAT"D". Weed efficacy and counts. T. Campbell did weed counts/D. Johnson rated.

Trial Comments

Reps: 4 Plots: 6.67 by 30 feet
 Spray vol: 15 GAL/AC Mix Size: 1119 mL (calculated mix size 1043.3)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Appl Code	Amt Product to Measure	Rep 1	Rep 2	Rep 3	Rep 4
1	2,4-D LV4	4 LBAE/GAL	L	L	0.5 lb ae/a	A	9.324 ml/mx	101	407	607	805
	CLARITY	4 LBAE/GAL	L	L	0.25 lb ae/a	A	4.662 ml/mx				
	ACTIVATOR 90 - NIS	90 %		L	0.25 % v/v	A	2.797 ml/mx				
	ROUNDUP XTEND										
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	SL	32 fl oz/a	C	18.65 ml/mx				
	CLARITY	4 LBAE/GAL	SL	SL	16 fl oz/a	C	9.325 ml/mx				
	SONIC	70 %		WG	4.5 oz/a	C	2.514 g/mx				
	TRICOR	75 %		DF	6 oz/a	C	3.352 g/mx				
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	SL	1.5 lb ae/a	D	24.86 ml/mx				
N-PAK - AMS	3.4 LBA/GAL	SL	SL	2.5 % v/v	D	27.97 ml/mx					
2	2,4-D LV4	4 LBAE/GAL	L	L	0.5 lb ae/a	A	9.324 ml/mx	102	303	508	706
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	SL	16 fl oz/a	A	9.325 ml/mx				
	N-PAK - AMS	3.4 LBA/GAL	SL	SL	2.5 % v/v	A	27.97 ml/mx				
	ROUNDUP XTEND										
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	SL	32 fl oz/a	C	18.65 ml/mx				
	CLARITY	4 LBAE/GAL	SL	SL	16 fl oz/a	C	9.325 ml/mx				
	SONIC	70 %		WG	4.5 oz/a	C	2.514 g/mx				
	TRICOR	75 %		DF	6 oz/a	C	3.352 g/mx				
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	SL	1.5 lb ae/a	D	24.86 ml/mx				
N-PAK - AMS	3.4 LBA/GAL	SL	SL	2.5 % v/v	D	27.97 ml/mx					
3	2,4-D LV4	4 LBAE/GAL	L	L	0.5 lb ae/a	A	9.324 ml/mx	103	305	601	701
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	SL	16 fl oz/a	A	9.325 ml/mx				
	N-PAK - AMS	3.4 LBA/GAL	SL	SL	2.5 % v/v	A	27.97 ml/mx				
	CLARITY	4 LBAE/GAL	L	L	0.25 lb ae/a	C	4.662 ml/mx				
	GRAMOXONE SL	2 LBAE/GAL	SL	SL	3 pt/a	C	27.97 ml/mx				
	SONIC	70 %		WG	4.5 oz/a	C	2.514 g/mx				
	TRICOR	75 %		DF	6 oz/a	C	3.352 g/mx				
	PRIME OIL - COC	99.47 %		L	1 % v/v	C	11.19 ml/mx				
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	SL	1.5 lb ae/a	D	24.86 ml/mx				
N-PAK - AMS	3.4 LBA/GAL	SL	SL	2.5 % v/v	D	27.97 ml/mx					
4	SHARPEN	2.85 LB/GAL	CS	CS	1 fl oz/a	A	0.5828 ml/mx	104	304	505	807
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	SL	16 fl oz/a	A	9.325 ml/mx				
	MSO ULTRA	100 %		L	1 % v/v	A	11.19 ml/mx				
	N-PAK - AMS	3.4 LBA/GAL	SL	SL	2.5 % v/v	A	27.97 ml/mx				
	SHARPEN	2.85 LB/GAL	CS	CS	1 fl oz/a	C	0.5828 ml/mx				
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	SL	0.75 lb ae/a	C	12.43 ml/mx				
	SONIC	70 %		WG	4.5 oz/a	C	2.514 g/mx				
	MSO ULTRA	100 %		L	1 % v/v	C	11.19 ml/mx				
	N-PAK - AMS	3.4 LBA/GAL	SL	SL	2.5 % v/v	C	27.97 ml/mx				
ROUNDUP XTEND											
ROUNDUP POWERMAX	4.5 LBAE/GAL	SL	SL	32 fl oz/a	D	18.65 ml/mx					
CLARITY	4 LBAE/GAL	SL	SL	16 fl oz/a	D	9.325 ml/mx					

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Reps: 4 Plots: 6.67 by 30 feet
 Spray vol: 15 GAL/AC Mix Size: 1119 mL (calculated mix size 1043.3)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Appl Unit	Code	Amt to Measure	Rep 1	Rep 2	Rep 3	Rep 4
5	2,4-D LV4	4 LBAE/GAL	L		0.5 lb ae/a	A	A	9.324 ml/mx	105	307	605	703
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL		16 fl oz/a	A	A	9.325 ml/mx				
	N-PAK - AMS	3.4 LBA/GAL	SL		2.5 % v/v	A	A	27.97 ml/mx				
	SHARPEN	2.85 LB/GAL	CS		1 fl oz/a	C	C	0.5828 ml/mx				
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL		0.75 lb ae/a	C	C	12.43 ml/mx				
	SONIC	70 %	WG		4.5 oz/a	C	C	2.514 g/mx				
	MSO ULTRA	100 %	L		1 % v/v	C	C	11.19 ml/mx				
	N-PAK - AMS	3.4 LBA/GAL	SL		2.5 % v/v	C	C	27.97 ml/mx				
	ROUNDUP XTEND											
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL		32 fl oz/a	D	D	18.65 ml/mx				
CLARITY	4 LBAE/GAL	SL		16 fl oz/a	D	D	9.325 ml/mx					
6	2,4-D LV4	4 LBAE/GAL	L		0.5 lb ae/a	A	A	9.324 ml/mx	106	402	501	704
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL		16 fl oz/a	A	A	9.325 ml/mx				
	N-PAK - AMS	3.4 LBA/GAL	SL		2.5 % v/v	A	A	27.97 ml/mx				
	2,4-D LV4	4 LBAE/GAL	L		0.5 lb ae/a	B	B	9.324 ml/mx				
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL		0.75 lb ae/a	B	B	12.43 ml/mx				
	SONIC	70 %	WG		4.5 oz/a	B	B	2.514 g/mx				
	N-PAK - AMS	3.4 LBA/GAL	SL		2.5 % v/v	B	B	27.97 ml/mx				
	ROUNDUP XTEND											
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL		32 fl oz/a	D	D	18.65 ml/mx				
	CLARITY	4 LBAE/GAL	SL		16 fl oz/a	D	D	9.325 ml/mx				
7	2,4-D LV4	4 LBAE/GAL	L		0.5 lb ae/a	A	A	9.324 ml/mx	107	404	503	708
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL		16 fl oz/a	A	A	9.325 ml/mx				
	N-PAK - AMS	3.4 LBA/GAL	SL		2.5 % v/v	A	A	27.97 ml/mx				
	2,4-D LV4	4 LBAE/GAL	L		0.5 lb ae/a	B	B	9.324 ml/mx				
	GRAMOXONE SL	2 LBAE/GAL	SL		3 pt/a	B	B	27.97 ml/mx				
	SONIC	70 %	WG		4.5 oz/a	B	B	2.514 g/mx				
	PRIME OIL - COC	99.47 %	L		1 % v/v	B	B	11.19 ml/mx				
	ROUNDUP XTEND											
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL		32 fl oz/a	D	D	18.65 ml/mx				
	CLARITY	4 LBAE/GAL	SL		16 fl oz/a	D	D	9.325 ml/mx				
8	SHARPEN	2.85 LB/GAL	CS		1 fl oz/a	A	A	0.5828 ml/mx	108	406	603	808
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL		16 fl oz/a	A	A	9.325 ml/mx				
	MSO ULTRA	100 %	L		1 % v/v	A	A	11.19 ml/mx				
	N-PAK - AMS	3.4 LBA/GAL	SL		2.5 % v/v	A	A	27.97 ml/mx				
	SONIC	70 %	WG		4.5 oz/a	C	C	2.514 g/mx				
	ROUNDUP XTEND											
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL		32 fl oz/a	C	C	18.65 ml/mx				
	CLARITY	4 LBAE/GAL	SL		16 fl oz/a	C	C	9.325 ml/mx				
	ROUNDUP XTEND											
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL		32 fl oz/a	D	D	18.65 ml/mx				
CLARITY	4 LBAE/GAL	SL		16 fl oz/a	D	D	9.325 ml/mx					
9	2,4-D LV4	4 LBAE/GAL	L		0.5 lb ae/a	A	A	9.324 ml/mx	201	302	604	804
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL		16 fl oz/a	A	A	9.325 ml/mx				
	N-PAK - AMS	3.4 LBA/GAL	SL		2.5 % v/v	A	A	27.97 ml/mx				
	SONIC	70 %	WG		4.5 oz/a	C	C	2.514 g/mx				
	ROUNDUP XTEND											
	ROUNDUP POWERMAX	4.5 LBAE/GAL	SL		32 fl oz/a	C	C	18.65 ml/mx				
	CLARITY	4 LBAE/GAL	SL		16 fl oz/a	C	C	9.325 ml/mx				
	ROUNDUP XTEND											
ROUNDUP POWERMAX	4.5 LBAE/GAL	SL		32 fl oz/a	D	D	18.65 ml/mx					
CLARITY	4 LBAE/GAL	SL		16 fl oz/a	D	D	9.325 ml/mx					

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Reps: 4		Plots: 6.67 by 30 feet		Mix Size: 1119 mL (calculated mix size 1043.3)							
Spray vol: 15 GAL/AC											
Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Unit	Appl Code	Amt Product to Measure	Rep 1	Rep 2	Rep 3	Rep 4
10	SHARPEN	2.85 LB/GAL		CS	1 fl oz/a	A	0.5828 ml/mx	202	401	504	806
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	16 fl oz/a	A	9.325 ml/mx				
	MSO ULTRA	100 %		L	1 % v/v	A	11.19 ml/mx				
	N-PAK - AMS	3.4 LBA/GAL		SL	2.5 % v/v	A	27.97 ml/mx				
	CLARITY	4 LBAE/GAL		L	0.25 lb ae/a	C	4.662 ml/mx				
	GRAMOXONE SL	2 LBAE/GAL		SL	3 pt/a	C	27.97 ml/mx				
	SONIC	70 %		WG	4.5 oz/a	C	2.514 g/mx				
	PRIME OIL - COC	99.47 %		L	1 % v/v	C	11.19 ml/mx				
	ROUNDUP XTEND										
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	32 fl oz/a	D	18.65 ml/mx				
	CLARITY	4 LBAE/GAL		SL	16 fl oz/a	D	9.325 ml/mx				
11	SHARPEN	2.85 LB/GAL		CS	1 fl oz/a	C	0.5828 ml/mx	203	403	606	705
	ROUNDUP XTEND										
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	32 fl oz/a	C	18.65 ml/mx				
	CLARITY	4 LBAE/GAL		SL	16 fl oz/a	C	9.325 ml/mx				
	SONIC	70 %		WG	4.5 oz/a	C	2.514 g/mx				
	TRICOR	75 %		DF	6 oz/a	C	3.352 g/mx				
	MSO ULTRA	100 %		L	1 % v/v	C	11.19 ml/mx				
	N-PAK - AMS	3.4 LBA/GAL		SL	2.5 % v/v	C	27.97 ml/mx				
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	1.5 lb ae/a	D	24.86 ml/mx				
	N-PAK - AMS	3.4 LBA/GAL		SL	2.5 % v/v	D	27.97 ml/mx				
12	SHARPEN	2.85 LB/GAL		CS	1 fl oz/a	C	0.5828 ml/mx	204	306	602	803
	ROUNDUP XTEND										
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	32 fl oz/a	C	18.65 ml/mx				
	CLARITY	4 LBAE/GAL		SL	16 fl oz/a	C	9.325 ml/mx				
	SONIC	70 %		WG	4.5 oz/a	C	2.514 g/mx				
	MSO ULTRA	100 %		L	1 % v/v	C	11.19 ml/mx				
	N-PAK - AMS	3.4 LBA/GAL		SL	2.5 % v/v	C	27.97 ml/mx				
	ROUNDUP XTEND										
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	32 fl oz/a	D	18.65 ml/mx				
	CLARITY	4 LBAE/GAL		SL	16 fl oz/a	D	9.325 ml/mx				
13	ROUNDUP XTEND							205	408	507	802
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	32 fl oz/a	C	18.65 ml/mx				
	CLARITY	4 LBAE/GAL		SL	16 fl oz/a	C	9.325 ml/mx				
	SONIC	70 %		WG	4.5 oz/a	C	2.514 g/mx				
	ROUNDUP XTEND										
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	32 fl oz/a	D	18.65 ml/mx				
	CLARITY	4 LBAE/GAL		SL	16 fl oz/a	D	9.325 ml/mx				
14	ROUNDUP XTEND							206	308	608	801
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	32 fl oz/a	C	18.65 ml/mx				
	CLARITY	4 LBAE/GAL		SL	16 fl oz/a	C	9.325 ml/mx				
	ROUNDUP XTEND										
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	32 fl oz/a	D	18.65 ml/mx				
	CLARITY	4 LBAE/GAL		SL	16 fl oz/a	D	9.325 ml/mx				
15	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	1.5 lb ae/a	C	24.86 ml/mx	207	301	506	702
	N-PAK - AMS	3.4 LBA/GAL		SL	2.5 % v/v	C	27.97 ml/mx				
	ROUNDUP POWERMAX	4.5 LBAE/GAL		SL	1.5 lb ae/a	D	24.86 ml/mx				
	N-PAK - AMS	3.4 LBA/GAL		SL	2.5 % v/v	D	27.97 ml/mx				
16	Untreated Check							208	405	502	707

Sort Order: Replicate 1

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
104.895	ml	2,4-D LV4	4	L	
17.482	ml	CLARITY	4	L	

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Product quantities required for listed treatments and applications of trials included in this table:

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
3.496	ml	ACTIVATOR 90 - NIS	90	L	
757.631	ml	ROUNDUP POWERMAX	4.5	SL	
209.812	ml	CLARITY	4	SL	
40.854	g	SONIC	70	WG	
16.761	g	TRICOR	75	DF	
699.299	ml	N-PAK - AMS	3.4	SL	
104.906	ml	GRAMOXONE SL	2	SL	
41.958	ml	PRIME OIL - COC	99.47	L	
5.100	ml	SHARPEN	2.85	CS	
97.902	ml	MSO ULTRA	100	L	

* 'Per area' calculations based on spray volume= 15 GAL/AC, mix size= 1119 mL (mix size basis).
 * Product amount calculations increased 25 % for overage adjustment.
 * 'Per volume' calculations use spray volume= 15 GAL/AC, mix size= 1119 mL.

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	ERICA	TAROF	SENGL	ERICA	TAROF
Pest Scientific Name	Conyza canadensis>	Taraxacum offi>	Senecio glabel>	Conyza canadensis>	Taraxacum offi>
Pest Name	Canada horsewe>	Common dandel>	Cressleaf grou>	Canada horsewe>	Common dandel>
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -
Rating Date	Nov-25-2015	Nov-25-2015	Nov-25-2015	Dec-10-2015	Dec-10-2015
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
SE Group No.	1	2	3	4	5
Days After First/Last Applic.	15 15	15 15	15 15	30 30	30 30
Trt-Eval Interval	15 DA-A	15 DA-A	15 DA-A	30 DA-A	30 DA-A
Plant-Eval Interval	-183 DP-1	-183 DP-1	-183 DP-1	-168 DP-1	-168 DP-1
Days After Emergence	-188 DE-1	-188 DE-1	-188 DE-1	-173 DE-1	-173 DE-1
ARM Action Codes	P	P	P	P	P
Number of Decimals	0	0	0	0	0
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code Plot	1	2	3
1 2,4-D LV4	0.5 lb ae/a A	101	.	20	10
CLARITY	0.25 lb ae/a A	407	.	20	10
ACTIVATOR 90 - NIS	0.25 % v/v A	607	.	20	5
ROUNDUP XTEND		805	.	15	5
ROUNDUP POWERMAX	32 fl oz/a C				
CLARITY	16 fl oz/a C				
SONIC	4.5 oz/a C				
TRICOR	6 oz/a C				
ROUNDUP POWERMAX	1.5 lb ae/a D				
N-PAK - AMS	2.5 % v/v D				
	Mean =		.	19	8
2 2,4-D LV4	0.5 lb ae/a A	102	.	30	20
ROUNDUP POWERMAX	16 fl oz/a A	303	.	35	.
N-PAK - AMS	2.5 % v/v A	508	.	20	10
ROUNDUP XTEND		706	.	20	20
ROUNDUP POWERMAX	32 fl oz/a C				
CLARITY	16 fl oz/a C				
SONIC	4.5 oz/a C				
TRICOR	6 oz/a C				
ROUNDUP POWERMAX	1.5 lb ae/a D				
N-PAK - AMS	2.5 % v/v D				
	Mean =		.	26	17
					0
					21
					60
					40
					70
					30
					50

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	ERICA	TAROF	SENGL	ERICA	TAROF		
Pest Scientific Name	Conyza canadensis	Taraxacum officinale	Senecio glaberrimus	Conyza canadensis	Taraxacum officinale		
Pest Name	Canada horseweed	Common dandelion	Cressleaf groundsel	Canada horseweed	Common dandelion		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Nov-25-2015	Nov-25-2015	Nov-25-2015	Dec-10-2015	Dec-10-2015		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
SE Group No.	1	2	3	4	5		
Days After First/Last Applic.	15 15	15 15	15 15	30 30	30 30		
Trt-Eval Interval	15 DA-A	15 DA-A	15 DA-A	30 DA-A	30 DA-A		
Plant-Eval Interval	-183 DP-1	-183 DP-1	-183 DP-1	-168 DP-1	-168 DP-1		
Days After Emergence	-188 DE-1	-188 DE-1	-188 DE-1	-173 DE-1	-173 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl	1	2	3	4	5
No. Name	Rate Unit	Code Plot					
3 2,4-D LV4	0.5 lb ae/a	A 103	.	50	30	.	70
ROUNDUP POWERMAX	16 fl oz/a	A 305	.	50	30	.	60
N-PAK - AMS	2.5 % v/v	A 601	.	30	.	.	30
CLARITY	0.25 lb ae/a	C 701	.	10	20	.	20
GRAMOXONE SL	3 pt/a	C	.			.	
SONIC	4.5 oz/a	C	.			.	
TRICOR	6 oz/a	C	.			.	
PRIME OIL - COC	1 % v/v	C	.			.	
ROUNDUP POWERMAX	1.5 lb ae/a	D	.			.	
N-PAK - AMS	2.5 % v/v	D	.			.	
Mean =			.	35	27	.	45
4 SHARPEN	1 fl oz/a	A 104	.	90	80	.	100
ROUNDUP POWERMAX	16 fl oz/a	A 304	.	100	100	.	100
MSO ULTRA	1 % v/v	A 505	.	90	90	.	100
N-PAK - AMS	2.5 % v/v	A 807	.	90	80	.	90
SHARPEN	1 fl oz/a	C	.			.	
ROUNDUP POWERMAX	0.75 lb ae/a	C	.			.	
SONIC	4.5 oz/a	C	.			.	
MSO ULTRA	1 % v/v	C	.			.	
N-PAK - AMS	2.5 % v/v	C	.			.	
ROUNDUP XTEND			.			.	
ROUNDUP POWERMAX	32 fl oz/a	D	.			.	
CLARITY	16 fl oz/a	D	.			.	
Mean =			.	93	88	.	98
5 2,4-D LV4	0.5 lb ae/a	A 105	.	50	30	.	60
ROUNDUP POWERMAX	16 fl oz/a	A 307	.	20	10	.	40
N-PAK - AMS	2.5 % v/v	A 605	.	25	10	.	40
SHARPEN	1 fl oz/a	C 703	.	10	10	.	20
ROUNDUP POWERMAX	0.75 lb ae/a	C	.			.	
SONIC	4.5 oz/a	C	.			.	
MSO ULTRA	1 % v/v	C	.			.	
N-PAK - AMS	2.5 % v/v	C	.			.	
ROUNDUP XTEND			.			.	
ROUNDUP POWERMAX	32 fl oz/a	D	.			.	
CLARITY	16 fl oz/a	D	.			.	
Mean =			.	26	15	.	40

