

# Purdue Weed Science

## Syngenta - Soybean Herbicides in Enlist Soybeans

Trial ID: 20S-MGS-SOY-19 Location: Lafayette Trial Year: 2020  
 Protocol ID: 20S-MGS-SOY-19 Investigator (Creator): Dr. Bill Johnson  
 Project ID: Study Director: Brent Mansfield  
 Sponsor Contact: Chad Threewits - Syngenta

### General Trial Information

**Study Director:** Brent Mansfield **Title:** Research Associate  
**Investigator:** Dr. Bill Johnson **Title:** Professor

**Discipline:** H herbicide  
**Trial Status:** E established **Trial Reliability:** 1 usable data  
**ARM Trial Created On:** 6/8/2020  
**Initiation Date:** 6/8/2020  
**Completion Date:** 11/2/2020

### Trial Location

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

**Latitude of LL Corner °:** 40.2700194 N  
**Longitude of LL Corner °:** -86.8827387 W

**Conducted Under GLP:** No  
**Conducted Under GEP:** No

### Contacts

**Role:** STYDIR study director  
**Study Director:** Brent Mansfield **Title:** Research Associate  
**Organization:** Purdue University  
**Address 1:** 915 W. State Street  
**Country:** USA United States **E-mail:** brentmansfield@purdue.edu  
**City:** West Lafayette, IN **Postal Code:** 47907  
**Role:** INVEST investigator  
**Investigator:** Dr. Bill Johnson **Title:** Professor  
**Organization:** Purdue University  
**Address 1:** 915 W. State Street  
**Country:** USA United States **E-mail:** wgj@purdue.edu  
**City:** West Lafayette, IN **Postal Code:** 47907  
**Role:** SPONSR sponsor  
**Sponsor:** Chad Threewits - Syngenta

### Crop Description

**Crop 1:** C GLXMA Glycine max Soybean **BBCH Scale:** BSOY  
**Entry Date:** 12/5/2020 **Stage Scale:** BBCH  
**Variety:** Stine 32EA12  
**Attributes:** 2,4-D-R and Glyphosate-R  
**Planting Date:** 6/8/2020 **Planting Rate:** 387790 S/ha  
**Depth:** 4.5 cm  
**Rows per Plot:** 4 **Planting Method:** PLANTD planted  
**Row Spacing:** 76 cm **Planting Equipment:** PP plot planter  
**Soil Temperature:** 80 F **Soil Moisture:** NORMAL normal, adequate  
**Emergence Date:** 6/15/2020  
**Harvested Width:** 5 FT  
**Harvested Length:** 27 FT  
**% Standard Moisture:** 13

**Crop 2:** C GLXMA Glycine max Soybean **BBCH Scale:** BSOY  
**Entry Date:** 12/5/2020 **Stage Scale:** BBCH  
**Variety:** Stine 32EA12  
**Attributes:** 2,4-D-R and Glyphosate-R  
**Planting Date:** 6/25/2020 **Planting Rate:** 387790 S/ha  
**Depth:** 4.5 cm  
**Rows per Plot:** 4 **Planting Method:** PLANTD planted  
**Row Spacing:** 76 cm **Planting Equipment:** PP plot planter  
**Soil Temperature:** 80 F **Soil Moisture:** NORMAL normal, adequate  
**Emergence Date:** 7/3/2020

### Pest Description

**Pest 1 Type:** W **Code:** AMATA *Amaranthus x tamariscinus* **Entry Date:** 12/5/2020  
**Common Name:** Common waterhemp **Stage Scale:** BBCH  
**Pest 2 Type:** W **Code:** SETFA *Setaria faberi* **Entry Date:** 12/5/2020  
**Common Name:** Giant foxtail **Stage Scale:** BBCH

**Site and Design**

Treated Plot Width: 6.67 FT

Treated Plot Length: 30 FT

Treated Plot Area: 200.1 FT<sup>2</sup> Treatments: 10

Replications: 4

Site Type: FIELD field

Experimental Unit: 1 PLOT plot

Tillage Type: CONTIL conventional-till

Study Design: RACOB� Randomized Complete Block (RCB)

**Soil Description**

Description Name: Crosby-Miami Silt

% Sand: 27 % OM: 2.4 Texture: SIL silt loam

% Silt: 52

pH: 7.1

% Clay: 21

CEC: 9.3

**Application Description**

	A	B	C
Application Date	6/8/2020	7/3/2020	7/21/2020
Appl. Start Time	6:38 PM	6:00 PM	12:15 PM
Appl. Stop Time	6:55 PM	6:20 PM	12:40 PM
Interval to Prev. Appl.		25 DAYS	18 DAYS
Application Method	SPRAY	SPRAY	SPRAY
Application Timing	A	B	C
Application Placement	BROSOI	BROFOL	BROFOL
Applied By	B.MANSFIELD	B. MANSFIELD	B. MANSFIELD
Appl. Entry Date	12/5/2020	12/5/2020	12/5/2020
Air Temperature Start, Stop	88, 88 F	88, 88 F	86, 86 F
% Relative Humidity Start, Stop	24, 24	46, 46	66, 66
Wind Velocity+Dir. Start	6 MPH, E	9 MPH, NNW	7 MPH, ESE
Wet Leaves (Y/N)	N, no	N, no	N, no
Soil Temperature	85 F	86 F	85 F
Soil Moisture	NORMAL	NORMAL	NORMAL
% Cloud Cover	60	59	100

**Crop Stage At Each Application**

	A	B	C
Crop 1 Code, BBCH Scale	GLXMA, BSOY	GLXMA, BSOY	GLXMA, BSOY
Days after Emergence	-7	18	36
Crop 2 Code, BBCH Scale	GLXMA, BSOY	GLXMA, BSOY	GLXMA, BSOY
Days after Emergence	-25		18
Stage Majority, Percent	00, -	10, -	13, -
Stage Minimum, Percent	00, -	09, -	12, -
Stage Maximum, Percent	00, -	10, -	13, -
Height Average	0 IN	0.5 IN	7 IN
Height Minimum, Maximum	0, 0	0.25, 0.5	6, 8

