

Realm Q Evaluation in Corn.

Trial ID: 10-2A-MME60

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: 06-04-10

Objectives: Evaluate weed control and crop response with Realm Q
 used in one and two pass systems.

Crop 1: ZEAMD Dent corn Variety: DKC 61-21 GENSS Description: RR2/LL
 Planting Method: SEEDED Planting Date: 06-04-10
 Rate, Unit: 28000 S/A Depth, Unit: 1.5 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: IPOHE Ipomoea hederacea (L.) Jacq. morningglory, ivyleaf
 Pest 4 Type: W Code: AMBEL Ambrosia artemisiifolia L. ragweed, common
 Pest 5 Type: W Code: ABUTH Abutilon theophrasti Medicus velvetleaf

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. GLXMA 2009

Field Prep./Maintenance: N 150 LB/A, P205 50 LB/A, K20 150 LB/A

% OM: 1.6 Texture: SILT LOAM
 pH: 5.9 Soil Name: PIERRON
 CEC: 6 Fert. Level: P1:41 LB/A, K:257 LB/A

Application Description

	A	B	C
Application Date:	06-05-10	06-22-10	06-24-10
Time of Day:	10:00	10:15	11:45
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	3-4"W-1	3-4"W-2
Application Placement:	BROSOL	BROFOL	BROFOL
Applied By:	DKP	NVH	JW
Air Temperature, Unit:	84 F	88 F	80 F
% Relative Humidity:	92	92	74
Wind Velocity, Unit:	4 MPH	2 MPH	1 MPH
Wind Direction:	SW	S	NW
Dew Presence (Y/N):	N	N	N
Soil Moisture:	NORMAL	NORMAL	NORMAL
% Cloud Cover:	95	25	15

	06-05-10	06-22-10	06-24-10
Crop stage at application:	NA	V4-V5	V6
Height Min, Max (inch):		8 12	12 14

Pest Stage At Each Application

	06-05-10	06-22-10	06-24-10
Application Date:	06-05-10	06-22-10	06-24-10
Weed Code:	GGGAN	GGGAN	GGGAN
Stage Majority (leaves):	NA	2	NA
Stage Min, Max:		1 4	
Height Majority:		4 IN	
Height Min, Max:		1 6	
Density, Unit:		2 FT2	
Weed Code:	AMATA	AMATA	AMATA
Stage Majority (leaves):	NA	6	6
Stage Min, Max:		2 14	2 14
Height Majority:		4 IN	4 IN
Height Min, Max:		1 6	1 6
Density, Unit:		3 FT2	0.01 FT2
Weed Code:	IPOHE	IPOHE	IPOHE
Stage Majority (leaves):	NA	8	8
Stage Min, Max:		4 10	4 10
Height Majority:		4 IN	4 IN
Height Min, Max:		1 5	1 5
Density, Unit:		0.02 FT2	0.02 FT2
Weed Code:	AMBEL	AMBEL	AMBEL
Stage Majority (leaves):	NA	2	NA
Stage Min, Max:		COTY 4	
Height Majority:		2 IN	
Height Min, Max:		1 3	
Density, Unit:		0.01 FT2	
Weed Code:	ABUTH	ABUTH	ABUTH
Stage Majority (leaves):	NA	3	3
Stage Min, Max:		1 5	3 5
Height Majority:		2 IN	2 IN
Height Min, Max:		1 4	1 4
Density, Unit:		0.2 FT2	0.02 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										GGGAN				GGGAN	GGGAN								
Crop Code										ZEAMD	ZEAMD	ZEAMD	ZEAMD										
Rating Date																							
Rating Data Type										Injury	Injury	Injury	Injury	Control	Control	Control							
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent	Percent							
Rating Timing										7 DA-A	14 DA-A	28 DA-A	56 DA-A	14 DA-A	28 DA-A	56 DA-A							
Trt-Eval Interval										7 DA-B	14 DA-B	28 DA-B	56 DA-B	14 DA-B	28 DA-B	56 DA-B							
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code														
1	REALM Q					4	oz/a	3-4"W-1	B	19	bc	9	bc	0	a	0	a	96	b	81	c	93	b
1	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-1	B														
1	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-1	B														
1	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-1	B														
1	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W-1	B														
1	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-1	B														
2	CINCH ATZ	5.5	SC	1.37	lb ai/a	1	qt/a	PRE	A	13	ef	6	d	0	a	0	a	98	a	93	a	99	a
2	REALM Q					4	oz/a	3-4"W-2	C														
2	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-2	C														
2	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-2	C														
2	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-2	C														
2	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W-2	C														
2	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-2	C														
3	REALM Q					4	oz/a	3-4"W-1	B	12	f	8	bcd	0	a	0	a	98	a	97	a	99	a
3	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-1	B														
3	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-1	B														
3	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-1	B														
3	ABUNDIT	3	SL	0.75	lb ae/a	32	fl oz/a	3-4"W-1	B														
3	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-1	B														
4	REALM Q					4	oz/a	3-4"W-1	B	22	a	15	a	0	a	0	a	98	ab	83	bc	94	ab
4	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-1	B														
4	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-1	B														
4	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-1	B														
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-1	B														
4	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-1	B														
5	REALM Q					4	oz/a	3-4"W-1	B	17	cd	8	bcd	0	a	0	a	83	c	41	d	81	c
5	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-1	B														
5	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-1	B														
5	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-1	B														
5	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	3-4"W-1	B														
5	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W-1	B														
5	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-1	B														
6	PREQUEL	45	WG			1.66	oz/a	PRE	A	15	de	7	cd	0	a	0	a	96	ab	80	c	93	b
6	RESOLVE SG	25	SG	0.0156	lb ai/a			PRE	A														
6	ISOXAFLUTOLE	75	WG	0.0313	lb ai/a			PRE	A														
6	REALM Q					4	oz/a	3-4"W-2	C														
6	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-2	C														
6	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-2	C														
6	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-2	C														
6	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W-2	C														
6	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-2	C														
7	STEADFAST Q	37.7	WG			1.5	oz/a	3-4"W-1	B	19	b	10	b	0	a	0	a	96	ab	91	ab	97	ab
7	ACCENT	75	WG	0.02362	lb ai/a			3-4"W-1	B														
7	RESOLVE SG	25	SG	0.01172	lb ai/a			3-4"W-1	B														
7	DPX-4145	50	WG	0.0078	lb ai/a			3-4"W-1	B														
7	MESOTRIONE	50	WG	0.078	lb ai/a	2.5	oz/a	3-4"W-1	B														
7	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W-1	B														
7	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-1	B														
8	NONTREATED									0	g	0	e	0	a	0	a	0	d	0	e	0	d
LSD (P=.05)										2.4		2.6		0.0		0.0		2.1		8.4		5.7	
Replicate F										1.190		1.070		0.000		0.000		0.649		0.853		2.149	
Replicate Prob(F)										0.3376		0.3831		1.0000		1.0000		0.5923		0.4804		0.1243	
Treatment F										65.898		21.530		0.000		0.000		2187.463		135.787		301.561	
Treatment Prob(F)										0.0001		0.0001		1.0000		1.0000		0.0001		0.0001		0.0001	

