

Purdue Weed Science

Acuron Performance on Grass in Corn

Trial ID: 17S-TPAC-CORN-07 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-CORN-07 Investigator: Dr. Bill Johnson
 Project ID: EHLCor06-2017 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 °: 40.29349 N
Longitude of LL Corner °: 86.9127 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

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

Planting Date: Apr-25-2017
Planting Method: PLANTD planted
Planting Equipment: PP Plot Planter
Emergence Date: May-15-2017
Harvested Width, Unit: 10 FT
Harvested Length, Unit: 30 FT
% Standard Moisture: 15.5

Pest Description

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

Pest 2 Type: W **Code:** SETPU Setaria pumila
Common Name: yellow foxtail

Pest 3 Type: W **Code:** XANST Xanthium strumarium
Common Name: Common cocklebur

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: 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	B	C	D
Application Date:	Apr-25-2017	May-22-2017	Jun-1-2017	Jun-7-2017
Appl. Start Time:	2:30 PM	1:00 PM	10:45 AM	8:05 AM
Appl. Stop Time:	2:45 PM	1:10 PM	10:55 AM	8:10 AM
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PREPLA	POSPOS	LAPOWE	LAPOWE
Application Placement:	BROADC	BROADC	BROADC	BROADC
Applied By:	G. DUNCAN	J. IKLEY	M. ZIMMER	D. JOHNSON
Air Temperature, Unit:	77 F	66 F	74 F	55 F
% Relative Humidity:	44	50	34	80
Wind Velocity, Unit:	9 MPH	5 MPH	9 MPH	8 MPH
Wind Direction:	SSE	SW	W	NNE
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	70 F	66 F	68 F	67 F
Soil Moisture:	DRY	VERWET	SLIWET	DRY
% Cloud Cover:	30	70	5	10

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:		BBCH	BBCH	BBCH
Stage Majority, Percent:		12	14	15
Stage Minimum, Percent:		11	13	14
Stage Maximum, Percent:		12	14	15
Height, Unit:		3.5 IN	5 IN	7.5 IN
Height Minimum, Maximum:		2 5	4 6	5 10

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Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent:	00	32	12	14
Stage Minimum, Percent:	00	31	10	10
Stage Maximum, Percent:	00	33	14	16
Height, Unit:		3 IN	1.5 IN	3.5 IN
Height Minimum, Maximum:		2 4	0.5 3	0.5 6
Density, Unit:		30 FT2	8 FT2	8 FT2
Pest 2 Code, Type, Scale:	SETPU W	SETPU W	SETPU W	SETPU W
Stage Majority, Percent:		11	11	13
Stage Minimum, Percent:		11	10	10
Stage Maximum, Percent:		12	13	16
Height, Unit:		1.25 IN	0.75 IN	2 IN
Height Minimum, Maximum:		0.5 2	0.25 1.5	1 3
Density, Unit:		84 FT2	5 FT2	8 FT2
Pest 3 Code, Type, Scale:	XANST W	XANST W	XANST W	XANST W
Stage Majority, Percent:			12	13
Stage Minimum, Percent:			10	10
Stage Maximum, Percent:			14	16
Height, Unit:			1.5 IN	2.5 IN
Height Minimum, Maximum:			0.5 3	0.5 6
Density, Unit:			2 FT2	

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 BACKPACK	CO2 BACKPACK	CO2 BACKPACK	CO2 BACKPACK
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	29 PSI	18 PSI	18 PSI	18 PSI
Nozzle Type:	TTI	FLAFXR	FLAFXR	FLAFXR
Nozzle Size:	TTI110015	XR11002	XR11002	XR11002
Nozzle Spacing, Unit:	15 IN	15 IN	15 IN	15 IN
Nozzles/Row:	8	8	8	8
Boom Length, Unit:	10 FT	10 FT	10 FT	10 FT
Boom Height, Unit:	17 IN	17 IN	17 IN	17 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	15 GAL/AC	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Size, Unit:	1.8 liters	1.8 liters	1.8 liters	1.8 liters
Propellant:	COMCO2	COMCO2	COMCO2	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	Appl Code	Amt Product to Measure	Rep 1	Rep 2	Rep 3	Rep 4
1	UNTREATED CHECK							101	205	303	401
2	ACURON ACTIVATOR 90 NIS	3.44 100 %	LB/GAL %	ZC SL	3 qt/a 0.25 % v/v	B B	90.0 ml/mx 4.5 ml/mx	102	206	307	405
3	ACURON ACURON ACTIVATOR 90 NIS	3.44 3.44 100 %	LB/GAL LB/GAL %	ZC ZC SL	1.25 qt/a 1.75 qt/a 0.25 % v/v	A C C	37.5 ml/mx 52.5 ml/mx 4.5 ml/mx	103	207	304	403
4	ACURON ACURON ACTIVATOR 90 NIS	3.44 3.44 100 %	LB/GAL LB/GAL %	ZC ZC SL	1.5 qt/a 1.5 qt/a 0.25 % v/v	A C C	45.0 ml/mx 45.0 ml/mx 4.5 ml/mx	104	201	306	404
5	ACURON ACURON ACTIVATOR 90 NIS	3.44 3.44 100 %	LB/GAL LB/GAL %	ZC ZC SL	2 qt/a 1 qt/a 0.25 % v/v	A C C	60.0 ml/mx 30.0 ml/mx 4.5 ml/mx	105	204	302	406
6	ACURON ACURON ACTIVATOR 90 NIS	3.44 3.44 100 %	LB/GAL LB/GAL %	ZC ZC SL	1.5 qt/a 1.5 qt/a 0.25 % v/v	A D D	45.0 ml/mx 45.0 ml/mx 4.5 ml/mx	106	203	301	407
7	ACURON ACURON ACTIVATOR 90 NIS	3.44 3.44 100 %	LB/GAL LB/GAL %	ZC ZC SL	1.25 qt/a 1.25 qt/a 0.25 % v/v	A D D	37.5 ml/mx 37.5 ml/mx 4.5 ml/mx	107	202	305	402

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
656.248	ml	ACURON	3.44	LB/GAL	ZC	
33.746	ml	ACTIVATOR 90 NIS	100	%	SL	

* '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.

