

Purdue Weed Science

Efficacy of Tank Mix Partners for Halex GT in Corn

Trial ID: 17S-TPAC-CORN-08 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-CORN-08 Investigator: Dr. Bill Johnson
 Project ID: EHL/WHLCOR08-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

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: Apr-25-2017

Trial Location

City: Lafayette **Country:** USA United States
State/Prov.: Indiana
Postal Code: 47909

Latitude of LL Corner °: 40.29175 N
Longitude of LL Corner °: 86.91022 W

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: Jay Young **Role:** Superintendent
Organization: Purdue University
Address 1: 8343 US 231 S
City: Lafayette **Phone No.:** 765-538-3422
State/Prov: IN **Fax No.:** 765-538-3423
Postal Code: 47909
Country: USA United States **E-mail:** jayyoung@purdue.edu

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: DK62-08STXRIB
Description: RR/LL Stacked

Nursery Date: May-12-2017
Planting Date: Apr-25-2017
Planting Method: PLANTD planted
Planting Equipment: PP Plot Planter
Planting Rate, Unit: 32000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN
Soil Temperature, Unit: 70 F
Soil Moisture: DRY dry

Pest Description

Pest 1 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed

Pest 2 Type: W **Code:** ECHSS Echinochloa sp.
Common Name: Barnyardgrass

Pest 3 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 12
Replications: 4
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB� Randomized Complete Block (RCB)

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Field Prep./Maintenance:
171 lbs of N as UAN on 4/18/17

Soil Description	
Description Name: TPAC- Field 4B	
% OM: 2.9	Texture: SIL silt loam
pH: 6.2	Soil Name: Toronto-Millbrook
CEC: 13.3	

Application Description	
	A
Application Date:	May-26-2017
Appl. Start Time:	11:15 AM
Appl. Stop Time:	12:00 PM
Application Method:	SPRAY
Application Timing:	POSPOS
Application Placement:	BROADC
Applied By:	J. IKLEY
Air Temperature, Unit:	70 F
% Relative Humidity:	69
Wind Velocity, Unit:	3 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	64 F
Soil Moisture:	WET
% Cloud Cover:	50

Crop Stage At Each Application	
	A
Crop 1 Code, BBCH Scale:	ZEAMX BCOR
Stage Scale Used:	BBCH
Stage Majority, Percent:	13
Stage Minimum, Percent:	13
Stage Maximum, Percent:	14
Height, Unit:	5 IN
Height Minimum, Maximum:	4 6

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Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMBTR W
Stage Majority, Percent:	33
Stage Minimum, Percent:	32
Stage Maximum, Percent:	34
Height, Unit:	6 IN
Height Minimum, Maximum:	4 8
Density, Unit:	250 YD2
Pest 2 Code, Type, Scale:	ECHSS W
Stage Majority, Percent:	13
Stage Minimum, Percent:	12
Stage Maximum, Percent:	14
Height, Unit:	3 IN
Height Minimum, Maximum:	2 4
Density, Unit:	150 YD2
Pest 3 Code, Type, Scale:	SETFA W
Stage Majority, Percent:	13
Stage Minimum, Percent:	12
Stage Maximum, Percent:	14
Height, Unit:	2 IN
Height Minimum, Maximum:	1 3
Density, Unit:	75 YD2

Application Equipment

	A
Appl. Equipment:	CO2 BACKPACK
Equipment Type:	BACSPR
Operation Pressure, Unit:	18 PSI
Nozzle Type:	FLAFXR
Nozzle Size:	XR11002
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	8
Boom Length, Unit:	10 FT
Boom Height, Unit:	17 IN
Ground Speed, Unit:	3 MPH
Carrier:	WATER
Spray Volume, Unit:	15 GAL/AC
Mix Size, Unit:	1.8 liters
Propellant:	COMCO2

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Reps: 4 Plots: 10 by 30 feet
 Spray vol: 15 GAL/AC Mix Size: 1.8 liters (1.5642 liters calculated mix size)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate	Appl Code	Amt to Measure	Product	Rep 1	Rep 2	Rep 3	Rep 4
1	UNTREATED CHECK								101	306	606	703
2	ACURON	3.44	LB/GAL	ZC	1.5 qt/a	A	45.0 ml/mx		102	304	604	702
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	26 fl oz/a	A	24.37 ml/mx					
	N-PAK AMS	3.4	LBA/GAL	L	2.5 % v/v	A	45.0 ml/mx					
3	ACURON FLEXI	3.26	LB/GAL	ZC	1.1 qt/a	A	33.0 ml/mx		103	404	603	701
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	26 fl oz/a	A	24.37 ml/mx					
	N-PAK AMS	3.4	LBA/GAL	L	2.5 % v/v	A	45.0 ml/mx					
4	HALEX GT	4.389	LBAE/GAL	L	3.6 pt/a	A	54.0 ml/mx		104	305	502	803
	ACTIVATOR 90 NIS	100 %		SL	0.25 % v/v	A	4.5 ml/mx					
	N-PAK AMS	3.4	LBA/GAL	L	2.5 % v/v	A	45.0 ml/mx					
5	HALEX GT	4.389	LBAE/GAL	L	3.6 pt/a	A	54.0 ml/mx		105	402	506	704
	AATREX	4	LB/GAL	L	1 pt/a	A	15.0 ml/mx					
	ACTIVATOR 90 NIS	100 %		SL	0.25 % v/v	A	4.5 ml/mx					
	N-PAK AMS	3.4	LBA/GAL	L	2.5 % v/v	A	45.0 ml/mx					
6	HALEX GT	4.389	LBAE/GAL	L	3.6 pt/a	A	54.0 ml/mx		106	406	504	805
	NORTHSTAR	47.4 %		WG	2.5 oz/a	A	2.247 g/mx					
	ACTIVATOR 90 NIS	100 %		SL	0.25 % v/v	A	4.5 ml/mx					
	N-PAK AMS	3.4	LBA/GAL	L	2.5 % v/v	A	45.0 ml/mx					
7	HALEX GT	4.389	LBAE/GAL	L	3.6 pt/a	A	54.0 ml/mx		201	302	601	705
	NORTHSTAR	47.4 %		WG	2.5 oz/a	A	2.247 g/mx					
	AATREX	4	LB/GAL	L	1 pt/a	A	15.0 ml/mx					
	ACTIVATOR 90 NIS	100 %		SL	0.25 % v/v	A	4.5 ml/mx					
	N-PAK AMS	3.4	LBA/GAL	L	2.5 % v/v	A	45.0 ml/mx					
8	HALEX GT	4.389	LBAE/GAL	L	3.6 pt/a	A	54.0 ml/mx		202	403	602	802
	STATUS	56 %		WG	2.5 oz/a	A	2.247 g/mx					
	ACTIVATOR 90 NIS	100 %		SL	0.25 % v/v	A	4.5 ml/mx					
	N-PAK AMS	3.4	LBA/GAL	L	2.5 % v/v	A	45.0 ml/mx					
9	HALEX GT	4.389	LBAE/GAL	L	3.6 pt/a	A	54.0 ml/mx		203	405	503	801
	STINGER	3	LBAE/GAL	L	2.5 fl oz/a	A	2.344 ml/mx					
	ACTIVATOR 90 NIS	100 %		SL	0.25 % v/v	A	4.5 ml/mx					
	N-PAK AMS	3.4	LBA/GAL	L	2.5 % v/v	A	45.0 ml/mx					
10	RESICORE	3.29	LB/GAL	L	1.25 qt/a	A	37.5 ml/mx		204	301	501	806
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	26 fl oz/a	A	24.37 ml/mx					
	N-PAK AMS	3.4	LBA/GAL	L	2.5 % v/v	A	45.0 ml/mx					
11	ARMEZON PRO	5.35	LB/GAL	EC	20 fl oz/a	A	18.75 ml/mx		205	303	505	804
	AATREX	4	LB/GAL	L	1 pt/a	A	15.0 ml/mx					
	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	26 fl oz/a	A	24.37 ml/mx					
	N-PAK AMS	3.4	LBA/GAL	L	2.5 % v/v	A	45.0 ml/mx					
12	UNTREATED CHECK 2								206	401	605	706

