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Soybean herbicide showcase programs
Trial ID: 19 SHOWCASE Location: Trial Year: 2019
Protocol ID: 19 SHOWCASE Investigator: Dr. Mark M. Loux
Project ID: Study Director: Bryan Reeb
Sponsor Contact:

General Trial Information
Study Director: Bryan Reeb
Investigator: Dr. Mark M. Loux

Trial Status: E established
ARM Trial Created On: May-6-2019

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 °: 39.85952 N
Longitude of LL Corner °: 83.67559 W
Altitude of LL Corner: 1112.00 FT

Conducted Under GLP: No
Conducted Under GEP: No

Contacts
Study Director: Bryan Reeb

Investigator: Dr. Mark M. Loux
Crop Description
Crop 1: C GLXMA Glycine max Soybean **BBCH Scale:** BSOY
Entry Date: May-21-2019
Variety: AG38X8
Attributes: Roundup Ready/xtend
Planting Date: May-16-2019 **Planting Rate:** 165000 S/A
Depth: 1.5 IN
Rows per Plot: 8 **Planting Method:** SEEDED seeded
Row Spacing: 15 IN **Planting Equipment:** PP plot planter
Seed Bed: CLODDY cloddy
Soil Temperature: 63 F **Soil Moisture:** GOOD good
Emergence Date: May-29-2019
Harvested Width: 6.25 FT
% Standard Moisture: 13 **Harvested Length:** 30 FT

Pest Description
Pest 1 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail **Entry Date:** May-31-2019

Pest 2 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed **Entry Date:** May-31-2019

Pest 3 Type: W **Code:** CHEAL Chenopodium album
Common Name: common lambsquarters **Entry Date:** May-31-2019

Pest 4 Type: W **Code:** AMARE Amaranthus retroflexus
Common Name: Redroot pigweed **Entry Date:** May-31-2019

Pest 5 Type: W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyard grass **Entry Date:** Jun-13-2019

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

Previous

No.	Crop	Year
1.	CORN	2018

Soil Description
Description Name: G-6
% Sand: 32 **% OM:** 2.2 **Texture:** SICL silty clay loam
% Silt: 53 **pH:** 5.9 **Soil Name:** Kokomo
% Clay: 15 **CEC:** 14.8 **Fert. Level:** G good
Soil Drainage: G good

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Application Description

	A	B	C
Application Date	May-16-2019	May-29-2019	Jun-12-2019
Appl. Start Time	9:00 PM	9:00 AM	9:10 AM
Appl. Stop Time	10:00 PM	9:30 AM	9:15 AM
Interval to Prev. Appl.		13 DAYS	14 DAYS
Application Method	BROADC	SPRAY	spray
Application Timing	PRE	11	POST
Application Placement	BROFOL	BROFOL	BROFOL
Applied By	LAMB	REEB	DOBBELS
Appl. Entry Date	May-17-2019	May-31-2019	Jun-13-2019
Air Temperature Start, Stop	74 74 F	76 76 F	65 65 F
% Relative Humidity Start, Stop	43 43	84 84	50 50
Wind Velocity+Dir. Start	11 MPH SW	10 MPH WSW	7 MPH ENE
Wind Velocity+Dir. Stop	11 MPH SW	10 MPH WSW	7 MPH ENE
Wind Velocity+Dir. Max	11 MPH S	10 MPH WSW	7 MPH ENE
Wet Leaves (Y/N)	N no	N no	Y yes
Soil Temperature	63 F	70 F	61 F
Soil Moisture	DRY	MOIST	DRY
Soil Surface Condition	SMOOTH	SMOOTH	SMOOTH
% Cloud Cover	90	90	15
Next Moisture Occurred On	May-17-2019	May-30-2019	Jun-12-2019
Time to Next Moisture	3 HR	1 DAY	8 HR
Moisture 6 Hours after Appl.	1.32 IN	0 IN	0 IN
Moisture 1 Week after Appl.	2.54 IN	0.66 IN	3.27 IN

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Days after Emergence	-13		14
Stage Scale Used		VR	
Stage Majority, Percent		VC	V3 100
Height Average		2 IN	8 IN
Height Minimum, Maximum			8 10

