

University of Georgia

PREEMERGENCE WEED CONTROL IN CLEARFIELD SUNFLOWERS

Trial ID: SUN-02-18 Study Dir.:
 Location: PONDER FARM Investigator: Eric P. Prostko

Reps: 4 Plots: 6 by 25 feet
 Spray vol: 15 GAL/AC Mix Size: 1.5 L (total for 4 plots; minimum=0.782 L)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg	Code	Amt Product to Measure	Rep			
									1	2	3	4
1	NTC								101	205	302	404
2	SPARTAN	4 F		3.75 oz/a		PRE	A	2.929 mL/mx	102	201	305	403
	ZIDUA	4.17 SC		2.5 oz/a		PRE	A	1.953 mL/mx				
3	SPARTAN	4 F		3.75 oz/a		PRE	A	2.929 mL/mx	103	206	303	406
	ZIDUA	4.17 SC		2.5 oz/a		PRE	A	1.953 mL/mx				
4	VALOR EZ	4 F		2.0 oz/a		PRE	A	1.562 mL/mx	104	203	304	401
	ZIDUA	4.17 SC		2.5 oz/a		PRE	A	1.953 mL/mx				
5	VALOR EZ	4 F		2.0 oz/a		PRE	A	1.562 mL/mx	105	202	306	405
	ZIDUA	4.17 SC		2.5 oz/a		PRE	A	1.953 mL/mx				
6	SPARTAN	4 F		3.75 oz/a		PRE	A	2.929 mL/mx	106	204	301	402
	PROWL H20	3.8 SC		32.0 oz/a		PRE	A	25.0 mL/mx				

Sort Order: Treatment

Trial Comments

SUMMARY:

- 1) PRE APPLICATIONS OF VALOR EZ @ 2 OZ/A RESULTED IN SIGNIFICANT REDUCTIONS IN SUNFLOWER DENSITY.
- 2) ALL PRE TREATMENTS PROVIDED EXCELLENT CONTROL (>93%) OF PALMER AMARANTH AND ANNUAL GRASSES.
- 3) SPARTAN + ZIDUA PROVIDED SIMILAR CONTROL TO SPARTAN + PROWL H20.

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		WEED STAGE AT EACH APPLICATION					
		A	B	C	D	E	F
Weed 1	Stage: AMAPA	_____	_____	_____	_____	_____	_____
Stage Scale:		_____	_____	_____	_____	_____	_____
Density, Unit:		_____	_____	_____	_____	_____	_____

