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Postemergence Systems in Corn using Realm Q for Control of Marestalk

Trial ID: 11S-SEP-NTC-04 Protocol ID: 11S-SEP-NTC-04
 Location: SEPAC Study Director: Paul Marquardt
 Project ID: 11S-SEP-NTC-04 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: 3-15-2011

Trial Location

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

Objectives:

#US 109/ 11/01: USA-11-109

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:** wgj@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
City: Butleville **Phone No.:** 812-458-6977
State/Prov.: IN **Fax No.:** 812-458-6979
Postal Code: 47223 **Mobile No.:** 812-592-8426
Country: USA **E-mail:** biehled@purdue.edu
 United States

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: Pioneer 33W84 **Description:** Roundup Ready/Liberty Link
BBCH Scale: BCOR **Planting Date:** 6-3-2011
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:** 75 F
Soil Moisture: MOIST **Emergence Date:** 6-8-2011

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Pest Description

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

Pest 2 Type: W **Code:** TAROF *Taraxacum officinale*
Common Name: Common dandelion

Pest 3 Type: W **Code:** AMBEL *Ambrosia artemisiifolia*
Common Name: Common ragweed

Pest 4 Type: W **Code:** SOOCA *Solidago canadensis*
Common Name: Canadian goldenrod

Pest 5 Type: W **Code:** XANST *Xanthium strumarium*
Common Name: Common cocklebur

Pest 6 Type: W **Code:** SIDSP *Sida spinosa*
Common Name: Prickly sida

Pest 7 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant fox tail

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

Soil Description

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

Application Description

	A	B
Application Date:	6-16-2011	7-14-2011
Time of Day:	9 AM	9 AM
Application Method:	SPRAY	SPRAY
Application Timing:	EAPOCR	LAPOCR
Application Placement:	FOLIAR	FOLIAR
Applied By:	RT	JR
Air Temperature, Unit:	75 F	71 F
% Relative Humidity:	42	63
Wind Velocity, Unit:	6 MPH	6 MPH
Wind Direction:	W	E
Dew Presence (Y/N):	Y yes	Y yes
Soil Temperature, Unit:	70 F	70 F
Soil Moisture:	WET	DRY
% Cloud Cover:	0	5

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Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:	BBCH	BBCH
Stage Majority, Percent:	12 60	14 100
Stage Minimum, Percent:	11 40	
Stage Maximum, Percent:	12 60	14 100

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Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ERICA W	ERICA W
Stage Majority, Percent:	30 100	
Height, Unit:	18 IN	
Height Minimum, Maximum:	1 36	
Density, Unit:	22.5 YD2	
Pest 2 Code, Type, Scale:	TAROF W	TAROF W
Stage Majority, Percent:	65 100	
Diameter, Unit:	20 IN	
Density, Unit:	18 YD2	
Pest 3 Code, Type, Scale:	AMBEL W	AMBEL W
Stage Majority, Percent:	35 100	39 100
Height, Unit:	10 IN	12 IN
Height Minimum, Maximum:	3 18	8 15
Density, Unit:	12 YD2	6 YD2
Pest 4 Code, Type, Scale:	SOOCA W	SOOCA W
Stage Majority, Percent:	40 100	
Height, Unit:	23 IN	
Height Minimum, Maximum:	6 40	
Density, Unit:	15 YD2	
Pest 5 Code, Type, Scale:	XANST W	XANST W
Stage Majority, Percent:	32 100	16 100
Height, Unit:	4.5 IN	10 IN
Height Minimum, Maximum:	1 8	8 12
Density, Unit:	5 YD2	4 YD2
Pest 6 Code, Type, Scale:	SIDSP W	SIDSP W
Stage Majority, Percent:	31 100	
Height, Unit:	2.5 IN	
Height Minimum, Maximum:	1 4	
Density, Unit:	15 YD2	
Pest 7 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:	21 100	14 100
Height, Unit:	6 IN	5.5 IN
Height Minimum, Maximum:	1 12	3 8
Density, Unit:	18 YD2	16 YD2

