

Purdue University Weed Science

2013/AUTHORITY MTZ/CORN/BURNDOWN

Trial ID: 13S-SEP-CTC-05 Location: SEPAC Trial Year: 2013
 Protocol ID: 13S-SEP-CTC-05 Investigator: Dr. Bill Johnson
 Project ID: SULF.COR.13.JPR.10 Study Director: JOE IKLEY
 Sponsor Contact: FMC - JOE REED

General Trial Information

Study Director: JOE IKLEY **Title:** RESEARCH ASSOCIATE
Investigator: DR. BILL JOHNSON **Title:** PROFESSOR

Discipline: H HERBICIDE
Trial Status: F one-year/final **Trial Reliability:** HIGH
Initiation Date: 5/30/2013 **Planned Completion Date:** 8/16/2013
Completion Date: 11/8/2013

Trial Location

City: BUTLERVILLE **Country:** USA UNITED STATES
State/Prov.: INDIANA
Postal Code: 47223

Contacts

Study Director: JOE IKLEY **Title:** RESEARCH ASSOCIATE
Organization: PURDUE UNIVERSITY
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City+State/Prov: WEST LAFAYETTE **Mobile No.:** 410-596-9091
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Investigator: DR. BILL JOHNSON **Title:** PROFESSOR
Organization: PURDUE UNIVERSITY
Address: 915 WEST STATE STREET **Phone No.:** 765-494-4656
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Postal Code: 47907 **E-mail:** WGJ@PURDUE.EDU

Cooperator/Landowner: DON BIEHLE **Role:** SUPERINTENDENT
Organization: SOUTHEAST PURDUE AGRICULTURE CENTER
Address 1: 4425 EAST COUNTY ROAD 350 NORTH
City: BUTLERVILLE **Phone No.:** 812-458-6977
State/Prov: INDIANA **Fax No.:** 812-458-6979
Postal Code: 47223-0216 **Mobile No.:** 812-592-8426
Country: USA UNITED STATES **E-mail:** BIEHLED@PURDUE.EDU

Crop Description

Crop 1: ZEAMX ZEA MAYS CORN
Variety: GOLDEN HARVEST G10D98-3102 **BBCH Scale:** BCOR
Description: SYNGENTA RR

Planting Rate, Unit: 32000 S/A **Planting Date:** 5/30/2013
Depth, Unit: 1.5 IN **Planting Method:** DIRDRI DIRECT DRILLED
Row Spacing, Unit: 30 IN **Planting Equipment:** JD7000
Spacing Within Row, Unit: 6 IN **Emergence Date:** 6/5/2013
Planting Density, Unit: 32000 S/A **Harvest Date:** 11/8/2013
Soil Temperature, Unit: 76 F **Harvested Width, Unit:** 5 FT
Soil Moisture: SLIWET SLIGHTLY WET, MOIST **Harvested Length, Unit:** 25 FT
Seed Bed: MEDIUM MEDIUM **Harvest Equipment:** Gleaner F3
 % Standard Moisture: 15.5
 Moisture Meter: Harvest Master
 Weighing Equipment: Harvest Master

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Pest Description

Pest 1 Type: W **Code:** BROSS BROMUS SP.
Common Name: BROMEGRASS

Pest 2 Type: W **Code:** AMBEL AMBROSIA ARTEMISIIFOLIA
Common Name: COMMON RAGWEED

Pest 3 Type: W **Code:** ERICA CONYZA CANADENSIS
Common Name: CANADA HORSEWEED

Pest 4 Type: W **Code:** PANDI PANICUM DICHOTOMIFLORUM
Common Name: FALL PANICUM

Pest 5 Type: W **Code:** XANST XANTHIUM STRUMARIUM
Common Name: HEART-LEAF COCKLEBUR

Pest 6 Type: W **Code:** AMBTR AMBROSIA TRIFIDA
Common Name: GIANT RAGWEED

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 7
Replications: 4

Site Type: FIELD FIELD
Experimental Unit: 1 PLOT PLOT
Tillage Type: NOTILL NO-TILL
Study Design: RACOBL Randomized Complete Block (RCB)

Maintenance

No.	Date	Maintenance Product Name	Description	Rate	Rate Unit	Tank Mix
1.	5/30/2013	22-11-0	STARTER	180	LB A/A	NO

Comment: APPLIED 22-11-0 @ 180 LB/A IN ROW

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
Application Date:	5/30/2013	6/20/2013
Appl. Start Time:	8:45	13:00
Appl. Stop Time:	10:00 AM	1:30 PM
Application Method:	SPRAY	SPRAY
Application Timing:	PREPRE	ACCRST
Application Placement:	SOIL	BROADC
Applied By:	SPAUNHORST	DEVKOTA
Air Temperature, Unit:	77.5 F	80 F
% Relative Humidity:	71	47
Wind Velocity, Unit:	2 MPH	5 MPH
Wind Direction:	SW	SSE
Dew Presence (Y/N):	N NO	N NO
Soil Temperature, Unit:	76 F	78 F
Soil Moisture:	SLIWET	DRY
% Cloud Cover:	95	50
Next Moisture Occurred On:	5/31/2013	6/22/2013
Time to Next Moisture, Unit:	1 HR	2 DAY

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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:	00	34
Stage Minimum, Percent:		34
Stage Maximum, Percent:		35
Height, Unit:		10.5 IN
Height Minimum, Maximum:		9 12
Stage Scale Used:	BBCH	BBCH

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Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	BROSS W	BROSS W
Stage Majority, Percent:	79	
Height, Unit:	35 IN	
Height Minimum, Maximum:	30 40	
Density, Unit:	25 YD2	
Pest 2 Code, Type, Scale:	AMBEL W	AMBEL W
Stage Majority, Percent:	34	36
Stage Minimum, Percent:	33	35
Stage Maximum, Percent:	35	37
Height, Unit:	10 IN	7 IN
Height Minimum, Maximum:	7 12	2 12
Density, Unit:	37 YD2	45 YD2
Pest 3 Code, Type, Scale:	ERICA W	ERICA W
Stage Majority, Percent:	13	
Stage Minimum, Percent:	12	
Stage Maximum, Percent:	14	
Height, Unit:	1 IN	
Height Minimum, Maximum:	0.5 2	
Density, Unit:	75 YD2	
Pest 4 Code, Type, Scale:	PANDI W	PANDI W
Stage Majority, Percent:	14	
Stage Minimum, Percent:	12	
Stage Maximum, Percent:	14	
Height, Unit:	1.5 IN	
Height Minimum, Maximum:	0.5 3	
Density, Unit:	60 YD2	
Pest 5 Code, Type, Scale:	XANST W	XANST W
Stage Majority, Percent:	34	
Stage Minimum, Percent:	32	
Stage Maximum, Percent:	35	
Height, Unit:	7 IN	
Height Minimum, Maximum:	5 8	
Density, Unit:	25 YD2	
Pest 6 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:		35
Stage Minimum, Percent:		34
Stage Maximum, Percent:		36
Height, Unit:		9 IN
Height Minimum, Maximum:		6 12
Density, Unit:		53 YD2

