



**2013 PEST MANAGEMENT FIELD DAY**  
**WISCONSIN CROP WEED SCIENCE PROGRAM**  
**DEPARTMENT OF AGRONOMY**  
**UNIVERSITY OF WISCONSIN AND UNIVERSITY OF**  
**WISCONSIN EXTENSION**

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**Trial:** Early preplant weed control and crop safety in field corn **Trial #** CN01

**Project Goal:** To expand application timings during peak work periods

**Location:** Arlington Research Station

#### Site Description:

<b>Field no.:</b>	365	<b>Crop:</b>	Corn
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	DKC 42-04
<b>% OM:</b>	3.5	<b>Date planted:</b>	6/3/13
<b>pH:</b>	5.9	<b>Planting pop.:</b>	31, 900 seeds/acre
<b>Fertilization:</b>	145 lbs N per acre	<b>Planting depth:</b>	1.5 in
<b>Previous cropping and tillage:</b>	Soybean	<b>Row spacing:</b>	30 in
		<b>Plot size:</b>	10x25 ft
<b>Principal weeds present:</b>	Common lambsquarter (CHEAL), dandelion (TAROF), woolly cupgrass (ERIVI)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	5/13/13
Treatment:	PREPLANT
Soil moisture [surface]:	MOIST
Soil temperature (°F) [2 in depth]	65
Air temperature (°F)	52
Wind speed (mph)/direction	4-6 (SW)
Relative humidity (%)	52.5
Cloud cover (%)	5

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:		5/20/2013	5/29/2013
Crop	Height (in)	Not planted	Not planted
	Stage (lf)		
CHEAL	Height (in)	1	.5-2
	Stage (lf)		
TAROF	Height(in)	6	10-17
	Stage (lf)		
ERBVI	Height	NA	.5-1
	Stage		

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
1	Nontreated						101	211	303	410
2	Roundup PowerMax	4.5lb/ae/gal	SL	22fl oz/a	EPP	A	102	207	309	406
	2,4-D LVE	3.8lb/gal	SL	2pt/a	EPP	A				
	Fierce	76%	WDG	3oz/a	EPP	A				
	AMS	100%	SG	2.5lb/a	EPP	A				
	Roundup PowerMax	4.5lb/ae/gal	SL	28fl oz/a	Post	B				
	AMS	100%	SG	2.5lb/a	Post	B				
3	Roundup PowerMax	4.5lb/ae/gal	SL	22fl oz/a	EPP	A	103	209	310	402
	2,4-D LVE	3.8lb/gal	SL	2pt/a	EPP	A				
	Fierce	76%	WDG	3oz/a	EPP	A				
	AMS	100%	SG	2.5lb/a	EPP	A				
	Princep	4lb/gal	F	1qt/a	EPP	A				
	Roundup PowerMax	4.5lb/ae/gal	SL	28fl oz/a	Post	B				
	AMS	100%	SG	2.5lb/a	Post	B				
4	Roundup PowerMax	4.5lb/ae/gal	SL	22fl oz/a	EPP	A	104	210	304	407
	2,4-D LVE	3.8lb/gal	SL	2pt/a	EPP	A				
	Verdict	5.57lb/gal	EC	15fl oz/a	EPP	A				
	MSO	100%	EC	1% v/v	EPP	A				
	AMS	100%	SG	17lb/100 gal	EPP	A				
	Roundup PowerMax	4.5lb/ae/gal	SL	28fl oz/a	Post	B				
	AMS	100%	SG	2.5lb/a	Post	B				
5	Harrow	75%	WDG	0.25oz/a	EPP	A	105	208	312	405
	Glyphos X-tra	3lb/ae/gal	SL	32fl oz/a	EPP	A				
	NIS	100%	SL	0.25% v/v	EPP	A				
	Roundup PowerMax	4.5lb/ae/gal	SL	28fl oz/a	Post	B				
	AMS	100%	SG	2.5lb/a	Post	B				
6	Harrow	75%	WDG	0.5oz/a	EPP	A	106	201	311	408
	Glyphos X-tra	3lb/ae/gal	SL	32fl oz/a	EPP	A				
	NIS	100%	SL	0.25% v/v	EPP	A				
	Roundup PowerMax	4.5lb/ae/gal	SL	28fl oz/a	Post	B				
	AMS	100%	SG	2.5lb/a	Post	B				
7	Harrow	75%	WDG	1oz/a	EPP	A	107	206	301	411
	Glyphos X-tra	3lb/ae/gal	SL	32fl oz/a	EPP	A				
	NIS	100%	SL	0.25% v/v	EPP	A				
	Roundup PowerMax	4.5lb/ae/gal	SL	28fl oz/a	Post	B				
	AMS	100%	SG	2.5lb/a	Post	B				
8	Basis	75%	WDG	0.5oz/a	EPP	A	108	212	307	401
	Glyphos X-tra	3lb/ae/gal	SL	32fl oz/a	EPP	A				
	NIS	100%	SL	0.25% v/v	EPP	A				
	Roundup PowerMax	4.5lb/ae/gal	SL	28fl oz/a	Post	B				
	AMS	100%	SG	2.5lb/a	Post	B				
9	Glyphos X-tra	3lb/ae/gal	SL	32fl oz/a	EPP	A	109	202	308	404
	NIS	100%	SL	0.25% v/v	EPP	A				
	Roundup PowerMax	4.5lb/ae/gal	SL	28fl oz/a	Post	B				
	AMS	100%	SG	2.5lb/a	Post	B				
10	Nontreated						110	205	305	412

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	2	3	4
11	Sharpen	2.8lb/gal	SC	2.5fl oz/a	Pre	A	111	203	302	409
	MSO	100%	SL	1% v/v	Pre	A				
	Roundup PowerMax	4.5lbae/gal	SL	22fl oz/a	Pre	A				
	AMS	100%	SG	2.5lb/a	Pre	A				
	Status	46%	WDG	5oz/a	Post	B				
	Roundup PowerMax	4.5lbae/gal	SL	28fl oz/a	Post	B				
	AMS	100%	SG	2.5lb/a	Post	B				
12	Surestart	4.25lb/gal	EC	3pt/a	Pre	A	112	204	306	403
	Roundup PowerMax	4.5lbae/gal	SL	28fl oz/a	Pre	A				
	AMS	100%	SG	2.5lb/a	Pre	A				
	Roundup PowerMax	4.5lbae/gal	SL	28fl oz/a	Post	B				
	AMS	100%	SG	2.5lb/a	Post	B				

**Trial:** Sequential corn herbicide evaluation **Trial #** CN03

**Project Goal:** To evaluate various herbicide programs for season-long weed control

**Location:** Arlington Research Station

#### Site Description:

<b>Field no.:</b>	453	<b>Crop:</b>	Corn
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	DKC 55-09
<b>% OM:</b>	3.9	<b>Date planted:</b>	5/1/13
<b>pH:</b>	5.9	<b>Planting pop.:</b>	32,400 seeds/acre
<b>Fertilization:</b>	145 lbs N per acre	<b>Planting depth:</b>	1.5 in
<b>Previous cropping and tillage:</b>	Soybean	<b>Row spacing:</b>	30 in
		<b>Plot size:</b>	10 by 25 ft
<b>Principal weeds present:</b>	Giant foxtail (SETFA), common ragweed (AMBEL), velvetleaf (ABUTH), woolly cupgrass (ERIVI)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	5/1/13
Treatment:	PRE
Soil moisture [surface]:	Dry-moist
Soil temperature (°F) [2 in depth]	80
Air temperature (°F)	78
Wind speed (mph)/direction	3-6/NW
Relative humidity (%)	48
Cloud cover (%)	20

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:	5/1/13	
Crop	Height (in)	PRE
	Stage (lf)	
SETFA	Height (in)	PRE
	Stage (lf)	
AMBEL	Height (in)	PRE
	Stage (lf)	
ABUTH	Height (in)	PRE
	Stage (lf)	
ERIVI	Height (in)	PRE
	Stage (lf)	

