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Instigate Applied Early Post to Corn

Trial ID: 12S-SEP-NTC-01 Protocol ID: 12S-SEP-NTC-01
 Location: SEPAC Study Director: Paul Marquardt
 Project ID: #US007/12/01:USA-12-007 Investigator: Dr. Bill Johnson
 Sponsor Contact: Helen Flanigan

General Trial Information

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

Discipline: H herbicide
Trial Status: E established
Initiation Date: 3-9-2012

Trial Location

City: Butleville
State/Prov.: IN
Postal Code: 47223
Country: USA

Personnel

Study Director: Paul Marquardt **Title:** Research Associate
Affiliation: Purdue University
Address: 915 W. State Street
Location: West Lafayette, IN
Postal Code: 47907 **E-mail:** pmarquar@purdue.edu
Phone No.: 765-494-0891 **Mobile No.:** 765-409-6369
Investigator: Dr. Bill Johnson **Title:** Professor

Affiliation: Purdue University
Address: 915 W. State Street
Location: West Lafayette, IN
Postal Code: 47907 **E-mail:** wji@purdue.edu
Phone No.: 765-494-4656 **Mobile No.:** 765-404-9801

Cooperator/Landowner

Cooperator: Don Biehle **Role:** Director
Organization: Southeast Purdue Agricultural Center **Org. Type:** University
Address 1: 4425 E. CR 350 N
Phone No.: 812-458-6977
City: Butleville **Fax No.:** 812-458-6979
State/Prov.: IN **Mobile No.:** 812-592-8426
Postal Code: 47223 **E-mail:** biehled@purdue.edu
Country: USA United States

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: 33W84 **Description:** Roundup Ready/Liberty Link
BBCH Scale: BCOR **Planting Date:** 5-3-2012
Planting Method: DIRDRI direct drilled **Rate, Unit:** 32000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN **Spacing Within Row, Unit:** 6 IN
Seed Bed: MEDIUM medium **Soil Temperature, Unit:** 70 F
Soil Moisture: MOIST **Emergence Date:** 5-9-2012

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Pest Description

- Pest 1 Type:** W **Code:** IPOLA *Ipomoea lacunosa*
Common Name: Pitted morningglory
- Pest 2 Type:** W **Code:** XANST *Xanthium strumarium*
Common Name: Heart-leaf cocklebur
- Pest 3 Type:** W **Code:** ERICA *Conyza canadensis*
Common Name: Canada horseweed
- Pest 4 Type:** W **Code:** SORHA *Sorghum halepense*
Common Name: Johnson grass
- Pest 5 Type:** W **Code:** AMARE *Amaranthus retroflexus*
Common Name: Redroot pigweed
- Pest 6 Type:** W **Code:** AMBEL *Ambrosia artemisiifolia*
Common Name: Common ragweed
- Pest 7 Type:** W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail
- Pest 8 Type:** W **Code:** TRFRE *Trifolium repens*
Common Name: White clover
- Pest 9 Type:** W **Code:** TAROF *Taraxacum officinale*
Common Name: Common dandelion
- Pest10 Type:** W **Code:** SIDSP *Sida spinosa*
Common Name: Prickly sida

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Description	Rate	Rate Unit	Tank Mix
1.	4-19-2012	Roundup PowerMAX	4.5	LB/GAL	I	BURNDOWN	22	OZ/A	yes
2.	4-19-2012	2,4-D LV4	4	LB/GAL	I	BURNDOWN	1	LB A/A	yes

Soil Description

Description Name: SEPAC-Field U41
% Sand: 20 **% OM:** 1.3 **Texture:** SIL silt loam
% Silt: 65 **pH:** 6.5 **Soil Name:** Avonburg
% Clay: 15 **CEC:** 5.7 **Fert. Level:** G good
Soil Drainage: P poor

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Application Description

	A
Application Date:	5-25-2012
Time of Day:	10 AM
Application Method:	SPRAY
Application Timing:	POSPOS
Application Placement:	FOLIAR
Applied By:	JR
Air Temperature, Unit:	73 F
% Relative Humidity:	75
Wind Velocity, Unit:	1.2 MPH
Wind Direction:	S
Dew Presence (Y/N):	Y yes
Soil Moisture:	DRY
% Cloud Cover:	0

