

Corn Tolerance from Planting into Select Max Soil Residues.

Project Code: 07-ARC-17-500W Location: Agronomy Research Center  
 Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Carbondale IL 62901 USA  
 Trial Status: Final Updated: 1-23-08

**Objective:**

Confirm crop safety of replanting Roundup Ready Corn 2 into a field treated with Select Max 4 and 10 days prior to planting, focusing on low organic matter and coarse soil profiles.

Crop 1: ZEAMX corn, field Variety: 33P70 RR2  
 Planting Method: Seeded Planting Date: 4-27-07  
 Rate: 28000 S/A Depth: 1.5 IN  
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 30 FT Reps: 4  
 Tillage Type: Reduced-Till Study Design: Randomized complete block  
 Previous Crop, Year: GLXMA, 2006  
 Field Prep./Maintenance: N 140 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Name: Stoy % OM: 0.8 pH: 6.1 CEC: 8.2  
 Texture: Silt loam Fert. Level: P1: 72 LB/A, K: 304 LB/A

**APPLICATION DESCRIPTION**

	A	B	C	D
Application Date:	4-17-07	4-23-07	4-27-07	6-11-07
Time of Day:	17:00	7:30	9:00	11:00
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	10DBP	4DBP	PRE	V6
Applic. Placement:	BROSIOI	BROSIOI	BROSIOI	BROSIOI
Air Temp., Unit:	70 F	63 F	58 F	75 F
% Relative Humidity:	39	88	65	68
Wind Velocity, Unit:	2-3 MPH	0-2 MPH	6 MPH	2 MPH
Dew Presence (Y/N):	N	N	N	N
Soil Temp., Unit:	52	61 F	57 F	71 F
Soil Moisture:	ABONOR	ABONOR	ABONOR	NORMAL
% Cloud Cover:	90	40	85	100

**CROP STAGE AT EACH APPLICATION**

	A	B	C	D
Crop 1 Code, Stage:	ZEAMX NA	ZEAMX NA	ZEAMX NA	ZEAMX V8
Height, Unit:	NA NA	NA NA	NA NA	26-30 IN

**APPLICATION EQUIPMENT**

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002	XR 8002	XR 8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

**NOTES:**

Corn Tolerance from Planting into Select Max Soil Residues.

Project Code: 07-ARC-17-500W Location: Agronomy Research Center  
Investigator: Bryan Young

Weed Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Crop Code	Moisture	Test wt.	Yield	Injury	Injury	Plants
Rating Data Type	Percent	lb/bu	bu/A	Percent	Percent	000/A
Rating Unit						
Rating Date	9-12-07	9-12-07	9-12-07	5-11-07	5-25-07	5-25-07
Trt-Eval Interval				14 DAP	28 DAP	28 DAP

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code												
1	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V6	D	13.9	b	58.9	ab	155	a	0	b	0	b	23.1	b
1	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	V6	D												
2	SELECT MAX-VC-1650	0.97	EC	0.03	lb ai/a	4	fl oz/a	10DBP	A	14.4	ab	59.5	ab	160	a	0	b	0	b	24.8	ab
2	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	10DBP	A												
2	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	10DBP	A												
2	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V6	D												
2	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	V6	D												
3	SELECT MAX-VC-1650	0.97	EC	0.045	lb ai/a	6	fl oz/a	10DBP	A	14.3	ab	59.0	ab	150	a	0	b	0	b	24.4	ab
3	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	10DBP	A												
3	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	10DBP	A												
3	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V6	D												
3	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	V6	D												
4	SELECT MAX-VC-1650	0.97	EC	0.06	lb ai/a	8	fl oz/a	10DBP	A	15.1	a	59.2	ab	163	a	0	b	0	b	25.4	ab
4	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	10DBP	A												
4	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	10DBP	A												
4	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V6	D												
4	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	V6	D												
5	SELECT MAX VC-1650	0.97	EC	0.03	lb ai/a	4	fl oz/a	4DBP	B	14.6	ab	58.4	b	147	a	0	b	0	b	26.1	ab
5	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	4DBP	B												
5	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	4DBP	B												
5	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V6	D												
5	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	V6	D												
6	SELECT MAX-VC-1650	0.97	EC	0.045	lb ai/a	6	fl oz/a	4DBP	B	14.6	ab	59.3	ab	157	a	0	b	0	b	25.9	ab
6	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	4DBP	B												
6	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	4DBP	B												
6	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V6	D												
6	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	V6	D												
7	SELECT MAX-VC-1650	0.97	EC	0.06	lb ai/a	8	fl oz/a	4DBP	B	14.5	ab	59.7	a	149	a	1	a	0	b	26.6	a
7	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	4DBP	B												
7	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	4DBP	B												
7	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V6	D												
7	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	V6	D												
8	SELECT MAX-VC-1650	0.97	EC	0.03	lb ai/a	4	fl oz/a	PRE	C	15.2	a	59.4	ab	158	a	0	b	0	b	24.8	ab
8	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	PRE	C												
8	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	PRE	C												
8	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V6	D												
8	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	V6	D												
9	SELECT MAX-VC-1650	0.97	EC	0.045	lb ai/a	6	fl oz/a	PRE	C	14.5	ab	58.5	b	150	a	0	b	0	b	25.8	ab
9	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	PRE	C												
9	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	PRE	C												
9	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V6	D												
9	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	V6	D												
10	SELECT MAX-VC-1650	0.97	EC	0.06	lb ai/a	8	fl oz/a	PRE	C	15.0	a	59.1	ab	163	a	0	b	2	a	25.5	ab
10	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	PRE	C												
10	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	PRE	C												
10	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V6	D												
10	N-PAK AMS	100	LIQ	5.0	% v/v	5	% v/v	V6	D												

LSD (P=.05)	0.95	1.15	21.6	1.1	1.6	3.37
Replicate F	2.688	0.426	2.279	1.000	1.000	0.594
Replicate Prob(F)	0.0663	0.7357	0.1022	0.4079	0.4079	0.6241
Treatment F	1.379	1.009	0.621	1.000	1.000	0.753
Treatment Prob(F)	0.2460	0.4572	0.7689	0.4635	0.4635	0.6585

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

Trial Comments

1. Protocol: Monsanto.
2. Ratings: CI 14 DAP and at harvest. Describe injury symptoms in the comments and evaluate CI more frequently if injury persists.
3. Consider stand counts if population is reduced.
4. Yield and grain moisture; grain should be destroyed.
5. PRE treatments should be applied prior to planting.
6. Blanket PRE application of Degree Xtra (2 qt/A) to all plots 10 ft wide and to all borders applied on 4-24-07.
7. Roundup application at V6 also to all plots 10 ft wide and to all borders, applied 6-11-07.
8. DAP = Days after planting. 000/A = Thousands per acre.
9. Injury symptoms at 14 DAP were slight chlorosis and possible stunting.  
Injury symptom at 28 DAP was possible stunting.
10. Harvested 9-12-07, (2) 30 inch rows by 27 ft.