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Application Equipment		
	A	B
Appl. Equipment:	CO2 BACKPACK	CO2 BACKPACK
Equipment Type:	SPRBAC	SPRBAC
Operation Pressure, Unit:	18 PSI	18 PSI
Nozzle Type:	FLAT FAN	FLAT FAN
Nozzle Size:	XR11002	XR11002
Nozzle Spacing, Unit:	15 IN	15 IN
Nozzles/Row:	8	8
Boom Length, Unit:	10 FT	10 FT
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	H2O	H2O
Water Hardness (ppm CaCO3):	150	150
Spray Volume, Unit:	15 GAL/AC	15 GAL/AC
Mix Size, Unit:	1.8 LITERS	1.8 LITERS
Propellant:	CO2	CO2
Tank Mix (Y/N):	N NO	N NO

Trial Comments

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2013/AUTHORITY MTZ/CORN/BURNDOWN

Trial ID: 13S-SEP-CTC-05 Location: SEPAC Trial Year: 2013
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 Sponsor Contact: FMC - JOE REED

Reps: 4 Plots: 10 by 30 feet
 Spray vol: 15 gal/ac Mix size: 1.8 liters (min 1.5642)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate	Other Rate	Other Rate	Appl Unit Code	Amt to Measure	Product	Rep 1	2	3	4
1	UNTREATED										101	501	601	1001
2	AUTHORITY MTZ	45 %W/W	WG	70 g ai/a	5.5 oz/a			A	4.931 g/mx		102	502	602	803
	GRAMOXONE INTEON	2.762 LB/GAL	SL	170 g ai/a	0.375 lb ai/a			A	16.28 ml/mx					
	N-PAK AMS	3.4 LBA/GAL	SL	4.9 % v/v	2.5 lb ai/a			A	88.19 ml/mx					
	ANTHEM ATZ	4.5 LB/GAL	SE	510 g ai/a	32 oz/a			B	29.98 ml/mx					
	AATREX NINE-O	90 %W/W	WG	410 g ai/a	16 oz/a			B	14.44 g/mx					
	ROUNDUP POWERMAX	5.5 LB/GAL	SL	624 g ai/a	32 oz/a			B	30.01 ml/mx					
3	AUTHORITY MTZ	45 %W/W	WG	70 g ai/a	5.5 oz/a			A	4.931 g/mx		103	403	503	802
	GRAMOXONE INTEON	2.762 LB/GAL	SL	227 g ai/a	0.5 lb ai/a			A	21.74 ml/mx					
	N-PAK AMS	3.4 LBA/GAL	SL	4.9 % v/v	2.5 lb ai/a			A	88.19 ml/mx					
	ANTHEM ATZ	4.5 LB/GAL	SE	510 g ai/a	32 oz/a			B	29.98 ml/mx					
	AATREX NINE-O	90 %W/W	WG	410 g ai/a	16 oz/a			B	14.44 g/mx					
	ROUNDUP POWERMAX	5.5 LB/GAL	SL	624 g ai/a	32 oz/a			B	30.01 ml/mx					
4	SPARTAN	4 LB/GAL	SC	34 g ai/a	2.4 oz/a			A	2.249 ml/mx		201	402	702	903
	SENCOR	75 %W/W	WG	106 g ai/a	5 oz/a			A	4.48 g/mx					
	GRAMOXONE INTEON	2.762 LB/GAL	SL	170 g ai/a	0.375 lb ai/a			A	16.28 ml/mx					
	N-PAK AMS	3.4 LBA/GAL	SL	4.9 % v/v	2.5 lb ai/a			A	88.19 ml/mx					
	ANTHEM ATZ	4.5 LB/GAL	SE	510 g ai/a	32 oz/a			B	29.98 ml/mx					
	AATREX NINE-O	90 %W/W	WG	410 g ai/a	16 oz/a			B	14.44 g/mx					
5	SPARTAN	4 LB/GAL	SC	34 g ai/a	2.4 oz/a			A	2.249 ml/mx		202	401	703	801
	SENCOR	75 %W/W	WG	106 g ai/a	5 oz/a			A	4.48 g/mx					
	GRAMOXONE INTEON	2.762 LB/GAL	SL	227 g ai/a	0.5 lb ai/a			A	21.74 ml/mx					
	N-PAK AMS	3.4 LBA/GAL	SL	4.9 % v/v	2.5 lb ai/a			A	88.19 ml/mx					
	ANTHEM ATZ	4.5 LB/GAL	SE	510 g ai/a	32 oz/a			B	29.98 ml/mx					
	AATREX NINE-O	90 %W/W	WG	410 g ai/a	16 oz/a			B	14.44 g/mx					
6	SPARTAN	4 LB/GAL	SC	22.7 g ai/a	1.6 oz/a			A	1.501 ml/mx		203	303	603	901
	SENCOR	75 %W/W	WG	106 g ai/a	5 oz/a			A	4.48 g/mx					
	GRAMOXONE INTEON	2.762 LB/GAL	SL	170 g ai/a	0.375 lb ai/a			A	16.28 ml/mx					
	N-PAK AMS	3.4 LBA/GAL	SL	4.9 % v/v	2.5 lb ai/a			A	88.19 ml/mx					
	ANTHEM ATZ	4.5 LB/GAL	SE	510 g ai/a	32 oz/a			B	29.98 ml/mx					
	AATREX NINE-O	90 %W/W	WG	410 g ai/a	16 oz/a			B	14.44 g/mx					
7	SPARTAN	4 LB/GAL	SC	22.7 g ai/a	1.6 oz/a			A	1.501 ml/mx		301	302	701	902
	SENCOR	75 %W/W	WG	106 g ai/a	5 oz/a			A	4.48 g/mx					
	GRAMOXONE INTEON	2.762 LB/GAL	SL	227 g ai/a	0.5 lb ai/a			A	21.74 ml/mx					
	N-PAK AMS	3.4 LBA/GAL	SL	4.9 % v/v	2.5 lb ai/a			A	88.19 ml/mx					
	ANTHEM ATZ	4.5 LB/GAL	SE	510 g ai/a	32 oz/a			B	29.98 ml/mx					
	AATREX NINE-O	90 %W/W	WG	410 g ai/a	16 oz/a			B	14.44 g/mx					
ROUNDUP POWERMAX	5.5 LB/GAL	SL	624 g ai/a	32 oz/a			B	30.01 ml/mx						

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
9.862	g	AUTHORITY MTZ	45	WG	
114.073	ml	GRAMOXONE INTEON	2.762	SL	
529.142	ml	N-PAK AMS	3.4	SL	
179.889	ml	ANTHEM ATZ	4.5	SE	
86.648	g	AATREX NINE-O	90	WG	
180.081	ml	ROUNDUP POWERMAX	5.5	SL	
7.500	ml	SPARTAN	4	SC	
17.921	g	SENCOR	75	WG	

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

- * 'Per area' calculations based on spray volume= 15 gal/ac, mix size= 1.8 liters (mix size basis).
- * 'Per volume' calculations use spray volume= 15 gal/ac, mix size= 1.8 liters.