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	ERICA	TAROF	SENGL	ERICA	TAROF		
Pest Scientific Name	Conyza canadensis	Taraxacum officinale	Senecio glaberrimus	Conyza canadensis	Taraxacum officinale		
Pest Name	Canada horseweed	Common dandelion	Cressleaf groundsel	Canada horseweed	Common dandelion		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Nov-25-2015	Nov-25-2015	Nov-25-2015	Dec-10-2015	Dec-10-2015		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
SE Group No.	1	2	3	4	5		
Days After First/Last Applic.	15 15	15 15	15 15	30 30	30 30		
Trt-Eval Interval	15 DA-A	15 DA-A	15 DA-A	30 DA-A	30 DA-A		
Plant-Eval Interval	-183 DP-1	-183 DP-1	-183 DP-1	-168 DP-1	-168 DP-1		
Days After Emergence	-188 DE-1	-188 DE-1	-188 DE-1	-173 DE-1	-173 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	1	2	3	4	5
6 2,4-D LV4	0.5 lb ae/a	A 106	.	35	25	.	40
ROUNDUP POWERMAX	16 fl oz/a	A 402	.	50	40	.	50
N-PAK - AMS	2.5 % v/v	A 501	.	20	.	.	30
2,4-D LV4	0.5 lb ae/a	B 704	.	30	10	.	30
ROUNDUP POWERMAX	0.75 lb ae/a	B	.			.	
SONIC	4.5 oz/a	B	.			.	
N-PAK - AMS	2.5 % v/v	B	.			.	
ROUNDUP XTEND			.			.	
ROUNDUP POWERMAX	32 fl oz/a	D	.			.	
CLARITY	16 fl oz/a	D	.			.	
Mean =			.	34	25	.	38
7 2,4-D LV4	0.5 lb ae/a	A 107	.	25	10	.	25
ROUNDUP POWERMAX	16 fl oz/a	A 404	.	30	30	.	70
N-PAK - AMS	2.5 % v/v	A 503	.	20	.	.	20
2,4-D LV4	0.5 lb ae/a	B 708	.	20	10	.	30
GRAMOXONE SL	3 pt/a	B	.			.	
SONIC	4.5 oz/a	B	.			.	
PRIME OIL - COC	1 % v/v	B	.			.	
ROUNDUP XTEND			.			.	
ROUNDUP POWERMAX	32 fl oz/a	D	.			.	
CLARITY	16 fl oz/a	D	.			.	
Mean =			.	24	17	.	36
8 SHARPEN	1 fl oz/a	A 108	.	90	90	.	90
ROUNDUP POWERMAX	16 fl oz/a	A 406	.	.	90	.	100
MSO ULTRA	1 % v/v	A 603	.	100	100	.	100
N-PAK - AMS	2.5 % v/v	A 808	.	90	90	.	100
SONIC	4.5 oz/a	C	.			.	
ROUNDUP XTEND			.			.	
ROUNDUP POWERMAX	32 fl oz/a	C	.			.	
CLARITY	16 fl oz/a	C	.			.	
ROUNDUP XTEND			.			.	
ROUNDUP POWERMAX	32 fl oz/a	D	.			.	
CLARITY	16 fl oz/a	D	.			.	
Mean =			.	93	93	.	98
9 2,4-D LV4	0.5 lb ae/a	A 201	.	60	20	.	70
ROUNDUP POWERMAX	16 fl oz/a	A 302	.	30	30	.	40
N-PAK - AMS	2.5 % v/v	A 604	.	40	40	.	40
SONIC	4.5 oz/a	C 804	.	10	5	.	20
ROUNDUP XTEND			.			.	
ROUNDUP POWERMAX	32 fl oz/a	C	.			.	
CLARITY	16 fl oz/a	C	.			.	
ROUNDUP XTEND			.			.	
ROUNDUP POWERMAX	32 fl oz/a	D	.			.	
CLARITY	16 fl oz/a	D	.			.	
Mean =			.	35	24	.	43

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	ERICA	TAROF	SENGL	ERICA	TAROF		
Pest Scientific Name	Conyza canadensis	Taraxacum officinale	Senecio glaberrimus	Conyza canadensis	Taraxacum officinale		
Pest Name	Canada horseweed	Common dandelion	Cressleaf groundsel	Canada horseweed	Common dandelion		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Nov-25-2015	Nov-25-2015	Nov-25-2015	Dec-10-2015	Dec-10-2015		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
SE Group No.	1	2	3	4	5		
Days After First/Last Applic.	15 15	15 15	15 15	30 30	30 30		
Trt-Eval Interval	15 DA-A	15 DA-A	15 DA-A	30 DA-A	30 DA-A		
Plant-Eval Interval	-183 DP-1	-183 DP-1	-183 DP-1	-168 DP-1	-168 DP-1		
Days After Emergence	-188 DE-1	-188 DE-1	-188 DE-1	-173 DE-1	-173 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	1	2	3	4	5
10 SHARPEN	1 fl oz/a	A 202	.	100	.	.	100
ROUNDUP POWERMAX	16 fl oz/a	A 401	.	100	90	.	100
MSO ULTRA	1 % v/v	A 504	.	100	90	.	100
N-PAK - AMS	2.5 % v/v	A 806	.	100	100	.	100
CLARITY	0.25 lb ae/a	C	.				
GRAMOXONE SL	3 pt/a	C	.				
SONIC	4.5 oz/a	C	.				
PRIME OIL - COC	1 % v/v	C	.				
ROUNDUP XTEND			.				
ROUNDUP POWERMAX	32 fl oz/a	D	.				
CLARITY	16 fl oz/a	D	.				
Mean =			.	100	93	.	100
11 SHARPEN	1 fl oz/a	C 203	.	25	10	.	20
ROUNDUP XTEND		403	.	0	0	.	0
ROUNDUP POWERMAX	32 fl oz/a	C 606	.	5	0	.	10
CLARITY	16 fl oz/a	C 705	.	0	0	0	0
SONIC	4.5 oz/a	C	.				
TRICOR	6 oz/a	C	.				
MSO ULTRA	1 % v/v	C	.				
N-PAK - AMS	2.5 % v/v	C	.				
ROUNDUP POWERMAX	1.5 lb ae/a	D	.				
N-PAK - AMS	2.5 % v/v	D	.				
Mean =			.	8	3	0	8
12 SHARPEN	1 fl oz/a	C 204	.	15	5	.	15
ROUNDUP XTEND		306	.	0	0	.	10
ROUNDUP POWERMAX	32 fl oz/a	C 602	.	10	0	0	10
CLARITY	16 fl oz/a	C 803	.	10	0	0	0
SONIC	4.5 oz/a	C	.				
MSO ULTRA	1 % v/v	C	.				
N-PAK - AMS	2.5 % v/v	C	.				
ROUNDUP XTEND			.				
ROUNDUP POWERMAX	32 fl oz/a	D	.				
CLARITY	16 fl oz/a	D	.				
Mean =			.	9	1	0	9
13 ROUNDUP XTEND		205	.	20	5	.	20
ROUNDUP POWERMAX	32 fl oz/a	C 408	.	0	0	.	0
CLARITY	16 fl oz/a	C 507	.	0	0	0	10
SONIC	4.5 oz/a	C 802	.	0	0	0	0
ROUNDUP XTEND			.				
ROUNDUP POWERMAX	32 fl oz/a	D	.				
CLARITY	16 fl oz/a	D	.				
Mean =			.	5	1	0	8

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	ERICA	TAROF	SENGL	ERICA	TAROF		
Pest Scientific Name	Conyza canadensis	Taraxacum officinale	Senecio glaberrimus	Conyza canadensis	Taraxacum officinale		
Pest Name	Canada horseweed	Common dandelion	Cressleaf groundsel	Canada horseweed	Common dandelion		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Nov-25-2015	Nov-25-2015	Nov-25-2015	Dec-10-2015	Dec-10-2015		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
SE Group No.	1	2	3	4	5		
Days After First/Last Applic.	15 15	15 15	15 15	30 30	30 30		
Trt-Eval Interval	15 DA-A	15 DA-A	15 DA-A	30 DA-A	30 DA-A		
Plant-Eval Interval	-183 DP-1	-183 DP-1	-183 DP-1	-168 DP-1	-168 DP-1		
Days After Emergence	-188 DE-1	-188 DE-1	-188 DE-1	-173 DE-1	-173 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl	1	2	3	4	5
No. Name	Rate Unit	Code Plot					
14 ROUNDUP XTEND		206	.	25	0	.	20
ROUNDUP POWERMAX	32 fl oz/a	C 308	.	10	10	.	10
CLARITY	16 fl oz/a	C 608	.	0	0	.	0
ROUNDUP XTEND		801	.	10	0	0	0
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
	Mean =		.	11	3	0	8
15 ROUNDUP POWERMAX	1.5 lb ae/a	C 207	.	0	0	.	10
N-PAK - AMS	2.5 % v/v	C 301	.	10	0	.	10
ROUNDUP POWERMAX	1.5 lb ae/a	D 506	.	15	5	0	10
N-PAK - AMS	2.5 % v/v	D 702	.	0	0	0	0
	Mean =		.	6	1	0	8
16 Untreated Check		208	0	0	0	0	0
		405	0	0	0	0	0
		502	0	0	0	0	0
		707	0	0	0	0	0
	Mean =		0	0	0	0	0

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SENGL	ERICA	TARSS	PANDI	DIGSA
Pest Scientific Name	Senecio glabel>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>
Pest Name	Cressleaf grou>	Canada horsewe>	Dandelion	Fall panicum	large crabgrass
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -
Rating Date	Dec-10-2015	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
SE Group No.	6	7	8	9	10
Days After First/Last Applic.	30 30	227 28	227 28	227 28	227 28
Trt-Eval Interval	30 DA-A				
Plant-Eval Interval	-168 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1
Days After Emergence	-173 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1
ARM Action Codes	P	P	P	P	P
Number of Decimals	0	0	0	0	0
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code Plot	6	7	8
1 2,4-D LV4	0.5 lb ae/a A	101	10	100	95
CLARITY	0.25 lb ae/a A	407	10	100	95
ACTIVATOR 90 - NIS	0.25 % v/v A	607	5	100	95
ROUNDUP XTEND		805	0	100	100
ROUNDUP POWERMAX	32 fl oz/a C				
CLARITY	16 fl oz/a C				
SONIC	4.5 oz/a C				
TRICOR	6 oz/a C				
ROUNDUP POWERMAX	1.5 lb ae/a D				
N-PAK - AMS	2.5 % v/v D				
	Mean =		6	100	96
2 2,4-D LV4	0.5 lb ae/a A	102	50	100	100
ROUNDUP POWERMAX	16 fl oz/a A	303	.	95	95
N-PAK - AMS	2.5 % v/v A	508	60	100	100
ROUNDUP XTEND		706	20	100	95
ROUNDUP POWERMAX	32 fl oz/a C				
CLARITY	16 fl oz/a C				
SONIC	4.5 oz/a C				
TRICOR	6 oz/a C				
ROUNDUP POWERMAX	1.5 lb ae/a D				
N-PAK - AMS	2.5 % v/v D				
	Mean =		43	99	98

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	SENGL	ERICA	TARSS	PANDI	DIGSA		
Pest Scientific Name	Senecio glabel>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>		
Pest Name	Cressleaf grou>	Canada horsewe>	Dandelion	Fall panicum	large crabgrass		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Dec-10-2015	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
SE Group No.	6	7	8	9	10		
Days After First/Last Applic.	30 30	227 28	227 28	227 28	227 28		
Trt-Eval Interval	30 DA-A						
Plant-Eval Interval	-168 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1		
Days After Emergence	-173 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	6	7	8	9	10
3 2,4-D LV4	0.5 lb ae/a A	103	60	100	95	100	95
ROUNDUP POWERMAX	16 fl oz/a A	305	40	100	100	95	100
N-PAK - AMS	2.5 % v/v A	601	.	95	100	100	95
CLARITY	0.25 lb ae/a C	701	30	100	95	95	100
GRAMOXONE SL	3 pt/a C						
SONIC	4.5 oz/a C						
TRICOR	6 oz/a C						
PRIME OIL - COC	1 % v/v C						
ROUNDUP POWERMAX	1.5 lb ae/a D						
N-PAK - AMS	2.5 % v/v D						
	Mean =		43	99	98	98	98
4 SHARPEN	1 fl oz/a A	104	90	100	100	100	95
ROUNDUP POWERMAX	16 fl oz/a A	304	100	95	95	100	100
MSO ULTRA	1 % v/v A	505	100	100	95	100	95
N-PAK - AMS	2.5 % v/v A	807	90	100	100	100	100
SHARPEN	1 fl oz/a C						
ROUNDUP POWERMAX	0.75 lb ae/a C						
SONIC	4.5 oz/a C						
MSO ULTRA	1 % v/v C						
N-PAK - AMS	2.5 % v/v C						
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a D						
CLARITY	16 fl oz/a D						
	Mean =		95	99	98	100	98
5 2,4-D LV4	0.5 lb ae/a A	105	40	100	100	80	100
ROUNDUP POWERMAX	16 fl oz/a A	307	20	100	95	100	100
N-PAK - AMS	2.5 % v/v A	605	20	95	100	100	95
SHARPEN	1 fl oz/a C	703	20	100	100	100	95
ROUNDUP POWERMAX	0.75 lb ae/a C						
SONIC	4.5 oz/a C						
MSO ULTRA	1 % v/v C						
N-PAK - AMS	2.5 % v/v C						
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a D						
CLARITY	16 fl oz/a D						
	Mean =		25	99	99	95	98

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	SENGL	ERICA	TARSS	PANDI	DIGSA		
Pest Scientific Name	Senecio glabel>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>		
Pest Name	Cressleaf grou>	Canada horsewe>	Dandelion	Fall panicum	large crabgrass		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Dec-10-2015	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
SE Group No.	6	7	8	9	10		
Days After First/Last Applic.	30 30	227 28	227 28	227 28	227 28		
Trt-Eval Interval	30 DA-A						
Plant-Eval Interval	-168 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1		
Days After Emergence	-173 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	6	7	8	9	10
6 2,4-D LV4	0.5 lb ae/a	A 106	30	95	100	80	80
ROUNDUP POWERMAX	16 fl oz/a	A 402	40	90	100	80	95
N-PAK - AMS	2.5 % v/v	A 501	.	85	100	95	85
2,4-D LV4	0.5 lb ae/a	B 704	20	90	100	100	60
ROUNDUP POWERMAX	0.75 lb ae/a	B					
SONIC	4.5 oz/a	B					
N-PAK - AMS	2.5 % v/v	B					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
		Mean =	30	90	100	89	80
7 2,4-D LV4	0.5 lb ae/a	A 107	10	95	100	80	80
ROUNDUP POWERMAX	16 fl oz/a	A 404	40	80	100	100	90
N-PAK - AMS	2.5 % v/v	A 503	.	90	100	90	80
2,4-D LV4	0.5 lb ae/a	B 708	20	95	95	95	60
GRAMOXONE SL	3 pt/a	B					
SONIC	4.5 oz/a	B					
PRIME OIL - COC	1 % v/v	B					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
		Mean =	23	90	99	91	78
8 SHARPEN	1 fl oz/a	A 108	90	100	100	100	95
ROUNDUP POWERMAX	16 fl oz/a	A 406	100	100	100	100	95
MSO ULTRA	1 % v/v	A 603	100	100	100	100	100
N-PAK - AMS	2.5 % v/v	A 808	90	100	100	100	95
SONIC	4.5 oz/a	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	C					
CLARITY	16 fl oz/a	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
		Mean =	95	100	100	100	96
9 2,4-D LV4	0.5 lb ae/a	A 201	50	100	100	100	90
ROUNDUP POWERMAX	16 fl oz/a	A 302	40	100	100	100	95
N-PAK - AMS	2.5 % v/v	A 604	30	100	100	100	100
SONIC	4.5 oz/a	C 804	10	95	100	100	100
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	C					
CLARITY	16 fl oz/a	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
		Mean =	33	99	100	100	96

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	SENGL	ERICA	TARSS	PANDI	DIGSA		
Pest Scientific Name	Senecio glabel>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>		
Pest Name	Cressleaf grou>	Canada horsewe>	Dandelion	Fall panicum	large crabgrass		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Dec-10-2015	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
SE Group No.	6	7	8	9	10		
Days After First/Last Applic.	30 30	227 28	227 28	227 28	227 28		
Trt-Eval Interval	30 DA-A						
Plant-Eval Interval	-168 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1		
Days After Emergence	-173 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	6	7	8	9	10
10 SHARPEN	1 fl oz/a	A 202	.	100	90	100	90
ROUNDUP POWERMAX	16 fl oz/a	A 401	100	100	100	100	95
MSO ULTRA	1 % v/v	A 504	100	95	95	100	95
N-PAK - AMS	2.5 % v/v	A 806	100	100	95	95	100
CLARITY	0.25 lb ae/a	C					
GRAMOXONE SL	3 pt/a	C					
SONIC	4.5 oz/a	C					
PRIME OIL - COC	1 % v/v	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
Mean =			100	99	95	99	95
11 SHARPEN	1 fl oz/a	C 203	0	100	75	100	100
ROUNDUP XTEND		403	0	100	85	100	100
ROUNDUP POWERMAX	32 fl oz/a	C 606	0	100	75	100	100
CLARITY	16 fl oz/a	C 705	0	100	80	100	100
SONIC	4.5 oz/a	C					
TRICOR	6 oz/a	C					
MSO ULTRA	1 % v/v	C					
N-PAK - AMS	2.5 % v/v	C					
ROUNDUP POWERMAX	1.5 lb ae/a	D					
N-PAK - AMS	2.5 % v/v	D					
Mean =			0	100	79	100	100
12 SHARPEN	1 fl oz/a	C 204	0	100	95	100	100
ROUNDUP XTEND		306	0	100	95	100	100
ROUNDUP POWERMAX	32 fl oz/a	C 602	0	100	95	100	100
CLARITY	16 fl oz/a	C 803	0	100	90	100	100
SONIC	4.5 oz/a	C					
MSO ULTRA	1 % v/v	C					
N-PAK - AMS	2.5 % v/v	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
Mean =			0	100	94	100	100
13 ROUNDUP XTEND		205	0	100	95	75	100
ROUNDUP POWERMAX	32 fl oz/a	C 408	0	100	95	95	100
CLARITY	16 fl oz/a	C 507	0	100	95	100	100
SONIC	4.5 oz/a	C 802	0	100	90	100	100
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
Mean =			0	100	94	93	100