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 Unit	Form Type	Lot Code
56.250	ml	ACURON	3.44	LB/GAL	ZC	
121.875	ml	ROUNDUP POWERMAX	4.5	LBAE/GAL	SL	
562.439	ml	N-PAK AMS	3.4	LBA/GAL	L	
41.250	ml	ACURON FLEXI	3.26	LB/GAL	ZC	
405.000	ml	HALEX GT	4.389	LBAE/GAL	L	
33.746	ml	ACTIVATOR 90 NIS	100	%	SL	
56.250	ml	AATREX	4	LB/GAL	L	
5.617	g	NORTHSTAR	47.4	%	WG	
2.808	g	STATUS	56	%	WG	

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

Amount*	Unit	Treatment Name	Form Conc	Form Unit	Form Type	Lot Code
2.930	ml	STINGER	3	LBAE/GAL	L	
46.875	ml	RESICORE	3.29	LB/GAL	L	
23.437	ml	ARMEZON PRO	5.35	LB/GAL	EC	

* 'Per area' calculations based on spray volume= 15 GAL/AC, mix size= 1.8 liters (mix size basis).

* Product amount calculations increased 25 % for overage adjustment.

* 'Per volume' calculations use spray volume= 15 GAL/AC, mix size= 1.8 liters.

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Pest Type	W Weed	W Weed	W Weed		W Weed	W Weed		
Pest Code	AMBTR	ECHSS	SETFA		AMBTR	ECHSS		
Pest Name	Giant ragweed	Barnyardgrass	Giant foxtail		Giant ragweed	Barnyardgrass		
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn		
Part Rated	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -		
Rating Date	Jun-2-2017	Jun-2-2017	Jun-2-2017	Jun-2-2017	Jun-9-2017	Jun-9-2017		
Rating Type	CONTROL	CONTROL	CONTROL	PHYGEN	CONTROL	CONTROL		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	D. JOHNSON	D. JOHNSON		
Rating Timing	A1	A1	A1	A1	A2	A2		
Days After First/Last Applic.	7 7	7 7	7 7	7 7	14 14	14 14		
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A		
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	1	2	3	4	5	6
1 UNTREATED CHECK		101	0	0	0	0	0	0
		306	0	0	0	0	0	0
		606	0	0	0	0	0	0
		703	0	0	0	0	0	0
		Mean =	0	0	0	0	0	0
2 ACURON	1.5 qt/a	A 102	85	100	100	0	98	100
ROUNDUP POWERMAX	26 fl oz/a	A 304	85	100	100	0	92	100
N-PAK AMS	2.5 % v/v	A 604	85	100	100	0	95	100
		702	85	100	100	0	95	100
		Mean =	85	100	100	0	95	100
3 ACURON FLEXI	1.1 qt/a	A 103	95	100	100	0	98	100
ROUNDUP POWERMAX	26 fl oz/a	A 404	90	100	100	3	95	100
N-PAK AMS	2.5 % v/v	A 603	85	100	100	0	85	100
		701	85	100	100	0	85	100
		Mean =	89	100	100	1	91	100
4 HALEX GT	3.6 pt/a	A 104	90	98	100	10	99	100
ACTIVATOR 90 NIS	0.25 % v/v	A 305	95	100	100	10	98	100
N-PAK AMS	2.5 % v/v	A 502	85	100	100	5	90	100
		803	85	100	100	5	90	100
		Mean =	89	100	100	8	94	100
5 HALEX GT	3.6 pt/a	A 105	80	100	100	5	95	100
AATREX	1 pt/a	A 402	90	100	100	10	95	100
ACTIVATOR 90 NIS	0.25 % v/v	A 506	80	95	95	5	85	100
N-PAK AMS	2.5 % v/v	A 704	85	100	100	5	95	100
		Mean =	84	99	99	6	93	100
6 HALEX GT	3.6 pt/a	A 106	95	100	100	3	100	100
NORTHSTAR	2.5 oz/a	A 406	80	100	100	10	90	100
ACTIVATOR 90 NIS	0.25 % v/v	A 504	85	100	100	3	95	100
N-PAK AMS	2.5 % v/v	A 805	85	100	100	3	95	100
		Mean =	86	100	100	5	95	100
7 HALEX GT	3.6 pt/a	A 201	80	100	100	0	95	100
NORTHSTAR	2.5 oz/a	A 302	90	100	100	3	97	100
AATREX	1 pt/a	A 601	85	100	100	0	90	100
ACTIVATOR 90 NIS	0.25 % v/v	A 705	85	100	100	3	95	100
N-PAK AMS	2.5 % v/v	A						
		Mean =	85	100	100	2	94	100
8 HALEX GT	3.6 pt/a	A 202	85	100	100	3	95	100
STATUS	2.5 oz/a	A 403	95	100	100	0	95	100
ACTIVATOR 90 NIS	0.25 % v/v	A 602	85	100	100	0	90	100
N-PAK AMS	2.5 % v/v	A 802	90	100	100	0	95	100
		Mean =	89	100	100	1	94	100
9 HALEX GT	3.6 pt/a	A 203	85	100	100	5	95	100
STINGER	2.5 fl oz/a	A 405	85	100	100	10	90	100
ACTIVATOR 90 NIS	0.25 % v/v	A 503	85	100	100	5	95	100
N-PAK AMS	2.5 % v/v	A 801	85	100	100	3	90	100
		Mean =	85	100	100	6	93	100