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Trial ID: 13S-SEP-CTC-05 Location: SEPAC Trial Year: 2013
 Protocol ID: 13S-SEP-CTC-05 Investigator: Dr. Bill Johnson
 Project ID: SULF.COR.13.JPR.10 Study Director: JOE IKLEY
 Sponsor Contact: FMC - JOE REED

Pest Type	W WEED	W WEED	W WEED
Pest Code	PANDI	XANST	AMBEL
Pest Scientific Name	PANICUM DICHOT>	XANTHIUM STRUM>	AMBROSIA ARTEM>
Pest Name	FALL PANICUM	HEART-LEAF COC>	COMMON RAGWEED
Crop Code			
BBCH Scale			
Crop Scientific Name			
Crop Name			
Part Rated	PLOT P	PLOT P	PLOT P
Rating Date	6/6/2013	6/6/2013	6/6/2013
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT
Days After First/Last Applic.	7 7	7 7	7 7
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A
ARM Action Codes	P	P	P
Number of Decimals	0	0	0
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code Plot	1 2 3
1 UNTREATED		101	0 0 0
		501	0 0 0
		601	0 0 0
		1001	0 0 0
		Mean =	0 0 0
2 AUTHORITY MTZ	70 g ai/a A	102	95 95 70
GRAMOXONE INTEON	170 g ai/a A	502	95 95 80
N-PAK AMS	4.9 % v/v A	602	95 95 80
ANTHEM ATZ	510 g ai/a B	803	95 95 80
AATREX NINE-O	410 g ai/a B		
ROUNDUP POWERMAX	624 g ai/a B		
		Mean =	95 95 78
3 AUTHORITY MTZ	70 g ai/a A	103	95 95 70
GRAMOXONE INTEON	227 g ai/a A	403	95 95 70
N-PAK AMS	4.9 % v/v A	503	95 95 90
ANTHEM ATZ	510 g ai/a B	802	95 95 80
AATREX NINE-O	410 g ai/a B		
ROUNDUP POWERMAX	624 g ai/a B		
		Mean =	95 95 78
4 SPARTAN	34 g ai/a A	201	95 95 80
SENCOR	106 g ai/a A	402	95 95 60
GRAMOXONE INTEON	170 g ai/a A	702	95 95 60
N-PAK AMS	4.9 % v/v A	903	100 90 90
ANTHEM ATZ	510 g ai/a B		
AATREX NINE-O	410 g ai/a B		
ROUNDUP POWERMAX	624 g ai/a B		
		Mean =	96 94 73
5 SPARTAN	34 g ai/a A	202	95 95 80
SENCOR	106 g ai/a A	401	95 95 80
GRAMOXONE INTEON	227 g ai/a A	703	95 95 80
N-PAK AMS	4.9 % v/v A	801	95 95 80
ANTHEM ATZ	510 g ai/a B		
AATREX NINE-O	410 g ai/a B		
ROUNDUP POWERMAX	624 g ai/a B		
		Mean =	95 95 80
6 SPARTAN	22.7 g ai/a A	203	95 95 80
SENCOR	106 g ai/a A	303	95 95 70
GRAMOXONE INTEON	170 g ai/a A	603	95 95 70
N-PAK AMS	4.9 % v/v A	901	95 100 60
ANTHEM ATZ	510 g ai/a B		
AATREX NINE-O	410 g ai/a B		
ROUNDUP POWERMAX	624 g ai/a B		
		Mean =	95 96 70

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Pest Type	W WEED	W WEED	W WEED	
Pest Code	PANDI	XANST	AMBEL	
Pest Scientific Name	PANICUM DICHOT>	XANTHIUM STRUM>	AMBROSIA ARTEM>	
Pest Name	FALL PANICUM	HEART-LEAF COC>	COMMON RAGWEED	
Crop Code				
BBCH Scale				
Crop Scientific Name				
Crop Name				
Part Rated	PLOT P	PLOT P	PLOT P	
Rating Date	6/6/2013	6/6/2013	6/6/2013	
Rating Type	CONTRO	CONTRO	CONTRO	
Rating Unit	%	%	%	
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	
Days After First/Last Applic.	7 7	7 7	7 7	
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	
ARM Action Codes	P	P	P	
Number of Decimals	0	0	0	
Trt Treatment	Rate Appl			
No. Name	Rate Unit Code Plot	1	2	3
7 SPARTAN	22.7 g ai/a A 301	95	95	80
SENCOR	106 g ai/a A 302	95	95	60
GRAMOXONE INTEON	227 g ai/a A 701	95	95	80
N-PAK AMS	4.9 % v/v A 902	100	95	80
ANTHEM ATZ	510 g ai/a B			
AATREX NINE-O	410 g ai/a B			
ROUNDUP POWERMAX	624 g ai/a B			
	Mean =	96	95	75

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Pest Type	W WEED	W WEED	W WEED				
Pest Code	PANDI	XANST	AMBEL				
Pest Scientific Name	PANICUM DICHOT>	XANTHIUM STRUM>	AMBROSIA ARTEM>				
Pest Name	FALL PANICUM	HEART-LEAF COC>	COMMON RAGWEED				
Crop Code				ZEAMX			
BBCH Scale				BCOR			
Crop Scientific Name				ZEA MAYS			
Crop Name				CORN			
Part Rated	PLOT P	PLOT P	PLOT P	PLOT C			
Rating Date	6/13/2013	6/13/2013	6/13/2013	6/13/2013			
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN			
Rating Unit	%	%	%	%			
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT			
Days After First/Last Applic.	14 14	14 14	14 14	14 14			
Trt-Eval Interval	14 DA-A	14 DA-A	14 DA-A	14 DA-A			
ARM Action Codes	P	P	P	P			
Number of Decimals	0	0	0	0			
Trt Treatment	Rate	Appl					
No. Name	Rate	Unit Code Plot	4	5	6	7	
1 UNTREATED			101	0	0	0	0
			501	0	0	0	0
			601	0	0	0	0
			1001	0	0	0	0
		Mean =	0	0	0	0	0
2 AUTHORITY MTZ	70 g ai/a A		102	95	95	50	0
GRAMOXONE INTEON	170 g ai/a A		502	80	100	70	0
N-PAK AMS	4.9 % v/v A		602	50	100	50	0
ANTHEM ATZ	510 g ai/a B		803	70	100	80	0
AATREX NINE-O	410 g ai/a B						
ROUNDUP POWERMAX	624 g ai/a B						
		Mean =		74	99	63	0
3 AUTHORITY MTZ	70 g ai/a A		103	50	95	50	0
GRAMOXONE INTEON	227 g ai/a A		403	70	100	50	0
N-PAK AMS	4.9 % v/v A		503	80	100	80	0
ANTHEM ATZ	510 g ai/a B		802	70	100	70	0
AATREX NINE-O	410 g ai/a B						
ROUNDUP POWERMAX	624 g ai/a B						
		Mean =		68	99	63	0
4 SPARTAN	34 g ai/a A		201	70	100	80	0
SENCOR	106 g ai/a A		402	70	100	60	0
GRAMOXONE INTEON	170 g ai/a A		702	70	100	50	0
N-PAK AMS	4.9 % v/v A		903	80	100	80	0
ANTHEM ATZ	510 g ai/a B						
AATREX NINE-O	410 g ai/a B						
ROUNDUP POWERMAX	624 g ai/a B						
		Mean =		73	100	68	0
5 SPARTAN	34 g ai/a A		202	80	95	50	0
SENCOR	106 g ai/a A		401	80	100	60	0
GRAMOXONE INTEON	227 g ai/a A		703	70	100	70	0
N-PAK AMS	4.9 % v/v A		801	80	100	80	0
ANTHEM ATZ	510 g ai/a B						
AATREX NINE-O	410 g ai/a B						
ROUNDUP POWERMAX	624 g ai/a B						
		Mean =		78	99	65	0
6 SPARTAN	22.7 g ai/a A		203	70	100	70	0
SENCOR	106 g ai/a A		303	70	100	70	0
GRAMOXONE INTEON	170 g ai/a A		603	50	100	50	0
N-PAK AMS	4.9 % v/v A		901	50	100	70	0
ANTHEM ATZ	510 g ai/a B						
AATREX NINE-O	410 g ai/a B						
ROUNDUP POWERMAX	624 g ai/a B						
		Mean =		60	100	65	0