Trial Comments

6/2/17-Yellow Foxtail was a little behind and low density for Application C, but went ahead and sprayed due to the emergence of giant ragweed and cocklebur in a lot of plots.

6/7/17-Yellow Foxtail density low but sprayed due to corn size.

6/7/17-403 was sprayed twice. Was marked wrong in back.

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W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	
SETPU	SETPU	SETPU	AMBTR	SETPU	SETPU	
yellow foxtail	yellow foxtail	Giant ragweed	yellow foxtail	yellow foxtail	yellow foxtail	
ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	
Corn	Corn	Corn	Corn	Corn	Corn	
PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	
May-22-2017	May-22-2017	May-29-2017	May-29-2017	May-29-2017	Jun-5-2017	
CONTROL	PHYGEN	CONTROL	CONTROL	PHYGEN	CONTROL	
%	%	%	%	%	%	
1	1	1	1	1	1	
J. IKLEY	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON	
A1	A1	A2	A2	A2	A3	
27 27	27 27	34 7	34 7	34 7	41 4	
7 DE-1	7 DE-1	14 DE-1	14 DE-1	14 DE-1	21 DE-1	
P	P	P	P	P	P	
0	0	0	0	0	0	
Trt Treatment	Rate Appl					
No. Name	Rate Unit Code	1	2	3	4	
1 UNTREATED CHECK		0 b	0 a	0 b	0 c	
2 ACURON	3 qt/a B	100 a	0 a	100 a	96 a	
ACTIVATOR 90 NIS	0.25 % v/v B				10 a	
3 ACURON	1.25 qt/a A	100 a	0 a	98 a	84 b	
ACURON	1.75 qt/a C				3 ab	
ACTIVATOR 90 NIS	0.25 % v/v C				99 a	
4 ACURON	1.5 qt/a A	100 a	0 a	99 a	84 b	
ACURON	1.5 qt/a C				4 ab	
ACTIVATOR 90 NIS	0.25 % v/v C				99 a	
5 ACURON	2 qt/a A	100 a	0 a	100 a	85 b	
ACURON	1 qt/a C				3 ab	
ACTIVATOR 90 NIS	0.25 % v/v C				99 a	
6 ACURON	1.5 qt/a A	100 a	0 a	99 a	81 b	
ACURON	1.5 qt/a D				3 ab	
ACTIVATOR 90 NIS	0.25 % v/v D				96 a	
7 ACURON	1.25 qt/a A	100 a	0 a	98 a	78 b	
ACURON	1.25 qt/a D				8 ab	
ACTIVATOR 90 NIS	0.25 % v/v D				91 b	
LSD P=.05		.	.	3.1	9.1	5.6
Standard Deviation		0.0	0.0	2.1	6.1	3.7
CV		0.0	0.0	2.44	8.41	91.06
Bartlett's X2		0.0	0.0	2.125	6.649	3.694
P(Bartlett's X2)		.	.	0.547	0.248	0.594
Skewness		-2.1586*	.	-2.1375*	-1.853*	0.9338*
Kurtosis		2.8592*	.	2.8037*	2.0288*	-0.5994
Replicate F		0.000	0.000	4.744	1.056	6.362
Replicate Prob(F)		1.0000	1.0000	0.0131	0.3934	0.0040
Treatment F		0.000	0.000	1307.233	113.509	3.383
Treatment Prob(F)		1.0000	1.0000	0.0001	0.0001	0.0206

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Project ID: EHLCor06-2017		Study Director: Dustin Johnson						
Sponsor Contact: C. Threewits - Syngenta								
Pest Type	W Weed	W Weed		W Weed	W Weed	W Weed		
Pest Code	AMBTR	XANSS		SETPU	AMBTR	XANSS		
Pest Name	Giant ragweed	Cocklebur		yellow foxtail	Giant ragweed	Cocklebur		
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jun-5-2017	Jun-5-2017	Jun-5-2017	Jun-8-2017	Jun-8-2017	Jun-8-2017		
Rating Type	CONTROL	CONTROL	PHYGEN	CONTROL	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	A3	A3	A3	A4	A4	A4		
Days After First/Last Applic.	41 4	41 4	41 4	44 1	44 1	44 1		
Days After Emergence	21 DE-1	21 DE-1	21 DE-1	24 DE-1	24 DE-1	24 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	7	8	9	10	11	12
1 UNTREATED CHECK			0 c	0 c	0 b	0 d	0 c	0 c
2 ACURON	3 qt/a B		100 a	100 a	18 a	100 a	100 a	100 a
ACTIVATOR 90 NIS	0.25 % v/v B							
3 ACURON	1.25 qt/a A		91 ab	90 a	13 a	97 ab	100 a	100 a
ACURON	1.75 qt/a C							
ACTIVATOR 90 NIS	0.25 % v/v C							
4 ACURON	1.5 qt/a A		91 ab	80 ab	10 a	97 ab	100 a	100 a
ACURON	1.5 qt/a C							
ACTIVATOR 90 NIS	0.25 % v/v C							
5 ACURON	2 qt/a A		85 b	78 ab	1 b	97 ab	100 a	100 a
ACURON	1 qt/a C							
ACTIVATOR 90 NIS	0.25 % v/v C							
6 ACURON	1.5 qt/a A		81 b	52 ab	0 b	93 bc	73 b	47 b
ACURON	1.5 qt/a D							
ACTIVATOR 90 NIS	0.25 % v/v D							
7 ACURON	1.25 qt/a A		80 b	35 bc	1 b	89 c	78 b	33 b
ACURON	1.25 qt/a D							
ACTIVATOR 90 NIS	0.25 % v/v D							
LSD P=.05	10.8	35.9	6.9	4.9	11.2	32.7		
Standard Deviation	7.3	21.5	4.6	3.3	7.5	19.5		
CV	9.66	34.7	76.07	3.99	9.52	28.5		
Bartlett's X2	16.292	9.001	9.559	5.027	16.536	2.253		
P(Bartlett's X2)	0.006*	0.061	0.049*	0.285	0.001*	0.133		
Skewness	-1.7916*	-0.1271	1.3317*	-2.0146*	-1.6061*	-0.0998		
Kurtosis	1.9027*	-1.6798	1.3988	2.3761*	1.193	-1.9512		
Replicate F	3.009	0.321	1.619	3.960	1.193	0.402		
Replicate Prob(F)	0.0574	0.8106	0.2201	0.0261	0.3422	0.7563		
Treatment F	86.877	10.724	9.614	493.277	95.822	18.112		
Treatment Prob(F)	0.0001	0.0031	0.0001	0.0001	0.0001	0.0006		

