

No-Till Soybean Burndown Evaluation for Vida and Experimental Herbicides.

Trial ID: 09-ARC-17-100-N75 Location: Agronomy Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Carbondale IL 62901 USA
 Trial Status: FINAL Initiation Date: 04-29-09

Objectives: Determine the burndown efficacy of Vida, GWN-9794, and GWN-9795
 for no-till soybean.

Crop 1: GLXMA Soybean	Variety: AG 4404	Description: RR/STS
Planting Method: SEEDED	Planting Date: 05-22-09	
Rate, Unit: 75 LB/A	Depth, Unit: 1.0 IN	
Row Spacing, Unit: 30 IN		

Pest 1 Type: W	Code: STEME	Stellaria media (L.) Vill.	chickweed, common
Pest 2 Type: W	Code: LAMAM	Lamium amplexicaule L.	henbit
Pest 3 Type: W	Code: POAAN	Poa annua L.	bluegrass, annual
Pest 4 Type: W	Code: SENGL	Senecio glabellus Poir.	groundsel, cressleaf
Pest 5 Type: W	Code: ERICA	Conyza canadensis (L.) Crong.	horseweed
Pest 6 Type: W	Code: PANDI	Panicum dichotomiflorum Michx.	panicum, fall
Pest 7 Type: W	Code: AMBTR	Ambrosia trifida L.	ragweed, giant

Plot Width, Unit: 10 FT	Site Type: FIELD
Plot Length, Unit: 28 FT	Tillage Type: NO-TILL
Replications: 4	Study Design: Randomized Complete Block

Prior Crops, Year
 1. ZEAMD 2008

Field Prep./Maintenance: N 0 LB/A, P205 0 LB/A, K20 0 LB/A

% OM: 1.6	Texture: SILT LOAM
pH: 6.2	Soil Name: STGY
CEC: 8.3	Fert. Level: P1: 67 LB/A, K: 247 LB/A

Application Description

Application Date:	04-29-09
Time of Day:	14:30
Application Method:	Spray
Application Timing:	14EPP
Application Placement:	BROFOL
Applied By:	NRJ
Air Temperature, Unit:	84 F
% Relative Humidity:	58
Wind Velocity, Unit:	1 MPH
Wind Direction:	W
Dew Presence (Y/N):	N
Soil Temperature, Unit:	70 F
Soil Moisture:	ABONOR
% Cloud Cover:	75

	04-29-09
Crop stage at application:	NA LVS

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	Pest Stage At Each Application
Application Date:	04-29-09
Weed Code:	STEME
Stage Majority (leaves):	70
Stage Min, Max:	60 80
Height Majority:	5 IN
Height Min, Max:	4 6
Density, Unit:	2 FT2
Weed Code:	LAMAM
Stage Majority (leaves):	50
Stage Min, Max:	30 60
Height Majority:	7 IN
Height Min, Max:	6 8
Density, Unit:	1 FT2
Weed Code:	POAAN
Stage Majority (leaves):	7 TILLERS
Stage Min, Max:	4 10
Height Majority:	3 IN
Height Min, Max:	2 4
Density, Unit:	1 FT2
Weed Code:	SENGL
Stage Majority (leaves):	20
Stage Min, Max:	10 30
Height Majority:	22 IN
Height Min, Max:	12 30
Density, Unit:	0.1 FT2
Weed Code:	ERICA
Stage Majority (leaves):	30
Stage Min, Max:	10 40
Height Majority:	8 IN
Height Min, Max:	3 10
Density, Unit:	0.1 FT2
Weed Code:	PANDI
Stage Majority (leaves):	NA
Weed Code:	AMBTR
Stage Majority (leaves):	6
Stage Min, Max:	2 8
Height Majority:	4 IN
Height Min, Max:	2 6
Density, Unit:	0.1 FT2

Application Equipment

Appl. Equipment:	CO2 sprayer
Operating Pressure:	30 PSI
Nozzle Type:	Flat fan
Nozzle Size:	XR 8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