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	W WEED PANDI PANICUM DICHOT> FALL PANICUM	W WEED XANST XANTHIUM STRUM> HEART-LEAF COC>	W WEED AMBEL AMBROSIA ARTEM> COMMON RAGWEED	
Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Code				
BBCH Scale				
Crop Scientific Name				ZEAMX BCOR
Crop Name				ZEA MAYS CORN
Part Rated	PLOT P	PLOT P	PLOT P	PLOT C
Rating Date	6/13/2013	6/13/2013	6/13/2013	6/13/2013
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN
Rating Unit	%	%	%	%
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Days After First/Last Applic.	14 14	14 14	14 14	14 14
Trt-Eval Interval	14 DA-A	14 DA-A	14 DA-A	14 DA-A
ARM Action Codes	P	P	P	P
Number of Decimals	0	0	0	0
Trt Treatment	Rate Appl			
No. Name	Rate Unit Code Plot	4	5	6
7 SPARTAN	22.7 g ai/a A 301	70	100	60
SENCOR	106 g ai/a A 302	70	100	50
GRAMOXONE INTEON	227 g ai/a A 701	70	90	70
N-PAK AMS	4.9 % v/v A 902	70	100	50
ANTHEM ATZ	510 g ai/a B			
AATREX NINE-O	410 g ai/a B			
ROUNDUP POWERMAX	624 g ai/a B			
	Mean =	70	98	58
				0

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Pest Type		W WEED	W WEED	W WEED	
Pest Code		PANDI	XANST	AMBEL	
Pest Scientific Name		PANICUM DICHOT>	XANTHIUM STRUM>	AMBROSIA ARTEM>	
Pest Name		FALL PANICUM	HEART-LEAF COC>	COMMON RAGWEED	
Crop Code					ZEAMX
BBCH Scale					BCOR
Crop Scientific Name					Zea mays
Crop Name					Corn
Part Rated		PLOT P	PLOT P	PLOT P	YIELD C
Rating Date		6/27/2013	6/27/2013	6/27/2013	11/8/2013
Rating Type		CONTRO	CONTRO	CONTRO	YIELD
Rating Unit		%	%	%	lb/plot
Sample Size, Unit		1 PLOT	1 PLOT	1 PLOT	1 PLOT
Days After First/Last Applic.		28 7	28 7	28 7	162 141
Trt-Eval Interval		28 DA-A	28 DA-A	28 DA-A	
ARM Action Codes		P	P	P	
Number of Decimals		0	0	0	1
Trt Treatment	Rate Appl				
No. Name	Rate Unit Code Plot	8	9	10	11
1 UNTREATED		101 0	0 0	0 0	0.4
		501 0	0 0	0 0	4.7
		601 0	0 0	0 0	1.1
		1001 0	0 0	0 0	2.4
	Mean =	0	0	0	2.1
2 AUTHORITY MTZ	70 g ai/a A 102	75	100	100	26.6
GRAMOXONE INTEON	170 g ai/a A 502	95	100	100	27.3
N-PAK AMS	4.9 % v/v A 602	70	100	100	27.9
ANTHEM ATZ	510 g ai/a B 803	90	100	100	23.9
AATREX NINE-O	410 g ai/a B				
ROUNDUP POWERMAX	624 g ai/a B				
	Mean =	83	100	100	26.5
3 AUTHORITY MTZ	70 g ai/a A 103	95	100	100	24.0
GRAMOXONE INTEON	227 g ai/a A 403	95	100	100	23.8
N-PAK AMS	4.9 % v/v A 503	95	100	100	25.7
ANTHEM ATZ	510 g ai/a B 802	90	100	100	22.7*
AATREX NINE-O	410 g ai/a B				
ROUNDUP POWERMAX	624 g ai/a B				
	Mean =	94	100	100	24.1
4 SPARTAN	34 g ai/a A 201	90	100	100	26.1
SENCOR	106 g ai/a A 402	95	100	100	28.2
GRAMOXONE INTEON	170 g ai/a A 702	90	90	100	28.9
N-PAK AMS	4.9 % v/v A 903	100	100	100	26.4
ANTHEM ATZ	510 g ai/a B				
AATREX NINE-O	410 g ai/a B				
ROUNDUP POWERMAX	624 g ai/a B				
	Mean =	94	98	100	27.4
5 SPARTAN	34 g ai/a A 202	100	100	100	26.3
SENCOR	106 g ai/a A 401	80	100	100	29.3
GRAMOXONE INTEON	227 g ai/a A 703	100	100	100	25.4
N-PAK AMS	4.9 % v/v A 801	90	100	100	22.3
ANTHEM ATZ	510 g ai/a B				
AATREX NINE-O	410 g ai/a B				
ROUNDUP POWERMAX	624 g ai/a B				
	Mean =	93	100	100	25.8
6 SPARTAN	22.7 g ai/a A 203	100	100	100	24.1
SENCOR	106 g ai/a A 303	90	100	100	27.1
GRAMOXONE INTEON	170 g ai/a A 603	70	100	100	25.5
N-PAK AMS	4.9 % v/v A 901	75	100	100	25.5
ANTHEM ATZ	510 g ai/a B				
AATREX NINE-O	410 g ai/a B				
ROUNDUP POWERMAX	624 g ai/a B				
	Mean =	84	100	100	25.5

