University of Georgia

WEED CONTROL IN IGROWTH SORGHUM WITH IMIFLEX AND CADRE

Trial ID: GS-03-21 Study Dir.:
Location: PONDER FARM Investigator: Eric P. Prostko

Reps: 3 Plots: 6 by 25 feet
Appl. Amount: 15 GAL/AC Mix Size: 1.5 L (total for 3 plots; minimum=0.5866 L)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Diluent	Rep 1	2	3
1	NTC								-	101	203	302
2	IMIFLEX	1	AS	6.0	oz/a	EPOST	A	4.687 mL/mx	1480.3 mL	102	201	303
	AGRIDEX			1.0	% v/v	EPOST	A	15.0 mL/mx				
3	CADRE	2	AS	4.0	oz/a	EPOST	A	3.125 mL/mx	1481.9 mL	103	202	301
	AGRIDEX			1.0	% v/v	EPOST	A	15.0 mL/mx				

Sort Order: Treatment

Trial Comments

SUMMARY:

1) SORGHUM RESPONSE TO IMIFLEX AND CADRE WAS SIMILAR.

2) FROM WEED CONTROL RATINGS OBTAINED ON JUNE 29 (26 DAT), THE FOLLOWING WAS OBSERVED:

A) PALMER AMARANTH CONTROL WITH EITHER IMIFLEX OR CADRE WAS POOR DUE TO THE FACT THAT POPULATION IS ALS-RESISTANT.

B) CADRE PROVIDED BETTER CONTROL OF ANNUAL GRASSES AND CARPETWEED THAN IMIFLEX.

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GENERAL TRIAL INFORMATION

Study Director: _____ **Title:** _____
Affiliation: _____ **Postal Code:** _____

Investigator: Eric P. Prostko **Title:** _____
Affiliation: _____ **Postal Code:** _____

Trial Status: E **Initiation Date:** _____ **Country:** _____
City: _____ **State/Prov.:** _____ **Postal Code:** _____
Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

Objective:

Conclusions:

CROP AND PEST DESCRIPTION

Weed 1. AMAPA PALMER AMAMRANTH **2.** RAPRA WILD RADISH
Weed 3. AGRASS TX PAN/CRAB/GOOS/CROW **4.** MOLVE CARPETWEED

Crop 1: SORBI SORGHUM **Variety:** ADV63189IG **Planting Date:** May-19-21
Planting Method: MONOSEM VACUUM **Rate:** 70000 SEED/A **Depth:** 1 IN
Perennial Age: ____ _____ **Row Spacing:** 36 IN **Seed Bed:** _____
Soil Temperature: ____ _ **Soil Moisture:** OPTIMUM **Emergence Date:** _____

Plot Width, Unit: 6 FT **Plot Length, Unit:** 25 FT **Reps:** 3
Site Type: _____
Tillage Type: CONVENTIONAL **Study Design:** RACOBL
Trial Initiation Comments: 300 LBS/A 5-15-30 PREPLANT; SIDEDRESS 127-0-0-16(S) - JUNE 15

Previous: Crops	Pesticides	Year
1. PEANUT		2020

MAINTENANCE

Field Prep./Maintenance: _____

No.	Date	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.	_____	_____	____	_____	___	_____	_____

SOIL DESCRIPTION

Texture: SAND **% OM:** 0.61 **% Sand:** 94 **% Silt:** 2 **% Clay:** 4
pH: 6.0 **CEC:** 2.2 **Soil Name:** TIFTON **Fertility Level:** GOOD

MOISTURE CONDITIONS

On:	Date	Time	Amount	Unit	Type	Interval	Unit
1.	May-19-21	_____	0.6	IN	SPRINKLER - LATERAL MOVE	_____	___
2.	May-21-21	_____	0.5	IN	SPRINKLER - LATERAL MOVE	_____	___
3.	May-24-21	_____	0.5	IN	SPRINKLER - LATERAL MOVE	_____	___
4.	Jun-1-21	_____	0.5	IN	SPRINKLER - LATERAL MOVE	_____	___
5.	Jun-4-21	_____	0.6	IN	RAINFALL	_____	___
6.	Jun-6-21	_____	0.4	IN	RAINFALL	_____	___
7.	Jun-7-21	_____	1.25	IN	RAINFALL	_____	___
8.	Jun-8-21	_____	0.15	IN	RAINFALL	_____	___
9.	Jun-11-21	_____	0.3	IN	RAINFALL	_____	___
10.	Jun-15-21	_____	1.0	IN	RAINFALL	_____	___
11.	Jun-18-21	_____	0.5	IN	SPRINKLER - LATERAL MOVE	_____	___
12.	Jun-20-21	_____	1.0	IN	RAINFALL	_____	___
13.	Jun-21-21	_____	2.4	IN	RAINFALL	_____	___