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	SENGL	ERICA	TARSS	PANDI	DIGSA		
Pest Scientific Name	Senecio glabel>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>		
Pest Name	Cressleaf grou>	Canada horsewe>	Dandelion	Fall panicum	large crabgrass		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Dec-10-2015	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
SE Group No.	6	7	8	9	10		
Days After First/Last Applic.	30 30	227 28	227 28	227 28	227 28		
Trt-Eval Interval	30 DA-A						
Plant-Eval Interval	-168 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1		
Days After Emergence	-173 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	6	7	8	9	10
14 ROUNDUP XTEND		206	0	100	90	90	90
ROUNDUP POWERMAX	32 fl oz/a	C 308	0	100	80	100	95
CLARITY	16 fl oz/a	C 608	0	100	95	90	95
ROUNDUP XTEND		801	0	100	90	95	95
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
		Mean =	0	100	89	94	94
15 ROUNDUP POWERMAX	1.5 lb ae/a	C 207	0	80	90	90	90
N-PAK - AMS	2.5 % v/v	C 301	0	70	100	100	90
ROUNDUP POWERMAX	1.5 lb ae/a	D 506	0	85	95	95	100
N-PAK - AMS	2.5 % v/v	D 702	0	85	100	100	95
		Mean =	0	80	96	96	94
16 Untreated Check		208	0	0	0	0	0
		405	0	0	0	0	0
		502	0	0	0	0	0
		707	0	0	0	0	0
		Mean =	0	0	0	0	0

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	ERICA	TARSS	PANDI	DIGSA	ERICA		
Pest Scientific Name	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>		
Pest Name	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Canada horsewe>		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jul-8-2016	Jul-8-2016	Jul-8-2016	Jul-8-2016	Jul-26-2016		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
SE Group No.	11	12	13	14	15		
Days After First/Last Applic.	241 14	241 14	241 14	241 14	259 32		
Trt-Eval Interval							
Plant-Eval Interval	43 DP-1	43 DP-1	43 DP-1	43 DP-1	61 DP-1		
Days After Emergence	38 DE-1	38 DE-1	38 DE-1	38 DE-1	56 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	11	12	13	14	15
1 2,4-D LV4	0.5 lb ae/a A	101	100	95	100	100	98
CLARITY	0.25 lb ae/a A	407	100	100	100	100	95
ACTIVATOR 90 - NIS	0.25 % v/v A	607	100	100	100	100	100
ROUNDUP XTEND		805	100	100	100	100	90
ROUNDUP POWERMAX	32 fl oz/a C						
CLARITY	16 fl oz/a C						
SONIC	4.5 oz/a C						
TRICOR	6 oz/a C						
ROUNDUP POWERMAX	1.5 lb ae/a D						
N-PAK - AMS	2.5 % v/v D						
	Mean =		100	99	100	100	96
2 2,4-D LV4	0.5 lb ae/a A	102	100	100	95	95	100
ROUNDUP POWERMAX	16 fl oz/a A	303	95	100	100	100	80
N-PAK - AMS	2.5 % v/v A	508	100	100	95	95	85
ROUNDUP XTEND		706	100	100	100	95	95
ROUNDUP POWERMAX	32 fl oz/a C						
CLARITY	16 fl oz/a C						
SONIC	4.5 oz/a C						
TRICOR	6 oz/a C						
ROUNDUP POWERMAX	1.5 lb ae/a D						
N-PAK - AMS	2.5 % v/v D						
	Mean =		99	100	98	96	90

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	ERICA	TARSS	PANDI	DIGSA	ERICA		
Pest Scientific Name	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>		
Pest Name	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Canada horsewe>		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jul-8-2016	Jul-8-2016	Jul-8-2016	Jul-8-2016	Jul-26-2016		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
SE Group No.	11	12	13	14	15		
Days After First/Last Applic.	241 14	241 14	241 14	241 14	259 32		
Trt-Eval Interval							
Plant-Eval Interval	43 DP-1	43 DP-1	43 DP-1	43 DP-1	61 DP-1		
Days After Emergence	38 DE-1	38 DE-1	38 DE-1	38 DE-1	56 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	11	12	13	14	15
3 2,4-D LV4	0.5 lb ae/a A	103	95	100	100	95	90
ROUNDUP POWERMAX	16 fl oz/a A	305	95	100	100	100	90
N-PAK - AMS	2.5 % v/v A	601	100	100	100	100	90
CLARITY	0.25 lb ae/a C	701	100	100	95	95	90
GRAMOXONE SL	3 pt/a C						
SONIC	4.5 oz/a C						
TRICOR	6 oz/a C						
PRIME OIL - COC	1 % v/v C						
ROUNDUP POWERMAX	1.5 lb ae/a D						
N-PAK - AMS	2.5 % v/v D						
	Mean =		98	100	99	98	90
4 SHARPEN	1 fl oz/a A	104	100	100	100	100	95
ROUNDUP POWERMAX	16 fl oz/a A	304	95	100	95	100	100
MSO ULTRA	1 % v/v A	505	100	95	95	100	95
N-PAK - AMS	2.5 % v/v A	807	100	100	100	95	100
SHARPEN	1 fl oz/a C						
ROUNDUP POWERMAX	0.75 lb ae/a C						
SONIC	4.5 oz/a C						
MSO ULTRA	1 % v/v C						
N-PAK - AMS	2.5 % v/v C						
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a D						
CLARITY	16 fl oz/a D						
	Mean =		99	99	98	99	98
5 2,4-D LV4	0.5 lb ae/a A	105	100	100	90	100	95
ROUNDUP POWERMAX	16 fl oz/a A	307	100	100	100	100	100
N-PAK - AMS	2.5 % v/v A	605	100	100	100	100	100
SHARPEN	1 fl oz/a C	703	100	100	100	100	100
ROUNDUP POWERMAX	0.75 lb ae/a C						
SONIC	4.5 oz/a C						
MSO ULTRA	1 % v/v C						
N-PAK - AMS	2.5 % v/v C						
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a D						
CLARITY	16 fl oz/a D						
	Mean =		100	100	98	100	99

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	ERICA	TARSS	PANDI	DIGSA	ERICA
Pest Scientific Name	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>
Pest Name	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Canada horsewe>
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -
Rating Date	Jul-8-2016	Jul-8-2016	Jul-8-2016	Jul-8-2016	Jul-26-2016
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
SE Group No.	11	12	13	14	15
Days After First/Last Applic.	241 14	241 14	241 14	241 14	259 32
Trt-Eval Interval					
Plant-Eval Interval	43 DP-1	43 DP-1	43 DP-1	43 DP-1	61 DP-1
Days After Emergence	38 DE-1	38 DE-1	38 DE-1	38 DE-1	56 DE-1
ARM Action Codes	P	P	P	P	P
Number of Decimals	0	0	0	0	0
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code Plot	11	12	13
6 2,4-D LV4	0.5 lb ae/a	A 106	95	100	100
ROUNDUP POWERMAX	16 fl oz/a	A 402	95	100	100
N-PAK - AMS	2.5 % v/v	A 501	90	100	100
2,4-D LV4	0.5 lb ae/a	B 704	95	100	100
ROUNDUP POWERMAX	0.75 lb ae/a	B			
SONIC	4.5 oz/a	B			
N-PAK - AMS	2.5 % v/v	B			
ROUNDUP XTEND					
ROUNDUP POWERMAX	32 fl oz/a	D			
CLARITY	16 fl oz/a	D			
	Mean =		94	100	100
7 2,4-D LV4	0.5 lb ae/a	A 107	95	100	95
ROUNDUP POWERMAX	16 fl oz/a	A 404	90	100	100
N-PAK - AMS	2.5 % v/v	A 503	95	100	100
2,4-D LV4	0.5 lb ae/a	B 708	95	95	100
GRAMOXONE SL	3 pt/a	B			
SONIC	4.5 oz/a	B			
PRIME OIL - COC	1 % v/v	B			
ROUNDUP XTEND					
ROUNDUP POWERMAX	32 fl oz/a	D			
CLARITY	16 fl oz/a	D			
	Mean =		94	99	99
8 SHARPEN	1 fl oz/a	A 108	100	100	100
ROUNDUP POWERMAX	16 fl oz/a	A 406	100	100	100
MSO ULTRA	1 % v/v	A 603	100	100	100
N-PAK - AMS	2.5 % v/v	A 808	100	100	100
SONIC	4.5 oz/a	C			
ROUNDUP XTEND					
ROUNDUP POWERMAX	32 fl oz/a	C			
CLARITY	16 fl oz/a	C			
ROUNDUP XTEND					
ROUNDUP POWERMAX	32 fl oz/a	D			
CLARITY	16 fl oz/a	D			
	Mean =		100	100	100
9 2,4-D LV4	0.5 lb ae/a	A 201	100	100	100
ROUNDUP POWERMAX	16 fl oz/a	A 302	100	100	100
N-PAK - AMS	2.5 % v/v	A 604	100	100	100
SONIC	4.5 oz/a	C 804	95	100	100
ROUNDUP XTEND					
ROUNDUP POWERMAX	32 fl oz/a	C			
CLARITY	16 fl oz/a	C			
ROUNDUP XTEND					
ROUNDUP POWERMAX	32 fl oz/a	D			
CLARITY	16 fl oz/a	D			
	Mean =		99	100	100

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	ERICA	TARSS	PANDI	DIGSA	ERICA		
Pest Scientific Name	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>		
Pest Name	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Canada horsewe>		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jul-8-2016	Jul-8-2016	Jul-8-2016	Jul-8-2016	Jul-26-2016		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
SE Group No.	11	12	13	14	15		
Days After First/Last Applic.	241 14	241 14	241 14	241 14	259 32		
Trt-Eval Interval							
Plant-Eval Interval	43 DP-1	43 DP-1	43 DP-1	43 DP-1	61 DP-1		
Days After Emergence	38 DE-1	38 DE-1	38 DE-1	38 DE-1	56 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	11	12	13	14	15
10 SHARPEN	1 fl oz/a	A 202	100	95	100	100	100
ROUNDUP POWERMAX	16 fl oz/a	A 401	100	100	100	100	95
MSO ULTRA	1 % v/v	A 504	95	95	100	100	100
N-PAK - AMS	2.5 % v/v	A 806	95	95	100	100	95
CLARITY	0.25 lb ae/a	C					
GRAMOXONE SL	3 pt/a	C					
SONIC	4.5 oz/a	C					
PRIME OIL - COC	1 % v/v	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
	Mean =		98	96	100	100	98
11 SHARPEN	1 fl oz/a	C 203	100	90	100	100	100
ROUNDUP XTEND		403	100	90	100	100	100
ROUNDUP POWERMAX	32 fl oz/a	C 606	100	90	100	100	100
CLARITY	16 fl oz/a	C 705	100	90	95	95	100
SONIC	4.5 oz/a	C					
TRICOR	6 oz/a	C					
MSO ULTRA	1 % v/v	C					
N-PAK - AMS	2.5 % v/v	C					
ROUNDUP POWERMAX	1.5 lb ae/a	D					
N-PAK - AMS	2.5 % v/v	D					
	Mean =		100	90	99	99	100
12 SHARPEN	1 fl oz/a	C 204	100	100	100	100	100
ROUNDUP XTEND		306	100	95	100	100	100
ROUNDUP POWERMAX	32 fl oz/a	C 602	100	100	100	100	100
CLARITY	16 fl oz/a	C 803	100	90	100	100	100
SONIC	4.5 oz/a	C					
MSO ULTRA	1 % v/v	C					
N-PAK - AMS	2.5 % v/v	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
	Mean =		100	96	100	100	100
13 ROUNDUP XTEND		205	95	100	100	100	100
ROUNDUP POWERMAX	32 fl oz/a	C 408	100	95	95	95	100
CLARITY	16 fl oz/a	C 507	100	95	100	100	100
SONIC	4.5 oz/a	C 802	100	90	100	100	100
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
	Mean =		99	95	99	99	100

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02	Location: SEPAC	Trial Year: 2015
Protocol ID: 15F-SEP-SOY-02	Investigator: Dr. Bill Johnson	
Project ID:	Study Director: Dustin Johnson	
	Sponsor Contact: Purdue/Ohio State	

	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Type	TARSS	PANDI	DIGSA	ERICA	TARSS
Pest Code	TARSS	PANDI	DIGSA	ERICA	TARSS
Pest Scientific Name	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>	Taraxacum sp.
Pest Name	Dandelion	Fall panicum	large crabgrass	Canada horsewe>	Dandelion
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -
Rating Date	Jul-26-2016	Jul-26-2016	Jul-26-2016	Jun-24-2016	Jun-24-2016
Rating Type	CONTRO	CONTRO	CONTRO	COUNT	COUNT
Rating Unit	%	%	%		
Number of Subsamples	1	1	1	2	2
SE Group No.	16	17	18	19	20
Days After First/Last Applic.	259 32	259 32	259 32	227 28	227 28
Trt-Eval Interval					
Plant-Eval Interval	61 DP-1	61 DP-1	61 DP-1	29 DP-1	29 DP-1
Days After Emergence	56 DE-1	56 DE-1	56 DE-1	24 DE-1	24 DE-1
ARM Action Codes	P	P	P	P	P
Number of Decimals	0	0	0	0	0
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code Plot	16	17	18
1 2,4-D LV4	0.5 lb ae/a A	101	95	90	95
CLARITY	0.25 lb ae/a A	407	100	90	90
ACTIVATOR 90 - NIS	0.25 % v/v A	607	100	95	98
ROUNDUP XTEND		805	100	90	100
ROUNDUP POWERMAX	32 fl oz/a C				1
CLARITY	16 fl oz/a C				
SONIC	4.5 oz/a C				
TRICOR	6 oz/a C				
ROUNDUP POWERMAX	1.5 lb ae/a D				
N-PAK - AMS	2.5 % v/v D				
Mean =			99	91	96
2 2,4-D LV4	0.5 lb ae/a A	102	100	95	90
ROUNDUP POWERMAX	16 fl oz/a A	303	100	95	90
N-PAK - AMS	2.5 % v/v A	508	100	85	90
ROUNDUP XTEND		706	95	90	90
ROUNDUP POWERMAX	32 fl oz/a C				0
CLARITY	16 fl oz/a C				
SONIC	4.5 oz/a C				
TRICOR	6 oz/a C				
ROUNDUP POWERMAX	1.5 lb ae/a D				
N-PAK - AMS	2.5 % v/v D				
Mean =			99	91	90

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	TARSS	PANDI	DIGSA	ERICA	TARSS		
Pest Scientific Name	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>	Taraxacum sp.		
Pest Name	Dandelion	Fall panicum	large crabgrass	Canada horsewe>	Dandelion		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jul-26-2016	Jul-26-2016	Jul-26-2016	Jun-24-2016	Jun-24-2016		
Rating Type	CONTRO	CONTRO	CONTRO	COUNT	COUNT		
Rating Unit	%	%	%				
Number of Subsamples	1	1	1	2	2		
SE Group No.	16	17	18	19	20		
Days After First/Last Applic.	259 32	259 32	259 32	227 28	227 28		
Trt-Eval Interval							
Plant-Eval Interval	61 DP-1	61 DP-1	61 DP-1	29 DP-1	29 DP-1		
Days After Emergence	56 DE-1	56 DE-1	56 DE-1	24 DE-1	24 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	16	17	18	19	20
3 2,4-D LV4	0.5 lb ae/a A	103	100	95	90	0	0
ROUNDUP POWERMAX	16 fl oz/a A	305	100	95	85	0	1
N-PAK - AMS	2.5 % v/v A	601	100	95	90	1	0
CLARITY	0.25 lb ae/a C	701	100	85	85	0	2
GRAMOXONE SL	3 pt/a C						
SONIC	4.5 oz/a C						
TRICOR	6 oz/a C						
PRIME OIL - COC	1 % v/v C						
ROUNDUP POWERMAX	1.5 lb ae/a D						
N-PAK - AMS	2.5 % v/v D						
	Mean =		100	93	88	0	1
4 SHARPEN	1 fl oz/a A	104	95	90	95	0	0
ROUNDUP POWERMAX	16 fl oz/a A	304	100	95	95	0	1
MSO ULTRA	1 % v/v A	505	80	98	95	0	1
N-PAK - AMS	2.5 % v/v A	807	90	95	85	0	1
SHARPEN	1 fl oz/a C						
ROUNDUP POWERMAX	0.75 lb ae/a C						
SONIC	4.5 oz/a C						
MSO ULTRA	1 % v/v C						
N-PAK - AMS	2.5 % v/v C						
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a D						
CLARITY	16 fl oz/a D						
	Mean =		91	95	93	0	1
5 2,4-D LV4	0.5 lb ae/a A	105	90	95	90	0	0
ROUNDUP POWERMAX	16 fl oz/a A	307	95	98	95	1	0
N-PAK - AMS	2.5 % v/v A	605	100	95	95	1	0
SHARPEN	1 fl oz/a C	703	100	90	95	0	0
ROUNDUP POWERMAX	0.75 lb ae/a C						
SONIC	4.5 oz/a C						
MSO ULTRA	1 % v/v C						
N-PAK - AMS	2.5 % v/v C						
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a D						
CLARITY	16 fl oz/a D						
	Mean =		96	95	94	0	0

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	TARSS	PANDI	DIGSA	ERICA	TARSS
Pest Scientific Name	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>	Taraxacum sp.
Pest Name	Dandelion	Fall panicum	large crabgrass	Canada horsewe>	Dandelion
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -
Rating Date	Jul-26-2016	Jul-26-2016	Jul-26-2016	Jun-24-2016	Jun-24-2016
Rating Type	CONTRO	CONTRO	CONTRO	COUNT	COUNT
Rating Unit	%	%	%		
Number of Subsamples	1	1	1	2	2
SE Group No.	16	17	18	19	20
Days After First/Last Applic.	259 32	259 32	259 32	227 28	227 28
Trt-Eval Interval					
Plant-Eval Interval	61 DP-1	61 DP-1	61 DP-1	29 DP-1	29 DP-1
Days After Emergence	56 DE-1	56 DE-1	56 DE-1	24 DE-1	24 DE-1
ARM Action Codes	P	P	P	P	P
Number of Decimals	0	0	0	0	0
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code Plot	16	17	18
6 2,4-D LV4	0.5 lb ae/a A	106	100	85	90
ROUNDUP POWERMAX	16 fl oz/a A	402	100	95	95
N-PAK - AMS	2.5 % v/v A	501	95	95	95
2,4-D LV4	0.5 lb ae/a B	704	100	90	90
ROUNDUP POWERMAX	0.75 lb ae/a B				
SONIC	4.5 oz/a B				
N-PAK - AMS	2.5 % v/v B				
ROUNDUP XTEND					
ROUNDUP POWERMAX	32 fl oz/a D				
CLARITY	16 fl oz/a D				
	Mean =		99	91	93
7 2,4-D LV4	0.5 lb ae/a A	107	100	90	85
ROUNDUP POWERMAX	16 fl oz/a A	404	95	95	95
N-PAK - AMS	2.5 % v/v A	503	95	95	98
2,4-D LV4	0.5 lb ae/a B	708	100	70	75
GRAMOXONE SL	3 pt/a B				
SONIC	4.5 oz/a B				
PRIME OIL - COC	1 % v/v B				
ROUNDUP XTEND					
ROUNDUP POWERMAX	32 fl oz/a D				
CLARITY	16 fl oz/a D				
	Mean =		98	88	88
8 SHARPEN	1 fl oz/a A	108	100	95	90
ROUNDUP POWERMAX	16 fl oz/a A	406	100	100	90
MSO ULTRA	1 % v/v A	603	95	100	95
N-PAK - AMS	2.5 % v/v A	808	100	95	90
SONIC	4.5 oz/a C				
ROUNDUP XTEND					
ROUNDUP POWERMAX	32 fl oz/a C				
CLARITY	16 fl oz/a C				
ROUNDUP XTEND					
ROUNDUP POWERMAX	32 fl oz/a D				
CLARITY	16 fl oz/a D				
	Mean =		99	98	91
9 2,4-D LV4	0.5 lb ae/a A	201	100	100	90
ROUNDUP POWERMAX	16 fl oz/a A	302	100	100	92
N-PAK - AMS	2.5 % v/v A	604	100	100	95
SONIC	4.5 oz/a C	804	100	95	95
ROUNDUP XTEND					
ROUNDUP POWERMAX	32 fl oz/a C				
CLARITY	16 fl oz/a C				
ROUNDUP XTEND					
ROUNDUP POWERMAX	32 fl oz/a D				
CLARITY	16 fl oz/a D				
	Mean =		100	99	93

