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Fall Burndown and Residual Weed Control with TriCor and Collide

Trial ID: 13FALLSOY3 Location: WESTERN BRANCH G-8 E Trial Year:
 Protocol ID: 13FALLSOY3 Investigator: Dr. Mark M. Loux
 Project ID: Study Director: Anthony F. Dobbels
 Sponsor Contact: Tony Estes, UPI

Crop Description

Crop 1: GLXMA Glycine max
Variety: Seed Consultants SC9362RR
Description: RR

BBCH Scale: BSOY

Soybean

Planting Rate, Unit: 150000 s/a
Depth, Unit: 0.5 in
Row Spacing, Unit: 15 IN
Soil Temperature, Unit: 56 F
Soil Moisture: SLIWET slightly wet, moist
Seed Bed: MEDTRA medium/trashy

Planting Date: May-6-2013
Planting Method: PLANTD planted
Planting Equipment: PP Plot Planter
Emergence Date: May-20-2013

Pest Description

Pest 1 Type: W **Code:** STEME *Stellaria media*
Common Name: Common chickweed

Pest 2 Type: W **Code:** LAMPU *Lamium purpureum*
Common Name: Purple deadnettel

Pest 3 Type: W **Code:** SENGL *Senecio glabellus*
Common Name: Cressleaf groundsel

Pest 4 Type: W **Code:** CAPBP *Capsella bursa-pastoris*
Common Name: Shepherd's purse

Pest 5 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed

Pest 6 Type: W **Code:** VERAR *Veronica arvensis*
Common Name: Corn speedwell

Pest 7 Type: W **Code:** TAROF *Taraxacum officinale*
Common Name: Common dandelion

Site and Design

Treated Plot Width: 6.67 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT **Experimental Unit:** 1 PLOT plot
Treated Plot Area: 200.1 FT² **Treatments:** 12 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOB Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Trial Initiation Comments:

Soil Description

Description Name: G-8
% OM: 2 **Texture:** SICL silty clay loam
pH: 6.1 **Soil Name:** Kokomo
CEC: 14.9 **Fert. Level:** G good
Soil Drainage: G good

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Application Description

A

Application Date: Nov-9-2012
Appl. Start Time: 10:00 A.M
Application Method: SPRAY
Application Timing: FALL
Application Placement: BROFOL
Applied By: Bethel
Air Temperature, Unit: 54 F
% Relative Humidity: 68
Wind Velocity, Unit: 5.5 MPH
Wind Direction: S
Dew Presence (Y/N): N no
Soil Temperature, Unit: 40 F
Soil Moisture: NORMAL
% Cloud Cover: 0
Next Moisture Occurred On: Nov-12-2012
Time to Next Moisture, Unit: 3 DAY

Crop Stage At Each Application

A

Crop 1 Code, BBCH Scale: GLXMA BSOY

Pest Stage At Each Application

A

Pest 1 Code, Type, Scale: STEME W
Stage Majority, Percent: 19 100
Diameter, Unit: 4 in
Height, Unit: 2 IN
Height Minimum, Maximum: 1 2
Density, Unit: 30.5 M2
Pest 2 Code, Type, Scale: LAMPU W
Stage Majority, Percent: 19 100
Diameter, Unit: 1 in
Height, Unit: 2 in
Height Minimum, Maximum: 1 2
Density, Unit: 24 M2
Pest 3 Code, Type, Scale: SENGL W
Density, Unit: 12 M2
Pest 4 Code, Type, Scale: CAPBP W
Density, Unit: 2.6 M2
Pest 5 Code, Type, Scale: AMBTR W
Density, Unit: 5.3 M2
Pest 6 Code, Type, Scale: VERAR W
Density, Unit: 12 M2
Pest 7 Code, Type, Scale: TAROF W
Density, Unit: 1.3 M2

Application Equipment

A

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

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Project ID:

Location: WESTERN BRANCH G-8 E Trial Year:
Investigator: Dr. Mark M. Loux
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Pest Code	STEME	LAMP	STEME	LAMP	RANAB	AMBTR	STEME
Crop Code							
Rating Date	Nov-30-2012	Nov-30-2012	Apr-23-2013	Apr-23-2013	Apr-23-2013	Apr-23-2013	May-7-2013
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%	%
Days After First/Last Applic.	21 21	21 21	165 165	165 165	165 165	165 165	179 179
Trt-Eval Interval	21 DA-A	21 DA-A	165 DA-A	165 DA-A	165 DA-A	165 DA-A	179 DA-A
Plant-Eval Interval	-157 DP-1	-157 DP-1	-13 DP-1	-13 DP-1	-13 DP-1	-13 DP-1	1 DP-1
Days After Emergence	-171 DE-1	-171 DE-1	-27 DE-1	-27 DE-1	-27 DE-1	-27 DE-1	-13 DE-1