Purdue University Weed Science

	W WEED PANDI	W WEED XANST	W WEED AMBEL	
Pest Type				
Pest Code				
Pest Scientific Name	PANICUM DICHOT>	XANTHIUM STRUM>	AMBROSIA ARTEM>	
Pest Name	FALL PANICUM	HEART-LEAF COC>	COMMON RAGWEED	
Crop Code				
BBCH Scale				
Crop Scientific Name				ZEAMX
Crop Name				BCOR
Part Rated				Zea mays
Rating Date				Corn
Rating Type	PLOT P	PLOT P	PLOT P	YIELD C
Rating Unit	6/27/2013	6/27/2013	6/27/2013	11/8/2013
Sample Size, Unit	CONTRO	CONTRO	CONTRO	YIELD
Days After First/Last Applic.	%	%	%	lb/plot
Trt-Eval Interval	1 PLOT	1 PLOT	1 PLOT	1 PLOT
ARM Action Codes	28 7	28 7	28 7	162 141
Number of Decimals	28 DA-A	28 DA-A	28 DA-A	
	P	P	P	
	0	0	0	1
Trt Treatment				
No. Name	Rate Unit Code Plot			
		8	9	10
7 SPARTAN	22.7 g ai/a A 301	95	100	100
SENCOR	106 g ai/a A 302	95	100	100
GRAMOXONE INTEON	227 g ai/a A 701	85	100	100
N-PAK AMS	4.9 % v/v A 902	80	100	100
ANTHEM ATZ	510 g ai/a B			
AATREX NINE-O	410 g ai/a B			
ROUNDUP POWERMAX	624 g ai/a B			
Mean =		89	100	100
				28.3

Purdue University Weed Science

Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Code			ZEAMX	ZEAMX
BBCH Scale			BCOR	BCOR
Crop Scientific Name			Zea mays	Zea mays
Crop Name			Corn	Corn
Part Rated			YIELD C	YIELD C
Rating Date			11/8/2013	11/8/2013
Rating Type			YIELD	YIELD
Rating Unit			bu/ac	kg/ha
Sample Size, Unit			1 PLOT	1 PLOT
Days After First/Last Applic.			162 141	162 141
Trt-Eval Interval				
ARM Action Codes			TY1	TY2
Number of Decimals			1	1
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code Plot	12	13
1 UNTREATED		101	2.5	158.3
		501	28.5	1790.8
		601	6.8	427.0
		1001	14.7	922.9
		Mean =	13.1	824.8
2 AUTHORITY MTZ	70 g ai/a A	102	162.5	10201.3
GRAMOXONE INTEON	170 g ai/a A	502	167.1	10490.6
N-PAK AMS	4.9 % v/v A	602	170.8	10717.9
ANTHEM ATZ	510 g ai/a B	803	146.4	9188.7
AATREX NINE-O	410 g ai/a B			
ROUNDUP POWERMAX	624 g ai/a B			
		Mean =	161.7	10149.6
3 AUTHORITY MTZ	70 g ai/a A	103	146.7	9209.4
GRAMOXONE INTEON	227 g ai/a A	403	145.7	9147.4
N-PAK AMS	4.9 % v/v A	503	157.3	9870.6
ANTHEM ATZ	510 g ai/a B	802	138.8*	8714.6*
AATREX NINE-O	410 g ai/a B			
ROUNDUP POWERMAX	624 g ai/a B			
		Mean =	147.1	9235.5
4 SPARTAN	34 g ai/a A	201	159.2	9994.6
SENCOR	106 g ai/a A	402	172.1	10800.6
GRAMOXONE INTEON	170 g ai/a A	702	176.7	11089.9
N-PAK AMS	4.9 % v/v A	903	161.2	10118.6
ANTHEM ATZ	510 g ai/a B			
AATREX NINE-O	410 g ai/a B			
ROUNDUP POWERMAX	624 g ai/a B			
		Mean =	167.3	10500.9
5 SPARTAN	34 g ai/a A	202	160.5	10077.3
SENCOR	106 g ai/a A	401	179.0	11234.5
GRAMOXONE INTEON	227 g ai/a A	703	155.0	9726.0
N-PAK AMS	4.9 % v/v A	801	136.2	8548.1
ANTHEM ATZ	510 g ai/a B			
AATREX NINE-O	410 g ai/a B			
ROUNDUP POWERMAX	624 g ai/a B			
		Mean =	157.7	9896.5
6 SPARTAN	22.7 g ai/a A	203	147.1	9230.1
SENCOR	106 g ai/a A	303	165.8	10407.9
GRAMOXONE INTEON	170 g ai/a A	603	155.6	9767.3
N-PAK AMS	4.9 % v/v A	901	155.9	9788.0
ANTHEM ATZ	510 g ai/a B			
AATREX NINE-O	410 g ai/a B			
ROUNDUP POWERMAX	624 g ai/a B			
		Mean =	156.1	9798.3

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Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Code		ZEAMX	ZEAMX	
BBCH Scale		BCOR	BCOR	
Crop Scientific Name		Zea mays	Zea mays	
Crop Name		Corn	Corn	
Part Rated		YIELD C	YIELD C	
Rating Date		11/8/2013	11/8/2013	
Rating Type		YIELD	YIELD	
Rating Unit		bu/ac	kg/ha	
Sample Size, Unit		1 PLOT	1 PLOT	
Days After First/Last Applic.		162 141	162 141	
Trt-Eval Interval				
ARM Action Codes		TY1	TY2	
Number of Decimals		1	1	
Trt Treatment				
	Rate	Appl		
No. Name	Rate Unit	Code	Plot	
				12
				13
7 SPARTAN	22.7 g ai/a A	301		183.6
SENCOR	106 g ai/a A	302		11234.5
GRAMOXONE INTEON	227 g ai/a A	701		10345.9
N-PAK AMS	4.9 % v/v A	902		164.7*
ANTHEM ATZ	510 g ai/a B			
AATREX NINE-O	410 g ai/a B			
ROUNDUP POWERMAX	624 g ai/a B			
		Mean =		173.0
				10861.2

Purdue University Weed Science

2013/AUTHORITY MTZ/CORN/BURNDOWN

Trial ID: 13S-SEP-CTC-05 Location: SEPAC Trial Year: 2013
 Protocol ID: 13S-SEP-CTC-05 Investigator: Dr. Bill Johnson
 Project ID: SULF.COR.13.JPR.10 Study Director: JOE IKLEY
 Sponsor Contact: FMC - JOE REED

Pest Type

W, WEED, G-BYRW7, G-WEDSTG = Weed or volunteer crop

Pest Code

PANDI, PANICUM DICHOTOMIFLORUM, = US

XANST, XANTHIUM STRUMARIUM, = US

AMBEL, AMBROSIA ARTEMISIIFOLIA, = US

Crop Code

ZEAMX, BCOR, ZEA MAYS, = US

Part Rated

PLOT = plot

YIELD = yield

P = Pest is Part Rated

C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

PHYGEN = phytotoxicity - general / injury

YIELD = yield

Rating Unit

% = percent

lb/plot = pounds per plot

bu/ac = bushels per acre

kg/ha = kilograms per hectare

PLOT = total plot

ARM Action Codes

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

TY1 = 6.112392*[11]

TY2 = 383.6631*[11]

Purdue University Weed Science

2013/AUTHORITY MTZ/CORN/BURNDOWN

Trial ID: 13S-SEP-CTC-05
 Protocol ID: 13S-SEP-CTC-05
 Project ID: SULF.COR.13.JPR.10

Location: SEPAC Trial Year: 2013
 Investigator: Dr. Bill Johnson
 Study Director: JOE IKLEY
 Sponsor Contact: FMC - JOE REED

