

Ohio State University
Horticulture and Crop Science

Evaluation of Stalwart Products + SA-0070111

Title No. 2:
 Trial ID: 12PREC2 Protocol ID: 12PREC2
 Location: Western Branch f-7 Study Director: Anthony F. Dobbels
 Project ID: 12PREC2 Investigator: Dr. Mark M. Loux
 Sponsor Contact: George Hackman, SipcamaAdvan

General Trial Information

Study Director: Anthony F. Dobbels Title: Research Specialist
 Investigator: Dr. Mark M. Loux

Trial Location

City: South Charleston Latitude of LL Corner °: 39.86013 N
 State/Prov.: Ohio Longitude of LL Corner °: 83.67008 W
 Postal Code: 45368
 Country: USA

Crop Description

Crop 1: ZEAMX Zea mays Corn
 Variety: Seed Consultants SCS 11HQ38 Description: RR/LL
 BBCH Scale: BCOR Planting Date: Apr-19-2012
 Planting Method: SEEDED seeded Rate, Unit: 32097 S/A
 Depth, Unit: 2 IN
 Row Spacing, Unit: 30 IN
 Seed Bed: MEDIUM medium Soil Temperature, Unit: 56 F
 Soil Moisture: GOOD good Emergence Date: May-4-2012

Pest Description

Pest 1 Type: W Code: AMBTR Ambrosia trifida
 Common Name: Giant ragweed
 Pest 2 Type: W Code: POLPY Persicaria pensylvanica
 Common Name: Pennsylvania smartweed
 Pest 3 Type: W Code: CHEAL Chenopodium album
 Common Name: Common lambsquarters
 Pest 4 Type: W Code: SETFA Setaria faberi
 Common Name: Giant foxtail
 Pest 5 Type: W Code: IPOHE Ipomoea hederacea
 Common Name: Ivyleaf morningglory
 Pest 6 Type: W Code: SIDSP Sida spinosa
 Common Name: Prickly sida
 Pest 7 Type: W Code: ABUTH Abutilon theophrasti
 Common Name: velvetleaf
 Pest 8 Type: W Code: AMARE Amaranthus retroflexus
 Common Name: Redroot pigweed

Site and Design

Plot Width, Unit: 6.67 FT Site Type: FIELD field
 Plot Length, Unit: 30 FT
 Plot Area, Unit: 200.1 FT2
 Replications: 3 Study Design: RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: F-7 East
 % OM: 1.8 Texture: SIL silt loam
 pH: 5.7 Soil Name: Crosby
 CEC: 16.2 Fert. Level: G good
 Soil Drainage: G good

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Application Description

	A	B
Application Date:	Apr-19-2012	May-23-2012
Time of Day:	1:30 P.M.	9:00AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Application Placement:	BROSIOI	BROFOL
Air Temperature, Unit:	76 F	69 F
% Relative Humidity:	48	67
Wind Velocity, Unit:	1 MPH	2 MPH
Wind Direction:	N	NNE
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	60 F	67 F
Soil Moisture:	GOOD	DRY
% Cloud Cover:	7	85
Next Rain Occurred On:	Apr-21-2012	May-31-2012

Crop Stage At Each Application

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

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:		16 100
Height, Unit:		4.5 IN
Height Minimum, Maximum:		3 6
Density, Unit:		12 M2
Pest 2 Code, Type, Scale:	POLPY W	POLPY W
Stage Majority, Percent:		14 100
Height, Unit:		2 IN
Height Minimum, Maximum:		2 2
Density, Unit:		22.6 M2
Pest 3 Code, Type, Scale:	CHEAL W	CHEAL W
Stage Majority, Percent:		14 100
Height, Unit:		1.5 IN
Height Minimum, Maximum:		1 2
Density, Unit:		30.6 M2
Pest 4 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:		10 100
Height, Unit:		1 IN
Height Minimum, Maximum:		1 1
Density, Unit:		473.3 M2
Pest 5 Code, Type, Scale:	IPOHE W	IPOHE W
Stage Majority, Percent:		14 100
Height, Unit:		2 IN
Height Minimum, Maximum:		2 2
Pest 6 Code, Type, Scale:	SIDSP W	SIDSP W
Stage Majority, Percent:		12 100
Height, Unit:		1 IN
Height Minimum, Maximum:		1 1
Pest 7 Code, Type, Scale:	ABUTH W	ABUTH W
Stage Majority, Percent:		12 100
Height, Unit:		2 IN
Height Minimum, Maximum:		2 2
Density, Unit:		5.3 M2
Pest 8 Code, Type, Scale:	AMARE W	AMARE W
Density, Unit:		52 M2

