

University of Georgia

Tropical spiderwort weed management systems.

Trial ID: C25-05

Study Dir.: Flanders, Culpepper

Location: Grady County

Investigator: Stanley Culpepper

Reps: 4

Plots: 12 by 25 feet

Spray vol: 14.8 gal/ac

Mix size: 2 liters (min 1.5434)

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Form Unit	Grow Stg	Appl Code	Amt Product to Measure	Plot No. By Rep			
									1	2	3	4
1	Prowl	3.3	EC	2	pt/a	PRE	A	33.78 ml/mx	101	204	319	413
	Roundup WeatherMax	5.5	L	22	oz/a	3-4 lf	C	23.23 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	10-12 lf	E	23.23 ml/mx				
2	Prowl	3.3	EC	2	pt/a	PRE	A	33.78 ml/mx	102	209	320	406
	Roundup WeatherMax	5.5	L	22	oz/a	3-4lf	C	23.23 ml/mx				
	Dual Magnum	7.64	L	16	oz/a	3-4lf	C	16.89 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	10-12 lf	E	23.23 ml/mx				
3	Prowl	3.3	EC	2	pt/a	PRE	A	33.78 ml/mx	103	216	309	407
	Roundup WeatherMax	5.5	L	22	oz/a	3-4lf	C	23.23 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	10-12 lf	E	23.23 ml/mx				
	Dual Magnum	7.64	L	16	oz/a	10-12 lf	E	16.89 ml/mx				
4	Prowl	3.3	EC	2	pt/a	PRE	A	33.78 ml/mx	104	212	305	411
	Roundup WeatherMax	5.5	L	22	oz/a	3-4lf	C	23.23 ml/mx				
	Dual Magnum	7.64	L	8	oz/a	3-4lf	C	8.446 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	10-12 lf	E	23.23 ml/mx				
	Dual Magnum	7.64	L	8	oz/a	10-12 lf	E	8.446 ml/mx				
5	Prowl	3.3	EC	2	pt/a	PRE	A	33.78 ml/mx	105	207	308	410
	Roundup WeatherMax	5.5	L	22	oz/a	3-4lf	C	23.23 ml/mx				
	Dual Magnum	7.64	L	12	oz/a	3-4lf	C	12.67 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	10-12 lf	E	23.23 ml/mx				
	Dual Magnum	7.64	L	12	oz/a	10-12 lf	E	12.67 ml/mx				
6	Prowl	3.3	EC	2	pt/a	PRE	A	33.78 ml/mx	106	215	304	401
	Roundup WeatherMax	5.5	L	22	oz/a	3-4lf	C	23.23 ml/mx				
	Dual Magnum	7.64	L	16	oz/a	3-4lf	C	16.89 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	10-12 lf	E	23.23 ml/mx				
	Dual Magnum	7.64	L	16	oz/a	10-12 lf	E	16.89 ml/mx				
7	Roundup WeatherMax	5.5	L	16	oz/a	1 lf	B	16.89 ml/mx	107	219	303	404
	Roundup WeatherMax	5.5	L	22	oz/a	6-8 lf	D	23.23 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	10-12 lf	E	23.23 ml/mx				
8	Roundup WeatherMax	5.5	L	16	oz/a	1 lf	B	16.89 ml/mx	108	213	311	416
	Roundup WeatherMax	5.5	L	22	oz/a	6-8 lf	D	23.23 ml/mx				
	Dual Magnum	7.64	L	16	oz/a	6-8 lf	D	16.89 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	10-12 lf	E	23.23 ml/mx				
9	Roundup WeatherMax	5.5	L	16	oz/a	1 lf	B	16.89 ml/mx	109	218	312	408
	Roundup WeatherMax	5.5	L	22	oz/a	6-8 lf	D	23.23 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	10-12 lf	E	23.23 ml/mx				
	Dual Magnum	7.64	L	16	oz/a	10-12 lf	E	16.89 ml/mx				
10	Roundup WeatherMax	5.5	L	16	oz/a	1 lf	B	16.89 ml/mx	110	203	302	414
	Roundup WeatherMax	5.5	L	22	oz/a	6-8 lf	D	23.23 ml/mx				
	Dual Magnum	7.64	L	8	oz/a	6-8 lf	D	8.446 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	10-12 lf	E	23.23 ml/mx				
	Dual Magnum	7.64	L	8	oz/a	10-12 lf	E	8.446 ml/mx				
11	Roundup WeatherMax	5.5	L	16	oz/a	1 lf	B	16.89 ml/mx	111	217	315	418
	Roundup WeatherMax	5.5	L	22	oz/a	6-8 lf	D	23.23 ml/mx				
	Dual Magnum	7.64	L	12	oz/a	6-8 lf	D	12.67 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	10-12 lf	E	23.23 ml/mx				
	Dual Magnum	7.64	L	12	oz/a	10-12 lf	E	12.67 ml/mx				