**Pest Stage At Each Application**

	A	B	C
Pest 1 Code, Type, Scale	AMATA, W, BBCH	AMATA, W, BBCH	AMATA, W, BBCH
Stage Majority, Percent	0, -	11, -	18, -
Stage Minimum, Percent	0, -	11, -	16, -
Stage Maximum, Percent	0, -	11, -	19, -
Height Average	0 IN	0.1 IN	8 IN
Height Minimum, Maximum	0, 0	0.1, 0.1	3, 14
Density Average		25 FT <sup>2</sup>	8 FT <sup>2</sup>
Density Minimum, Maximum		5, 45	2, 20
Pest 2 Code, Type, Scale	SETFA, W, BBCH	SETFA, W, BBCH	SETFA, W, BBCH
Stage Majority, Percent	0, -	11, -	16, -
Stage Minimum, Percent	0, -	11, -	14, -
Stage Maximum, Percent	0, -	11, -	19, -
Height Average	0 IN	0.5 IN	10 IN
Height Minimum, Maximum	0, 0	0.25, 1	6, 16
Density Average		5 FT <sup>2</sup>	6 FT <sup>2</sup>
Density Minimum, Maximum		1, 10	2, 12

<b>Application Equipment</b>			
	<b>A</b>	<b>B</b>	<b>C</b>
<b>Appl. Equipment</b>	CO2 BACKPACK	CO2 BACKPACK	CO2 BACKPACK
<b>Equipment Type</b>	BACSPR	BACSPR	BACSPR
<b>Operation Pressure</b>	44 PSI	45 PSI	45 PSI
<b>Nozzle Model</b>	TT110015	TT110015	TT110015
<b>Nozzle Type</b>	TEEJAI	TEEJTU	TEEJTU
<b>Nozzle Spacing</b>	20.0 IN	20.0 IN	20.0 IN
<b>Nozzles/Row</b>	4.0	4.0	4.0
<b>Boom Length</b>	6.67 FT	6.67 FT	6.67 FT
<b>Boom Height</b>	17.0 IN	18.0 IN	30.0 IN
<b>Ground Speed</b>	3 MPH	3 MPH	3 MPH
<b>Carrier</b>	WATER	WATER	WATER
<b>Application Amount</b>	15 GAL/AC	15 GAL/AC	15 GAL/AC
<b>Mix Overage</b>	0 mL	0 mL	0 mL
<b>Mix Size</b>	1119.0 mL	1119.0 mL	1119.0 mL
<b>Propellant</b>	COMCO2	COMCO2	COMCO2

<b>Notes</b>			
<b>Context</b>	<b>Date</b>	<b>By</b>	<b>Notes</b>
STATUS	6/8/2020	Dr. Bill Johnson	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
CROP	12/5/2020	Dr. Bill Johnson	Dry weather resulted in poor soil to seed contact and poor emergence. Trial was replanted on 6/25/20. The A timing for herbicide application was only applied after the first planting on 6/8/2020.

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## Syngenta - Soybean Herbicides in Enlist Soybeans

Trial ID: 20S-MGS-SOY-19	Location: Lafayette	Trial Year: 2020
Protocol ID: 20S-MGS-SOY-19	Investigator (Creator): Dr. Bill Johnson	
Project ID:	Study Director: Brent Mansfield	
	Sponsor Contact: Chad Threewits - Syngenta	

Pest Type	C, GLXMA	C, GLXMA	W, Weed AMATA	W, Weed SETFA	C, GLXMA			
Pest Code			Amaranthus x ta>	Setaria faberi				
Pest Scientific Name			Common waterhemp	Giant foxtail				
Pest Name								
Crop Type, Code	C, GLXMA	C, GLXMA			C, GLXMA			
BBCH Scale	BSOY	BSOY			BSOY			
Crop Scientific Name	Glycine max	Glycine max			Glycine max			
Crop Name	Soybean	Soybean			Soybean			
Rating Date	6/16/2020	6/22/2020	6/22/2020	6/22/2020	6/29/2020			
Part Rated	PLANT, C	PLANT, C	PLANT, C	PLANT, C	PLANT, C			
Rating Type	PHYGEN	PHYGEN	CONTROL	CONTROL	PHYGEN			
Rating Unit/Min/Max	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100			
Sample Size								
Number of Subsamples	1	1	1	1	1			
Assessed By	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD			
Data Entry Date	12/5/2020	12/5/2020	12/5/2020	12/5/2020	12/5/2020			
Rating Timing	8 DAA	14 DAA	14 DAA	14 DAA	21 DAA			
Days After First/Last Applic.	8, 8	14, 14	14, 14	14, 14	21, 21			
Plant-Eval Interval	8 DP-1	14 DP-1	14 DP-1	14 DP-1	21 DP-1			
Days After Emergence	1 DE-1	7 DE-1	7 DE-1	7 DE-1	14 DE-1			
ARM Action Codes								
Number of Decimals								
Trt Treatment No. Name	Rate	Unit	Appl Code	1	2	3	4	5
1 PREFIX	1.32 LB A/I/A	A	A	0.0	0.0	100.0	100.0	0.0
TRICOR	0.28 LB A/I/A	A	A					
ENLIST ONE	2 PT/A	C	C					
ROUNDUP POWERMAX	24 FL OZ/A	C	C					
REQUEST	0.5 % V/V	C	C					
2 PREFIX	1.32 LB A/I/A	A	A	0.0 -	0.0 -	100.0 a	100.0 a	0.0 -
TRICOR	0.28 LB A/I/A	A	A					
ENLIST ONE	2 PT/A	C	C					
SEQUENCE	3 PT/A	C	C					
REQUEST	0.5 % V/V	C	C					
3 PREFIX	1.32 LB A/I/A	B	B					
ROUNDUP POWERMAX	0.84 LB AE/A	B	B					
REQUEST	0.5 % V/V	B	B					
ENLIST ONE	2 PT/A	C	C					
ROUNDUP POWERMAX	24 FL OZ/A	C	C					
REQUEST	0.5 % V/V	C	C					
4 BOUNDARY	1.63 LB A/I/A	A	A	0.0 -	0.0 -	100.0 a	100.0 a	0.0 -
ENLIST ONE	2 PT/A	C	C					
ROUNDUP POWERMAX	24 FL OZ/A	C	C					
REQUEST	0.5 % V/V	C	C					
5 BOUNDARY	1.63 LB A/I/A	A	A	0.0 -	0.0 -	100.0 a	100.0 a	0.0 -
ENLIST ONE	2 PT/A	C	C					
SEQUENCE	3 PT/A	C	C					
REQUEST	0.5 % V/V	C	C					
6 BOUNDARY	1.63 LB A/I/A	A	A	0.0 -	0.0 -	100.0 a	100.0 a	0.0 -
ENLIST ONE	2 PT/A	C	C					
ROUNDUP POWERMAX	24 FL OZ/A	C	C					
REQUEST	0.5 % V/V	C	C					
PREFIX	1.32 LB A/I/A	C	C					
7 SONIC	0.175 LB A/I/A	A	A	0.0 -	0.0 -	100.0 a	100.0 a	0.0 -
ENLIST ONE	2 PT/A	C	C					
ROUNDUP POWERMAX	24 FL OZ/A	C	C					
REQUEST	0.5 % V/V	C	C					
8 BROADAXE XC	1.42 LB A/I/A	A	A	0.0 -	0.0 -	100.0 a	100.0 a	0.0 -
TRICOR	0.28 LB A/I/A	A	A					
ENLIST ONE	2 PT/A	C	C					
SEQUENCE	3 PT/A	C	C					
REQUEST	0.5 % V/V	C	C					

