

University of Georgia

APPLICATION EQUIPMENT						
	A	B	C	D	E	F
Appl. Equipment:	backpack	backpack	backpack			
Operating Pressure:	22	22	22			
Nozzle Type:	flat fan	flat fan	flat fan			
Nozzle Size:	11002	11002	11002			
Nozzle Spacing, Unit:	18 inch	18 inch	18 inch			
Boom Length, Unit:	4.5 feet	4.5 feet	4.5 feet			
Boom Height, Unit:	15 inch	15 inch	15 inch			
Ground Speed, Unit:	3 mph	3 mph	3 mph			
Carrier:	water	water	water			
Spray Volume, Unit:	14.8 GPA	14.8 GPA	14.8 GPA			
Propellant:	CO2	CO2	CO2			
Tank Mix (Y/N) :	Y	Y	Y			

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University of Georgia

Potential herbicides for use in seeded collard, kale, mustard, and turnip greens

Trial ID: Veg5-03

Study Dir.: Amy

Location: Ponder farm

Investigator: Stanley Culpepper

Weed Code		Mustard	Mustard	Mustard	Mustard	Plant 1	Plant 2	Plant 3	Plant 4
Crop Code		injury	injury	injury	injury	Mustards	Mustards	Mustards	Mustards
Rating Data Type		percent	percent	percent	percent	Diameter	Diameter	Diameter	Diameter
Rating Unit						cm	cm	cm	cm
Rating Date		Mar-26-03	Apr-04-03	Apr-18-03	Apr-30-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03
Trt-Eval Interval		14 DA-C	23 DA-C	37 DA-C	49 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C
PRM Data Type									
Trt Treatment	Rate								
No. Name	Unit	1	2	3	4	5	6	7	8
1 Weed-free check		0.0	0.0	0.0	0.0	52.3	54.3	31.7	45.3
2 Dacthal	1.875 lb ai/a	0.0	1.7	1.7	1.7	51.7	44.0	46.3	43.7
3 Dacthal	3.75 lb ai/a	1.7	18.3	16.7	15.0	56.3	39.7	46.7	35.3
4 Devrinol	1 lb ai/a	21.7	16.7	15.0	11.7	37.0	43.3	50.3	46.7
5 Devrinol	2 lb ai/a	53.3	63.3	46.7	33.3	27.0	29.3	23.7	29.3
6 Goal	0.125 lb ai/a	97.0	99.3	98.3	93.3	15.3	8.3	11.3	0.0
7 Goal	0.25 lb ai/a	98.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0
8 Dual Magnum	0.95 lb ai/a	10.0	36.7	23.3	20.0	38.7	34.0	34.7	39.0
9 Outlook	0.94 lb ai/a	21.7	58.3	50.0	53.3	39.0	10.3	21.7	17.3
10 UpBeet	0.016 lb ai/a	86.7	91.7	80.0	40.0	29.7	30.7	19.3	27.3
11 Dual Magnum	0.95 lb ai/a	8.3	23.3	21.7	23.3	50.0	34.0	30.3	27.7
12 Outlook	0.94 lb ai/a	13.3	51.7	40.0	23.3	38.0	36.3	36.7	28.0
13 UpBeet	0.016 lb ai/a	73.3	95.0	93.3	78.3	14.7	31.3	9.0	11.0
14 Treflan	0.5 lb ai/a	6.7	11.7	7.0	11.7	47.7	40.3	44.3	52.7
15 Prowl	0.62 lb ai/a	35.0	43.3	50.0	26.7	35.3	42.3	45.0	43.7
LSD (P=.05)		8.83	11.00	11.18	12.37	17.09	19.24	22.18	20.87
Standard Deviation		5.28	6.58	6.69	7.40	10.22	11.51	13.27	12.48
CV		15.03	13.88	15.59	20.87	28.78	36.09	44.12	41.89
Bartlett's X2		12.291	21.289	10.243	16.796	11.876	8.323	20.806	14.155
P(Bartlett's X2)		0.342	0.03*	0.595	0.079	0.538	0.822	0.077	0.291