Overall Moisture Conditions: _____
Closest Weather Station: _____ **Distance:** _____ **Unit:** __

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APPLICATION DESCRIPTION

		A	B	C	D	E	F
Application Date:	Jun-3-21						
Time of Day:	7:00 AM						
Application Method:	BROADCAST						
Application Timing:	EPOST						
Applic. Placement:	FOLIAGE						
Air Temp., Unit:	67 F						
% Relative Humidity:	95						
Wind Velocity, Unit:	3 MPH						
Dew Presence (Y/N):	Y						
Water Hardness:	--						
Soil Temp., Unit:	70 F						
Soil Moisture:	WET						
% Cloud Cover:	100						

CROP STAGE AT EACH APPLICATION

		A	B	C	D	E	F
Crop 1 Stage:	SORBI						
Stage Scale:	V4-V5						
Height, Unit:	4 IN						

WEED STAGE AT EACH APPLICATION

		A	B	C	D	E	F
Weed 1 Stage:	AMAPA 1-3"						
Stage Scale:							
Density, Unit:							
Weed 2 Stage:	RAPRA 1"						
Stage Scale:							
Density, Unit:							
Weed 3 Stage:	AGRASS 1-2"						
Stage Scale:							
Density, Unit:							
Weed 4 Stage:	MOLVE 0.5"						
Stage Scale:							
Density, Unit:							

APPLICATION EQUIPMENT

		A	B	C	D	E	F
Appl. Equipment:	BACKPACK						
Operating Pressure:	36						
Nozzle Type:	AIXR						
Nozzle Size:	11002						
Nozzle Spacing, Unit:	20 IN						
Nozzles/Row:							
Band Width, Unit:							
Boom Length, Unit:	60 IN						
Boom Height, Unit:	20 IN						
Ground Speed, Unit:	3.5 MPH						
Incorporation Equip.:							
Hours to Incorp.:							
Incorp. Depth, Unit:							
Carrier:	WATER						
Spray Volume, Unit:	15 GPA						
Spray pH:							
Propellant:	CO2						
Tank Mix (Y/N):							

Trt No	Treatment Application Comment

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	1	2	3	4	5	6	7
	Weed Code							------	Amapa	Agrass	Molve	Amapa	Agrass	Molve
	Crop Code							Sorbi	-----	-----	-----	------	-----	-----
	Part Rated													
	Rating Data Type							Stunt	Control	Control	Control	Control	Control	Control
	Rating Unit							%	%	%	%	%	%	%
	Rating Date							Jun-9-21	Jun-9-21	Jun-9-21	Jun-9-21	Jun-29-21	Jun-29-21	Jun-29-21
	Trt-Eval Interval							6 DA-A	6 DA-A	6 DA-A	6 DA-A	26 DA-A	26 DA-A	26 DA-A
1	NTC							0.0 b	0.0 b	0.0 b	0.0 c	0.0 a	0.0 c	0.0 c
2	IMIFLEX	1	AS	6.0	oz/a	EPOST	A	6.7 a	26.7 a	81.7 a	50.0 b	0.0 a	71.7 b	38.3 b
	AGRIDEX			1.0	% v/v	EPOST	A							
3	CADRE	2	AS	4.0	oz/a	EPOST	A	8.3 a	30.0 a	85.0 a	99.0 a	0.0 a	88.3 a	91.7 a
	AGRIDEX			1.0	% v/v	EPOST	A							
	LSD P=.10							5.02	5.80	11.60	.	.	14.21	31.78
	Standard Deviation							2.89	3.33	6.67	0.00	0.00	8.16	18.26
	CV							57.74	17.65	12.0	0.0	0.0	15.31	42.13
	Grand Mean							5.00	18.89	55.56	49.67	0.00	53.33	43.33
	Bartlett's X2^							115.532	1.134	1.134	.	.	0.00	1.487
	P(Bartlett's X2)							0.00*	0.567	0.567	.	.	1.00	0.476

Means followed by same letter or symbol do not significantly differ (P=.10, LSD).
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Could not calculate LSD (% mean diff) for columns 4,5 because error mean square = 0.
^Calculated from residual.