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

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Pest Type		W Weed	W Weed	W Weed		W Weed		
Pest Code		SETPU	ECHSS	AMBTR		SETPU		
Pest Name		yellow foxtail	Barnyardgrass	Giant ragweed		yellow foxtail		
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jun-8-2017	Jun-14-2017	Jun-14-2017	Jun-14-2017	Jun-14-2017	Jun-20-2017		
Rating Type	PHYGEN	CONTROL	CONTROL	CONTROL	PHYGEN	CONTROL		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Assessed By	D. JOHNSON	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER		
Rating Timing	A4	A5	A5	A5	A5	A6		
Days After First/Last Applic.	44 1	50 7	50 7	50 7	50 7	56 13		
Days After Emergence	24 DE-1	30 DE-1	30 DE-1	30 DE-1	30 DE-1	36 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	13	14	15	16	17	18
1 UNTREATED CHECK			0 b	0 b	0 b	0 b	0 a	0 c
2 ACURON	3 qt/a B		11 a	100 a	100 a	100 a	1 a	98 a
ACTIVATOR 90 NIS	0.25 % v/v B							
3 ACURON	1.25 qt/a A		9 a	99 a	100 a	100 a	2 a	96 a
ACURON	1.75 qt/a C							
ACTIVATOR 90 NIS	0.25 % v/v C							
4 ACURON	1.5 qt/a A		6 ab	100 a	100 a	100 a	0 a	94 ab
ACURON	1.5 qt/a C							
ACTIVATOR 90 NIS	0.25 % v/v C							
5 ACURON	2 qt/a A		0 b	98 a	100 a	100 a	0 a	95 ab
ACURON	1 qt/a C							
ACTIVATOR 90 NIS	0.25 % v/v C							
6 ACURON	1.5 qt/a A		0 b	95 a	100 a	97 a	0 a	93 ab
ACURON	1.5 qt/a D							
ACTIVATOR 90 NIS	0.25 % v/v D							
7 ACURON	1.25 qt/a A		1 b	95 a	100 a	95 a	1 a	88 b
ACURON	1.25 qt/a D							
ACTIVATOR 90 NIS	0.25 % v/v D							
LSD P=.05	5.7	4.2				5.0	2.4	5.2
Standard Deviation	3.8	2.8			0.0	3.3	1.6	3.5
CV	96.79	3.35			0.0	3.94	284.75	4.29
Bartlett's X2	4.847	1.077			0.0	0.447	0.062	3.741
P(Bartlett's X2)	0.183	0.783				0.504	0.97	0.587
Skewness	1.4196*	-2.0626*			-2.1586*	-2.0609*	2.6229*	-2.0102*
Kurtosis	1.2785	2.5022*			2.8592*	2.4917*	5.265*	2.377*
Replicate F	1.772	1.326			0.000	0.953	1.088	5.545
Replicate Prob(F)	0.1906	0.2988			1.0000	0.4371	0.3809	0.0077
Treatment F	6.256	694.239			0.000	503.296	0.780	426.197
Treatment Prob(F)	0.0013	0.0001			1.0000	0.0001	0.5968	0.0001

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Pest Type	W Weed	W Weed		W Weed	W Weed	W Weed		
Pest Code	ECHSS	AMBTR		SETPU	ECHSS	AMBTR		
Pest Name	Barnyardgrass	Giant ragweed		yellow foxtail	Barnyardgrass	Giant ragweed		
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jun-20-2017	Jun-20-2017	Jun-20-2017	Jun-28-2017	Jun-28-2017	Jun-28-2017		
Rating Type	CONTROL	CONTROL	PHYGEN	CONTROL	CONTROL	CONTROL		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER		
Rating Timing	A6	A6	A6	A7	A7	A7		
Days After First/Last Applic.	56 13	56 13	56 13	64 21	64 21	64 21		
Days After Emergence	36 DE-1	36 DE-1	36 DE-1	44 DE-1	44 DE-1	44 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	19	20	21	22	23	24
1 UNTREATED CHECK			0 b	0 b	0 a	0 c	0 b	0 b
2 ACURON	3 qt/a B		100 a	100 a	0 a	100 a	100 a	100 a
ACTIVATOR 90 NIS	0.25 % v/v B							
3 ACURON	1.25 qt/a A		100 a	100 a	0 a	99 a	100 a	99 a
ACURON	1.75 qt/a C							
ACTIVATOR 90 NIS	0.25 % v/v C							
4 ACURON	1.5 qt/a A		100 a	100 a	0 a	98 a	100 a	100 a
ACURON	1.5 qt/a C							
ACTIVATOR 90 NIS	0.25 % v/v C							
5 ACURON	2 qt/a A		100 a	100 a	0 a	98 a	100 a	100 a
ACURON	1 qt/a C							
ACTIVATOR 90 NIS	0.25 % v/v C							
6 ACURON	1.5 qt/a A		100 a	99 a	0 a	97 a	100 a	100 a
ACURON	1.5 qt/a D							
ACTIVATOR 90 NIS	0.25 % v/v D							
7 ACURON	1.25 qt/a A		100 a	100 a	0 a	91 b	100 a	100 a
ACURON	1.25 qt/a D							
ACTIVATOR 90 NIS	0.25 % v/v D							
LSD P=.05				1.6		3.8		0.7
Standard Deviation	0.0		0.0	1.1	0.0	2.5	0.0	0.5
CV	0.0		0.0	1.24	0.0	3.05	0.0	0.57
Bartlett's X2	0.0		0.0	2.178	0.0	12.514	0.0	1.756
P(Bartlett's X2)				0.14		0.028*		0.781
Skewness				-2.0959*		-2.0534*		-2.0976*
Kurtosis				2.5943*		2.4764*		2.5901*
Replicate F	0.000		0.000	0.929	0.000	3.083	0.000	11.988
Replicate Prob(F)	1.0000		1.0000	0.4480	1.0000	0.0553	1.0000	0.0002
Treatment F	0.000		0.000	5074.834	0.000	839.648	0.000	23968.216
Treatment Prob(F)	1.0000		1.0000	0.0001	1.0000	0.0001	1.0000	0.0001