	W WEED PANDI	W WEED XANST	W WEED AMBEL	W WEED PANDI
Pest Type	PANICUM DICHOT>	XANTHIUM STRUM>	AMBROSIA ARTEM>	PANICUM DICHOT>
Pest Code	FALL PANICUM	HEART-LEAF COC>	COMMON RAGWEED	FALL PANICUM
Pest Scientific Name				
Pest Name				
Crop Code				
BBCH Scale				
Crop Scientific Name				
Crop Name				
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P
Rating Date	6/6/2013	6/6/2013	6/6/2013	6/13/2013
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Days After First/Last Applic.	7 7	7 7	7 7	14 14
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	14 DA-A
ARM Action Codes	P	P	P	P
Number of Decimals	0	0	0	0
Trt Treatment No. Name	1	2	3	4
Rate Unit Code				
1 UNTREATED	0 b	0 b	0 b	0 b
2 AUTHORITY MTZ 70 g ai/a A GRAMOXONE INTEON 170 g ai/a A N-PAK AMS 4.9 % v/v A ANTHEM ATZ 510 g ai/a B AATREX NINE-O 410 g ai/a B ROUNDUP POWERMAX 624 g ai/a B	95 a	95 a	78 a	74 a
3 AUTHORITY MTZ 70 g ai/a A GRAMOXONE INTEON 227 g ai/a A N-PAK AMS 4.9 % v/v A ANTHEM ATZ 510 g ai/a B AATREX NINE-O 410 g ai/a B ROUNDUP POWERMAX 624 g ai/a B	95 a	95 a	78 a	68 a
4 SPARTAN 34 g ai/a A SENCOR 106 g ai/a A GRAMOXONE INTEON 170 g ai/a A N-PAK AMS 4.9 % v/v A ANTHEM ATZ 510 g ai/a B AATREX NINE-O 410 g ai/a B ROUNDUP POWERMAX 624 g ai/a B	96 a	94 a	73 a	73 a
5 SPARTAN 34 g ai/a A SENCOR 106 g ai/a A GRAMOXONE INTEON 227 g ai/a A N-PAK AMS 4.9 % v/v A ANTHEM ATZ 510 g ai/a B AATREX NINE-O 410 g ai/a B ROUNDUP POWERMAX 624 g ai/a B	95 a	95 a	80 a	78 a
6 SPARTAN 22.7 g ai/a A SENCOR 106 g ai/a A GRAMOXONE INTEON 170 g ai/a A N-PAK AMS 4.9 % v/v A ANTHEM ATZ 510 g ai/a B AATREX NINE-O 410 g ai/a B ROUNDUP POWERMAX 624 g ai/a B	95 a	96 a	70 a	60 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.
 Missing data estimates are included in columns: Yates=11,12,13

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	W WEED PANDI	W WEED XANST	W WEED AMBEL	W WEED PANDI
Pest Type	PANICUM DICHOT>	XANTHIUM STRUM>	AMBROSIA ARTEM>	PANICUM DICHOT>
Pest Code	FALL PANICUM	HEART-LEAF COC>	COMMON RAGWEED	FALL PANICUM
Pest Scientific Name				
Pest Name				
Crop Code				
BBCH Scale				
Crop Scientific Name				
Crop Name				
Part Rated	PLOT P	PLOT P	PLOT P	PLOT P
Rating Date	6/6/2013	6/6/2013	6/6/2013	6/13/2013
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Days After First/Last Applic.	7 7	7 7	7 7	14 14
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	14 DA-A
ARM Action Codes	P	P	P	P
Number of Decimals	0	0	0	0
Trt Treatment				
No. Name	1	2	3	4
Rate Appl				
Rate Unit Code				
7 SPARTAN	96 a	95 a	75 a	70 a
SENCOR				
GRAMOXONE INTEON				
N-PAK AMS				
ANTHEM ATZ				
AATREX NINE-O				
ROUNDUP POWERMAX				
LSD (P=.05)	1.8	2.1	12.7	15.2
Standard Deviation	1.2	1.4	8.5	10.2
CV	1.49	1.77	13.22	16.97
Bartlett's X2	0.0	0.0	3.207	6.753
P(Bartlett's X2)	.	.	0.524	0.15
Skewness	-2.1518*	-2.1513*	-1.8013*	-1.5649*
Kurtosis	2.8431*	2.8411*	1.9455*	1.4056

Purdue University Weed Science

Pest Type	W WEED	W WEED		W WEED		
Pest Code	XANST	AMBEL		PANDI		
Pest Scientific Name	XANTHIUM STRUM>	AMBROSIA ARTEM>		PANICUM DICHOT>		
Pest Name	HEART-LEAF COC>	COMMON RAGWEED		FALL PANICUM		
Crop Code						
BBCH Scale						
Crop Scientific Name						
Crop Name						
Part Rated						
Rating Date						
Rating Type						
Rating Unit						
Sample Size, Unit						
Days After First/Last Applic.						
Trt-Eval Interval						
ARM Action Codes						
Number of Decimals						
Trt Treatment No. Name	Rate	Appl Code	5	6	7	8
1 UNTREATED			0 b	0 b	0 a	0 b
2 AUTHORITY MTZ GRAMOXONE INTEON N-PAK AMS ANTHEM ATZ AATREX NINE-O ROUNDUP POWERMAX	70 g ai/a A 170 g ai/a A 4.9 % v/v A 510 g ai/a B 410 g ai/a B 624 g ai/a B		99 a	63 a	0 a	83 a
3 AUTHORITY MTZ GRAMOXONE INTEON N-PAK AMS ANTHEM ATZ AATREX NINE-O ROUNDUP POWERMAX	70 g ai/a A 227 g ai/a A 4.9 % v/v A 510 g ai/a B 410 g ai/a B 624 g ai/a B		99 a	63 a	0 a	94 a
4 SPARTAN SENCOR GRAMOXONE INTEON N-PAK AMS ANTHEM ATZ AATREX NINE-O ROUNDUP POWERMAX	34 g ai/a A 106 g ai/a A 170 g ai/a A 4.9 % v/v A 510 g ai/a B 410 g ai/a B 624 g ai/a B		100 a	68 a	0 a	94 a
5 SPARTAN SENCOR GRAMOXONE INTEON N-PAK AMS ANTHEM ATZ AATREX NINE-O ROUNDUP POWERMAX	34 g ai/a A 106 g ai/a A 227 g ai/a A 4.9 % v/v A 510 g ai/a B 410 g ai/a B 624 g ai/a B		99 a	65 a	0 a	93 a
6 SPARTAN SENCOR GRAMOXONE INTEON N-PAK AMS ANTHEM ATZ AATREX NINE-O ROUNDUP POWERMAX	22.7 g ai/a A 106 g ai/a A 170 g ai/a A 4.9 % v/v A 510 g ai/a B 410 g ai/a B 624 g ai/a B		100 a	65 a	0 a	84 a