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Reps: 4 Plots: 12 by 25 feet
 Spray vol: 14.8 gal/ac Mix size: 2 liters (min 1.5434)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Stg	Appl Code	Amt to Measure	Plot No. By Rep				
									1	2	3	4	
12	Roundup WeatherMax	5.5	L	16	oz/a	1	If	B	16.89 ml/mx	112	205	316	409
	Roundup WeatherMax	5.5	L	22	oz/a	6-8	If	D	23.23 ml/mx				
	Dual Magnum	7.64	L	16	oz/a	6-8	If	D	16.89 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	10-12	If	E	23.23 ml/mx				
	Dual Magnum	7.64	L	16	oz/a	10-12	If	E	16.89 ml/mx				
13	Roundup WeatherMax	5.5	L	16	oz/a	1	If	B	16.89 ml/mx	113	214	301	402
	Roundup WeatherMax	5.5	L	22	oz/a	6-8	If	D	23.23 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	LPD		F	23.23 ml/mx				
	Direx	4	L	24	oz/a	LPD		F	25.34 ml/mx				
14	Roundup WeatherMax	5.5	L	16	oz/a	1	If	B	16.89 ml/mx	114	211	317	412
	Roundup WeatherMax	5.5	L	22	oz/a	6-8	If	D	23.23 ml/mx				
	Dual Magnum	7.64	L	16	oz/a	6-8	If	D	16.89 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	LPD		F	23.23 ml/mx				
	Direx	4	L	24	oz/a	LPD		F	25.34 ml/mx				
15	Roundup WeatherMax	5.5	L	16	oz/a	1	If	B	16.89 ml/mx	115	202	314	417
	Roundup WeatherMax	5.5	L	22	oz/a	6-8	If	D	23.23 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	LPD		F	23.23 ml/mx				
	Dual Magnum	7.64	L	16	oz/a	LPD		F	16.89 ml/mx				
	Direx	4	L	24	oz/a	LPD		F	25.34 ml/mx				
16	Roundup WeatherMax	5.5	L	16	oz/a	1	If	B	16.89 ml/mx	116	220	310	403
	Roundup WeatherMax	5.5	L	22	oz/a	6-8	If	D	23.23 ml/mx				
	Dual Magnum	7.64	L	8	oz/a	6-8	If	D	8.446 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	LPD		F	23.23 ml/mx				
	Dual Magnum	7.64	L	8	oz/a	LPD		F	8.446 ml/mx				
	Direx	4	L	24	oz/a	LPD		F	25.34 ml/mx				
17	Roundup WeatherMax	5.5	L	16	oz/a	1	If	B	16.89 ml/mx	117	210	318	415
	Roundup WeatherMax	5.5	L	22	oz/a	6-8	If	D	23.23 ml/mx				
	Dual Magnum	7.64	L	12	oz/a	6-8	If	D	12.67 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	LPD		F	23.23 ml/mx				
	Dual Magnum	7.64	L	12	oz/a	LPD		F	12.67 ml/mx				
	Direx	4	L	24	oz/a	LPD		F	25.34 ml/mx				
18	Roundup WeatherMax	5.5	L	16	oz/a	1	If	B	16.89 ml/mx	118	206	307	419
	Roundup WeatherMax	5.5	L	22	oz/a	6-8	If	D	23.23 ml/mx				
	Dual Magnum	7.64	L	16	oz/a	6-8	If	D	16.89 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	LPD		F	23.23 ml/mx				
	Dual Magnum	7.64	L	16	oz/a	LPD		F	16.89 ml/mx				
Direx	4	L	24	oz/a	LPD		F	25.34 ml/mx					
19	Non-treated control									119	208	306	405
20	Roundup WeatherMax	5.5	L	16	oz/a	1	If	B	16.89 ml/mx	120	201	313	420
	Roundup WeatherMax	5.5	L	22	oz/a	6-8	If	D	23.23 ml/mx				
	Dual Magnum	7.64	L	8	oz/a	6-8	If	D	8.446 ml/mx				
	Roundup WeatherMax	5.5	L	22	oz/a	LPD		F	23.23 ml/mx				
	Dual Magnum	7.64	L	8	oz/a	LPD		F	8.446 ml/mx				
Valor	51	DF	1.5	oz/a	LPD		F	1.518 g/mx					

