

University of Georgia

Watermelon response to Targa mixtures.

Trial ID: Veg15-05 (targa) Study Dir.: Stanley Culpepper
 Location: Ponder (5139) Investigator: Stanley Culpepper

Reps: 3 Plots: 6 by 25 feet
 Spray vol: 14.8 gal/ac Mix size: 1 liters (min .57876)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code	Amt to Measure	Plot No. By Rep		
									1	2	3
1	Targa	0.88	E	8 oz/a			A	4.223 ml/mx	101	202	306
	NIS		L	0.25 % v/v			A	2.5 ml/mx			
2	Targa	0.88	E	10 oz/a			A	5.279 ml/mx	102	204	305
	NIS		L	0.25 % v/v			A	2.5 ml/mx			
3	Targa	0.88	E	8 oz/a			A	4.223 ml/mx	103	206	303
	NIS		L	0.25 % v/v			A	2.5 ml/mx			
	Alanap	2	E	6 qt/a			A	101.3 ml/mx			
4	Targa	0.88	E	8 oz/a			A	4.223 ml/mx	104	201	302
	Alanap	2	E	6 qt/a			A	101.3 ml/mx			
5	Non-treated								105	203	304
6	Targa	0.88	E	8 oz/a			A	4.223 ml/mx	106	205	301
	NIS		L	0.25 % v/v			A	2.5 ml/mx			
	Sandea	75	DF	0.5 oz/a			A	0.253 g/mx			

Sort Order: Treatment

Product quantities required for listed treatments and applications in one trial:

Amount*	Unit	Treatment Name	Lot Code
27.713	ml	Targa 0.88 E	
12.499	ml	NIS L	
253.352	ml	Alanap 2 E	
0.316	g	Sandea 75 DF	

- * 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 1 liters (mix size basis).
- * Product amount calculations increased 25 % for overage adjustment.
- * 'Per volume' calculations use spray volume= 14.8 gal/ac, mix size= 1 liters.

Trial Comments

OBJECTIVE: Evaluate watermelon and grass response to Targa applied alone and in combinations.

VISUAL INJURY:

1. Targa did not injure crop.
2. Only Sandea stunted the crop when runner lengths were measured at 7 DAT. Watermelon resumed normal growth quickly.

TEXAS PANICUM CONTROL:

1. Targa provided excellent control.
2. Alanap in mixture with Targa reduced grass control by at least 56% control. Adding a surfactant in mixture with Alanap and Targa did improve control but control was much less than Targa applied alone.
3. Mixing Sandea with Targa did not statistically reduce grass control compared to Targa alone; however, there was usually one larger grass plant per plot beginning to regrowth by late-season in Sandea + Targa plots.

WATERMELON YIELD:

1. Compared to Targa alone which provided excellent weed control, there were fewer melons and melon weights in the non-treated and the Targa + Sandea treatments. The trends for less yield in the Targa + Alanap plots was also clear. Lower yields in the non-treated and Targa + Alanap were because of poor grass control while yield in the Sandea + Targa plots were lower likely because of a slight delay in crop maturity.

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Watermelon response to Targa mixtures.

Trial ID: Veg15-05 (targa)

Study Dir.: Stanley Culpepper

Location: Ponder (5139)

Investigator: Stanley Culpepper

Weed Code	watermel	watermel	watermel	PANTE	PANTE	PANTE	plant 1	plant 2		
Crop Code	watermel	watermel	watermel	watermel	watermel	watermel	watermel	watermel		
Rating Data Type	injury	injury	injury	control	control	control	dt	dt		
Rating Unit	percent	percent	percent	percent	percent	percent	cm	cm		
Rating Date	May-16-05	May-24-05	Jun-02-05	May-16-05	May-24-05	Jun-02-05	May-13-05	May-13-05		
Trt-Eval Interval	10 DA-A	18 DA-A	27 DA-A	10 DA-A	18 DA-A	27 DA-A	7 DA-A	7 DA-A		
ARM Action Codes										
# Subsamples, Dec.										
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	Rate		
		Unit								
			1	2	3	4	5	6	7	8
1	Targa NIS	8 oz/a 0.25 % v/v	0	0	0	95	96	98	130	114
2	Targa NIS	10 oz/a 0.25 % v/v	0	2	0	95	95	97	111	144
3	Targa NIS Alanap	8 oz/a 0.25 % v/v 6 qt/a	0	0	0	81	69	65	144	119
4	Targa Alanap	8 oz/a 6 qt/a	0	0	0	38	42	42	146	115
5	Non-treated		0	0	0	0	0	0	122	123
6	Targa NIS Sanda	8 oz/a 0.25 % v/v 0.5 oz/a	3	0	0	95	93	91	91	97
LSD (P=.05)			4.3	2.1	0.0	3.7	33.7	12.3	33.4	31.2
Standard Deviation			2.4	1.2	0.0	2.0	18.5	6.8	18.3	17.1
CV			424.26	424.26	0.0	3.02	28.13	10.37	14.77	14.45