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Application Equipment

	A	B
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	

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 Location: SEPAC Study Director: Paul Marquardt
 Project ID: 11S-SEP-NTC-04 Investigator: Dr. Bill Johnson
 Sponsor Contact: Helen Flanigan

Pest Type			W Weed	W Weed	W Weed	W Weed			W Weed	
Pest Code			AMBEL	ERICA	XANST	SETFA			GGGAN	
Pest Scientific Name			Ambrosia artem>	Conyza canad>	Xanthium strum>	Setaria faberi			Annual grasses	
Pest Name			Common ragweed	Canada horsewe>	Common cockleb>	Giant foxtail			Annual grasses	
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	
BBCH Scale	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn	
Crop Variety	P33W84	P33W84	P33W84	P33W84	P33W84	P33W84	P33W84	P33W84	P33W84	
Description	6-10 IN	12-18 IN	12-18 IN	12-18 IN	12-18 IN	12-18 IN	12-18 IN	12-18 IN	12-18 IN	
Rating Date	6-24-2011	7-7-2011	7-7-2011	7-7-2011	7-7-2011	7-7-2011	7-7-2011	7-21-2011	7-26-2011	
Rating Type	PHYGEN	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	
Rating Unit	%	%	%	%	%	%	%	%	%	
Number of Subsamples	1	1	1	1	1	1	1	1	1	
Crop Stage Majority	V3	V5	V5	V5	V5	V5	V5	V11	V12	
Pest Stage Majority			12 IN	12 IN	4 IN	8 IN			36 IN	
Pest Density, Unit			18 YD2	25 YD2	5 YD2	40 YD2			50 YD2	
Assessed By	PM	JR	JR	JR	JR	JR	JR	JR	RH	
Days After First/Last Applic.	8 8	21 21	21 21	21 21	21 21	21 21	21 21	35 7	40 12	
Trt-Eval Interval	8 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	35 DA-A	40 DA-A	
Plant-Eval Interval	21 DP-1	34 DP-1	34 DP-1	34 DP-1	34 DP-1	34 DP-1	34 DP-1	48 DP-1	53 DP-1	
Days After Emergence	16 DE-	29 DE-	29 DE-	29 DE-	29 DE-	29 DE-	29 DE-	43 DE-	48 DE-	
Trt Treatment	Rate	Appl								
No. Name	Rate Unit	Code	1	2	3	4	5	6	7	8
1 UNTREATED			0.0 a	0.0 a	0.0 b	0.0 c	0.0 c	0.0 d	0.0 a	0.0 d
2 Realm Q (4 OZ/A)			0.0 a	0.3 a	10.0 b	15.0 bc	61.3 ab	67.0 abc	2.0 a	98.5 a
Resolve	5.25 g ai/ha	A								
Isoxadifen-ethyl	5.25 g ai/ha	A								
Mesotrione	44 g ai/ha	A								
COC	1 % v/v	A								
N-Pak AMS	5 % v/v	A								
Abundit	1120 g ae/ha	B								
N-Pak AMS	5 % v/v	B								
3 Realm Q (4 OZ/A)			0.0 a	0.3 a	55.0 a	72.5 a	85.8 a	92.5 a	0.5 a	71.3 b
Resolve	5.25 g ai/ha	A								
Isoxadifen-ethyl	5.25 g ai/ha	A								
Mesotrione	44 g ai/ha	A								
Abundit	1120 g ae/ha	A								
N-Pak AMS	5 % v/v	A								
4 Realm Q (4 OZ/A)			0.0 a	0.5 a	56.3 a	72.0 a	77.0 ab	80.0 ab	0.8 a	43.8 c
Resolve	5.25 g ai/ha	A								
Isoxadifen-ethyl	5.25 g ai/ha	A								
Mesotrione	44 g ai/ha	A								
Ignite	450 g ae/ha	A								
N-Pak AMS	5 % v/v	A								