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMX BCOR
Stage Scale Used:	BBCH
Stage Majority, Percent:	32 80
Stage Minimum, Percent:	32 80
Stage Maximum, Percent:	33 20
Height, Unit:	8 IN

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	IPOLA W
Stage Majority, Percent:	12 100
Height, Unit:	3.5 IN
Height Minimum, Maximum:	1 6
Density, Unit:	10 M2
Pest 2 Code, Type, Scale:	XANST W
Stage Majority, Percent:	14 100
Height, Unit:	3.5 IN
Height Minimum, Maximum:	1 6
Density, Unit:	7.5 M2
Pest 3 Code, Type, Scale:	ERICA W
Stage Majority, Percent:	30 100
Height, Unit:	3 IN
Height Minimum, Maximum:	2 4
Density, Unit:	2.5 M2
Pest 4 Code, Type, Scale:	SORHA W
Stage Majority, Percent:	13 100
Height, Unit:	15 IN
Height Minimum, Maximum:	6 24
Density, Unit:	12.5 M2
Pest 5 Code, Type, Scale:	AMARE W

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Stage Majority, Percent:	12 100
Height, Unit:	2 IN
Height Minimum, Maximum:	1 3
Density, Unit:	12.5 M2
Pest 6 Code, Type, Scale:	AMBEL W
Stage Majority, Percent:	14 100
Height, Unit:	3.5 IN
Height Minimum, Maximum:	1 6
Density, Unit:	5 M2
Pest 7 Code, Type, Scale:	SETFA W
Stage Majority, Percent:	12 100
Height, Unit:	2.5 IN
Height Minimum, Maximum:	1 4
Density, Unit:	25 M2
Pest 8 Code, Type, Scale:	TRFRE W
Stage Majority, Percent:	61 100
Height, Unit:	2 IN
Height Minimum, Maximum:	1 3
Density, Unit:	12.5 M2
Pest 9 Code, Type, Scale:	TAROF W
Stage Majority, Percent:	61 100
Height, Unit:	4 IN
Height Minimum, Maximum:	2 6
Density, Unit:	1.5 M2
Pest10 Code, Type, Scale:	SIDSP W
Stage Majority, Percent:	12 100
Height, Unit:	1.5 IN
Height Minimum, Maximum:	1 2
Density, Unit:	7.5 M2

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Application Equipment

	A
Appl. Equipment:	CO2 Backpack
Equipment Type:	SPRBAC
Operation Pressure, Unit:	17 PSI
Nozzle Type:	Flat Fan
Nozzle Size:	XR11002
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	6
Boom Length, Unit:	7.5 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3 MPH
Carrier:	H2O
Water Hardness (ppm CaCO3):	150
Spray Volume, Unit:	15 GAL/AC
Mix Size, Unit:	1.8 Liters
Propellant:	CO2
Tank Mix (Y/N):	N no

No.	Date	By	Deviations
1.6-7-2012		PM	Mis-application on plots 102,501,602. FirstRate (17.7 g ai/ha), Roundup PowerMAX (840 g ae/ha) was accidentally applied to these three plots.

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Crop Code	ZEAMX	ZEAMX	ZEAMX
BBCH Scale	BCOR	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays	Zea mays
Crop Name	Corn	Corn	Corn
Crop Variety	P33W84	P33W84	P33W84
Description	18"	18-30 IN	48 IN
Part Rated	PLOT C	PLOT C	PLOT C
Rating Date	5-31-2012	6-7-2012	6-20-2012
Rating Type	PHYGEN	PHYGEN	PHYGEN
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Crop Stage Majority	34	35	37
Assessed By	PM/JS	PM	PM
Days After First/Last Applic.	6 6	13 13	26 26
Trt-Eval Interval	6 DA-A	6 DA-A	13 DA-A
Plant-Eval Interval	28 DP-1	35 DP-1	48 DP-1
Days After Emergence	22 DE-1	29 DE-1	42 DE-1