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Pest Code Crop Code Rating Date Rating Data Type Rating Unit Rating Timing Trt-Eval Interval										GLXMA 11-05-09 Moisture Percent	GLXMA 11-05-09 Yield bu/A	GLXMA 06-19-09 Injury Percent 21 DAE 28 DA-A	STEME 05-06-09 Control Percent 7 DA-A	STEME 05-13-09 Control Percent 14 DA-A	LAMAM 05-06-09 Control Percent 7 DA-A	LAMAM 05-13-09 Control Percent 14 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
1	NONTREATED									12.5 ab	25 ab	0 a	0 b	0 b	0 b	0 b
2	VIDA	0.208	SL	0.00163	lb ai/a	1 fl oz/a		14EPP A		12.3 ab	30 a	0 a	97 a	99 a	99 a	99 a
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22 fl oz/a		14EPP A								
2	N-PAK AMS	100	SL	5	% v/v	5 % v/v		14EPP A								
3	VIDA	0.208	SL	0.00163	lb ai/a	1 fl oz/a		14EPP A		13.2 a	31 a	0 a	95 a	98 a	99 a	99 a
3	2,4-D LV 4	3.8	EC	0.238	lb ae/a	8 fl oz/a		14EPP A								
3	DESTINY MSO	100	SL	1	% v/v	1 % v/v		14EPP A								
3	N-PAK AMS	100	SL	5	% v/v	5 % v/v		14EPP A								
4	GWN-9794	74.3	WG	0.0232	lb ai/a	0.5 oz/a		14EPP A		12.9 ab	23 b	0 a	97 a	99 a	99 a	99 a
4	DESTINY MSO	100	SL	1	% v/v	1 % v/v		14EPP A								
4	N-PAK AMS	100	SL	5	% v/v	5 % v/v		14EPP A								
5	GWN-9794	74.3	WG	0.0232	lb ai/a	0.5 oz/a		14EPP A		12.2 b	30 a	0 a	96 a	99 a	99 a	99 a
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22 fl oz/a		14EPP A								
5	N-PAK AMS	100	SL	5	% v/v	5 % v/v		14EPP A								
6	GWN-9795	73.7	WG	0.161	lb ai/a	3.5 oz/a		14EPP A		12.5 ab	29 a	0 a	94 a	99 a	99 a	99 a
6	DESTINY MSO	100	SL	1	% v/v	1 % v/v		14EPP A								
6	N-PAK AMS	100	SL	5	% v/v	5 % v/v		14EPP A								
7	GWN-9795	73.7	WG	0.161	lb ai/a	3.5 oz/a		14EPP A		12.4 ab	27 ab	0 a	96 a	99 a	99 a	99 a
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22 fl oz/a		14EPP A								
7	N-PAK AMS	100	SL	5	% v/v	5 % v/v		14EPP A								
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22 fl oz/a		14EPP A		12.4 ab	26 ab	0 a	97 a	99 a	99 a	99 a
8	N-PAK AMS	100	SL	5	% v/v	5 % v/v		14EPP A								
LSD (P=.05)										0.94	5.8	0.0	5.1	1.0	0.0	0.0
Replicate F										2.844	6.062	0.000	1.229	1.000	0.000	0.000
Replicate Prob(F)										0.0623	0.0039	1.0000	0.3241	0.4123	1.0000	1.0000
Treatment F										1.118	1.953	0.000	386.371	9773.715	0.000	0.000
Treatment Prob(F)										0.3887	0.1112	1.0000	0.0001	0.0001	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)