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	2	3	4
1	Nontreated						101	214	319	408
2	Dual II Magnum	7.64lb/gal	SL	1pt/a	Pre	A	102	211	303	404
	F9387	4lb/gal	SC	2.5oz/a	Post	B				
	COC	100%	EC	1% v/v	Post	B				
	AMS	100%	SG	8.5lb/100 gal	Post	B				
3	Dual II Magnum	7.64lb/gal	SL	1pt/a	Pre	A	103	208	313	402
	F9387	4lb/gal	SC	3oz/a	Post	B				
	COC	100%	EC	1% v/v	Post	B				
	AMS	100%	SG	8.5lb/100 gal	Post	B				
4	Dual II Magnum	7.64lb/gal	SL	1pt/a	Pre	A	104	210	302	403
	Callisto	4lb/gal	SC	3fl oz/a	Post	B				
	COC	100%	EC	1% v/v	Post	B				
	AMS	100%	SG	8.5lb/100 gal	Post	B				
5	Dual II Magnum	7.64lb/gal	SL	1pt/a	Pre	A	105	217	320	406
	Status	46%	WDG	5oz/a	Post	B				
	COC	100%	EC	1% v/v	Post	B				
	AMS	100%	SG	8.5lb/100 gal	Post	B				
6	Dual II Magnum	7.64lb/gal	SL	1pt/a	Pre	A	106	221	306	419
	Capreno	3.45lb/gal	SC	3fl oz/a	Post	B				
	COC	100%	EC	1% v/v	Post	B				
	AMS	100%	SG	8.5lb/100 gal	Post	B				
7	Dual II Magnum	7.64lb/gal	SL	1pt/a	Pre	A	107	206	305	414
	F9387	4lb/gal	SC	3oz/a	Post	B				
	Roundup	4.5lbae/gal	SL	22fl oz/a	Post	B				
	PowerMax									
	AMS	100%	SG	8.5lb/100 gal	Post	B				
8	Dual II Magnum	7.64lb/gal	SL	1pt/a	Pre	A	108	201	304	410
	Halex GT	4.47lb/gal	SC	3.6pt/a	Post	B				
	AMS	100%	SG	8.5lb/100 gal	Post	B				
9	Nontreated						109	220	316	412
10	Verdict	5.57lb/gal	EC	15fl oz/a	Pre	A	110	218	317	401
11	Verdict	5.57lb/gal	EC	15fl oz/a	Pre	A	111	209	312	418
	Roundup	4.5lbae/gal	SL	22fl oz/a	Post	B				
	PowerMax									
	Activator 90	100%	SL	0.25% v/v	Post	B				
	AMS	100%	SG	17lb/100 gal	Post	B				
12	Verdict	5.57lb/gal	EC	15fl oz/a	Pre	A	112	213	307	416
	Prowl H2O	3.5lb/gal	AS	2pt/a	Pre	A				
13	Verdict	5.57lb/gal	EC	15fl oz/a	Pre	A	113	216	309	421
	Prowl H2O	3.5lb/gal	AS	2pt/a	Pre	A				
	Roundup	4.5lbae/gal	SL	22fl oz/a	Post	B				
	PowerMax									
	Activator 90	100%	SL	0.25% v/v	Post	B				
	AMS	100%	SG	17lb/100 gal	Post	B				
14	Zidua	85%	WDG	2.5oz/a	Pre	A	114	212	321	409
	Sharpen	2.85lb/gal	SC	3fl oz/a	Pre	A				
15	Zidua	85%	WDG	2.5oz/a	Pre	A	115	202	301	413
	Sharpen	2.85lb/gal	SC	3fl oz/a	Pre	A				
	Roundup	4.5lbae/gal	SL	22fl oz/a	Post	B				
	PowerMax									
	Activator 90	100%	SL	0.25% v/v	Post	B				
	AMS	100%	SG	17lb/100 gal	Post	B				
16	Verdict	5.57lb/gal	EC	10fl oz/a	Pre	A	116	204	310	405
	Zidua	85%	WDG	2.5oz/a	Pre	A				
17	Verdict	5.57lb/gal	EC	10fl oz/a	Pre	A	117	215	311	415
	Zidua	85%	WDG	2.5oz/a	Pre	A				
	Roundup	4.5lbae/gal	SL	22fl oz/a	Post	B				
	PowerMax									
	Activator 90	100%	SL	0.25% v/v	Post	B				
	AMS	100%	SG	17lb/100 gal	Post	B				

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
18	SureStart	4.25lb/gal	EC	2pt/a	Pre	A	118	219	314	411
19	SureStart	4.25lb/gal	EC	2pt/a	Pre	A	119	203	318	417
	Roundup PowerMax	4.5lbae/gal	SL	22fl oz/a	Post	B				
	Activator 90	100%	SL	0.25% v/v	Post	B				
	AMS	100%	SG	17lb/100 gal	Post	B				
20	Zemax	3.7lb/gal	SE	2qt/a	Pre	A	120	205	308	420
21	Zemax	3.7lb/gal	SE	2qt/a	Pre	A	121	207	315	407
	Roundup PowerMax	4.5lbae/gal	SL	22fl oz/a	Post	B				
	Activator 90	100%	SL	0.25% v/v	Post	B				
	AMS	100%	SG	17lb/100 gal	Post	B				

**Trial:** Anthem: Efficacy and Crop Safety with Sequential Applications **Trial #** CN04

**Project Goal:** To evaluate various herbicide programs for season-long weed control

**Location:** Arlington Research Station

#### Site Description:

<b>Field no.:</b>	452	<b>Crop:</b>	Corn
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	DKC 55-09
<b>% OM:</b>	3.4	<b>Date planted:</b>	5/1/13
<b>pH:</b>	6.7	<b>Planting pop.:</b>	32,400 seeds/acre
<b>Fertilization:</b>	145 lbs N per acre	<b>Planting depth:</b>	1.75 in
<b>Previous cropping and tillage:</b>	Soybean	<b>Row spacing:</b>	30 in
		<b>Plot size:</b>	10 by 25 ft
<b>Principal weeds present:</b>	Giant foxtail (SETFA), common lambsquarters (CHEAL), velvetleaf (ABUTH), ladythumb (POLPE), common ragweed (AMBEL)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	5/1/13	6/3/13	6/11/13
Treatment:	PRE	EPOST	MPOST
Soil moisture [surface]:	Dry moist	Dry moist	Dry
Soil temperature (°F) [2 in depth]	80	--	80
Air temperature (°F)	78	75	81
Wind speed (mph)/direction	4/NW	1-5/S/SW	3-7/W
Relative humidity (%)	48	34	53
Cloud cover (%)	20	20	90

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:		5/1/13	6/5/13
Crop	Height (in)	PRE	6
	Stage (lf)		V4
ABUTH	Height (in)	PRE	1.5
	Stage (lf)		
SETFA	Height (in)	PRE	0.75
	Stage (lf)		
AMBEL	Height (in)	PRE	
	Stage (lf)		
CHEAL	Height (in)	PRE	0.75
	Stage (lf)		



Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	2	3	4
1	Nontreated						101	215	310	404
2	Anthem	2.15lb/gal	SE	8fl oz/a	Pre	A	102	204	308	413
	F9387	4lb/gal	SC	3oz/a	Post	C				
	Roundup	4.5lbae/gal	SL	22fl oz/a	Post	C				
	PowerMax									
	AMS	100%	SG	8.5lb/100 gal	Post	C				
3	Anthem	2.15lb/gal	SE	9.5fl oz/a	Pre	A	103	211	305	409
	F9387	4lb/gal	SC	2.5oz/a	Post	C				
	Roundup	4.5lbae/gal	SL	22fl oz/a	Post	C				
	PowerMax									
	AMS	100%	SG	8.5lb/100 gal	Post	C				
4	Anthem	2.15lb/gal	SE	8fl oz/a	Pre	A	104	206	303	418
	F9387	4lb/gal	SC	3oz/a	Post	C				
	Hornet	68.5%	WDG	2oz/a	Post	C				
	Roundup	4.5lbae/gal	SL	22fl oz/a	Post	C				
	PowerMax									
	AMS	100%	SG	8.5lb/100 gal	Post	C				
5	Anthem	2.15lb/gal	SE	8fl oz/a	Pre	A	105	217	306	412
	F9387	4lb/gal	SC	3oz/a	Post	C				
	Status	56%	WDG	2.5oz/a	Post	C				
	Roundup	4.5lbae/gal	SL	22fl oz/a	Post	C				
	PowerMax									
	AMS	100%	SG	8.5lb/100 gal	Post	C				
6	Anthem	2.15lb/gal	SE	8fl oz/a	Pre	A	106	202	304	414
	F9387	4lb/gal	SC	3oz/a	Post	C				
	Python	80%	WDG	1oz/a	Post	C				
	Roundup	4.5lbae/gal	SL	22fl oz/a	Post	C				
	PowerMax									
	AMS	100%	SG	8.5lb/100 gal	Post	C				
7	Anthem	2.15lb/gal	SE	10fl oz/a	Pre	A	107	219	314	405
	Sharpen	2.85lb/gal	SC	2oz/a	Post	C				
	Roundup	4.5lbae/gal	SL	22fl oz/a	Post	C				
	PowerMax									
	AMS	100%	SG	8.5lb/100 gal	Post	C				
8	Surestart	4.25lb/gal	EC	2pt/a	Pre	A	108	209	318	410
	Roundup	4.5lbae/gal	SL	22fl oz/a	Post	C				
	PowerMax									
	AMS	100%	SG	8.5lb/100 gal	Post	C				
9	Halex GT	4.47lb/gal	SC	3.6pt/a	Post	C	109	213	301	406
	AMS	100%	SG	8.5lb/100 gal	Post	C				
10	Zemax	3.67lb/gal	SE	2qt/a	Pre	A	110	207	315	402
	Roundup	4.5lbae/gal	SL	22fl oz/a	Post	C				
	PowerMax									
	AMS	100%	SG	8.5lb/100 gal	Post	C				
11	Anthem	2.15lb/gal	SE	8fl oz/a	EPost	B	111	220	302	403
	F9387	4lb/gal	SC	3oz/a	EPost	B				
	Roundup	4.5lbae/gal	SL	22fl oz/a	EPost	B				
	PowerMax									
	AMS	100%	SG	8.5lb/100 gal	EPost	B				
12	Nontreated						112	214	307	417
13	Surestart	4.25lb/gal	EC	1.5pt/a	Pre	A	113	208	320	401
	Durango DMA	4lbae/gal	SL	1.5pt/a	MPost	D				
	Surestart	4.25lb/gal	EC	1.5pt/a	MPost	D				
	AMS	100%	SG	2.5% v/v	MPost	D				
14	Surestart	4.25lb/gal	EC	2.5pt/a	Pre	A	114	205	312	407
	Durango DMA	4lbae/gal	SL	1.5pt/a	MPost	D				
	AMS	100%	SG	2.5% v/v	MPost	D				

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
15	Surestart	4.25lb/gal	EC	2.5pt/a	EPost	B	115	216	317	411
	Durango DMA	4lbae/gal	SL	1.5pt/a	EPost	B				
	AMS	100%	SG	2.5% v/v	EPost	B				
16	Harness	7lb/gal	EC	1.75pt/a	Pre	A	116	201	313	419
	Impact	2.8lb/gal	SC	1fl oz/a	Post	C				
	Status	56%	WDG	2.5oz/a	Post	C				
	MSO	100%	SL	1% v/v	Post	C				
	28% UAN	100%	SL	2.5% v/v	Post	C				
17	Harness	7lb/gal	EC	1.75pt/a	Pre	A	117	212	316	415
	Impact	2.8lb/gal	SC	1fl oz/a	Post	C				
	Roundup	4.5lbae/gal	SL	22fl oz/a	Post	C				
	PowerMax									
	MSO	100%	SL	1% v/v	Post	C				
	28% UAN	100%	SL	2.5% v/v	Post	C				
18	Nontreated						118	203	311	408
19	Solida	25%	WDG	1oz/a	MPost	D	119	210	319	416
	Glyfos X-Tra	3lbae/gal	SL	32fl oz/a	MPost	D				
20	Harrow	75%	WDG	0.33oz/a	EPost	B	120	218	309	420
	Glyfos X-Tra	3lbae/gal	SL	32fl oz/a	EPost	B				
	Activator 90	100%	SL	0.25% v/v	EPost	B				

**Trial:** Buccaneer Plus adjuvant evaluation **Trial #** CN07

**Project Goal:** To evaluate different adjuvants for improved glyphosate efficacy

**Location:** Arlington Research Station

#### Site Description:

<b>Field no.:</b>	453	<b>Crop:</b>	Corn
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	DKC 55-09
<b>% OM:</b>	3.9	<b>Date planted:</b>	5/1/13
<b>pH:</b>	5.9	<b>Planting pop.:</b>	32,400 seeds/acre
<b>Fertilization:</b>	145 lbs N per acre	<b>Planting depth:</b>	1.5 in
<b>Previous cropping and tillage:</b>	Soybean	<b>Row spacing:</b>	30 in.
		<b>Plot size:</b>	10x25 ft
<b>Principal weeds present:</b>	Velvetleaf (ABUTH), giant foxtail (SETFA), common ragweed (AMBEL)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	6/14/13
Treatment:	POST
Soil moisture [surface]:	Dry moist
Soil temperature (°F) [2 in depth]	75
Air temperature (°F)	78
Wind speed (mph)/direction	3-7/SE
Relative humidity (%)	65
Cloud cover (%)	5

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 20 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:	6/14/13	
Crop	Height (in)	10
	Stage (lf)	V3
ABUTH	Height (in)	4
	Stage (lf)	2-4
SETFA	Height (in)	8
	Stage (lf)	3-4
AMBEL	Height (in)	3-4
	Stage (lf)	4-5

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
1	Nontreated						101	210	303	405
2	Buccaneer Plus	3lbae/gal	SL	16fl oz/a	Post	A	102	206	311	406
3	Buccaneer Plus	3lbae/gal	SL	16fl oz/a	Post	A	103	205	308	410
	WC 051	100%	SL	0.25% v/v	Post	A				
4	Buccaneer Plus	3lbae/gal	SL	16fl oz/a	Post	A	104	203	307	409
	WC 037	100%	SL	0.5% v/v	Post	A				
5	Buccaneer Plus	3lbae/gal	SL	16fl oz/a	Post	A	105	211	305	401
	WC 111	100%	SL	0.5% v/v	Post	A				
6	Buccaneer Plus	3lbae/gal	SL	16fl oz/a	Post	A	106	208	310	403
	WC 141	100%	SL	0.5% v/v	Post	A				
7	Buccaneer Plus	3lbae/gal	SL	16fl oz/a	Post	A	107	202	304	402
	WC 148	100%	SL	0.5% v/v	Post	A				
8	Buccaneer Plus	3lbae/gal	SL	16fl oz/a	Post	A	108	207	301	407
	WC 115	100%	SL	0.5% v/v	Post	A				
	WC160	100%	SL	4oz/a	Post	A				
9	Buccaneer Plus	3lbae/gal	SL	16fl oz/a	Post	A	109	201	309	408
	WC 133	100%	SL	0.5% v/v	Post	A				
10	Buccaneer Plus	3lbae/gal	SL	16fl oz/a	Post	A	110	209	306	404
	WC 037	100%	SL	0.5% v/v	Post	A				
	WC 101	100%	SL	10fl oz/a	Post	A				
11	Buccaneer Plus	3lbae/gal	SL	16fl oz/a	Post	A	111	204	302	411
	WC 037	100%	SL	0.5% v/v	Post	A				
	WC 123	100%	SL	1qt/a	Post	A				

**Trial:** High Yield System Evaluation **Trial #** CN12

**Project Goal:** To determine the effect of additional inputs on corn yield

**Location:** Arlington Research Station

#### Site Description:

<b>Field no.:</b>	361	<b>Crop:</b>	Corn
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	DKC 55-09
<b>% OM:</b>	3.6	<b>Date planted:</b>	5/7/13
<b>pH:</b>	6.0	<b>Planting pop.:</b>	32,400 seeds/acre
<b>Fertilization:</b>	145 lbs N per acre	<b>Planting depth:</b>	1.5 in.
<b>Previous cropping and tillage:</b>	Soybean	<b>Row spacing:</b>	30 in.
<b>Principal weeds present:</b>		<b>Plot size:</b>	10 by 50 ft.
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated	5/7/13
Treatment	PRE
Soil moisture [surface]:	DRY-MOIST
Soil temperature (°F) [2 in depth]	68
Air temperature (°F)	76
Wind speed (mph)/direction	0
Relative humidity (%)	33
Cloud cover (%)	10

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:	5/7/13	
Crop	Height (in)	PRE
	Stage (If)	
	Height (in)	PRE
	Stage (If)	

