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Reps: 4

Plots: 9 by 25 feet

Spray vol: 14.8 gal/ac

Mix size: 1.5 liters (min 1.1575)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Form Rate	Rate Unit	Grow Stg	Appl Code	Amt to Measure	Product	Plot No. By Rep			
											1	2	3	4
20	Aim	2		EC	1.5	OZ/A	PD	A	1.188 ml/mx	120	210	323	408	
	L			1	% V/V	PD	A	15.0 ml/mx						
21	Envoke	75		DF	0.15	OZ/A	PD	A	0.1139 g/mx	121	204	316	409	
	L			1	% V/V	PD	A	15.0 ml/mx						
22	Suprend	80		WDG	1.0	LB/A	PD	A	12.14 g/mx	122	212	324	413	
	L			1	% V/V	PD	A	15.0 ml/mx						
23	Staple	3.2		L	2.6	OZ/A	PD	A	2.059 ml/mx	123	220	312	416	
	L			1	% V/V	PD	A	15.0 ml/mx						
24	Valor	51		DG	1.5	OZ/A	PD	A	1.139 g/mx	124	219	313	423	
	MSMA	6		L	2.5	PT/A	PD	A	31.67 ml/mx					
	COC			L	1	% V/V	PD	A	15.0 ml/mx					
25	Diuron	4		L	2	PT/A	PD	A	25.34 ml/mx	125	202	315	405	
	MSMA	6		L	2.5	PT/A	PD	A	31.67 ml/mx					
	COC			L	1	% V/V	PD	A	15.0 ml/mx					
26	Non-treated									126	214	317	412	

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
82.339	ml	Prometryn	4	L	
449.952	ml	COC		L	
110.841	ml	Fluometuron	4	L	
104.508	ml	Linex	4	L	
190.014	ml	Diuron	4	L	
95.007	ml	Parallel PCS	8	L	
1.485	ml	Aim	2	EC	
0.142	g	Envoke	75	DF	
15.181	g	Suprend	80	WDG	
2.573	ml	Staple	3.2	L	
1.423	g	Valor	51	DG	
79.172	ml	MSMA	6	L	

* 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 1.5 liters (mix size basis).

* Product amount calculations increased 25 % for overage adjustment.

* 'Per volume' calculations use spray volume= 14.8 gal/ac, mix size= 1.5 liters.

Trial Comments

OBJECTIVE: Determine the most effective layby option for the control of morningglory, spiderwort, and doveweed.

COTTON RESPONSE:

1. Injury ranged from 10 to 24% with most Linex mixtures, Valor + MSMA and with Aim at 7 DAT.
2. By 15 DAT, injury was greater than 10% with Valor + MSMA and Aim only.
3. No injury greater than 7% was noted by 22 DAT.

SPIDERWORT RESPONSE:

1. Prometryn at 2 pt was less effective than Fluometuron 2 pt, Diuron 2 pt, or Linex at 1.5 pt.
2. At 15 DAT, greater than 80% control was only achieved by diuron + MSMA, Valor + MSMA, and Aim. These treatments tended to be the most effective at 22 d; however, rapid spiderwort emergence was reducing control quickly.

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3. Compared to 2 pt of diuron, only diuron 1.5 pt + fluometuron at 1 pt was more effective when comparing substituted urea only treatments at 22 DAT.

4. Little benefit was noted with Parallel, primarily because emerged plants were never controlled in those systems.

PITTED MORNINGGLORY:

1. At 7 DAT, Valor + MSMA, Aim, and diuron + MSMA were the most effective options. Diuron was more effective than prometryn, fluometuron, or Linex.

2. By 22 DAT, similar control was noted with fluometuron, Linex and diuron when applied alone. Prometryn was less effective. The only combination of these materials that tended to more effective than diuron alone was a combination of Linex 1.2 pt + Diuron 1.2 pt.

3. By 22 DAT, greater than 90% control was noted with Staple and Valor + MSMA; 80 to 90% control was noted with Aim, Envoke, Suprend, diuron + MSMA, Linex 1.2 pt + diuron 1.2 pt, and Fluometuron 1 pt + diuron 1.5 pt.