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.
 Missing data estimates are included in columns: Yates=4, 10, 11, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25; Average=8, 12, 30
 Could not calculate LSD (% mean diff) for columns 1, 2, 15, 19, 21, 23, 25 because error mean square = 0.

Purdue Weed Science

Acuron Performance on Grass in Corn

Trial ID: 17S-TPAC-CORN-07 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-CORN-07 Investigator: Dr. Bill Johnson
 Project ID: EHLCor06-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type		W Weed	W Weed	W Weed				
Pest Code		SETPU	ECHSS	AMBTR				
Pest Name		yellow foxtail	Barnyardgrass	Giant ragweed				
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jun-28-2017	Jul-5-2017	Jul-5-2017	Jul-5-2017	Oct-31-2017	Oct-31-2017		
Rating Type	PHYGEN	CONTROL	CONTROL	CONTROL	YIELD	MOICON		
Rating Unit	%	%	%	%	LB	%		
Number of Subsamples	1	1	1	1	1	1		
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	T. CAMPBELL	T. CAMPBELL		
Rating Timing	A7	A8	A8	A8				
Days After First/Last Applic.	64 21	71 28	71 28	71 28	189 146	189 146		
Days After Emergence	44 DE-1	51 DE-1	51 DE-1	51 DE-1	169 DE-1	169 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	25	26	27	28	29	30
1 UNTREATED CHECK			0 a	0 c	0 c	0 b	3 b	16.240 a
2 ACURON	3 qt/a	B	0 a	99 a	99 a	100 a	35 a	14.938 b
ACTIVATOR 90 NIS	0.25 % v/v	B						
3 ACURON	1.25 qt/a	A	0 a	98 a	99 a	100 a	31 a	14.963 b
ACURON	1.75 qt/a	C						
ACTIVATOR 90 NIS	0.25 % v/v	C						
4 ACURON	1.5 qt/a	A	0 a	96 a	96 a	100 a	36 a	14.993 b
ACURON	1.5 qt/a	C						
ACTIVATOR 90 NIS	0.25 % v/v	C						
5 ACURON	2 qt/a	A	0 a	98 a	98 a	100 a	36 a	14.960 b
ACURON	1 qt/a	C						
ACTIVATOR 90 NIS	0.25 % v/v	C						
6 ACURON	1.5 qt/a	A	0 a	95 a	95 a	100 a	35 a	15.063 b
ACURON	1.5 qt/a	D						
ACTIVATOR 90 NIS	0.25 % v/v	D						
7 ACURON	1.25 qt/a	A	0 a	89 b	89 b	100 a	28 a	14.980 b
ACURON	1.25 qt/a	D						
ACTIVATOR 90 NIS	0.25 % v/v	D						
LSD P=.05			.0	5.0	5.0	0.4	7.0	0.4635
Standard Deviation			0.0	3.4	3.4	0.3	4.7	0.3075
CV			0.0	4.13	4.13	0.31	16.07	2.03
Bartlett's X2			0.0	12.24	11.293	0.0	10.078	6.043
P(Bartlett's X2)			.	0.032*	0.046*	.	0.121	0.302
Skewness			.	-2.0746*	-2.0755*	-2.1582*	-1.4822*	1.4683*
Kurtosis			.	2.6327*	2.6351*	2.8581*	1.2463	3.9033*
Replicate F			0.000	4.188	3.358	8.000	0.632	0.836
Replicate Prob(F)			1.0000	0.0206	0.0419	0.0013	0.6036	0.4951
Treatment F			0.000	459.559	459.628	79734.341	26.455	9.622
Treatment Prob(F)			1.0000	0.0001	0.0001	0.0001	0.0001	0.0002

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.
 Missing data estimates are included in columns: Yates=4, 10, 11, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25; Average=8, 12, 30
 Could not calculate LSD (% mean diff) for columns 1, 2, 15, 19, 21, 23, 25 because error mean square = 0.

Purdue Weed Science

Acuron Performance on Grass in Corn

Trial ID: 17S-TPAC-CORN-07	Location: TPAC	Trial Year: 2017
Protocol ID: 17S-TPAC-CORN-07	Investigator: Dr. Bill Johnson	
Project ID: EHLCor06-2017	Study Director: Dustin Johnson	
Sponsor Contact: C. Threewits - Syngenta		