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

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Pest Type			W Weed	W Weed	W Weed	W Weed			W Weed	
Pest Code			AMBEL	ERICA	XANST	SETFA			GGGAN	
Pest Scientific Name			Ambrosia artem>	Conyza canaden>	Xanthium strum>	Setaria faberi			Annual grasses	
Pest Name			Common ragweed	Canada horsewe>	Common cockleb>	Giant foxtail			Annual grasses	
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	
BBCH Scale	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn	
Crop Variety	P33W84	P33W84	P33W84	P33W84	P33W84	P33W84	P33W84	P33W84	P33W84	
Description	6-10 IN	12-18 IN	12-18 IN	12-18 IN	12-18 IN	12-18 IN	12-18 IN	12-18 IN	12-18 IN	
Rating Date	6-24-2011	7-7-2011	7-7-2011	7-7-2011	7-7-2011	7-7-2011	7-7-2011	7-21-2011	7-26-2011	
Rating Type	PHYGEN	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	
Rating Unit	%	%	%	%	%	%	%	%	%	
Number of Subsamples	1	1	1	1	1	1	1	1	1	
Crop Stage Majority	V3	V5	V5	V5	V5	V5	V5	V11	V12	
Pest Stage Majority			12 IN	12 IN	4 IN	8 IN			36 IN	
Pest Density , Unit			18 YD2	25 YD2	5 YD2	40 YD2			50 YD2	
Assessed By	PM	JR	JR	JR	JR	JR	JR	JR	RH	
Days After First/Last Applic.	8 8	21 21	21 21	21 21	21 21	21 21	21 21	35 7	40 12	
Trt-Eval Interval	8 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	35 DA-A	40 DA-A	
Plant-Eval Interval	21 DP-1	34 DP-1	34 DP-1	34 DP-1	34 DP-1	34 DP-1	34 DP-1	48 DP-1	53 DP-1	
Days After Emergence	16 DE-	29 DE-	29 DE-	29 DE-	29 DE-	29 DE-	29 DE-	43 DE-	48 DE-	
Trt Treatment	Rate	Appl								
No. Name	Rate Unit	Code	1	2	3	4	5	6	7	8
5 Realm Q (4 OZ/A)			0.0 a	0.0 a	61.3 a	46.3 ab	65.0 ab	61.3 bc	1.8 a	43.8 c
Resolve	5.25 g ai/ha A									
Isoxadifen-ethyl	5.25 g ai/ha A									
Mesotrione	44 g ai/ha A									
Atrazine	1010 g ai/ha A									
COC	1 % v/v A									
N-Pak AMS	5 % v/v A									
6 Realm Q (4 OZ/A)			0.0 a	0.5 a	69.5 a	92.5 a	77.5 ab	94.3 a	0.8 a	63.8 bc
Resolve	5.25 g ai/ha A									
Isoxadifen-ethyl	5.25 g ai/ha A									
Mesotrione	44 g ai/ha A									
Atrazine	1010 g ai/ha A									
Abundit	1120 g ae/ha A									
N-Pak AMS	5 % v/v A									
7 Realm Q (4 OZ/A)			0.0 a	0.0 a	60.0 a	52.5 ab	88.8 a	47.0 c	1.3 a	42.5 c
Resolve	5.25 g ai/ha A									
Isoxadifen-ethyl	5.25 g ai/ha A									
Mesotrione	44 g ai/ha A									
Clarity	70 g ai/ha A									
COC	1 % v/v A									
N-Pak AMS	5 % v/v A									
8 Abundit	1120 g ae/ha A		0.0 a	0.0 a	48.8 a	73.8 a	42.5 b	92.0 a	0.0 a	95.5 a
N-Pak AMS	5 % v/v A									
Abundit	1120 g ae/ha B									
N-Pak AMS	5 % v/v B									
9 UNTREATED			0.0 a	0.0 a	0.0 b	0.0 c	0.0 c	0.0 d	0.0 a	0.0 d