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale	SETFA W	SETFA W	SETFA W
Stage Majority, Percent		11 100	12 90
Stage Minimum, Percent			12 90
Stage Maximum, Percent			13 10
Height Average		0.5 IN	2 IN
Height Minimum, Maximum		0.5 1	1 3
Density Average		128 PLA/m2	128 PLA/m2
Density Min, Max		96 251	96 251
Pest 2 Code, Type, Scale	AMBTR W	AMBTR W	AMBTR W
Stage Majority, Percent		12 90	14 80
Stage Minimum, Percent		12 90	14 80
Stage Maximum, Percent		14 10	16 60
Height Average		1.5 IN	3 IN
Height Minimum, Maximum		1 2	2 4
Density Average		8 PLA/m2	8 PLA/m2
Density Min, Max		5 12	5 12
Pest 3 Code, Type, Scale	CHEAL W	CHEAL W	CHEAL W
Stage Majority, Percent		12 100	
Height Average		1 IN	
Height Minimum, Maximum		1 1.5	
Density Average		3 PLA/m2	
Density Min, Max		2 6	
Pest 4 Code, Type, Scale	AMARE W	AMARE W	AMARE W
Stage Majority, Percent		12 90	
Stage Minimum, Percent		10 10	
Stage Maximum, Percent		12 90	
Height Average		0.25 IN	
Height Minimum, Maximum		0.25 0.5	
Density Average		4 PLA/m2	
Density Min, Max		2 8	
Pest 5 Code, Type, Scale	ECHCG W	ECHCG W	ECHCG W
Stage Majority, Percent			12 100
Height Average			1.5 IN
Height Minimum, Maximum			1 2
Density Average			25 PLA/m2
Density Min, Max			13 65

Application Equipment

	A	B	C
Appl. Equipment	10' TTI	10' TTI	10' TTI
Equipment Type	SPRBAC	SPRBAC	SPRBAC
Operation Pressure	40 PSI	40 PSI	40 PSI
Nozzle Type	TTI	TTI	TTI
Nozzle Size	110015	110015	110015
Nozzle Spacing	18 IN	18 IN	18 IN
Boom Length	10 FT	10 FT	10 FT
Boom Height	20 IN	20 IN	20 IN
Ground Speed	3 MPH	3 MPH	3 MPH
Carrier	WATER	WATER	WATER
Application Amount	15 GPA	15 GPA	15 GPA
Mix Size	3 GAL	3 GAL	3 GAL
Propellant	CO2	CO2	CO2

Context	Date	By	Notes
STATUS	May-6-2019	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	May-21-2019	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'E' when Planting Date entered.

SE Definitions

	1.
Crop Type, Code	C

Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Type, Code	C	C	C	C
Crop Name	GLXMA Soybean	GLXMA Soybean	GLXMA Soybean	GLXMA Soybean
Rating Date	Oct-2-2019	Oct-2-2019	Oct-2-2019	Oct-2-2019
Rating Type	WEIGHT	MOICON	YIELD	WEITES
Rating Unit	LBS	%	BU	LBS
Number of Subsamples	1	1	1	1
Data Entry Date	Oct-4-2019	Oct-4-2019	Oct-4-2019	Oct-4-2019
Days After First/Last Applic.	139 112	139 112	139 112	139 112
Trt-Eval Interval				
Plant-Eval Interval	139 DP-1	139 DP-1	139 DP-1	139 DP-1
Days After Emergence	126 DE-1	126 DE-1	126 DE-1	126 DE-1
ARM Action Codes			TY1	
Number of Decimals	2	2	1	2

Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	19*	20*	21*	22*
1	Sonic	0.219	lb ai/a	5	oz/a	A	13.91 -	11.11 b-e	54.9 bc	55.10 -
1	Durango DMA	1	lb ae/a	32	oz/a	C				
1	N-pak ams	2.5	% v/v	1.5	qt/a	C				
2	Sonic	0.219	lb ai/a	5	oz/a	A	16.43 -	10.58 e	65.4 ab	54.82 -
2	Everprex	0.95	lb ai/a	1	pt/a	C				
2	Durango DMA	1	lb ae/a	32	oz/a	C				
2	N-pak ams	2.5	% v/v	1.5	qt/a	C				
3	Trivence @ 8 oz					A	16.36 -	11.95 a-d	64.1 ab	54.89 -
3	Classic	0.0195	lb ai/a	1.25	oz/a	A				
3	Valor SX	0.064	lb ai/a	2.0	oz/a	A				
3	Metribuzin	0.223	lb ai/a	4.76	oz/a	A				
3	Durango DMA	1	lb ae/a	32	oz/a	C				
3	N-pak ams	2.5	% v/v	1.5	qt/a	C				
4	Zidua Pro	0.192	lb ai/a	6	oz/a	A	17.61 -	10.80 de	69.9 ab	55.43 -
4	Engenia	0.5	lb ai/a	12.8	oz/a	A				
4	Roundup Power Max	1.13	lb ae/a	32	oz/a	A				
4	Destiny HC	0.5	% v/v	0.3	qt/a	A				
4	Engenia Pro	1.04	lb ai/a	16	oz/a	C				
4	Roundup Power Max	1.13	lb ae/a	32	oz/a	C				
4	Induce	0.25	% v/v	0.15	qt/a	C				
5	Engenia Pro	1.04	lb ai/a	16	oz/a	A	19.36 -	10.92 cde	76.8 a	55.21 -
5	Sencor DF	0.234	lb ai/a	5	oz/a	A				
5	Roundup Power Max	1.13	lb ae/a	32	oz/a	A				
5	Induce	0.25	% v/v	0.15	qt/a	A				
5	Engenia Pro	1.04	lb ai/a	16	oz/a	C				
5	Roundup Power Max	1.13	lb ae/a	32	oz/a	C				
5	Induce	0.25	% v/v	0.15	qt/a	C				