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Pest Type	W Weed	W Weed	W Weed		W Weed	W Weed		
Pest Code	AMBTR	ECHSS	SETFA		AMBTR	ECHSS		
Pest Name	Giant ragweed	Barnyardgrass	Giant foxtail		Giant ragweed	Barnyardgrass		
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn		
Part Rated	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -		
Rating Date	Jun-2-2017	Jun-2-2017	Jun-2-2017	Jun-2-2017	Jun-9-2017	Jun-9-2017		
Rating Type	CONTROL	CONTROL	CONTROL	PHYGEN	CONTROL	CONTROL		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	D. JOHNSON	D. JOHNSON		
Rating Timing	A1	A1	A1	A1	A2	A2		
Days After First/Last Applic.	7 7	7 7	7 7	7 7	14 14	14 14		
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A		
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	1	2	3	4	5	6
10 RESICORE	1.25 qt/a A	204	93	100	100	7	97	100
ROUNDUP POWERMAX	26 fl oz/a A	301	85	100	100	5	92	100
N-PAK AMS	2.5 % v/v A	501	90	100	100	0	95	100
		806	85	100	100	3	90	100
		Mean =	88	100	100	4	94	100
11 ARMEZON PRO	20 fl oz/a A	205	80	100	100	3	95	100
AATREX	1 pt/a A	303	85	100	100	0	98	100
ROUNDUP POWERMAX	26 fl oz/a A	505	80	100	100	0	95	100
N-PAK AMS	2.5 % v/v A	804	80	100	100	0	95	100
		Mean =	81	100	100	1	96	100
12 UNTREATED CHECK 2		206	0	0	0	0	0	0
		401	0	0	0	0	0	0
		605	0	0	0	0	0	0
		706	0	0	0	0	0	0
		Mean =	0	0	0	0	0	0

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Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	ECHSS	SETFA
Pest Name	Giant foxtail	Giant ragweed	Barnyardgrass	Giant foxtail
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Crop Name	Corn	Corn	Corn	Corn
Part Rated	PLANT -	PLANT -	PLANT -	PLANT -
Rating Date	Jun-9-2017	Jun-9-2017	Jun-23-2017	Jun-23-2017
Rating Type	CONTROL	PHYGEN	CONTROL	CONTROL
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Assessed By	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON
Rating Timing	A2	A2	A3	A3
Days After First/Last Applic.	14 14	14 14	28 28	28 28
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 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	7	8	9	10	11
1 UNTREATED CHECK		101	0	0	0	0	0
		306	0	0	0	0	0
		606	0	0	0	0	0
		703	0	0	0	0	0
		Mean =	0	0	0	0	0
2 ACURON	1.5 qt/a A	102	99	0	95	100	98
ROUNDUP POWERMAX	26 fl oz/a A	304	100	0	96	100	100
N-PAK AMS	2.5 % v/v A	604	100	0	95	100	99
		702	100	0	90	100	100
		Mean =	100	0	94	100	99
3 ACURON FLEXI	1.1 qt/a A	103	98	0	95	100	95
ROUNDUP POWERMAX	26 fl oz/a A	404	100	2	88	100	100
N-PAK AMS	2.5 % v/v A	603	100	0	75	100	95
		701	100	0	78	100	100
		Mean =	100	1	84	100	98
4 HALEX GT	3.6 pt/a A	104	100	10	93	100	95
ACTIVATOR 90 NIS	0.25 % v/v A	305	100	10	90	100	100
N-PAK AMS	2.5 % v/v A	502	100	10	90	100	99
		803	100	10	75	100	95
		Mean =	100	10	87	100	97
5 HALEX GT	3.6 pt/a A	105	100	5	95	100	95
AATREX	1 pt/a A	402	100	10	95	100	100
ACTIVATOR 90 NIS	0.25 % v/v A	506	100	10	78	100	100
N-PAK AMS	2.5 % v/v A	704	100	10	87	100	100
		Mean =	100	9	89	100	99
6 HALEX GT	3.6 pt/a A	106	100	3	99	100	100
NORTHSTAR	2.5 oz/a A	406	100	5	80	100	95
ACTIVATOR 90 NIS	0.25 % v/v A	504	100	3	95	100	95
N-PAK AMS	2.5 % v/v A	805	100	2	88	100	100
		Mean =	100	3	91	100	98
7 HALEX GT	3.6 pt/a A	201	100	0	97	100	100
NORTHSTAR	2.5 oz/a A	302	100	0	95	100	100
AATREX	1 pt/a A	601	100	0	88	100	95
ACTIVATOR 90 NIS	0.25 % v/v A	705	100	0	90	100	100
N-PAK AMS	2.5 % v/v A						
		Mean =	100	0	93	100	99
8 HALEX GT	3.6 pt/a A	202	100	2	95	100	100
STATUS	2.5 oz/a A	403	100	2	93	100	98
ACTIVATOR 90 NIS	0.25 % v/v A	602	100	0	85	100	100
N-PAK AMS	2.5 % v/v A	802	100	0	92	100	97
		Mean =	100	1	91	100	99
9 HALEX GT	3.6 pt/a A	203	100	10	90	100	98
STINGER	2.5 fl oz/a A	405	100	10	85	100	95
ACTIVATOR 90 NIS	0.25 % v/v A	503	100	10	95	100	100
N-PAK AMS	2.5 % v/v A	801	100	7	75	100	97
		Mean =	100	9	86	100	98

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 Project ID: EHL/WHLCOR08-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type	W Weed		W Weed	W Weed	W Weed
Pest Code	SETFA		AMBTR	ECHSS	SETFA
Pest Name	Giant foxtail		Giant ragweed	Barnyardgrass	Giant foxtail
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Crop Name	Corn	Corn	Corn	Corn	Corn
Part Rated	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -
Rating Date	Jun-9-2017	Jun-9-2017	Jun-23-2017	Jun-23-2017	Jun-23-2017
Rating Type	CONTROL	PHYGEN	CONTROL	CONTROL	CONTROL
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Assessed By	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON
Rating Timing	A2	A2	A3	A3	A3
Days After First/Last Applic.	14 14	14 14	28 28	28 28	28 28
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A
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	7	8	9
10 RESICORE	1.25 qt/a A	204	100	10	92
ROUNDUP POWERMAX	26 fl oz/a A	301	100	5	88
N-PAK AMS	2.5 % v/v A	501	100	0	88
		806	100	5	70
	Mean =		100	5	85
11 ARMEZON PRO	20 fl oz/a A	205	100	2	90
AATREX	1 pt/a A	303	100	0	95
ROUNDUP POWERMAX	26 fl oz/a A	505	100	0	82
N-PAK AMS	2.5 % v/v A	804	100	0	75
	Mean =		100	1	86
12 UNTREATED CHECK 2		206	0	0	0
		401	0	0	0
		605	0	0	0
		706	0	0	0
	Mean =		0	0	0