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

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Weed Code	plant 3 watermel	plant 4 watermel	plant 5 watermel	Avg5plan watermel	plant 1 watermel	plant 2 watermel	plant 3 watermel	plant 4 watermel			
Crop Code											
Rating Data Type	dt	dt	dt	dt	dt	dt	dt	dt			
Rating Unit	cm	cm	cm	cm	cm	cm	cm	cm			
Rating Date	May-13-05	May-13-05	May-13-05	May-13-05	Jun-01-05	Jun-01-05	Jun-01-05	Jun-01-05			
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	26 DA-A	26 DA-A	26 DA-A	26 DA-A			
ARM Action Codes				T1							
# Subsamples, Dec.				1							
Trt No.	Treatment Name	Rate	Rate Unit	9	10	11	12	13	14	15	16
1	Targa NIS	8 oz/a 0.25 % v/v		126	121	117	121.7	194	118	150	188
2	Targa NIS	10 oz/a 0.25 % v/v		105	115	109	116.7	156	172	145	160
3	Targa NIS Alanap	8 oz/a 0.25 % v/v 6 qt/a		125	90	101	116.0	131	154	189	121
4	Targa Alanap	8 oz/a 6 qt/a		130	114	105	122.0	184	156	167	160
5	Non-treated			124	127	129	125.0	174	122	134	160
6	Targa NIS Sanda	8 oz/a 0.25 % v/v 0.5 oz/a		101	109	109	101.4	142	152	181	156
LSD (P=.05)				32.2	27.3	29.6	13.75	64.4	94.1	71.6	73.7
Standard Deviation				17.7	15.0	16.3	7.56	35.4	51.7	39.4	40.5
CV				14.94	13.33	14.55	6.45	21.64	35.49	24.44	25.72

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

Column 12: T1 = @AVG([C7].[C11])

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Weed Code	plant 5	Avg5plan	Harv 1	Harv 1	Harv 1	Harv 1	Harv 1	Harv 1	Harv 1	
Crop Code	watermel	watermel	watermel	watermel	watermel	watermel	watermel	watermel	watermel	
Rating Data Type	dt	dt	<10	<10	<10	<10	<10	<10	<10	
Rating Unit	cm	cm	wt/lb	wt/lb	wt/lb	wt/lb	wt/lb	wt/lb	wt/lb	
Rating Date	Jun-01-05	Jun-01-05	Jun-29-05	Jun-29-05	Jun-29-05	Jun-29-05	Jun-29-05	Jun-29-05	Jun-29-05	
Trt-Eval Interval	26 DA-A	26 DA-A	54 DA-A	54 DA-A	54 DA-A	54 DA-A	54 DA-A	54 DA-A	54 DA-A	
ARM Action Codes			T2							
# Subsamples, Dec.			1							
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	
		Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit	
1	Targa NIS	8 oz/a 0.25 % v/v	181	166.3	6	10	5	3	2	3
2	Targa NIS	10 oz/a 0.25 % v/v	99	146.5	7	5	4	5	3	0
3	Targa NIS Alanap	8 oz/a 0.25 % v/v 6 qt/a	133	145.5	9	7	7	8	3	2
4	Targa Alanap	8 oz/a 6 qt/a	154	164.1	9	8	8	5	2	0
5	Non-treated		171	152.3	7	7	8	2	0	0
6	Targa NIS Sanda	8 oz/a 0.25 % v/v 0.5 oz/a	174	161.0	9	7	9	8	8	9
LSD (P=.05)			68.7	28.99	3.3	4.5	4.8	5.4	5.6	5.2
Standard Deviation			37.8	15.94	1.8	2.5	2.6	3.0	3.1	2.8
CV			24.83	10.22	23.99	34.17	39.03	55.93	106.08	117.6

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

Column 18: T2 = @AVG([C13].[C17])

