

Ohio State University
Horticulture and Crop Science

Postemergence Weed Control from Resolve, Resolve Q, Accent and Steadfast Q Plus Dry Mesotrione

Title No. 2: USA-09-111

Trial ID: 09Q

Protocol ID: 09Q

Location: Western Branch F-8 W

Study Director: Anthony F. Dobbels

Project ID: 09Q

Investigator: Dr. Mark M. Loux

Sponsor Contact: Marsha Martin, DuPont

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: Pioneer 33W84 **Description:** RR/LL
BBCH Scale: BCOR **Planting Date:** Apr-26-2009
Planting Method: SEEDED seeded **Rate, Unit:** 32097 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN
Seed Bed: SMOOTH smooth
Soil Moisture: NORMAL normal

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail

Pest 2 Type: W **Code:** CHEAL *Chenopodium album*
Common Name: Common lambsquarters

Pest 3 Type: W **Code:** POLPY *Polygonum pensylvanicum*
Common Name: Pennsylvania smartweed

Pest 4 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed

Pest 5 Type: W **Code:** AMBEL *Ambrosia artemisiifolia*
Common Name: Common ragweed

Pest 6 Type: W **Code:** AMARE *Amaranthus retroflexus*
Common Name: Redroot pigweed

Pest 7 Type: W **Code:** ABUTH *Abutilon theophrasti*
Common Name: Velvetleaf

Pest 8 Type: W **Code:** HIBTR *Hibiscus trionum*
Common Name: Venice mallow

Site and Design

Plot Width, Unit: 6.67 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 200.1 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 3 **Study Design:** RACOB� Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Application Description

	A	B
Application Date:	Apr-27-2009	May-30-2009
Time of Day:	7:30 AM	8:00 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREPLA	POST
Application Placement:	BROSOL	BROFOL
Air Temperature, Unit:	67 F	62 F
% Relative Humidity:	59	60
Wind Velocity, Unit:	7.1 MPH	2 MPH
Wind Direction:	SW	E
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	56 F	62 F
Soil Moisture:	NORMAL	DRY
% Cloud Cover:	5	2

Crop Stage At Each Application

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	A		B	
Crop 1 Code, BBCH Scale:	ZEAMX	BCOR	ZEAMX	BCOR
Stage Majority, Percent:			14	100
Height, Unit:			8	IN
Height Minimum, Maximum:			8	10

Pest Stage At Each Application

	A		B	
Pest 1 Code, Type, Scale:	SETFA	W	SETFA	W W
Stage Majority, Percent:			14	100
Height, Unit:			9	IN
Height Minimum, Maximum:			7	9
Pest 2 Code, Type, Scale:	CHEAL	W	CHEAL	W
Stage Majority, Percent:			14	100
Height, Unit:			4	IN
Height Minimum, Maximum:			2	4
Pest 3 Code, Type, Scale:	POLPY	W	POLPY	W
Stage Majority, Percent:			13	100
Height, Unit:			5	IN
Height Minimum, Maximum:			3	5
Pest 4 Code, Type, Scale:	AMBTR	W	AMBTR	W
Stage Majority, Percent:			19	100
Height, Unit:			10	IN
Height Minimum, Maximum:			7	10
Pest 5 Code, Type, Scale:	AMBEL	W	AMBEL	W
Stage Majority, Percent:			19	100
Height, Unit:			4	IN
Height Minimum, Maximum:			2	4
Pest 6 Code, Type, Scale:	AMARE	W	AMARE	W
Stage Majority, Percent:			14	100
Height, Unit:			6	IN
Height Minimum, Maximum:			4	6
Pest 7 Code, Type, Scale:	ABUTH	W	ABUTH	W
Stage Majority, Percent:			13	100
Height, Unit:			4	IN
Height Minimum, Maximum:			3	4
Pest 8 Code, Type, Scale:	HIBTR	W	HIBTR	W
Stage Majority, Percent:			14	100
Height, Unit:			3	IN
Height Minimum, Maximum:			2	3

Application Equipment

	A		B	
Appl. Equipment:	BACKPACK		BACKPACK	
Equipment Type:	SPRBAC		SPRBAC	
Operating Pressure, Unit:	53	PSI	53	PSI
Nozzle Type:	TEEJET	DG	TEEJET	DG
Nozzle Size:	11002		11002	
Nozzle Spacing, Unit:	18	IN	18	IN
Boom Length, Unit:	10	FT	10	FT
Boom Height, Unit:	20	IN	20	IN
Ground Speed, Unit:	3	MPH	3	MPH
Carrier:	WATER		WATER	
Spray Volume, Unit:	20	GPA	20	GPA
Mix Size, Unit:	3	L	3	L
Propellant:	CO2		CO2	