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	2	3	4
1135#	N Roundup WeatherMax AMS	4.5lbae/gal	SL	22fl oz/a	Post	B	101	207	304	408
		100%	SG	17lb/100 gal	Post	B				
2135#	N Outlook Roundup WeatherMax AMS	6lb/gal	EC	20fl oz/a	Pre	A	102	204	302	407
		4.5lbae/gal	SL	22fl oz/a	Post	B				
		100%	SG	17lb/100 gal	Post	B				
3135#	N Verdict Roundup WeatherMax AMS	5.57lb/gal	EC	15fl oz/a	Pre	A	103	210	308	403
		4.5lbae/gal	SL	22fl oz/a	Post	B				
		100%	SG	17lb/100 gal	Post	B				
4135#	N Verdict Roundup WeatherMax Status Activator 90 AMS	5.57lb/gal	EC	15fl oz/a	Pre	A	104	205	303	410
		4.5lbae/gal	SL	22fl oz/a	Post	B				
		51%	WDG	5oz/a	Post	B				
		100%	SL	0.25% v/v	Post	B				
		100%	SG	17lb/100 gal	Post	B				
5135#	N Verdict Roundup WeatherMax Status Priaxor Activator 90 AMS Headline AMP Activator 90	5.57lb/gal	EC	15fl oz/a	Pre	A	105	209	306	405
		4.5lbae/gal	SL	22fl oz/a	Post	B				
		51%	WDG	5oz/a	Post	B				
		4.07lb/gal	SL	4fl oz/a	Post	B				
		100%	SL	0.25% v/v	Post	B				
		100%	SG	17lb/100 gal	Post	B				
		1.68lb/gal	SC	10fl oz/a	Post	D				
		100%	SL	0.25% v/v	Post	D				
6185 #	N Roundup WeatherMax AMS	4.5lbae/gal	SL	22fl oz/a	Post	B	106	208	310	401
		100%	SG	17lb/100 gal	Post	B				
7135#	N Outlook Roundup WeatherMax AMS	6lb/gal	EC	20fl oz/a	Pre	A	107	206	305	406
		4.5lbae/gal	SL	22fl oz/a	Post	B				
		100%	SG	17lb/100 gal	Post	B				
8185#	N Verdict Roundup WeatherMax AMS	5.57lb/gal	EC	15fl oz/a	Pre	A	108	203	301	404
		4.5lbae/gal	SL	22fl oz/a	Post	B				
		100%	SG	17lb/100 gal	Post	B				
9185#	N Verdict Roundup WeatherMax Status Activator 90 AMS	5.57lb/gal	EC	15fl oz/a	Pre	A	109	201	309	402
		4.5lbae/gal	SL	22fl oz/a	Post	B				
		51%	WDG	5oz/a	Post	B				
		100%	SL	0.25% v/v	Post	B				
		100%	SG	17lb/100 gal	Post	B				

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Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
10185#	N						110	202	307	409
	Verdict	5.57lb/gal	EC	15fl oz/a	Pre	A				
	Roundup	4.5lbae/gal	SL	22fl oz/a	Post	B				
	WeatherMax	51%	WDG	5oz/a	Post	B				
	Status	4.07lb/gal	SL	4fl oz/a	Post	B				
	Priaxor	100%	SL	0.25% v/v	Post	B				
	Activator 90	100%	SG	17lb/100 gal	Post	B				
	AMS	1.68lb/gal	SC	10fl oz/a	Post	D				
	Headline AMP	100%	SL	0.25% v/v	Post	D				
	Activator 90									

**Trial:** High Yield Systems Evaluation **Trial #** CN16

**Project Goal:** To determine the effect of additional inputs on corn yield

**Location:** Arlington Research Station

#### Site Description:

<b>Field no.:</b>	363	<b>Crop:</b>	Corn
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	DKC 52-04 RIB
<b>% OM:</b>	--	<b>Date planted:</b>	6/3/13
<b>pH:</b>	--	<b>Planting pop.:</b>	32,400 seeds/acre
<b>Fertilization:</b>	145 lbs N per acre	<b>Planting depth:</b>	1.5 in.
<b>Previous cropping and tillage:</b>	Soybean	<b>Row spacing:</b>	30in.
		<b>Plot size:</b>	10 by 75 ft
<b>Principal weeds present:</b>	Giant foxtail (SETFA), common lambsquarters (CHEAL), velvetleaf (ABUTH), common ragweed (AMBEL), ladythumb (POLPE)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB,		

#### Herbicide Application Information:

Date treated:	6/3/13
Treatment:	PRE
Soil moisture [surface]:	Dry moist
Soil temperature (°F) [2 in depth]	--
Air temperature (°F)	69
Wind speed (mph)/direction	0-3/S
Relative humidity (%)	37
Cloud cover (%)	75

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:	6/3/13	
Crop	Height (in)	PRE
	Stage (lf)	
SETFA	Height (in)	PRE
	Stage (lf)	
CHEAL	Height (in)	PRE
	Stage (lf)	
ABUTH	Height (in)	PRE
	Stage (lf)	
AMBEL	Height (in)	PRE
	Stage (lf)	
POLPE	Height (in)	PRE
	Stage (lf)	



Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	2	3	4
	1135 lb nitrogen				Preplt	A	101	206	303	408
	Status	51%	WDG	5oz/a	Post	D				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	Post	E				
	AMS	100%	SG	8.5lb/100 gal	Post	E				
	Activator 90	100%	SL	0.25% v/v	Post	E				
	5175 lb nitrogen				Preplt	A	102	204	305	410
	Stamina seed				Planting	B				
	Verdict	5.57lb/gal	EC	15fl oz/a	Pre	C				
	28% UAN	100%	SL	75gal/a	Post	D				
	Status	51%	WDG	5oz/a	Post	E				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	Post	E				
	AMS	100%	SG	8.5lb/100 gal	Post	E				
	Activator 90	100%	SL	0.25% v/v	Post	E				
	Priaxor	4.17lb/gal	SC	4fl oz/a	Post	E				
	Headline Amp	1.68lb/gal	SC	10fl oz/a	LPost	F				
	Fastac	0.83lb/gal	EC	3.8fl oz/a	LPost	F				
	2135 lb nitrogen				Preplt	A	103	201	308	409
	Verdict	5.57lb/gal	EC	15fl oz/a	Pre	C				
	Status	51%	WDG	5oz/a	Post	E				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	Post	E				
	AMS	100%	SG	8.5lb/100 gal	Post	E				
	Activator 90	100%	SL	0.25% v/v	Post	E				
	7175 lb nitrogen				Preplt	A	104	207	302	405
	Stamina seed				Planting	B				
	Verdict	5.57lb/gal	EC	15fl oz/a	Pre	C				
	28% UAN	100%	SL	75gal/a	Post	D				
	Status	51%	WDG	5oz/a	Post	E				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	Post	E				
	AMS	100%	SG	8.5lb/100 gal	Post	E				
	Activator 90	100%	SL	0.25% v/v	Post	E				
	Headline Amp	1.68lb/gal	SC	10fl oz/a	LPost	F				
	Fastac	0.83lb/gal	EC	3.8fl oz/a	LPost	F				
	8175 lb nitrogen				Preplt	A	105	210	304	402
	Stamina seed				Planting	B				
	Verdict	5.57lb/gal	EC	15fl oz/a	Pre	C				
	28% UAN	100%	SL	75gal/a	Post	D				
	Status	51%	WDG	5oz/a	Post	E				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	Post	E				
	AMS	100%	SG	8.5lb/100 gal	Post	E				
	Activator 90	100%	SL	0.25% v/v	Post	E				
	Priaxor	4.17lb/gal	SC	4fl oz/a	Post	E				
	Fastac	0.83lb/gal	EC	3.8fl oz/a	LPost	F				
	3175 lb nitrogen				Preplt	A	106	208	309	403
	Verdict	5.57lb/gal	EC	15fl oz/a	Pre	C				
	Status	51%	WDG	5oz/a	Post	E				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	Post	E				
	AMS	100%	SG	8.5lb/100 gal	Post	E				
	Activator 90	100%	SL	0.25% v/v	Post	E				