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										AMATA	AMATA	AMATA	IPOSS	IPOSS	IPOSS
Pest Code										Control	Control	Control	Control	Control	Control
Crop Code										Percent	Percent	Percent	Percent	Percent	Percent
Rating Date										14 DA-A	28 DA-A	56 DA-A	14 DA-A	28 DA-A	56 DA-A
Rating Data Type										14 DA-B	28 DA-B	56 DA-B	14 DA-B	28 DA-B	56 DA-B
Rating Unit															
Rating Timing															
Trt-Eval Interval															
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	REALM Q					4 oz/a		3-4"W-1 B		98 b	95 b	99 a	96 b	93 b	96 b
1	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-1 B							
1	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-1 B							
1	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-1 B							
1	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W-1 B							
1	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-1 B							
2	CINCH ATZ	5.5	SC	1.37	lb ai/a	1 qt/a		PRE A		99 a	99 a	99 a	98 a	95 ab	98 ab
2	REALM Q					4 oz/a		3-4"W-2 C							
2	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-2 C							
2	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-2 C							
2	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-2 C							
2	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W-2 C							
2	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-2 C							
3	REALM Q					4 oz/a		3-4"W-1 B		99 a	99 a	99 a	98 a	97 ab	99 a
3	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-1 B							
3	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-1 B							
3	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-1 B							
3	ABUNDIT	3	SL	0.75	lb ae/a	32 fl oz/a		3-4"W-1 B							
3	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-1 B							
4	REALM Q					4 oz/a		3-4"W-1 B		99 a	99 a	99 a	98 a	94 ab	98 ab
4	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-1 B							
4	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-1 B							
4	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-1 B							
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22 fl oz/a		3-4"W-1 B							
4	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-1 B							
5	REALM Q					4 oz/a		3-4"W-1 B		99 a	99 a	99 a	99 a	98 a	98 ab
5	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-1 B							
5	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-1 B							
5	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-1 B							
5	AATREX NINE-O	90	WG	1	lb ai/a	1.11 lb/a		3-4"W-1 B							
5	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W-1 B							
5	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-1 B							
6	PREQUEL	45	WG			1.66 oz/a		PRE A		99 a	96 ab	99 a	98 a	98 a	99 a
6	RESOLVE SG	25	SG	0.0156	lb ai/a			PRE A							
6	ISOXAFLOTOL	75	WG	0.0313	lb ai/a			PRE A							
6	REALM Q					4 oz/a		3-4"W-2 C							
6	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-2 C							
6	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-2 C							
6	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-2 C							
6	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W-2 C							
6	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-2 C							
7	STEADFAST Q	37.7	WG			1.5 oz/a		3-4"W-1 B		98 b	96 b	99 a	97 a	95 ab	98 ab
7	ACCENT	75	WG	0.02362	lb ai/a			3-4"W-1 B							
7	RESOLVE SG	25	SG	0.01172	lb ai/a			3-4"W-1 B							
7	DPX-4145	50	WG	0.0078	lb ai/a			3-4"W-1 B							
7	MESOTRIONE	50	WG	0.078	lb ai/a	2.5 oz/a		3-4"W-1 B							
7	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W-1 B							
7	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-1 B							
8	NONTREATED									0 c	0 c	0 b	0 c	0 c	0 c
LSD (P=.05)										0.9	3.1	0.0	1.7	5.0	2.5
Replicate F										1.262	1.078	0.000	1.103	0.782	2.585
Replicate Prob(F)										0.3128	0.3797	1.0000	0.3700	0.5174	0.0803
Treatment F										13365.198	1046.444	0.000	3418.107	403.714	1674.996
Treatment Prob(F)										0.0001	0.0001	1.0000	0.0001	0.0001	0.0001