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

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Pest Type			W Weed	W Weed	W Weed	W Weed		W Weed		
Pest Code			AMBEL	ERICA	XANST	SETFA		GGGAN		
Pest Scientific Name			Ambrosia artem>	Conyza canaden>	Xanthium strum>	Setaria faberi		Annual grasses		
Pest Name			Common ragweed	Canada horsewe>	Common cockleb>	Giant foxtail		Annual grasses		
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
BBCH Scale	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR		
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays	Zea mays		
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn		
Crop Variety	P33W84	P33W84	P33W84	P33W84	P33W84	P33W84	P33W84	P33W84		
Description	6-10 IN	12-18 IN	12-18 IN	12-18 IN	12-18 IN	12-18 IN				
Rating Date	6-24-2011	7-7-2011	7-7-2011	7-7-2011	7-7-2011	7-7-2011	7-21-2011	7-26-2011		
Rating Type	PHYGEN	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO		
Rating Unit	%	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1	1		
Crop Stage Majority	V3	V5	V5	V5	V5	V5	V11	V12		
Pest Stage Majority			12 IN	12 IN	4 IN	8 IN		36 IN		
Pest Density, Unit			18 YD2	25 YD2	5 YD2	40 YD2		50 YD2		
Assessed By	PM	JR	JR	JR	JR	JR	JR	RH		
Days After First/Last Applic.	8 8	21 21	21 21	21 21	21 21	21 21	35 7	40 12		
Trt-Eval Interval	8 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	21 DA-A	35 DA-A	40 DA-A		
Plant-Eval Interval	21 DP-1	34 DP-1	34 DP-1	34 DP-1	34 DP-1	34 DP-1	48 DP-1	53 DP-1		
Days After Emergence	16 DE-	29 DE-	29 DE-	29 DE-	29 DE-	29 DE-	43 DE-	48 DE-		
Trt Treatment	Rate	Appl								
No. Name	Rate Unit	Code	1	2	3	4	5	6	7	8
10 UNTREATED	0.0 a	0.0 a	0.0 b	0.0 c	0.0 c	0.0 d	0.0 a	0.0 d		
LSD (P=.05)	0.00	0.60	33.95	31.31	24.79	20.73	1.67	16.71		
Standard Deviation	0.00	0.41	23.40	21.58	17.08	14.29	1.15	11.51		
CV	0.0	275.17	64.85	50.82	34.32	26.76	164.5	25.08		
Bartlett's X2	0.0	2.162	4.503	7.061	3.636	26.684	8.204	16.827		
P(Bartlett's X2)	.	0.54	0.609	0.315	0.726	0.001*	0.145	0.01*		
Replicate F	0.000	1.761	2.613	0.444	0.622	0.590	1.056	3.602		
Replicate Prob(F)	1.0000	0.1784	0.0717	0.7234	0.6072	0.6269	0.3841	0.0261		
Treatment F	0.000	1.043	6.361	11.014	18.541	30.989	1.709	42.005		
Treatment Prob(F)	1.0000	0.4330	0.0001	0.0001	0.0001	0.0001	0.1354	0.0001		