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

University of Georgia

Weed Code		Plant 5	Plant 6	Plant 7	Plant 8	Plant 9	Plant 10	Average	Mustard
Crop Code		Mustards	Mustards	Mustards	Mustards	Mustards	Mustards	Mustard	per10ft
Rating Data Type		Diameter	Diameter	Diameter	Diameter	Diameter	Diameter	Dm/10pla	number
Rating Unit		cm	cm	cm	cm	cm	cm	cm	
Rating Date		Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03
Trt-Eval Interval		43 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C
PRM Data Type								T1	
Trt Treatment	Rate								
No. Name	Rate Unit	9	10	11	12	13	14	15	16
1	Weed-free check	42.7	43.0	43.0	44.0	34.3	49.0	40.7	15.7
2	Dacthal 1.875 lb ai/a	36.7	46.0	39.3	49.3	58.7	45.7	42.6	18.7
3	Dacthal 3.75 lb ai/a	45.3	56.7	46.7	46.3	46.0	43.0	42.2	16.7
4	Devrinol 1 lb ai/a	43.3	41.3	48.0	56.7	47.7	39.3	40.9	16.3
5	Devrinol 2 lb ai/a	25.3	29.3	35.3	22.0	21.3	31.3	25.8	15.7
6	Goal 0.125 lb ai/a	0.0	0.0	0.0	0.0	0.0	0.0	3.7	1.3
7	Goal 0.25 lb ai/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Dual Magnum 0.95 lb ai/a	41.3	40.3	51.3	44.0	49.3	43.0	37.8	13.7
9	Outlook 0.94 lb ai/a	19.0	27.0	20.3	11.7	26.3	16.7	20.4	9.0
10	UpBeet 0.016 lb ai/a	16.7	24.7	19.3	19.3	18.0	18.0	20.9	14.3
11	Dual Magnum 0.95 lb ai/a	24.3	40.0	33.3	31.7	28.0	46.7	32.0	15.0
12	Outlook 0.94 lb ai/a	35.0	30.3	24.0	23.3	18.3	25.0	27.6	10.0
13	UpBeet 0.016 lb ai/a	11.3	12.7	27.0	21.7	7.3	4.7	13.5	6.7
14	Treflan 0.5 lb ai/a	43.7	43.0	46.7	48.7	38.3	46.3	41.2	17.0
15	Prowl 0.62 lb ai/a	43.7	34.3	41.0	38.0	39.7	26.3	35.6	14.7
LSD (P=.05)		18.61	24.45	28.35	23.59	22.08	19.57	13.19	5.77
Standard Deviation		11.13	14.62	16.96	14.11	13.20	11.70	7.89	3.45
CV		38.97	46.79	53.5	46.33	45.71	40.35	27.85	28.02
Bartlett's X2		8.693	12.638	19.535	10.846	22.485	16.099	36.434	13.131
P(Bartlett's X2)		0.729	0.396	0.076	0.542	0.032*	0.187	0.001*	0.438