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Pest Code	POAAN	POAAN	POAAN	SENGL	SENGL
Crop Code					
Rating Date	05-06-09	05-13-09	05-27-09	05-06-09	05-13-09
Rating Data Type	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent
Rating Timing					
Trt-Eval Interval	7 DA-A	14 DA-A	28 DA-A	7 DA-A	14 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	NONTREATED									0 c	0 c	0 c	0 d	0 c
2	VIDA	0.208	SL	0.00163	lb ai/a	1	fl oz/a	14EPP	A	85 a	99 a	99 a	85 a	99 a
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A					
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	14EPP	A					
3	VIDA	0.208	SL	0.00163	lb ai/a	1	fl oz/a	14EPP	A	83 a	38 b	60 b	50 c	56 b
3	2,4-D LV 4	3.8	EC	0.238	lb ae/a	8	fl oz/a	14EPP	A					
3	DESTINY MSO	100	SL	1	% v/v	1	% v/v	14EPP	A					
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	14EPP	A					
4	GWN-9794	74.3	WG	0.0232	lb ai/a	0.5	oz/a	14EPP	A	56 b	8 c	0 c	78 ab	98 a
4	DESTINY MSO	100	SL	1	% v/v	1	% v/v	14EPP	A					
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	14EPP	A					
5	GWN-9794	74.3	WG	0.0232	lb ai/a	0.5	oz/a	14EPP	A	74 ab	99 a	98 a	70 ab	99 a
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A					
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	14EPP	A					
6	GWN-9795	73.7	WG	0.161	lb ai/a	3.5	oz/a	14EPP	A	64 ab	0 c	35 b	66 bc	99 a
6	DESTINY MSO	100	SL	1	% v/v	1	% v/v	14EPP	A					
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	14EPP	A					
7	GWN-9795	73.7	WG	0.161	lb ai/a	3.5	oz/a	14EPP	A	75 ab	99 a	99 a	69 ab	98 a
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A					
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	14EPP	A					
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A	84 a	99 a	99 a	76 ab	99 a
8	N-PAK AMS	100	SL	5	% v/v	5	% v/v	14EPP	A					
LSD (P=.05)										25.9	16.2	27.7	17.1	14.9
Replicate F										2.199	1.138	0.384	2.192	1.106
Replicate Prob(F)										0.1182	0.3566	0.7654	0.1190	0.3690
Treatment F										10.213	77.350	22.335	21.485	50.398
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

No-Till Soybean Burndown Evaluation for Vida and Experimental Herbicides.

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Pest Code	ERICA	ERICA	ERICA	PANDI	AMBTR
Crop Code					
Rating Date	05-06-09	05-13-09	05-27-09	05-27-09	05-27-09
Rating Data Type	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent
Rating Timing					
Trt-Eval Interval	7 DA-A	14 DA-A	28 DA-A	28 DA-A	28 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	NONTREATED										0 c	0 c	0 e	0 a 0 c
2	VIDA	0.208	SL	0.00163	lb ai/a	1	fl oz/a	14EPP	A	58 ab	93 a	84 b	0 a	96 a
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A					
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	14EPP	A					
3	VIDA	0.208	SL	0.00163	lb ai/a	1	fl oz/a	14EPP	A	55 b	61 b	58 c	0 a	99 a
3	2,4-D LV 4	3.8	EC	0.238	lb ae/a	8	fl oz/a	14EPP	A					
3	DESTINY MSO	100	SL	1	% v/v	1	% v/v	14EPP	A					
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	14EPP	A					
4	GWN-9794	74.3	WG	0.0232	lb ai/a	0.5	oz/a	14EPP	A	55 b	56 b	38 d	0 a	52 b
4	DESTINY MSO	100	SL	1	% v/v	1	% v/v	14EPP	A					
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	14EPP	A					
5	GWN-9794	74.3	WG	0.0232	lb ai/a	0.5	oz/a	14EPP	A	60 ab	90 a	78 b	0 a	87 a
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A					
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	14EPP	A					
6	GWN-9795	73.7	WG	0.161	lb ai/a	3.5	oz/a	14EPP	A	64 a	92 a	99 a	0 a	96 a
6	DESTINY MSO	100	SL	1	% v/v	1	% v/v	14EPP	A					
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	14EPP	A					
7	GWN-9795	73.7	WG	0.161	lb ai/a	3.5	oz/a	14EPP	A	61 ab	94 a	99 a	0 a	94 a
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A					
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	14EPP	A					
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	14EPP	A	59 ab	86 a	84 b	0 a	82 ab
8	N-PAK AMS	100	SL	5	% v/v	5	% v/v	14EPP	A					
LSD (P=.05)										7.5	9.0	9.3	0.0	32.3
Replicate F										1.068	1.248	1.881	0.000	0.917
Replicate Prob(F)										0.3837	0.3174	0.1638	1.0000	0.4497
Treatment F										67.545	113.291	117.039	0.000	9.652
Treatment Prob(F)										0.0001	0.0001	0.0001	1.0000	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

Trial Comments

1. Protocol: Gowan (UNI-09-02-T01).
2. Ratings: CI 14-21 DAE, WC at 7, 14, and 28-35 DAT.
3. Targets: STEME, ERICA, LAMAM, AMBTR.
4. DAE = Days after emergence.
5. Harvested 11-5-09, (2) 30 inch rows by 25 ft.