

University of Georgia

Glyphosate timing and rate for the burndown of cabbage post-harvest.

Trial ID: Veg9-06

Study Dir.: Andrew MacRae

Location: TyTy

Investigator: Stanley Culpepper

Reps: 3

Plots: 6 by 20 feet

Spray vol: 14.8 gal/ac

Mix size: 1 liters (min .55561)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Grow Unit	Stg	Appl Code	Amt to Measure	Product	Plot No. 1	Plot No. 2	Plot No. 3
1	1 day after harvest Roundup WeatherMax	5.5	LB/GAL	EC	1	PT/A		A	8.445 ml/mx		101	202	312
2	1 day after harvest Roundup WeatherMax	5.5	LB/GAL	EC	2	PT/A		A	16.89 ml/mx		102	212	307
3	1 day after harvest Roundup WeatherMax	5.5	LB/GAL	EC	3	PT/A		A	25.34 ml/mx		103	209	308
4	1 day after harvest Roundup WeatherMax	5.5	LB/GAL	EC	4	PT/A		A	33.78 ml/mx		104	210	302
5	7 days after harvest Roundup WeatherMax	5.5	LB/GAL	EC	1	PT/A		B	8.445 ml/mx		105	206	303
6	7 days after harvest Roundup WeatherMax	5.5	LB/GAL	EC	2	PT/A		B	16.89 ml/mx		106	208	309
7	7 days after harvest Roundup WeatherMax	5.5	LB/GAL	EC	3	PT/A		B	25.34 ml/mx		107	211	304
8	7 days after harvest Roundup WeatherMax	5.5	LB/GAL	EC	4	PT/A		B	33.78 ml/mx		108	201	305
9	14 days after harvest Roundup WeatherMax	5.5	LB/GAL	EC	1	PT/A		C	8.445 ml/mx		109	205	310
10	14 days after harvest Roundup WeatherMax	5.5	LB/GAL	EC	2	PT/A		C	16.89 ml/mx		110	203	311
11	14 days after harvest Roundup WeatherMax	5.5	LB/GAL	EC	3	PT/A		C	25.34 ml/mx		111	204	306
12	14 days after harvest Roundup WeatherMax	5.5	LB/GAL	EC	4	PT/A		C	33.78 ml/mx		112	207	301

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
316.690	ml	Roundup WeatherMax	5.5	EC	

* '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 glyphosate rate and time of application to kill cabbage after harvest.

Cabbage Control:

1. Main effect means were of biological importance.
2. When pooled over application timings, 4, 3, 2, and 1 pt/A of WeatherMax provided 96, 88, 85, and 66% control at 57 days after the initial application.
3. When pooled over herbicide rates, control was greatest with a 7 d after harvest application (91%) followed by 1 day after harvest application (85%) and then 14 d after harvest application (76%). Evaluations were taken 57 d after the initial application.

CONCLUSION:

1. The most effective and economical option would be an application of WeatherMax at 2 pt/A at 7 d after harvest.

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Crop Code	BRSOL	BRSOL	BRSOL			
Rating Data Type	injury	control	control			
Rating Unit	percent	percent	percent			
Rating Date	Jan-05-06	Jan-13-06	Jan-16-06			
Assessed By	AM	AM	AM			
Trt-Eval Interval	49 DA-A	57 DA-A	60 DA-A			
Trt No.	Treatment Name	Rate	Unit	1	2	3
1	1 day after harvest Roundup WeatherMax	1	PT/A	62 g	63 e	43 f
2	1 day after harvest Roundup WeatherMax	2	PT/A	67 fg	88 c	60 de
3	1 day after harvest Roundup WeatherMax	3	PT/A	83 cd	92 bc	82 bc
4	1 day after harvest Roundup WeatherMax	4	PT/A	90 abc	96 ab	90 ab
5	7 days after harvest Roundup WeatherMax	1	PT/A	50 h	79 d	27 g
6	7 days after harvest Roundup WeatherMax	2	PT/A	87 bc	91 bc	78 bc
7	7 days after harvest Roundup WeatherMax	3	PT/A	95 ab	94 ab	90 ab
8	7 days after harvest Roundup WeatherMax	4	PT/A	99 a	99 a	99 a
9	14 days after harvest Roundup WeatherMax	1	PT/A	47 h	57 f	13 g
10	14 days after harvest Roundup WeatherMax	2	PT/A	73 ef	76 d	55 ef
11	14 days after harvest Roundup WeatherMax	3	PT/A	77 de	78 d	72 cd
12	14 days after harvest Roundup WeatherMax	4	PT/A	95 ab	95 ab	93 ab
LSD (P=.05)				9.5	4.5	15.1
Standard Deviation				5.6	2.7	8.9
CV				7.27	3.17	13.3
Bartlett's X2				5.829	14.596	11.528
P(Bartlett's X2)				0.757	0.202	0.318

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

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MAINTENANCE

Field Prep./Maintenance: Cabbage was harvested on 11-16-05 when heads were 4-5 inches in size. Applications made based on days after harvest.

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

SOIL DESCRIPTION

% Sand: 94	% OM: 1.1	Texture: sand
% Silt: 2	pH: 6.1	Soil Name: Tifton sandy loam
% Clay: 4	CEC: _____	Fert. Level: _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

Date	Time	Amount	Unit	Type	Interval	Unit
1.						

Overall Moisture Conditions: irrigated

Closest Weather Station: _____ Distance: _____ Unit: ____

APPLICATION DESCRIPTION

	A	B	C
Application Date:	Nov-17-05	Nov-23-05	Dec-01-05
Time of Day:	5:00 pm	5:45 pm	5:30 pm
Application Method:	Broadcast	Broadcast	Broadcast
Application Timing:	1 day	7 day	15 day
Applic. Placement:	overtop	overtop	overtop
Air Temp., Unit:	55 F	55 F	56 F
% Relative Humidity:	26	39	36
Wind Velocity, Unit:	2 mph	3 mph	1 mph
Dew Presence (Y/N):	n	n	n
Water Hardness:			
Soil Temp., Unit:	55 F	51 F	53 F
Soil Moisture:	Moist	Moist	Moist
% Cloud Cover:	5	5	20

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	BRSOL .	BRSOL .	BRSOL .
Stage Scale:	No growth	New Growt	1 in bud
Height, Unit:			

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code, Stage:	.		
Stage Scale:	.		
Density, Unit:	.		

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APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	Backpack	Backpack	Backpack
Operating Pressure:	27 psi	27 psi	27 psi
Nozzle Type:	flat fan	flat fan	flat fan
Nozzle Size:	11002 DG	11002 DG	11002 DG
Nozzle Spacing, Unit:	20 inch	20 inch	20 inch
Nozzles/Row:	2	2	2
Band Width, Unit:			
Boom Length, Unit:	60 inch	60 inch	60 inch
Boom Height, Unit:			
Ground Speed, Unit:	3 mph	3 mph	3 mph
Incorporation Equip.:			
Hours to Incorp.:			
Incorp. Depth, Unit:			
Carrier:	water	water	water
Spray Volume, Unit:	14.8 gpa	14.8 gpa	14.8 gpa
Spray pH:			
Propellant:	CO2	CO2	CO2
Tank Mix (Y/N):			

Trt No	Treatment Application Comment