Pest Type			
Pest Code			
Pest Name			
Crop Code		ZEAMX	
Crop Name		Corn	
Part Rated		PLOT -	
Rating Date		Oct-31-2017	
Rating Type		YIELD	
Rating Unit		BU	
Number of Subsamples		1	
Assessed By		T. CAMPBELL	
Rating Timing			
Days After First/Last Applic.		189 146	
Days After Emergence		169 DE-1	
ARM Action Codes		TY1	
Number of Decimals		1	
Trt No.	Treatment Name	Rate	Appl Code
		Rate Unit	
			31
1	UNTREATED CHECK		16.3 b
2	ACURON	3 qt/a B	222.2 a
	ACTIVATOR 90 NIS	0.25 % v/v B	
3	ACURON	1.25 qt/a A	197.1 a
	ACURON	1.75 qt/a C	
	ACTIVATOR 90 NIS	0.25 % v/v C	
4	ACURON	1.5 qt/a A	227.5 a
	ACURON	1.5 qt/a C	
	ACTIVATOR 90 NIS	0.25 % v/v C	
5	ACURON	2 qt/a A	223.2 a
	ACURON	1 qt/a C	
	ACTIVATOR 90 NIS	0.25 % v/v C	
6	ACURON	1.5 qt/a A	219.2 a
	ACURON	1.5 qt/a D	
	ACTIVATOR 90 NIS	0.25 % v/v D	
7	ACURON	1.25 qt/a A	176.8 a
	ACURON	1.25 qt/a D	
	ACTIVATOR 90 NIS	0.25 % v/v D	
	LSD P=.05		43.47
	Standard Deviation		29.26
	CV		15.98
	Bartlett's X2		10.326
	P(Bartlett's X2)		0.112
	Skewness		-1.4894*
	Kurtosis		1.2606
	Replicate F		0.604
	Replicate Prob(F)		0.6208
	Treatment F		26.839
	Treatment Prob(F)		0.0001

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.

Missing data estimates are included in columns: Yates=4, 10, 11, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25; Average=8, 12, 30

Could not calculate LSD (% mean diff) for columns 1, 2, 15, 19, 21, 23, 25 because error mean square = 0.

Purdue Weed Science

Acuron Performance on Grass in Corn

Trial ID: 17S-TPAC-CORN-07	Location: TPAC	Trial Year: 2017
Protocol ID: 17S-TPAC-CORN-07	Investigator: Dr. Bill Johnson	
Project ID: EHLCor06-2017	Study Director: Dustin Johnson	
	Sponsor Contact: C. Threewits - Syngenta	

Pest Type

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

Pest Code

SETPU, Setaria pumila, yellow foxtail = US
 AMBTR, Ambrosia trifida, Giant ragweed = US
 XANSS, Xanthium sp., Cocklebur = US
 ECHSS, Echinochloa sp., Barnyardgrass = US

Crop Code

ZEAMX, BCOR, Zea mays, Corn = US

Part Rated

PLOT = plot

Rating Type

PHYGEN = phytotoxicity - general / injury
 YIELD = yield
 MOICON = moisture content

Rating Unit

% = percent
 LB = pound
 BU = bushel

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
 A6 = 6th Assessment according to Trial Schedule
 A7 = 7th Assessment According to Trial Schedule
 A8 = 8th Assessment According to Trial Schedule

ARM Action Codes

P = Rating scale of 0 to 100 (e.g. % control or injury)
 TY1 = $6.222857 * [29] * (100 - @MVAVGREP([30])) / 84.5$

Purdue Weed Science

Acuron Performance on Grass in Corn

Trial ID: 17S-TPAC-CORN-07 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-CORN-07 Investigator: Dr. Bill Johnson
 Project ID: EHLCor06-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type	W Weed		W Weed	W Weed		W Weed		
Pest Code	SETPU		SETPU	AMBTR		SETPU		
Pest Name	yellow foxtail		yellow foxtail	Giant ragweed		yellow foxtail		
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	May-22-2017	May-22-2017	May-29-2017	May-29-2017	May-29-2017	Jun-5-2017		
Rating Type	CONTROL	PHYGEN	CONTROL	CONTROL	PHYGEN	CONTROL		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Assessed By	J. IKLEY	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON	D. JOHNSON		
Rating Timing	A1	A1	A2	A2	A2	A3		
Days After First/Last Applic.	27 27	27 27	34 7	34 7	34 7	41 4		
Days After Emergence	7 DE-1	7 DE-1	14 DE-1	14 DE-1	14 DE-1	21 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code Plot	1	2	3	4	5	6
1 UNTREATED CHECK		101	0	0	0	0	0	0
		205	0	0	0	0	0	0
		303	0	0	0	0	0	0
		401	0	0	0	0	0	0
		Mean =	0	0	0	0	0	0
2 ACURON	3 qt/a B	102	100	0	100	90	10	100
ACTIVATOR 90 NIS	0.25 % v/v B	206	100	0	100	100	5	100
		307	100	0	100	95	10	100
		405	100	0	100	100	15	100
		Mean =	100	0	100	96	10	100
3 ACURON	1.25 qt/a A	103	100	0	100	80	5	100
ACURON	1.75 qt/a C	207	100	0	100	90	0	100
ACTIVATOR 90 NIS	0.25 % v/v C	304	100	0	90	90	0	95
		403	100	0	100	75	5	99
		Mean =	100	0	98	84	3	99
4 ACURON	1.5 qt/a A	104	100	0	100	85	5	100
ACURON	1.5 qt/a C	201	100	0	100	80	0	98
ACTIVATOR 90 NIS	0.25 % v/v C	306	100	0	95	85	0	98
		404	100	0	100	85	10	100
		Mean =	100	0	99	84	4	99
5 ACURON	2 qt/a A	105	100	0	100	80	10	100
ACURON	1 qt/a C	204	100	0	100	85	0	97
ACTIVATOR 90 NIS	0.25 % v/v C	302	100	0	100	90	0	99
		406	100	0	100	85	0	99
		Mean =	100	0	100	85	3	99
6 ACURON	1.5 qt/a A	106	100	0	100	85	10	100
ACURON	1.5 qt/a D	203	100	0	100	75	0	95
ACTIVATOR 90 NIS	0.25 % v/v D	301	100	0	95	95	0	95
		407	100	0	100	70	0	95
		Mean =	100	0	99	81	3	96
7 ACURON	1.25 qt/a A	107	100	0	100	85	15	95
ACURON	1.25 qt/a D	202	100	0	100	75	0	95
ACTIVATOR 90 NIS	0.25 % v/v D	305	100	0	95	75	0	90
		402	100	0	95	75*	15	85
		Mean =	100	0	98	78	8	91