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
 Untreated treatment(s) 1 excluded from analysis.  
 Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,9,12,13,16,18,19,20,21,22,23,24 because error mean square = 0.  
 ^Calculated from residual.

Pest Type			W, Weed	W, Weed	
Pest Code			AMATA	SETFA	
Pest Scientific Name			Amaranthus x ta>	Setaria faberi	
Pest Name			Common waterhemp	Giant foxtail	
Crop Type, Code	C, GLXMA	C, GLXMA			C, GLXMA
BBCH Scale	BSOY	BSOY			BSOY
Crop Scientific Name	Glycine max	Glycine max			Glycine max
Crop Name	Soybean	Soybean			Soybean
Rating Date	6/16/2020	6/22/2020	6/22/2020	6/22/2020	6/29/2020
Part Rated	PLANT, C	PLANT, C	PLANT, C	PLANT, C	PLANT, C
Rating Type	PHYGEN	PHYGEN	CONTROL	CONTROL	PHYGEN
Rating Unit/Min/Max	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100
Sample Size					
Number of Subsamples	1	1	1	1	1
Assessed By	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD
Data Entry Date	12/5/2020	12/5/2020	12/5/2020	12/5/2020	12/5/2020
Rating Timing	8 DAA	14 DAA	14 DAA	14 DAA	21 DAA
Days After First/Last Applic.	8, 8	14, 14	14, 14	14, 14	21, 21
Plant-Eval Interval	8 DP-1	14 DP-1	14 DP-1	14 DP-1	21 DP-1
Days After Emergence	1 DE-1	7 DE-1	7 DE-1	7 DE-1	14 DE-1
ARM Action Codes					
Number of Decimals					
Trt Treatment	Rate	Unit	Appl		
No. Name			Code	1	2
				3	4
				5	
9 BOUNDARY	1.63 LB AI/A	A	A	0.0 -	0.0 -
FIRSTRATE	0.0263 LB AI/A	A	A	100.0 a	100.0 a
ENLIST ONE	2 PT/A	C	C		0.0 -
SEQUENCE	3 PT/A	C	C		
REQUEST	0.5 % V/V	C	C		
10 UNTREATED				0.0 -	0.0 -
LSD P=.05					
Standard Deviation	0.00	0.00	0.00	0.00	0.00
CV	0.0	0.0	0.0	0.0	0.0
Grand Mean	0.00	0.00	87.50	87.50	0.00
Levene's F^	.	.	.	.	.
Levene's Prob(F)	.	.	.	.	.
Rank X2	.	.	.	.	.
P(Rank X2)	.	.	.	.	.
Skewness^	.	.	.	.	.
Kurtosis^	.	.	.	.	.
Replicate F	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
Untreated treatment(s) 1 excluded from analysis.  
Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,9,12,13,16,18,19,20,21,22,23,24 because error mean square = 0.  
^Calculated from residual.

Trt No.	Treatment Name	Rate	Unit	Appl Code	6	7	8	9	10
1	PREFIX TRICOR ENLIST ONE ROUNDUP POWERMAX REQUEST	1.32 0.28 2 24 0.5	LB AI/A LB AI/A PT/A FL OZ/A % V/V	A A C C C					93.8
2	PREFIX TRICOR ENLIST ONE SEQUENCE REQUEST	1.32 0.28 2 3 0.5	LB AI/A LB AI/A PT/A PT/A % V/V	A A C C C					95.0 ab
3	PREFIX ROUNDUP POWERMAX REQUEST ENLIST ONE ROUNDUP POWERMAX REQUEST	1.32 0.84 0.5 2 24 0.5	LB AI/A LB AE/A % V/V PT/A FL OZ/A % V/V	B B B C C C	10.0 a	5.0 a	98.8 a	100.0 a	99.3 a
4	BOUNDARY ENLIST ONE ROUNDUP POWERMAX REQUEST	1.63 2 24 0.5	LB AI/A PT/A FL OZ/A % V/V	A C C C					87.5 bc
5	BOUNDARY ENLIST ONE SEQUENCE REQUEST	1.63 2 3 0.5	LB AI/A PT/A PT/A % V/V	A C C C					85.5 c
6	BOUNDARY ENLIST ONE ROUNDUP POWERMAX REQUEST PREFIX	1.63 2 24 0.5 1.32	LB AI/A PT/A FL OZ/A % V/V LB AI/A	A C C C C					86.8 bc
7	SONIC ENLIST ONE ROUNDUP POWERMAX REQUEST	0.175 2 24 0.5	LB AI/A PT/A FL OZ/A % V/V	A C C C					95.5 ab
8	BROADAXE XC TRICOR ENLIST ONE SEQUENCE REQUEST	1.42 0.28 2 3 0.5	LB AI/A LB AI/A PT/A PT/A % V/V	A A C C C					96.0 ab

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
Untreated treatment(s) 1 excluded from analysis.  
Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,9,12,13,16,18,19,20,21,22,23,24 because error mean square = 0.  
^Calculated from residual.