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Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	19*	20*	21*	22*
	Pest Type						C	C	C	C
	Pest Code						GLXMA	GLXMA	GLXMA	GLXMA
	Pest Scientific Name						Soybean	Soybean	Soybean	Soybean
	Pest Name						Oct-2-2019	Oct-2-2019	Oct-2-2019	Oct-2-2019
	Crop Type, Code						WEIGHT	MOICON	YIELD	WEITES
	Crop Name						LBS	%	BU	LBS
	Rating Date						1	1	1	1
	Rating Type						Oct-4-2019	Oct-4-2019	Oct-4-2019	Oct-4-2019
	Rating Unit						139 112	139 112	139 112	139 112
	Number of Subsamples									
	Data Entry Date						139 DP-1	139 DP-1	139 DP-1	139 DP-1
	Days After First/Last Applic.						126 DE-1	126 DE-1	126 DE-1	126 DE-1
	Trt-Eval Interval								TY1	
	Plant-Eval Interval						2	2	1	2
	Days After Emergence									
	ARM Action Codes									
	Number of Decimals									
6	BAS 872UAH	1.04	lb ai/a	16	oz/a	B	14.48 -	12.19 ab	56.7 bc	54.89 -
6	Roundup Power Max	1.13	lb ae/a	32	oz/a	B				
6	Induce	0.25	% v/v	0.15	qt/a	B				
7	BAS 872UAH	1.04	lb ai/a	16	oz/a	A	15.80 -	11.34 b-e	62.3 abc	54.91 -
7	Roundup Power Max	1.13	lb ae/a	32	oz/a	A				
7	Induce	0.25	% v/v	0.15	qt/a	A				
7	Engenia Pro	1.04	lb ai/a	16	oz/a	C				
7	Roundup Power Max	1.13	lb ae/a	32	oz/a	C				
7	Induce	0.25	% v/v	0.15	qt/a	C				
8	Boundary	1.46	lb ai/a	1.8	pt/a	A	15.51 -	10.96 cde	61.5 abc	55.24 -
8	Roundup Power Max	1.13	lb ae/a	32	oz/a	C				
8	N-pak ams	2.5	% v/v	1.5	qt/a	C				
9	Roundup Power Max	1.13	lb ae/a	32	oz/a	C	14.17 -	11.99 abc	55.5 bc	54.52 -
9	N-pak ams	2.5	% v/v	1.5	qt/a	C				
10	Authority XL	0.175	lb ai/a	4	oz/a	A	12.25 -	12.60 a	47.6 c	54.34 -
10	Roundup Power Max	1.13	lb ae/a	32	oz/a	C				
10	N-pak ams	2.5	% v/v	1.5	qt/a	C				
	LSD P=.05						4.108	1.184	16.02	0.916
	Standard Deviation						2.831	0.816	11.04	0.631
	CV						18.16	7.13	17.96	1.15
	Grand Mean						15.588	11.442	61.47	54.935
	Levene's F						2.486	0.276	2.474	0.522
	Levene's Prob(F)						0.03*	0.976	0.03*	0.847
	Skewness						-0.5687	0.2602	-0.5773	0.1527
	Kurtosis						-0.9235	-1.3267	-0.909	0.6869
	Replicate F						0.826	0.020	0.850	2.013
	Replicate Prob(F)						0.4910	0.9961	0.4786	0.1358
	Treatment F						2.047	2.835	2.267	1.109
	Treatment Prob(F)						0.0727	0.0174	0.0484	0.3896

Crop Type, Code
C = EPPO species (Bayer) codes
GLXMA, BSOY, Glycine max, Soybean = US
Rating Type
WEIGHT = weight
MOICON = moisture content
YIELD = yield
WEITES = weight - test
Rating Unit
% = percent
BU = bushel
Plant-Eval Interval
139 DP-1 = 1 GLXMA May-16-2019
ARM Action Codes
TY1 = 3.872*[19]*(100-[20])/87