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed					
Pest Code	ERICA	AMBEL	XANST	GGGAN	ERICA	AMBEL					
Pest Scientific Name	<i>Conyza canadensis</i>	<i>Ambrosia artemisiifolia</i>	<i>Xanthium strumarium</i>	Annual grasses	<i>Conyza canadensis</i>	<i>Ambrosia artemisiifolia</i>					
Pest Name	Canada horseweed	Common ragweed	Common cocklebur	Annual grasses	Canada horseweed	Common ragweed					
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX					
BBCH Scale	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR					
Crop Scientific Name	<i>Zea mays</i>	<i>Zea mays</i>	<i>Zea mays</i>	<i>Zea mays</i>	<i>Zea mays</i>	<i>Zea mays</i>					
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn					
Crop Variety	P33W84	P33W84	P33W84	P33W84	P33W84	P33W84					
Description											
Rating Date	7-26-2011	7-26-2011	7-26-2011	8-10-2011	8-10-2011	8-10-2011					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO					
Rating Unit	%	%	%	%	%	%					
Number of Subsamples	1	1	1	1	1	1					
Crop Stage Majority	V12	V12	V12	R4	R4	R4					
Pest Stage Majority	48 IN	36 IN	24 IN	48 IN	48 IN	48 IN					
Pest Density, Unit	4 YD2	15 YD2	2.5 YD2	50 YD2	5 YD2	15 YD2					
Assessed By	RH	RH	RH	PM	PM	PM					
Days After First/Last Applic.	40 12	40 12	40 12	55 27	55 27	55 27					
Trt-Eval Interval	40 DA-A	40 DA-A	40 DA-A								
Plant-Eval Interval	53 DP-1	53 DP-1	53 DP-1	68 DP-1	68 DP-1	68 DP-1					
Days After Emergence	48 DE-	48 DE-	48 DE-	63 DE-	63 DE-	63 DE-					
Trt Treatment	Rate	Appl									
No. Name	Rate Unit	Code	9	10	11	12	13	14			
1 UNTREATED	0.0 b		0.0 c		0.0 c		0.0 d		0.0 b		
2 Realm Q (4 OZ/A)	64.5 a		92.0 a		100.0 a		100.0 a		72.5 a		85.0 a
Resolve	5.25 g ai/ha A										
Isoxadifen-ethyl	5.25 g ai/ha A										
Mesotrione	44 g ai/ha A										
COC	1 % v/v A										
N-Pak AMS	5 % v/v A										
Abundit	1120 g ae/ha B										
N-Pak AMS	5 % v/v B										
3 Realm Q (4 OZ/A)	65.8 a		72.0 ab		52.5 b		48.8 b		57.5 ab		65.0 ab
Resolve	5.25 g ai/ha A										
Isoxadifen-ethyl	5.25 g ai/ha A										
Mesotrione	44 g ai/ha A										
Abundit	1120 g ae/ha A										
N-Pak AMS	5 % v/v A										
4 Realm Q (4 OZ/A)	93.8 a		52.5 b		90.0 a		25.0 c		48.8 ab		50.0 ab
Resolve	5.25 g ai/ha A										
Isoxadifen-ethyl	5.25 g ai/ha A										
Mesotrione	44 g ai/ha A										
Ignite	450 g ae/ha A										
N-Pak AMS	5 % v/v A										