Purdue Weed Science

Efficacy of Tank Mix Partners for Halex GT in Corn

Trial ID: 17S-TPAC-CORN-08 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-CORN-08 Investigator: Dr. Bill Johnson
 Project ID: EHL/WHLCOR08-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type		W Weed	W Weed	W Weed	
Pest Code		AMBTR	ECHSS	SETFA	
Pest Name		Giant ragweed	Barnyardgrass	Giant foxtail	
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Crop Name	Corn	Corn	Corn	Corn	Corn
Part Rated	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -
Rating Date	Jun-23-2017	Jun-10-2017	Jul-10-2017	Jul-10-2017	Jul-10-2017
Rating Type	PHYGEN	CONTROL	CONTROL	CONTROL	PHYGEN
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Assessed By	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON
Rating Timing	A3	A4	A4	A4	A4
Days After First/Last Applic.	28 28	15 15	45 45	45 45	45 45
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A
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	12	13	14
1 UNTREATED CHECK		101	0	0	0
		306	0	0	0
		606	0	0	0
		703	0	0	0
		Mean =	0	0	0
2 ACURON	1.5 qt/a A	102	0	95	100
ROUNDUP POWERMAX	26 fl oz/a A	304	0	90	100
N-PAK AMS	2.5 % v/v A	604	0	85	100
		702	0	90	100
		Mean =	0	90	100
3 ACURON FLEXI	1.1 qt/a A	103	0	95	100
ROUNDUP POWERMAX	26 fl oz/a A	404	0	80	100
N-PAK AMS	2.5 % v/v A	603	0	70	100
		701	0	75	100
		Mean =	0	80	100
4 HALEX GT	3.6 pt/a A	104	3	95	100
ACTIVATOR 90 NIS	0.25 % v/v A	305	0	85	100
N-PAK AMS	2.5 % v/v A	502	3	85	100
		803	0	65	100
		Mean =	2	83	100
5 HALEX GT	3.6 pt/a A	105	0	90	100
AATREX	1 pt/a A	402	0	95	100
ACTIVATOR 90 NIS	0.25 % v/v A	506	0	68	100
N-PAK AMS	2.5 % v/v A	704	0	70	100
		Mean =	0	81	100
6 HALEX GT	3.6 pt/a A	106	0	95	100
NORTHSTAR	2.5 oz/a A	406	0	70	100
ACTIVATOR 90 NIS	0.25 % v/v A	504	0	85	100
N-PAK AMS	2.5 % v/v A	805	0	80	90
		Mean =	0	83	98
7 HALEX GT	3.6 pt/a A	201	0	100	100
NORTHSTAR	2.5 oz/a A	302	0	90	100
AATREX	1 pt/a A	601	0	80	100
ACTIVATOR 90 NIS	0.25 % v/v A	705	0	80	100
N-PAK AMS	2.5 % v/v A				
		Mean =	0	88	100
8 HALEX GT	3.6 pt/a A	202	0	90	100
STATUS	2.5 oz/a A	403	0	80	100
ACTIVATOR 90 NIS	0.25 % v/v A	602	0	85	100
N-PAK AMS	2.5 % v/v A	802	0	90	100
		Mean =	0	86	100
9 HALEX GT	3.6 pt/a A	203	0	90	100
STINGER	2.5 fl oz/a A	405	0	75	100
ACTIVATOR 90 NIS	0.25 % v/v A	503	3	95	100
N-PAK AMS	2.5 % v/v A	801	0	70	100
		Mean =	1	83	100

Purdue Weed Science

Efficacy of Tank Mix Partners for Halex GT in Corn

Trial ID: 17S-TPAC-CORN-08	Location: TPAC	Trial Year: 2017
Protocol ID: 17S-TPAC-CORN-08	Investigator: Dr. Bill Johnson	
Project ID: EHL/WHLCOR08-2017	Study Director: Dustin Johnson	
Sponsor Contact: C. Threewits - Syngenta		

		W Weed AMBTR Giant ragweed	W Weed ECHSS Barnyardgrass	W Weed SETFA Giant foxtail	
Pest Type					
Pest Code					
Pest Name					
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Crop Name	Corn	Corn	Corn	Corn	Corn
Part Rated	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -
Rating Date	Jun-23-2017	Jun-10-2017	Jul-10-2017	Jul-10-2017	Jul-10-2017
Rating Type	PHYGEN	CONTROL	CONTROL	CONTROL	PHYGEN
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Assessed By	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON
Rating Timing	A3	A4	A4	A4	A4
Days After First/Last Applic.	28 28	15 15	45 45	45 45	45 45
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A
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	12	13	14	15
10 RESICORE	1.25 qt/a A 204	0	90	100	95
ROUNDUP POWERMAX	26 fl oz/a A 301	0	80	100	100
N-PAK AMS	2.5 % v/v A 501	0	85	100	95
	806	0	60	95	98
	Mean =	0	79	99	97
11 ARMEZON PRO	20 fl oz/a A 205	0	85	100	100
AATREX	1 pt/a A 303	0	85	100	100
ROUNDUP POWERMAX	26 fl oz/a A 505	0	70	100	100
N-PAK AMS	2.5 % v/v A 804	0	65	100	100
	Mean =	0	76	100	100
12 UNTREATED CHECK 2	206	0	0	0	0
	401	0	0	0	0
	605	0	0	0	0
	706	0	0	0	0
	Mean =	0	0	0	0

Purdue Weed Science

Efficacy of Tank Mix Partners for Halex GT in Corn

Trial ID: 17S-TPAC-CORN-08 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-CORN-08 Investigator: Dr. Bill Johnson
 Project ID: EHL/WHLCOR08-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type	W Weed	W Weed	W Weed
Pest Code	AMBTR	ECHSS	SETFA
Pest Name	Giant ragweed	Barnyardgrass	Giant foxtail
Crop Code	ZEAMX	ZEAMX	ZEAMX
Crop Name	Corn	Corn	Corn
Part Rated	PLANT -	PLANT -	PLANT -
Rating Date	Jul-21-2017	Jul-21-2017	Jul-21-2017
Rating Type	CONTROL	CONTROL	CONTROL
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Assessed By	D. JOHNSON	D. JOHNSON	D. JOHNSON
Rating Timing	A5	A5	A5
Days After First/Last Applic.	56 56	56 56	56 56
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	17	18	19
1 UNTREATED CHECK		101	0	0	0
		306	0	0	0
		606	0	0	0
		703	0	0	0
		Mean =	0	0	0
2 ACURON	1.5 qt/a	A 102	95	100	95
ROUNDUP POWERMAX	26 fl oz/a	A 304	90	100	100
N-PAK AMS	2.5 % v/v	A 604	80	100	95
		702	90	100	100
		Mean =	89	100	98
3 ACURON FLEXI	1.1 qt/a	A 103	95	100	90
ROUNDUP POWERMAX	26 fl oz/a	A 404	80	100	90
N-PAK AMS	2.5 % v/v	A 603	60	100	85
		701	70	100	100
		Mean =	76	100	91
4 HALEX GT	3.6 pt/a	A 104	95	100	90
ACTIVATOR 90 NIS	0.25 % v/v	A 305	75	100	100
N-PAK AMS	2.5 % v/v	A 502	85	100	100
		803	60	100	100
		Mean =	79	100	98
5 HALEX GT	3.6 pt/a	A 105	85	100	95
AATREX	1 pt/a	A 402	90	100	100
ACTIVATOR 90 NIS	0.25 % v/v	A 506	55	100	95
N-PAK AMS	2.5 % v/v	A 704	55	100	95
		Mean =	71	100	96
6 HALEX GT	3.6 pt/a	A 106	95	100	92
NORTHSTAR	2.5 oz/a	A 406	60	95	75
ACTIVATOR 90 NIS	0.25 % v/v	A 504	85	100	95
N-PAK AMS	2.5 % v/v	A 805	70	90	90
		Mean =	78	96	88
7 HALEX GT	3.6 pt/a	A 201	98	100	100
NORTHSTAR	2.5 oz/a	A 302	90	100	95
AATREX	1 pt/a	A 601	73	100	95
ACTIVATOR 90 NIS	0.25 % v/v	A 705	75	100	90
N-PAK AMS	2.5 % v/v	A			
		Mean =	84	100	95
8 HALEX GT	3.6 pt/a	A 202	88	100	98
STATUS	2.5 oz/a	A 403	75	100	90
ACTIVATOR 90 NIS	0.25 % v/v	A 602	80	100	95
N-PAK AMS	2.5 % v/v	A 802	90	100	97
		Mean =	83	100	95
9 HALEX GT	3.6 pt/a	A 203	88	100	95
STINGER	2.5 fl oz/a	A 405	70	95	75
ACTIVATOR 90 NIS	0.25 % v/v	A 503	92	100	100
N-PAK AMS	2.5 % v/v	A 801	70	100	100
		Mean =	80	99	93