Pest Type			W, Weed	W, Weed	W, Weed
Pest Code			AMATA	SETFA	AMATA
Pest Scientific Name			Amaranthus x ta>	Setaria faberi	Amaranthus x ta>
Pest Name			Common waterhemp	Giant foxtail	Common waterhemp
Crop Type, Code	C, GLXMA	C, GLXMA			
BBCH Scale	BSOY	BSOY			
Crop Scientific Name	Glycine max	Glycine max			
Crop Name	Soybean	Soybean			
Rating Date	7/10/2020	7/17/2020	7/17/2020	7/17/2020	7/21/2020
Part Rated	PLANT, C	PLANT, C	PLANT, C	PLANT, C	PLANT, C
Rating Type	PHYGEN	PHYGEN	CONTROL	CONTROL	CONTROL
Rating Unit/Min/Max	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100
Sample Size					
Number of Subsamples	1	1	1	1	1
Assessed By	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD
Data Entry Date	12/5/2020	12/5/2020	12/5/2020	12/5/2020	12/5/2020
Rating Timing	7 DAB	14 DAB	14 DAB	14 DAB	0 DAC
Days After First/Last Applic.	32, 7	39, 14	39, 14	39, 14	43, 18
Plant-Eval Interval	32 DP-1	39 DP-1	39 DP-1	39 DP-1	43 DP-1
Days After Emergence	25 DE-1	32 DE-1	32 DE-1	32 DE-1	36 DE-1
ARM Action Codes					
Number of Decimals					
Trt Treatment					
No. Name	6	7	8	9	10
Rate					
Unit					
Appl Code					
9 BOUNDARY	1.63 LB AI/A	A			
FIRSTRATE	0.0263 LB AI/A	A			93.0 abc
ENLIST ONE	2 PT/A	C			
SEQUENCE	3 PT/A	C			
REQUEST	0.5 % V/V	C			
10 UNTREATED	0.0 b	0.0 b	0.0 b	0.0 b	0.0 d
LSD P=.05	.	.	3.98	.	9.27
Standard Deviation	0.00	0.00	1.77	0.00	6.35
CV	0.0	0.0	3.58	0.0	7.74
Grand Mean	5.00	2.50	49.38	50.00	82.06
Levene's F^	.	.	.	.	0.856
Levene's Prob(F)	.	.	.	.	0.564
Rank X2	.	.	.	.	.
P(Rank X2)	.	.	.	.	.
Skewness^	.	.	0.0035	.	-1.0724*
Kurtosis^	.	.	-2.7923	.	2.5354*
Replicate F	0.000	0.000	1.000	0.000	2.635
Replicate Prob(F)	1.0000	1.0000	0.5000	1.0000	0.0729
Treatment F	0.000	0.000	6241.001	0.000	96.162
Treatment Prob(F)	1.0000	1.0000	0.0001	1.0000	0.0001

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

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

Untreated treatment(s) 1 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,9,12,13,16,18,19,20,21,22,23,24 because error mean square = 0.

^Calculated from residual.

Pest Type	W, Weed			W, Weed	W, Weed		
Pest Code	SETFA			AMATA	SETFA		
Pest Scientific Name	Setaria faberi			Amaranthus x ta>	Setaria faberi		
Pest Name	Giant foxtail			Common waterhemp	Giant foxtail		
Crop Type, Code		C, GLXMA	C, GLXMA				
BBCH Scale		BSOY	BSOY				
Crop Scientific Name		Glycine max	Glycine max				
Crop Name		Soybean	Soybean				
Rating Date	7/21/2020	7/28/2020	8/4/2020	8/4/2020	8/4/2020		
Part Rated	PLANT, C	PLANT, C	PLANT, C	PLANT, C	PLANT, C		
Rating Type	CONTROL	PHYGEN	PHYGEN	CONTROL	CONTROL		
Rating Unit/Min/Max	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Assessed By	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD		
Data Entry Date	12/5/2020	12/5/2020	12/5/2020	12/5/2020	12/5/2020		
Rating Timing	0 DAC	7 DAC	14 DAC	14 DAC	14 DAC		
Days After First/Last Applic.	43, 18	50, 7	57, 14	57, 14	57, 14		
Plant-Eval Interval	43 DP-1	50 DP-1	57 DP-1	57 DP-1	57 DP-1		
Days After Emergence	36 DE-1	43 DE-1	50 DE-1	50 DE-1	50 DE-1		
ARM Action Codes							
Number of Decimals							
Trt Treatment	Rate	Rate	Rate	Rate	Rate		
No. Name	Unit	Unit	Unit	Unit	Unit		
Appl Code	11	12	13	14	15		
1 PREFIX	1.32 LB A/I/A	A	84.3	0.0	0.0	98.8	98.3
TRICOR	0.28 LB A/I/A	A					
ENLIST ONE	2 PT/A	C					
ROUNDUP POWERMAX	24 FL OZ/A	C					
REQUEST	0.5 % V/V	C					
2 PREFIX	1.32 LB A/I/A	A	88.5 a	0.0 -	0.0 -	100.0 a	100.0 a
TRICOR	0.28 LB A/I/A	A					
ENLIST ONE	2 PT/A	C					
SEQUENCE	3 PT/A	C					
REQUEST	0.5 % V/V	C					
3 PREFIX	1.32 LB A/I/A	B	100.0 a	0.0 -	0.0 -	100.0 a	99.8 ab
ROUNDUP POWERMAX	0.84 LB AE/A	B					
REQUEST	0.5 % V/V	B					
ENLIST ONE	2 PT/A	C					
ROUNDUP POWERMAX	24 FL OZ/A	C					
REQUEST	0.5 % V/V	C					
4 BOUNDARY	1.63 LB A/I/A	A	94.3 a	0.0 -	0.0 -	90.0 b	98.8 abc
ENLIST ONE	2 PT/A	C					
ROUNDUP POWERMAX	24 FL OZ/A	C					
REQUEST	0.5 % V/V	C					
5 BOUNDARY	1.63 LB A/I/A	A	95.0 a	0.0 -	0.0 -	97.5 a	98.3 abc
ENLIST ONE	2 PT/A	C					
SEQUENCE	3 PT/A	C					
REQUEST	0.5 % V/V	C					
6 BOUNDARY	1.63 LB A/I/A	A	88.0 a	0.0 -	0.0 -	96.3 a	97.5 c
ENLIST ONE	2 PT/A	C					
ROUNDUP POWERMAX	24 FL OZ/A	C					
REQUEST	0.5 % V/V	C					
PREFIX	1.32 LB A/I/A	C					
7 SONIC	0.175 LB A/I/A	A	61.8 b	0.0 -	0.0 -	98.8 a	97.8 bc
ENLIST ONE	2 PT/A	C					
ROUNDUP POWERMAX	24 FL OZ/A	C					
REQUEST	0.5 % V/V	C					
8 BROADAXE XC	1.42 LB A/I/A	A	95.5 a	0.0 -	0.0 -	100.0 a	99.0 abc
TRICOR	0.28 LB A/I/A	A					
ENLIST ONE	2 PT/A	C					
SEQUENCE	3 PT/A	C					
REQUEST	0.5 % V/V	C					

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

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

Untreated treatment(s) 1 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,9,12,13,16,18,19,20,21,22,23,24 because error mean square = 0.