Means followed by same letter do not significantly differ (P=0.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	ERICA	AMBEL	XANST	GGGAN	ERICA	AMBEL
Pest Scientific Name	<i>Conyza canadensis</i>	<i>Ambrosia artemisiifolia</i>	<i>Xanthium strumarium</i>	Annual grasses	<i>Conyza canadensis</i>	<i>Ambrosia artemisiifolia</i>
Pest Name	Canada horseweed	Common ragweed	Common cocklebur	Annual grasses	Canada horseweed	Common ragweed
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
BBCH Scale	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR
Crop Scientific Name	<i>Zea mays</i>	<i>Zea mays</i>	<i>Zea mays</i>	<i>Zea mays</i>	<i>Zea mays</i>	<i>Zea mays</i>
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn
Crop Variety	P33W84	P33W84	P33W84	P33W84	P33W84	P33W84
Description						
Rating Date	7-26-2011	7-26-2011	7-26-2011	8-10-2011	8-10-2011	8-10-2011
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
Crop Stage Majority	V12	V12	V12	R4	R4	R4
Pest Stage Majority	48 IN	36 IN	24 IN	48 IN	48 IN	48 IN
Pest Density, Unit	4 YD2	15 YD2	2.5 YD2	50 YD2	5 YD2	15 YD2
Assessed By	RH	RH	RH	PM	PM	PM
Days After First/Last Applic.	40 12	40 12	40 12	55 27	55 27	55 27
Trt-Eval Interval	40 DA-A	40 DA-A	40 DA-A			
Plant-Eval Interval	53 DP-1	53 DP-1	53 DP-1	68 DP-1	68 DP-1	68 DP-1
Days After Emergence	48 DE-	48 DE-	48 DE-	63 DE-	63 DE-	63 DE-
Trt Treatment						
No. Name	9	10	11	12	13	14
5 Realm Q (4 OZ/A)	63.8 a	75.0 ab	93.8 a	7.5 d	42.5 ab	65.0 ab
Resolve	5.25 g ai/ha A					
Isoxadifen-ethyl	5.25 g ai/ha A					
Mesotrione	44 g ai/ha A					
Atrazine	1010 g ai/ha A					
COC	1 % v/v A					
N-Pak AMS	5 % v/v A					
6 Realm Q (4 OZ/A)	94.5 a	75.8 ab	68.8 ab	57.5 b	87.5 a	69.5 ab
Resolve	5.25 g ai/ha A					
Isoxadifen-ethyl	5.25 g ai/ha A					
Mesotrione	44 g ai/ha A					
Atrazine	1010 g ai/ha A					
Abundit	1120 g ae/ha A					
N-Pak AMS	5 % v/v A					
7 Realm Q (4 OZ/A)	80.0 a	92.0 a	100.0 a	27.5 c	60.0 ab	52.5 ab
Resolve	5.25 g ai/ha A					
Isoxadifen-ethyl	5.25 g ai/ha A					
Mesotrione	44 g ai/ha A					
Clarity	70 g ai/ha A					
COC	1 % v/v A					
N-Pak AMS	5 % v/v A					
8 Abundit	1120 g ae/ha A	93.3 a	98.3 a	100.0 a	98.8 a	96.5 a
N-Pak AMS	5 % v/v A					
Abundit	1120 g ae/ha B					
N-Pak AMS	5 % v/v B					
9 UNTREATED	0.0 b	0.0 c	0.0 c	0.0 d	0.0 b	0.0 b

Means followed by same letter do not significantly differ (P=0.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Purdue University

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	ERICA	AMBEL	XANST	GGGAN	ERICA	AMBEL		
Pest Scientific Name	<i>Conyza canadensis</i>	<i>Ambrosia artemisiifolia</i>	<i>Xanthium strumarium</i>	Annual grasses	<i>Conyza canadensis</i>	<i>Ambrosia artemisiifolia</i>		
Pest Name	Canada horseweed	Common ragweed	Common cocklebur	Annual grasses	Canada horseweed	Common ragweed		
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
BBCH Scale	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR		
Crop Scientific Name	<i>Zea mays</i>	<i>Zea mays</i>	<i>Zea mays</i>	<i>Zea mays</i>	<i>Zea mays</i>	<i>Zea mays</i>		
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn		
Crop Variety	P33W84	P33W84	P33W84	P33W84	P33W84	P33W84		
Description								
Rating Date	7-26-2011	7-26-2011	7-26-2011	8-10-2011	8-10-2011	8-10-2011		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Crop Stage Majority	V12	V12	V12	R4	R4	R4		
Pest Stage Majority	48 IN	36 IN	24 IN	48 IN	48 IN	48 IN		
Pest Density, Unit	4 YD2	15 YD2	2.5 YD2	50 YD2	5 YD2	15 YD2		
Assessed By	RH	RH	RH	PM	PM	PM		
Days After First/Last Applic.	40 12	40 12	40 12	55 27	55 27	55 27		
Trt-Eval Interval	40 DA-A	40 DA-A	40 DA-A					
Plant-Eval Interval	53 DP-1	53 DP-1	53 DP-1	68 DP-1	68 DP-1	68 DP-1		
Days After Emergence	48 DE-	48 DE-	48 DE-	63 DE-	63 DE-	63 DE-		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	9	10	11	12	13	14
10 UNTREATED	0.0 b	0.0 c	0.0 c	0.0 d	0.0 b	0.0 b		
LSD (P=.05)	31.33	25.81	21.50	15.47	44.14	44.18		
Standard Deviation	21.59	17.79	14.82	10.66	30.42	30.45		
CV	38.87	31.91	24.49	29.2	65.38	62.85		
Bartlett's X2	29.933	16.992	5.194	14.006	15.832	11.92		
P(Bartlett's X2)	0.001*	0.009*	0.158	0.016*	0.015*	0.064		
Replicate F	1.208	2.570	0.964	2.919	0.899	2.623		
Replicate Prob(F)	0.3256	0.0751	0.4239	0.0522	0.4547	0.0710		
Treatment F	13.828	20.794	35.973	53.005	5.604	5.653		
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002		