Application Equipment

	A	B
Appl. Equipment:	6 foot boom	6 foot boom
Equipment Type:	SPRBAC	SPRBAC
Operation Pressure, Unit:	46 PSI	46 PSI
Nozzle Type:	AI XR	AI XR
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	18 IN	18 IN
Boom Length, Unit:	6 FT	6 FT
Boom Height, Unit:	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 GPA	15 GPA
Mix Size, Unit:	1 Liters	1 Liters
Propellant:	CO2	CO2

Trt No Treatment Application Comment
306 Plot 306 not sprayed.

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 Sponsor Contact: George Hackman, SipcamaAdvan

Pest Type	W Weed	W Weed	W Weed	W Weed							
Pest Code	SETFA	AMBTR	POLPY	ABUTH							
Pest Scientific Name	Setaria Ambrosia trifida>	Persicaria pen>	Abutilon theop>	velvetleaf							
Pest Name	Giant foxtail	Giant ragweed	Pennsylvania s>								
Crop Code	ZEAMX										
BBCH Scale	BCOR										
Crop Scientific Name	Zea mays										
Crop Name	Corn										
Rating Date	May-10-2012	May-10-2012	May-10-2012	May-10-2012							
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO							
Rating Unit	%	%	%	%							
Number of Subsamples	1	1	1	1							
Rating Timing											
Days After First/Last Applic.	21 21	21 21	21 21	21 21							
Trt-Eval Interval	21 DA-A	21 DA-A	21 DA-A	21 DA-A							
Plant-Eval Interval	21 DP-1	21 DP-1	21 DP-1	21 DP-1							
Days After Emergence	6 DE-1	6 DE-1	6 DE-1	6 DE-1							
Number of Decimals	0	0	0	0							
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	1	2	3	4	5
1	SA-0070111	2.6 pt/a	2.6 pt/a		PRE	A	0 a	90 b	47 bc	90 a	92 b
2	Stalwart C	1.5 pt/a	1.5 pt/a		PRE	A	0 a	96 ab	30 c	71 b	86 c
3	Stalwart Xtra	2.6 pt/a	2.6 pt/a		PRE	A	0 a	100 a	63 ab	100 a	97 ab
4	Roundup PowerMax	0.77 lb ae/a	22 oz/a		POST	B	0 a	0 c	0 d	0 c	0 d
5	UTC						0 a	0 c	0 d	0 c	0 d
6	Bicep Lite II Magnum	1.5 qt/a	1.5 qt/a		PRE	A	0 a	100 a	72 a	100 a	100 a
LSD (P=.05)							0.0	8.4	23.1	13.7	5.7
Standard Deviation							0.0	4.6	12.5	7.4	3.1
CV							0.0	7.08	35.47	12.33	4.98
Replicate F							0.000	1.671	3.685	1.009	2.562
Replicate Prob(F)							1.0000	0.2414	0.0677	0.4023	0.1316
Treatment F							0.000	361.125	18.166	124.591	733.569
Treatment Prob(F)							1.0000	0.0001	0.0002	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Type	W Weed	W Weed	W Weed	W Weed							
Pest Code	AMARE	CHEAL	IPOHE	SETFA							
Pest Scientific Name	Amaranthus ret>	Chenopodium al>	Ipomoea hederata>	Setaria faberi							
Pest Name	Redroot pigweed	Common lambsqu>	Ivyleaf mornin>	Giant foxtail							
Crop Code				ZEAMX							
BBCH Scale				BCOR							
Crop Scientific Name				Zea mays							
Crop Name				Corn							
Rating Date	May-10-2012	May-10-2012	May-10-2012	May-22-2012	May-22-2012						
Rating Type	CONTRO	CONTRO	CONTRO	PHYTO	CONTRO						
Rating Unit	%	%	%	%	%						
Number of Subsamples	1	1	1	1	1						
Rating Timing				AT POST	AT POST						
Days After First/Last Applic.	21 21	21 21	21 21	33 33	33 33						
Trt-Eval Interval	21 DA-A	21 DA-A	21 DA-A	33 DA-A	33 DA-A						
Plant-Eval Interval	21 DP-1	21 DP-1	21 DP-1	33 DP-1	33 DP-1						
Days After Emergence	6 DE-1	6 DE-1	6 DE-1	18 DE-1	18 DE-1						
Number of Decimals	0	0	0	0	0						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	6	7	8	9	10
1	SA-0070111	2.6 pt/a	2.6 pt/a		PRE	A	100 a	95 a	63 c	0 a	90 a
2	Stalwart C	1.5 pt/a	1.5 pt/a		PRE	A	100 a	96 a	75 bc	0 a	88 a
3	Stalwart Xtra	2.6 pt/a	2.6 pt/a		PRE	A	100 a	100 a	100 a	0 a	88 a
4	Roundup PowerMax	0.77 lb ae/a	22 oz/a		POST	B	0 b	0 b	0 d	0 a	0 b
5	UTC						0 b	0 b	0 d	0 a	0 b
6	Bicep Lite II Magnum	1.5 qt/a	1.5 qt/a		PRE	A	100 a	100 a	93 ab	0 a	95 a
	LSD (P=.05)						0.0	5.9	22.0	0.0	10.0
	Standard Deviation						0.0	3.2	11.9	0.0	5.4
	CV						0.0	4.87	21.55	0.0	8.99
	Replicate F						0.000	0.552	1.069	0.000	4.539
	Replicate Prob(F)						1.0000	0.5943	0.3833	1.0000	0.0434
	Treatment F						0.000	760.293	42.300	0.000	223.365
	Treatment Prob(F)						1.0000	0.0001	0.0001	1.0000	0.0001