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

Realm Q Evaluation in Corn.

Trial ID: 10-2A-MME60

Location: Belleville Res. Center

Pest Code	AMBEL	AMBEL	AMBEL	ABUTH	ABUTH	ABUTH
Crop Code						
Rating Date						
Rating Data Type	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing	14 DA-A	28 DA-A	56 DA-A	14 DA-A	28 DA-A	56 DA-A
Trt-Eval Interval	14 DA-B	28 DA-B	56 DA-B	14 DA-B	28 DA-B	56 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	REALM Q					4	oz/a	3-4"W-1	B	99	ab	97	b	99	a
1	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-1	B						
1	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-1	B						
1	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-1	B						
1	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W-1	B						
1	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-1	B						
2	CINCH ATZ	5.5	SC	1.37	lb ai/a	1	qt/a	PRE	A	99	a	99	a	99	a
2	REALM Q					4	oz/a	3-4"W-2	C						
2	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-2	C						
2	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-2	C						
2	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-2	C						
2	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W-2	C						
2	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-2	C						
3	REALM Q					4	oz/a	3-4"W-1	B	99	a	99	a	99	a
3	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-1	B						
3	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-1	B						
3	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-1	B						
3	ABUNDIT	3	SL	0.75	lb ae/a	32	fl oz/a	3-4"W-1	B						
3	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-1	B						
4	REALM Q					4	oz/a	3-4"W-1	B	99	a	99	a	99	a
4	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-1	B						
4	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-1	B						
4	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-1	B						
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	3-4"W-1	B						
4	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-1	B						
5	REALM Q					4	oz/a	3-4"W-1	B	99	a	99	a	99	a
5	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-1	B						
5	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-1	B						
5	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-1	B						
5	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	3-4"W-1	B						
5	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W-1	B						
5	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-1	B						
6	PREQUEL	45	WG			1.66	oz/a	PRE	A	99	a	99	a	99	a
6	RESOLVE SG	25	SG	0.0156	lb ai/a			PRE	A						
6	ISOXAFLOTOL	75	WG	0.0313	lb ai/a			PRE	A						
6	REALM Q					4	oz/a	3-4"W-2	C						
6	RESOLVE SG	25	SG	0.0188	lb ai/a			3-4"W-2	C						
6	DPX-4145	50	WG	0.0094	lb ai/a			3-4"W-2	C						
6	MESOTRIONE	50	WG	0.078	lb ai/a			3-4"W-2	C						
6	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W-2	C						
6	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-2	C						
7	STEADFAST Q	37.7	WG			1.5	oz/a	3-4"W-1	B	98	b	97	b	99	a
7	ACCENT	75	WG	0.02362	lb ai/a			3-4"W-1	B						
7	RESOLVE SG	25	SG	0.01172	lb ai/a			3-4"W-1	B						
7	DPX-4145	50	WG	0.0078	lb ai/a			3-4"W-1	B						
7	MESOTRIONE	50	WG	0.078	lb ai/a	2.5	oz/a	3-4"W-1	B						
7	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W-1	B						
7	AMS	100	SG	2	lb/a	2	lb/a	3-4"W-1	B						
8	NONTREATED									0	c	0	c	0	b
LSD (P=.05)										0.8		1.5		0.0	
Replicate F										1.711		1.189		0.000	
Replicate Prob(F)										0.1953		0.3379		1.0000	
Treatment F										18218.068		4807.937		0.000	
Treatment Prob(F)										0.0001		0.0001		1.0000	

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

Realm Q Evaluation in Corn.

Trial ID: 10-2A-MME60

Location: Belleville Res. Center

Trial Comments

1. Protocol: DuPont (USA-10-111).
2. Ratings: CI at 7, 14, and 28 days after each POST application; WC 14, 28, and 56 days after each POST application.
3. GGGAN = Annual grasses including SETFA (giant foxtail) and PANDI (fall panicum).
4. Ratings at 7 days after the 3-4"W-1 (B) application and the 3-4"W-2 (C) application were on 6-29-10 and 7-1-10, respectively.
Ratings at 14 days after the 3-4"W-1 (B) application and the 3-4"W-2 (C) application were on 7-6-10 and 7-8-10, respectively.
Ratings at 28 days after the 3-4"W-1 (B) application and the 3-4"W-2 (C) application were on 7-20-10 and 7-22-10, respectively.
5. Not harvested.