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Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
9175 lb nitrogen	Stamina seed				Preplnt	A	107	202	310	407
	Verdict	5.57lb/gal	EC	15fl oz/a	Pre	C				
	28% UAN	100%	SL	75gal/a	Post	D				
	Status	51%	WDG	5oz/a	Post	E				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	Post	E				
	AMS	100%	SG	8.5lb/100 gal	Post	E				
	Activator 90	100%	SL	0.25% v/v	Post	E				
	Priaxor	4.17lb/gal	SC	4fl oz/a	Post	E				
	Headline Amp	1.68lb/gal	SC	10fl oz/a	LPost	F				
4175 lb nitrogen	Verdict	5.57lb/gal	EC	15fl oz/a	Pre	C	108	209	301	406
	28% UAN	100%	SL	75gal/a	Post	D				
	Status	51%	WDG	5oz/a	Post	E				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	Post	E				
	AMS	100%	SG	8.5lb/100 gal	Post	E				
	Activator 90	100%	SL	0.25% v/v	Post	E				
	Verdict	5.57lb/gal	EC	15fl oz/a	Pre	C				
6175 lb nitrogen	28% UAN	100%	SL	75gal/a	Post	D	109	203	306	401
	Status	51%	WDG	5oz/a	Post	E				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	Post	E				
	AMS	100%	SG	8.5lb/100 gal	Post	E				
	Activator 90	100%	SL	0.25% v/v	Post	E				
	Priaxor	4.17lb/gal	SC	4fl oz/a	Post	E				
	Headline Amp	1.68lb/gal	SC	10fl oz/a	LPost	F				
	Fastac	0.83lb/gal	EC	3.8fl oz/a	LPost	F				
	10162.5 lb nitrogen	12.5 lb MESZ				Preplnt	A	110	205	307
Stamina seed										
Verdict		5.57lb/gal	EC	15fl oz/a	Pre	C				
28% UAN		100%	SL	75gal/a	Post	D				
Status		51%	WDG	5oz/a	Post	E				
Roundup										
PowerMax		4.5lbae/gal	SL	22fl oz/a	Post	E				
AMS		100%	SG	8.5lb/100 gal	Post	E				
Activator 90		100%	SL	0.25% v/v	Post	E				
Priaxor		4.17lb/gal	SC	4fl oz/a	Post	E				
Headline Amp	1.68lb/gal	SC	10fl oz/a	LPost	F					
Fastac	0.83lb/gal	EC	3.8fl oz/a	LPost	F					

**Trial:** Yield Maximization Evaluation **Trial #** CN17

**Project Goal:** To evaluate the effect of fungicide and insecticide applications on corn yield

**Location:** Arlington Research Station

#### Site Description:

<b>Field no.:</b>	397	<b>Crop:</b>	Corn
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	NK50K-3000GT
<b>% OM:</b>	--	<b>Date planted:</b>	5/3/13
<b>pH:</b>	--	<b>Planting pop.:</b>	32,400 seeds/acre
<b>Fertilization:</b>	145 lbs N per acre	<b>Planting depth:</b>	1.5 in.
<b>Previous cropping and tillage:</b>	Corn	<b>Row spacing:</b>	30 in.
		<b>Plot size:</b>	20x100 ft.
<b>Principal weeds present:</b>	Giant foxtail (SETFA), common lambsquarters (CHEAL), velvetleaf (ABUTH)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	5-24-13
Treatment:	PRE
Soil moisture [surface]:	DRY-MOIST
Soil temperature (°F) [2 in depth]	72
Air temperature (°F)	71
Wind speed (mph)/direction	1-4 (NE)
Relative humidity (%)	45
Cloud cover (%)	50

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:	5/24/13	
Crop	Height (in)	PRE
	Stage (lf)	
SETFA	Height (in)	PRE
	Stage (lf)	
CHEAL	Height (in)	PRE
	Stage (lf)	
ABUTH	Height (in)	PRE
	Stage (lf)	

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	2	3	4
1	NK50K-3000GT						101	202	304	405
	Force 3G	3	GR	4.4 oz wt/1000 row-ft	Planting	A				
	Zemax	3.67lb/gal	SE	1.2qt/a	Pre	B				
	Halex GT	4.47lb/gal	SC	3.6pt/a	Post	C				
	Activator 90	100%	SL	0.25% v/v	Post	C				
	AMS	100%	SG	8.5lb/100 gal	Post	C				
	Quilt Xcel	2.2lb/gal	SC	10.5fl oz/a	Post	C				
	Quilt Xcel	2.2lb/gal	SC	10.5fl oz/a	LPost	D				
	Warrior	1lb/gal	CS	1.6fl oz/a	LPost	D				
2	NK50K-3000GT						102	206	301	406
	Zemax	3.67lb/gal	SE	1.2qt/a	Pre	B				
	Halex GT	4.47lb/gal	SC	3.6pt/a	Post	C				
	Activator 90	100%	SL	0.25% v/v	Post	C				
	AMS	100%	SG	8.5lb/100 gal	Post	C				
	Quilt Xcel	2.2lb/gal	SC	10.5fl oz/a	Post	C				
	Quilt Xcel	2.2lb/gal	SC	10.5fl oz/a	LPost	D				
	Warrior	1lb/gal	CS	1.6fl oz/a	LPost	D				
3	NK50K-3000GT						103	205	303	402
	Dual II	7.64lb/gal	EC	1pt/a	Pre	B				
	Magnum									
	Touch Total	4.17lbae/gal	SL	24fl oz/a	Post	C				
	AMS	100%	SG	8.5lb/100 gal	Post	C				
	Quilt Xcel	2.2lb/gal	SC	10.5fl oz/a	Post	C				
	Quilt Xcel	2.2lb/gal	SC	10.5fl oz/a	LPost	D				
	Warrior	1lb/gal	CS	1.6fl oz/a	LPost	D				
4	NK50K-3000GT						104	201	302	404
	Force 3G	3	GR	4.4 oz wt/1000 row-ft	Planting	A				
	Zemax	3.67lb/gal	SE	1.2qt/a	Pre	B				
	Halex GT	4.47lb/gal	SC	3.6pt/a	Post	C				
	Activator 90	100%	SL	0.25% v/v	Post	C				
	AMS	100%	SG	8.5lb/100 gal	Post	C				
	Quilt Xcel	2.2lb/gal	SC	10.5fl oz/a	LPost	D				
	Warrior	1lb/gal	CS	1.6fl oz/a	LPost	D				
5	NK50K-3000GT						105	203	305	401
	Zemax	3.67lb/gal	SE	1.2qt/a	Pre	B				
	Halex GT	4.47lb/gal	SC	3.6pt/a	Post	C				
	Activator 90	100%	SL	0.25% v/v	Post	C				
	AMS	100%	SG	8.5lb/100 gal	Post	C				
	Quilt Xcel	2.2lb/gal	SC	10.5fl oz/a	Post	C				
6	NK50K-3000GT						106	204	306	403
	Dual II	7.64lb/gal	EC	1pt/a	Pre	B				
	Magnum									
	Touch Total	4.17lbae/gal	SL	24fl oz/a	Post	C				
	AMS	100%	SG	8.5lb/100 gal	Post	C				

**Trial:** Sequential Corn Herbicide Evaluation **Trial #** CN20

**Project Goal:** To evaluate various herbicide programs for season-long weed control

**Location:** Arlington Research Station

#### Site Description:

<b>Field no.:</b>	453	<b>Crop:</b>	Corn
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	DKC 55-09
<b>% OM:</b>	3.9	<b>Date planted:</b>	5/1/2013
<b>pH:</b>	5.9	<b>Planting pop.:</b>	32,400 seeds/acre
<b>Fertilization:</b>	145 lbs N per acre	<b>Planting depth:</b>	1.5 in
<b>Previous cropping and tillage:</b>	Soybean	<b>Row spacing:</b>	30 in
		<b>Plot size:</b>	10 by 25 ft
<b>Principal weeds present:</b>	Giant foxtail (SETFA), common lambsquarters (CHEAL), velvetleaf (ABUTH), common ragweed (AMBEL)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	5/1/2013	6/3/2013
Treatment:	PRE	EPOST
Soil moisture [surface]:	DRY-MOIST	DRY-MOIST
Soil temperature (°F) [2 in depth]	53	--
Air temperature (°F)	63	75
Wind speed (mph)/direction	11 (N)	1-5 (S/SW)
Relative humidity (%)	53	34
Cloud cover (%)	20	20

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:		5/1/13	6/3/13
Crop	Height (in)	PRE	
	Stage (lf)		
SETFA	Height (in)	PRE	1-2
	Stage (lf)		3
ABUTH	Height (in)	PRE	1
	Stage (lf)		3
AMBEL	Height (in)	PRE	--
	Stage (lf)		--
CHEAL	Height (in)	PRE	0.5-1
	Stage (lf)		2-4