DOVEWEED:

1. At 7 DAT, only Aim, Valor + MSMA, and diuron plus MSMA provided greater than 40% control.

2. By 15 DAT, only MSMA treatments provided greater than 60% control.

3. Treatments did not control emerged plants; thus, determining the impact from Parallel was not possible; however, it appeared that Parallel controlled emerging plants for a short period after application and rainfall.

4. No control was detectable by 22 DAT from any treatment.

GENERAL COMMENTS:

1. On June 1, 2008 trial was oversprayed with Roundup PowerMax at 22 oz/A. Cotton had 3 to 4 leaves.

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Pitted morningglory, doveweed, and spiderwort response to directed herbicides.

Prot (diu-08-1b)

Trial ID: C37-08

Study Dir.: Stanley Culpepper

Location: Sunbelt Expo

Investigator: Stanley Culpepper

Weed Code			GOSHI	GOSHI	GOSHI	COMBE	COMBE	COMBE	IPOLA	IPOLA	IPOLA
Crop Code			injury	injury	injury	control	control	control	control	control	control
Rating Data Type			%	%	%	%	%	%	%	%	%
Rating Unit											
Rating Date			Jun-25-08	Jul-03-08	Jul-10-08	Jun-25-08	Jul-03-08	Jul-10-08	Jun-25-08	Jul-03-08	Jul-10-08
Trt-Eval Interval			7 DA-A	15 DA-A	22 DA-A	7 DA-A	15 DA-A	22 DA-A	7 DA-A	15 DA-A	22 DA-A
Trt No.	Treatment Name	Rate	1	2	3	4	5	6	7	8	9
		Unit									
1	Non-treated		0 i	0 g	0 b	0 f	0 h	0 i	0 j	0 g	0 h
2	Prometryn COC	2.0 PT/A 1 % V/V	5 e-i	0 g	0 b	48 cde	35 fg	30 h	45 f-i	53 f	50 g
3	Fluometuron COC	2.0 PT/A 1 % V/V	2 hi	0 g	0 b	40 de	61 b-e	58 b-f	39 hi	73 a-f	73 b-e
4	Linex COC	1.5 PT/A 1 % V/V	10 def	4 de	0 b	45 de	53 def	54 c-f	43 ghi	64 b-f	71 c-f
5	Diuron COC	2.0 PT/A 1 % V/V	4 f-i	0 g	0 b	45 de	65 b-e	60 a-f	65 cde	78 a-f	74 b-e
6	Parallel PCS COC	1.0 PT/A 1 % V/V	1 hi	0 g	0 b	3 f	25 g	35 gh	5 j	13 g	13 h
7	Fluometuron Diuron COC	1.0 PT/A 1.0 PT/A 1 % V/V	5 e-i	0 g	0 b	34 e	65 b-e	63 a-e	53 d-i	69 a-f	76 a-e
8	Fluometuron Diuron COC	1.0 PT/A 1.5 PT/A 1 % V/V	5 e-i	0 g	0 b	64 bcd	71 a-d	78 a	50 d-i	75 a-f	84 a-d
9	Fluometuron Prometryn COC	1 PT/A 0.8 PT/A 1 % V/V	5 e-i	0 g	0 b	40 de	63 b-e	66 a-d	54 d-i	64 b-f	78 a-e
10	Fluometuron Linex COC	1.0 PT/A 1.5 PT/A 1 % V/V	5 e-i	0 g	0 b	40 de	57 de	65 a-e	58 c-h	70 a-f	75 b-e
11	Linex Diuron COC	0.8 PT/A 0.8 PT/A 1 % V/V	15 cd	5 cd	0 b	40 de	61 b-e	51 d-g	53 d-i	69 a-f	68 d-g
12	Linex Diuron COC	1.2 PT/A 1.2 PT/A 1 % V/V	17 bc	7 c	0 b	51 b-e	70 a-d	69 abc	68 bcd	86 a-d	85 a-d
13	Diuron Prometryn COC	1.0 PT/A 0.8 PT/A 1 % V/V	8 e-h	3 efg	0 b	50 cde	60 cde	56 b-f	46 e-i	73 a-f	75 b-e
14	Linex Prometryn COC	0.8 PT/A 0.8 PT/A 1 % V/V	11 de	3 def	0 b	39 de	63 b-e	54 c-f	50 d-i	58 def	53 fg
15	Parallel PCS Diuron COC	1.0 PT/A 1.0 PT/A 1 % V/V	9 efg	1 fg	0 b	58 b-e	64 b-e	60 a-f	56 c-i	73 a-f	63 efg
16	Parallel PCS Diuron COC	1.0 PT/A 1.5 PT/A 1 % V/V	9 efg	1 g	0 b	58 b-e	73 a-d	73 ab	49 d-i	77 a-f	70 c-f
17	Parallel PCS Prometryn COC	1.0 PT/A 0.8 PT/A 1 % V/V	6 e-i	0 g	0 b	38 de	63 b-e	48 efg	38 i	56 ef	68 d-g