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Weed Code	Harv 1	Harv 1	Harv 1	Tot Har1	Tot Har1	Harv 1	Harv 1	Harv 1		
Crop Code	watermel	watermel	watermel	watermel	watermel	watermel	watermel	watermel		
Rating Data Type	<10	<10	<10	<10 lbs	<10 lbs	>10 lb	>10 lb	>10 lb		
Rating Unit	wt/lb	wt/lb	wt/lb	#	lbs	wt/lb	wt/lb	wt/lb		
Rating Date	Jun-29-05	Jun-29-05	Jun-29-05	Jun-29-05	Jun-29-05	Jun-29-05	Jun-29-05	Jun-29-05		
Trt-Eval Interval	54 DA-A	54 DA-A	54 DA-A	54 DA-A	54 DA-A	54 DA-A	54 DA-A	54 DA-A		
ARM Action Codes					T3					
# Subsamples, Dec.					1					
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	Rate		
		Unit	Unit	Unit	Unit	Unit	Unit	Unit		
		25	26	27	28	29	30	31	32	
1	Targa NIS	8 oz/a 0.25 % v/v	0	0	0	4	27.1	12	13	13
2	Targa NIS	10 oz/a 0.25 % v/v	0	0	0	3	24.1	12	12	14
3	Targa NIS Alanap	8 oz/a 0.25 % v/v 6 qt/a	3	2	0	5	40.9	11	7	8
4	Targa Alanap	8 oz/a 6 qt/a	0	0	0	4	32.8	11	16	9
5	Non-treated		0	0	0	3	23.3	13	13	0
6	Targa NIS Sanda	8 oz/a 0.25 % v/v 0.5 oz/a	7	0	0	7	56.3	12	12	3
LSD (P=.05)			5.2	2.6	0.0	2.6	19.92	3.6	5.4	9.9
Standard Deviation			2.9	1.4	0.0	1.4	10.95	2.0	3.0	5.5
CV			184.75	424.26	0.0	32.67	32.12	16.71	24.01	69.02

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

Column 29: T3 = [19]+[20]+[21]+[22]+[23]+[24]+[25]+[26]+[27]

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Weed Code	Harv 1	Harv 1	Harv 1	Tot Har1	Tot Har1	ALL Har1	All Har1		
Crop Code	watermel	watermel	watermel	watermel	watermel	watermel	watermel		
Rating Data Type	>10 lb	>10 lb	>10 lb	>10 lb	>10 lb	all melon	all melon		
Rating Unit	wt/lb	wt/lb	wt/lb	#	lbs	#	lbs		
Rating Date	Jun-29-05	Jun-29-05	Jun-29-05	Jun-29-05	Jun-29-05	Jun-29-05	Jun-29-05		
Trt-Eval Interval	54 DA-A	54 DA-A	54 DA-A	54 DA-A	54 DA-A	54 DA-A	54 DA-A		
ARM Action Codes					T4	T5	T6		
# Subsamples, Dec.					1	1	1		
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate		
		Unit	Unit	Unit	Unit	Unit	Unit		
33									
34									
35									
36									
37									
38									
39									
1	Targa	8 oz/a	14	11	9	6	71.1	5.7	74.8
	NIS	0.25 % v/v							
2	Targa	10 oz/a	10	4	0	4	52.9	4.0	56.3
	NIS	0.25 % v/v							
3	Targa	8 oz/a	4	0	0	3	31.1	2.7	36.4
	NIS	0.25 % v/v							
	Alanap	6 qt/a							
4	Targa	8 oz/a	0	0	0	3	35.3	2.7	39.3
	Alanap	6 qt/a							
5	Non-treated		0	0	0	2	26.4	2.0	29.7
6	Targa	8 oz/a	0	0	0	2	28.0	2.3	34.7
	NIS	0.25 % v/v							
	Sandea	0.5 oz/a							
LSD (P=.05)			7.7	5.8	5.7	1.6	23.64	1.65	21.36
Standard Deviation			4.3	3.2	3.1	0.9	13.00	0.91	11.74
CV			93.66	126.24	212.65	28.14	31.85	28.14	25.98

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

Column 37: T4 = [30]+[31]+[32]+[33]+[34]+[35]

Column 38: T5 = [27]+[36]

Column 39: T6 = [28]+[37]

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No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.							

SOIL DESCRIPTION

% Sand: 94 % OM: 1.1 Texture: sand
 % Silt: 2 pH: 6.1 Soil Name: Tifton sandy loam
 % Clay: 4 CEC: _____ Fert. Level: _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: irrigated

Closest Weather Station: _____ Distance: _____ Unit: __

APPLICATION DESCRIPTION

	A
Application Date:	May-06-05
Time of Day:	5 pm
Application Method:	broadcast
Application Timing:	POST
Applic. Placement:	overtop
Air Temp., Unit:	86 F
% Relative Humidity:	39
Wind Velocity, Unit:	1 mph
Dew Presence (Y/N):	n
Water Hardness:	
Soil Temp., Unit:	88 F
Soil Moisture:	moist
% Cloud Cover:	0

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	CITLA POST
Stage Scale:	.
Height, Unit:	12 inch

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	PANTE POST
Stage Scale:	1-5 inch
Density, Unit:	4 ydsq

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APPLICATION EQUIPMENT

	A
Appl. Equipment:	backpack
Operating Pressure:	23
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 inch
Nozzles/Row:	4
Band Width, Unit:	
Boom Length, Unit:	4.5 feet
Boom Height, Unit:	15 inch
Ground Speed, Unit:	3 mph
Incorporation Equip.:	
Hours to Incorp.:	
Incorp. Depth, Unit:	
Carrier:	water
Spray Volume, Unit:	14.8 GPA
Spray pH:	
Propellant:	CO2
Tank Mix (Y/N):	Y

Trt No	Treatment Application Comment