

Acuron Weed Control and Corn Tolerance

Trial ID: 15ACURON Location: Western Branch Big E Trial Year: 2015
Protocol ID: 15ACURON Investigator: Dr. Mark M. Loux
Project ID: HBI001B3-2015US Study Director: Anthony Dobbels
Sponsor Contact: Dain Bruns, Syngenta

General Trial Information

Study Director: Anthony Dobbels
Investigator: Dr. Mark M. Loux

Trial Location

City: South Charleston Country: USA United States
State/Prov.: Ohio
Postal Code: 45368 Climate Zone: USWARM US Warm Continental

Latitude of LL Corner °: 39.85796 N
Longitude of LL Corner °: -83.66996 W

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Anthony Dobbels
Investigator: Dr. Mark M. Loux

Crop Description

Crop 1: ZEAMX Zea mays
Variety: SCS 1105 AM
Description: Seed Consultants RR / LL

Planting Date: 5-3-2015
Planting Method: PLANTD planted
Planting Equipment: FPP Finger Pickup Planter
Emergence Date: 5-8-2015
Harvest Date: 10-2-2015
Harvested Width, Unit: 5 FT
Harvested Length, Unit: 30 FT
Harvest Equipment: Massey Ferguson 8 XP
% Standard Moisture: 15.5
Moisture Meter: Harvest Master
Weighing Equipment: Harvest Master

Planting Rate, Unit: 32097 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Soil Temperature, Unit: 60 F
Soil Moisture: NORMAL normal, adequate
Seed Bed: MEDIUM medium

Pest Description

- Pest 1 Type: W Code: SETFA Setaria faberi
Common Name: Giant foxtail
Pest 2 Type: W Code: AMBTR Ambrosia trifida
Common Name: Giant ragweed
Pest 3 Type: W Code: AMARE Amaranthus retroflexus
Common Name: Redroot pigweed
Pest 4 Type: W Code: CHEAL Chenopodium album
Common Name: Common lambsquarters
Pest 5 Type: W Code: IPOHE Ipomoea hederacea
Common Name: Ivy leaf morning glory
Pest 6 Type: W Code: ABUTH Abutilon theophrasti
Common Name: velvet leaf
Pest 7 Type: W Code: SOLPT Solanum ptycanthum
Common Name: Eastern black nightshade

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 L Randomized Complete Block (RCB)

No. Previous Crop Year

1. Soybean 2014

Soil Description

Description Name: Big E

% OM: 2.8

pH: 5.9

CEC: 17.44

Texture: SIL silt loam

Soil Name: Kokomo

Fert. Level: G good

Soil Drainage: G good

Additional Measured Elements

Date	Element	Quantity	Unit
4-24-2015	NH3	180	LBS

Application Description

	A	B
Application Date:	5-4-2015	5-28-2015
Appl. Start Time:	11:00 AM	8:50 AM
Appl. Stop Time:	11:20 AM	9:10 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Application Placement:	BROSOI	BROFOL
Applied By:	Bethel	Dobbels
Air Temperature, Unit:	73 F	69 F
% Relative Humidity:	45	75
Wind Velocity, Unit:	10 MPH	2.5 MPH
Wind Direction:	SW	E
Dew Presence (Y/N):	N no	
Soil Temperature, Unit:	58 F	66 F
Soil Moisture:	DRY	Dry/moist
% Cloud Cover:	40	60
Next Moisture Occurred On:	5-5-2015	5-30-2015
Time to Next Moisture, Unit:	14 HR	2 DAY

Crop Stage At Each Application

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

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:		13 100
Stage Minimum, Percent:		12 100
Stage Maximum, Percent:		13 100
Height, Unit:		5 IN
Height Minimum, Maximum:		2 7
Density, Unit:	111 M2	25 M2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:		16 100
Stage Minimum, Percent:		16 100
Stage Maximum, Percent:		18 100
Height, Unit:		4 IN
Height Minimum, Maximum:		3 6
Density, Unit:	6 m2	6 M2
Pest 3 Code, Type, Scale:	AMARE W	AMARE W
Stage Majority, Percent:		14 100
Stage Minimum, Percent:		14 100
Stage Maximum, Percent:		16 100
Height, Unit:		1.5 IN
Height Minimum, Maximum:		1 3
Density, Unit:	5 M2	1 M2
Pest 4 Code, Type, Scale:	CHEAL W	CHEAL W
Stage Majority, Percent:		18 100
Stage Minimum, Percent:		16 100
Stage Maximum, Percent:		18 100
Height, Unit:		2 IN
Height Minimum, Maximum:		1 3
Density, Unit:	5 M2	5 M2
Pest 5 Code, Type, Scale:	IPOHE W	IPOHE W
Stage Majority, Percent:		10 100
Stage Minimum, Percent:		10 100
Stage Maximum, Percent:		10 100
Height, Unit:		1.5 IN
Height Minimum, Maximum:		1 2
Density, Unit:	1 M2	1 M2
Pest 6 Code, Type, Scale:	ABUTH W	ABUTH W
Stage Majority, Percent:		14 100
Stage Minimum, Percent:		14 100
Stage Maximum, Percent:		16 100
Height, Unit:		2 IN
Height Minimum, Maximum:		2 5
Density, Unit:	1 M2	1 M2
Pest 7 Code, Type, Scale:	SOLPT W	SOLPT W
Stage Majority, Percent:		12 100
Stage Minimum, Percent:		12 100
Stage Maximum, Percent:		12 100
Height, Unit:		0.5 IN
Height Minimum, Maximum:		0.25 0.5
Density, Unit:	4 M2	4 M2