Purdue Weed Science

Acuron Performance on Grass in Corn

Trial ID: 17S-TPAC-CORN-07 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-CORN-07 Investigator: Dr. Bill Johnson
 Project ID: EHLCor06-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type	W Weed	W Weed		W Weed	W Weed	W Weed		
Pest Code	AMBTR	XANSS		SETPU	AMBTR	XANSS		
Pest Name	Giant ragweed	Cocklebur		yellow foxtail	Giant ragweed	Cocklebur		
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jun-5-2017	Jun-5-2017	Jun-5-2017	Jun-8-2017	Jun-8-2017	Jun-8-2017		
Rating Type	CONTROL	CONTROL	PHYGEN	CONTROL	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	A3	A3	A3	A4	A4	A4		
Days After First/Last Applic.	41 4	41 4	41 4	44 1	44 1	44 1		
Days After Emergence	21 DE-1	21 DE-1	21 DE-1	24 DE-1	24 DE-1	24 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code Plot	7	8	9	10	11	12
1 UNTREATED CHECK		101	0	0	0	0	0	0
		205	0	0	0	0	0	0
		303	0	0	0	0	0	0
		401	0	0	0	0	0	0
		Mean =	0	0	0	0	0	0
2 ACURON	3 qt/a B	102	100	100	5	100	99	100
ACTIVATOR 90 NIS	0.25 % v/v B	206	99	99	20	100	100	100
		307	100	100*	15	100	100	100*
		405	100	100*	30	100	100	100*
		Mean =	100	100	18	100	100	100
3 ACURON	1.25 qt/a A	103	85	100	10	99	100	100
ACURON	1.75 qt/a C	207	95	80	15	100	100	100
ACTIVATOR 90 NIS	0.25 % v/v C	304	95	90*	15	95	100	100*
		403	90	90*	10	94*	100*	100*
		Mean =	91	90	13	97	100	100
4 ACURON	1.5 qt/a A	104	80	80	5	100	100	100
ACURON	1.5 qt/a C	201	95	80*	15	95	100	100*
ACTIVATOR 90 NIS	0.25 % v/v C	306	90	80*	5	95	100	100*
		404	99	80*	15	98	100	100*
		Mean =	91	80	10	97	100	100
5 ACURON	2 qt/a A	105	85	80	0	100	100	100
ACURON	1 qt/a C	204	65	75	0	99	100	100
ACTIVATOR 90 NIS	0.25 % v/v C	302	98	78*	0	95	100	100*
		406	90	78*	5	95	100	100*
		Mean =	85	78	1	97	100	100
6 ACURON	1.5 qt/a A	106	80	30	0	100	80	30
ACURON	1.5 qt/a D	203	70	30	0	90	50	20
ACTIVATOR 90 NIS	0.25 % v/v D	301	95	95	0	95	90	90
		407	80	52*	0	85	70	47*
		Mean =	81	52	0	93	73	47
7 ACURON	1.25 qt/a A	107	75	15	5	95	70	20
ACURON	1.25 qt/a D	202	70	50	0	90	70	40
ACTIVATOR 90 NIS	0.25 % v/v D	305	85	35*	0	90	80	33*
		402	90	40	0	80	90	40
		Mean =	80	35	1	89	78	33

Purdue Weed Science

Acuron Performance on Grass in Corn

Trial ID: 17S-TPAC-CORN-07 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-CORN-07 Investigator: Dr. Bill Johnson
 Project ID: EHLCor06-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type		W Weed	W Weed	W Weed		W Weed	
Pest Code		SETPU	ECHSS	AMBTR		SETPU	
Pest Name		yellow foxtail	Barnyardgrass	Giant ragweed		yellow foxtail	
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn	
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	
Rating Date	Jun-8-2017	Jun-14-2017	Jun-14-2017	Jun-14-2017	Jun-14-2017	Jun-20-2017	
Rating Type	PHYGEN	CONTROL	CONTROL	CONTROL	PHYGEN	CONTROL	
Rating Unit	%	%	%	%	%	%	
Number of Subsamples	1	1	1	1	1	1	
Assessed By	D. JOHNSON	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	
Rating Timing	A4	A5	A5	A5	A5	A6	
Days After First/Last Applic.	44 1	50 7	50 7	50 7	50 7	56 13	
Days After Emergence	24 DE-1	30 DE-1	30 DE-1	30 DE-1	30 DE-1	36 DE-1	
ARM Action Codes	P	P	P	P	P	P	
Number of Decimals	0	0	0	0	0	0	
Trt Treatment	Rate Appl						
No. Name	Rate Unit Code Plot	13	14	15	16	17	18
1 UNTREATED CHECK	101	0	0	0	0	0	0
	205	0	0	0	0	0	0
	303	0	0	0	0	0	0
	401	0	0	0	0	0	0
	Mean =	0	0	0	0	0	0
2 ACURON	3 qt/a B 102	0	100	100	100	0	99
ACTIVATOR 90 NIS	0.25 % v/v B 206	15	100	100	100	5	100
	307	10	100	100	100	0	98
	405	20	100	100	100	0	95
	Mean =	11	100	100	100	1	98
3 ACURON	1.25 qt/a A 103	5	100	100	100	0	100
ACURON	1.75 qt/a C 207	10	100	100	100	5	100
ACTIVATOR 90 NIS	0.25 % v/v C 304	10	95	100	100	0	90
	403	11*	99*	100	98*	1*	93*
	Mean =	9	99	100	100	2	96
4 ACURON	1.5 qt/a A 104	0	100	100	100	0	97
ACURON	1.5 qt/a C 201	10	100	100	100	0	90
ACTIVATOR 90 NIS	0.25 % v/v C 306	5	100	100	100	0	95
	404	10	100	100	100	0	95
	Mean =	6	100	100	100	0	94
5 ACURON	2 qt/a A 105	0	100	100	100	0	99
ACURON	1 qt/a C 204	0	100	100	100	0	100
ACTIVATOR 90 NIS	0.25 % v/v C 302	0	95	100	100	0	90
	406	0	95	100	100	0	90
	Mean =	0	98	100	100	0	95
6 ACURON	1.5 qt/a A 106	0	100	100	100	0	100
ACURON	1.5 qt/a D 203	0	88	100	100	0	95
ACTIVATOR 90 NIS	0.25 % v/v D 301	0	95	100	98	0	90
	407	0	95	100	90	0	88
	Mean =	0	95	100	97	0	93
7 ACURON	1.25 qt/a A 107	5	95	100	100	5	97
ACURON	1.25 qt/a D 202	0	95	100	85	0	85
ACTIVATOR 90 NIS	0.25 % v/v D 305	0	90	100	100	0	85
	402	0	100	100	95	0	85
	Mean =	1	95	100	95	1	88