University of Georgia

Weed Code				COMBE	COMBE	COMBE	IPOLA	IPOLA	IPOLA		
Crop Code		GOSHI	GOSHI	GOSHI	COMBE	COMBE	COMBE	COMBE	COMBE		
Rating Data Type		injury	injury	injury	control	control	control	control	control		
Rating Unit		%	%	%	%	%	%	%	%		
Rating Date		Jun-25-08	Jul-03-08	Jul-10-08	Jun-25-08	Jul-03-08	Jul-10-08	Jun-25-08	Jul-03-08	Jul-10-08	
Trt-Eval Interval		7 DA-A	15 DA-A	22 DA-A	7 DA-A	15 DA-A	22 DA-A	7 DA-A	15 DA-A	22 DA-A	
Trt No.	Treatment Name	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	
		Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit	
			1	2	3	4	5	6	7	8	9
18	Parallel PCS Fluometuron COC	1.0 PT/A 1.0 PT/A 1 % V/V	5 e-i	0 g	0 b	43 de	45 efg	44 fgh	45 f-i	60 c-f	66 d-g
19	Parallel PCS Linex COC	1.0 PT/A 0.8 PT/A 1 % V/V	5 e-i	0 g	0 b	50 cde	53 def	61 a-f	45 f-i	65 b-f	67 d-g
20	Aim COC	1.5 OZ/A 1 % V/V	24 a	18 a	6 a	90 a	81 abc	70 abc	91 a	84 a-e	81 a-e
21	Envoke COC	0.15 OZ/A 1 % V/V	7 e-h	0 g	0 b	58 b-e	68 b-e	58 b-f	63 c-f	95 a	89 abc
22	Suprend COC	1.0 LB/A 1 % V/V	3 ghi	0 g	0 b	73 abc	75 a-d	59 b-f	73 bc	91 ab	86 a-d
23	Staple COC	2.6 OZ/A 1 % V/V	3 ghi	0 g	0 b	60 b-e	69 a-d	64 a-e	60 c-g	86 a-d	93 ab
24	Valor MSMA COC	1.5 OZ/A 2.5 PT/A 1 % V/V	21 ab	11 b	5 a	78 ab	91 a	77 a	96 a	97 a	96 a
25	Diuron MSMA COC	2 PT/A 2.5 PT/A 1 % V/V	10 def	5 cd	0 b	90 a	84 ab	71 abc	84 ab	87 abc	84 a-d
26	Non-treated		0 i	0 g	0 b	0 f	5 h	0 i	0 j	20 g	0 h
LSD (P=.05)			5.2	2.3	1.3	22.9	19.3	15.1	15.8	23.8	17.0
Standard Deviation			3.7	1.6	0.9	16.2	13.6	10.7	11.1	16.8	12.1
CV			49.43	72.96	213.8	34.25	23.4	19.5	21.86	25.28	18.09
Bartlett's X2			13.332	8.057	0.69	35.373	23.921	18.437	41.812	50.007	39.878
P(Bartlett's X2)			0.897	0.528	0.406	0.035*	0.466	0.621	0.01*	0.001*	0.016*