Application Equipment

	A	B
Appl. Equipment:	6 FOOT BOOM	10' AI XR
Equipment Type:	SPRBAC	SPRBAC
Operation Pressure, Unit:	46 PSI	46 PSI
Nozzle Type:	AI XR	AI XR
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	18 IN	18 IN
Boom Length, Unit:	6.67 FT	10 FT
Boom Height, Unit:	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 GPA	15 GPA
Mix Size, Unit:	2 Liters	2 Liters
Propellant:	CO2	CO2

Acuron Weed Control and Corn Tolerance

Trial ID: 15ACURON Location: Western Branch Big E Trial Year: 2015
 Protocol ID: 15ACURON Investigator: Dr. Mark M. Loux
 Project ID: HBI001B3-2015US Study Director: Anthony Dobbels
 Sponsor Contact: Dain Bruns, Syngenta

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	Appl Description	29	30	31	32
1	UTC					32.3 d	18.8 a	160.8 d	57.6 a
2	Acuron	3 qt/a		A	PRE	44.6 abc	19.4 a	220.8 abc	57.6 a
3	Acuron	3 qt/a		A	PRE	44.3 abc	19.0 a	220.4 abc	58.0 a
3	AAtrex	1 qt/a		A	PRE				
4	Acuron	3 qt/a		A	PRE	47.6 abc	18.9 a	236.9 abc	57.4 a
4	Touchdown Total	30 oz/a		B	POST				
4	Status	5 oz/a		B	POST				
4	N PAK AMS	48 oz/a		B	POST				
5	Anthem ATZ	2.5 pt/a		A	PRE	42.1 c	18.3 a	211.1 c	58.4 a
6	Surestart II	3 pt/a		A	PRE	42.7 bc	19.2 a	212.2 c	58.3 a
7	Verdict	18 oz/a		A	PRE	43.0 bc	19.4 a	212.7 bc	57.8 a
8	Corvus	5.6 oz/a		A	PRE	43.3 bc	19.1 a	215.1 bc	58.0 a
9	Cinch ATZ	2 qt/a		A	PRE	42.9 bc	20.1 a	210.4 c	58.4 a
9	INSTIGATE 4 OZ								
9	Rimsulfuron	1 oz/a		A	PRE				
9	Mesotrione	5 oz/a		A	PRE				
10	Acuron	1.5 qt/a		A	PRE	49.3 a	18.7 a	246.2 a	57.6 a
10	Acuron	1.5 qt/a		B	POST				
10	NIS	4.8 oz/a		B	POST				
10	N PAK AMS	48 oz/a		B	POST				
11	Acuron	1.5 qt/a		A	PRE	48.3 ab	19.0 a	240.1 ab	58.8 a
11	Halex GT	3.6 pt/a		B	POST				
11	NIS	4.8 oz/a		B	POST				
11	N PAK AMS	48 oz/a		B	POST				

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

Trt	Treatment	Other	Other	Appl	Appl					
No.	Name	Rate	Rate	Unit	Code	Description	29	30	31	32
	12 Acuron	2 qt/a		A	PRE		49.8 a	19.2 a	247.2 a	57.8 a
	12 Touchdown Total	30 oz/a		B	POST					
	12 N PAK AMS	48 oz/a		B	POST					
LSD P=.05							5.64	1.21	27.60	0.98
Standard Deviation							3.92	0.84	19.19	0.68
CV							8.86	4.42	8.74	1.17
Grand Mean							44.20	19.08	219.50	57.97
Bartlett's X2							20.486	32.75	19.093	18.593
P(Bartlett's X2)							0.039*	0.001*	0.059	0.069
Skewness							-1.0732*	2.3407*	-1.0355*	0.4469
Kurtosis							0.8263	12.8102*	0.7207	2.8477*
Replicate F							3.481	5.048	4.144	1.683
Replicate Prob(F)							0.0267	0.0055	0.0134	0.1897
Treatment F							5.666	1.009	5.857	1.518
Treatment Prob(F)							0.0001	0.4595	0.0001	0.1719

Crop Code

ZEAMX, BCOR, Zea mays, = US

Rating Type

YIELD = yield

MOICON = moisture content

WEITES = weight - test

Rating Unit

% = percent

BU = bushel

PLOT = total plot

A = acre

BU = bushel

QT = quart

Plant-Eval Interval

152 DP-1 = 1 ZEAMX 5-3-2015

ARM Action Codes

TY1 = 5.185714*[29]*(100-[30])/84.5