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

Column 15: T1 = (([C72]+[C5]+[C6]+[C7]+[C8]+[C9]+[C10]+[C11]+[C13]+[C14])/10

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Weed Code		Turnip injury percent	Turnip injury percent	Turnip injury percent	Turnip injury percent	Plant 1 Turnips Diameter cm	Plant 2 Turnips Diameter cm	Plant 3 Turnips Diameter cm	Plant 4 Turnips Diameter cm		
Crop Code		Mar-26-03	Apr-04-03	Apr-18-03	Apr-30-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03		
Rating Data Type		14 DA-C	23 DA-C	37 DA-C	49 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C		
Rating Unit											
Rating Date											
Trt-Eval Interval											
PRM Data Type											
Trt No.	Treatment Name	Rate	Unit	18	19	20	21	22	23	24	25
1	Weed-free check			0.0	0.0	0.0	0.0	46.7	51.0	54.7	58.0
2	Dacthal	1.875	lb ai/a	0.0	0.0	1.7	1.7	52.3	60.0	65.3	60.3
3	Dacthal	3.75	lb ai/a	1.7	10.0	3.3	3.3	60.3	60.0	58.0	56.3
4	Devrinol	1	lb ai/a	26.7	28.3	18.3	8.3	55.3	49.7	57.0	63.3
5	Devrinol	2	lb ai/a	53.3	46.7	40.0	19.0	53.3	52.0	52.7	56.0
6	Goal	0.125	lb ai/a	97.0	96.0	96.7	83.3	30.0	19.7	16.3	12.0
7	Goal	0.25	lb ai/a	98.0	100.0	100.0	98.3	7.0	0.0	0.0	0.0
8	Dual Magnum	0.95	lb ai/a	6.7	13.3	5.0	11.7	56.3	49.3	53.0	57.7
9	Outlook	0.94	lb ai/a	38.3	60.0	40.0	25.0	40.7	29.7	31.3	30.0
10	UpBeet	0.016	lb ai/a	83.3	83.0	60.0	29.3	22.3	33.3	37.3	40.0
11	Dual Magnum	0.95	lb ai/a	13.3	21.7	13.0	15.0	60.7	54.7	52.3	41.7
12	Outlook	0.94	lb ai/a	13.3	46.7	36.7	18.3	49.7	50.3	52.0	45.3
13	UpBeet	0.016	lb ai/a	68.3	76.7	46.7	28.3	53.3	49.7	40.3	49.3
14	Treflan	0.5	lb ai/a	8.3	6.7	0.0	6.7	53.0	46.7	56.3	51.7
15	Prowl	0.62	lb ai/a	40.0	65.0	36.7	33.3	40.7	49.0	45.0	37.3
LSD (P=.05)				8.92	11.22	17.30	6.27	17.09	14.48	18.68	13.21
Standard Deviation				5.33	6.71	10.35	3.75	10.22	8.66	11.17	7.90
CV				14.59	15.39	31.17	14.75	22.49	19.83	24.95	17.99
Bartlett's X2				10.862	6.289	11.275	8.493	20.827	7.824	11.572	18.251
P(Bartlett's X2)				0.455	0.79	0.421	0.81	0.106	0.855	0.563	0.148

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

University of Georgia

Weed Code		Plant 5	Plant 6	Plant 7	Plant 8	Plant 9	Plant 10	Average	Turnip
Crop Code		Turnips	Turnips	Turnips	Turnips	Turnips	Turnips	Turnips	pla/10ft
Rating Data Type		Diameter	Diameter	Diameter	Diameter	Diameter	Diameter	di/10pla	number
Rating Unit		cm	cm	cm	cm	cm	cm	cm	
Rating Date		Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03
Trt-Eval Interval		43 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C
PRM Data Type									
Trt Treatment	Rate								
No. Name	Rate Unit	26	27	28	29	30	31	32	33
1 Weed-free check		68.3	56.0	53.0	55.7	56.3	55.3	55.5	17.3
2 Dacthal	1.875 lb ai/a	58.3	64.0	66.3	56.7	64.3	62.3	61.0	18.7
3 Dacthal	3.75 lb ai/a	55.0	55.7	54.7	55.3	58.0	52.0	56.5	19.3
4 Devrinol	1 lb ai/a	56.7	54.0	55.3	55.3	52.7	64.3	56.4	17.7
5 Devrinol	2 lb ai/a	47.3	41.7	45.7	49.7	42.0	52.3	49.3	16.3
6 Goal	0.125 lb ai/a	17.7	4.3	7.0	7.3	0.0	0.0	11.4	3.3
7 Goal	0.25 lb ai/a	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0
8 Dual Magnum	0.95 lb ai/a	58.3	53.0	54.3	59.3	59.0	60.3	56.1	19.7
9 Outlook	0.94 lb ai/a	47.3	42.3	39.7	54.0	51.7	54.0	42.1	17.7
10 UpBeet	0.016 lb ai/a	46.0	47.0	42.3	41.0	31.7	28.0	36.9	19.3
11 Dual Magnum	0.95 lb ai/a	51.0	50.3	46.3	54.7	51.3	56.7	52.0	17.7
12 Outlook	0.94 lb ai/a	44.7	49.7	49.0	54.3	49.7	55.0	50.0	17.7
13 UpBeet	0.016 lb ai/a	43.0	38.0	45.7	44.3	41.3	37.0	44.2	18.7
14 Treflan	0.5 lb ai/a	51.7	62.0	62.0	55.3	56.3	58.7	55.4	19.7
15 Prowl	0.62 lb ai/a	34.7	46.0	33.7	44.0	38.3	39.0	40.8	17.3
LSD (P=.05)		19.17	13.79	16.70	16.05	15.93	12.56	7.39	4.49
Standard Deviation		11.47	8.25	9.99	9.60	9.53	7.51	4.42	2.69
CV		25.29	18.63	22.88	20.96	21.89	16.69	9.93	16.76
Bartlett's X2		14.082	12.768	12.717	14.867	6.608	11.639	20.347	15.671
P(Bartlett's X2)		0.368	0.466	0.47	0.316	0.882	0.475	0.12	0.267

