

MON 63410 in Soybean.

Trial ID: 10-2C-MW70

Location: Belleville Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Belleville IL 62221 USA
 Trial Status: FINAL Initiation Date: 06-07-10

Objectives: To better understand how MON 63410 fits with soybean herbicide systems including one-pass and two-pass systems utilizing preemergence products.

Crop 1: GLXMA Soybean Variety: AG 4404 Description: RR/STS
 Planting Method: SEEDED Planting Date: 06-07-10
 Rate, Unit: 75 LB/A Depth, Unit: 1.0 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: GGGAN grasses, annual
 Pest 2 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common
 Pest 3 Type: W Code: AMBTR Ambrosia trifida L. ragweed, giant
 Pest 4 Type: W Code: ABUTH Abutilon theophrasti Medicus velvetleaf
 Pest 5 Type: W Code: IPOHE Ipomoea hederacea (L.) Jacq. morningglory, ivyleaf

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 28 FT Tillage Type: REDUCED-TILL
 Replications: 4 Study Design: Randomized Complete Block

Prior Crops, Year
 1. ZEAMD 2009

Field Prep./Maintenance: N 0 LB/A, P2O5 0 LB/A, K2O 150 LB/A

% OM: 1.5 Texture: SILT LOAM
 pH: 6.2 Soil Name: PIERRON
 CEC: 7 Fert. Level: P1: 85 LB/A, K: 262 LB/A

Application Description

	A	B	C
Application Date:	06-07-10	06-30-10	07-14-10
Time of Day:	16:00	9:00	8:30
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	V3	V9-R1
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	DKP	JRK	JRK
Air Temperature, Unit:	80 F	70 F	80 F
% Relative Humidity:	90	92	92
Wind Velocity, Unit:	1 MPH	2 MPH	1 MPH
Wind Direction:	E	W	E
Dew Presence (Y/N):	N	Y	N
Soil Moisture:	NORMAL	ABONOR	NORMAL
% Cloud Cover:	80	0	70

	06-07-10	06-30-10	07-14-10
Crop stage at application:	NA	V3	V9-R1
Height Min, Max (inch):		9 10 16	23

Pest Stage At Each Application

	06-07-10	06-30-10	07-14-10
Application Date:	06-07-10	06-30-10	07-14-10
Weed Code:	GGGAN	GGGAN	GGGAN
Stage Majority (leaves):	NA	3	6
Stage Min, Max:		2 4	2 6
Height Majority:		5 IN	8 IN
Height Min, Max:		2 6	4 8
Density, Unit:		1 FT2	1 FT2
Weed Code:	AMATA	AMATA	AMATA
Stage Majority (leaves):	NA	10	12
Stage Min, Max:		2 12	4 15
Height Majority:		5 IN	8 IN
Height Min, Max:		1 8	4 10
Density, Unit:		0.1 FT2	0.01 FT2
Weed Code:	AMBTR	AMBTR	AMBTR
Stage Majority (leaves):	NA	6	8
Stage Min, Max:		2 8	4 10
Height Majority:		6 IN	8 IN
Height Min, Max:		3 8	5 10
Density, Unit:		0.01 FT2	0.01 FT2
Weed Code:	ABUTH	ABUTH	ABUTH
Stage Majority (leaves):	NA	4	6
Stage Min, Max:		2 4	2 6
Height Majority:		5 IN	6 IN
Height Min, Max:		1 6	2 8
Density, Unit:		0.01 FT2	0.01 FT2
Weed Code:	IPOHE	IPOHE	IPOHE
Stage Majority (leaves):	NA	6	6
Stage Min, Max:		1 6	2 8
Height Majority:		6 IN	8 IN
Height Min, Max:		1 7	2 8
Density, Unit:		0.01 FT2	0.01 FT2

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Application Equipment

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

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Pest Code										GLXMA								GGGAN		GGGAN					
Crop Code										10-21-10		07-07-10		07-07-10		07-21-10		07-21-10		07-21-10		08-25-10			
Rating Date										Yield		Chlorosis		Stunt		Chlorosis		Stunt		Control		Control			
Rating Data Type										bu/A		Percent		Percent		Percent		Percent		Percent		Percent			
Rating Unit										30 DA-A		30 DA-A		7 DA-C		7 DA-C		7 DA-C		7 DA-C		42 DA-C			
Rating Timing										7 DA-B		7 DA-B		21 DA-B		21 DA-B		21 DA-B		21 DA-B		56 DA-B			
Trt-Eval Interval																									
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code																
1	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V9-R1	C	39	b	0	d	0	b	1	b	0	c	58	c	99	a		
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V9-R1	C																
2	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V3	B	43	ab	0	d	0	b	2	a	0	c	99	a	99	a		
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B																
2	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V9-R1	C																
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V9-R1	C																
3	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V3	B	42	ab	3	b	0	b	2	ab	3	ab	99	a	99	a		
3	MON 63410	3	CS	1.125	lb ai/a	48	fl oz/a	V3	B																
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B																
4	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	46	ab	2	c	0	b	2	a	3	b	99	a	99	a		
4	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V3	B																
4	MON 63410	3	CS	1.125	lb ai/a	48	fl oz/a	V3	B																
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B																
5	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	46	ab	0	d	0	b	1	ab	0	c	86	b	99	a		
5	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V9-R1	C																
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V9-R1	C																
6	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	48	a	3	b	0	b	1	ab	3	b	99	a	99	a		
6	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V3	B																
6	MON 63410	3	CS	1.125	lb ai/a	48	fl oz/a	V3	B																
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B																
7	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	39	b	0	d	0	b	1	ab	0	c	61	c	99	a		
7	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V9-R1	C																
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V9-R1	C																
8	EXTREME	2.17	SL	0.81	lb ai/a	1.5	qt/a	V3	B	43	ab	5	a	5	a	2	a	4	a	99	a	99	a		
8	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B																
9	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V3	B	43	ab	2	c	0	b	1	b	1	c	99	a	99	a		
9	DUAL II MAGNUM	7.64	EC	1.125	lb ai/a	1.18	pt/a	V3	B																
9	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B																
10	NONTREATED									0	c	0	d	0	b	0	c	0	c	0	d	0	b		
LSD (P=.05)										8.2		0.7		0.0		0.6		0.9		4.0		0.0			
Replicate F										0.879		1.227		0.000		5.674		0.379		0.559		0.000			
Replicate Prob(F)										0.4642		0.3190		1.0000		0.0038		0.7688		0.6467		1.0000			
Treatment F										24.576		52.909		0.000		6.522		20.548		555.899		0.000			
Treatment Prob(F)										0.0001		0.0001		1.0000		0.0001		0.0001		0.0001		1.0000			