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 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Purdue University

Pest Type	W Weed	
Pest Code	XANST	
Pest Scientific Name	Xanthium strum>	
Pest Name	Common cockleb>	
Crop Code	ZEAMX	ZEAMX
BBCH Scale	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays
Crop Name	Com	Com
Crop Variety	P33W84	P33W84
Description		
Rating Date	8-10-2011	8-10-2011
Rating Type	CONTRO	PHYGEN
Rating Unit	%	%
Number of Subsamples	1	1
Crop Stage Majority	R4	R4
Pest Stage Majority	36 IN	
Pest Density, Unit	2.5 YD2	
Assessed By	PM	PM
Days After First/Last Applic.	55 27	55 27
Trt-Eval Interval		
Plant-Eval Interval	68 DP-1	68 DP-1
Days After Emergence	63 DE-	63 DE-
Trt Treatment	Rate	Appl
No. Name	Rate Unit	Code
	15	16
1 UNTREATED	0.0 b	0.0 a
2 Realm Q (4 OZ/A)	98.8 a	0.0 a
Resolve	5.25 g ai/ha A	
Isoxadifen-ethyl	5.25 g ai/ha A	
Mesotrione	44 g ai/ha A	
COC	1 % v/v A	
N-Pak AMS	5 % v/v A	
Abundit	1120 g ae/ha B	
N-Pak AMS	5 % v/v B	
3 Realm Q (4 OZ/A)	38.8 ab	0.0 a
Resolve	5.25 g ai/ha A	
Isoxadifen-ethyl	5.25 g ai/ha A	
Mesotrione	44 g ai/ha A	
Abundit	1120 g ae/ha A	
N-Pak AMS	5 % v/v A	
4 Realm Q (4 OZ/A)	50.0 ab	0.0 a
Resolve	5.25 g ai/ha A	
Isoxadifen-ethyl	5.25 g ai/ha A	
Mesotrione	44 g ai/ha A	
Ignite	450 g ae/ha A	
N-Pak AMS	5 % v/v A	

Means followed by same letter do not significantly differ (P=0.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Purdue University