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

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Weed Code		Above gr	Collard	Collard	Collard	Collard	Plant 1	Plant 2	Plant 3	
Crop Code		Turnips	injury	injury	injury	injury	Collards	Collards	Collards	
Rating Data Type		wt/10ft	percent	percent	percent	percent	Height	Height	Height	
Rating Unit		lbs					cm	cm	cm	
Rating Date		May-05-03	Mar-26-03	Apr-04-03	Apr-18-03	Apr-30-03	Apr-24-03	Apr-24-03	Apr-24-03	
Trt-Eval Interval		54 DA-C	14 DA-C	23 DA-C	37 DA-C	49 DA-C	43 DA-C	43 DA-C	43 DA-C	
PRM Data Type										
Trt No.	Treatment Name	Rate	34	37	38	39	40	41	42	43
		Unit								
1	Weed-free check		8.8	0.0	0.0	0.0	0.0	17.3	19.7	16.7
2	Dacthal	1.875 lb ai/a	9.4	0.0	0.0	0.0	0.0	24.7	25.0	24.3
3	Dacthal	3.75 lb ai/a	8.4	1.7	15.0	18.3	6.7	17.3	16.0	16.7
4	Devrinol	1 lb ai/a	7.2	25.0	21.7	15.0	11.7	12.7	15.3	26.0
5	Devrinol	2 lb ai/a	5.5	60.0	58.3	56.7	26.7	14.0	9.0	7.7
6	Goal	0.125 lb ai/a	0.9	93.7	72.7	53.3	43.3	14.0	15.0	17.3
7	Goal	0.25 lb ai/a	0.0	96.3	90.0	73.3	56.7	13.7	15.7	15.7
8	Dual Magnum	0.95 lb ai/a	9.0	15.0	11.7	6.7	11.7	20.7	16.7	15.7
9	Outlook	0.94 lb ai/a	6.4	13.3	63.3	56.7	58.3	16.3	7.7	5.3
10	UpBeet	0.016 lb ai/a	6.3	63.3	60.0	58.3	36.0	10.3	10.0	10.0
11	Dual Magnum	0.95 lb ai/a	7.3	16.7	36.7	16.7	16.7	12.7	11.7	13.7
12	Outlook	0.94 lb ai/a	5.2	16.7	21.7	35.0	18.3	12.3	15.0	12.0
13	UpBeet	0.016 lb ai/a	6.1	34.7	53.3	50.0	20.0	16.7	18.0	11.7
14	Treflan	0.5 lb ai/a	7.5	8.3	3.3	3.3	5.0	23.7	15.7	24.0
15	Prowl	0.62 lb ai/a	3.4	23.3	33.3	31.7	28.3	15.7	18.7	17.0
LSD (P=.05)			1.34	8.39	15.95	15.46	13.77	10.73	9.17	8.66
Standard Deviation			0.80	5.02	9.54	9.25	8.23	6.42	5.48	5.18
CV			13.14	16.08	26.45	29.2	36.39	39.77	35.9	33.26
Bartlett's X2			9.293	7.388	15.344	10.443	26.973	32.926	14.321	13.839
P(Bartlett's X2)			0.75	0.831	0.167	0.577	0.008*	0.003*	0.426	0.462