		APPLICATION EQUIPMENT					
		A	B	C	D	E	F
Appl. Equipment:	BACKPACK	_____	_____	_____	_____	_____	_____
Operating Pressure:	27	_____	_____	_____	_____	_____	_____
Nozzle Type:	AIXR	_____	_____	_____	_____	_____	_____
Nozzle Size:	11002	_____	_____	_____	_____	_____	_____
Nozzle Spacing, Unit:	15	IN	_____	_____	_____	_____	_____
Nozzles/Row:	2	_____	_____	_____	_____	_____	_____
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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Trial ID:		SUN-02-18		Study Dir.:		Eric P. Prostko							
Location:		PONDER FARM		Investigator:		Eric P. Prostko							
Weed Code	Crop Code	Part Rated	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	----- HELAN PLANT - EMERGENC #/ROW May-11-18 15 DA-A	AMAPA ----- CONTROL PERCENT May-11-18 15 DA-A	AMAPA ----- CONTROL PERCENT May-21-18 25 DA-A	AGRASS ----- CONTROL PERCENT May-21-18 25 DA-A	----- HELAN PLANTS - #/PLOT May-21-18 25 DA-A	AMAPA ----- CONTROL PERCENT Jun-6-18 41 DA-A	AGRASS ----- CONTROL PERCENT Jun-6-18 41 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg	1	2	3	4	5	6	7
1	NTC						16.8 a	0.0 b	0.0 b	0.0 c	29.3 a	24.8 b	0.0 b
2	SPARTAN ZIDUA	4 F 4.17 SC		3.75 oz/a 2.5 oz/a	PRE PRE	A A	16.8 a	99.0 a	99.0 a	93.5 ab	34.0 a	99.0 a	96.0 a
3	SPARTAN ZIDUA	4 F 4.17 SC		3.75 oz/a 2.5 oz/a	PRE PRE	A A	10.5 ab	99.0 a	99.0 a	97.0 ab	29.5 a	99.0 a	94.8 a
4	VALOR EZ ZIDUA	4 F 4.17 SC		2.0 oz/a 2.5 oz/a	PRE PRE	A A	3.0 b	99.0 a	99.0 a	98.0 ab	6.5 b	99.0 a	98.0 a
5	VALOR EZ ZIDUA	4 F 4.17 SC		2.0 oz/a 2.5 oz/a	PRE PRE	A A	4.0 b	99.0 a	99.0 a	99.0 a	9.3 b	99.0 a	99.0 a
6	SPARTAN PROWL H20	4 F 3.8 SC		3.75 oz/a 32.0 oz/a	PRE PRE	A A	16.5 a	99.0 a	99.0 a	92.5 b	28.5 a	99.0 a	93.5 a
Tukey's HSD P=.10							8.76	.	.	6.24	17.63	40.95	6.36
Standard Deviation							4.33	0.00	0.00	3.08	8.70	20.21	3.14
CV							38.45	0.0	0.0	3.85	38.12	23.33	3.91
Grand Mean							11.25	82.50	82.50	80.00	22.83	86.63	80.21
Levene's F							1.214	0.00	0.00	1.455	0.789		1.199
Levene's Prob(F)							0.342	0.00*	0.00*	0.253	0.571		0.349
Replicate F							0.834	0.000	0.000	0.621	0.371	1.000	0.817
Replicate Prob(F)							0.4957	1.0000	1.0000	0.6125	0.7750	0.4199	0.5043
Treatment F							8.947	0.000	0.000	650.234	7.327	9.000	629.207
Treatment Prob(F)							0.0004	1.0000	1.0000	0.0001	0.0012	0.0004	0.0001

Weed Code	AMAPA = AMARANTH, PALMER / AMARANTHUS PALMERI S.WATS.
Crop Code	HELAN = SUNFLOWER / HELIANTHUS ANNUUS L.
Part Rated	PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)

Means followed by same letter or symbol do not significantly differ (P=.10, Tukey's HSD)
 Could not calculate Tukey's HSD (% mean diff) for columns 2,3 because error mean square = 0.

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Trial ID: SUN-02-18 Study Dir.: Eric P. Prostko
 Location: PONDER FARM Investigator:

