

Valent active ingredients in Roundup Ready systems

Trial ID: 19 PRPOST 1 Location: Western Branch G-6 Trial Year: 2019
 Protocol ID: 19 PRPOST 1 Investigator: Dr. Mark M. Loux
 Project ID: FIERCEMD6410/6403 Study Director: Bryan Reeb
 Sponsor Contact: Eric Ott, Valent

General Trial Information

Study Director: Bryan Reeb
Investigator: Dr. Mark M. Loux

Trial Status: E established**ARM Trial Created On:** Apr-25-2019**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 °: 83.67577 W
Altitude of LL Corner: 1111.00 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
Harvested Length: 30 FT
% Standard Moisture: 13

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail **Entry Date:** Jun-21-2019

Pest 2 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed **Entry Date:** Jun-21-2019

Pest 3 Type: W **Code:** CHEAL *Chenopodium album*
Common Name: common lambsquarters **Entry Date:** Jun-21-2019

Pest 4 Type: W **Code:** AMARE *Amaranthus retroflexus*
Common Name: Redroot pigweed **Entry Date:** Jun-21-2019

Pest 5 Type: W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyard grass **Entry Date:** Jul-11-2019

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:** 16 **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

Application Description

	A	B	C
Application Date	May-16-2019	Jun-21-2019	Jul-11-2019
Appl. Start Time	9:00 PM	9:00 AM	8:50 AM
Appl. Stop Time	10:00 PM	10:00 AM	9:30 AM
Interval to Prev. Appl.		36 DAYS	20 DAYS
Application Method	SPRAY	SPRAY	SPRAY
Application Timing	PRE	POST	LPO
Application Placement	BROSOL	BROFOL	BROFOL
Applied By	KILEY	OSBURN	DOBBELS
Appl. Entry Date	May-17-2019	Jun-21-2019	Jul-11-2019
Air Temperature Start, Stop	74 74 F	65 68 F	73 73 F
% Relative Humidity Start, Stop	43 43	73 63	88 88
Wind Velocity+Dir. Start	11 MPH SW	8 MPH NNW	4 MPH WNW
Wind Velocity+Dir. Stop	11 MPH SW	6 MPH NNW	4 MPH WNW
Wind Velocity+Dir. Max	11 MPH S	8 MPH NNW	4 MPH WNW
Wet Leaves (Y/N)	N no	N no	N no
Soil Temperature	63 F	63 F	70 F
Soil Moisture	DRY	DAMP	DRY
Soil Surface Condition	ROUGH	ROUGH	ROUGH
% Cloud Cover	70	0	90
Next Moisture Occurred On	May-17-2019	Jul-21-2019	Jul-11-2019
Time to Next Moisture	3 HR	2 HR	6 HR
Moisture 6 Hours after Appl.	1.32 IN	0.01 IN	0.10 IN
Moisture 1 Week after Appl.	2.54 IN	1.21 IN	0.43 IN

Crop Stage At Each Application

	A		B		C	
Crop 1 Code, BBCH Scale	GLXMA	BSOY	GLXMA	BSOY	GLXMA	BSOY
Days after Emergence	-13		23		43	
Stage Majority, Percent			V3	100	R1	100
Height Average			3	IN	12	IN
Height Minimum, Maximum					11	13

Pest Stage At Each Application

	A		B		C	
Pest 1 Code, Type, Scale	SETFA	W	SETFA	W	SETFA	W
Stage Majority, Percent			15	100	12	100
Height Average			12	IN	3	IN
Height Minimum, Maximum			12	14	2	6
Density Average			172.25 PLA/m2		172.25 PLA/m2	
Density Min, Max			98	210	98	210
Pest 2 Code, Type, Scale	AMBTR	W	AMBTR	W	AMBTR	W
Stage Majority, Percent			19	100	19	100
Height Average			14	IN	6	IN
Height Minimum, Maximum			12	18	2	10
Density Average			14	PLA/m2	14	PLA/m2
Density Min, Max			12	16	12	16
Pest 3 Code, Type, Scale	CHEAL	W	CHEAL	W	CHEAL	W
Stage Majority, Percent			19	100	12	80
Stage Minimum, Percent					12	80
Stage Maximum, Percent					16	10
Height Average			6	IN	1	IN
Height Minimum, Maximum			2	9	0.5	2
Density Average			17	PLA/m2	17	PLA/m2
Density Min, Max			4	32	4	32
Pest 4 Code, Type, Scale	AMARE	W	AMARE	W	AMARE	W
Stage Majority, Percent			19	100	14	100
Height Average			9	IN	2	IN
Height Minimum, Maximum			6	12	1	3
Density Average			7	PLA/m2	7	PLA/m2
Density Min, Max			4	12	4	12
Pest 5 Code, Type, Scale	ECHCG	W	ECHCG	W	ECHCG	W
Stage Majority, Percent					12	100
Height Average					3	IN
Height Minimum, Maximum					2	4
Density Average					133.75 PLA/m2	
Density Min, Max					120	150