Purdue Weed Science

Efficacy of Tank Mix Partners for Halex GT in Corn

Trial ID: 17S-TPAC-CORN-08	Location: TPAC	Trial Year: 2017
Protocol ID: 17S-TPAC-CORN-08	Investigator: Dr. Bill Johnson	
Project ID: EHL/WHLCOR08-2017	Study Director: Dustin Johnson	
	Sponsor Contact: C. Threewits - Syngenta	

Pest Type	W Weed	W Weed	W Weed	
Pest Code	AMBTR	ECHSS	SETFA	
Pest Name	Giant ragweed	Barnyardgrass	Giant foxtail	
Crop Code	ZEAMX	ZEAMX	ZEAMX	
Crop Name	Corn	Corn	Corn	
Part Rated	PLANT -	PLANT -	PLANT -	
Rating Date	Jul-21-2017	Jul-21-2017	Jul-21-2017	
Rating Type	CONTROL	CONTROL	CONTROL	
Rating Unit	%	%	%	
Number of Subsamples	1	1	1	
Assessed By	D. JOHNSON	D. JOHNSON	D. JOHNSON	
Rating Timing	A5	A5	A5	
Days After First/Last Applic.	56 56	56 56	56 56	
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	17	18
10 RESICORE	1.25 qt/a A	204	88	100
ROUNDUP POWERMAX	26 fl oz/a A	301	80	100
N-PAK AMS	2.5 % v/v A	501	82	100
		806	55	90
		Mean =	76	98
11 ARMEZON PRO	20 fl oz/a A	205	80	100
AATREX	1 pt/a A	303	78	100
ROUNDUP POWERMAX	26 fl oz/a A	505	60	100
N-PAK AMS	2.5 % v/v A	804	55	100
		Mean =	68	100
12 UNTREATED CHECK 2		206	0	0
		401	0	0
		605	0	0
		706	0	0
		Mean =	0	0

Purdue Weed Science

Efficacy of Tank Mix Partners for Halex GT in Corn

Trial ID: 17S-TPAC-CORN-08 Location: TPAC Trial Year: 2017
Protocol ID: 17S-TPAC-CORN-08 Investigator: Dr. Bill Johnson
Project ID: EHL/WHLCOR08-2017 Study Director: Dustin Johnson
Sponsor Contact: C. Threewits - Syngenta

Pest Type

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

Pest Code

AMBTR, Ambrosia trifida, Giant ragweed = US

ECHSS, Echinochloa sp., Barnyardgrass = US

SETFA, Setaria faberi, Giant foxtail = US

Crop Code

ZEAMX, BCOR, Zea mays, Corn = US

Part Rated

PLANT = plant

Rating Type

PHYGEN = phytotoxicity - general / injury

Rating Unit

% = percent

Rating Timing

A1 = 1st Assessment According to Trial Schedule

A2 = 2nd Assessment According to trial Schedule

A3 = 3rd Assessment According to Trial Schedule

A4 = 4th Assessment According to Trial Schedule

A5 = 5th Assessment According to Trial Schedule

ARM Action Codes

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

Purdue Weed Science

Efficacy of Tank Mix Partners for Halex GT in Corn

Trial ID: 17S-TPAC-CORN-08
 Protocol ID: 17S-TPAC-CORN-08
 Project ID: EHL/WHLCOR08-2017
 Location: TPAC
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta
 Trial Year: 2017

Pest Type	W Weed	W Weed	W Weed		W Weed	W Weed		
Pest Code	AMBTR	ECHSS	SETFA		AMBTR	ECHSS		
Pest Name	Giant ragweed	Barnyardgrass	Giant foxtail		Giant ragweed	Barnyardgrass		
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn		
Part Rated	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -		
Rating Date	Jun-2-2017	Jun-2-2017	Jun-2-2017	Jun-2-2017	Jun-9-2017	Jun-9-2017		
Rating Type	CONTROL	CONTROL	CONTROL	PHYGEN	CONTROL	CONTROL		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	D. JOHNSON	D. JOHNSON		
Rating Timing	A1	A1	A1	A1	A2	A2		
Days After First/Last Applic.	7 7	7 7	7 7	7 7	14 14	14 14		
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A		
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	1	2	3	4	5	6
1 UNTREATED CHECK			0 b	0 b	0 b	0 c	0 b	0 b
2 ACURON ROUNDUP POWERMAX N-PAK AMS	1.5 qt/a A 26 fl oz/a A 2.5 % v/v A		85 a	100 a	100 a	0 c	95 a	100 a
3 ACURON FLEXI ROUNDUP POWERMAX N-PAK AMS	1.1 qt/a A 26 fl oz/a A 2.5 % v/v A		89 a	100 a	100 a	1 c	91 a	100 a
4 HALEX GT ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 0.25 % v/v A 2.5 % v/v A		89 a	100 a	100 a	8 a	94 a	100 a
5 HALEX GT AATREX ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 1 pt/a A 0.25 % v/v A 2.5 % v/v A		84 a	99 a	99 a	6 ab	93 a	100 a
6 HALEX GT NORTHSTAR ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 2.5 oz/a A 0.25 % v/v A 2.5 % v/v A		86 a	100 a	100 a	5 ab	95 a	100 a
7 HALEX GT NORTHSTAR AATREX ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 2.5 oz/a A 1 pt/a A 0.25 % v/v A 2.5 % v/v A		85 a	100 a	100 a	2 c	94 a	100 a
8 HALEX GT STATUS ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 2.5 oz/a A 0.25 % v/v A 2.5 % v/v A		89 a	100 a	100 a	1 c	94 a	100 a
9 HALEX GT STINGER ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 2.5 fl oz/a A 0.25 % v/v A 2.5 % v/v A		85 a	100 a	100 a	6 ab	93 a	100 a
10 RESICORE ROUNDUP POWERMAX N-PAK AMS	1.25 qt/a A 26 fl oz/a A 2.5 % v/v A		88 a	100 a	100 a	4 bc	94 a	100 a
11 ARMEZON PRO AATREX ROUNDUP POWERMAX N-PAK AMS	20 fl oz/a A 1 pt/a A 26 fl oz/a A 2.5 % v/v A		81 a	100 a	100 a	1 c	96 a	100 a

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Could not calculate LSD (% mean diff) for columns 6,10,16 because error mean square = 0.