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Pest Type											
Pest Code											
Pest Scientific Name											
Pest Name											
Crop Code											
BBCH Scale											
Crop Scientific Name											
Crop Name											
Rating Date											
Rating Type											
Rating Unit											
Number of Subsamples											
Rating Timing											
Days After First/Last Applic.											
Trt-Eval Interval											
Plant-Eval Interval											
Days After Emergence											
Number of Decimals											
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	11	12	13	14	15
1	SA-0070111	2.6 pt/a	2.6 pt/a		PRE	A	13 b	50 b	46 b	100 a	40 b
2	Stalwart C	1.5 pt/a	1.5 pt/a		PRE	A	4 b	40 c	11 c	100 a	37 b
3	Stalwart Xtra	2.6 pt/a	2.6 pt/a		PRE	A	50 a	100 a	90 a	100 a	90 a
4	Roundup PowerMax	0.77 lb ae/a	22 oz/a		POST	B	0 b	0 d	0 c	0 b	0 c
5	UTC						0 b	0 d	0 c	0 b	0 c
6	Bicep Lite II Magnum	1.5 qt/a	1.5 qt/a		PRE	A	57 a	100 a	100 a	100 a	90 a
LSD (P=.05)							19.7	8.6	22.9	0.0	22.7
Standard Deviation							10.6	4.6	12.1	0.0	12.3
CV							51.51	9.44	29.43	0.0	28.79
Replicate F							2.688	0.800	3.018	0.000	0.824
Replicate Prob(F)							0.1215	0.4823	0.1055	1.0000	0.4692
Treatment F							17.694	290.400	41.343	0.000	32.338
Treatment Prob(F)							0.0002	0.0001	0.0001	1.0000	0.0001