Purdue Weed Science

Acuron Performance on Grass in Corn

Trial ID: 17S-TPAC-CORN-07 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-CORN-07 Investigator: Dr. Bill Johnson
 Project ID: EHLCor06-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type	W Weed	W Weed		W Weed	W Weed	W Weed	
Pest Code	ECHSS	AMBTR		SETPU	ECHSS	AMBTR	
Pest Name	Barnyardgrass	Giant ragweed		yellow foxtail	Barnyardgrass	Giant ragweed	
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn	
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	
Rating Date	Jun-20-2017	Jun-20-2017	Jun-20-2017	Jun-28-2017	Jun-28-2017	Jun-28-2017	
Rating Type	CONTROL	CONTROL	PHYGEN	CONTROL	CONTROL	CONTROL	
Rating Unit	%	%	%	%	%	%	
Number of Subsamples	1	1	1	1	1	1	
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	
Rating Timing	A6	A6	A6	A7	A7	A7	
Days After First/Last Applic.	56 13	56 13	56 13	64 21	64 21	64 21	
Days After Emergence	36 DE-1	36 DE-1	36 DE-1	44 DE-1	44 DE-1	44 DE-1	
ARM Action Codes	P	P	P	P	P	P	
Number of Decimals	0	0	0	0	0	0	
Trt Treatment	Rate Appl						
No. Name	Rate Unit Code Plot	19	20	21	22	23	24
1 UNTREATED CHECK	101	0	0	0	0	0	0
	205	0	0	0	0	0	0
	303	0	0	0	0	0	0
	401	0	0	0	0	0	0
	Mean =	0	0	0	0	0	0
2 ACURON	3 qt/a B 102	100	100	0	100	100	99
ACTIVATOR 90 NIS	0.25 % v/v B 206	100	100	0	100	100	100
	307	100	98	0	100	100	100
	405	100	100	0	98	100	100
	Mean =	100	100	0	100	100	100
3 ACURON	1.25 qt/a A 103	100	100	0	100	100	98
ACURON	1.75 qt/a C 207	100	100	0	100	100	100
ACTIVATOR 90 NIS	0.25 % v/v C 304	100	100	0	98	100	100
	403	100*	99*	0*	98*	100*	100*
	Mean =	100	100	0	99	100	99
4 ACURON	1.5 qt/a A 104	100	100	0	100	100	98
ACURON	1.5 qt/a C 201	100	100	0	96	100	100
ACTIVATOR 90 NIS	0.25 % v/v C 306	100	100	0	98	100	100
	404	100	100	0	98	100	100
	Mean =	100	100	0	98	100	100
5 ACURON	2 qt/a A 105	100	100	0	100	100	98
ACURON	1 qt/a C 204	100	100	0	100	100	100
ACTIVATOR 90 NIS	0.25 % v/v C 302	100	100	0	98	100	100
	406	100	100	0	95	100	100
	Mean =	100	100	0	98	100	100
6 ACURON	1.5 qt/a A 106	100	100	0	100	100	98
ACURON	1.5 qt/a D 203	100	100	0	95	100	100
ACTIVATOR 90 NIS	0.25 % v/v D 301	100	100	0	98	100	100
	407	100	95	0	95	100	100
	Mean =	100	99	0	97	100	100
7 ACURON	1.25 qt/a A 107	100	100	0	100	100	100
ACURON	1.25 qt/a D 202	100	100	0	90	100	100
ACTIVATOR 90 NIS	0.25 % v/v D 305	100	100	0	85	100	100
	402	100	100	0	90	100	100
	Mean =	100	100	0	91	100	100

Purdue Weed Science

Acuron Performance on Grass in Corn

Trial ID: 17S-TPAC-CORN-07 Location: TPAC Trial Year: 2017
 Protocol ID: 17S-TPAC-CORN-07 Investigator: Dr. Bill Johnson
 Project ID: EHLCor06-2017 Study Director: Dustin Johnson
 Sponsor Contact: C. Threewits - Syngenta