Purdue Weed Science

Efficacy of Tank Mix Partners for Halex GT in Corn

Trial ID: 17S-TPAC-CORN-08	Location: TPAC	Trial Year: 2017
Protocol ID: 17S-TPAC-CORN-08	Investigator: Dr. Bill Johnson	
Project ID: EHL/WHLCOR08-2017	Study Director: Dustin Johnson	
Sponsor Contact: C. Threewits - Syngenta		

	W Weed AMBTR Giant ragweed	W Weed ECHSS Barnyardgrass	W Weed SETFA Giant foxtail	Z ZEAMX Corn	Z ZEAMX Corn	W Weed AMBTR Giant ragweed	W Weed ECHSS Barnyardgrass
Pest Type							
Pest Code	AMBTR	ECHSS	SETFA			AMBTR	ECHSS
Pest Name	Giant ragweed	Barnyardgrass	Giant foxtail			Giant ragweed	Barnyardgrass
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn	Corn
Part Rated	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -
Rating Date	Jun-2-2017	Jun-2-2017	Jun-2-2017	Jun-2-2017	Jun-2-2017	Jun-9-2017	Jun-9-2017
Rating Type	CONTROL	CONTROL	CONTROL	PHYGEN	CONTROL	CONTROL	CONTROL
Rating Unit	%	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1	1
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	D. JOHNSON	D. JOHNSON	D. JOHNSON
Rating Timing	A1	A1	A1	A1	A2	A2	A2
Days After First/Last Applic.	7 7	7 7	7 7	7 7	14 14	14 14	14 14
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A
ARM Action Codes	P	P	P	P	P	P	P
Number of Decimals	0	0	0	0	0	0	0
Trt Treatment							
No. Name	1	2	3	4	5	6	
	Rate	Rate	Rate	Rate	Rate	Rate	Rate
	Unit	Unit	Unit	Unit	Unit	Unit	Unit
	Code	Code	Code	Code	Code	Code	Code
12 UNTREATED CHECK 2	0 b	0 b	0 b	0 c	0 b	0 b	0 b
LSD P=.05	5.3	1.1	1.0	2.6	4.5	.	.
Standard Deviation	3.7	0.8	0.7	1.8	3.2	0.0	0.0
CV	5.11	0.94	0.87	68.12	4.04	0.0	0.0
Bartlett's X2	2.352	2.199	0.0	5.071	8.851	0.0	0.0
P(Bartlett's X2)	0.938	0.138	.	0.75	0.451	.	.
Skewness	-1.7846*	-1.8454*	-1.8456*	1.0981*	-1.8102*	-1.8471*	-1.8471*
Kurtosis	1.3565*	1.4679*	1.4683*	0.2618	1.3975*	1.4713*	1.4713*
Replicate F	1.625	0.754	1.000	5.753	4.322	0.000	0.000
Replicate Prob(F)	0.2022	0.5277	0.4051	0.0028	0.0112	1.0000	1.0000
Treatment F	335.549	9792.526	11608.274	9.508	534.152	0.000	0.000
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.0001	1.0000	1.0000

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Could not calculate LSD (% mean diff) for columns 6,10,16 because error mean square = 0.

Purdue Weed Science

Efficacy of Tank Mix Partners for Halex GT in Corn

Trial ID: 17S-TPAC-CORN-08 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-CORN-08 Investigator: Dr. Bill Johnson
 Project ID: EHL/WHLCOR08-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	SETFA		AMBTR	ECHSS	SETFA			
Pest Name	Giant foxtail		Giant ragweed	Barnyardgrass	Giant foxtail			
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn		
Part Rated	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -		
Rating Date	Jun-9-2017	Jun-9-2017	Jun-23-2017	Jun-23-2017	Jun-23-2017	Jun-23-2017		
Rating Type	CONTROL	PHYGEN	CONTROL	CONTROL	CONTROL	PHYGEN		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Assessed By	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON		
Rating Timing	A2	A2	A3	A3	A3	A3		
Days After First/Last Applic.	14 14	14 14	28 28	28 28	28 28	28 28		
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A		
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	7	8	9	10	11	12
1 UNTREATED CHECK			0 b	0 c	0 b	0 b	0 b	0 a
2 ACURON ROUNDUP POWERMAX N-PAK AMS	1.5 qt/a A 26 fl oz/a A 2.5 % v/v A		100 a	0 c	94 a	100 a	99 a	0 a
3 ACURON FLEXI ROUNDUP POWERMAX N-PAK AMS	1.1 qt/a A 26 fl oz/a A 2.5 % v/v A		100 a	1 c	84 a	100 a	98 a	0 a
4 HALEX GT ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 0.25 % v/v A 2.5 % v/v A		100 a	10 a	87 a	100 a	97 a	2 a
5 HALEX GT AATREX ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 1 pt/a A 0.25 % v/v A 2.5 % v/v A		100 a	9 a	89 a	100 a	99 a	0 a
6 HALEX GT NORTHSTAR ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 2.5 oz/a A 0.25 % v/v A 2.5 % v/v A		100 a	3 bc	91 a	100 a	98 a	0 a
7 HALEX GT NORTHSTAR AATREX ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 2.5 oz/a A 1 pt/a A 0.25 % v/v A 2.5 % v/v A		100 a	0 c	93 a	100 a	99 a	0 a
8 HALEX GT STATUS ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 2.5 oz/a A 0.25 % v/v A 2.5 % v/v A		100 a	1 c	91 a	100 a	99 a	0 a
9 HALEX GT STINGER ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 2.5 fl oz/a A 0.25 % v/v A 2.5 % v/v A		100 a	9 a	86 a	100 a	98 a	1 a
10 RESICORE ROUNDUP POWERMAX N-PAK AMS	1.25 qt/a A 26 fl oz/a A 2.5 % v/v A		100 a	5 b	85 a	100 a	98 a	0 a
11 ARMEZON PRO AATREX ROUNDUP POWERMAX N-PAK AMS	20 fl oz/a A 1 pt/a A 26 fl oz/a A 2.5 % v/v A		100 a	1 c	86 a	100 a	100 a	0 a

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Could not calculate LSD (% mean diff) for columns 6,10,16 because error mean square = 0.