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

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Pest Code	AMATA	AMATA	AMBTR	AMBTR	ABUTH	ABUTH
Crop Code						
Rating Date	07-21-10	07-21-10	07-21-10	07-21-10	07-21-10	07-21-10
Rating Data Type	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing	7 DA-C	42 DA-C	7 DA-C	42 DA-C	7 DA-C	42 DA-C
Trt-Eval Interval	21 DA-B	56 DA-B	21 DA-B	56 DA-B	21 DA-B	56 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V9-R1	C	19	c	99	a	14	c
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V9-R1	C						
2	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V3	B	99	a	99	a	93	b
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B						
2	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V9-R1	C						
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V9-R1	C						
3	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V3	B	99	a	99	a	98	a
3	MON 63410	3	CS	1.125	lb ai/a	48	fl oz/a	V3	B						
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B						
4	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	99	a	99	a	97	ab
4	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V3	B						
4	MON 63410	3	CS	1.125	lb ai/a	48	fl oz/a	V3	B						
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B						
5	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	79	b	99	a	99	a
5	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V9-R1	C						
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V9-R1	C						
6	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	99	a	99	a	97	ab
6	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V3	B						
6	MON 63410	3	CS	1.125	lb ai/a	48	fl oz/a	V3	B						
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B						
7	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	99	a	99	a	99	a
7	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V9-R1	C						
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V9-R1	C						
8	EXTREME	2.17	SL	0.81	lb ai/a	1.5	qt/a	V3	B	94	a	99	a	97	ab
8	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B						
9	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V3	B	96	a	99	a	97	ab
9	DUAL II MAGNUM	7.64	EC	1.125	lb ai/a	1.18	pt/a	V3	B						
9	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B						
10	NONTREATED									0	d	0	b	0	d
	LSD (P=.05)									5.3		0.0		5.5	
	Replicate F									0.135		0.000		2.509	
	Replicate Prob(F)									0.9383		1.0000		0.0801	
	Treatment F									406.991		0.000		411.022	
	Treatment Prob(F)									0.0001		1.0000		0.0001	

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

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Location: Belleville Res. Center

Pest Code		IPOHE	IPOHE
Crop Code			
Rating Date		07-21-10	07-21-10
Rating Data Type		Control	Control
Rating Unit		Percent	Percent
Rating Timing		7 DA-C	42 DA-C
Trt-Eval Interval		21 DA-B	56 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V9-R1	C	5 f	99 a	
1	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V9-R1	C			
2	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V3	B	66 cd	99 a	
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B			
2	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V9-R1	C			
2	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V9-R1	C			
3	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V3	B	79 ab	99 a	
3	MON 63410	3	CS	1.125	lb ai/a	48	fl oz/a	V3	B			
3	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B			
4	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	86 a	99 a	
4	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V3	B			
4	MON 63410	3	CS	1.125	lb ai/a	48	fl oz/a	V3	B			
4	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B			
5	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	74 bc	99 a	
5	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V9-R1	C			
5	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V9-R1	C			
6	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	79 ab	99 a	
6	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V3	B			
6	MON 63410	3	CS	1.125	lb ai/a	48	fl oz/a	V3	B			
6	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B			
7	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	PRE	A	65 d	99 a	
7	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V9-R1	C			
7	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V9-R1	C			
8	EXTREME	2.17	SL	0.81	lb ai/a	1.5	qt/a	V3	B	49 e	99 a	
8	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B			
9	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	V3	B	61 d	99 a	
9	DUAL II MAGNUM	7.64	EC	1.125	lb ai/a	1.18	pt/a	V3	B			
9	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	B			
10	NONTREATED									0 f	0 b	
LSD (P=.05)										8.6	0.0	
Replicate F										4.485	0.000	
Replicate Prob(F)										0.0111	1.0000	
Treatment F										104.449	0.000	
Treatment Prob(F)										0.0001	1.0000	

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

Trial Comments

1. Protocol: Monsanto (2010-01-04-10).
2. Ratings: Chlorosis/stunt at 7 and 21 DA-B; WC at 21 and 56 DA-B.
3. Yield if possible.
4. GGGAN = Annual grasses including SETFA (giant foxtail) and PANDI (fall panicum).
5. Weed stages and sizes at the postemergence applications varied depending on preemergence treatment.
6. Harvested 10-21-10, (2) 30 inch rows by 25 ft.