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

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Weed Code		MUDNU	MUDNU	MUDNU
Crop Code				
Rating Data Type		control	control	control
Rating Unit		%	%	%
Rating Date		Jun-25-08	Jul-03-08	Jul-10-08
Trt-Eval Interval		7 DA-A	15 DA-A	22 DA-A
Trt No.	Treatment Name	Rate	Unit	
1	Non-treated	0 g		0 e
2	Prometryn COC	2.0 PT/A 1 % V/V		29 c-f
3	Fluometuron COC	2.0 PT/A 1 % V/V		30 cd
4	Linex COC	1.5 PT/A 1 % V/V		11 fg
5	Diuron COC	2.0 PT/A 1 % V/V		29 cd
6	Parallel PCS COC	1.0 PT/A 1 % V/V		0 g
7	Fluometuron Diuron COC	1.0 PT/A 1.0 PT/A 1 % V/V		25 d
8	Fluometuron Diuron COC	1.0 PT/A 1.5 PT/A 1 % V/V		16 efg
9	Fluometuron Prometryn COC	1 PT/A 0.8 PT/A 1 % V/V		43 bcd
10	Fluometuron Linex COC	1.0 PT/A 1.5 PT/A 1 % V/V		23 c-g
11	Linex Diuron COC	0.8 PT/A 0.8 PT/A 1 % V/V		40 cd
12	Linex Diuron COC	1.2 PT/A 1.2 PT/A 1 % V/V		25 c-f
13	Diuron Prometryn COC	1.0 PT/A 0.8 PT/A 1 % V/V		45 bcd
14	Linex Prometryn COC	0.8 PT/A 0.8 PT/A 1 % V/V		25 c-f
15	Parallel PCS Diuron COC	1.0 PT/A 1.0 PT/A 1 % V/V		35 cd
16	Parallel PCS Diuron COC	1.0 PT/A 1.5 PT/A 1 % V/V		40 bcd
17	Parallel PCS Prometryn COC	1.0 PT/A 0.8 PT/A 1 % V/V		33 cd
18	Parallel PCS Fluometuron COC	1.0 PT/A 1.0 PT/A 1 % V/V		26 c-f
19	Parallel PCS Linex COC	1.0 PT/A 0.8 PT/A 1 % V/V		49 bc
				50 bc
				14 fg
				38 cd
				18 d-g
				35 cd
				0 a

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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: 88	% OM: 1.2	Texture: .
% Silt: 12	pH: 6.0	Soil Name: _____
% Clay: 0	CEC: _____	Fert. Level: _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

No.	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: irrigated

Closest Weather Station: _____ Distance: _____ Unit: ____

APPLICATION DESCRIPTION

	A
Application Date:	Jun-18-08
Time of Day:	9:00 am
Application Method:	broadcast
Application Timing:	PD
Applic. Placement:	directed
Air Temp., Unit:	80 F
% Relative Humidity:	68
Wind Velocity, Unit:	5 mph
Dew Presence (Y/N):	N
Water Hardness:	
Soil Temp., Unit:	82 F
Soil Moisture:	moist
% Cloud Cover:	15

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	GOSHI A
Stage Scale:	12-131f
Height, Unit:	19 in

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WEED STAGE AT EACH APPLICATION

A	
Weed 1 Code, Stage:	COMBE A
Stage Scale:	4 inch
Density, Unit:	20 ydsq
Weed 2 Code, Stage:	IPOLA A
Stage Scale:	6 in
Density, Unit:	3 ydsq
Weed 3 Code, Stage:	MUDNU A
Stage Scale:	1.5 in
Density, Unit:	40 ydsq

APPLICATION EQUIPMENT

A	
Appl. Equipment:	backpack
Operating Pressure:	24
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	12 in
Nozzles/Row:	3
Band Width, Unit:	
Boom Length, Unit:	24 in
Boom Height, Unit:	12 in
Ground Speed, Unit:	3 mph
Incorporation Equip.:	
Hours to Incorp.:	
Incorp. Depth, Unit:	
Carrier:	water
Spray Volume, Unit:	15 GPA
Spray pH:	
Propellant:	CO2
Tank Mix (Y/N):	y

Trt No	Treatment Application Comment