Purdue Weed Science

Efficacy of Tank Mix Partners for Halex GT in Corn

Trial ID: 17S-TPAC-CORN-08
 Protocol ID: 17S-TPAC-CORN-08
 Project ID: EHL/WHLCOR08-2017
 Location: TPAC Trial Year: 2017
 Investigator: Dr. Bill Johnson
 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA		AMBTR	ECHSS	SETFA	
Pest Name	Giant foxtail		Giant ragweed	Barnyardgrass	Giant foxtail	
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn
Part Rated	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -
Rating Date	Jun-9-2017	Jun-9-2017	Jun-23-2017	Jun-23-2017	Jun-23-2017	Jun-23-2017
Rating Type	CONTROL	PHYGEN	CONTROL	CONTROL	CONTROL	PHYGEN
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
Assessed By	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON
Rating Timing	A2	A2	A3	A3	A3	A3
Days After First/Last Applic.	14 14	14 14	28 28	28 28	28 28	28 28
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A
ARM Action Codes	P	P	P	P	P	P
Number of Decimals	0	0	0	0	0	0
Trt Treatment	Rate	Rate	Rate	Rate	Rate	Rate
No. Name	Unit	Unit	Unit	Unit	Unit	Unit
	Code	Code	Code	Code	Code	Code
	7	8	9	10	11	12
12 UNTREATED CHECK 2	0 b	0 c	0 b	0 b	0 b	0 a
LSD P=.05	0.4	2.3	8.2	.	2.9	0.9
Standard Deviation	0.3	1.6	5.7	0.0	2.0	0.6
CV	0.37	49.61	7.73	0.0	2.5	343.48
Bartlett's X2	1.321	11.29	6.826	0.0	4.247	0.061
P(Bartlett's X2)	0.25	0.08	0.655	.	0.834	0.805
Skewness	-1.8468*	0.8671*	-1.6907*	-1.8471*	-1.8358*	3.7325*
Kurtosis	1.4707*	-0.9833	1.147	1.4713*	1.4492*	12.4486*
Replicate F	1.941	1.030	6.819	0.000	0.750	1.658
Replicate Prob(F)	0.1421	0.3919	0.0011	1.0000	0.5301	0.1951
Treatment F	62651.987	25.778	147.476	0.000	1401.641	2.096
Treatment Prob(F)	0.0001	0.0001	0.0001	1.0000	0.0001	0.0497

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Could not calculate LSD (% mean diff) for columns 6,10,16 because error mean square = 0.

Purdue Weed Science

Efficacy of Tank Mix Partners for Halex GT in Corn

Trial ID: 17S-TPAC-CORN-08 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-CORN-08 Investigator: Dr. Bill Johnson
 Project ID: EHL/WHLCOR08-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	AMBTR	ECHSS	SETFA		AMBTR	ECHSS		
Pest Name	Giant ragweed	Barnyardgrass	Giant foxtail		Giant ragweed	Barnyardgrass		
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn		
Part Rated	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -		
Rating Date	Jun-10-2017	Jul-10-2017	Jul-10-2017	Jul-10-2017	Jul-21-2017	Jul-21-2017		
Rating Type	CONTROL	CONTROL	CONTROL	PHYGEN	CONTROL	CONTROL		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Assessed By	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON		
Rating Timing	A4	A4	A4	A4	A5	A5		
Days After First/Last Applic.	15 15	45 45	45 45	45 45	56 56	56 56		
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A		
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	13	14	15	16	17	18
1 UNTREATED CHECK			0 b	0 b	0 c	0 a	0 b	0 b
2 ACURON ROUNDUP POWERMAX N-PAK AMS	1.5 qt/a A 26 fl oz/a A 2.5 % v/v A		90 a	100 a	98 ab	0 a	89 a	100 a
3 ACURON FLEXI ROUNDUP POWERMAX N-PAK AMS	1.1 qt/a A 26 fl oz/a A 2.5 % v/v A		80 a	100 a	93 ab	0 a	76 a	100 a
4 HALEX GT ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 0.25 % v/v A 2.5 % v/v A		83 a	100 a	99 ab	0 a	79 a	100 a
5 HALEX GT AATREX ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 1 pt/a A 0.25 % v/v A 2.5 % v/v A		81 a	100 a	99 ab	0 a	71 a	100 a
6 HALEX GT NORTHSTAR ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 2.5 oz/a A 0.25 % v/v A 2.5 % v/v A		83 a	98 a	91 b	0 a	78 a	96 a
7 HALEX GT NORTHSTAR AATREX ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 2.5 oz/a A 1 pt/a A 0.25 % v/v A 2.5 % v/v A		88 a	100 a	98 ab	0 a	84 a	100 a
8 HALEX GT STATUS ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 2.5 oz/a A 0.25 % v/v A 2.5 % v/v A		86 a	100 a	98 ab	0 a	83 a	100 a
9 HALEX GT STINGER ACTIVATOR 90 NIS N-PAK AMS	3.6 pt/a A 2.5 fl oz/a A 0.25 % v/v A 2.5 % v/v A		83 a	100 a	95 ab	0 a	80 a	99 a
10 RESICORE ROUNDUP POWERMAX N-PAK AMS	1.25 qt/a A 26 fl oz/a A 2.5 % v/v A		79 a	99 a	97 ab	0 a	76 a	98 a
11 ARMEZON PRO AATREX ROUNDUP POWERMAX N-PAK AMS	20 fl oz/a A 1 pt/a A 26 fl oz/a A 2.5 % v/v A		76 a	100 a	100 a	0 a	68 a	100 a

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 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Could not calculate LSD (% mean diff) for columns 6,10,16 because error mean square = 0.

Purdue Weed Science

Efficacy of Tank Mix Partners for Halex GT in Corn	
Trial ID: 17S-TPAC-CORN-08	Location: TPAC Trial Year: 2017
Protocol ID: 17S-TPAC-CORN-08	Investigator: Dr. Bill Johnson
Project ID: EHL/WHLCOR08-2017	Study Director: Dustin Johnson
Sponsor Contact: C. Threewits - Syngenta	