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Lot Code
253.352	ml	Prowl 3.3 EC	
1,377.748	ml	Roundup WeatherMax 5.5 L	
432.856	ml	Dual Magnum 7.64 L	
190.034	ml	Direx 4 L	

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Reps: 4 Plots: 12 by 25 feet
 Spray vol: 14.8 gal/ac Mix size: 2 liters (min 1.5434)

Trt No.	Tr> N>	Form Conc	Form Type	Plot No. By Rep
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Product quantities required for listed treatments and applications in one trial:

Amount*	Unit	Treatment Name	Lot Code
1.898	g	Valor 51 DF	

- * 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 2 liters (mix size basis).
- * Product amount calculations increased 25 % for overage adjustment.

Trial Comments

OBJECTIVE: Determine the most effective tropical spiderwort program for control in cotton.

Spiderwort Response:

1. Conditions throughout the growing season were ideal with lush spiderwort being controlled extremely well by glyphosate as well as rainfall occurring within 48 hours of each metolachlor application.
2. All programs with sequential Dual Magnum applications provided excellent control (95% or greater).
3. The other two programs that provided excellent control contained Dual Magnum mid-POST fb Direx or Dual Mag. + Direx + Roundup at layby.
4. All applications were timely.

CONCLUSIONS:

1. Based on our results, it appears that sequential rates of Dual Magnum are more effective than a single application.

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Tropical spiderwort weed management systems.

Trial ID: C25-05

Study Dir.: Flanders, Culpepper

Location: Grady County

Investigator: Stanley Culpepper

Weed Code		COMBE	COMBE	COMBE	COMBE	COMBE	
Rating Data Type		control	control	control	control	control	
Rating Unit		percent	percent	percent	percent	percent	
Rating Date		Jun-16-05	Jul-12-05	Aug-03-05	Sep-05-05	Oct-06-05	
Trt-Eval Interval		35 DA-A	61 DA-A	83 DA-A	116 DA-A		
Trt No.	Treatment Name	Rate	1	2	3	4	5
		Unit					
1	Prowl	2 pt/a	44	56	50	49	56
	Roundup WeatherMax	22 oz/a					
	Roundup WeatherMax	22 oz/a					
2	Prowl	2 pt/a	99	97	90	83	85
	Roundup WeatherMax	22 oz/a					
	Dual Magnum	16 oz/a					
	Roundup WeatherMax	22 oz/a					
3	Prowl	2 pt/a	72	76	83	84	87
	Roundup WeatherMax	22 oz/a					
	Roundup WeatherMax	22 oz/a					
	Dual Magnum	16 oz/a					
4	Prowl	2 pt/a	99	99	99	95	96
	Roundup WeatherMax	22 oz/a					
	Dual Magnum	8 oz/a					
	Roundup WeatherMax	22 oz/a					
	Dual Magnum	8 oz/a					
5	Prowl	2 pt/a	99	99	98	95	95
	Roundup WeatherMax	22 oz/a					
	Dual Magnum	12 oz/a					
	Roundup WeatherMax	22 oz/a					
	Dual Magnum	12 oz/a					
6	Prowl	2 pt/a	99	100	99	96	96
	Roundup WeatherMax	22 oz/a					
	Dual Magnum	16 oz/a					
	Roundup WeatherMax	22 oz/a					
	Dual Magnum	16 oz/a					
7	Roundup WeatherMax	16 oz/a	86	74	51	63	69
	Roundup WeatherMax	22 oz/a					
	Roundup WeatherMax	22 oz/a					
8	Roundup WeatherMax	16 oz/a	87	100	89	85	88
	Roundup WeatherMax	22 oz/a					
	Dual Magnum	16 oz/a					
	Roundup WeatherMax	22 oz/a					
9	Roundup WeatherMax	16 oz/a	89	86	96	88	89
	Roundup WeatherMax	22 oz/a					
	Roundup WeatherMax	22 oz/a					
	Dual Magnum	16 oz/a					
10	Roundup WeatherMax	16 oz/a	89	100	98	92	96
	Roundup WeatherMax	22 oz/a					
	Dual Magnum	8 oz/a					
	Roundup WeatherMax	22 oz/a					
	Dual Magnum	8 oz/a					
11	Roundup WeatherMax	16 oz/a	96	100	99	96	97
	Roundup WeatherMax	22 oz/a					
	Dual Magnum	12 oz/a					
	Roundup WeatherMax	22 oz/a					
	Dual Magnum	12 oz/a					