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	W WEED XANST XANTHIUM STRUM> HEART-LEAF COC>	W WEED AMBEL AMBROSIA ARTEM> COMMON RAGWEED	Z EAMX BCOR ZEA MAYS CORN	W WEED PANDI PANICUM DICHOT> FALL PANICUM
Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Code				
BBCH Scale				
Crop Scientific Name				
Crop Name				
Part Rated	PLOT P	PLOT P	PLOT C	PLOT P
Rating Date	6/13/2013	6/13/2013	6/13/2013	6/27/2013
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO
Rating Unit	%	%	%	%
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Days After First/Last Applic.	14 14	14 14	14 14	28 7
Trt-Eval Interval	14 DA-A	14 DA-A	14 DA-A	28 DA-A
ARM Action Codes	P	P	P	P
Number of Decimals	0	0	0	0
Trt Treatment No. Name	5	6	7	8
Rate Appl Rate Unit Code	98 a	58 a	0 a	89 a
7 SPARTAN	22.7 g ai/a A			
SENCOR	106 g ai/a A			
GRAMOXONE INTEON	227 g ai/a A			
N-PAK AMS	4.9 % v/v A			
ANTHEM ATZ	510 g ai/a B			
AATREX NINE-O	410 g ai/a B			
ROUNDUP POWERMAX	624 g ai/a B			
LSD (P=.05)	3.6	17.9	0.0	12.8
Standard Deviation	2.4	12.1	0.0	8.6
CV	2.88	22.2	0.0	11.26
Bartlett's X2	2.413	1.112	0.0	8.033
P(Bartlett's X2)	0.491	0.953	.	0.154
Skewness	-2.1395*	-1.3227*	.	-1.8677*
Kurtosis	2.8084*	0.9517	.	2.09*

Purdue University Weed Science

Pest Type	W WEED	W WEED					
Pest Code	XANST	AMBEL					
Pest Scientific Name	XANTHIUM STRUM>	AMBROSIA ARTEM>					
Pest Name	HEART-LEAF COC>	COMMON RAGWEED					
Crop Code			ZEAMX	ZEAMX	ZEAMX		
BBCH Scale			BCOR	BCOR	BCOR		
Crop Scientific Name			Zea mays	Zea mays	Zea mays		
Crop Name			Corn	Corn	Corn		
Part Rated	PLOT P	PLOT P	YIELD C	YIELD C	YIELD C		
Rating Date	6/27/2013	6/27/2013	11/8/2013	11/8/2013	11/8/2013		
Rating Type	CONTRO	CONTRO	YIELD	YIELD	YIELD		
Rating Unit	%	%	lb/plot	bu/ac	kg/ha		
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT		
Days After First/Last Applic.	28 7	28 7	162 141	162 141	162 141		
Trt-Eval Interval	28 DA-A	28 DA-A					
ARM Action Codes	P	P		TY1	TY2		
Number of Decimals	0	0	1	1	1		
Trt Treatment No. Name	Rate Unit	Appl Code	9	10	11	12	13
1 UNTREATED			0 b	0 b	2.1 c	13.1 c	824.8 c
2 AUTHORITY MTZ GRAMOXONE INTEON N-PAK AMS ANTHEM ATZ AATREX NINE-O ROUNDUP POWERMAX	70 g ai/a A 170 g ai/a A 4.9 % v/v A 510 g ai/a B 410 g ai/a B 624 g ai/a B		100 a	100 a	26.5 ab	161.7 ab	10149.6 ab
3 AUTHORITY MTZ GRAMOXONE INTEON N-PAK AMS ANTHEM ATZ AATREX NINE-O ROUNDUP POWERMAX	70 g ai/a A 227 g ai/a A 4.9 % v/v A 510 g ai/a B 410 g ai/a B 624 g ai/a B		100 a	100 a	24.1 b	147.1 b	9235.5 b
4 SPARTAN SENCOR GRAMOXONE INTEON N-PAK AMS ANTHEM ATZ AATREX NINE-O ROUNDUP POWERMAX	34 g ai/a A 106 g ai/a A 170 g ai/a A 4.9 % v/v A 510 g ai/a B 410 g ai/a B 624 g ai/a B		98 a	100 a	27.4 ab	167.3 ab	10500.9 ab
5 SPARTAN SENCOR GRAMOXONE INTEON N-PAK AMS ANTHEM ATZ AATREX NINE-O ROUNDUP POWERMAX	34 g ai/a A 106 g ai/a A 227 g ai/a A 4.9 % v/v A 510 g ai/a B 410 g ai/a B 624 g ai/a B		100 a	100 a	25.8 ab	157.7 ab	9896.5 ab
6 SPARTAN SENCOR GRAMOXONE INTEON N-PAK AMS ANTHEM ATZ AATREX NINE-O ROUNDUP POWERMAX	22.7 g ai/a A 106 g ai/a A 170 g ai/a A 4.9 % v/v A 510 g ai/a B 410 g ai/a B 624 g ai/a B		100 a	100 a	25.5 ab	156.1 ab	9798.3 ab

Purdue University Weed Science

Pest Type	W WEED	W WEED			
Pest Code	XANST	AMBEL			
Pest Scientific Name	XANTHIUM STRUM>	AMBROSIA ARTEM>			
Pest Name	HEART-LEAF COC>	COMMON RAGWEED			
Crop Code			ZEAMX	ZEAMX	ZEAMX
BBCH Scale			BCOR	BCOR	BCOR
Crop Scientific Name			Zea mays	Zea mays	Zea mays
Crop Name			Corn	Corn	Corn
Part Rated	PLOT P	PLOT P	YIELD C	YIELD C	YIELD C
Rating Date	6/27/2013	6/27/2013	11/8/2013	11/8/2013	11/8/2013
Rating Type	CONTRO	CONTRO	YIELD	YIELD	YIELD
Rating Unit	%	%	lb/plot	bu/ac	kg/ha
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Days After First/Last Applic.	28 7	28 7	162 141	162 141	162 141
Trt-Eval Interval	28 DA-A	28 DA-A			
ARM Action Codes	P	P		TY1	TY2
Number of Decimals	0	0	1	1	1
Trt Treatment No. Name	Rate Appl Rate Unit Code				
		9	10	11	12
		13			
7 SPARTAN	22.7 g ai/a A	100 a	100 a	28.3 a	173.0 a
SENCOR	106 g ai/a A				10861.2 a
GRAMOXONE INTEON	227 g ai/a A				
N-PAK AMS	4.9 % v/v A				
ANTHEM ATZ	510 g ai/a B				
AATREX NINE-O	410 g ai/a B				
ROUNDUP POWERMAX	624 g ai/a B				
LSD (P=.05)	2.8	0.0	2.34	14.30	897.49
Standard Deviation	1.9	0.0	1.56	9.54	598.70
CV	2.21	0.0	6.84	6.84	6.84
Bartlett's X2	0.0	0.0	3.347	3.347	3.347
P(Bartlett's X2)	.	.	0.764	0.764	0.764
Skewness	-2.1467*	-2.1586*	-1.8774*	-1.8774*	-1.8774*
Kurtosis	2.8265*	2.8592*	2.0501*	2.0501*	2.0501*