Pest Type	W Weed	W Weed	W Weed	W Weed				
Pest Code	SETPU	ECHSS	AMBTR					
Pest Name	yellow foxtail	Barnyardgrass	Giant ragweed					
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn		
Part Rated	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -	PLOT -		
Rating Date	Jun-28-2017	Jul-5-2017	Jul-5-2017	Jul-5-2017	Oct-31-2017	Oct-31-2017		
Rating Type	PHYGEN	CONTROL	CONTROL	CONTROL	YIELD	MOICON		
Rating Unit	%	%	%	%	LB	%		
Number of Subsamples	1	1	1	1	1	1		
Assessed By	M. ZIMMER	M. ZIMMER	M. ZIMMER	M. ZIMMER	T. CAMPBELL	T. CAMPBELL		
Rating Timing	A7	A8	A8	A8				
Days After First/Last Applic.	64 21	71 28	71 28	71 28	189 146	189 146		
Days After Emergence	44 DE-1	51 DE-1	51 DE-1	51 DE-1	169 DE-1	169 DE-1		
ARM Action Codes	P	P	P	P	P	P		
Number of Decimals	0	0	0	0	0	0		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code Plot	25	26	27	28	29	30
1 UNTREATED CHECK		101	0	0	0	0	2	16.240*
		205	0	0	0	0	4	16.240
		303	0	0	0	0	2	16.240*
		401	0	0	0	0	2	16.240*
		Mean =	0	0	0	0	3	16.240
2 ACURON	3 qt/a B	102	0	100	100	99	38	15.110
ACTIVATOR 90 NIS	0.25 % v/v B	206	0	100	100	100	33	14.720
		307	0	98	98	100	34	14.790
		405	0	98	98	100	36	15.130
		Mean =	0	99	99	100	35	14.938
3 ACURON	1.25 qt/a A	103	0	100	100	100	39	15.510
ACURON	1.75 qt/a C	207	0	99	100	100	25	14.420
ACTIVATOR 90 NIS	0.25 % v/v C	304	0	95	95	100	34	14.630
		403	0*	99	99	100	28	15.290
		Mean =	0	98	99	100	31	14.963
4 ACURON	1.5 qt/a A	104	0	99	99	99	39	15.100
ACURON	1.5 qt/a C	201	0	90	90	100	29	14.770
ACTIVATOR 90 NIS	0.25 % v/v C	306	0	95	95	100	35	14.920
		404	0	98	98	100	41	15.180
		Mean =	0	96	96	100	36	14.993
5 ACURON	2 qt/a A	105	0	100	99	99	35	14.730
ACURON	1 qt/a C	204	0	99	100	100	40	14.940
ACTIVATOR 90 NIS	0.25 % v/v C	302	0	95	95	100	26	15.200
		406	0	97	97	100	42	14.970
		Mean =	0	98	98	100	36	14.960
6 ACURON	1.5 qt/a A	106	0	100	99	99	30	15.280
ACURON	1.5 qt/a D	203	0	90	90	100	37	15.030
ACTIVATOR 90 NIS	0.25 % v/v D	301	0	95	95	100	33	14.840
		407	0	95	95	100	40	15.100
		Mean =	0	95	95	100	35	15.063
7 ACURON	1.25 qt/a A	107	0	100	99	100	26	14.860
ACURON	1.25 qt/a D	202	0	80	80	100	31	15.520
ACTIVATOR 90 NIS	0.25 % v/v D	305	0	85	85	100	30	14.740
		402	0	90	90	100	26	14.800
		Mean =	0	89	89	100	28	14.980

Purdue Weed Science

Acuron Performance on Grass in Corn

Trial ID: 17S-TPAC-CORN-07	Location: TPAC	Trial Year: 2017
Protocol ID: 17S-TPAC-CORN-07	Investigator: Dr. Bill Johnson	
Project ID: EHLCor06-2017	Study Director: Dustin Johnson	
	Sponsor Contact: C. Threewits - Syngenta	

Pest Type				
Pest Code				
Pest Name				
Crop Code				ZEAMX
Crop Name				Corn
Part Rated				PLOT -
Rating Date				Oct-31-2017
Rating Type				YIELD
Rating Unit				BU
Number of Subsamples				1
Assessed By				T. CAMPBELL
Rating Timing				
Days After First/Last Applic.				189 146
Days After Emergence				169 DE-1
ARM Action Codes				TY1
Number of Decimals				1
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code Plot		31
1 UNTREATED CHECK		101		12.3
		205		26.6
		303		11.7
		401		14.5
		Mean =		16.3
2 ACURON	3 qt/a B	102		239.6
ACTIVATOR 90 NIS	0.25 % v/v B	206		209.8
		307		213.2
		405		225.9
		Mean =		222.2
3 ACURON	1.25 qt/a A	103		241.1
ACURON	1.75 qt/a C	207		156.9
ACTIVATOR 90 NIS	0.25 % v/v C	304		212.9
		403		177.4
		Mean =		197.1
4 ACURON	1.5 qt/a A	104		245.8
ACURON	1.5 qt/a C	201		185.0
ACTIVATOR 90 NIS	0.25 % v/v C	306		221.3
		404		257.9
		Mean =		227.5
5 ACURON	2 qt/a A	105		219.8
ACURON	1 qt/a C	204		250.5
ACTIVATOR 90 NIS	0.25 % v/v C	302		161.1
		406		261.4
		Mean =		223.2
6 ACURON	1.5 qt/a A	106		190.0
ACURON	1.5 qt/a D	203		231.1
ACTIVATOR 90 NIS	0.25 % v/v D	301		206.1
		407		249.4
		Mean =		219.2
7 ACURON	1.25 qt/a A	107		160.1
ACURON	1.25 qt/a D	202		192.1
ACTIVATOR 90 NIS	0.25 % v/v D	305		189.6
		402		165.3
		Mean =		176.8

Purdue Weed Science

Acuron Performance on Grass in Corn

Trial ID: 17S-TPAC-CORN-07	Location: TPAC	Trial Year: 2017
Protocol ID: 17S-TPAC-CORN-07	Investigator: Dr. Bill Johnson	
Project ID: EHLCor06-2017	Study Director: Dustin Johnson	
	Sponsor Contact: C. Threewits - Syngenta	

Pest Type

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

Pest Code

SETPU, Setaria pumila, yellow foxtail = US
 AMBTR, Ambrosia trifida, Giant ragweed = US
 XANSS, Xanthium sp., Cocklebur = US
 ECHSS, Echinochloa sp., Barnyardgrass = US

Crop Code

ZEAMX, BCOR, Zea mays, Corn = US

Part Rated

PLOT = plot

Rating Type

PHYGEN = phytotoxicity - general / injury
 YIELD = yield
 MOICON = moisture content

Rating Unit

% = percent
 LB = pound
 BU = bushel

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
 A6 = 6th Assessment according to Trial Schedule
 A7 = 7th Assessment According to Trial Schedule
 A8 = 8th Assessment According to Trial Schedule

ARM Action Codes

P = Rating scale of 0 to 100 (e.g. % control or injury)
 TY1 = $6.222857 * [29] * (100 - @MVAVGREP([30])) / 84.5$