	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Type	AMBTR	ECHSS	SETFA		AMBTR	ECHSS
Pest Code	Giant ragweed	Barnyardgrass	Giant foxtail		Giant ragweed	Barnyardgrass
Pest Name	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Crop Code	Corn	Corn	Corn	Corn	Corn	Corn
Crop Name	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -	PLANT -
Part Rated	Jun-10-2017	Jul-10-2017	Jul-10-2017	Jul-10-2017	Jul-21-2017	Jul-21-2017
Rating Date	CONTROL	CONTROL	CONTROL	PHYGEN	CONTROL	CONTROL
Rating Type	%	%	%	%	%	%
Rating Unit	1	1	1	1	1	1
Number of Subsamples	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON
Assessed By						
Rating Timing	A4	A4	A4	A4	A5	A5
Days After First/Last Applic.	15 15	45 45	45 45	45 45	56 56	56 56
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A
ARM Action Codes	P	P	P	P	P	P
Number of Decimals	0	0	0	0	0	0
Trt Treatment						
No. Name	Rate	Rate	Rate	Rate	Rate	Rate
	Unit	Unit	Unit	Unit	Unit	Unit
	Code	Code	Code	Code	Code	Code
	13	14	15	16	17	18
12 UNTREATED CHECK 2	0 b	0 b	0 c	0 a	0 b	0 b
LSD P=.05	11.1	2.2	4.9	.	14.3	3.0
Standard Deviation	7.7	1.6	3.4	0.0	10.0	2.1
CV	11.24	1.87	4.18	0.0	15.23	2.49
Bartlett's X2	6.149	1.321	9.526	0.0	4.898	1.455
P(Bartlett's X2)	0.725	0.25	0.30	.	0.843	0.483
Skewness	-1.5323*	-1.84*	-1.8038*	.	-1.3209*	-1.8335*
Kurtosis	0.8449	1.4562*	1.3819*	.	0.4214	1.4425*
Replicate F	7.725	1.941	1.189	0.000	7.013	1.806
Replicate Prob(F)	0.0005	0.1421	0.3289	1.0000	0.0009	0.1653
Treatment F	69.984	2491.981	500.883	0.000	38.842	1412.821
Treatment Prob(F)	0.0001	0.0001	0.0001	1.0000	0.0001	0.0001

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

Efficacy of Tank Mix Partners for Halex GT in Corn

Trial ID: 17S-TPAC-CORN-08	Location: TPAC	Trial Year: 2017
Protocol ID: 17S-TPAC-CORN-08	Investigator: Dr. Bill Johnson	
Project ID: EHL/WHLCOR08-2017	Study Director: Dustin Johnson	
	Sponsor Contact: C. Threewits - Syngenta	

Pest Type	W Weed			
Pest Code	SETFA			
Pest Name	Giant foxtail			
Crop Code	ZEAMX			
Crop Name	Corn			
Part Rated	PLANT -			
Rating Date	Jul-21-2017			
Rating Type	CONTROL			
Rating Unit	%			
Number of Subsamples	1			
Assessed By	D. JOHNSON			
Rating Timing	A5			
Days After First/Last Applic.	56 56			
Trt-Eval Interval	7 DA-A			
ARM Action Codes	P			
Number of Decimals	0			
Trt No.	Treatment Name	Rate	Appl Code	
		Rate Unit		19
1	UNTREATED CHECK			0 b
2	ACURON	1.5 qt/a	A	98 a
	ROUNDUP POWERMAX	26 fl oz/a	A	
	N-PAK AMS	2.5 % v/v	A	
3	ACURON FLEXI	1.1 qt/a	A	91 a
	ROUNDUP POWERMAX	26 fl oz/a	A	
	N-PAK AMS	2.5 % v/v	A	
4	HALEX GT	3.6 pt/a	A	98 a
	ACTIVATOR 90 NIS	0.25 % v/v	A	
	N-PAK AMS	2.5 % v/v	A	
5	HALEX GT	3.6 pt/a	A	96 a
	AATREX	1 pt/a	A	
	ACTIVATOR 90 NIS	0.25 % v/v	A	
	N-PAK AMS	2.5 % v/v	A	
6	HALEX GT	3.6 pt/a	A	88 a
	NORTHSTAR	2.5 oz/a	A	
	ACTIVATOR 90 NIS	0.25 % v/v	A	
	N-PAK AMS	2.5 % v/v	A	
7	HALEX GT	3.6 pt/a	A	95 a
	NORTHSTAR	2.5 oz/a	A	
	AATREX	1 pt/a	A	
	ACTIVATOR 90 NIS	0.25 % v/v	A	
	N-PAK AMS	2.5 % v/v	A	
8	HALEX GT	3.6 pt/a	A	95 a
	STATUS	2.5 oz/a	A	
	ACTIVATOR 90 NIS	0.25 % v/v	A	
	N-PAK AMS	2.5 % v/v	A	
9	HALEX GT	3.6 pt/a	A	93 a
	STINGER	2.5 fl oz/a	A	
	ACTIVATOR 90 NIS	0.25 % v/v	A	
	N-PAK AMS	2.5 % v/v	A	
10	RESICORE	1.25 qt/a	A	95 a
	ROUNDUP POWERMAX	26 fl oz/a	A	
	N-PAK AMS	2.5 % v/v	A	
11	ARMEZON PRO	20 fl oz/a	A	100 a
	AATREX	1 pt/a	A	
	ROUNDUP POWERMAX	26 fl oz/a	A	
	N-PAK AMS	2.5 % v/v	A	

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Purdue Weed Science

Efficacy of Tank Mix Partners for Halex GT in Corn

Trial ID: 17S-TPAC-CORN-08	Location: TPAC	Trial Year: 2017
Protocol ID: 17S-TPAC-CORN-08	Investigator: Dr. Bill Johnson	
Project ID: EHL/WHLCOR08-2017	Study Director: Dustin Johnson	
	Sponsor Contact: C. Threewits - Syngenta	

Pest Type	W Weed
Pest Code	SETFA
Pest Name	Giant foxtail
Crop Code	ZEAMX
Crop Name	Corn
Part Rated	PLANT -
Rating Date	Jul-21-2017
Rating Type	CONTROL
Rating Unit	%
Number of Subsamples	1
Assessed By	D. JOHNSON
Rating Timing	A5
Days After First/Last Applic.	56 56
Trt-Eval Interval	7 DA-A
ARM Action Codes	P
Number of Decimals	0
Trt Treatment	Rate Appl
No. Name	Rate Unit Code
12 UNTREATED CHECK 2	19 0 b
LSD P=.05	7.8
Standard Deviation	5.4
CV	6.88
Bartlett's X2	12.485
P(Bartlett's X2)	0.131
Skewness	-1.7554*
Kurtosis	1.2725
Replicate F	0.732
Replicate Prob(F)	0.5401
Treatment F	185.933
Treatment Prob(F)	0.0001

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls)
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Purdue Weed Science

Efficacy of Tank Mix Partners for Halex GT in Corn

Trial ID: 17S-TPAC-CORN-08	Location: TPAC	Trial Year: 2017
Protocol ID: 17S-TPAC-CORN-08	Investigator: Dr. Bill Johnson	
Project ID: EHL/WHLCOR08-2017	Study Director: Dustin Johnson	
	Sponsor Contact: C. Threewits - Syngenta	

Pest Type

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

Pest Code

AMBTR, Ambrosia trifida, Giant ragweed = US

ECHSS, Echinochloa sp., Barnyardgrass = US

SETFA, Setaria faberi, Giant foxtail = US

Crop Code

ZEAMX, BCOR, Zea mays, Corn = US

Part Rated

PLANT = plant

Rating Type

PHYGEN = phytotoxicity - general / injury

Rating Unit

% = percent

Rating Timing

A1 = 1st Assessment According to Trial Schedule

A2 = 2nd Assessment According to trial Schedule

A3 = 3rd Assessment According to Trial Schedule

A4 = 4th Assessment According to Trial Schedule

A5 = 5th Assessment According to Trial Schedule

ARM Action Codes

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

Trial Comments