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	TARSS	PANDI	DIGSA	ERICA	TARSS		
Pest Scientific Name	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>	Taraxacum sp.		
Pest Name	Dandelion	Fall panicum	large crabgrass	Canada horsewe>	Dandelion		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jul-26-2016	Jul-26-2016	Jul-26-2016	Jun-24-2016	Jun-24-2016		
Rating Type	CONTRO	CONTRO	CONTRO	COUNT	COUNT		
Rating Unit	%	%	%				
Number of Subsamples	1	1	1	2	2		
SE Group No.	16	17	18	19	20		
Days After First/Last Applic.	259 32	259 32	259 32	227 28	227 28		
Trt-Eval Interval							
Plant-Eval Interval	61 DP-1	61 DP-1	61 DP-1	29 DP-1	29 DP-1		
Days After Emergence	56 DE-1	56 DE-1	56 DE-1	24 DE-1	24 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	16	17	18	19	20
10 SHARPEN	1 fl oz/a	A 202	100	95	95	0	1
ROUNDUP POWERMAX	16 fl oz/a	A 401	100	95	90	1	0
MSO ULTRA	1 % v/v	A 504	100	99	95	1	0
N-PAK - AMS	2.5 % v/v	A 806	100	95	95	0	0
CLARITY	0.25 lb ae/a	C					
GRAMOXONE SL	3 pt/a	C					
SONIC	4.5 oz/a	C					
PRIME OIL - COC	1 % v/v	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
	Mean =		100	96	94	0	0
11 SHARPEN	1 fl oz/a	C 203	95	95	95	0	1
ROUNDUP XTEND		403	95	95	90	0	3
ROUNDUP POWERMAX	32 fl oz/a	C 606	95	95	97	0	2
CLARITY	16 fl oz/a	C 705	80	80	90	0	3
SONIC	4.5 oz/a	C					
TRICOR	6 oz/a	C					
MSO ULTRA	1 % v/v	C					
N-PAK - AMS	2.5 % v/v	C					
ROUNDUP POWERMAX	1.5 lb ae/a	D					
N-PAK - AMS	2.5 % v/v	D					
	Mean =		91	91	93	0	2
12 SHARPEN	1 fl oz/a	C 204	90	90	95	2	2
ROUNDUP XTEND		306	100	90	95	0	2
ROUNDUP POWERMAX	32 fl oz/a	C 602	95	100	95	0	1
CLARITY	16 fl oz/a	C 803	90	95	95	1	1
SONIC	4.5 oz/a	C					
MSO ULTRA	1 % v/v	C					
N-PAK - AMS	2.5 % v/v	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
	Mean =		94	94	95	1	1
13 ROUNDUP XTEND		205	85	95	90	1	2
ROUNDUP POWERMAX	32 fl oz/a	C 408	95	85	85	1	4
CLARITY	16 fl oz/a	C 507	100	95	98	1	2
SONIC	4.5 oz/a	C 802	90	90	95	6	4
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
	Mean =		93	91	92	2	3

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	TARSS	PANDI	DIGSA	ERICA	TARSS		
Pest Scientific Name	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>	Taraxacum sp.		
Pest Name	Dandelion	Fall panicum	large crabgrass	Canada horsewe>	Dandelion		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jul-26-2016	Jul-26-2016	Jul-26-2016	Jun-24-2016	Jun-24-2016		
Rating Type	CONTRO	CONTRO	CONTRO	COUNT	COUNT		
Rating Unit	%	%	%				
Number of Subsamples	1	1	1	2	2		
SE Group No.	16	17	18	19	20		
Days After First/Last Applic.	259 32	259 32	259 32	227 28	227 28		
Trt-Eval Interval							
Plant-Eval Interval	61 DP-1	61 DP-1	61 DP-1	29 DP-1	29 DP-1		
Days After Emergence	56 DE-1	56 DE-1	56 DE-1	24 DE-1	24 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	16	17	18	19	20
14 ROUNDUP XTEND		206	100	90	85	4	2
ROUNDUP POWERMAX	32 fl oz/a C	308	95	90	95	2	5
CLARITY	16 fl oz/a C	608	95	95	90	0	3
ROUNDUP XTEND		801	95	95	95	3	6
ROUNDUP POWERMAX	32 fl oz/a D						
CLARITY	16 fl oz/a D						
	Mean =		96	93	91	2	4
15 ROUNDUP POWERMAX	1.5 lb ae/a C	207	95	85	95	18	1
N-PAK - AMS	2.5 % v/v C	301	100	100	95	16	0
ROUNDUP POWERMAX	1.5 lb ae/a D	506	95	85	95	11	1
N-PAK - AMS	2.5 % v/v D	702	100	80	90	8	0
	Mean =		98	88	94	13	0
16 Untreated Check		208	0	0	0	23	19
		405	0	0	0	6	8
		502	0	0	0	10	3
		707	0	0	0	10	19
	Mean =		0	0	0	12	12

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	PANDI	DIGSA	SIDSP	ERICA	TARSS	PANDI		
Pest Scientific Name	Panicum dichot>	Digitaria sang>	Sida spinosa	Erigeron canad>	Taraxacum sp.	Panicum dichot>		
Pest Name	Fall panicum	large crabgrass	Prickly sida	Canada horsewe>	Dandelion	Fall panicum		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-8-2016	Jul-8-2016	Jul-8-2016		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit								
Number of Subsamples	2	2	2	2	2	2		
SE Group No.	21	22	23	24	25	26		
Days After First/Last Applic.	227 28	227 28	227 28	211 12	241 14	241 14		
Trt-Eval Interval								
Plant-Eval Interval	29 DP-1	29 DP-1	29 DP-1	13 DP-1	43 DP-1	43 DP-1		
Days After Emergence	24 DE-1	24 DE-1	24 DE-1	8 DE-1	38 DE-1	38 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code Plot	21	22	23	24	25	26
1 2,4-D LV4	0.5 lb ae/a A	101	0	1	0	0	0	0
CLARITY	0.25 lb ae/a A	407	9	0	0	0	0	1
ACTIVATOR 90 - NIS	0.25 % v/v A	607	0	0	0	0	0	0
ROUNDUP XTEND		805	2	2	0	0	0	1
ROUNDUP POWERMAX	32 fl oz/a C							
CLARITY	16 fl oz/a C							
SONIC	4.5 oz/a C							
TRICOR	6 oz/a C							
ROUNDUP POWERMAX	1.5 lb ae/a D							
N-PAK - AMS	2.5 % v/v D							
Mean =			3	1	0	0	0	0
2 2,4-D LV4	0.5 lb ae/a A	102	1	0	0	1	0	1
ROUNDUP POWERMAX	16 fl oz/a A	303	1	4	1	2	0	1
N-PAK - AMS	2.5 % v/v A	508	1	0	0	0	1	1
ROUNDUP XTEND		706	2	2	0	0	0	0
ROUNDUP POWERMAX	32 fl oz/a C							
CLARITY	16 fl oz/a C							
SONIC	4.5 oz/a C							
TRICOR	6 oz/a C							
ROUNDUP POWERMAX	1.5 lb ae/a D							
N-PAK - AMS	2.5 % v/v D							
Mean =			1	1	0	1	0	0

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	PANDI	DIGSA	SIDSP	ERICA	TARSS	PANDI
Pest Scientific Name	Panicum dichot>	Digitaria sang>	Sida spinosa	Erigeron canad>	Taraxacum sp.	Panicum dichot>
Pest Name	Fall panicum	large crabgrass	Prickly sida	Canada horsewe>	Dandelion	Fall panicum
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -
Rating Date	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-8-2016	Jul-8-2016	Jul-8-2016
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
Rating Unit						
Number of Subsamples	2	2	2	2	2	2
SE Group No.	21	22	23	24	25	26
Days After First/Last Applic.	227 28	227 28	227 28	211 12	241 14	241 14
Trt-Eval Interval						
Plant-Eval Interval	29 DP-1	29 DP-1	29 DP-1	13 DP-1	43 DP-1	43 DP-1
Days After Emergence	24 DE-1	24 DE-1	24 DE-1	8 DE-1	38 DE-1	38 DE-1
ARM Action Codes	P	P	P	P	P	P
Number of Decimals	0	0	0	0	0	0
Trt Treatment	Rate	Appl				
No. Name	Rate Unit	Code Plot	21	22	23	24
3 2,4-D LV4	0.5 lb ae/a A	103	1	1	0	0
ROUNDUP POWERMAX	16 fl oz/a A	305	6	2	0	1
N-PAK - AMS	2.5 % v/v A	601	0	1	0	0
CLARITY	0.25 lb ae/a C	701	1	2	1	1
GRAMOXONE SL	3 pt/a C					
SONIC	4.5 oz/a C					
TRICOR	6 oz/a C					
PRIME OIL - COC	1 % v/v C					
ROUNDUP POWERMAX	1.5 lb ae/a D					
N-PAK - AMS	2.5 % v/v D					
	Mean =		2	1	0	1
4 SHARPEN	1 fl oz/a A	104	1	1	0	0
ROUNDUP POWERMAX	16 fl oz/a A	304	0	2	0	0
MSO ULTRA	1 % v/v A	505	0	0	0	1
N-PAK - AMS	2.5 % v/v A	807	0	1	0	1
SHARPEN	1 fl oz/a C					
ROUNDUP POWERMAX	0.75 lb ae/a C					
SONIC	4.5 oz/a C					
MSO ULTRA	1 % v/v C					
N-PAK - AMS	2.5 % v/v C					
ROUNDUP XTEND						
ROUNDUP POWERMAX	32 fl oz/a D					
CLARITY	16 fl oz/a D					
	Mean =		0	1	0	0
5 2,4-D LV4	0.5 lb ae/a A	105	13	0	0	0
ROUNDUP POWERMAX	16 fl oz/a A	307	2	2	0	0
N-PAK - AMS	2.5 % v/v A	605	1	3	0	0
SHARPEN	1 fl oz/a C	703	0	0	0	0
ROUNDUP POWERMAX	0.75 lb ae/a C					
SONIC	4.5 oz/a C					
MSO ULTRA	1 % v/v C					
N-PAK - AMS	2.5 % v/v C					
ROUNDUP XTEND						
ROUNDUP POWERMAX	32 fl oz/a D					
CLARITY	16 fl oz/a D					
	Mean =		4	1	0	0

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	PANDI	DIGSA	SIDSP	ERICA	TARSS	PANDI		
Pest Scientific Name	Panicum dichot>	Digitaria sang>	Sida spinosa	Erigeron canad>	Taraxacum sp.	Panicum dichot>		
Pest Name	Fall panicum	large crabgrass	Prickly sida	Canada horsewe>	Dandelion	Fall panicum		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-8-2016	Jul-8-2016	Jul-8-2016		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit								
Number of Subsamples	2	2	2	2	2	2		
SE Group No.	21	22	23	24	25	26		
Days After First/Last Applic.	227 28	227 28	227 28	211 12	241 14	241 14		
Trt-Eval Interval								
Plant-Eval Interval	29 DP-1	29 DP-1	29 DP-1	13 DP-1	43 DP-1	43 DP-1		
Days After Emergence	24 DE-1	24 DE-1	24 DE-1	8 DE-1	38 DE-1	38 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code Plot	21	22	23	24	25	26
6 2,4-D LV4	0.5 lb ae/a A	106	9	6	1	2	0	1
ROUNDUP POWERMAX	16 fl oz/a A	402	4	4	1	2	1	1
N-PAK - AMS	2.5 % v/v A	501	6	4	0	1	1	1
2,4-D LV4	0.5 lb ae/a B	704	3	8	0	1	0	0
ROUNDUP POWERMAX	0.75 lb ae/a B							
SONIC	4.5 oz/a B							
N-PAK - AMS	2.5 % v/v B							
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a D							
CLARITY	16 fl oz/a D							
	Mean =		5	5	0	1	0	1
7 2,4-D LV4	0.5 lb ae/a A	107	9	4	1	2	0	1
ROUNDUP POWERMAX	16 fl oz/a A	404	3	3	2	3	0	1
N-PAK - AMS	2.5 % v/v A	503	3	7	2	1	0	1
2,4-D LV4	0.5 lb ae/a B	708	2	4	0	0	0	0
GRAMOXONE SL	3 pt/a B							
SONIC	4.5 oz/a B							
PRIME OIL - COC	1 % v/v B							
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a D							
CLARITY	16 fl oz/a D							
	Mean =		4	4	1	1	0	1
8 SHARPEN	1 fl oz/a A	108	1	0	1	0	0	0
ROUNDUP POWERMAX	16 fl oz/a A	406	1	3	0	0	0	0
MSO ULTRA	1 % v/v A	603	1	1	0	0	0	1
N-PAK - AMS	2.5 % v/v A	808	1	2	0	0	0	0
SONIC	4.5 oz/a C							
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a C							
CLARITY	16 fl oz/a C							
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a D							
CLARITY	16 fl oz/a D							
	Mean =		1	1	0	0	0	0
9 2,4-D LV4	0.5 lb ae/a A	201	1	3	1	0	0	0
ROUNDUP POWERMAX	16 fl oz/a A	302	1	0	0	0	0	0
N-PAK - AMS	2.5 % v/v A	604	0	1	0	0	0	0
SONIC	4.5 oz/a C	804	0	0	0	0	0	1
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a C							
CLARITY	16 fl oz/a C							
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a D							
CLARITY	16 fl oz/a D							
	Mean =		0	1	0	0	0	0

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	PANDI	DIGSA	SIDSP	ERICA	TARSS	PANDI
Pest Scientific Name	Panicum dichot>	Digitaria sang>	Sida spinosa	Erigeron canad>	Taraxacum sp.	Panicum dichot>
Pest Name	Fall panicum	large crabgrass	Prickly sida	Canada horsewe>	Dandelion	Fall panicum
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -
Rating Date	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-8-2016	Jul-8-2016	Jul-8-2016
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
Rating Unit						
Number of Subsamples	2	2	2	2	2	2
SE Group No.	21	22	23	24	25	26
Days After First/Last Applic.	227 28	227 28	227 28	211 12	241 14	241 14
Trt-Eval Interval						
Plant-Eval Interval	29 DP-1	29 DP-1	29 DP-1	13 DP-1	43 DP-1	43 DP-1
Days After Emergence	24 DE-1	24 DE-1	24 DE-1	8 DE-1	38 DE-1	38 DE-1
ARM Action Codes	P	P	P	P	P	P
Number of Decimals	0	0	0	0	0	0
Trt Treatment	Rate	Appl				
No. Name	Rate Unit	Code Plot	21	22	23	24
10 SHARPEN	1 fl oz/a	A 202	4	2	2	0
ROUNDUP POWERMAX	16 fl oz/a	A 401	0	2	0	1
MSO ULTRA	1 % v/v	A 504	1	2	0	0
N-PAK - AMS	2.5 % v/v	A 806	0	0	0	0
CLARITY	0.25 lb ae/a	C				
GRAMOXONE SL	3 pt/a	C				
SONIC	4.5 oz/a	C				
PRIME OIL - COC	1 % v/v	C				
ROUNDUP XTEND						
ROUNDUP POWERMAX	32 fl oz/a	D				
CLARITY	16 fl oz/a	D				
	Mean =		1	1	1	0
11 SHARPEN	1 fl oz/a	C 203	1	0	0	0
ROUNDUP XTEND		403	0	0	0	1
ROUNDUP POWERMAX	32 fl oz/a	C 606	0	0	0	1
CLARITY	16 fl oz/a	C 705	0	0	0	1
SONIC	4.5 oz/a	C				
TRICOR	6 oz/a	C				
MSO ULTRA	1 % v/v	C				
N-PAK - AMS	2.5 % v/v	C				
ROUNDUP POWERMAX	1.5 lb ae/a	D				
N-PAK - AMS	2.5 % v/v	D				
	Mean =		0	0	0	1
12 SHARPEN	1 fl oz/a	C 204	0	0	1	0
ROUNDUP XTEND		306	0	0	0	2
ROUNDUP POWERMAX	32 fl oz/a	C 602	1	0	0	1
CLARITY	16 fl oz/a	C 803	0	1	0	2
SONIC	4.5 oz/a	C				
MSO ULTRA	1 % v/v	C				
N-PAK - AMS	2.5 % v/v	C				
ROUNDUP XTEND						
ROUNDUP POWERMAX	32 fl oz/a	D				
CLARITY	16 fl oz/a	D				
	Mean =		0	0	0	1
13 ROUNDUP XTEND		205	16	3	1	1
ROUNDUP POWERMAX	32 fl oz/a	C 408	1	0	0	1
CLARITY	16 fl oz/a	C 507	0	1	0	0
SONIC	4.5 oz/a	C 802	0	0	0	2
ROUNDUP XTEND						
ROUNDUP POWERMAX	32 fl oz/a	D				
CLARITY	16 fl oz/a	D				
	Mean =		4	1	0	1

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	PANDI	DIGSA	SIDSP	ERICA	TARSS	PANDI		
Pest Scientific Name	Panicum dichot>	Digitaria sang>	Sida spinosa	Erigeron canad>	Taraxacum sp.	Panicum dichot>		
Pest Name	Fall panicum	large crabgrass	Prickly sida	Canada horsewe>	Dandelion	Fall panicum		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-8-2016	Jul-8-2016	Jul-8-2016		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit								
Number of Subsamples	2	2	2	2	2	2		
SE Group No.	21	22	23	24	25	26		
Days After First/Last Applic.	227 28	227 28	227 28	211 12	241 14	241 14		
Trt-Eval Interval								
Plant-Eval Interval	29 DP-1	29 DP-1	29 DP-1	13 DP-1	43 DP-1	43 DP-1		
Days After Emergence	24 DE-1	24 DE-1	24 DE-1	8 DE-1	38 DE-1	38 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code Plot	21	22	23	24	25	26
14 ROUNDUP XTEND		206	3	8	0	5	0	2
ROUNDUP POWERMAX	32 fl oz/a C	308	1	3	0	1	3	0
CLARITY	16 fl oz/a C	608	0	2	0	2	2	0
ROUNDUP XTEND		801	4	2	0	1	3	0
ROUNDUP POWERMAX	32 fl oz/a D							
CLARITY	16 fl oz/a D							
	Mean =		2	3	0	2	2	1
15 ROUNDUP POWERMAX	1.5 lb ae/a C	207	2	6	0	15	0	1
N-PAK - AMS	2.5 % v/v C	301	2	2	0	26	0	1
ROUNDUP POWERMAX	1.5 lb ae/a D	506	3	0	0	13	0	1
N-PAK - AMS	2.5 % v/v D	702	1	1	0	14	0	1
	Mean =		2	2	0	17	0	1
16 Untreated Check		208	1	1	0	19	8	3
		405	3	0	1	13	7	4
		502	2	0	0	16	4	1
		707	0	1	0	11	7	1
	Mean =		1	0	0	15	6	2