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Pest Type	W Weed	W Weed	W Weed	W Weed							
Pest Code	IPOHE	AMBEL	SETFA	AMBTR							
Pest Scientific Name	Ipomoea hederata>	Ambrosia artem>	Setaria faberi	Ambrosia trifida>							
Pest Name	Ivyleaf mornin>	Common ragweed	Giant foxtail	Giant ragweed							
Crop Code			ZEAMX								
BBCH Scale			BCOR								
Crop Scientific Name			Zea mays								
Crop Name			Corn								
Rating Date	May-22-2012	May-22-2012	Jun-19-2012	Jun-19-2012	Jun-19-2012						
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO						
Rating Unit	%	%	%	%	%						
Number of Subsamples	1	1	1	1	1						
Rating Timing	AT POST	AT POST									
Days After First/Last Applic.	33 33	33 33	61 27	61 27	61 27						
Trt-Eval Interval	33 DA-A	33 DA-A	27 DA-B	27 DA-B	27 DA-B						
Plant-Eval Interval	33 DP-1	33 DP-1	61 DP-1	61 DP-1	61 DP-1						
Days After Emergence	18 DE-1	18 DE-1	46 DE-1	46 DE-1	46 DE-1						
Number of Decimals	0	0	0	0	0						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	16	17	18	19	20
1	SA-0070111	2.6 pt/a	2.6 pt/a		PRE	A	0 b	43 b	0 a	65 ab	85 a
2	Stalwart C	1.5 pt/a	1.5 pt/a		PRE	A		51 b	0 a	65 b	79 a
3	Stalwart Xtra	2.6 pt/a	2.6 pt/a		PRE	A	48 a	100 a	0 a	63 b	77 a
4	Roundup PowerMax	0.77 lb ae/a	22 oz/a		POST	B	0 b	0 c	0 a	57 b	92 a
5	UTC						0 b	0 c	0 a	0 c	0 b
6	Bicep Lite II Magnum	1.5 qt/a	1.5 qt/a		PRE	A		100 a	0 a	73 a	92 a
LSD (P=.05)		5.0						9.1	0.0	8.4	16.1
Standard Deviation		1.4						4.9	0.0	4.6	8.7
CV		11.69						10.09	0.0	8.5	12.32
Replicate F		0.333						1.009	0.000	0.295	2.567
Replicate Prob(F)		0.7500						0.4023	1.0000	0.7517	0.1312
Treatment F		878.689						246.409	0.000	103.755	49.035
Treatment Prob(F)		0.0011						0.0001	1.0000	0.0001	0.0001

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Pest Type	W Weed	W Weed	W Weed	W Weed						
Pest Code	POLPY	ABUTH	AMARE	CHEAL						
Pest Scientific Name	Persicaria pen->	Abutilon theop->	Amaranthus ret->	Chenopodium al->						
Pest Name	Pennsylvania s>	velvetleaf	Redroot pigweed	Common lambsqu->						
Crop Code										
BBCH Scale										
Crop Scientific Name										
Crop Name										
Rating Date	Jun-19-2012	Jun-19-2012	Jun-19-2012	Jun-19-2012						
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO						
Rating Unit	%	%	%	%						
Number of Subsamples	1	1	1	1						
Rating Timing										
Days After First/Last Applic.	61 27	61 27	61 27	61 27						
Trt-Eval Interval	27 DA-B	27 DA-B	27 DA-B	27 DA-B						
Plant-Eval Interval	61 DP-1	61 DP-1	61 DP-1	61 DP-1						
Days After Emergence	46 DE-1	46 DE-1	46 DE-1	46 DE-1						
Number of Decimals	0	0	0	0						
Trt No.	Treatment Name	Rate Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	21	22	23	24
1	SA-0070111	2.6 pt/a	2.6 pt/a		PRE	A	97 a	85 bc	70 bc	73 b
2	Stalwart C	1.5 pt/a	1.5 pt/a		PRE	A	95 a	99 ab	75 b	48 c
3	Stalwart Xtra	2.6 pt/a	2.6 pt/a		PRE	A	100 a	83 c	73 b	85 ab
4	Roundup PowerMax	0.77 lb ae/a	22 oz/a		POST	B	100 a	100 a	53 c	53 c
5	UTC						0 b	0 d	0 d	0 d
6	Bicep Lite II Magnum	1.5 qt/a	1.5 qt/a		PRE	A	100 a	90 abc	97 a	93 a
LSD (P=.05)		5.5	14.8					19.6		12.2
Standard Deviation		3.0	8.0					10.6		6.6
CV		3.64	10.5					17.3		11.26
Replicate F		2.100	0.341					3.718		4.500
Replicate Prob(F)		0.1784	0.7198					0.0665		0.0442
Treatment F		546.000	67.552					29.155		78.243
Treatment Prob(F)		0.0001	0.0001					0.0001		0.0001