Application Equipment

	A	B	C
Appl. Equipment	6 foot TTI	6 foot TTI	6 foot TTI
Equipment Type	SPRBAC	SPRBAC	SPRBAC
Operation Pressure	48 PSI	48 PSI	48 PSI
Nozzle Type	TTI	TTI	TTI
Nozzle Size	110015	110015	110015
Nozzle Spacing	18 IN	18 IN	18 IN
Boom Length	6.67 FT	6.67 FT	6.67 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	1 Liters	1 Liters	1 Liters
Propellant	COMCO2	COMCO2	COMCO2

Context	Date	By	Notes
STATUS	Apr-25-2019	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 GLXMA
BBCH Scale	BSOY
Crop Scientific Name	Glycine max
Crop Name	Soybean
Rating Date	Oct-2-2019
Rating Type	WEITES
Rating Unit	LBS
Sample Size	
Number of Subsamples	1
Data Entry Date	Oct-4-2019
Days After First/Last Applic.	139 83
Trt-Eval Interval	
Plant-Eval Interval	139 DP-1
Days After Emergence	126 DE-1
ARM Action Codes	
Number of Decimals	2

Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Code	28*
1	UTC						54.93 ab
2	Roundup Power Max	1.13 lb	ae/a	32 oz/a		B	56.02 a
2	Xtendimax	0.5 lb	ae/a	22 oz/a		B	
2	On Target	0.5 %	v/v	0.3 qt/a		B	
2	Induce	0.25 %	v/v	0.15 qt/a		B	
3	Fierce EZ	0.143 lb	ai/a	6 oz/a		A	55.82 a
3	Roundup Power Max	1.13 lb	ae/a	32 oz/a		B	
3	Xtendimax	0.5 lb	ae/a	22 oz/a		B	
3	On Target	0.5 %	v/v	0.3 qt/a		B	
3	Induce	0.25 %	v/v	0.15 qt/a		B	
4	Fierce MTZ	0.33 lb	ai/a	1 pt/a		A	56.08 a
4	Roundup Power Max	1.13 lb	ae/a	32 oz/a		B	
4	Xtendimax	0.5 lb	ae/a	22 oz/a		B	
4	On Target	0.5 %	v/v	0.3 qt/a		B	
4	Induce	0.25 %	v/v	0.15 qt/a		B	
5	Valor SX	0.0625 lb	ai/a	1.96 oz/a		A	55.99 a
5	Tricor 4F	0.187 lb	ai/a	6 oz/a		A	
5	Prowl H2O	0.714 lb	ai/a	1.5 pt/a		A	
5	Roundup Power Max	1.13 lb	ae/a	32 oz/a		B	
5	Xtendimax	0.5 lb	ae/a	22 oz/a		B	
5	On Target	0.5 %	v/v	0.3 qt/a		B	
5	Induce	0.25 %	v/v	0.15 qt/a		B	

Pest Type
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 Pest Scientific Name
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 Crop Type, Code C GLXMA
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 Rating Type WEITES
 Rating Unit LBS
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 Plant-Eval Interval 139 DP-1
 Days After Emergence 126 DE-1
 ARM Action Codes
 Number of Decimals 2

Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Code	28*
6	Fierce MTZ	0.33 lb ai/a		1 pt/a		A	53.13 d
6	Scout	0.585 lb ai/a		32 oz/a		B	
6	N-pak ams	3.75 % v/v		2.25 qt/a		B	
7	Roundup Power Max	1.13 lb ae/a		32 oz/a		B	55.43 ab
7	N-pak ams	4.5 % v/v		2.7 qt/a		B	
7	Roundup Power Max	1.13 lb ae/a		32 oz/a		C	
7	N-pak ams	4.5 % v/v		2.7 qt/a		C	
7	Select Max	0.07 lb ai/a		9 oz/a		C	
7	Induce	0.25 % v/v		4.8 oz/a		C	
8	Roundup Power Max	1.13 lb ae/a		32 oz/a		B	55.03 ab
8	Perpetuo	0.108 lb ai/a		6 oz/a		B	
8	N-pak ams	4.5 % v/v		2.7 qt/a		B	
8	Roundup Power Max	1.13 lb ae/a		32 oz/a		C	
8	N-pak ams	4.5 % v/v		2.7 qt/a		C	
8	Select Max	0.07 lb ai/a		9 oz/a		C	
8	Induce	0.25 % v/v		4.8 oz/a		C	
9	Fierce EZ	0.143 lb ai/a		6 oz/a		A	55.19 ab
9	Roundup Power Max	1.13 lb ae/a		32 oz/a		B	
9	N-pak ams	4.5 % v/v		2.7 qt/a		B	
9	Select Max	0.07 lb ai/a		9 oz/a		C	
9	Induce	0.25 % v/v		4.8 oz/a		C	
9	N-pak ams	4.5 % v/v		2.7 qt/a		C	
10	Fierce MTZ	0.33 lb ai/a		16 oz/a		A	55.01 ab
10	Roundup Power Max	1.13 lb ae/a		32 oz/a		B	
10	N-pak ams	4.5 % v/v		2.7 qt/a		B	
10	Select Max	0.07 lb ai/a		9 oz/a		C	
10	Induce	0.25 % v/v		4.8 oz/a		C	
10	N-pak ams	4.5 % v/v		2.7 qt/a		C	
11	Fierce EZ	0.143 lb ai/a		6 oz/a		A	54.41 bc
11	Roundup Power Max	1.13 lb ae/a		32 oz/a		B	
11	Perpetuo	0.108 lb ai/a		6 oz/a		B	
11	N-pak ams	4.5 % v/v		2.7 qt/a		B	
11	Select Max	0.07 lb ai/a		9 oz/a		C	
11	Induce	0.25 % v/v		4.8 oz/a		C	
11	N-pak ams	4.5 % v/v		2.7 qt/a		C	
12	Fierce MTZ	0.33 lb ai/a		16 oz/a		A	53.42 cd
12	Roundup Power Max	1.13 lb ae/a		32 oz/a		B	
12	Perpetuo	0.108 lb ai/a		6 oz/a		B	
12	N-pak ams	4.5 % v/v		2.7 qt/a		B	
12	Select Max	0.07 lb ai/a		9 oz/a		C	
12	Induce	0.25 % v/v		4.8 oz/a		C	
12	N-pak ams	4.5 % v/v		2.7 qt/a		C	

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 Trt-Eval Interval
 Plant-Eval Interval 139 DP-1
 Days After Emergence 126 DE-1
 ARM Action Codes
 Number of Decimals 2

Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Appl Code	28*
13	Authority MTZ	0.31 lb ai/a		11 oz/a		A	55.17 ab
13	Roundup Power Max	1.13 lb ae/a		32 oz/a		B	
13	Anthem Maxx	0.084 lb ai/a		2.5 oz/a		B	
13	N-pak ams	4.5 % v/v		2.7 qt/a		B	
13	Select Max	0.07 lb ai/a		9 oz/a		C	
13	Induce	0.25 % v/v		4.8 oz/a		C	
13	N-pak ams	4.5 % v/v		2.7 qt/a		C	
14	Zidua Pro	0.144 lb ai/a		4.5 oz/a		A	55.19 ab
14	Roundup Power Max	1.13 lb ae/a		32 oz/a		B	
14	Perpetuo	0.108 lb ai/a		6 oz/a		B	
14	N-pak ams	4.5 % v/v		2.7 qt/a		B	
14	Select Max	0.07 lb ai/a		9 oz/a		C	
14	Induce	0.25 % v/v		4.8 oz/a		C	
14	N-pak ams	4.5 % v/v		2.7 qt/a		C	
15	Fierce XLT @ 4.0 oz					A	55.42 ab
15	Valor SX	0.063 lb ai/a		1.98 oz/a		A	
15	Classic	0.021 lb ai/a		1.34 oz/a		A	
15	Zidua WG	0.054 lb ai/a		1.02 oz/a		A	
15	Roundup Power Max	1.13 lb ae/a		32 oz/a		B	
15	Perpetuo	0.108 lb ai/a		6 oz/a		B	
15	N-pak ams	4.5 % v/v		2.7 qt/a		B	
15	Select Max	0.07 lb ai/a		9 oz/a		C	
15	Induce	0.25 % v/v		4.8 oz/a		C	
15	N-pak ams	4.5 % v/v		2.7 qt/a		C	
16	Valor XLT @ 4.0 oz					A	55.45 ab
16	Valor SX	0.075 lb ai/a		2.35 oz/a		A	
16	Classic	0.0258 lb ai/a		1.65 oz/a		A	
16	Roundup Power Max	1.13 lb ae/a		32 oz/a		B	
16	N-pak ams	4.5 % v/v		2.7 qt/a		B	
16	Select Max	0.07 lb ai/a		9 oz/a		C	
16	Induce	0.25 % v/v		4.8 oz/a		C	
16	N-pak ams	4.5 % v/v		2.7 qt/a		C	
LSD P=.05							1.214
Standard Deviation							0.852
CV							1.55
Grand Mean							55.106
Levene's F							1.068
Levene's Prob(F)							0.409
Skewness							-0.7003*
Kurtosis							-0.0472
Replicate F							1.492
Replicate Prob(F)							0.2295
Treatment F							3.927
Treatment Prob(F)							0.0002

Crop Type, Code
 C = EPPO species (Bayer) codes
 GLXMA, BSOY, Glycine max, Soybean = US
Rating Type
 WEITES = weight - test
Plant-Eval Interval

139 DP-1 = 1 GLXMA May-16-2019