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	DIGSA	ERICA	TARSS	PANDI	DIGSA
Pest Scientific Name	Digitaria sang>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>
Pest Name	large crabgrass	Canada horsewe>	Dandelion	Fall panicum	large crabgrass
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -
Rating Date	Jul-8-2016	Jul-27-2016	Jul-27-2016	Jul-27-2016	Jul-27-2016
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT
Rating Unit					
Number of Subsamples	2	2	2	2	2
SE Group No.	27	28	29	30	31
Days After First/Last Applic.	241 14	260 33	260 33	260 33	260 33
Trt-Eval Interval					
Plant-Eval Interval	43 DP-1	62 DP-1	62 DP-1	62 DP-1	62 DP-1
Days After Emergence	38 DE-1	57 DE-1	57 DE-1	57 DE-1	57 DE-1
ARM Action Codes	P	P	P	P	P
Number of Decimals	0	0	0	0	0
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code Plot	27	28	29
1 2,4-D LV4	0.5 lb ae/a A	101	1	0	0
CLARITY	0.25 lb ae/a A	407	0	5	0
ACTIVATOR 90 - NIS	0.25 % v/v A	607	0	2	0
ROUNDUP XTEND		805	0	2	1
ROUNDUP POWERMAX	32 fl oz/a C				1
CLARITY	16 fl oz/a C				
SONIC	4.5 oz/a C				
TRICOR	6 oz/a C				
ROUNDUP POWERMAX	1.5 lb ae/a D				
N-PAK - AMS	2.5 % v/v D				
	Mean =		0	2	0
2 2,4-D LV4	0.5 lb ae/a A	102	0	2	0
ROUNDUP POWERMAX	16 fl oz/a A	303	1	6	0
N-PAK - AMS	2.5 % v/v A	508	0	7	0
ROUNDUP XTEND		706	1	8	0
ROUNDUP POWERMAX	32 fl oz/a C				2
CLARITY	16 fl oz/a C				
SONIC	4.5 oz/a C				
TRICOR	6 oz/a C				
ROUNDUP POWERMAX	1.5 lb ae/a D				
N-PAK - AMS	2.5 % v/v D				
	Mean =		0	5	0

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	DIGSA	ERICA	TARSS	PANDI	DIGSA
Pest Scientific Name	Digitaria sang>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>
Pest Name	large crabgrass	Canada horsewe>	Dandelion	Fall panicum	large crabgrass
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -
Rating Date	Jul-8-2016	Jul-27-2016	Jul-27-2016	Jul-27-2016	Jul-27-2016
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT
Rating Unit					
Number of Subsamples	2	2	2	2	2
SE Group No.	27	28	29	30	31
Days After First/Last Applic.	241 14	260 33	260 33	260 33	260 33
Trt-Eval Interval					
Plant-Eval Interval	43 DP-1	62 DP-1	62 DP-1	62 DP-1	62 DP-1
Days After Emergence	38 DE-1	57 DE-1	57 DE-1	57 DE-1	57 DE-1
ARM Action Codes	P	P	P	P	P
Number of Decimals	0	0	0	0	0
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code Plot	27	28	29
3 2,4-D LV4	0.5 lb ae/a A	103	0	4	0
ROUNDUP POWERMAX	16 fl oz/a A	305	1	4	0
N-PAK - AMS	2.5 % v/v A	601	0	10	0
CLARITY	0.25 lb ae/a C	701	0	4	0
GRAMOXONE SL	3 pt/a C				1
SONIC	4.5 oz/a C				
TRICOR	6 oz/a C				
PRIME OIL - COC	1 % v/v C				
ROUNDUP POWERMAX	1.5 lb ae/a D				
N-PAK - AMS	2.5 % v/v D				
Mean =			0	5	0
4 SHARPEN	1 fl oz/a A	104	0	6	0
ROUNDUP POWERMAX	16 fl oz/a A	304	2	4	0
MSO ULTRA	1 % v/v A	505	0	1	1
N-PAK - AMS	2.5 % v/v A	807	2	9	0
SHARPEN	1 fl oz/a C				
ROUNDUP POWERMAX	0.75 lb ae/a C				
SONIC	4.5 oz/a C				
MSO ULTRA	1 % v/v C				
N-PAK - AMS	2.5 % v/v C				
ROUNDUP XTEND					
ROUNDUP POWERMAX	32 fl oz/a D				
CLARITY	16 fl oz/a D				
Mean =			1	5	0
5 2,4-D LV4	0.5 lb ae/a A	105	1	3	0
ROUNDUP POWERMAX	16 fl oz/a A	307	0	0	0
N-PAK - AMS	2.5 % v/v A	605	0	6	0
SHARPEN	1 fl oz/a C	703	0	0	0
ROUNDUP POWERMAX	0.75 lb ae/a C				
SONIC	4.5 oz/a C				
MSO ULTRA	1 % v/v C				
N-PAK - AMS	2.5 % v/v C				
ROUNDUP XTEND					
ROUNDUP POWERMAX	32 fl oz/a D				
CLARITY	16 fl oz/a D				
Mean =			0	2	0

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	DIGSA	ERICA	TARSS	PANDI	DIGSA		
Pest Scientific Name	Digitaria sang>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>		
Pest Name	large crabgrass	Canada horsewe>	Dandelion	Fall panicum	large crabgrass		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jul-8-2016	Jul-27-2016	Jul-27-2016	Jul-27-2016	Jul-27-2016		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit							
Number of Subsamples	2	2	2	2	2		
SE Group No.	27	28	29	30	31		
Days After First/Last Applic.	241 14	260 33	260 33	260 33	260 33		
Trt-Eval Interval							
Plant-Eval Interval	43 DP-1	62 DP-1	62 DP-1	62 DP-1	62 DP-1		
Days After Emergence	38 DE-1	57 DE-1	57 DE-1	57 DE-1	57 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	27	28	29	30	31
6 2,4-D LV4	0.5 lb ae/a A	106	1	8	1	8	0
ROUNDUP POWERMAX	16 fl oz/a A	402	0	2	0	3	1
N-PAK - AMS	2.5 % v/v A	501	0	0	1	3	1
2,4-D LV4	0.5 lb ae/a B	704	0	5	0	0	1
ROUNDUP POWERMAX	0.75 lb ae/a B						
SONIC	4.5 oz/a B						
N-PAK - AMS	2.5 % v/v B						
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a D						
CLARITY	16 fl oz/a D						
Mean =			0	4	0	3	1
7 2,4-D LV4	0.5 lb ae/a A	107	1	9	0	4	0
ROUNDUP POWERMAX	16 fl oz/a A	404	0	13	2	2	0
N-PAK - AMS	2.5 % v/v A	503	0	0	0	3	4
2,4-D LV4	0.5 lb ae/a B	708	1	16	0	2	1
GRAMOXONE SL	3 pt/a B						
SONIC	4.5 oz/a B						
PRIME OIL - COC	1 % v/v B						
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a D						
CLARITY	16 fl oz/a D						
Mean =			0	9	1	3	1
8 SHARPEN	1 fl oz/a A	108	0	8	1	6	1
ROUNDUP POWERMAX	16 fl oz/a A	406	0	5	0	4	0
MSO ULTRA	1 % v/v A	603	0	3	0	2	1
N-PAK - AMS	2.5 % v/v A	808	0	9	0	2	3
SONIC	4.5 oz/a C						
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a C						
CLARITY	16 fl oz/a C						
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a D						
CLARITY	16 fl oz/a D						
Mean =			0	6	0	3	1
9 2,4-D LV4	0.5 lb ae/a A	201	1	3	0	4	2
ROUNDUP POWERMAX	16 fl oz/a A	302	0	3	0	3	1
N-PAK - AMS	2.5 % v/v A	604	0	13	0	1	1
SONIC	4.5 oz/a C	804	0	5	0	2	0
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a C						
CLARITY	16 fl oz/a C						
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a D						
CLARITY	16 fl oz/a D						
Mean =			0	6	0	2	1

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	DIGSA	ERICA	TARSS	PANDI	DIGSA		
Pest Scientific Name	Digitaria sang>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>		
Pest Name	large crabgrass	Canada horsewe>	Dandelion	Fall panicum	large crabgrass		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jul-8-2016	Jul-27-2016	Jul-27-2016	Jul-27-2016	Jul-27-2016		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit							
Number of Subsamples	2	2	2	2	2		
SE Group No.	27	28	29	30	31		
Days After First/Last Applic.	241 14	260 33	260 33	260 33	260 33		
Trt-Eval Interval							
Plant-Eval Interval	43 DP-1	62 DP-1	62 DP-1	62 DP-1	62 DP-1		
Days After Emergence	38 DE-1	57 DE-1	57 DE-1	57 DE-1	57 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	27	28	29	30	31
10 SHARPEN	1 fl oz/a	A 202	1	0	0	0	0
ROUNDUP POWERMAX	16 fl oz/a	A 401	1	6	0	3	0
MSO ULTRA	1 % v/v	A 504	0	5	0	1	4
N-PAK - AMS	2.5 % v/v	A 806	0	11	0	0	3
CLARITY	0.25 lb ae/a	C					
GRAMOXONE SL	3 pt/a	C					
SONIC	4.5 oz/a	C					
PRIME OIL - COC	1 % v/v	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
Mean =			0	5	0	1	2
11 SHARPEN	1 fl oz/a	C 203	0	0	0	5	0
ROUNDUP XTEND		403	0	9	1	1	1
ROUNDUP POWERMAX	32 fl oz/a	C 606	0	0	0	1	0
CLARITY	16 fl oz/a	C 705	0	2	1	2	0
SONIC	4.5 oz/a	C					
TRICOR	6 oz/a	C					
MSO ULTRA	1 % v/v	C					
N-PAK - AMS	2.5 % v/v	C					
ROUNDUP POWERMAX	1.5 lb ae/a	D					
N-PAK - AMS	2.5 % v/v	D					
Mean =			0	3	0	2	0
12 SHARPEN	1 fl oz/a	C 204	1	9	2	3	0
ROUNDUP XTEND		306	0	2	1	1	3
ROUNDUP POWERMAX	32 fl oz/a	C 602	0	0	0	1	0
CLARITY	16 fl oz/a	C 803	0	0	1	0	1
SONIC	4.5 oz/a	C					
MSO ULTRA	1 % v/v	C					
N-PAK - AMS	2.5 % v/v	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
Mean =			0	3	1	1	1
13 ROUNDUP XTEND		205	0	2	2	3	2
ROUNDUP POWERMAX	32 fl oz/a	C 408	1	0	1	4	0
CLARITY	16 fl oz/a	C 507	0	0	0	2	0
SONIC	4.5 oz/a	C 802	0	2	2	1	1
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
Mean =			0	1	1	2	1

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	DIGSA	ERICA	TARSS	PANDI	DIGSA		
Pest Scientific Name	Digitaria sang>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>		
Pest Name	large crabgrass	Canada horsewe>	Dandelion	Fall panicum	large crabgrass		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jul-8-2016	Jul-27-2016	Jul-27-2016	Jul-27-2016	Jul-27-2016		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit							
Number of Subsamples	2	2	2	2	2		
SE Group No.	27	28	29	30	31		
Days After First/Last Applic.	241 14	260 33	260 33	260 33	260 33		
Trt-Eval Interval							
Plant-Eval Interval	43 DP-1	62 DP-1	62 DP-1	62 DP-1	62 DP-1		
Days After Emergence	38 DE-1	57 DE-1	57 DE-1	57 DE-1	57 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code Plot	27	28	29	30	31
14 ROUNDUP XTEND		206	1	0	0	4	0
ROUNDUP POWERMAX	32 fl oz/a C	308	0	2	0	4	1
CLARITY	16 fl oz/a C	608	0	0	0	0	0
ROUNDUP XTEND		801	0	7	0	0	2
ROUNDUP POWERMAX	32 fl oz/a D						
CLARITY	16 fl oz/a D						
	Mean =		0	2	0	2	1
15 ROUNDUP POWERMAX	1.5 lb ae/a C	207	0	7	0	1	1
N-PAK - AMS	2.5 % v/v C	301	0	13	0	1	2
ROUNDUP POWERMAX	1.5 lb ae/a D	506	1	11	0	5	0
N-PAK - AMS	2.5 % v/v D	702	0	5	0	1	2
	Mean =		0	9	0	2	1
16 Untreated Check		208	1	23	10	1	0
		405	1	7	5	10	0
		502	2	5	4	2	0
		707	0	7	8	2	0
	Mean =		1	10	7	4	0

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type
 W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code
 ERICA, Conyza canadensis, = ERICA, Conyza canadensis,
 TAROF, Taraxacum officinale, = US
 SENGL, Senecio glabellus, = US
 ERICA, Erigeron canadensis, = US
 TARSS, Taraxacum sp., = US
 PANDI, Panicum dichotomiflorum, = US
 DIGSA, Digitaria sanguinalis, = US
 SIDSP, Sida spinosa, = US

Crop Code
 GLXMA, BSOY, Glycine max, = US

Part Rated
 PLOT = plot

Rating Type
 CONTRO = control / burndown or knockdown
 COUNT = count

Rating Unit
 % = percent

Plant-Eval Interval
 -183 DP-1 = 1 GLXMA May-26-2016
 -168 DP-1 = 1 GLXMA May-26-2016
 29 DP-1 = 1 GLXMA May-26-2016
 43 DP-1 = 1 GLXMA May-26-2016
 61 DP-1 = 1 GLXMA May-26-2016
 13 DP-1 = 1 GLXMA May-26-2016
 62 DP-1 = 1 GLXMA May-26-2016

ARM Action Codes
 P = Rating scale of 0 to 100 (e.g. % control or injury)

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	ERICA	TAROF	SENGL	ERICA	TAROF				
Pest Scientific Name	Conyza canadensis	Taraxacum officinale	Senecio glabellus	Conyza canadensis	Taraxacum officinale				
Pest Name	Canada horseweed	Common dandelion	Cressleaf groundsel	Canada horseweed	Common dandelion				
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA				
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY				
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max				
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean				
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -				
Rating Date	Nov-25-2015	Nov-25-2015	Nov-25-2015	Dec-10-2015	Dec-10-2015				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1				
SE Group No.	1	2	3	4	5				
Days After First/Last Applic.	15 15	15 15	15 15	30 30	30 30				
Trt-Eval Interval	15 DA-A	15 DA-A	15 DA-A	30 DA-A	30 DA-A				
Plant-Eval Interval	-183 DP-1	-183 DP-1	-183 DP-1	-168 DP-1	-168 DP-1				
Days After Emergence	-188 DE-1	-188 DE-1	-188 DE-1	-173 DE-1	-173 DE-1				
ARM Action Codes	P	P	P	P	P				
Number of Decimals	0	0	0	0	0				
Trt No.	Treatment Name	Rate	Appl Unit	Code	1	2	3	4	5
1	2,4-D LV4	0.5 lb ae/a	A						
	CLARITY	0.25 lb ae/a	A			19 bcd	8 c		21 cd
	ACTIVATOR 90 - NIS	0.25 % v/v	A						
	ROUNDUP XTEND								
	ROUNDUP POWERMAX	32 fl oz/a	C						
	CLARITY	16 fl oz/a	C						
	SONIC	4.5 oz/a	C						
	TRICOR	6 oz/a	C						
	ROUNDUP POWERMAX	1.5 lb ae/a	D						
	N-PAK - AMS	2.5 % v/v	D						
2	2,4-D LV4	0.5 lb ae/a	A			26 bc	17 bc	0 -	50 b
	ROUNDUP POWERMAX	16 fl oz/a	A						
	N-PAK - AMS	2.5 % v/v	A						
	ROUNDUP XTEND								
	ROUNDUP POWERMAX	32 fl oz/a	C						
	CLARITY	16 fl oz/a	C						
	SONIC	4.5 oz/a	C						
	TRICOR	6 oz/a	C						
	ROUNDUP POWERMAX	1.5 lb ae/a	D						
	N-PAK - AMS	2.5 % v/v	D						

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	ERICA	TAROF	SENGL	ERICA	TAROF		
Pest Scientific Name	Conyza canadens>	Taraxacum offi>	Senecio glabel>	Conyza canadens>	Taraxacum offi>		
Pest Name	Canada horsewe>	Common dandel>	Cressleaf grou>	Canada horsewe>	Common dandel>		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Nov-25-2015	Nov-25-2015	Nov-25-2015	Dec-10-2015	Dec-10-2015		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
SE Group No.	1	2	3	4	5		
Days After First/Last Applic.	15 15	15 15	15 15	30 30	30 30		
Trt-Eval Interval	15 DA-A	15 DA-A	15 DA-A	30 DA-A	30 DA-A		
Plant-Eval Interval	-183 DP-1	-183 DP-1	-183 DP-1	-168 DP-1	-168 DP-1		
Days After Emergence	-188 DE-1	-188 DE-1	-188 DE-1	-173 DE-1	-173 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment No. Name	Rate Unit	Appl Code	1	2	3	4	5
3 2,4-D LV4	0.5 lb ae/a	A		35 b	27 b		45 b
ROUNDUP POWERMAX	16 fl oz/a	A					
N-PAK - AMS	2.5 % v/v	A					
CLARITY	0.25 lb ae/a	C					
GRAMOXONE SL	3 pt/a	C					
SONIC	4.5 oz/a	C					
TRICOR	6 oz/a	C					
PRIME OIL - COC	1 % v/v	C					
ROUNDUP POWERMAX	1.5 lb ae/a	D					
N-PAK - AMS	2.5 % v/v	D					
4 SHARPEN	1 fl oz/a	A		93 a	88 a		98 a
ROUNDUP POWERMAX	16 fl oz/a	A					
MSO ULTRA	1 % v/v	A					
N-PAK - AMS	2.5 % v/v	A					
SHARPEN	1 fl oz/a	C					
ROUNDUP POWERMAX	0.75 lb ae/a	C					
SONIC	4.5 oz/a	C					
MSO ULTRA	1 % v/v	C					
N-PAK - AMS	2.5 % v/v	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
5 2,4-D LV4	0.5 lb ae/a	A		26 bc	15 bc		40 bc
ROUNDUP POWERMAX	16 fl oz/a	A					
N-PAK - AMS	2.5 % v/v	A					
SHARPEN	1 fl oz/a	C					
ROUNDUP POWERMAX	0.75 lb ae/a	C					
SONIC	4.5 oz/a	C					
MSO ULTRA	1 % v/v	C					
N-PAK - AMS	2.5 % v/v	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
6 2,4-D LV4	0.5 lb ae/a	A		34 b	25 b		38 bc
ROUNDUP POWERMAX	16 fl oz/a	A					
N-PAK - AMS	2.5 % v/v	A					
2,4-D LV4	0.5 lb ae/a	B					
ROUNDUP POWERMAX	0.75 lb ae/a	B					
SONIC	4.5 oz/a	B					
N-PAK - AMS	2.5 % v/v	B					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	ERICA	TAROF	SENGL	ERICA	TAROF		
Pest Scientific Name	Conyza canadens>	Taraxacum offi>	Senecio glabel>	Conyza canadens>	Taraxacum offi>		
Pest Name	Canada horsewe>	Common dandel>	Cressleaf grou>	Canada horsewe>	Common dandel>		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Nov-25-2015	Nov-25-2015	Nov-25-2015	Dec-10-2015	Dec-10-2015		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
SE Group No.	1	2	3	4	5		
Days After First/Last Applic.	15 15	15 15	15 15	30 30	30 30		
Trt-Eval Interval	15 DA-A	15 DA-A	15 DA-A	30 DA-A	30 DA-A		
Plant-Eval Interval	-183 DP-1	-183 DP-1	-183 DP-1	-168 DP-1	-168 DP-1		
Days After Emergence	-188 DE-1	-188 DE-1	-188 DE-1	-173 DE-1	-173 DE-1		
ARM Action Codes	P	P	P	P	P		
Number of Decimals	0	0	0	0	0		
Trt Treatment No. Name	Rate Unit	Appl Code	1	2	3	4	5
7 2,4-D LV4	0.5 lb ae/a	A		24 bc	17 bc		36 bc
ROUNDUP POWERMAX	16 fl oz/a	A					
N-PAK - AMS	2.5 % v/v	A					
2,4-D LV4	0.5 lb ae/a	B					
GRAMOXONE SL	3 pt/a	B					
SONIC	4.5 oz/a	B					
PRIME OIL - COC	1 % v/v	B					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
8 SHARPEN	1 fl oz/a	A		93 a	93 a		98 a
ROUNDUP POWERMAX	16 fl oz/a	A					
MSO ULTRA	1 % v/v	A					
N-PAK - AMS	2.5 % v/v	A					
SONIC	4.5 oz/a	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	C					
CLARITY	16 fl oz/a	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
9 2,4-D LV4	0.5 lb ae/a	A		35 b	24 b		43 bc
ROUNDUP POWERMAX	16 fl oz/a	A					
N-PAK - AMS	2.5 % v/v	A					
SONIC	4.5 oz/a	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	C					
CLARITY	16 fl oz/a	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					
10 SHARPEN	1 fl oz/a	A		100 a	93 a		100 a
ROUNDUP POWERMAX	16 fl oz/a	A					
MSO ULTRA	1 % v/v	A					
N-PAK - AMS	2.5 % v/v	A					
CLARITY	0.25 lb ae/a	C					
GRAMOXONE SL	3 pt/a	C					
SONIC	4.5 oz/a	C					
PRIME OIL - COC	1 % v/v	C					
ROUNDUP XTEND							
ROUNDUP POWERMAX	32 fl oz/a	D					
CLARITY	16 fl oz/a	D					