^Calculated from residual.



Pest Type	W, Weed	W, Weed	W, Weed	W, Weed	W, Weed
Pest Code	SETFA	AMATA	SETFA	AMATA	SETFA
Pest Scientific Name	Setaria faberi	Amaranthus x ta>	Setaria faberi	Amaranthus x ta>	Setaria faberi
Pest Name	Giant foxtail	Common waterhemp	Giant foxtail	Common waterhemp	Giant foxtail
Crop Type, Code		C, GLXMA	C, GLXMA		
BBCH Scale		BSOY	BSOY		
Crop Scientific Name		Glycine max	Glycine max		
Crop Name		Soybean	Soybean		
Rating Date	7/21/2020	7/28/2020	7/28/2020	8/4/2020	8/4/2020
Part Rated	PLANT, C	PLANT, C	PLANT, C	PLANT, C	PLANT, C
Rating Type	CONTROL	PHYGEN	PHYGEN	CONTROL	CONTROL
Rating Unit/Min/Max	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100
Sample Size					
Number of Subsamples	1	1	1	1	1
Assessed By	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD
Data Entry Date	12/5/2020	12/5/2020	12/5/2020	12/5/2020	12/5/2020
Rating Timing	0 DAC	7 DAC	14 DAC	14 DAC	14 DAC
Days After First/Last Applic.	43, 18	50, 7	57, 14	57, 14	57, 14
Plant-Eval Interval	43 DP-1	50 DP-1	57 DP-1	57 DP-1	57 DP-1
Days After Emergence	36 DE-1	43 DE-1	50 DE-1	50 DE-1	50 DE-1
ARM Action Codes					
Number of Decimals					
Trt Treatment					
No. Name					
Rate					
Unit					
Appl Code					
9 BOUNDARY	1.63 LB AI/A	A			
FIRSTRATE	0.0263 LB AI/A	A			
ENLIST ONE	2 PT/A	C			
SEQUENCE	3 PT/A	C			
REQUEST	0.5 % V/V	C			
10 UNTREATED					
LSD P=.05	16.68	.	.	5.31	2.21
Standard Deviation	11.43	0.00	0.00	3.64	1.52
CV	14.3	0.0	0.0	4.21	1.72
Grand Mean	79.89	0.00	0.00	86.53	87.89
Levene's F^	5.356	.	.	1.691	1.235
Levene's Prob(F)	0.00*	.	.	0.146	0.317
Rank X2	.	.	.	.	.
P(Rank X2)	.	.	.	.	.
Skewness^	-0.1787	.	.	-0.3221	-0.6086
Kurtosis^	4.4311*	.	.	1.1058	-0.0022
Replicate F	0.904	0.000	0.000	4.105	3.323
Replicate Prob(F)	0.4538	1.0000	1.0000	0.0174	0.0367
Treatment F	31.378	0.000	0.000	320.790	1893.678
Treatment Prob(F)	0.0001	1.0000	1.0000	0.0001	0.0001

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
Untreated treatment(s) 1 excluded from analysis.  
Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,9,12,13,16,18,19,20,21,22,23,24 because error mean square = 0.  
^Calculated from residual.

Pest Type		W, Weed AMATA	W, Weed SETFA	W, Weed AMATA	W, Weed SETFA		
Pest Code		Amaranthus x ta>	Setaria faberi	Amaranthus x ta>	Setaria faberi		
Pest Scientific Name		Common waterhemp	Giant foxtail	Common waterhemp	Giant foxtail		
Pest Name							
Crop Type, Code	C, GLXMA						
BBCH Scale	BSOY						
Crop Scientific Name	Glycine max						
Crop Name	Soybean						
Rating Date	8/11/2020	8/18/2020	8/18/2020	9/1/2020	9/1/2020		
Part Rated	PLANT, C	PLANT, C	PLANT, C	PLANT, C	PLANT, C		
Rating Type	PHYGEN	CONTROL	CONTROL	CONTROL	CONTROL		
Rating Unit/Min/Max	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Assessed By	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD		
Data Entry Date	12/5/2020	12/5/2020	12/5/2020	12/5/2020	12/5/2020		
Rating Timing	21 DAC	28 DAC	28 DAC	42 DAC	42 DAC		
Days After First/Last Applic.	64, 21	71, 28	71, 28	85, 42	85, 42		
Plant-Eval Interval	64 DP-1	71 DP-1	71 DP-1	85 DP-1	85 DP-1		
Days After Emergence	57 DE-1	64 DE-1	64 DE-1	78 DE-1	78 DE-1		
ARM Action Codes							
Number of Decimals							
Trt Treatment	Rate	Rate	Rate	Rate	Rate		
No. Name	Unit	Unit	Unit	Unit	Unit		
Code							
1 PREFIX	1.32 LB AI/A	A	0.0	100.0	100.0	100.0	100.0
TRICOR	0.28 LB AI/A	A					
ENLIST ONE	2 PT/A	C					
ROUNDUP POWERMAX	24 FL OZ/A	C					
REQUEST	0.5 % V/V	C					
2 PREFIX	1.32 LB AI/A	A	0.0 -	100.0 a	100.0 a	100.0 a	100.0 a
TRICOR	0.28 LB AI/A	A					
ENLIST ONE	2 PT/A	C					
SEQUENCE	3 PT/A	C					
REQUEST	0.5 % V/V	C					
3 PREFIX	1.32 LB AI/A	B	0.0 -	100.0 a	100.0 a	100.0 a	100.0 a
ROUNDUP POWERMAX	0.84 LB AE/A	B					
REQUEST	0.5 % V/V	B					
ENLIST ONE	2 PT/A	C					
ROUNDUP POWERMAX	24 FL OZ/A	C					
REQUEST	0.5 % V/V	C					
4 BOUNDARY	1.63 LB AI/A	A	0.0 -	96.8 c	100.0 a	100.0 a	100.0 a
ENLIST ONE	2 PT/A	C					
ROUNDUP POWERMAX	24 FL OZ/A	C					
REQUEST	0.5 % V/V	C					
5 BOUNDARY	1.63 LB AI/A	A	0.0 -	99.3 ab	100.0 a	100.0 a	100.0 a
ENLIST ONE	2 PT/A	C					
SEQUENCE	3 PT/A	C					
REQUEST	0.5 % V/V	C					
6 BOUNDARY	1.63 LB AI/A	A	0.0 -	97.5 bc	100.0 a	100.0 a	100.0 a
ENLIST ONE	2 PT/A	C					
ROUNDUP POWERMAX	24 FL OZ/A	C					
REQUEST	0.5 % V/V	C					
PREFIX	1.32 LB AI/A	C					
7 SONIC	0.175 LB AI/A	A	0.0 -	100.0 a	100.0 a	100.0 a	100.0 a
ENLIST ONE	2 PT/A	C					
ROUNDUP POWERMAX	24 FL OZ/A	C					
REQUEST	0.5 % V/V	C					
8 BROADAXE XC	1.42 LB AI/A	A	0.0 -	100.0 a	100.0 a	100.0 a	100.0 a
TRICOR	0.28 LB AI/A	A					
ENLIST ONE	2 PT/A	C					
SEQUENCE	3 PT/A	C					
REQUEST	0.5 % V/V	C					