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	2	3	4
1	Nontreated						101	213	305	402
2	Verdict	5.57lb/gal	EC	15fl oz/a	Pre	A	102	210	320	407
3	Verdict	5.57lb/gal	EC	15fl oz/a	Pre	A	103	220	316	403
	Liberty 280	2.34lb/gal	SL	22fl oz/a	Post	C				
	AMS	100%	SG	3lb/a	Post	C				
4	Verdict	5.57lb/gal	EC	15fl oz/a	Pre	A	104	215	308	421
	Prowl H20	3.5lb/gal	AS	2pt/a	Pre	A				
5	Verdict	5.57lb/gal	EC	15fl oz/a	Pre	A	105	222	319	410
	Prowl H20	3.5lb/gal	AS	2pt/a	Pre	A				
	Liberty 280	2.34lb/gal	SL	22fl oz/a	Post	C				
	AMS	100%	SG	3lb/a	Post	C				
6	Zidua	85%	WDG	2.5oz/a	Pre	A	106	202	310	409
	Sharpen	2.85lb/gal	SC	3fl oz/a	Pre	A				
7	Zidua	85%	WDG	2.5oz/a	Pre	A	107	201	303	416
	Sharpen	2.85lb/gal	SC	3fl oz/a	Pre	A				
	Liberty 280	2.34lb/gal	SL	22fl oz/a	Post	C				
	AMS	100%	SG	3lb/a	Post	C				
8	Verdict	5.57lb/gal	EC	10fl oz/a	Pre	A	108	218	309	420
	Zidua	85%	WDG	2.5oz/a	Pre	A				
9	Verdict	5.57lb/gal	EC	10fl oz/a	Pre	A	109	208	318	419
	Zidua	85%	WDG	2.5oz/a	Pre	A				
	Liberty 280	2.34lb/gal	SL	22fl oz/a	Post	C				
	AMS	100%	SG	3lb/a	Post	C				
10	SureStart	4.25lb/gal	EC	2pt/a	Pre	A	110	206	307	415
11	SureStart	4.25lb/gal	EC	2pt/a	Pre	A	111	219	304	405
	Liberty 280	2.34lb/gal	SL	22fl oz/a	Post	C				
	AMS	100%	SG	3lb/a	Post	C				
12	Zemax	3.7lb/gal	SE	2qt/a	Pre	A	112	204	322	418
13	Zemax	3.7lb/gal	SE	2qt/a	Pre	A	113	212	301	404
	Liberty 280	2.34lb/gal	SL	22fl oz/a	Post	C				
	AMS	100%	SG	3lb/a	Post	C				
14	Liberty 280	2.34lb/gal	SL	22fl oz/a	EPost	B	114	211	317	401
	AMS	100%	SG	3lb/a	EPost	B				
15	Capreno	3.45lb/gal	SC	3fl oz/a	EPost	B	115	217	302	408
	AMS	100%	SG	8.5lb/100 gal	EPost	B				
16	Halex GT	4.47lb/gal	SL	3.6pt/a	EPost	B	116	209	306	422
	AMS	100%	SG	8.5lb/100 gal	EPost	B				
17	Anthem	2.5lb/gal	SE	10fl oz/a	Pre	A	117	203	313	411
18	Anthem	2.5lb/gal	SE	10fl oz/a	Pre	A	118	214	321	414
	Liberty 280	2.34lb/gal	SL	22fl oz/a	Post	C				
	AMS	100%	SG	3lb/a	Post	C				
19	Dual II Magnum	7.64lb/gal	EC	1.67pt/a	Pre	A	119	207	315	406
20	Dual II Magnum	7.64lb/gal	EC	1.67pt/a	Pre	A	120	216	312	417
	Liberty 280	2.34lb/gal	SL	22fl oz/a	Post	C				
	AMS	100%	SG	3lb/a	Post	C				
21	Dual II Magnum	7.64lb/gal	EC	1.67pt/a	Pre	A	121	205	311	413
	Status	56%	WDG	5oz/a	Post	C				
	COC	100%	SL	1% v/v	Post	C				
	AMS	100%	SG	17lb/100 gal	Post	C				
22	Dual II Magnum	7.64lb/gal	EC	1.67pt/a	Pre	A	122	221	314	412
	Liberty 280	2.34lb/gal	SL	22fl oz/a	Post	C				
	Status	56%	WDG	5oz/a	Post	C				
	AMS	100%	SG	17lb/100 gal	Post	C				
23	Roundup PowerMax	4.5lb/gal	SL	22fl oz/a	EPost	B	123	223	323	423
	AMS	100%	SG	17lb/100 gal	EPost	B				

**Trial:** Crop Safety and Efficacy **Trial #** SB01

**Project Goal:** To evaluate a new product for weed control in soybean

**Location:** Arlington Research Station

#### Site Description:

<b>Field no.:</b>	454	<b>Crop:</b>	Soybean
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	ASGROW 2130
<b>% OM:</b>	3.7	<b>Date planted:</b>	5/15/2013
<b>pH:</b>	6.7	<b>Planting pop.:</b>	154,000 seeds/acre
<b>Fertilization:</b>	None	<b>Planting depth:</b>	1 in.
<b>Previous cropping and tillage:</b>	Corn	<b>Row spacing:</b>	30 in.
		<b>Plot size:</b>	10 by 25 ft
<b>Principal weeds present:</b>	Giant foxtail (SETFA), woolly cupgrass (ERIVI), common lambsquarters (CHEAL), velvetleaf (ABUTH), common ragweed (AMBEL)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB,		

#### Herbicide Application Information:

Date treated:	5/15/13
Treatment:	PRE
Soil moisture [surface]:	MOIST
Soil temperature (°F) [2 in depth]	74
Air temperature (°F)	78
Wind speed (mph)/direction	4-7
Relative humidity (%)	30
Cloud cover (%)	10

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:		5-15-13	5-31-2013	6/6/13
Crop	Height (in)		1.75	2.2
	Stage (lf)			V1-v2
SETFA	Height (in)			
	Stage (lf)			
ERBVI	Height (in)		0.25-0.5	
	Stage (lf)			
CHEAL	Height (in)			
	Stage (lf)			
ABUTH	Height (in)			
	Stage (lf)			
AMBEL	Height (in)		0.5	
	Stage (lf)			

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
1	Pummel	5.25lba/gal	SL	1.5pt/a		Pre A	101	212	315	408
2	Pummel	5.25lba/gal	SL	2pt/a		Pre A	102	209	314	404
3	Pummel metribuzin	5.25lba/gal 75%	SL DF	1.5pt/a 2oz/a		Pre A Pre A	103	207	313	407
4	Pummel metribuzin	5.25lba/gal 75%	SL DF	1.5pt/a 4oz/a		Pre A Pre A	104	210	308	411
5	Pummel metribuzin	5.25lba/gal 75%	SL DF	2pt/a 2oz/a		Pre A Pre A	105	214	312	402
6	Pummel metribuzin	5.25lba/gal 75%	SL DF	2pt/a 4oz/a		Pre A Pre A	106	204	309	410
7	Matador	4.7lba/gal	EC	2.5pt/a		Pre A	107	205	311	412
8	nontreated						108	202	301	413
9	Pummel Roundup PowerMax AMS	5.25lba/gal 4.5lbae/gal 100%	SL SL SG	1.5pt/a 22fl oz/a 17lb/100 gal		Pre A Pos B Pos B	109	213	303	416
10	Pummel Roundup PowerMax AMS	5.25lba/gal 4.5lbae/gal 100%	SL SL SG	2pt/a 22fl oz/a 17lb/100 gal		Pre A Pos B Pos B	110	203	310	403
11	Pummel metribuzin Roundup PowerMax AMS	5.25lba/gal 75% 4.5lbae/gal 100%	SL DF SL SG	1.5pt/a 2oz/a 22fl oz/a 17lb/100 gal		Pre A Pre A Pos B Pos B	111	208	316	414
12	Pummel metribuzin Roundup PowerMax AMS	5.25lba/gal 75% 4.5lbae/gal 100%	SL DF SL SG	1.5pt/a 4oz/a 22fl oz/a 17lb/100 gal		Pre A Pre A Pos B Pos B	112	216	304	401
13	Pummel metribuzin Roundup PowerMax AMS	5.25lba/gal 75% 4.5lbae/gal 100%	SL DF SL SG	2pt/a 2oz/a 22fl oz/a 17lb/100 gal		Pre A Pre A Pos B Pos B	113	211	307	405
14	Pummel metribuzin Roundup PowerMax AMS	5.25lba/gal 75% 4.5lbae/gal 100%	SL DF SL SG	2pt/a 4oz/a 22fl oz/a 17lb/100 gal		Pre A Pre A Pos B Pos B	114	201	306	409
15	Matador Roundup PowerMax AMS	4.7lba/gal 4.5lbae/gal 100%	EC SL SG	2.5pt/a 22fl oz/a 17lb/100 gal		Pre A Pos B Pos B	115	206	305	415
16	nontreated						116	215	302	406