Trt Treatment	Other Rate	Other Rate Unit	Growth Stage	Appl Code	1	2	3	4	5	6	7
1 UTC					0 d	0 c	0 c	0 b	0 c	0 a	0 c
2 TriCor DF	8 oz/a		FALL	A	47 ab	30 abc	70 ab	87 a	53 ab	9 a	77 ab
2 COC	0.6 qt/a		FALL								
3 Collide	2 pt/a		FALL	A	33 abc	68 ab	33 b	95 a	95 a	31 a	30 bc
3 COC	0.6 qt/a		FALL								
4 TriCor DF	4 oz/a		FALL	A	50 a	30 abc	50 ab	90 a	97 a	11 a	55 ab
4 Collide	1 pt/a		FALL								
4 COC	0.6 qt/a		FALL								
5 TriCor DF	8 oz/a		FALL	A	47 ab	0 c	60 ab	93 a	45 abc	8 a	63 ab
5 2,4-D	16 oz/a		FALL								
5 COC	0.6 qt/a		FALL								
6 Collide	2 pt/a		FALL	A	22 c	80 a	7 c	95 a	100 a	12 a	17 c
6 2,4-D	16 oz/a		FALL								
6 COC	0.6 qt/a		FALL								
7 TriCor DF	4 oz/a		FALL	A	49 a	53 abc	50 ab	100 a	100 a	12 a	58 ab
7 Collide	1 pt/a		FALL								
7 2,4-D	16 oz/a		FALL								
7 COC	0.6 qt/a		FALL								
8 TriCor DF	8 oz/a		FALL	A	37 abc	17 bc	77 a	80 a	15 bc	0 a	73 ab
8 Roundup PowerMax	22 oz/a		FALL								
8 N-PAK AMS	1.5 qt/a		FALL								
9 Collide	2 pt/a		FALL	A	27 bc	40 abc	57 ab	93 a	83 a	10 a	60 ab
9 Roundup PowerMax	22 oz/a		FALL								
9 N-PAK AMS	1.5 qt/a		FALL								
10 TriCor DF	4 oz/a		FALL	A	33 abc	40 abc	85 a	98 a	70 a	7 a	80 a
10 Collide	1 pt/a		FALL								
10 Roundup PowerMax	22 oz/a		FALL								
10 N-PAK AMS	1.5 qt/a		FALL								
11 Roundup PowerMax	22 oz/a		FALL	A	18 c	25 abc	80 a	83 a	70 a	2 a	80 a
11 2,4-D	16 oz/a		FALL								
11 N-PAK AMS	1.5 qt/a		FALL								

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
t=Mean descriptions are reported in transformed data units, and are not de-transformed.
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns: Yates=1,5,10,11; Average=2,4,8,9

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Pest Code	STEME		LAMPU		STEME		LAMPU		RANAB	AMBTR	STEME	
Crop Code	Nov-30-2012		Nov-30-2012		Apr-23-2013		Apr-23-2013		Apr-23-2013	Apr-23-2013	May-7-2013	
Rating Date												
Rating Type	CONTRO		CONTRO		CONTRO		CONTRO		CONTRO	CONTRO	CONTRO	
Rating Unit	%		%		%		%		%	%	%	
Days After First/Last Applic.	21	21	21	21	165	165	165	165	165	165	179	
Trt-Eval Interval	21 DA-A		21 DA-A		165 DA-A		165 DA-A		165 DA-A	165 DA-A	179 DA-A	
Plant-Eval Interval	-157 DP-1		-157 DP-1		-13 DP-1		-13 DP-1		-13 DP-1	-13 DP-1	1 DP-1	
Days After Emergence	-171 DE-1		-171 DE-1		-27 DE-1		-27 DE-1		-27 DE-1	-27 DE-1	-13 DE-1	
Trt Treatment	Other	Other	Growth		Appl							
No. Name	Rate	Rate	Unit	Stage	Code	1	2	3	4	5	6	7
12 Roundup PowerMax	22 oz/a		FALL	A		20 c	17 bc	77 a	78 a	47 abc	8 a	67 ab
12 N-PAK AMS	1.5 qt/a		FALL									
LSD (P=.05)						13.5	33.0	24.5	16.0	35.2	1.3t	29.0
Standard Deviation						8.0	18.4	14.5	9.3	20.4	0.8t	17.1
CV						25.03	55.3	26.95	11.28	31.61	91.39	31.12
Bartlett's X2						2.878	3.237	6.945	8.946	10.151	3.843	8.613
P(Bartlett's X2)						0.984	0.862	0.731	0.347	0.255	0.921	0.474
Skewness						-0.225	0.6147	-0.4055	-2.3345*	-0.5353	-0.1265	-0.5579
Kurtosis						-0.519	-0.6008	-0.8587	4.7738*	-1.2897	-1.9276*	-0.5351
Replicate F						4.722	0.002	6.473	1.107	2.614	1.065	3.761
Replicate Prob(F)						0.0203	0.9979	0.0062	0.3510	0.1024	0.3618	0.0393
Treatment F						10.988	5.398	11.149	25.042	8.021	1.044	6.904
Treatment Prob(F)						0.0001	0.0047	0.0001	0.0001	0.0001	0.4446	0.0001