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	ERICA	TAROF	SENGL	ERICA	TAROF			
Pest Scientific Name	Conyza canadens>	Taraxacum offi>	Senecio glabel>	Conyza canadens>	Taraxacum offi>			
Pest Name	Canada horsewe>	Common dandel>	Cressleaf grou>	Canada horsewe>	Common dandel>			
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA			
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY			
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max			
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean			
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -			
Rating Date	Nov-25-2015	Nov-25-2015	Nov-25-2015	Dec-10-2015	Dec-10-2015			
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1			
SE Group No.	1	2	3	4	5			
Days After First/Last Applic.	15 15	15 15	15 15	30 30	30 30			
Trt-Eval Interval	15 DA-A	15 DA-A	15 DA-A	30 DA-A	30 DA-A			
Plant-Eval Interval	-183 DP-1	-183 DP-1	-183 DP-1	-168 DP-1	-168 DP-1			
Days After Emergence	-188 DE-1	-188 DE-1	-188 DE-1	-173 DE-1	-173 DE-1			
ARM Action Codes	P	P	P	P	P			
Number of Decimals	0	0	0	0	0			
Trt No.	Treatment Name	Rate	Appl Code	1	2	3	4	5
11	SHARPEN	1 fl oz/a	C		8 cd	3 c	0 -	8 d
	ROUNDUP XTEND							
	ROUNDUP POWERMAX	32 fl oz/a	C					
	CLARITY	16 fl oz/a	C					
	SONIC	4.5 oz/a	C					
	TRICOR	6 oz/a	C					
	MSO ULTRA	1 % v/v	C					
	N-PAK - AMS	2.5 % v/v	C					
	ROUNDUP POWERMAX	1.5 lb ae/a	D					
	N-PAK - AMS	2.5 % v/v	D					
12	SHARPEN	1 fl oz/a	C		9 cd	1 c	0 -	9 d
	ROUNDUP XTEND							
	ROUNDUP POWERMAX	32 fl oz/a	C					
	CLARITY	16 fl oz/a	C					
	SONIC	4.5 oz/a	C					
	MSO ULTRA	1 % v/v	C					
	N-PAK - AMS	2.5 % v/v	C					
	ROUNDUP XTEND							
	ROUNDUP POWERMAX	32 fl oz/a	D					
	CLARITY	16 fl oz/a	D					
13	ROUNDUP XTEND				5 cd	1 c	0 -	8 d
	ROUNDUP POWERMAX	32 fl oz/a	C					
	CLARITY	16 fl oz/a	C					
	SONIC	4.5 oz/a	C					
	ROUNDUP XTEND							
	ROUNDUP POWERMAX	32 fl oz/a	D					
	CLARITY	16 fl oz/a	D					
14	ROUNDUP XTEND				11 cd	3 c	0 -	8 d
	ROUNDUP POWERMAX	32 fl oz/a	C					
	CLARITY	16 fl oz/a	C					
	ROUNDUP XTEND							
	ROUNDUP POWERMAX	32 fl oz/a	D					
	CLARITY	16 fl oz/a	D					
15	ROUNDUP POWERMAX	1.5 lb ae/a	C		6 cd	1 c	0 -	8 d
	N-PAK - AMS	2.5 % v/v	C					
	ROUNDUP POWERMAX	1.5 lb ae/a	D					
	N-PAK - AMS	2.5 % v/v	D					

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	ERICA	TAROF	SENGL	ERICA	TAROF
Pest Scientific Name	Conyza canadens>	Taraxacum offi>	Senecio glabel>	Conyza canadens>	Taraxacum offi>
Pest Name	Canada horsewe>	Common dandel>	Cressleaf grou>	Canada horsewe>	Common dandel>
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -
Rating Date	Nov-25-2015	Nov-25-2015	Nov-25-2015	Dec-10-2015	Dec-10-2015
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
SE Group No.	1	2	3	4	5
Days After First/Last Applic.	15 15	15 15	15 15	30 30	30 30
Trt-Eval Interval	15 DA-A	15 DA-A	15 DA-A	30 DA-A	30 DA-A
Plant-Eval Interval	-183 DP-1	-183 DP-1	-183 DP-1	-168 DP-1	-168 DP-1
Days After Emergence	-188 DE-1	-188 DE-1	-188 DE-1	-173 DE-1	-173 DE-1
ARM Action Codes	P	P	P	P	P
Number of Decimals	0	0	0	0	0
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	1	2	3
16 Untreated Check	0		0 d	0 c	0 -
LSD P=.05	.		13.3	10.3	.
Standard Deviation	.		9.4	7.2	0.0
CV	.		29.98	31.22	0.0
Bartlett's X2	.		20.968	24.798	0.0
P(Bartlett's X2)	.		0.074	0.037*	.
Skewness	.		1.119*	1.3439*	.
Kurtosis	.		-0.049	0.2564	.
Replicate F			6.099	2.546	0.000
Replicate Prob(F)			0.0015	0.0695	1.0000
Treatment F			46.868	81.413	0.000
Treatment Prob(F)			0.0001	0.0001	1.0000

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	SENGL	ERICA	TARSS	PANDI	DIGSA	ERICA		
Pest Scientific Name	Senecio glabell>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>		
Pest Name	Cressleaf grou>	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Canada horsewe>		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Dec-10-2015	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jul-8-2016		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
SE Group No.	6	7	8	9	10	11		
Days After First/Last Applic.	30 30	227 28	227 28	227 28	227 28	241 14		
Trt-Eval Interval	30 DA-A							
Plant-Eval Interval	-168 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1	43 DP-1		
Days After Emergence	-173 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1	38 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	6	7	8	9	10	11
1 2,4-D LV4	0.5 lb ae/a	A	6 d	100 a	96 a	94 a	100 a	100 a
CLARITY	0.25 lb ae/a	A						
ACTIVATOR 90 - NIS	0.25 % v/v	A						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
SONIC	4.5 oz/a	C						
TRICOR	6 oz/a	C						
ROUNDUP POWERMAX	1.5 lb ae/a	D						
N-PAK - AMS	2.5 % v/v	D						
2 2,4-D LV4	0.5 lb ae/a	A	43 b	99 a	98 a	98 a	96 a	99 a
ROUNDUP POWERMAX	16 fl oz/a	A						
N-PAK - AMS	2.5 % v/v	A						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
SONIC	4.5 oz/a	C						
TRICOR	6 oz/a	C						
ROUNDUP POWERMAX	1.5 lb ae/a	D						
N-PAK - AMS	2.5 % v/v	D						

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	SENGL	ERICA	TARSS	PANDI	DIGSA	ERICA		
Pest Scientific Name	Senecio glabel>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>		
Pest Name	Cressleaf grou>	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Canada horsewe>		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Dec-10-2015	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jul-8-2016		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
SE Group No.	6	7	8	9	10	11		
Days After First/Last Applic.	30 30	227 28	227 28	227 28	227 28	241 14		
Trt-Eval Interval	30 DA-A							
Plant-Eval Interval	-168 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1	43 DP-1		
Days After Emergence	-173 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1	38 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment No. Name	Rate	Appl	6	7	8	9	10	11
3 2,4-D LV4	0.5 lb ae/a A		43 b	99 a	98 a	98 a	98 a	98 a
ROUNDUP POWERMAX	16 fl oz/a A							
N-PAK - AMS	2.5 % v/v A							
CLARITY	0.25 lb ae/a C							
GRAMOXONE SL	3 pt/a C							
SONIC	4.5 oz/a C							
TRICOR	6 oz/a C							
PRIME OIL - COC	1 % v/v C							
ROUNDUP POWERMAX	1.5 lb ae/a D							
N-PAK - AMS	2.5 % v/v D							
4 SHARPEN	1 fl oz/a A		95 a	99 a	98 a	100 a	98 a	99 a
ROUNDUP POWERMAX	16 fl oz/a A							
MSO ULTRA	1 % v/v A							
N-PAK - AMS	2.5 % v/v A							
SHARPEN	1 fl oz/a C							
ROUNDUP POWERMAX	0.75 lb ae/a C							
SONIC	4.5 oz/a C							
MSO ULTRA	1 % v/v C							
N-PAK - AMS	2.5 % v/v C							
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a D							
CLARITY	16 fl oz/a D							
5 2,4-D LV4	0.5 lb ae/a A		25 c	99 a	99 a	95 a	98 a	100 a
ROUNDUP POWERMAX	16 fl oz/a A							
N-PAK - AMS	2.5 % v/v A							
SHARPEN	1 fl oz/a C							
ROUNDUP POWERMAX	0.75 lb ae/a C							
SONIC	4.5 oz/a C							
MSO ULTRA	1 % v/v C							
N-PAK - AMS	2.5 % v/v C							
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a D							
CLARITY	16 fl oz/a D							
6 2,4-D LV4	0.5 lb ae/a A		30 bc	90 b	100 a	89 a	80 b	94 a
ROUNDUP POWERMAX	16 fl oz/a A							
N-PAK - AMS	2.5 % v/v A							
2,4-D LV4	0.5 lb ae/a B							
ROUNDUP POWERMAX	0.75 lb ae/a B							
SONIC	4.5 oz/a B							
N-PAK - AMS	2.5 % v/v B							
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a D							
CLARITY	16 fl oz/a D							

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	SENGL	ERICA	TARSS	PANDI	DIGSA	ERICA		
Pest Scientific Name	Senecio glabel>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>		
Pest Name	Cressleaf grou>	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Canada horsewe>		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Dec-10-2015	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jul-8-2016		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
SE Group No.	6	7	8	9	10	11		
Days After First/Last Applic.	30 30	227 28	227 28	227 28	227 28	241 14		
Trt-Eval Interval	30 DA-A							
Plant-Eval Interval	-168 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1	43 DP-1		
Days After Emergence	-173 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1	38 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment No. Name	Rate	Appl	6	7	8	9	10	11
7 2,4-D LV4	0.5 lb ae/a	A	23 c	90 b	99 a	91 a	78 b	94 a
ROUNDUP POWERMAX	16 fl oz/a	A						
N-PAK - AMS	2.5 % v/v	A						
2,4-D LV4	0.5 lb ae/a	B						
GRAMOXONE SL	3 pt/a	B						
SONIC	4.5 oz/a	B						
PRIME OIL - COC	1 % v/v	B						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
8 SHARPEN	1 fl oz/a	A	95 a	100 a	100 a	100 a	96 a	100 a
ROUNDUP POWERMAX	16 fl oz/a	A						
MSO ULTRA	1 % v/v	A						
N-PAK - AMS	2.5 % v/v	A						
SONIC	4.5 oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
9 2,4-D LV4	0.5 lb ae/a	A	33 bc	99 a	100 a	100 a	96 a	99 a
ROUNDUP POWERMAX	16 fl oz/a	A						
N-PAK - AMS	2.5 % v/v	A						
SONIC	4.5 oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
10 SHARPEN	1 fl oz/a	A	100 a	99 a	95 a	99 a	95 a	98 a
ROUNDUP POWERMAX	16 fl oz/a	A						
MSO ULTRA	1 % v/v	A						
N-PAK - AMS	2.5 % v/v	A						
CLARITY	0.25 lb ae/a	C						
GRAMOXONE SL	3 pt/a	C						
SONIC	4.5 oz/a	C						
PRIME OIL - COC	1 % v/v	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	SENGL	ERICA	TARSS	PANDI	DIGSA	ERICA		
Pest Scientific Name	Senecio glabel>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>		
Pest Name	Cressleaf grou>	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Canada horsewe>		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Dec-10-2015	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jul-8-2016		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
SE Group No.	6	7	8	9	10	11		
Days After First/Last Applic.	30 30	227 28	227 28	227 28	227 28	241 14		
Trt-Eval Interval	30 DA-A							
Plant-Eval Interval	-168 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1	43 DP-1		
Days After Emergence	-173 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1	38 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment No. Name	Rate	Appl	6	7	8	9	10	11
Rate Unit Code	Code	Code	Code	Code	Code	Code	Code	Code
11 SHARPEN ROUNDUP XTEND ROUNDUP POWERMAX CLARITY SONIC TRICOR MSO ULTRA N-PAK - AMS ROUNDUP POWERMAX N-PAK - AMS	1 fl oz/a 32 fl oz/a 16 fl oz/a 4.5 oz/a 6 oz/a 1 % v/v 2.5 % v/v 1.5 lb ae/a 2.5 % v/v	C C C C C C C C D D	0 d	100 a	79 c	100 a	100 a	100 a
12 SHARPEN ROUNDUP XTEND ROUNDUP POWERMAX CLARITY SONIC MSO ULTRA N-PAK - AMS ROUNDUP XTEND ROUNDUP POWERMAX CLARITY	1 fl oz/a 32 fl oz/a 16 fl oz/a 4.5 oz/a 6 oz/a 1 % v/v 2.5 % v/v 32 fl oz/a 16 fl oz/a	C C C C C C C D D	0 d	100 a	94 ab	100 a	100 a	100 a
13 ROUNDUP XTEND ROUNDUP POWERMAX CLARITY SONIC ROUNDUP XTEND ROUNDUP POWERMAX CLARITY	32 fl oz/a 16 fl oz/a 4.5 oz/a 32 fl oz/a 16 fl oz/a	C C C C D D	0 d	100 a	94 ab	93 a	100 a	99 a
14 ROUNDUP XTEND ROUNDUP POWERMAX CLARITY ROUNDUP XTEND ROUNDUP POWERMAX CLARITY	32 fl oz/a 16 fl oz/a 32 fl oz/a 16 fl oz/a	C C D D	0 d	100 a	89 b	94 a	94 a	99 a
15 ROUNDUP POWERMAX N-PAK - AMS ROUNDUP POWERMAX N-PAK - AMS	1.5 lb ae/a 2.5 % v/v 1.5 lb ae/a 2.5 % v/v	C C D D	0 d	80 c	96 a	96 a	94 a	73 b

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02	Location: SEPAC	Trial Year: 2015
Protocol ID: 15F-SEP-SOY-02	Investigator: Dr. Bill Johnson	
Project ID:	Study Director: Dustin Johnson	
	Sponsor Contact: Purdue/Ohio State	

	W Weed TARSS	W Weed PANDI	W Weed DIGSA	W Weed ERICA	W Weed TARSS	W Weed PANDI		
Pest Type	TARSS	PANDI	DIGSA	ERICA	TARSS	PANDI		
Pest Code	TARSS	PANDI	DIGSA	ERICA	TARSS	PANDI		
Pest Scientific Name	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>	Taraxacum sp.	Panicum dichot>		
Pest Name	Dandelion	Fall panicum	large crabgrass	Canada horsewe>	Dandelion	Fall panicum		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jul-8-2016	Jul-8-2016	Jul-8-2016	Jul-26-2016	Jul-26-2016	Jul-26-2016		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
SE Group No.	12	13	14	15	16	17		
Days After First/Last Applic.	241 14	241 14	241 14	259 32	259 32	259 32		
Trt-Eval Interval								
Plant-Eval Interval	43 DP-1	43 DP-1	43 DP-1	61 DP-1	61 DP-1	61 DP-1		
Days After Emergence	38 DE-1	38 DE-1	38 DE-1	56 DE-1	56 DE-1	56 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment No. Name	Rate Unit	Appl Code	12	13	14	15	16	17
1 2,4-D LV4	0.5 lb ae/a	A	99 a	100 a	100 a	96 ab	99 a	91 a
CLARITY	0.25 lb ae/a	A						
ACTIVATOR 90 - NIS	0.25 % v/v	A						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
SONIC	4.5 oz/a	C						
TRICOR	6 oz/a	C						
ROUNDUP POWERMAX	1.5 lb ae/a	D						
N-PAK - AMS	2.5 % v/v	D						
2 2,4-D LV4	0.5 lb ae/a	A	100 a	98 a	96 a	90 b	99 a	91 a
ROUNDUP POWERMAX	16 fl oz/a	A						
N-PAK - AMS	2.5 % v/v	A						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
SONIC	4.5 oz/a	C						
TRICOR	6 oz/a	C						
ROUNDUP POWERMAX	1.5 lb ae/a	D						
N-PAK - AMS	2.5 % v/v	D						

