

The Ohio State University

Tavium Tank mix Pre and Post Options

Trial ID: 20TAVIUM Location: Western Branch F-9 East Trial Year: 2020
 Protocol ID: 20TAVIUM Investigator: Dr. Mark M. Loux
 Project ID: H058SMAD2020US Study Director: Anthony Dobbels
 Sponsor Contact: Dain Bruns, Syngenta

General Trial Information

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

Discipline: H herbicide
Trial Status: E established

ARM Trial Created On: Mar-17-2020 **Trial Usage/Type:** 0 Research and Development
Initiation Date: May-13-2020

Trial Location

Address (Location): 7721 South Charleston Pike
City: South Charleston **Country:** USA United States
State/Prov.: Ohio
Postal Code: 45368

Latitude of LL Corner °: 39.85767 N
Longitude of LL Corner °: -83.67 W
Altitude of LL Corner: 1093.00 FT

Conducted Under GLP: No
Conducted Under GEP: No

Objectives:

Contacts

Study Director: Anthony Dobbels

Investigator: Dr. Mark M. Loux

Crop Description

Crop 1: C	GLXMA Glycine max	Soybean	BBCH Scale: BSOY
	Entry Date: May-14-2020	Stage Scale: BBCH	
	Variety: Pioneer 33A24X		
	Attributes: GLYPHOSATE-R,AUXIN-R		
	Seed Lot No: B3GRA13059-00-1207	Seed Source: Illinois	
	% Germination: 90		
	Planting Date: May-13-2020	Seed Size: 2114 S/LB	
	Depth: 2 IN	Planting Rate: 160000 S/A	
	Rows per Plot: 4	Planting Method: PLANTD planted	
	Row Spacing: 30 IN	Planting Equipment: FE field equipment	
		Seed Bed: MEDIUM medium	
	Soil Temperature: 62 F	Soil Moisture: NORMAL normal, adequate	
		Plant Arrangement: ROW	
	Emergence Date: May-25-2020	Harvest Equipment: Kincaid 8XP	
	Harvest Date: Oct-8-2020	Harvested Width: 5 FT	
	Moisture Meter: Harvest Master	Harvested Length: 30 FT	
	% Standard Moisture: 13		
	Weighing Equipment: Harvest Master HM800		

Pest Description

Pest 1 Type: W	Code: AMBTR	Ambrosia trifida	Entry Date: May-14-2020
	Common Name: ragweed, giant		
Pest 2 Type: W	Code: SETFA	Setaria faberi	Entry Date: Jun-25-2020
	Common Name: foxtail, giant		
Pest 3 Type: W	Code: ECHCG	Echinochloa crus-galli	Entry Date: Jun-25-2020
	Common Name: barnyardgrass		
Pest 4 Type: W	Code: ABUTH	Abutilon theophrasti	Entry Date: Jun-25-2020
	Common Name: velvetleaf		
Pest 5 Type: W	Code: CHEAL	Chenopodium album	Entry Date: Jun-25-2020
	Common Name: lambsquarters, common		
Pest 6 Type: W	Code: AMARE	Amaranthus retroflexus	Entry Date: Jun-25-2020
	Common Name: pigweed, redroot		
Pest 7 Type: W	Code: IPOHE	Ipomoea hederacea	Entry Date: Jun-25-2020
	Common Name: morningglory, ivyleaf		

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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: MUTTIL multiple-tillage
 Replications: 4 Study Design: RACOB L Randomized Complete Block (RCB)

Trial Initiation Comments:

Spring disc followed by spring 1 pass finishing tool with disc, cultivator, harrow and rolling basket.

Previous

No. Crop Year
 1. CORN 2019

Soil Description

Description Name: Big E
 % Sand: 44 % OM: 3.1 Texture: L loam
 % Silt: 45 pH: 6.6 Soil Name: Kokomo
 % Clay: 11 CEC: 15.2 Fert. Level: G good
 Soil Drainage: G good

Application Description

	A	B
Application Date	May-13-2020	Jun-24-2020
Appl. Start Time	3:00 PM	8:00 AM
Appl. Stop Time	3:30 PM	8:30 AM
Interval to Prev. Appl.		42 DAYS
Application Method	SPRAY	SPRAY
Application Timing	PREPRE	POSPOS
Application Placement	BROSOI	BROFOL
Applied By	Ackley and Essman	Kimmet
Appl. Entry Date	May-14-2020	Jun-25-2020
Air Temperature Start, Stop	64 64 F	66 66 F
% Relative Humidity Start, Stop	32 32	80 80
Wind Velocity+Dir. Start	10 MPH SE	8 MPH W
Wind Velocity+Dir. Stop	10 MPH SE	8 MPH W
Wind Velocity+Dir. Max	11 MPH SE	8 MPH W
Wet Leaves (Y/N)	N no	Y yes
Soil Temperature	62 F	69 F
Soil Moisture	NORMAL	SLIWET
Soil Surface Condition	MEDIUM	MEDIUM
% Cloud Cover	25	30
Next Moisture Occurred On	May-14-2020	Jun-25-2020
Time to Next Moisture	14 HR	1 DAY
Moisture 6 Hours after Appl.	0 IN	0 IN
Moisture 1 Week after Appl.	2.52 IN	0.09 IN