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Pest Code	LAMPU		CAPBP		RANAB		AMBTR		AMBTR	
Crop Code	May-7-2013		May-7-201		May-7-2013		May-7-201		May-21-201	
Rating Date			3				3		3	
Rating Type	CONTRO		CONTRO		CONTRO		CONTRO		CONTRO	
Rating Unit	%		%		%		%		%	
Days After First/Last Applic.	179	179	179	179	179	179	179	179	193	193
Trt-Eval Interval	179 DA-A		179 DA-A		179 DA-A		179 DA-A		193 DA-A	
Plant-Eval Interval	1 DP-1		1 DP-1		1 DP-1		1 DP-1		15 DP-1	
Days After Emergence	-13 DE-1		-13 DE-1		-13 DE-1		-13 DE-1		1 DE-1	
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage	Appl Code	8	9	10	11	12
1	UTC					0	0 b	0 c	0 a	0 a
2	TriCor DF	8 oz/a		FALL	A	77 a	87 a	50 ab	10 a	0 a
2	COC	0.6 qt/a		FALL						
3	Collide	2 pt/a		FALL	A	88 a	87 a	57 ab	5 a	23 a
3	COC	0.6 qt/a		FALL						
4	TriCor DF	4 oz/a		FALL	A	75 a	95 a	70 ab	10 a	7 a
4	Collide	1 pt/a		FALL						
4	COC	0.6 qt/a		FALL						
5	TriCor DF	8 oz/a		FALL	A	75 a	85 a	50 ab	0 a	0 a
5	2,4-D	16 oz/a		FALL						
5	COC	0.6 qt/a		FALL						
6	Collide	2 pt/a		FALL	A	83 a	90 a	70 ab	0 a	23 a
6	2,4-D	16 oz/a		FALL						
6	COC	0.6 qt/a		FALL						
7	TriCor DF	4 oz/a		FALL	A	92 a	93 a	100 a	37 a	17 a
7	Collide	1 pt/a		FALL						
7	2,4-D	16 oz/a		FALL						
7	COC	0.6 qt/a		FALL						
8	TriCor DF	8 oz/a		FALL	A	73 a	65 a	40 b	0 a	0 a
8	Roundup PowerMax	22 oz/a		FALL						
8	N-PAK AMS	1.5 qt/a		FALL						
9	Collide	2 pt/a		FALL	A	90 a	100 a	71 ab	0 a	0 a
9	Roundup PowerMax	22 oz/a		FALL						
9	N-PAK AMS	1.5 qt/a		FALL						
10	TriCor DF	4 oz/a		FALL	A	88 a	70 a	81 ab	10 a	0 a
10	Collide	1 pt/a		FALL						
10	Roundup PowerMax	22 oz/a		FALL						
10	N-PAK AMS	1.5 qt/a		FALL						
11	Roundup PowerMax	22 oz/a		FALL	A	70 a	100 a	51 ab	0 a	0 a
11	2,4-D	16 oz/a		FALL						
11	N-PAK AMS	1.5 qt/a		FALL						

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Pest Code	LAMPU	CAPBP	RANAB	AMBTR	AMBTR
Crop Code					
Rating Date	May-7-2013	May-7-201	May-7-2013	May-7-201	May-21-201
Rating Type	3	3	3	3	3
Rating Unit	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Days After First/Last Applic.	%	%	%	%	%
Trt-Eval Interval	179 179	179 179	179 179	179 179	193 193
Plant-Eval Interval	179 DA-A	179 DA-A	179 DA-A	179 DA-A	193 DA-A
Days After Emergence	1 DP-1	1 DP-1	1 DP-1	1 DP-1	15 DP-1
	-13 DE-1	-13 DE-1	-13 DE-1	-13 DE-1	1 DE-1
Trt Treatment No. Name	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
12 Roundup PowerMax	22 oz/a	FALL	A		8
12 N-PAK AMS	1.5 qt/a	FALL			9
					10
					11
					12
LSD (P=.05)	20.9	36.0	30.7	22.2	23.3
Standard Deviation	12.1	20.4	17.4	13.0	13.7
CV	15.16	25.24	30.96	219.34	235.45
Bartlett's X2	6.179	4.778	7.215	2.46	1.482
P(Bartlett's X2)	0.722	0.573	0.514	0.482	0.686
Skewness	-0.1004	-1.5788*	-0.0658	3.4249*	2.5302*
Kurtosis	-0.7445	1.3592	-0.0752	13.1998*	5.3293*
Replicate F	5.401	0.326	0.639	4.778	0.839
Replicate Prob(F)	0.0153	0.7275	0.5438	0.0195	0.4454
Treatment F	1.381	5.572	6.323	1.991	1.450
Treatment Prob(F)	0.2681	0.0023	0.0013	0.0842	0.2203

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Pest Code

STEME, Stellaria media, = US
LAMPU, Lamium purpureum, = US
RANAB, Ranunculus abortivus, = US
AMBTR, Ambrosia trifida, = US
CAPBP, Capsella bursa-pastoris, = US

Rating Type

CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

-157 DP-1 = 1 GLXMA May-6-2013
-13 DP-1 = 1 GLXMA May-6-2013
1 DP-1 = 1 GLXMA May-6-2013
15 DP-1 = 1 GLXMA May-6-2013