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

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Weed Code		Plant 4	Plant 5	Plant 6	Plant 7	Plant 8	Plant 9	Plant 10	average		
Crop Code		Collards	Collards	Collards	Collards	Collards	Collards	Collards	Collard		
Rating Data Type		Height	Height	Height	Height	Height	Height	Height	ht/10 pl		
Rating Unit		cm	cm	cm	cm	cm	cm	cm	cm		
Rating Date		Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03		
Trt-Eval Interval		43 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C		
PRM Data Type									T3		
Trt No.	Treatment Name	Rate	Unit	44	45	46	47	48	49	50	51
1	Weed-free check			14.3	15.0	18.7	20.0	15.0	17.3	19.0	17.3
2	Dacthal	1.875	lb ai/a	20.7	19.7	17.3	24.3	31.3	25.3	21.7	23.4
3	Dacthal	3.75	lb ai/a	18.7	14.3	16.7	19.3	25.3	23.7	18.7	18.7
4	Devrinol	1	lb ai/a	20.3	16.3	13.3	13.3	16.7	16.0	17.7	16.8
5	Devrinol	2	lb ai/a	16.0	14.7	8.7	12.7	14.7	9.7	11.0	11.8
6	Goal	0.125	lb ai/a	13.0	9.3	10.0	10.7	10.3	12.3	4.7	11.7
7	Goal	0.25	lb ai/a	7.3	4.3	3.7	9.7	6.3	7.0	3.3	8.7
8	Dual Magnum	0.95	lb ai/a	18.7	19.7	23.0	16.7	20.7	17.0	16.3	18.5
9	Outlook	0.94	lb ai/a	8.3	5.7	5.7	13.7	10.0	4.7	5.7	8.3
10	UpBeet	0.016	lb ai/a	13.0	13.0	17.0	16.7	12.7	11.7	12.0	12.6
11	Dual Magnum	0.95	lb ai/a	15.0	17.0	14.0	19.0	18.7	11.3	8.7	14.2
12	Outlook	0.94	lb ai/a	16.0	18.0	18.7	18.7	17.0	18.0	17.0	16.3
13	UpBeet	0.016	lb ai/a	14.3	13.0	16.0	16.7	13.3	11.3	13.7	14.5
14	Treflan	0.5	lb ai/a	22.7	21.7	22.0	27.0	22.0	22.7	16.3	21.8
15	Prowl	0.62	lb ai/a	19.7	19.7	19.7	11.0	17.3	17.0	17.3	17.3
LSD (P=.05)				12.78	10.02	9.58	13.41	11.07	12.07	10.26	6.81
Standard Deviation				7.64	5.99	5.73	8.02	6.62	7.22	6.14	4.07
CV				48.17	40.62	38.3	48.24	39.53	48.13	45.34	26.36
Bartlett's X2				19.391	15.348	8.124	23.163	14.991	10.398	14.987	22.97
P(Bartlett's X2)				0.151	0.355	0.883	0.058	0.379	0.733	0.379	0.061

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

Column 48: T3 = (([C41]+[C42]+[C43]+[C44]+[C45]+[C46]+[C47]+[C48]+[C49]+[C50])/10)

University of Georgia

Weed Code								Plant 1	Plant 2
Crop Code		Collard	Collards	Kale	Kale	Kale	Kale	Kale	Kale
Rating Data Type		pla/10ft	weight	injury	injury	injury	injury	Height	Height
Rating Unit		number	lb/10ft	percent	percent	percent	percent	cm	cm
Rating Date		Apr-24-03	May-05-03	Mar-26-03	Apr-04-03	Apr-18-03	Apr-30-03	Apr-24-03	Apr-24-03
Trt-Eval Interval		43 DA-C	54 DA-C	14 DA-C	23 DA-C	37 DA-C	49 DA-C	43 DA-C	43 DA-C
PRM Data Type									
Trt Treatment	Rate								
No. Name	Rate Unit	52	53	56	57	58	59	60	61
1 Weed-free check		13.0	3.3	0.0	0.0	0.0	0.0	23.0	31.7
2 Dacthal	1.875 lb ai/a	17.3	5.4	0.0	0.0	3.3	0.0	22.7	31.0
3 Dacthal	3.75 lb ai/a	14.3	2.8	1.7	10.0	10.0	13.3	23.0	28.3
4 Devrinol	1 lb ai/a	14.7	2.5	16.7	6.7	6.7	0.0	27.3	20.0
5 Devrinol	2 lb ai/a	13.7	1.6	53.3	48.3	26.7	8.3	38.7	25.0
6 Goal	0.125 lb ai/a	6.3	1.1	95.3	99.0	73.3	36.7	13.7	10.3
7 Goal	0.25 lb ai/a	4.0	0.4	96.3	99.7	96.7	76.7	7.3	9.3
8 Dual Magnum	0.95 lb ai/a	13.3	3.7	25.0	26.7	26.7	13.3	25.3	24.3
9 Outlook	0.94 lb ai/a	8.0	1.3	21.7	25.3	23.3	13.3	28.7	22.0
10 UpBeet	0.016 lb ai/a	15.0	2.2	66.7	66.7	70.0	25.0	15.0	16.3
11 Dual Magnum	0.95 lb ai/a	14.0	2.1	16.7	36.7	43.3	23.3	16.0	15.7
12 Outlook	0.94 lb ai/a	13.7	2.2	15.0	26.7	43.3	26.7	13.0	16.3
13 UpBeet	0.016 lb ai/a	13.0	2.1	34.7	45.0	46.7	20.0	18.0	14.7
14 Treflan	0.5 lb ai/a	15.7	4.0	6.7	3.3	3.3	6.7	25.0	23.3
15 Prowl	0.62 lb ai/a	14.7	2.5	30.0	33.3	46.7	26.7	14.0	17.0
LSD (P=.05)		6.86	0.95	12.72	12.15	14.17	7.32	21.31	14.64
Standard Deviation		4.10	0.57	7.61	7.27	8.47	4.38	12.74	8.75
CV		32.27	22.95	23.79	20.67	24.44	22.64	61.54	43.0
Bartlett's X2		12.949	15.167	23.072	15.642	15.484	1.961	42.341	23.228
P(Bartlett's X2)		0.531	0.367	0.027*	0.155	0.278	0.999	0.001*	0.057