Trt No.	Treatment Name	Rate	Unit	Appl Code	1	2	3
1	UNTREATED				0.0 a	0.0 a	0.0 a
2	Instigate 5.25 oz				0.0 a	0.0 a	0.0 a
	Rimsulfuron	0.0154	kg ai/ha	A			
	Mesotrione	0.154	kg ai/ha	A			
	NIS	0.25	% v/v	A			
3	Instigate 5.25 oz				0.0 a	0.0 a	0.0 a
	Rimsulfuron	0.0154	kg ai/ha	A			
	Mesotrione	0.154	kg ai/ha	A			
	Abundit	1.12	kg ae/ha	A			
	Ammonium Sulfate	2.24	kg ai/ha	A			
4	Instigate 5.25 oz				0.0 a	0.0 a	0.0 a
	Rimsulfuron	0.0154	kg ai/ha	A			
	Mesotrione	0.154	kg ai/ha	A			
	Atrazine	1.12	kg ai/ha	A			
	NIS	0.25	% v/v	A			
5	Instigate 5.25 oz				0.0 a	0.0 a	0.0 a
	Rimsulfuron	0.0154	kg ai/ha	A			
	Mesotrione	0.154	kg ai/ha	A			
	Cinch ATZ	1.12	kg ai/ha	A			
	NIS	0.25	% v/v	A			
6	Instigate 6.00 oz				0.0 a	0.0 a	0.0 a
	Rimsulfuron	0.0175	kg ai/ha	A			
	Mesotrione	0.175	kg ai/ha	A			
	NIS	0.25	% v/v	A			
7	Instigate 6.00 oz				0.0 a	0.0 a	0.0 a
	Rimsulfuron	0.0175	kg ai/ha	A			
	Mesotrione	0.175	kg ai/ha	A			
	Abundit	1.12	kg ae/ha	A			
	Ammonium Sulfate	2.24	kg ai/ha	A			
8	Instigate 6.00 oz				0.0 a	0.0 a	0.0 a
	Rimsulfuron	0.0175	kg ai/ha	A			
	Mesotrione	0.175	kg ai/ha	A			
	Atrazine	1.12	kg ai/ha	A			
	NIS	0.25	% v/v	A			

Means followed by same letter do not significantly differ (P= .05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Rating Unit	%	%	%
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Trt No.	Treatment Name	Rate	Unit	Appl Code	1	2	3
9	Instigate	6.00	oz		0.0 a	0.0 a	0.0 a
	Rimsulfuron	0.0175	kg ai/ha	A			
	Mesotrione	0.175	kg ai/ha	A			
	Cinch ATZ	1.12	kg ai/ha	A			
	NIS	0.25	% v/v	A			
10	Lumax	2.24	kg ai/ha	A	0.0 a	0.0 a	0.0 a
	Abundit	1.12	kg ae/ha	A			
	Ammonium Sulfate	2.24	kg ai/ha	A			
	LSD (P=.05)				0.00	0.00	0.00
	Standard Deviation				0.00	0.00	0.00
	CV				0.0	0.0	0.0
	Bartlett's X2				0.0	0.0	0.0
	P(Bartlett's X2)				.	.	.
	Replicate F				0.000	0.000	0.000
	Replicate Prob(F)				1.0000	1.0000	1.0000
	Treatment F				0.000	0.000	0.000
	Treatment Prob(F)				1.0000	1.0000	1.0000

Crop Code
 ZEAMX, BCOR, Zea mays, = US
Part Rated
 PLOT = plot
 C = Crop is Part Rated
Rating Type
 PHYGEN = phytotoxicity - general / injury
Rating Unit
 % = percent
Crop Stage Majority
 34 = 4 nodes detectable
 35 = 5 nodes detectable
 37 = 7 nodes detectable
Plant-Eval Interval
 28 DP-1 = 1 ZEAMX 5-3-2012
 35 DP-1 = 1 ZEAMX 5-3-2012
 48 DP-1 = 1 ZEAMX 5-3-2012