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	TARSS	PANDI	DIGSA	ERICA	TARSS	PANDI		
Pest Scientific Name	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>	Taraxacum sp.	Panicum dichot>		
Pest Name	Dandelion	Fall panicum	large crabgrass	Canada horsewe>	Dandelion	Fall panicum		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jul-8-2016	Jul-8-2016	Jul-8-2016	Jul-26-2016	Jul-26-2016	Jul-26-2016		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
SE Group No.	12	13	14	15	16	17		
Days After First/Last Applic.	241 14	241 14	241 14	259 32	259 32	259 32		
Trt-Eval Interval								
Plant-Eval Interval	43 DP-1	43 DP-1	43 DP-1	61 DP-1	61 DP-1	61 DP-1		
Days After Emergence	38 DE-1	38 DE-1	38 DE-1	56 DE-1	56 DE-1	56 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment No. Name	Rate	Appl	12	13	14	15	16	17
	Rate Unit	Code						
7 2,4-D LV4	0.5 lb ae/a	A	99 a	99 a	100 a	98 ab	98 a	88 a
ROUNDUP POWERMAX	16 fl oz/a	A						
N-PAK - AMS	2.5 % v/v	A						
2,4-D LV4	0.5 lb ae/a	B						
GRAMOXONE SL	3 pt/a	B						
SONIC	4.5 oz/a	B						
PRIME OIL - COC	1 % v/v	B						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
8 SHARPEN	1 fl oz/a	A	100 a	100 a	100 a	100 a	99 a	98 a
ROUNDUP POWERMAX	16 fl oz/a	A						
MSO ULTRA	1 % v/v	A						
N-PAK - AMS	2.5 % v/v	A						
SONIC	4.5 oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
9 2,4-D LV4	0.5 lb ae/a	A	100 a	100 a	100 a	99 ab	100 a	99 a
ROUNDUP POWERMAX	16 fl oz/a	A						
N-PAK - AMS	2.5 % v/v	A						
SONIC	4.5 oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
10 SHARPEN	1 fl oz/a	A	96 a	100 a	100 a	98 ab	100 a	96 a
ROUNDUP POWERMAX	16 fl oz/a	A						
MSO ULTRA	1 % v/v	A						
N-PAK - AMS	2.5 % v/v	A						
CLARITY	0.25 lb ae/a	C						
GRAMOXONE SL	3 pt/a	C						
SONIC	4.5 oz/a	C						
PRIME OIL - COC	1 % v/v	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	TARSS	PANDI	DIGSA	ERICA	TARSS	PANDI		
Pest Scientific Name	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>	Taraxacum sp.	Panicum dichot>		
Pest Name	Dandelion	Fall panicum	large crabgrass	Canada horsewe>	Dandelion	Fall panicum		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jul-8-2016	Jul-8-2016	Jul-8-2016	Jul-26-2016	Jul-26-2016	Jul-26-2016		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
SE Group No.	12	13	14	15	16	17		
Days After First/Last Applic.	241 14	241 14	241 14	259 32	259 32	259 32		
Trt-Eval Interval								
Plant-Eval Interval	43 DP-1	43 DP-1	43 DP-1	61 DP-1	61 DP-1	61 DP-1		
Days After Emergence	38 DE-1	38 DE-1	38 DE-1	56 DE-1	56 DE-1	56 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment No. Name	Rate	Appl Code	12	13	14	15	16	17
11 SHARPEN	1 fl oz/a	C	90 b	99 a	99 a	100 a	91 a	91 a
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
SONIC	4.5 oz/a	C						
TRICOR	6 oz/a	C						
MSO ULTRA	1 % v/v	C						
N-PAK - AMS	2.5 % v/v	C						
ROUNDUP POWERMAX	1.5 lb ae/a	D						
N-PAK - AMS	2.5 % v/v	D						
12 SHARPEN	1 fl oz/a	C	96 a	100 a	100 a	100 a	94 a	94 a
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
SONIC	4.5 oz/a	C						
MSO ULTRA	1 % v/v	C						
N-PAK - AMS	2.5 % v/v	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
13 ROUNDUP XTEND			95 a	99 a	99 a	100 a	93 a	91 a
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
SONIC	4.5 oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
14 ROUNDUP XTEND			95 a	99 a	99 a	99 ab	96 a	93 a
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
15 ROUNDUP POWERMAX	1.5 lb ae/a	C	99 a	99 a	100 a	60 c	98 a	88 a
N-PAK - AMS	2.5 % v/v	C						
ROUNDUP POWERMAX	1.5 lb ae/a	D						
N-PAK - AMS	2.5 % v/v	D						

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	DIGSA	ERICA	TARSS	PANDI	DIGSA	SIDSP
Pest Scientific Name	Digitaria sang>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Sida spinosa
Pest Name	large crabgrass	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Prickly sida
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -
Rating Date	Jul-26-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016
Rating Type	CONTRO	COUNT	COUNT	COUNT	COUNT	COUNT
Rating Unit	%					
Number of Subsamples	1	2	2	2	2	2
SE Group No.	18	19	20	21	22	23
Days After First/Last Applic.	259 32	227 28	227 28	227 28	227 28	227 28
Trt-Eval Interval						
Plant-Eval Interval	61 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1
Days After Emergence	56 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1
ARM Action Codes	P	P	P	P	P	P
Number of Decimals	0	0	0	0	0	0
Trt No.	18	19	20	21	22	23
Treatment Name						
Rate						
Appl Code						
Rate Unit						
Appl Code						
1 2,4-D LV4	0.5 lb ae/a A					
CLARITY	0.25 lb ae/a A					
ACTIVATOR 90 - NIS	0.25 % v/v A					
ROUNDUP XTEND						
ROUNDUP POWERMAX	32 fl oz/a C					
CLARITY	16 fl oz/a C					
SONIC	4.5 oz/a C					
TRICOR	6 oz/a C					
ROUNDUP POWERMAX	1.5 lb ae/a D					
N-PAK - AMS	2.5 % v/v D					
2 2,4-D LV4	0.5 lb ae/a A					
ROUNDUP POWERMAX	16 fl oz/a A					
N-PAK - AMS	2.5 % v/v A					
ROUNDUP XTEND						
ROUNDUP POWERMAX	32 fl oz/a C					
CLARITY	16 fl oz/a C					
SONIC	4.5 oz/a C					
TRICOR	6 oz/a C					
ROUNDUP POWERMAX	1.5 lb ae/a D					
N-PAK - AMS	2.5 % v/v D					

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	DIGSA	ERICA	TARSS	PANDI	DIGSA	SIDSP		
Pest Scientific Name	Digitaria sang>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Sida spinosa		
Pest Name	large crabgrass	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Prickly sida		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jul-26-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016		
Rating Type	CONTRO	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit	%							
Number of Subsamples	1	2	2	2	2	2		
SE Group No.	18	19	20	21	22	23		
Days After First/Last Applic.	259 32	227 28	227 28	227 28	227 28	227 28		
Trt-Eval Interval								
Plant-Eval Interval	61 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1		
Days After Emergence	56 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment No. Name	Rate	Appl	18	19	20	21	22	23
	Rate Unit	Code						
3 2,4-D LV4	0.5 lb ae/a	A	88 a	0 b	1 b	2 -	1 bc	0 -
ROUNDUP POWERMAX	16 fl oz/a	A						
N-PAK - AMS	2.5 % v/v	A						
CLARITY	0.25 lb ae/a	C						
GRAMOXONE SL	3 pt/a	C						
SONIC	4.5 oz/a	C						
TRICOR	6 oz/a	C						
PRIME OIL - COC	1 % v/v	C						
ROUNDUP POWERMAX	1.5 lb ae/a	D						
N-PAK - AMS	2.5 % v/v	D						
4 SHARPEN	1 fl oz/a	A	93 a	0 b	1 b	0 -	1 bc	0 -
ROUNDUP POWERMAX	16 fl oz/a	A						
MSO ULTRA	1 % v/v	A						
N-PAK - AMS	2.5 % v/v	A						
SHARPEN	1 fl oz/a	C						
ROUNDUP POWERMAX	0.75 lb ae/a	C						
SONIC	4.5 oz/a	C						
MSO ULTRA	1 % v/v	C						
N-PAK - AMS	2.5 % v/v	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
5 2,4-D LV4	0.5 lb ae/a	A	94 a	0 b	0 b	4 -	1 bc	0 -
ROUNDUP POWERMAX	16 fl oz/a	A						
N-PAK - AMS	2.5 % v/v	A						
SHARPEN	1 fl oz/a	C						
ROUNDUP POWERMAX	0.75 lb ae/a	C						
SONIC	4.5 oz/a	C						
MSO ULTRA	1 % v/v	C						
N-PAK - AMS	2.5 % v/v	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
6 2,4-D LV4	0.5 lb ae/a	A	93 a	3 b	0 b	5 -	5 a	0 -
ROUNDUP POWERMAX	16 fl oz/a	A						
N-PAK - AMS	2.5 % v/v	A						
2,4-D LV4	0.5 lb ae/a	B						
ROUNDUP POWERMAX	0.75 lb ae/a	B						
SONIC	4.5 oz/a	B						
N-PAK - AMS	2.5 % v/v	B						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	DIGSA	ERICA	TARSS	PANDI	DIGSA	SIDSP		
Pest Scientific Name	Digitaria sang>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Sida spinosa		
Pest Name	large crabgrass	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Prickly sida		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jul-26-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016		
Rating Type	CONTRO	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit	%							
Number of Subsamples	1	2	2	2	2	2		
SE Group No.	18	19	20	21	22	23		
Days After First/Last Applic.	259 32	227 28	227 28	227 28	227 28	227 28		
Trt-Eval Interval								
Plant-Eval Interval	61 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1		
Days After Emergence	56 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment No. Name	Rate	Appl	18	19	20	21	22	23
	Rate Unit	Code						
7 2,4-D LV4	0.5 lb ae/a	A	88 a	2 b	1 b	4 -	4 ab	1 -
ROUNDUP POWERMAX	16 fl oz/a	A						
N-PAK - AMS	2.5 % v/v	A						
2,4-D LV4	0.5 lb ae/a	B						
GRAMOXONE SL	3 pt/a	B						
SONIC	4.5 oz/a	B						
PRIME OIL - COC	1 % v/v	B						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
8 SHARPEN	1 fl oz/a	A	91 a	0 b	0 b	1 -	1 bc	0 -
ROUNDUP POWERMAX	16 fl oz/a	A						
MSO ULTRA	1 % v/v	A						
N-PAK - AMS	2.5 % v/v	A						
SONIC	4.5 oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
9 2,4-D LV4	0.5 lb ae/a	A	93 a	1 b	0 b	0 -	1 bc	0 -
ROUNDUP POWERMAX	16 fl oz/a	A						
N-PAK - AMS	2.5 % v/v	A						
SONIC	4.5 oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
10 SHARPEN	1 fl oz/a	A	94 a	0 b	0 b	1 -	1 bc	1 -
ROUNDUP POWERMAX	16 fl oz/a	A						
MSO ULTRA	1 % v/v	A						
N-PAK - AMS	2.5 % v/v	A						
CLARITY	0.25 lb ae/a	C						
GRAMOXONE SL	3 pt/a	C						
SONIC	4.5 oz/a	C						
PRIME OIL - COC	1 % v/v	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	DIGSA	ERICA	TARSS	PANDI	DIGSA	SIDSP		
Pest Scientific Name	Digitaria sang>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Sida spinosa		
Pest Name	large crabgrass	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Prickly sida		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jul-26-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016		
Rating Type	CONTRO	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit	%							
Number of Subsamples	1	2	2	2	2	2		
SE Group No.	18	19	20	21	22	23		
Days After First/Last Applic.	259 32	227 28	227 28	227 28	227 28	227 28		
Trt-Eval Interval								
Plant-Eval Interval	61 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1		
Days After Emergence	56 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment No. Name	Rate	Appl Code	18	19	20	21	22	23
11 SHARPEN	1 fl oz/a	C	93 a	0 b	2 b	0 -	0 c	0 -
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
SONIC	4.5 oz/a	C						
TRICOR	6 oz/a	C						
MSO ULTRA	1 % v/v	C						
N-PAK - AMS	2.5 % v/v	C						
ROUNDUP POWERMAX	1.5 lb ae/a	D						
N-PAK - AMS	2.5 % v/v	D						
12 SHARPEN	1 fl oz/a	C	95 a	1 b	1 b	0 -	0 c	0 -
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
SONIC	4.5 oz/a	C						
MSO ULTRA	1 % v/v	C						
N-PAK - AMS	2.5 % v/v	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
13 ROUNDUP XTEND			92 a	2 b	3 b	4 -	1 bc	0 -
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
SONIC	4.5 oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
14 ROUNDUP XTEND			91 a	2 b	4 b	2 -	3 abc	0 -
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
15 ROUNDUP POWERMAX	1.5 lb ae/a	C	94 a	13 a	0 b	2 -	2 bc	0 -
N-PAK - AMS	2.5 % v/v	C						
ROUNDUP POWERMAX	1.5 lb ae/a	D						
N-PAK - AMS	2.5 % v/v	D						

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	DIGSA	ERICA	TARSS	PANDI	DIGSA	SIDSP		
Pest Scientific Name	Digitaria sang>	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Sida spinosa		
Pest Name	large crabgrass	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Prickly sida		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jul-26-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016	Jun-24-2016		
Rating Type	CONTRO	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit	%							
Number of Subsamples	1	2	2	2	2	2		
SE Group No.	18	19	20	21	22	23		
Days After First/Last Applic.	259 32	227 28	227 28	227 28	227 28	227 28		
Trt-Eval Interval								
Plant-Eval Interval	61 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1	29 DP-1		
Days After Emergence	56 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1	24 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	18	19	20	21	22	23
16 Untreated Check			0 b	12 a	12 a	1 -	0 c	0 -
LSD P=.05	5.5	3.3	3.0	4.0	2.1	0.6		
Standard Deviation	3.9	2.3	2.1	2.8	1.5	0.4		
CV	4.51	97.91	131.31	149.03	96.13	213.61		
Bartlett's X2	16.533	77.894	107.616	85.265	27.57	12.739		
P(Bartlett's X2)	0.168	0.001*	0.001*	0.001*	0.016*	0.175		
Skewness	-3.5004*	2.8431*	4.1122*	2.7208*	1.7573*	2.5364*		
Kurtosis	11.0962*	8.4914*	18.3875*	8.1597*	2.9673*	6.1828*		
Replicate F	2.708	1.478	1.087	3.386	1.347	2.403		
Replicate Prob(F)	0.0563	0.2331	0.3644	0.0261	0.2711	0.0800		
Treatment F	141.373	12.510	8.097	1.324	4.166	1.403		
Treatment Prob(F)	0.0001	0.0001	0.0001	0.2280	0.0001	0.1876		

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	ERICA	TARSS	PANDI	DIGSA	ERICA	TARSS		
Pest Scientific Name	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>	Taraxacum sp.		
Pest Name	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Canada horsewe>	Dandelion		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jun-8-2016	Jul-8-2016	Jul-8-2016	Jul-8-2016	Jul-27-2016	Jul-27-2016		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit								
Number of Subsamples	2	2	2	2	2	2		
SE Group No.	24	25	26	27	28	29		
Days After First/Last Applic.	211 12	241 14	241 14	241 14	260 33	260 33		
Trt-Eval Interval								
Plant-Eval Interval	13 DP-1	43 DP-1	43 DP-1	43 DP-1	62 DP-1	62 DP-1		
Days After Emergence	8 DE-1	38 DE-1	38 DE-1	38 DE-1	57 DE-1	57 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	24	25	26	27	28	29
1 2,4-D LV4	0.5 lb ae/a	A	0 b	0 c	0 b	0 -	2 -	0 b
CLARITY	0.25 lb ae/a	A						
ACTIVATOR 90 - NIS	0.25 % v/v	A						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
SONIC	4.5 oz/a	C						
TRICOR	6 oz/a	C						
ROUNDUP POWERMAX	1.5 lb ae/a	D						
N-PAK - AMS	2.5 % v/v	D						
2 2,4-D LV4	0.5 lb ae/a	A	1 b	0 c	0 b	0 -	5 -	0 b
ROUNDUP POWERMAX	16 fl oz/a	A						
N-PAK - AMS	2.5 % v/v	A						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
SONIC	4.5 oz/a	C						
TRICOR	6 oz/a	C						
ROUNDUP POWERMAX	1.5 lb ae/a	D						
N-PAK - AMS	2.5 % v/v	D						

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	ERICA	TARSS	PANDI	DIGSA	ERICA	TARSS		
Pest Scientific Name	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>	Taraxacum sp.		
Pest Name	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Canada horsewe>	Dandelion		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jun-8-2016	Jul-8-2016	Jul-8-2016	Jul-8-2016	Jul-27-2016	Jul-27-2016		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit								
Number of Subsamples	2	2	2	2	2	2		
SE Group No.	24	25	26	27	28	29		
Days After First/Last Applic.	211 12	241 14	241 14	241 14	260 33	260 33		
Trt-Eval Interval								
Plant-Eval Interval	13 DP-1	43 DP-1	43 DP-1	43 DP-1	62 DP-1	62 DP-1		
Days After Emergence	8 DE-1	38 DE-1	38 DE-1	38 DE-1	57 DE-1	57 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	24	25	26	27	28	29
3 2,4-D LV4	0.5 lb ae/a	A	1 b	0 c	1 ab	0 -	5 -	0 b
ROUNDUP POWERMAX	16 fl oz/a	A						
N-PAK - AMS	2.5 % v/v	A						
CLARITY	0.25 lb ae/a	C						
GRAMOXONE SL	3 pt/a	C						
SONIC	4.5 oz/a	C						
TRICOR	6 oz/a	C						
PRIME OIL - COC	1 % v/v	C						
ROUNDUP POWERMAX	1.5 lb ae/a	D						
N-PAK - AMS	2.5 % v/v	D						
4 SHARPEN	1 fl oz/a	A	0 b	0 c	0 b	1 -	5 -	0 b
ROUNDUP POWERMAX	16 fl oz/a	A						
MSO ULTRA	1 % v/v	A						
N-PAK - AMS	2.5 % v/v	A						
SHARPEN	1 fl oz/a	C						
ROUNDUP POWERMAX	0.75 lb ae/a	C						
SONIC	4.5 oz/a	C						
MSO ULTRA	1 % v/v	C						
N-PAK - AMS	2.5 % v/v	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
5 2,4-D LV4	0.5 lb ae/a	A	0 b	0 c	0 b	0 -	2 -	0 b
ROUNDUP POWERMAX	16 fl oz/a	A						
N-PAK - AMS	2.5 % v/v	A						
SHARPEN	1 fl oz/a	C						
ROUNDUP POWERMAX	0.75 lb ae/a	C						
SONIC	4.5 oz/a	C						
MSO ULTRA	1 % v/v	C						
N-PAK - AMS	2.5 % v/v	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
6 2,4-D LV4	0.5 lb ae/a	A	1 b	0 c	1 b	0 -	4 -	0 b
ROUNDUP POWERMAX	16 fl oz/a	A						
N-PAK - AMS	2.5 % v/v	A						
2,4-D LV4	0.5 lb ae/a	B						
ROUNDUP POWERMAX	0.75 lb ae/a	B						
SONIC	4.5 oz/a	B						
N-PAK - AMS	2.5 % v/v	B						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	ERICA	TARSS	PANDI	DIGSA	ERICA	TARSS		
Pest Scientific Name	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>	Taraxacum sp.		
Pest Name	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Canada horsewe>	Dandelion		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jun-8-2016	Jul-8-2016	Jul-8-2016	Jul-8-2016	Jul-27-2016	Jul-27-2016		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit								
Number of Subsamples	2	2	2	2	2	2		
SE Group No.	24	25	26	27	28	29		
Days After First/Last Applic.	211 12	241 14	241 14	241 14	260 33	260 33		
Trt-Eval Interval								
Plant-Eval Interval	13 DP-1	43 DP-1	43 DP-1	43 DP-1	62 DP-1	62 DP-1		
Days After Emergence	8 DE-1	38 DE-1	38 DE-1	38 DE-1	57 DE-1	57 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment No. Name	Rate	Appl	Rate	Appl	Rate	Appl		
	Rate Unit	Code	24	25	26	27	28	29
7 2,4-D LV4	0.5 lb ae/a	A	1 b	0 c	1 b	0 -	9 -	1 b
ROUNDUP POWERMAX	16 fl oz/a	A						
N-PAK - AMS	2.5 % v/v	A						
2,4-D LV4	0.5 lb ae/a	B						
GRAMOXONE SL	3 pt/a	B						
SONIC	4.5 oz/a	B						
PRIME OIL - COC	1 % v/v	B						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
8 SHARPEN	1 fl oz/a	A	0 b	0 c	0 b	0 -	6 -	0 b
ROUNDUP POWERMAX	16 fl oz/a	A						
MSO ULTRA	1 % v/v	A						
N-PAK - AMS	2.5 % v/v	A						
SONIC	4.5 oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
9 2,4-D LV4	0.5 lb ae/a	A	0 b	0 c	0 b	0 -	6 -	0 b
ROUNDUP POWERMAX	16 fl oz/a	A						
N-PAK - AMS	2.5 % v/v	A						
SONIC	4.5 oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
10 SHARPEN	1 fl oz/a	A	0 b	0 c	0 b	0 -	5 -	0 b
ROUNDUP POWERMAX	16 fl oz/a	A						
MSO ULTRA	1 % v/v	A						
N-PAK - AMS	2.5 % v/v	A						
CLARITY	0.25 lb ae/a	C						
GRAMOXONE SL	3 pt/a	C						
SONIC	4.5 oz/a	C						
PRIME OIL - COC	1 % v/v	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	ERICA	TARSS	PANDI	DIGSA	ERICA	TARSS		
Pest Scientific Name	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>	Taraxacum sp.		
Pest Name	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Canada horsewe>	Dandelion		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jun-8-2016	Jul-8-2016	Jul-8-2016	Jul-8-2016	Jul-27-2016	Jul-27-2016		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit								
Number of Subsamples	2	2	2	2	2	2		
SE Group No.	24	25	26	27	28	29		
Days After First/Last Applic.	211 12	241 14	241 14	241 14	260 33	260 33		
Trt-Eval Interval								
Plant-Eval Interval	13 DP-1	43 DP-1	43 DP-1	43 DP-1	62 DP-1	62 DP-1		
Days After Emergence	8 DE-1	38 DE-1	38 DE-1	38 DE-1	57 DE-1	57 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl	24	25	26	27	28	29
No. Name	Rate Unit	Code						
11 SHARPEN	1 fl oz/a	C	0 b	1 bc	0 b	0 -	3 -	0 b
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
SONIC	4.5 oz/a	C						
TRICOR	6 oz/a	C						
MSO ULTRA	1 % v/v	C						
N-PAK - AMS	2.5 % v/v	C						
ROUNDUP POWERMAX	1.5 lb ae/a	D						
N-PAK - AMS	2.5 % v/v	D						
12 SHARPEN	1 fl oz/a	C	0 b	1 bc	0 b	0 -	3 -	1 b
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
SONIC	4.5 oz/a	C						
MSO ULTRA	1 % v/v	C						
N-PAK - AMS	2.5 % v/v	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
13 ROUNDUP XTEND			1 b	1 bc	1 ab	0 -	1 -	1 b
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
SONIC	4.5 oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
14 ROUNDUP XTEND			2 b	2 b	1 b	0 -	2 -	0 b
ROUNDUP POWERMAX	32 fl oz/a	C						
CLARITY	16 fl oz/a	C						
ROUNDUP XTEND								
ROUNDUP POWERMAX	32 fl oz/a	D						
CLARITY	16 fl oz/a	D						
15 ROUNDUP POWERMAX	1.5 lb ae/a	C	17 a	0 c	1 b	0 -	9 -	0 b
N-PAK - AMS	2.5 % v/v	C						
ROUNDUP POWERMAX	1.5 lb ae/a	D						
N-PAK - AMS	2.5 % v/v	D						