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY
Days after Emergence	-12	30
Stage Majority, Percent	14	100
Height Average	8 IN	
Height Minimum, Maximum	6 10	

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Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale	AMBTR W	AMBTR W
Stage Majority, Percent	18	80
Stage Minimum, Percent	14	
Stage Maximum, Percent	19	
Height Average	6	IN
Height Minimum, Maximum	4	16
Density Average	56	PLA/m2
Density Min, Max	48	64
Pest 2 Code, Type, Scale	SETFA W	SETFA W
Stage Majority, Percent	16	80
Stage Minimum, Percent	14	
Stage Maximum, Percent	19	
Height Average	4	IN
Height Minimum, Maximum	2	6
Density Average	52	PLA/m2
Density Min, Max	28	92
Pest 3 Code, Type, Scale	ECHCG W	ECHCG W
Stage Majority, Percent	16	80
Stage Minimum, Percent	14	
Stage Maximum, Percent	19	
Height Average	4	IN
Height Minimum, Maximum	2	4
Density Average	15	PLA/m2
Density Min, Max	0	48
Pest 4 Code, Type, Scale	ABUTH W	ABUTH W
Stage Majority, Percent	16	80
Stage Minimum, Percent	14	
Stage Maximum, Percent	18	
Height Average	4	IN
Height Minimum, Maximum	2	4
Density Average	0	PLA/m2
Density Min, Max	0	0
Pest 5 Code, Type, Scale	CHEAL W	CHEAL W
Stage Majority, Percent	19	90
Stage Minimum, Percent	14	
Stage Maximum, Percent	19	
Height Average	4	IN
Height Minimum, Maximum	2	10
Density Average	8	PLA/m2
Density Min, Max	0	24
Pest 6 Code, Type, Scale	AMARE W	AMARE W
Stage Majority, Percent	18	80
Stage Minimum, Percent	14	
Stage Maximum, Percent	19	
Height Average	4	IN
Height Minimum, Maximum	2	6
Density Average	2	PLA/m2
Density Min, Max	0	8
Pest 7 Code, Type, Scale	IPOHE W	IPOHE W
Stage Majority, Percent	18	80
Stage Minimum, Percent	16	
Stage Maximum, Percent	19	
Height Average	2	IN
Height Minimum, Maximum	2	4
Density Average	1	PLA/m2
Density Min, Max	0	4

Application Equipment

	A	B
Appl. Equipment	6' TTI	10' TTI
Equipment Type	BACCAI	BACCAI
Operation Pressure	44 PSI	44 PSI
Nozzle Type	TTI	TTI
Nozzle Size	1110015	110015
Nozzle Spacing	18 IN	18 IN
Boom Length	6.67 FT	10 FT
Boom Height	20 IN	20 IN
Ground Speed	3 MPH	3 MPH
Carrier	WATER	WATER
Application Amount	15 GAL/AC	15 GAL/AC
Mix Size	1 L	2 L
Propellant	COMCO2	COMCO2
Tank Mix (Y/N)		Y yes

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Context	Date	By	Notes
STATUS	Mar-17-2020	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	Mar-27-2020	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	Mar-27-2020	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	May-14-2020	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'E' when Planting Date entered.
STATUS	May-28-2020	Dr. Mark M. Loux	Automatically added by ARM: Trial Status updated to 'E' when Initiation Date entered.

Pest Type			
Pest Code			
Pest Scientific Name			
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	Oct-8-2020	Oct-8-2020	Oct-8-2020
Rating Type	YIELD	MOICON	YIELD
Rating Unit	LBS	%	BU
Number of Subsamples	1	1	1
Assessed By			
Data Entry Date	Oct-12-2020	Oct-12-2020	
Rating Timing	HARVEST	HARVEST	HARVEST
Days After First/Last Applic.	148 106	148 106	148 106
Trt-Eval Interval			
Plant-Eval Interval	148 DP-1	148 DP-1	148 DP-1
Days After Emergence	136 DE-1	136 DE-1	136 DE-1
ARM Action Codes			TY1
Number of Decimals	2	2	1