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Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Plot No. Rep. 1	2	3	Notes
1	Resolve 1.2 oz									101	210	302	
	Rimsulfuron	25	SG	0.3 oz ai/a		1.2 oz/a		POST	B				
	Isoxadifen-Ethyl	50	WG	0.15 oz ai/a		0.3 oz/a		POST					
	Mesotrione	50	WG	1.25 oz ai/a		2.5 oz/a		POST					
	COC	100	SL	1 % v/v		0.8 qt/a		POST					
	N-PAK AMS	100	L	3 % v/v		2.4 qt/a		POST					
2	Cinch ATZ	5.5	EC	1.38 lb ai/a		1 qt/a		PRE	A	102	203	309	
	Rimsulfuron	25	SG	0.3 oz ai/a		1.2 oz/a		POST	B				
	Isoxadifen-Ethyl	50	WG	0.15 oz ai/a		0.3 oz/a		POST					
	Mesotrione	50	WG	1.25 oz ai/a		2.5 oz/a		POST					
	COC	100	SL	1 % v/v		0.8 qt/a		POST					
	N-PAK AMS	100	L	3 % v/v		2.4 qt/a		POST					
3	Resolve 1.2 oz									103	209	305	
	Rimsulfuron	25	SG	0.3 oz ai/a		1.2 oz/a		POST	B				
	Isoxadifen-Ethyl	50	WG	0.15 oz ai/a		0.3 oz/a		POST					
	Mesotrione	50	WG	1.25 oz ai/a		2.5 oz/a		POST					
	Roundup PowerMax	4.5	SL	0.77 lb ae/a		22 oz/a		POST					
	N-PAK AMS	100	L	3 % v/v		2.4 qt/a		POST					
4	Resolve 1.2 oz									104	202	310	
	Rimsulfuron	25	SG	0.3 oz ai/a		1.2 oz/a		POST	B				
	Isoxadifen-Ethyl	50	WG	0.15 oz ai/a		0.3 oz/a		POST					
	Mesotrione	50	WG	1.25 oz ai/a		2.5 oz/a		POST					
	Ignite	2.34	EC	0.402 lb ai/a		22 oz/a		POST					
	N-PAK AMS	100	L	3 % v/v		2.4 qt/a		POST					
5	Resolve 1.2 oz									105	204	308	
	Rimsulfuron	25	SG	0.3 oz ai/a		1.2 oz/a		POST	B				
	Isoxadifen-Ethyl	50	WG	0.15 oz ai/a		0.3 oz/a		POST					
	Mesotrione	50	WG	1.25 oz ai/a		2.5 oz/a		POST					
	Atrazine	4	F	0.9 lb ai/a		0.9 qt/a		POST					
	COC	100	SL	1 % v/v		0.8 qt/a		POST					
	N-PAK AMS	100	L	3 % v/v		2.4 qt/a		POST					
6	Resolve Q 1.25 oz									106	208	307	
	Rimsulfuron	25	SG	0.25 oz ai/a		1 oz/a		POST	B				
	Thifensulfuron	50	SG	0.05 oz ai/a		0.1 oz/a		POST					
	Isoxadifen-Ethyl	50	WG	0.115 oz ai/a		0.23 oz/a		POST					
	Mesotrione	50	WG	1.25 oz ai/a		2.5 oz/a		POST					
	COC	100	SL	1 % v/v		0.8 qt/a		POST					
	N-PAK AMS	100	L	3 % v/v		2.4 qt/a		POST					
7	Accent	75	WG	0.5 oz ai/a		0.67 oz/a		POST	B	107	206	301	
	Mesotrione	50	WG	1.25 oz ai/a		2.5 oz/a		POST					
	COC	100	SL	1 % v/v		0.8 qt/a		POST					
	N-PAK AMS	100	L	3 % v/v		2.4 qt/a		POST					
8	Steadfast Q 1.5 oz									108	201	304	
	Steadfast	75	WG	0.5625 oz ai/a		0.75 oz/a		POST	B				
	Isoxadifen-Ethyl	50	WG	0.125 oz ai/a		0.25 oz/a		POST					
	Mesotrione	50	WG	1.25 oz ai/a		2.5 oz/a		POST					
	COC	100	SL	1 % v/v		0.8 qt/a		POST					
	N-PAK AMS	100	L	3 % v/v		2.4 qt/a		POST					
9	Roundup PowerMax	4.5	SL	0.77 lb ae/a		22 oz/a		POST	B	109	205	303	

(09Q)

Tour Report

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Plot No. Rep. 1	2	3	Notes
	N-PAK AMS	100	L		3 % v/v	2.4	qt/a	POST					
10	Untreated Check									110	207	306	

Sort Order: Replicate 1