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

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Weed Code		Plant 3	Plant 4	Plant 5	Plant 6	Plant 7	Plant 8	Plant 9	Plant 10		
Crop Code		Kale	Kale	Kale	Kale	Kale	Kale	Kale	Kale		
Rating Data Type		Height	Height	Height	Height	Height	Height	Height	Height		
Rating Unit		cm	cm	cm	cm	cm	cm	cm	cm		
Rating Date		Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03	Apr-24-03		
Trt-Eval Interval		43 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C	43 DA-C		
PRM Data Type											
Trt No.	Treatment Name	Rate	Unit	62	63	64	65	66	67	68	69
1	Weed-free check			34.3	30.7	31.3	16.7	26.3	20.0	23.3	23.3
2	Dacthal	1.875	lb ai/a	29.3	29.7	27.0	35.7	38.3	33.3	33.3	35.0
3	Dacthal	3.75	lb ai/a	21.0	24.3	22.0	24.0	25.3	21.7	25.3	23.0
4	Devrinol	1	lb ai/a	30.0	28.7	25.3	32.0	31.7	35.0	31.7	38.0
5	Devrinol	2	lb ai/a	28.3	22.0	24.7	44.0	35.0	34.0	34.0	26.0
6	Goal	0.125	lb ai/a	9.0	12.0	5.7	6.7	4.0	0.0	0.0	0.0
7	Goal	0.25	lb ai/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Dual Magnum	0.95	lb ai/a	18.0	17.3	20.3	17.0	15.0	10.7	15.7	16.7
9	Outlook	0.94	lb ai/a	23.0	21.7	19.3	25.3	31.0	22.7	18.3	28.0
10	UpBeet	0.016	lb ai/a	18.0	17.0	17.3	13.0	11.0	13.7	12.0	7.7
11	Dual Magnum	0.95	lb ai/a	20.3	20.7	16.0	13.3	14.0	12.0	18.7	12.0
12	Outlook	0.94	lb ai/a	16.3	18.7	24.0	13.3	13.7	15.0	14.3	11.7
13	UpBeet	0.016	lb ai/a	15.7	22.3	19.3	20.7	19.3	21.0	16.0	13.7
14	Treflan	0.5	lb ai/a	29.3	27.0	28.7	35.7	31.7	31.0	31.0	31.3
15	Prowl	0.62	lb ai/a	16.3	18.3	22.7	20.0	11.0	7.3	13.7	14.3
LSD (P=.05)				13.67	12.88	11.95	12.61	15.11	13.83	15.62	15.50
Standard Deviation				8.17	7.70	7.15	7.54	9.04	8.27	9.34	9.27
CV				39.68	37.22	35.3	35.65	44.11	44.74	48.76	49.54
Bartlett's X2				24.968	19.928	16.391	11.873	24.105	27.971	15.465	11.821
P(Bartlett's X2)				0.023*	0.097	0.229	0.538	0.03*	0.006*	0.217	0.46