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

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

Untreated treatment(s) 1 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,9,12,13,16,18,19,20,21,22,23,24 because error mean square = 0.

^Calculated from residual.

				W, Weed AMATA Amaranthus x ta> Common waterhemp	W, Weed SETFA Setaria faberi Giant foxtail	W, Weed AMATA Amaranthus x ta> Common waterhemp	W, Weed SETFA Setaria faberi Giant foxtail
Pest Type							
Pest Code							
Pest Scientific Name							
Pest Name							
Crop Type, Code	C, GLXMA						
BBCH Scale	B SOY						
Crop Scientific Name	Glycine max						
Crop Name	Soybean						
Rating Date	8/11/2020		8/18/2020	8/18/2020		9/1/2020	9/1/2020
Part Rated	PLANT, C		PLANT, C	PLANT, C		PLANT, C	PLANT, C
Rating Type	PHYGEN		CONTROL	CONTROL		CONTROL	CONTROL
Rating Unit/Min/Max	% , 0, 100		% , 0, 100	% , 0, 100		% , 0, 100	% , 0, 100
Sample Size							
Number of Subsamples	1		1	1		1	1
Assessed By	B. MANSFIELD		B. MANSFIELD	B. MANSFIELD		B. MANSFIELD	B. MANSFIELD
Data Entry Date	12/5/2020		12/5/2020	12/5/2020		12/5/2020	12/5/2020
Rating Timing	21 DAC		28 DAC	28 DAC		42 DAC	42 DAC
Days After First/Last Applic.	64, 21		71, 28	71, 28		85, 42	85, 42
Plant-Eval Interval	64 DP-1		71 DP-1	71 DP-1		85 DP-1	85 DP-1
Days After Emergence	57 DE-1		64 DE-1	64 DE-1		78 DE-1	78 DE-1
ARM Action Codes							
Number of Decimals							
Trt Treatment							
No. Name	Rate Unit Appl Code	16	17	18	19	20	
9 BOUNDARY	1.63 LB AI/A A	0.0 -	99.3 ab	100.0 a	100.0 a	100.0 a	
FIRSTRATE	0.0263 LB AI/A A						
ENLIST ONE	2 PT/A C						
SEQUENCE	3 PT/A C						
REQUEST	0.5 % V/V C						
10 UNTREATED		0.0 -	0.0 d	0.0 b	0.0 b	0.0 b	
LSD P=.05		.	2.33	.	.	.	.
Standard Deviation		0.00	1.60	0.00	0.00	0.00	0.00
CV		0.0	1.82	0.0	0.0	0.0	0.0
Grand Mean		0.00	88.08	88.89	88.89	88.89	88.89
Levene's F^		.	3.682	.	.	.	.
Levene's Prob(F)		.	0.005*	.	.	.	.
Rank X2		.	.	.	.	.	.
P(Rank X2)		.	.	.	.	.	.
Skewness^		.	-0.3147	.	.	.	.
Kurtosis^		.	0.4951	.	.	.	.
Replicate F		0.000	3.110	0.000	0.000	0.000	0.000
Replicate Prob(F)		1.0000	0.0452	1.0000	1.0000	1.0000	1.0000
Treatment F		0.000	1708.428	0.000	0.000	0.000	0.000
Treatment Prob(F)		1.0000	0.0001	1.0000	1.0000	1.0000	1.0000

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

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

Untreated treatment(s) 1 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,9,12,13,16,18,19,20,21,22,23,24 because error mean square = 0.

^Calculated from residual.