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	ERICA	TARSS	PANDI	DIGSA	ERICA	TARSS		
Pest Scientific Name	Erigeron canad>	Taraxacum sp.	Panicum dichot>	Digitaria sang>	Erigeron canad>	Taraxacum sp.		
Pest Name	Canada horsewe>	Dandelion	Fall panicum	large crabgrass	Canada horsewe>	Dandelion		
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jun-8-2016	Jul-8-2016	Jul-8-2016	Jul-8-2016	Jul-27-2016	Jul-27-2016		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit								
Number of Subsamples	2	2	2	2	2	2		
SE Group No.	24	25	26	27	28	29		
Days After First/Last Applic.	211 12	241 14	241 14	241 14	260 33	260 33		
Trt-Eval Interval								
Plant-Eval Interval	13 DP-1	43 DP-1	43 DP-1	43 DP-1	62 DP-1	62 DP-1		
Days After Emergence	8 DE-1	38 DE-1	38 DE-1	38 DE-1	57 DE-1	57 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	24	25	26	27	28	29
16 Untreated Check			15 a	6 a	2 a	1 -	10 -	7 a
LSD P=.05			2.7	0.9	0.9	0.7	6.0	1.1
Standard Deviation			1.9	0.6	0.7	0.5	4.2	0.8
CV			79.83	81.23	123.41	182.45	87.94	129.97
Bartlett's X2			41.951	25.137	36.217	18.473	17.993	37.76
P(Bartlett's X2)			0.001*	0.005*	0.002*	0.14	0.263	0.001*
Skewness			2.6921*	3.0494*	2.2711*	2.1833*	1.399*	4.0165*
Kurtosis			6.8317*	9.386*	6.3633*	4.8319*	3.0831*	17.543*
Replicate F			1.402	1.550	3.611	0.912	0.507	1.609
Replicate Prob(F)			0.2547	0.2147	0.0202	0.4427	0.6795	0.2006
Treatment F			30.969	25.456	2.317	1.035	1.753	15.987
Treatment Prob(F)			0.0001	0.0001	0.0152	0.4401	0.0741	0.0001

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed
Pest Code	PANDI	DIGSA
Pest Scientific Name	Panicum dichot>	Digitaria sang>
Pest Name	Fall panicum	large crabgrass
Crop Code	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max
Crop Name	Soybean	Soybean
Part Rated	PLOT -	PLOT -
Rating Date	Jul-27-2016	Jul-27-2016
Rating Type	COUNT	COUNT
Rating Unit		
Number of Subsamples	2	2
SE Group No.	30	31
Days After First/Last Applic.	260 33	260 33
Trt-Eval Interval		
Plant-Eval Interval	62 DP-1	62 DP-1
Days After Emergence	57 DE-1	57 DE-1
ARM Action Codes	P	P
Number of Decimals	0	0
Trt No.	30	31
Treatment Name		
Rate		
Unit		
Appl Code		
1 2,4-D LV4	0.5 lb ae/a A	1 -
CLARITY	0.25 lb ae/a A	1 -
ACTIVATOR 90 - NIS	0.25 % v/v A	
ROUNDUP XTEND		
ROUNDUP POWERMAX	32 fl oz/a C	
CLARITY	16 fl oz/a C	
SONIC	4.5 oz/a C	
TRICOR	6 oz/a C	
ROUNDUP POWERMAX	1.5 lb ae/a D	
N-PAK - AMS	2.5 % v/v D	
2 2,4-D LV4	0.5 lb ae/a A	2 -
ROUNDUP POWERMAX	16 fl oz/a A	1 -
N-PAK - AMS	2.5 % v/v A	
ROUNDUP XTEND		
ROUNDUP POWERMAX	32 fl oz/a C	
CLARITY	16 fl oz/a C	
SONIC	4.5 oz/a C	
TRICOR	6 oz/a C	
ROUNDUP POWERMAX	1.5 lb ae/a D	
N-PAK - AMS	2.5 % v/v D	

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed			
Pest Code	PANDI	DIGSA			
Pest Scientific Name	Panicum dichot>	Digitaria sang>			
Pest Name	Fall panicum	large crabgrass			
Crop Code	GLXMA	GLXMA			
BBCH Scale	BSOY	BSOY			
Crop Scientific Name	Glycine max	Glycine max			
Crop Name	Soybean	Soybean			
Part Rated	PLOT -	PLOT -			
Rating Date	Jul-27-2016	Jul-27-2016			
Rating Type	COUNT	COUNT			
Rating Unit					
Number of Subsamples	2	2			
SE Group No.	30	31			
Days After First/Last Applic.	260 33	260 33			
Trt-Eval Interval					
Plant-Eval Interval	62 DP-1	62 DP-1			
Days After Emergence	57 DE-1	57 DE-1			
ARM Action Codes	P	P			
Number of Decimals	0	0			
Trt No.	Treatment Name	Rate	Appl Code	30	31
		Rate Unit			
3	2,4-D LV4	0.5 lb ae/a	A	3 -	1 -
	ROUNDUP POWERMAX	16 fl oz/a	A		
	N-PAK - AMS	2.5 % v/v	A		
	CLARITY	0.25 lb ae/a	C		
	GRAMOXONE SL	3 pt/a	C		
	SONIC	4.5 oz/a	C		
	TRICOR	6 oz/a	C		
	PRIME OIL - COC	1 % v/v	C		
	ROUNDUP POWERMAX	1.5 lb ae/a	D		
	N-PAK - AMS	2.5 % v/v	D		
4	SHARPEN	1 fl oz/a	A	2 -	1 -
	ROUNDUP POWERMAX	16 fl oz/a	A		
	MSO ULTRA	1 % v/v	A		
	N-PAK - AMS	2.5 % v/v	A		
	SHARPEN	1 fl oz/a	C		
	ROUNDUP POWERMAX	0.75 lb ae/a	C		
	SONIC	4.5 oz/a	C		
	MSO ULTRA	1 % v/v	C		
	N-PAK - AMS	2.5 % v/v	C		
	ROUNDUP XTEND				
	ROUNDUP POWERMAX	32 fl oz/a	D		
	CLARITY	16 fl oz/a	D		
5	2,4-D LV4	0.5 lb ae/a	A	2 -	1 -
	ROUNDUP POWERMAX	16 fl oz/a	A		
	N-PAK - AMS	2.5 % v/v	A		
	SHARPEN	1 fl oz/a	C		
	ROUNDUP POWERMAX	0.75 lb ae/a	C		
	SONIC	4.5 oz/a	C		
	MSO ULTRA	1 % v/v	C		
	N-PAK - AMS	2.5 % v/v	C		
	ROUNDUP XTEND				
	ROUNDUP POWERMAX	32 fl oz/a	D		
	CLARITY	16 fl oz/a	D		
6	2,4-D LV4	0.5 lb ae/a	A	3 -	1 -
	ROUNDUP POWERMAX	16 fl oz/a	A		
	N-PAK - AMS	2.5 % v/v	A		
	2,4-D LV4	0.5 lb ae/a	B		
	ROUNDUP POWERMAX	0.75 lb ae/a	B		
	SONIC	4.5 oz/a	B		
	N-PAK - AMS	2.5 % v/v	B		
	ROUNDUP XTEND				
	ROUNDUP POWERMAX	32 fl oz/a	D		
	CLARITY	16 fl oz/a	D		

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed			
Pest Code	PANDI	DIGSA			
Pest Scientific Name	Panicum dichot>	Digitaria sang>			
Pest Name	Fall panicum	large crabgrass			
Crop Code	GLXMA	GLXMA			
BBCH Scale	BSOY	BSOY			
Crop Scientific Name	Glycine max	Glycine max			
Crop Name	Soybean	Soybean			
Part Rated	PLOT -	PLOT -			
Rating Date	Jul-27-2016	Jul-27-2016			
Rating Type	COUNT	COUNT			
Rating Unit					
Number of Subsamples	2	2			
SE Group No.	30	31			
Days After First/Last Applic.	260 33	260 33			
Trt-Eval Interval					
Plant-Eval Interval	62 DP-1	62 DP-1			
Days After Emergence	57 DE-1	57 DE-1			
ARM Action Codes	P	P			
Number of Decimals	0	0			
Trt No.	Treatment Name	Rate	Appl Code	30	31
7	2,4-D LV4	0.5 lb ae/a	A	3 -	1 -
	ROUNDUP POWERMAX	16 fl oz/a	A		
	N-PAK - AMS	2.5 % v/v	A		
	2,4-D LV4	0.5 lb ae/a	B		
	GRAMOXONE SL	3 pt/a	B		
	SONIC	4.5 oz/a	B		
	PRIME OIL - COC	1 % v/v	B		
	ROUNDUP XTEND				
	ROUNDUP POWERMAX	32 fl oz/a	D		
	CLARITY	16 fl oz/a	D		
8	SHARPEN	1 fl oz/a	A	3 -	1 -
	ROUNDUP POWERMAX	16 fl oz/a	A		
	MSO ULTRA	1 % v/v	A		
	N-PAK - AMS	2.5 % v/v	A		
	SONIC	4.5 oz/a	C		
	ROUNDUP XTEND				
	ROUNDUP POWERMAX	32 fl oz/a	C		
	CLARITY	16 fl oz/a	C		
	ROUNDUP XTEND				
	ROUNDUP POWERMAX	32 fl oz/a	D		
	CLARITY	16 fl oz/a	D		
9	2,4-D LV4	0.5 lb ae/a	A	2 -	1 -
	ROUNDUP POWERMAX	16 fl oz/a	A		
	N-PAK - AMS	2.5 % v/v	A		
	SONIC	4.5 oz/a	C		
	ROUNDUP XTEND				
	ROUNDUP POWERMAX	32 fl oz/a	C		
	CLARITY	16 fl oz/a	C		
	ROUNDUP XTEND				
	ROUNDUP POWERMAX	32 fl oz/a	D		
	CLARITY	16 fl oz/a	D		
10	SHARPEN	1 fl oz/a	A	1 -	2 -
	ROUNDUP POWERMAX	16 fl oz/a	A		
	MSO ULTRA	1 % v/v	A		
	N-PAK - AMS	2.5 % v/v	A		
	CLARITY	0.25 lb ae/a	C		
	GRAMOXONE SL	3 pt/a	C		
	SONIC	4.5 oz/a	C		
	PRIME OIL - COC	1 % v/v	C		
	ROUNDUP XTEND				
	ROUNDUP POWERMAX	32 fl oz/a	D		
	CLARITY	16 fl oz/a	D		

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02
 Protocol ID: 15F-SEP-SOY-02
 Project ID:

Location: SEPAC Trial Year: 2015
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type	W Weed	W Weed			
Pest Code	PANDI	DIGSA			
Pest Scientific Name	Panicum dichot>	Digitaria sang>			
Pest Name	Fall panicum	large crabgrass			
Crop Code	GLXMA	GLXMA			
BBCH Scale	BSOY	BSOY			
Crop Scientific Name	Glycine max	Glycine max			
Crop Name	Soybean	Soybean			
Part Rated	PLOT -	PLOT -			
Rating Date	Jul-27-2016	Jul-27-2016			
Rating Type	COUNT	COUNT			
Rating Unit					
Number of Subsamples	2	2			
SE Group No.	30	31			
Days After First/Last Applic.	260 33	260 33			
Trt-Eval Interval					
Plant-Eval Interval	62 DP-1	62 DP-1			
Days After Emergence	57 DE-1	57 DE-1			
ARM Action Codes	P	P			
Number of Decimals	0	0			
Trt No.	Treatment Name	Rate	Appl Code	30	31
11	SHARPEN	1 fl oz/a	C	2 -	0 -
	ROUNDUP XTEND				
	ROUNDUP POWERMAX	32 fl oz/a	C		
	CLARITY	16 fl oz/a	C		
	SONIC	4.5 oz/a	C		
	TRICOR	6 oz/a	C		
	MSO ULTRA	1 % v/v	C		
	N-PAK - AMS	2.5 % v/v	C		
	ROUNDUP POWERMAX	1.5 lb ae/a	D		
	N-PAK - AMS	2.5 % v/v	D		
12	SHARPEN	1 fl oz/a	C	1 -	1 -
	ROUNDUP XTEND				
	ROUNDUP POWERMAX	32 fl oz/a	C		
	CLARITY	16 fl oz/a	C		
	SONIC	4.5 oz/a	C		
	MSO ULTRA	1 % v/v	C		
	N-PAK - AMS	2.5 % v/v	C		
	ROUNDUP XTEND				
	ROUNDUP POWERMAX	32 fl oz/a	D		
	CLARITY	16 fl oz/a	D		
13	ROUNDUP XTEND			2 -	1 -
	ROUNDUP POWERMAX	32 fl oz/a	C		
	CLARITY	16 fl oz/a	C		
	SONIC	4.5 oz/a	C		
	ROUNDUP XTEND				
	ROUNDUP POWERMAX	32 fl oz/a	D		
	CLARITY	16 fl oz/a	D		
14	ROUNDUP XTEND			2 -	1 -
	ROUNDUP POWERMAX	32 fl oz/a	C		
	CLARITY	16 fl oz/a	C		
	ROUNDUP XTEND				
	ROUNDUP POWERMAX	32 fl oz/a	D		
	CLARITY	16 fl oz/a	D		
15	ROUNDUP POWERMAX	1.5 lb ae/a	C	2 -	1 -
	N-PAK - AMS	2.5 % v/v	C		
	ROUNDUP POWERMAX	1.5 lb ae/a	D		
	N-PAK - AMS	2.5 % v/v	D		

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02	Location: SEPAC	Trial Year: 2015
Protocol ID: 15F-SEP-SOY-02	Investigator: Dr. Bill Johnson	
Project ID:	Study Director: Dustin Johnson	
	Sponsor Contact: Purdue/Ohio State	

	W Weed PANDI	W Weed DIGSA
Pest Type	Panicum dichot>	Digitaria sang>
Pest Code		
Pest Scientific Name		
Pest Name	Fall panicum	large crabgrass
Crop Code	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max
Crop Name	Soybean	Soybean
Part Rated	PLOT -	PLOT -
Rating Date	Jul-27-2016	Jul-27-2016
Rating Type	COUNT	COUNT
Rating Unit		
Number of Subsamples	2	2
SE Group No.	30	31
Days After First/Last Applic.	260 33	260 33
Trt-Eval Interval		
Plant-Eval Interval	62 DP-1	62 DP-1
Days After Emergence	57 DE-1	57 DE-1
ARM Action Codes	P	P
Number of Decimals	0	0
Trt Treatment No. Name	Rate 30	Appl Code 31
16 Untreated Check	4 -	0 -
LSD P=.05	2.3	1.5
Standard Deviation	1.6	1.0
CV	77.65	129.75
Bartlett's X2	14.12	15.27
P(Bartlett's X2)	0.516	0.36
Skewness	1.4763*	1.2687*
Kurtosis	3.6398*	0.7799
Replicate F	6.525	1.291
Replicate Prob(F)	0.0009	0.2891
Treatment F	1.006	0.568
Treatment Prob(F)	0.4663	0.8836

Purdue Weed Science

Dicamba-Based Fall/Spring Programs for Control of Glyphosate-Resistant Marestalk

Trial ID: 15F-SEP-SOY-02 Location: SEPAC Trial Year: 2015
 Protocol ID: 15F-SEP-SOY-02 Investigator: Dr. Bill Johnson
 Project ID: Study Director: Dustin Johnson
 Sponsor Contact: Purdue/Ohio State

Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

ERICA, Conyza canadensis, = ERICA, Conyza canadensis,
 TAROF, Taraxacum officinale, = US
 SENGL, Senecio glabellus, = US
 ERICA, Erigeron canadensis, = US
 TARSS, Taraxacum sp., = US
 PANDI, Panicum dichotomiflorum, = US
 DIGSA, Digitaria sanguinalis, = US
 SIDSP, Sida spinosa, = US

Crop Code

GLXMA, BSOY, Glycine max, = US

Part Rated

PLOT = plot

Rating Type

CONTRO = control / burndown or knockdown

COUNT = count

Rating Unit

% = percent

Plant-Eval Interval

-183 DP-1 = 1 GLXMA May-26-2016

-168 DP-1 = 1 GLXMA May-26-2016

29 DP-1 = 1 GLXMA May-26-2016

43 DP-1 = 1 GLXMA May-26-2016

61 DP-1 = 1 GLXMA May-26-2016

13 DP-1 = 1 GLXMA May-26-2016

62 DP-1 = 1 GLXMA May-26-2016

ARM Action Codes

P = Rating scale of 0 to 100 (e.g. % control or injury)