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

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Weed Code	Average	kale	Kale	LAMAM	OEOLA			
Crop Code	Kale	kale	Kale					
Rating Data Type	ht/10pla	pl/10ft	weight	control	control			
Rating Unit	cm	number		percent	percent			
Rating Date	Apr-24-03	Apr-24-03	May-05-03	Mar-26-03	Mar-26-03			
Trt-Eval Interval	43 DA-C	43 DA-C	54 DA-C	14 DA-C	14 DA-C			
PRM Data Type	T4							
Trt No.	Treatment Name	Rate	Unit	70	71	72	74	75
1	Weed-free check			26.1	12.0	11.2	0.0	0.0
2	Dacthal	1.875 lb ai/a		31.5	15.7	13.5	88.3	35.0
3	Dacthal	3.75 lb ai/a		23.8	13.0	6.3	91.3	50.0
4	Devrinol	1 lb ai/a		30.0	14.7	11.5	53.3	70.0
5	Devrinol	2 lb ai/a		31.2	13.3	6.5	94.7	83.0
6	Goal	0.125 lb ai/a		6.1	5.7	2.1	95.0	93.3
7	Goal	0.25 lb ai/a		1.7	1.3	0.4	97.7	97.7
8	Dual Magnum	0.95 lb ai/a		18.0	15.7	6.0	53.3	36.7
9	Outlook	0.94 lb ai/a		24.0	10.7	6.3	86.7	53.3
10	UpBeet	0.016 lb ai/a		14.1	10.3	5.1	58.3	35.0
11	Dual Magnum	0.95 lb ai/a		15.9	13.3	5.3	25.0	23.3
12	Outlook	0.94 lb ai/a		15.6	12.3	4.2	28.3	26.7
13	UpBeet	0.016 lb ai/a		18.1	11.7	6.1	33.3	26.7
14	Treflan	0.5 lb ai/a		29.4	13.3	9.0	76.7	28.3
15	Prowl	0.62 lb ai/a		15.5	13.0	4.2	84.0	43.3
LSD (P=.05)				10.92	5.27	1.43	16.60	15.11
Standard Deviation				6.53	3.15	0.86	9.93	9.04
CV				32.56	26.84	13.15	15.41	19.3
Bartlett's X2				53.013	10.866	22.572	14.093	17.488
P(Bartlett's X2)				0.001*	0.696	0.068	0.295	0.064

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

Column 65: T4 = (([C60]+[C61]+[C62]+[C63]+[C64]+[C65]+[C66]+[C67]+[C68]+[C69])/10

Trial Comments

GENERAL COMMENTS: Kale (Dwarf Siberian), collard (Champion), mustard (Florida broadleaf) and turnip (Purple Top White Globe) were seeded in 1 row (split plot) of a 4 row herbicide (whole plot) on Feb 13. At the first application, all crops were less than 0.75 inch wide or tall with plants containing cotyledon to 2 leaves. At time of the second POST application, mustard and turnip were 1 to 2 inches tall with 2-4 leaves while collard and kale were still less than 1" with 3 leaves. February and March were extremely wet and the crops struggled due to the intense rainfall.

OBJECTIVE: Evaluate potential herbicide for collard, kale, mustard, and turnip.

CROP INJURY:

MUSTARD:

- 1) Dacthal at 1.875lb ai PRE and Treflan PRE were the only herbicides that did not cause significant visual stunting (<12%) when compared to the weed free.
- 2) Dacthal at 3.75 lb PRE and Devrinol at 1 lb ai PRE visually stunted mustard 12 to 17% late in the season when compared to the weed free.
- 3) Dual Magnum applied 1 and 2 wk after emergence visually stunted mustard 20 to 24% late in the season when compared to the weed free.
- 4) Visual injury from Goal PRE, Outlook POST, UpBeet POST and Prowl PRE was not acceptable.
- 5) Trends for reduction in plant diameter were noted with all herbicides except Dacthal PRE, Treflan PRE, and Devrinol at 1 lb ai PRE; however, statistically plant diameters were not reduced by Dacthal, Devrinol 1 lb ai, Dual POST at 1 or 2 wk after emergence, Outlook POST 2 wk after emergence, and Treflan PRE when compared to the weed free control at 73 DAP.
- 6) Plant stands were not reduced by Dacthal PRE, Devrinol PRE, Dual POST, Treflan PRE and Prowl PRE when compared to the weed free control at 73 DAP.