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Weed Code	COMBE	COMBE	COMBE	COMBE	COMBE			
Rating Data Type	control	control	control	control	control			
Rating Unit	percent	percent	percent	percent	percent			
Rating Date	Jun-16-05	Jul-12-05	Aug-03-05	Sep-05-05	Oct-06-05			
Trt-Eval Interval	35 DA-A	61 DA-A	83 DA-A	116 DA-A				
Trt No.	Treatment Name	Rate	Unit	1	2	3	4	5
12	Roundup WeatherMax	16	oz/a	90	100	99	99	97
	Roundup WeatherMax	22	oz/a					
	Dual Magnum	16	oz/a					
	Roundup WeatherMax	22	oz/a					
	Dual Magnum	16	oz/a					
13	Roundup WeatherMax	16	oz/a	87	92	81	75	74
	Roundup WeatherMax	22	oz/a					
	Roundup WeatherMax	22	oz/a					
	Direx	24	oz/a					
14	Roundup WeatherMax	16	oz/a	96	100	99	95	94
	Roundup WeatherMax	22	oz/a					
	Dual Magnum	16	oz/a					
	Roundup WeatherMax	22	oz/a					
	Direx	24	oz/a					
15	Roundup WeatherMax	16	oz/a	94	100	99	96	96
	Roundup WeatherMax	22	oz/a					
	Roundup WeatherMax	22	oz/a					
	Dual Magnum	16	oz/a					
	Direx	24	oz/a					
16	Roundup WeatherMax	16	oz/a	90	99	99	93	96
	Roundup WeatherMax	22	oz/a					
	Dual Magnum	8	oz/a					
	Roundup WeatherMax	22	oz/a					
	Dual Magnum	8	oz/a					
	Direx	24	oz/a					
17	Roundup WeatherMax	16	oz/a	91	100	99	98	98
	Roundup WeatherMax	22	oz/a					
	Dual Magnum	12	oz/a					
	Roundup WeatherMax	22	oz/a					
	Dual Magnum	12	oz/a					
	Direx	24	oz/a					
18	Roundup WeatherMax	16	oz/a	92	100	99	100	99
	Roundup WeatherMax	22	oz/a					
	Dual Magnum	16	oz/a					
	Roundup WeatherMax	22	oz/a					
	Dual Magnum	16	oz/a					
	Direx	24	oz/a					
19	Non-treated control			0	0	0	0	0
20	Roundup WeatherMax	16	oz/a	93	100	98	96	98
	Roundup WeatherMax	22	oz/a					
	Dual Magnum	8	oz/a					
	Roundup WeatherMax	22	oz/a					
	Dual Magnum	8	oz/a					
	Valor	1.5	oz/a					
LSD (P=.05)				7.4	4.5	6.8	4.3	6.8
Standard Deviation				5.2	3.2	4.8	3.1	4.8
CV				6.17	3.63	5.57	3.65	5.63