Purdue University Weed Science

2013/AUTHORITY MTZ/CORN/BURNDOWN

Trial ID: 13S-SEP-CTC-05	Location: SEPAC Trial Year: 2013
Protocol ID: 13S-SEP-CTC-05	Investigator: Dr. Bill Johnson
Project ID: SULF.COR.13.JPR.10	Study Director: JOE IKLEY
	Sponsor Contact: FMC - JOE REED

Randomized Complete Block (RCB) AOV For W WEED PANDI PANICUM DICHOTOMIFLORUM FALL PANICUM PLOT P 6/6/2013 CONTRO % 1 PLOT 7 7 7 DA-A P 0 (Data Column 1)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	27	31260.714286			
Replicate	3	10.714286	3.571429	2.400	0.1016
Treatment	6	31223.214286	5203.869048	3497.000	0.0001
Error	18	26.785714	1.488095		

Randomized Complete Block (RCB) AOV For W WEED XANST XANTHIUM STRUMARIUM HEART-LEAF COCKLEBUR PLOT P 6/6/2013 CONTRO % 1 PLOT 7 7 7 DA-A P 0 (Data Column 2)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	27	30992.857143			
Replicate	3	0.000000	0.000000	0.000	1.0000
Treatment	6	30955.357143	5159.226190	2476.429	0.0001
Error	18	37.500000	2.083333		

Randomized Complete Block (RCB) AOV For W WEED AMBEL AMBROSIA ARTEMISIIFOLIA COMMON RAGWEED PLOT P 6/6/2013 CONTRO % 1 PLOT 7 7 7 DA-A P 0 (Data Column 3)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	27	21296.428571			
Replicate	3	210.714286	70.238095	0.962	0.4321
Treatment	6	19771.428571	3295.238095	45.130	0.0001
Error	18	1314.285714	73.015873		

Randomized Complete Block (RCB) AOV For W WEED PANDI PANICUM DICHOTOMIFLORUM FALL PANICUM PLOT P 6/13/2013 CONTRO % 1 PLOT 14 14 14 DA-A P 0 (Data Column 4)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	27	19724.107143			
Replicate	3	216.964286	72.321429	0.694	0.5678
Treatment	6	17630.357143	2938.392857	28.182	0.0001
Error	18	1876.785714	104.265873		

Randomized Complete Block (RCB) AOV For W WEED XANST XANTHIUM STRUMARIUM HEART-LEAF COCKLEBUR PLOT P 6/13/2013 CONTRO % 1 PLOT 14 14 14 DA-A P 0 (Data Column 5)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	27	33724.107143			
Replicate	3	24.107143	8.035714	1.350	0.2897
Treatment	6	33592.857143	5598.809524	940.600	0.0001
Error	18	107.142857	5.952381		

Randomized Complete Block (RCB) AOV For W WEED AMBEL AMBROSIA ARTEMISIIFOLIA COMMON RAGWEED PLOT P 6/13/2013 CONTRO % 1 PLOT 14 14 14 DA-A P 0 (Data Column 6)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	27	17085.714286			
Replicate	3	485.714286	161.904762	1.115	0.3691
Treatment	6	13985.714286	2330.952381	16.049	0.0001
Error	18	2614.285714	145.238095		

Randomized Complete Block (RCB) AOV For ZEAMX BCOR ZEA MAYS CORN PLOT C 6/13/2013 PHYGEN % 1 PLOT 14 14 14 DA-A P 0 (Data Column 7)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	27	0.000000000000			
Replicate	3	0.000000000000	0.000000000000	0.000	1.0000
Treatment	6	0.000000000000	0.000000000000	0.000	1.0000
Error	18	0.000000000000	0.000000000000		

Randomized Complete Block (RCB) AOV For W WEED PANDI PANICUM DICHOTOMIFLORUM FALL PANICUM PLOT P 6/27/2013 CONTRO % 1 PLOT 28 7 28 DA-A P 0 (Data Column 8)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	27	29292.857143			
Replicate	3	192.857143	64.285714	0.869	0.4755
Treatment	6	27767.857143	4627.976190	62.534	0.0001
Error	18	1332.142857	74.007937		

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Randomized Complete Block (RCB) AOV For W WEED XANST XANTHIUM STRUMARIUM HEART-LEAF COCKLEBUR PLOT P 6/27/2013
 CONTRO % 1 PLOT 28 7 28 DA-A P 0 (Data Column 9)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	27	34096.428571			
Replicate	3	10.714286	3.571429	1.000	0.4155
Treatment	6	34021.428571	5670.238095	1587.667	0.0001
Error	18	64.285714	3.571429		

Randomized Complete Block (RCB) AOV For W WEED AMBEL AMBROSIA ARTEMISIIFOLIA COMMON RAGWEED PLOT P 6/27/2013
 CONTRO % 1 PLOT 28 7 28 DA-A P 0 (Data Column 10)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	27	34285.714286			
Replicate	3	0.000000	0.000000	0.000	1.0000
Treatment	6	34285.714286	5714.285714	0.000	1.0000
Error	18	0.000000	0.000000		

Randomized Complete Block (RCB) AOV For ZEAMX BCOR Zea mays Corn YIELD C 11/8/2013 YIELD lb/plot 1 PLOT 162 141 1 (Data Column 11)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	25	2103.800013			
Replicate	3	28.388225	9.462742	3.886	0.0291
Treatment	6	2036.450544	339.408424	139.383	0.0001
Error	16	38.961244	2.435078		

Randomized Complete Block (RCB) AOV For ZEAMX BCOR Zea mays Corn YIELD C 11/8/2013 YIELD bu/ac 1 PLOT 162 141 TY1 1 (Data Column 12)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	25	78600.779091			
Replicate	3	1060.622026	353.540675	3.886	0.0291
Treatment	6	76084.512945	12680.752157	139.383	0.0001
Error	16	1455.644120	90.977758		

Randomized Complete Block (RCB) AOV For ZEAMX BCOR Zea mays Corn YIELD C 11/8/2013 YIELD kg/ha 1 PLOT 162 141 TY2 1 (Data Column 13)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	25	309673838.006140			
Replicate	3	4178672.238676	1392890.746225	3.886	0.0291
Treatment	6	299760172.976703	49960028.829451	139.383	0.0001
Error	16	5734992.790760	358437.049423		

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

Pest Code
 PANDI, PANICUM DICHOTOMIFLORUM, = US
 XANST, XANTHIUM STRUMARIUM, = US
 AMBEL, AMBROSIA ARTEMISIIFOLIA, = US

Crop Code
 ZEAMX, BCOR, ZEA MAYS, = US

Part Rated
 PLOT = plot
 YIELD = yield
 P = Pest is Part Rated
 C = Crop is Part Rated

Rating Type
 CONTRO = control / burndown or knockdown
 PHYGEN = phytotoxicity - general / injury
 YIELD = yield

Rating Unit
 % = percent
 lb/plot = pounds per plot
 bu/ac = bushels per acre
 kg/ha = kilograms per hectare

PLOT = total plot
ARM Action Codes
 P = Rating scale of 0 to 100 (e.g. % control or injury)
 TY1 = 6.112392*[11]
 TY2 = 383.6631*[11]