Pest Type	W Weed	
Pest Code	XANST	
Pest Scientific Name	Xanthium strum>	
Pest Name	Common cockleb>	
Crop Code	ZEAMX	ZEAMX
BBCH Scale	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays
Crop Name	Com	Com
Crop Variety	P33W84	P33W84
Description		
Rating Date	8-10-2011	8-10-2011
Rating Type	CONTRO	PHYGEN
Rating Unit	%	%
Number of Subsamples	1	1
Crop Stage Majority	R4	R4
Pest Stage Majority	36 IN	
Pest Density, Unit	2.5 YD2	
Assessed By	PM	PM
Days After First/Last Applic.	55 27	55 27
Trt-Eval Interval		
Plant-Eval Interval	68 DP-1	68 DP-1
Days After Emergence	63 DE-	63 DE-
Trt Treatment	Rate	Appl
No. Name	Rate Unit	Code
		15
		16
5 Realm Q (4 OZ/A)		61.3 ab
Resolve	5.25 g ai/ha A	
Isoxadifen-ethyl	5.25 g ai/ha A	
Mesotrione	44 g ai/ha A	
Atrazine	1010 g ai/ha A	
COC	1 % v/v A	
N-Pak AMS	5 % v/v A	
6 Realm Q (4 OZ/A)		58.8 ab
Resolve	5.25 g ai/ha A	
Isoxadifen-ethyl	5.25 g ai/ha A	
Mesotrione	44 g ai/ha A	
Atrazine	1010 g ai/ha A	
Abundit	1120 g ae/ha A	
N-Pak AMS	5 % v/v A	
7 Realm Q (4 OZ/A)		62.5 ab
Resolve	5.25 g ai/ha A	
Isoxadifen-ethyl	5.25 g ai/ha A	
Mesotrione	44 g ai/ha A	
Clarity	70 g ai/ha A	
COC	1 % v/v A	
N-Pak AMS	5 % v/v A	
8 Abundit	1120 g ae/ha A	97.5 a
N-Pak AMS	5 % v/v A	
Abundit	1120 g ae/ha B	
N-Pak AMS	5 % v/v B	
9 UNTREATED		0.0 b
		0.0 a

Means followed by same letter do not significantly differ (P=0.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Purdue University

Pest Type	W Weed	
Pest Code	XANST	
Pest Scientific Name	Xanthium strum>	
Pest Name	Common cockleb>	
Crop Code	ZEAMX	ZEAMX
BBCH Scale	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays
Crop Name	Com	Com
Crop Variety	P33W84	P33W84
Description		
Rating Date	8-10-2011	8-10-2011
Rating Type	CONTRO	PHYGEN
Rating Unit	%	%
Number of Subsamples	1	1
Crop Stage Majority	R4	R4
Pest Stage Majority	36 IN	
Pest Density, Unit	2.5 YD2	
Assessed By	PM	PM
Days After First/Last Applic.	55 27	55 27
Trt-Eval Interval		
Plant-Eval Interval	68 DP-1	68 DP-1
Days After Emergence	63 DE-	63 DE-
Trt Treatment	Rate	Appl
No. Name	Rate Unit	Code
	15	16
10 UNTREATED	0.0 b	0.0 a
LSD (P=.05)	47.23	0.00
Standard Deviation	32.55	0.00
CV	69.62	0.0
Bartlett's X2	22.929	0.0
P(Bartlett's X2)	0.001*	.
Replicate F	1.045	0.000
Replicate Prob(F)	0.3884	1.0000
Treatment F	5.250	0.000
Treatment Prob(F)	0.0004	1.0000

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

Purdue University

Postemergence Systems in Corn using Realm Q for Control of Marestalk

Trial ID: 11S-SEP-NTC-04 Protocol ID: 11S-SEP-NTC-04
 Location: SEPAC Study Director: Paul Marquardt
 Project ID: 11S-SEP-NTC-04 Investigator: Dr. Bill Johnson
 Sponsor Contact: Helen Flanigan

Pest Type

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

Pest Code

AMBEL, Ambrosia artemisiifolia, = US

ERICA, Conyza canadensis, = US

XANST, Xanthium strumarium, = US

SETFA, Setaria faberi, = US

GGGAN, Annual grasses, = US

Crop Code

ZEAMX, BCOR, Zea mays, = US

Rating Type

PHYGEN = phytotoxicity - general / injury

CONTRO = control / burndown or knockdown

Rating Unit

% = percent

YD2 = per square yard

Plant-Eval Interval

21 DP-1 = 1 ZEAMX 6-3-2011

34 DP-1 = 1 ZEAMX 6-3-2011

48 DP-1 = 1 ZEAMX 6-3-2011

53 DP-1 = 1 ZEAMX 6-3-2011

68 DP-1 = 1 ZEAMX 6-3-2011