**Trial:** Sequential Soybean Herbicide Evaluation **Trial #** SB02

**Project Goal:** To compare soil-applied herbicides in soybean

**Location:** Arlington Research Station

#### Site Description:

<b>Field no.:</b>	360	<b>Crop:</b>	Soybeans
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	ASGROW 2130
<b>% OM:</b>	3.9	<b>Date planted:</b>	5/16/13
<b>pH:</b>	6.5	<b>Planting pop.:</b>	154,000 seeds/acre
<b>Fertilization:</b>	None	<b>Planting depth:</b>	1 in.
<b>Previous cropping and tillage:</b>	Corn	<b>Row spacing:</b>	30 in.
		<b>Plot size:</b>	10 by 25 ft
<b>Principal weeds present:</b>	Giant foxtail (SETFA), common lambsquarters (CHEAL), velvetleaf (ABUTH), common ragweed (AMBEL)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB,		

#### Herbicide Application Information:

Date treated:	5/17/2013
Treatment:	PRE
Soil moisture [surface]:	Saturated
Soil temperature (°F) [2 in depth]	62
Air temperature (°F)	56
Wind speed (mph)/direction	9 (E)
Relative humidity (%)	83
Cloud cover (%)	95

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:	5/17/13	
Crop	Height (in)	PRE
	Stage (lf)	
SETFA	Height (in)	PRE
	Stage (lf)	
CHEAL	Height (in)	PRE
	Stage (lf)	
ABUTH	Height (in)	PRE
	Stage (lf)	
AMBEL	Height (in)	PRE
	Stage (lf)	

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
1	Nontreated						101	207	309	412
2	Authority First	70%	DF	5oz/a	Pre	A	102	208	310	407
	Select	2lb/gal	EC	10fl oz/a	Post	B				
	COC	100%	EC	1% v/v	Post	B				
	AMS	100%	SG	8.5lb/100 gal	Post	B				
	Roundup PowerMax	4.5 <sub>l</sub> bae/ga	SL	21fl oz/a	LPost	C				
	AMS	100%	SG	8.5lb/100 gal	LPost	C				
3	Authority XL	70%	DF	3.2oz/a	Pre	A	103	204	306	408
	Select	2lb/gal	EC	10fl oz/a	Post	B				
	COC	100%	EC	1% v/v	Post	B				
	AMS	100%	SG	8.5lb/100 gal	Post	B				
	Roundup PowerMax	4.5 <sub>l</sub> bae/ga	SL	21fl oz/a	LPost	C				
	AMS	100%	SG	8.5lb/100 gal	LPost	C				
4	Authority Maxx	66%	DF	5oz/a	Pre	A	104	212	308	409
	Select	2lb/gal	EC	10fl oz/a	Post	B				
	COC	100%	EC	1% v/v	Post	B				
	AMS	100%	SG	8.5lb/100 gal	Post	B				
	Roundup PowerMax	4.5 <sub>l</sub> bae/ga	SL	21fl oz/a	LPost	C				
	AMS	100%	SG	8.5lb/100 gal	LPost	C				
5	Valor XLT	40.3%	WDG	2.5oz/a	Pre	A	105	201	312	402
	Select	2lb/gal	EC	10fl oz/a	Post	B				
	COC	100%	EC	1% v/v	Post	B				
	AMS	100%	SG	8.5lb/100 gal	Post	B				
	Roundup PowerMax	4.5 <sub>l</sub> bae/ga	SL	21fl oz/a	LPost	C				
	AMS	100%	SG	8.5lb/100 gal	LPost	C				
6	OpTill Pro			2fl oz/a	Pre	A	106	211	302	406
	Select	2lb/gal	EC	10fl oz/a	Post	B				
	COC	100%	EC	1% v/v	Post	B				
	AMS	100%	SG	8.5lb/100 gal	Post	B				
	Roundup PowerMax	4.5 <sub>l</sub> bae/ga	SL	21fl oz/a	LPost	C				
	AMS	100%	SG	8.5lb/100 gal	LPost	C				
7	Authority Elite	7lb/gal	SC	32fl oz/a	Pre	A	107	210	305	403
	Select	2lb/gal	EC	10fl oz/a	Post	B				
	COC	100%	EC	1% v/v	Post	B				
	AMS	100%	SG	8.5lb/100 gal	Post	B				
	Roundup PowerMax	4.5 <sub>l</sub> bae/ga	SL	21fl oz/a	LPost	C				
	AMS	100%	SG	8.5lb/100 gal	LPost	C				
8	Fierce			3oz/a	Pre	A	108	206	307	411
	Select	2lb/gal	EC	10fl oz/a	Post	B				
	COC	100%	EC	1% v/v	Post	B				
	AMS	100%	SG	8.5lb/100 gal	Post	B				
	Roundup PowerMax	4.5 <sub>l</sub> bae/ga	SL	21fl oz/a	LPost	C				
	AMS	100%	SG	8.5lb/100 gal	LPost	C				
9	Authority Assist	4lb/gal	SC	10fl oz/a	Pre	A	109	203	304	405
	Select	2lb/gal	EC	10fl oz/a	Post	B				
	COC	100%	EC	1% v/v	Post	B				
	AMS	100%	SG	8.5lb/100 gal	Post	B				
	Roundup PowerMax	4.5 <sub>l</sub> bae/ga	SL	21fl oz/a	LPost	C				
	AMS	100%	SG	8.5lb/100 gal	LPost	C				

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
10	Gangster			3 oz/a	Pre	A	110	209	311	401
	Firstate	57%	WDG	0.5oz/a	Pre	A				
	Valor SX	51%	WDG	2.5oz/a	Pre	A				
	Select	2lb/gal	EC	10fl oz/a	Post	B				
	COC	100%	EC	1% v/v	Post	B				
	AMS	100%	SG	8.5lb/100 gal	Post	B				
	Roundup PowerMax	4.5lbae/gal	SL	21fl oz/a	LPost	C				
	AMS	100%	SG	8.5lb/100 gal	LPost	C				
11	Authority MTZ	45%	DF	12oz/a	Pre	A	111	205	301	404
	Select	2lb/gal	EC	10fl oz/a	Post	B				
	COC	100%	EC	1% v/v	Post	B				
	AMS	100%	SG	8.5lb/100 gal	Post	B				
	Roundup PowerMax	4.5lbae/gal	SL	21fl oz/a	LPost	C				
	AMS	100%	SG	8.5lb/100 gal	LPost	C				
12	Classic	25%	WG	1oz/a	Pre	A	112	202	303	410
	Fierce	76%	WDG	2oz/a	Pre	A				
	V-10206	85%	WDG	1oz/a	Pre	A				

**Trial:** Post herbicide efficacy and crop safety evaluation **Trial #** SB03

**Project Goal:** To evaluate post-emergence herbicides in soybean

**Location:** Arlington Research Station

#### Site Description:

<b>Field no.:</b>	454	<b>Crop:</b>	Soybean
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	ASGROW 2103
<b>% OM:</b>	3.7	<b>Date planted:</b>	
<b>pH:</b>	6.7	<b>Planting pop.:</b>	154,000 seeds/acre
<b>Fertilization:</b>	None	<b>Planting depth:</b>	1 in.
<b>Previous cropping and tillage:</b>	Corn	<b>Row spacing:</b>	30 in.
		<b>Plot size:</b>	10 by 25 ft
<b>Principal weeds present:</b>	Common ragweed (AMBEL), giant foxtail (SETFA), common lambsquarters (CHEAL)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	6/11/13
Treatment:	POST
Soil moisture [surface]:	Dry
Soil temperature (°F) [2 in depth]	79
Air temperature (°F)	80
Wind speed (mph)/direction	2-3.5/W
Relative humidity (%)	56
Cloud cover (%)	55