TURNIP:

- 1) Dacthal PRE, Dual POST at 1 week after emergence, and Treflan PRE were the only herbicides that did not cause significant visual stunting (<13%).
- 2) Devrinol at 1 lb ai PRE, Dual POST at 2 week after emergence stunted mustard 8 to 18% late in the season when compared to the weed free control.
- 3) Unacceptable injury was noted with at Devrinol 2 lb ai PRE, Goal PRE, Outlook POST, UpBeet POST, and Prowl PRE.
- 4) Goal PRE, Outlook POST and UpBeet POST reduced turnip diameter compared to the non-treated control at 73 DAP.

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- 5) Goal PRE were the only treatments that reduced plant stands compared to the weed free control at 73 DAP.
 6) Compared to the weed free control, Dacthal PRE and Dual POST 1 wk after emergence were the only treatments that did not reduced fresh weights at harvest at 84 DAP.

COLLARD:

- 1) Treflan PRE, Dacthal at 1.875 lb PRE, and Dual at 1 wk after emergence stunted collard growth less than 15% throughout the season when compared to the weed free control.
- 2) Dacthalat 3.75 lb and Devrinol at 1 lb ai PRE stunted collard growth up to 25% throughout the season when compared to the weed free control.
- 3) Injury from Devrinol at 2 lb ai PRE, Goal PRE, Outlook POST, UpBeet POST, and Prowl PRE was not acceptable.
- 4) Collard heights were only reduced by Goal at 0.25 lb ai PRE and Outlook POST at 1 wk after emergence. However, obvious trends for height reduction were noted with Devrinol at 2 lb PRE and Goal at 0.125 lb PRE.
- 5) Collard plant stands were reduced by only Goal at 0.25 lb ai/A.
- 6) Harvested fresh weights were reduced by all treatments except Dacthal PRE, Devrinol at 1 lb ai PRE, Treflan PRE, Prowl PRE, and Dual POST 1 wk after emergence when compared to the weed free control at 84 DAP.

KALE:

- 1) Dacthal PRE, Devrinol 1 lb ai PRE, and Treflan PRE stunted kale less than 17% throughout the season when compared to the weed free control.
- 2) Dual and Outlook POST 1 wk after emergence stunted kale up to 27% but only 13% late in the season when compared to the weed free control.
- 3) Injury from all other treatments were severe.
- 4) Kale height was reduced by Goal PRE and UpBeet POST 1 wk after emergence when compared to the weed free control at 73 DAP.
- 5) Kale plant stands were only reduced by Goal PRE when compared to the weed free control at 73 DAP.
- 6) All treatments except Dacthal at 1.875 lb PRE and Devrinol 1 lb ai PRE reduced harvested biomass at 84 DAP.

WEED CONTROL (Prior to cultivation,henbit and primrose were rated in the area outside the designated weed free section of each plot)

HENBIT:

1. Excellent early season control was noted with Dacthal PRE, Devrinol at 2 lb ai PRE, Goal PRE, Prowl PRE, and Outlook POST 1 wk after emergence.

PRIMROSE:

- 1) Only 2 lb ai of Devrinol and Goal provided greater than 70% control at 43 DAP.

CONCLUSIONS:

FOR IR4: Dual Magnum appears to be the only possible "new" product that could be used for these crops. Injury from Dual was marginal in this trial; however, the trial was conducted on a soil containing 94% sand. Additionally, over 12 inches of rain fell on this trial during early season. Further work on Georgia soils is needed to identify the proper rate of Dual Magnum (probably 0.63 to 72 lb ai/A applied 1 to 2 weeks after emergence of the crop)

FOR UGA: Dacthal, Treflan, and Dual Magnum are the herbicide tools for future use in mustard, turnip, collard and kale. Developing systems utilizing each herbicide and identifying rates of each product is needed.