Weed Code	----	AMAPA	AMAPA	AGRASS	----	AMAPA							
Crop Code	HELAN	----	----	----	HELAN	----							
Part Rated	PLANT -				PLANTS -								
Rating Data Type	EMERGENC	CONTROL	CONTROL	CONTROL	#/PLOT	CONTROL							
Rating Unit	#/ROW	PERCENT	PERCENT	PERCENT	May-21-18	PERCENT							
Rating Date	May-11-18	May-11-18	May-21-18	May-21-18	May-21-18	Jun-6-18							
Trt-Eval Interval	15 DA-A	15 DA-A	25 DA-A	25 DA-A	25 DA-A	41 DA-A							
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Stg	Appl Code	Plot	1	2	3	4	5	6
1	NTC						101	16.0	0.0	0.0	0.0	40.0	0.0
							205	17.0	0.0	0.0	0.0	30.0	0.0
							302	16.0	0.0	0.0	0.0	24.0	99.0
							404	18.0	0.0	0.0	0.0	23.0	0.0
							Mean =	16.8	0.0	0.0	0.0	29.3	24.8
2	SPARTAN ZIDUA	4 F	4.17 SC	3.75 oz/a	PRE	A	102	18.0	99.0	99.0	99.0	32.0	99.0
				2.5 oz/a	PRE	A	201	14.0	99.0	99.0	95.0	25.0	99.0
							305	12.0	99.0	99.0	90.0	33.0	99.0
							403	23.0	99.0	99.0	90.0	46.0	99.0
							Mean =	16.8	99.0	99.0	93.5	34.0	99.0
3	SPARTAN ZIDUA	4 F	4.17 SC	3.75 oz/a	PRE	A	103	8.0	99.0	99.0	95.0	29.0	99.0
				2.5 oz/a	PRE	A	206	9.0	99.0	99.0	99.0	29.0	99.0
							303	9.0	99.0	99.0	95.0	24.0	99.0
							406	16.0	99.0	99.0	99.0	36.0	99.0
							Mean =	10.5	99.0	99.0	97.0	29.5	99.0
4	VALOR EZ ZIDUA	4 F	4.17 SC	2.0 oz/a	PRE	A	104	4.0	99.0	99.0	95.0	7.0	99.0
				2.5 oz/a	PRE	A	203	3.0	99.0	99.0	99.0	9.0	99.0
							304	1.0	99.0	99.0	99.0	3.0	99.0
							401	4.0	99.0	99.0	99.0	7.0	99.0
							Mean =	3.0	99.0	99.0	98.0	6.5	99.0
5	VALOR EZ ZIDUA	4 F	4.17 SC	2.0 oz/a	PRE	A	105	6.0	99.0	99.0	99.0	16.0	99.0
				2.5 oz/a	PRE	A	202	3.0	99.0	99.0	99.0	3.0	99.0
							306	2.0	99.0	99.0	99.0	6.0	99.0
							405	5.0	99.0	99.0	99.0	12.0	99.0
							Mean =	4.0	99.0	99.0	99.0	9.3	99.0
6	SPARTAN PROWL H20	4 F	3.8 SC	3.75 oz/a	PRE	A	106	9.0	99.0	99.0	85.0	16.0	99.0
				32.0 oz/a	PRE	A	204	14.0	99.0	99.0	95.0	23.0	99.0
							301	28.0	99.0	99.0	95.0	49.0	99.0
							402	15.0	99.0	99.0	95.0	26.0	99.0
							Mean =	16.5	99.0	99.0	92.5	28.5	99.0

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Weed Code							AGRASS	
Crop Code							----	
Part Rated								
Rating Data Type							CONTROL	
Rating Unit							PERCENT	
Rating Date							Jun-6-18	
Trt-Eval Interval							41 DA-A	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Stg	Appl Code	Plot	
							7	
1	NTC						101 205 302 404 Mean =	0.0 0.0 0.0 0.0 0.0
2	SPARTAN ZIDUA	4 F 4.17 SC		3.75 oz/a 2.5 oz/a	PRE PRE	A A	102 201 305 403 Mean =	95.0 95.0 95.0 99.0 96.0
3	SPARTAN ZIDUA	4 F 4.17 SC		3.75 oz/a 2.5 oz/a	PRE PRE	A A	103 206 303 406 Mean =	95.0 90.0 95.0 99.0 94.8
4	VALOR EZ ZIDUA	4 F 4.17 SC		2.0 oz/a 2.5 oz/a	PRE PRE	A A	104 203 304 401 Mean =	99.0 99.0 99.0 95.0 98.0
5	VALOR EZ ZIDUA	4 F 4.17 SC		2.0 oz/a 2.5 oz/a	PRE PRE	A A	105 202 306 405 Mean =	99.0 99.0 99.0 99.0 99.0
6	SPARTAN PROWL H20	4 F 3.8 SC		3.75 oz/a 32.0 oz/a	PRE PRE	A A	106 204 301 402 Mean =	85.0 95.0 99.0 95.0 93.5

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