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Winter weed maturity impact on cotton burndown herbicides.

Trial ID: C4-06

Study Dir.: Stanley Culpepper

Location: Jones Farm

Investigator: Stanley Culpepper

Reps: 4

Plots: 6 by 30 feet

Spray vol: 14.8 gal/ac

Mix size: 1 liters (min .92602)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt to Measure	Product	Plot No. By Rep			
											1	2	3	4
1	Late March Application Roundup WeatherMax	4.5	L		22 OZ/A		BD	A	11.61 ml/mx		101	207	308	404
2	Late March Application Roundup WeatherMax Valor	4.5 51	L WDG		22 OZ/A 1.5 OZ/A		BD	A	11.61 ml/mx 0.759 g/mx		102	212	310	409
3	Late March Application Roundup WeatherMax 2,4-D	4.5 4	L L		22 OZ/A 1 PT/A		BD	A	11.61 ml/mx 8.445 ml/mx		103	204	307	412
4	Late March Application Ignite	2.8	L		23 OZ/A		BD	A	12.14 ml/mx		104	203	305	401
5	Late March Application Gramoxone Inteon COC	2	L L		2.5 PT/A 1 QT/A		BD	A	21.11 ml/mx 16.89 ml/mx		105	202	306	410
6	Late March Application Gramoxone Inteon Direx COC	2 4	L L L		2.5 PT/A 1.5 PT/A 1 QT/A		BD	A	21.11 ml/mx 12.67 ml/mx 16.89 ml/mx		106	208	303	407
7	Late April Application Roundup WeatherMax	4.5	L		22 OZ/A		BD	B	11.61 ml/mx		107	210	312	408
8	Late April Application Roundup WeatherMax Valor	4.5 51	L WDG		22 OZ/A 1.5 OZ/A		BD	B	11.61 ml/mx 0.759 g/mx		108	201	309	403
9	Late April Application Roundup WeatherMax 2,4-D	4.5 4	L L		22 OZ/A 1 PT/A		BD	B	11.61 ml/mx 8.445 ml/mx		109	211	304	406
10	Late April Application Ignite	2.8	L		23 OZ/A		BD	B	12.14 ml/mx		110	209	301	405
11	Late April Application Gramoxone Inteon COC	2	L L		2.5 PT/A 1 QT/A		BD	B	21.11 ml/mx 16.89 ml/mx		111	206	311	402
12	Late April Application Gramoxone Inteon Direx COC	2 4	L L L		2.5 PT/A 1.5 PT/A 1 QT/A		BD	B	21.11 ml/mx 12.67 ml/mx 16.89 ml/mx		112	205	302	411

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
87.099	ml	Roundup WeatherMax	4.5	L	
1.898	g	Valor	51	WDG	
21.113	ml	2,4-D	4	L	
30.353	ml	Ignite	2.8	L	
105.563	ml	Gramoxone Inteon	2	L	
84.451	ml	COC		L	
31.669	ml	Direx	4	L	

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Reps: 4 Plots: 6 by 30 feet
 Spray vol: 14.8 gal/ac Mix size: 1 liters (min .92602)

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
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- * '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.

Trial Comments

OBJECTIVE: Determine the most effective application time for various burndown herbicides.

Primrose:

1. In March primrose was not blooming but by April primrose was in full bloom.
2. Roundup provided less than 75% control regardless of application timing.
3. Adding Valor to glyphosate was more effective with the April application as compared to the March application.
4. Mixing 2,4-D with Roundup provided complete control regardless of application timing.
5. Ignite and Gramoxone were 9 to 23% more effective when applied in April as compared to March.
6. Mixing Direx with Gramoxone improved control with the March application to 82% but the April application was more effective providing complete control.

Red Sorrel:

1. All treatments except Ignite provided excellent control. Control by Ignite was much greater with April applications when the red sorrel was "maturing out".

CONCLUSIONS:

1. 2,4-D mixtures with Roundup provide excellent primrose control. Only Gramoxone + Direx applied in April was as effective as 2,4-D plus Roundup followed closely by an April application of Ignite.