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

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

SOIL DESCRIPTION

% Sand: 80 % OM: 5.9 Texture: loamy sand
 % Silt: 12 pH: 2.1 Soil Name: _____
 % Clay: 8 CEC: _____ Fert. Level: _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

No.	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: _____
 Closest Weather Station: _____ Distance: _____ Unit: ____

APPLICATION DESCRIPTION

	A	B	C	D	E	F
Application Date:	May-12-05	May-23-05	Jun-03-05	Jun-08-05	Jun-30-05	Jun-30-05
Time of Day:	2 pm	9 am	7 pm	2 pm	10 am	10 am
Application Method:	broadcast	broadcast	broadcast	broadcast	broadcast	broadcast
Application Timing:	PRE	1 leaf	4 leaf	6-8 lf	10-12 lf	10-12 lf
Applic. Placement:	on soil	overtop	overtop	overtop	overtop	overtop
Air Temp., Unit:	86 F	76 F	86 F	94 F	82 F	82 F
% Relative Humidity:	54	58	49	54	70	70
Wind Velocity, Unit:	4 mph	4 mph	3 mph	3 mph	0 mph	0 mph
Dew Presence (Y/N):	n	n	n	n	n	n
Water Hardness:						
Soil Temp., Unit:	97 F	74 F	80 F	99 F	79 F	79 F
Soil Moisture:	fair	moist	wet	moist	wet	wet
% Cloud Cover:	0	40	100	30	25	25

CROP STAGE AT EACH APPLICATION

	A	B	C	D	E
Crop 1 Code, Stage:	GOSHI PRE	GOSHI 1 leaf	GOSHI 4 leaf	GOSHI 6-8 leaf	GOSHI 10-12 lf
Stage Scale:	not up	1 leaf	3-5 leaf	6-7 leaf	14 leaf
Height, Unit:	0 inch	1 inch	5 inch	8 inch	18 inch
	F				
Crop 1 Code, Stage:	GOSHI 10-12 lf				
Stage Scale:	14 leaf				
Height, Unit:	18 inch				

WEED STAGE AT EACH APPLICATION

	A	B	C	D	E
Weed 1 Code, Stage:	COMBE PRE	COMBE 1-leaf	COMBE 4-leaf	COMBE 6-8 lf	COMBE 10-12 lf
Stage Scale:	not up	<1 inch	<1.5 inch	< 3 inch	< 4 inch
Density, Unit:	0 ydsq	25 ydsq	50 ydsq	100 ydsq	120 ydsq

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	F
Weed 1 Code, Stage:	COMBE 10-12 lf
Stage Scale:	< 4 inch
Density, Unit:	120 ydsq

APPLICATION EQUIPMENT

	A	B	C	D	E	F
Appl. Equipment:	backpack	backpack	backpack	backpack	backpack	backpack
Operating Pressure:	23	23	23	23	23	18
Nozzle Type:	flat fan	flat fan	flat fan	flat fan	flat fan	flat fan
Nozzle Size:	11002	11002	11002	11002	11002	11002
Nozzle Spacing, Unit:	18 inch	18 inch	18 inch	18 inch	18 inch	12 inch
Nozzles/Row:	2	2	2	2	2	3
Band Width, Unit:						
Boom Length, Unit:	4.5 feet	4.5 feet	4.5 feet	4.5 feet	4.5 feet	2 feet
Boom Height, Unit:	15 inch	15 inch	15 inch	15 inch	15 inch	12 inch
Ground Speed, Unit:	3 mph	3 mph	3 mph	3 mph	3 mph	3 mph
Incorporation Equip.:						
Hours to Incorp.:						
Incorp. Depth, Unit:						
Carrier:	water	water	water	water	water	water
Spray Volume, Unit:	14.8 GPA	14.8 GPA	14.8 GPA	14.8 GPA	14.8 GPA	14.8 GPA
Spray pH:						
Propellant:	CO2	CO2	CO2	CO2	CO2	CO2
Tank Mix (Y/N):	Y	Y	Y	Y	Y	Y

Trt No	Treatment Application Comment