Pest Type	W, Weed	W, Weed	W, Weed	W, Weed			
Pest Code	AMATA	SETFA	AMATA	SETFA			
Pest Scientific Name	Amaranthus x ta>	Setaria faberi	Amaranthus x ta>	Setaria faberi			
Pest Name	Common waterhemp	Giant foxtail	Common waterhemp	Giant foxtail			
Crop Type, Code					C, GLXMA		
BBCH Scale					BSOY		
Crop Scientific Name					Glycine max		
Crop Name					Soybean		
Rating Date	9/15/2020	9/15/2020	11/2/2020	11/2/2020	11/2/2020		
Part Rated	PLANT, C	PLANT, C	PLANT, C	PLANT, C			
Rating Type	CONTROL	CONTROL	CONTROL	CONTROL	Weight		
Rating Unit/Min/Max	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100	LB, -, -		
Sample Size					1 PLOT		
Number of Subsamples	1	1	1	1	1		
Assessed By	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD		
Data Entry Date	12/5/2020	12/5/2020	12/5/2020	12/5/2020	12/5/2020		
Rating Timing	56 DAC	56 DAC	Harvest	Harvest	Harvest		
Days After First/Last Applic.	99, 56	99, 56	147, 104	147, 104	147, 104		
Plant-Eval Interval	99 DP-1	99 DP-1	147 DP-1	147 DP-1	147 DP-1		
Days After Emergence	92 DE-1	92 DE-1	140 DE-1	140 DE-1	140 DE-1		
ARM Action Codes							
Number of Decimals							
Trt Treatment	Rate	Rate	Rate	Rate	Rate		
No. Name	Unit	Unit	Unit	Unit	Unit		
Appl Code	21	22	23	24	25		
1 PREFIX	1.32 LB AI/A	A	100.0	100.0	100.0	100.0	9.933
TRICOR	0.28 LB AI/A	A					
ENLIST ONE	2 PT/A	C					
ROUNDUP POWERMAX	24 FL OZ/A	C					
REQUEST	0.5 % V/V	C					
2 PREFIX	1.32 LB AI/A	A	100.0 a	100.0 a	100.0 a	100.0 a	11.590 a
TRICOR	0.28 LB AI/A	A					
ENLIST ONE	2 PT/A	C					
SEQUENCE	3 PT/A	C					
REQUEST	0.5 % V/V	C					
3 PREFIX	1.32 LB AI/A	B	100.0 a	100.0 a	100.0 a	100.0 a	9.825 a
ROUNDUP POWERMAX	0.84 LB AE/A	B					
REQUEST	0.5 % V/V	B					
ENLIST ONE	2 PT/A	C					
ROUNDUP POWERMAX	24 FL OZ/A	C					
REQUEST	0.5 % V/V	C					
4 BOUNDARY	1.63 LB AI/A	A	100.0 a	100.0 a	100.0 a	100.0 a	11.360 a
ENLIST ONE	2 PT/A	C					
ROUNDUP POWERMAX	24 FL OZ/A	C					
REQUEST	0.5 % V/V	C					
5 BOUNDARY	1.63 LB AI/A	A	100.0 a	100.0 a	100.0 a	100.0 a	10.138 a
ENLIST ONE	2 PT/A	C					
SEQUENCE	3 PT/A	C					
REQUEST	0.5 % V/V	C					
6 BOUNDARY	1.63 LB AI/A	A	100.0 a	100.0 a	100.0 a	100.0 a	9.438 a
ENLIST ONE	2 PT/A	C					
ROUNDUP POWERMAX	24 FL OZ/A	C					
REQUEST	0.5 % V/V	C					
PREFIX	1.32 LB AI/A	C					
7 SONIC	0.175 LB AI/A	A	100.0 a	100.0 a	100.0 a	100.0 a	9.355 a
ENLIST ONE	2 PT/A	C					
ROUNDUP POWERMAX	24 FL OZ/A	C					
REQUEST	0.5 % V/V	C					
8 BROADAXE XC	1.42 LB AI/A	A	100.0 a	100.0 a	100.0 a	100.0 a	9.665 a
TRICOR	0.28 LB AI/A	A					
ENLIST ONE	2 PT/A	C					
SEQUENCE	3 PT/A	C					
REQUEST	0.5 % V/V	C					

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

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

Untreated treatment(s) 1 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,9,12,13,16,18,19,20,21,22,23,24 because error mean square = 0.

^Calculated from residual.

Pest Type	W, Weed	W, Weed	W, Weed	W, Weed	
Pest Code	AMATA	SETFA	AMATA	SETFA	
Pest Scientific Name	Amaranthus x ta>	Setaria faberi	Amaranthus x ta>	Setaria faberi	
Pest Name	Common waterhemp	Giant foxtail	Common waterhemp	Giant foxtail	
Crop Type, Code					C, GLXMA
BBCH Scale					BSOY
Crop Scientific Name					Glycine max
Crop Name					Soybean
Rating Date	9/15/2020	9/15/2020	11/2/2020	11/2/2020	11/2/2020
Part Rated	PLANT, C	PLANT, C	PLANT, C	PLANT, C	
Rating Type	CONTROL	CONTROL	CONTROL	CONTROL	Weight
Rating Unit/Min/Max	% , 0, 100	% , 0, 100	% , 0, 100	% , 0, 100	LB, -, -
Sample Size					1 PLOT
Number of Subsamples	1	1	1	1	1
Assessed By	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD	B. MANSFIELD
Data Entry Date	12/5/2020	12/5/2020	12/5/2020	12/5/2020	12/5/2020
Rating Timing	56 DAC	56 DAC	Harvest	Harvest	Harvest
Days After First/Last Applic.	99, 56	99, 56	147, 104	147, 104	147, 104
Plant-Eval Interval	99 DP-1	99 DP-1	147 DP-1	147 DP-1	147 DP-1
Days After Emergence	92 DE-1	92 DE-1	140 DE-1	140 DE-1	140 DE-1
ARM Action Codes					
Number of Decimals					
Trt Treatment					
No. Name	21	22	23	24	25
Rate					
Unit					
Appl Code					
9 BOUNDARY	100.0 a	100.0 a	100.0 a	100.0 a	10.740 a
FIRSTRATE					
ENLIST ONE					
SEQUENCE					
REQUEST					
10 UNTREATED	0.0 b	0.0 b	0.0 b	0.0 b	5.510 b
LSD P=.05					2.2931
Standard Deviation	0.00	0.00	0.00	0.00	1.5712
CV	0.0	0.0	0.0	0.0	16.14
Grand Mean	88.89	88.89	88.89	88.89	9.7356
Levene's F^					2.13
Levene's Prob(F)					0.068
Rank X2					
P(Rank X2)					
Skewness^					-0.0641
Kurtosis^					-1.1031
Replicate F	0.000	0.000	0.000	0.000	9.836
Replicate Prob(F)	1.0000	1.0000	1.0000	1.0000	0.0002
Treatment F	0.000	0.000	0.000	0.000	5.134
Treatment Prob(F)	1.0000	1.0000	1.0000	1.0000	0.0008

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
Untreated treatment(s) 1 excluded from analysis.  
Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,9,12,13,16,18,19,20,21,22,23,24 because error mean square = 0.  
^Calculated from residual.

Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C, GLXMA	C, GLXMA	
BBCH Scale	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	
Rating Date	11/2/2020	11/2/2020	
Part Rated			
Rating Type	Moisture	YIELD	
Rating Unit/Min/Max	%, 0, 100	BU, -, -	
Sample Size		1 A	
Number of Subsamples	1	1	
Assessed By	B. MANSFIELD	B. MANSFIELD	
Data Entry Date	12/5/2020		
Rating Timing	Harvest	Harvest	
Days After First/Last Applic.	147, 104	147, 104	
Plant-Eval Interval	147 DP-1	147 DP-1	
Days After Emergence	140 DE-1	140 DE-1	
ARM Action Codes		TY1	
Number of Decimals		1	
Trt Treatment			
No. Name	Rate	Unit	Appl Code
			26
			27
1 PREFIX	1.32 LB A/A	A	
TRICOR	0.28 LB A/A	A	
ENLIST ONE	2 PT/A	C	
ROUNDUP POWERMAX	24 FL OZ/A	C	
REQUEST	0.5 % V/V	C	
			12.563
			53.7
2 PREFIX	1.32 LB A/A	A	
TRICOR	0.28 LB A/A	A	
ENLIST ONE	2 PT/A	C	
SEQUENCE	3 PT/A	C	
REQUEST	0.5 % V/V	C	
			12.820 -
			62.5 a
3 PREFIX	1.32 LB A/A	B	
ROUNDUP POWERMAX	0.84 LB AE/A	B	
REQUEST	0.5 % V/V	B	
ENLIST ONE	2 PT/A	C	
ROUNDUP POWERMAX	24 FL OZ/A	C	
REQUEST	0.5 % V/V	C	
			12.395 -
			53.2 a
4 BOUNDARY	1.63 LB A/A	A	
ENLIST ONE	2 PT/A	C	
ROUNDUP POWERMAX	24 FL OZ/A	C	
REQUEST	0.5 % V/V	C	
			12.398 -
			61.5 a
5 BOUNDARY	1.63 LB A/A	A	
ENLIST ONE	2 PT/A	C	
SEQUENCE	3 PT/A	C	
REQUEST	0.5 % V/V	C	
			12.628 -
			54.7 a
6 BOUNDARY	1.63 LB A/A	A	
ENLIST ONE	2 PT/A	C	
ROUNDUP POWERMAX	24 FL OZ/A	C	
REQUEST	0.5 % V/V	C	
PREFIX	1.32 LB A/A	C	
			12.465 -
			51.1 a
7 SONIC	0.175 LB A/A	A	
ENLIST ONE	2 PT/A	C	
ROUNDUP POWERMAX	24 FL OZ/A	C	
REQUEST	0.5 % V/V	C	
			12.785 -
			50.4 a
8 BROADAXE XC	1.42 LB A/A	A	
TRICOR	0.28 LB A/A	A	
ENLIST ONE	2 PT/A	C	
SEQUENCE	3 PT/A	C	
REQUEST	0.5 % V/V	C	
			12.488 -
			52.3 a

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

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

Untreated treatment(s) 1 excluded from analysis.

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,9,12,13,16,18,19,20,21,22,23,24 because error mean square = 0.

^Calculated from residual.

Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C, GLXMA	C, GLXMA	
BBCH Scale	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	
Rating Date	11/2/2020	11/2/2020	
Part Rated			
Rating Type	Moisture	YIELD	
Rating Unit/Min/Max	%, 0, 100	BU, -, -	
Sample Size		1 A	
Number of Subsamples	1	1	
Assessed By	B. MANSFIELD	B. MANSFIELD	
Data Entry Date	12/5/2020		
Rating Timing	Harvest	Harvest	
Days After First/Last Applic.	147, 104	147, 104	
Plant-Eval Interval	147 DP-1	147 DP-1	
Days After Emergence	140 DE-1	140 DE-1	
ARM Action Codes		TY1	
Number of Decimals		1	
Trt Treatment			
No. Name	Rate	Unit	Appl Code
9 BOUNDARY	1.63 LB AI/A	A	A
FIRSTRATE	0.0263 LB AI/A	A	A
ENLIST ONE	2 PT/A	C	C
SEQUENCE	3 PT/A	C	C
REQUEST	0.5 % V/V	C	C
10 UNTREATED			
LSD P=.05	0.5214		12.33
Standard Deviation	0.3573		8.45
CV	2.84		16.06
Grand Mean	12.5686		52.62
Levene's F^	1.529		2.176
Levene's Prob(F)	0.194		0.063
Rank X2	.		.
P(Rank X2)	.		.
Skewness^	-0.0007		-0.0678
Kurtosis^	-0.1638		-1.1095
Replicate F	0.876		10.004
Replicate Prob(F)	0.4675		0.0002
Treatment F	1.013		5.215
Treatment Prob(F)	0.4523		0.0007

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
Untreated treatment(s) 1 excluded from analysis.  
Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,9,12,13,16,18,19,20,21,22,23,24 because error mean square = 0.  
^Calculated from residual.

# Purdue Weed Science

## Syngenta - Soybean Herbicides in Enlist Soybeans

Trial ID: 20S-MGS-SOY-19  
Protocol ID: 20S-MGS-SOY-19  
Project ID:

Location: Lafayette  
Investigator (Creator): Dr. Bill Johnson  
Study Director: Brent Mansfield  
Sponsor Contact: Chad Threewits - Syngenta

Trial Year: 2020

### Pest Type

W, Weed = Weed or volunteer crop

### Pest Code

AMATA, Amaranthus x tamariscinus, Common waterhemp = US

SETFA, Setaria faberi, Giant foxtail = US

### Crop Type Code

C = EPPO species (Bayer) codes

GLXMA, BSOY, Glycine max, Soybean = US

### Part Rated

PLANT = plant

C = Crop is Part Rated

### Rating Type

PHYGEN = phytotoxicity - general / injury

Weight = weight

YIELD = yield

### Rating Unit/Min/Max

%, 0, 100 = percent

LB, , = pound

BU, , = bushel

PLOT = total plot

A = acre

### Plant-Eval Interval

8 DP-1 = 1 GLXMA 6/8/2020

14 DP-1 = 1 GLXMA 6/8/2020

21 DP-1 = 1 GLXMA 6/8/2020

32 DP-1 = 1 GLXMA 6/8/2020

39 DP-1 = 1 GLXMA 6/8/2020

43 DP-1 = 1 GLXMA 6/8/2020

50 DP-1 = 1 GLXMA 6/8/2020

57 DP-1 = 1 GLXMA 6/8/2020

64 DP-1 = 1 GLXMA 6/8/2020

71 DP-1 = 1 GLXMA 6/8/2020

85 DP-1 = 1 GLXMA 6/8/2020

99 DP-1 = 1 GLXMA 6/8/2020

147 DP-1 = 1 GLXMA 6/8/2020

### ARM Action Codes

TY1 = 5.377778\*[25]\*(100-[26])/87