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Randomized Complete Block (RCB) AOV For ------ Sorbi Stunt % Jun-9-21 6 DA-A (Data Column 1)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	8	200.000000			
Replicate	2	50.000000	25.000000	3.000	0.1600
Treatment	2	116.666667	58.333333	7.000	0.0494
Error	4	33.333333	8.333333		

Randomized Complete Block (RCB) AOV For Amapa ----- Control % Jun-9-21 6 DA-A (Data Column 2)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	8	1688.888889			
Replicate	2	22.222222	11.111111	1.000	0.4444
Treatment	2	1622.222222	811.111111	73.000	0.0007
Error	4	44.444444	11.111111		

Randomized Complete Block (RCB) AOV For Agrass ----- Control % Jun-9-21 6 DA-A (Data Column 3)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	8	14172.222222			
Replicate	2	88.888889	44.444444	1.000	0.4444
Treatment	2	13905.555556	6952.777778	156.438	0.0002
Error	4	177.777778	44.444444		

Randomized Complete Block (RCB) AOV For Molve ----- Control % Jun-9-21 6 DA-A (Data Column 4)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	8	14702.000000			
Replicate	2	0.000000	0.000000	0.000	1.0000
Treatment	2	14702.000000	7351.000000	0.000	1.0000
Error	4	0.000000	0.000000		

Randomized Complete Block (RCB) AOV For Amapa ------ Control % Jun-29-21 26 DA-A (Data Column 5)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	8	0.000000000000			
Replicate	2	0.000000000000	0.000000000000	0.000	1.0000
Treatment	2	0.000000000000	0.000000000000	0.000	1.0000
Error	4	0.000000000000	0.000000000000		

Randomized Complete Block (RCB) AOV For Agrass ----- Control % Jun-29-21 26 DA-A (Data Column 6)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	8	13750.000000			
Replicate	2	266.666667	133.333333	2.000	0.2500
Treatment	2	13216.666667	6608.333333	99.125	0.0004
Error	4	266.666667	66.666667		

Randomized Complete Block (RCB) AOV For Molve ----- Control % Jun-29-21 26 DA-A (Data Column 7)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	8	15100.000000			
Replicate	2	1050.000000	525.000000	1.575	0.3130
Treatment	2	12716.666667	6358.333333	19.075	0.0090
Error	4	1333.333333	333.333333		

Weed Code
Amapa = AMARANTH, PALMER / AMARANTHUS PALMERI S.WATS.
Molve = CARPETWEED / MOLLUGO VERTICILLATA L.

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Plot	1	2	3	4	5	6	7
	Weed Code								------	Amapa	Agrass	Molve	Amapa	Agrass	Molve
	Crop Code								Sorbi	-----	-----	-----	------	-----	-----
	Part Rated														
	Rating Data Type								Stunt	Control	Control	Control	Control	Control	Control
	Rating Unit								%	%	%	%	%	%	%
	Rating Date								Jun-9-21	Jun-9-21	Jun-9-21	Jun-9-21	Jun-29-21	Jun-29-21	Jun-29-21
	Trt-Eval Interval								6 DA-A	6 DA-A	6 DA-A	6 DA-A	26 DA-A	26 DA-A	26 DA-A
1	NTC							101	0.0	0.0	0.0	0.0	0.0	0.0	0.0
								203	0.0	0.0	0.0	0.0	0.0	0.0	0.0
								302	0.0	0.0	0.0	0.0	0.0	0.0	0.0
								Mean =	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	IMIFLEX	1 AS		6.0	oz/a	EPOST	A	102	5.0	30.0	75.0	50.0	0.0	85.0	0.0
	AGRIDEX			1.0	% v/v	EPOST	A	201	5.0	30.0	95.0	50.0	0.0	65.0	65.0
								303	10.0	20.0	75.0	50.0	0.0	65.0	50.0
								Mean =	6.7	26.7	81.7	50.0	0.0	71.7	38.3
3	CADRE	2 AS		4.0	oz/a	EPOST	A	103	5.0	30.0	85.0	99.0	0.0	95.0	85.0
	AGRIDEX			1.0	% v/v	EPOST	A	202	5.0	30.0	85.0	99.0	0.0	95.0	95.0
								301	15.0	30.0	85.0	99.0	0.0	75.0	95.0
								Mean =	8.3	30.0	85.0	99.0	0.0	88.3	91.7

Weed Code
Amapa = AMARANTH, PALMER / AMARANTHUS PALMERI S.WATS.
Molve = CARPETWEED / MOLLUGO VERTICILLATA L.