Trt No.	Treatment Name	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	28*	29*	30*
1	UTC						3.54 c	13.33 -	17.0 c
2	Tavium	1.49 lb ai/a		3.53 pt/a		A	15.75 a	11.83 -	77.3 a
2	Intact	0.5 % v/v		0.5 % v/v		A			
2	Tavium	1.49 lb ai/a		3.53 pt/a		B			
2	Roundup Powermax	0.91 lb ae/a		26 oz/a		B			
2	Class Act Ridion	1 % v/v		1 % v/v		B			
2	Intact	0.5 % v/v		0.5 % v/v		B			
3	Tavium	1.49 lb ai/a		3.53 pt/a		A	15.60 ab	11.03 -	77.2 a
3	Tricor	0.28 lb ai/a		6 oz/a		A			
3	Intact	0.5 % v/v		0.5 % v/v		A			
3	Tavium	1.49 lb ai/a		3.53 pt/a		B			
3	Roundup Powermax	0.91 lb ae/a		26 oz/a		B			
3	Class Act Ridion	1 % v/v		1 % v/v		B			
3	Intact	0.5 % v/v		0.5 % v/v		B			
4	Tavium	1.49 lb ai/a		3.53 pt/a		A	15.78 a	11.63 -	77.6 a
4	Tricor	0.28 lb ai/a		6 oz/a		A			
4	Intact	0.5 % v/v		0.5 % v/v		A			
4	Sequence	2.3 lb ai/a		3.5 pt/a		B			
4	N Pak AMS	2.5 % v/v		2.5 % v/v		B			
5	Tavium	1.49 lb ai/a		3.53 pt/a		A	17.11 a	12.35 -	83.4 a
5	Tricor	0.28 lb ai/a		6 oz/a		A			
5	Intact	0.5 % v/v		0.5 % v/v		A			
5	Prefix	1.32 lb ai/a		2 pt/a		B			
5	Roundup Powermax	0.91 lb ae/a		26 oz/a		B			
5	N Pak AMS	2.5 % v/v		2.5 % v/v		B			
6	Tavium	1.49 lb ai/a		3.53 pt/a		A	16.20 a	11.35 -	80.0 a
6	Canopy Blend	0.106 lb ai/a		2.9 oz/a		A			
6	Intact	0.5 % v/v		0.5 % v/v		A			
6	Tavium	1.49 lb ai/a		3.53 pt/a		B			
6	Roundup Powermax	0.91 lb ae/a		26 oz/a		B			
6	Class Act Ridion	1 % v/v		1 % v/v		B			
6	Intact	0.5 % v/v		0.5 % v/v		B			

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Trt	Treatment	Rate	Unit	Other Rate	Other Unit	Appl Code	28*	29*	30*
7	Tavium	1.49	lb ai/a	3.53	pt/a	A	16.53 a	11.83 -	81.1 a
7	Prefix	1.32	lb ai/a	2	pt/a	A			
7	Intact	0.5	% v/v	0.5	% v/v	A			
7	Sequence	2.3	lb ai/a	3.5	pt/a	B			
7	N Pak AMS	2.5	% v/v	2.5	% v/v	B			
8	Xtendimax	0.5	lb ae/a	22	oz/a	A	13.81 b	11.35 -	68.1 b
8	Intact	0.5	% v/v	0.5	% v/v	A			
8	Tavium	1.49	lb ai/a	3.53	pt/a	B			
8	Roundup Powermax	0.91	lb ae/a	26	oz/a	B			
8	Class Act Ridion	1	% v/v	1	% v/v	B			
8	Intact	0.5	% v/v	0.5	% v/v	B			
9	Boundary	1.63	lb ai/a	2	pt/a	A	16.81 a	11.08 -	83.1 a
9	Firstrate	0.0263	lb ai/a	0.5	oz/a	A			
9	Tavium	1.49	lb ai/a	3.53	pt/a	B			
9	Roundup Powermax	0.91	lb ae/a	26	oz/a	B			
9	Class Act Ridion	1	% v/v	1	% v/v	B			
9	Intact	0.5	% v/v	0.5	% v/v	B			
10	Prefix	1.32	lb ai/a	2	pt/a	A	16.45 a	11.63 -	80.8 a
10	Tricor	0.28	lb ai/a	6	oz/a	A			
10	Tavium	1.49	lb ai/a	3.53	pt/a	B			
10	Roundup Powermax	0.91	lb ae/a	26	oz/a	B			
10	Class Act Ridion	1	% v/v	1	% v/v	B			
10	Intact	0.5	% v/v	0.5	% v/v	B			
LSD	P=.05						1.837	1.581	8.84
	Standard Deviation						1.266	1.089	6.09
	CV						8.58	9.28	8.4
	Grand Mean						14.755	11.738	72.56
	Levene's F						0.964	1.916	0.924
	Levene's Prob(F)						0.488	0.088	0.518
	Rank X2						.	.	.
	P(Rank X2)						.	.	.
	Skewness						-1.8901*	2.2983*	-1.8978*
	Kurtosis						3.1487*	7.0547*	3.1612*
	Replicate F						11.559	0.931	12.886
	Replicate Prob(F)						0.0001	0.4393	0.0001
	Treatment F						40.858	1.566	43.017
	Treatment Prob(F)						0.0001	0.1759	0.0001

Crop Type, Code

C = EPP0 species (Bayer) codes
 GLXMA, BSOY, Glycine max, Soybean = US

Rating Type

YIELD = yield

MOICON = moisture content

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Rating Unit

% = percent

BU = bushel

Plant-Eval Interval

148 DP-1 = 1 GLXMA May-13-2020

ARM Action Codes

TY1 = $4.84 * [28] * (100 - [29]) / 87$