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Weed Code	OEOLA control	OEOLA control	OEOLA control	OEOLA control	RUMAA control	RUMAA control	RUMAA control		
Rating Data Type	control	control	control	control	control	control	control		
Rating Unit	%	%	%	%	%	%	%		
Rating Date	Apr-11-06	Apr-29-06	May-12-06	May-25-06	Apr-29-06	May-12-06	May-25-06		
Assessed By	SC	SC	SC	SC	SC	SC	SC		
Trt-Eval Interval	12 DA-A	30 DA-A	43 DA-A	56 DA-A	30 DA-A	43 DA-A	56 DA-A		
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate		
		Unit	Unit	Unit	Unit	Unit	Unit		
1	Late March Application Roundup WeatherMax	22 OZ/A	69 c	90 abc	74 de	73 fg	97 ab	98 a	99 a
2	Late March Application Roundup WeatherMax Valor	22 OZ/A 1.5 OZ/A	89 a	90 abc	85 bc	78 efg	99 a	99 a	99 a
3	Late March Application Roundup WeatherMax 2,4-D	22 OZ/A 1 PT/A	79 b	99 a	96 a	99 a	98 ab	98 a	99 a
4	Late March Application Ignite	23 OZ/A	92 a	84 c	83 cd	79 def	76 d	46 c	57 d
5	Late March Application Gramoxone Inteon COC	2.5 PT/A 1 QT/A	90 a	94 ab	78 cde	72 g	94 abc	99 a	99 a
6	Late March Application Gramoxone Inteon Direx COC	2.5 PT/A 1.5 PT/A 1 QT/A	93 a	90 abc	82 cd	82 cde	99 a	99 a	99 a
7	Late April Application Roundup WeatherMax	22 OZ/A	0 d	59 e	72 e	73 fg	93 abc	99 a	99 a
8	Late April Application Roundup WeatherMax Valor	22 OZ/A 1.5 OZ/A	0 d	86 bc	96 a	86 cd	97 ab	99 a	99 a
9	Late April Application Roundup WeatherMax 2,4-D	22 OZ/A 1 PT/A	0 d	70 d	93 ab	99 a	89 bc	99 a	90 b
10	Late April Application Ignite	23 OZ/A	0 d	93 abc	94 ab	89 bc	86 c	78 b	71 c
11	Late April Application Gramoxone Inteon COC	2.5 PT/A 1 QT/A	0 d	96 a	96 a	95 ab	99 a	99 a	99 a
12	Late April Application Gramoxone Inteon Direx COC	2.5 PT/A 1.5 PT/A 1 QT/A	0 d	99 a	99 a	99 a	99 a	99 a	99 a
LSD (P=.05)			8.2	8.3	9.0	6.7	8.0	9.6	7.4
Standard Deviation			5.7	5.7	6.3	4.6	5.6	6.7	5.1
CV			13.27	6.56	7.17	5.44	5.93	7.18	5.55
Bartlett's X2			4.907	34.002	17.431	4.775	13.672	20.839	2.137
P(Bartlett's X2)			0.427	0.001*	0.065	0.781	0.057	0.001*	0.343

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

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MAINTENANCE

Field Prep./Maintenance:

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

SOIL DESCRIPTION

% Sand: 95	% OM: 5.8	Texture: Sand	
% Silt: 2	pH: 0.67	Soil Name: Tifton sandy loam	
% Clay: 3	CEC: _____	Fert. Level: _____	

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: wet

Closest Weather Station: _____ Distance: _____ Unit: ____

APPLICATION DESCRIPTION

	A	B
Application Date:	Mar-30-06	Apr-20-06
Time of Day:	7:30am	7:00am
Application Method:	broadcast	broadcast
Application Timing:	BD march	BD april
Applic. Placement:	overtop	overtop
Air Temp., Unit:	64 F	75 F
% Relative Humidity:	71	66
Wind Velocity, Unit:	0 mph	0 mph
Dew Presence (Y/N):	y	y
Water Hardness:		
Soil Temp., Unit:	61 F	74 F
Soil Moisture:	dry	fair
% Cloud Cover:	100	0

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	none .	none .
Stage Scale:	.	.
Height, Unit:		

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	OEOLA BD-March	OEOLA BD-April
Stage Scale:	2-8"	8-16"blom
Density, Unit:	4 ydsq	4 ydsq
Weed 2 Code, Stage:	RUMAA BD-March	RUMAA BD-April
Stage Scale:	15 inch	18-20"
Density, Unit:	6 ydsq	6 ydsq

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APPLICATION EQUIPMENT

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

Trt No	Treatment Application Comment