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:	6/11/13	
Crop	Height (in)	3-4
	Stage (lf)	V1
AMBEL	Height (in)	2-3
	Stage (lf)	6
SETFA	Height (in)	3-4
	Stage (lf)	4
CHEAL	Height (in)	1-2
	Stage (lf)	4-6

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	2	3	4
1	Nontreated						101	208	307	406
2	Statement Glyphos X-Tra	5.25lb/gal	EC	32fl oz/a	Post	A	102	204	308	404
		3lb/gal	SL	32fl oz/a	Post	A				
3	Statement Glyphos X-Tra	5.25lb/gal	EC	40fl oz/a	Post	A	103	201	303	405
		3lb/gal	SL	32fl oz/a	Post	A				
4	Rhythem Glyphos X-Tra	1.88lb/gal	EC	25.5fl oz/a	Post	A	104	206	302	403
		3lb/gal	SL	32fl oz/a	Post	A				
5	Dawn Glyphos X-Tra	2lb/gal	SL	24fl oz/a	Post	A	105	202	305	408
		3lb/gal	SL	32fl oz/a	Post	A				
6	Prefix Glyphos X-Tra	5.29lb/gal	SL	32fl oz/a	Post	A	106	203	304	407
		3lb/gal	SL	32fl oz/a	Post	A				
7	Prefix Glyphos X-Tra	5.29lb/gal	SL	40fl oz/a	Post	A	107	205	306	401
		3lb/gal	SL	32fl oz/a	Post	A				
8	Glyphos X-Tra	3lb/gal	SL	32fl oz/a	Post	A	108	207	301	402

Trial: Sequential herbicide evaluations **Trial #** SB05

**Project Goal:** To evaluate different herbicide programs for season-long weed control in soybean  
**Location:** Arlington Research Station

#### Site Description:

<b>Field no.:</b>	360	<b>Crop:</b>	Soybean
<b>Soil type:</b>	Plano Silt Loam	<b>Variety:</b>	ASGROW 2130
<b>% OM:</b>	3.6	<b>Date planted:</b>	5/16/13
<b>pH:</b>	5.9	<b>Planting pop.:</b>	154,000 seeds/acre
<b>Fertilization:</b>	None	<b>Planting depth:</b>	1.25 in
<b>Previous cropping and tillage:</b>	Corn	<b>Row spacing:</b>	30 in.
		<b>Plot size:</b>	10 by 25 ft
<b>Principal weeds present:</b>	Giant foxtail (SETFA), common lambsquarters (CHEAL), velvetleaf (ABUTH), common ragweed (AMBEL), pigweed (AMARE), dandelion (TAROF)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	5/16/13 8:30 AM	5/16/13 4:00 PM	6/17/13
Treatment:	PREPLANT	PRE	EPOST
Soil moisture [surface]:	Moist	Moist	Dry moist
Soil temperature (°F) [2 in depth]	68	74	88
Air temperature (°F)	72	82	80
Wind speed (mph)/direction	2-5/N	0-3/E	5-8/W/NW
Relative humidity (%)	43	40	56
Cloud cover (%)	0	40	5

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:		5/16/13	5/16/13	6/17/13
Crop	Height (in)	PREPLANT	PRE	5-6
	Stage (lf)			V2
SETFA	Height (in)	PREPLANT	PRE	4-6
	Stage (lf)			3-4
CHEAL	Height (in)	PREPLANT	PRE	2-4
	Stage (lf)			4-6
ABUTH	Height (in)	PREPLANT	PRE	2-4
	Stage (lf)			4-5
AMBEL	Height (in)	PREPLANT	PRE	3-5
	Stage (lf)			4-6
AMARE	Height (in)	PREPLANT	PRE	2-5
	Stage (lf)			4-6
TAROF	Height (in)	--	--	0.25
	Stage (lf)			

Trt No.	Treatment Name	Form Conc.	Form Type	Rate	Growth Stage	Appl Code	Rep 1	2	3	4
1	Nontreated						101	223	308	402
2	Authority First	70%	DF	4oz/a	Pre	B	102	217	314	418
	Marvel	3lb/gal	SC	6fl oz/a	MPost	D				
	Roundup	4.5lb/ae/gal	SL	22fl oz/a	MPost	D				
	PowerMax									
	AMS	100%	SG	8.5lb/100 gal	MPost	D				
3	Authority First	70%	DF	4oz/a	Pre	B	103	212	307	417
	Marvel	3lb/gal	SC	7.25fl oz/a	MPost	D				
	Roundup	4.5lb/ae/gal	SL	22fl oz/a	Mpost	D				
	PowerMax									
	AMS	100%	SG	8.5lb/100 gal	MPost	D				
4	Boundary	6.5lb/gal	EC	1.6pt/a	Pre	B	104	218	312	403
	Flexstar	1.88lb/gal	ME	1pt/a	MPost	D				
	Roundup	4.5lb/ae/gal	SL	22fl oz/a	MPost	D				
	PowerMax									
	AMS	100%	SG	8.5lb/100 gal	MPost	D				
5	Gangster			3oz/a	Pre	B	105	208	322	414
	Firstrate	57%	WDG	0.5oz/a	Pre	B				
	Valor SX	51%	WDG	2.5oz/a	Pre	B				
	Cobra	2lb/gal	EC	12fl oz/a	MPost	D				
	Roundup	4.5lb/ae/gal	SL	22fl oz/a	Mpost	D				
	PowerMax									
	AMS	100%	SG	8.5lb/100 gal	Mpost	D				
6	Sonic	70%	WDG	3oz/a	Pre	B	106	215	301	419
	Durango DMA	4lb/ae/gal	SL	1.5pt/a	Post	D				
	AMS	100%	SG	2.5% v/v	MPost	D				
7	Sonic	70%	WDG	4.5oz/a	Pre	B	107	201	318	406
	Durango DMA	4lb/ae/gal	SL	1.5pt/a	MPost	D				
	AMS	100%	SG	2.5% v/v	MPost	D				
8	Sonic	70%	WDG	3oz/a	Pre	B	108	214	323	421
	Firstrate	84%	WDG	0.3oz/a	MPost	D				
	Durango DMA	4lb/ae/gal	SL	1.5pt/a	MPost	D				
	AMS	100%	SG	2.5% v/v	MPost	D				
9	Nontreated						109	207	315	420
10	Roundup	4.5lb/ae/gal	SL	22fl oz/a	Epost	C	110	213	306	404
	PowerMax									
	Activator 90	100%	SL	0.25% v/v	EPost	C				
	AMS	100%	SG	8.5lb/100 gal	EPost	C				
	Roundup	4.5lb/ae/gal	SL	22fl oz/a	LPost	E				
	PowerMax									
	Activator 90	100%	SL	0.25% v/v	LPost	E				
	AMS	100%	SG	8.5lb/100 gal	LPost	E				
11	Optill Pro			2oz/a	Pre	B	111	216	319	422
	Optill	68%	WG	2oz/a	Pre	B				
	Outlook	6lb/gal	EC	10fl oz/a	Pre	B				
	Roundup	4.5lb/ae/gal	SL	22fl oz/a	LPost	E				
	PowerMax									
	Activator 90	100%	SL	0.25% v/v	LPost	E				
	AMS	100%	SG	8.5lb/100 gal	LPost	E				

Treatments continued on the next page

Trt No.	Treatment Name	Form Conc.	Form Type	Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
12	Verdict	5.57lb/gal	EC	5fl oz/a	Pre	B	112	204	303	405
	Outlook	6lb/gal	EC	10fl oz/a	Pre	B				
	Roundup PowerMax	4.5lbae/gal	SL	22fl oz/a	LPost	E				
	Activator 90	100%	SL	0.25% v/v	LPost	E				
	AMS	100%	SG	8.5lb/100 gal	LPost	E				
13	Verdict	5.57lb/gal	EC	5fl oz/a	Pre	B	113	209	304	423
	Zidua	85%	WDG	2oz/a	Pre	B				
	Roundup PowerMax	4.5lbae/gal	SL	22fl oz/a	LPost	E				
	Activator 90	100%	SL	0.25% v/v	LPost	E				
	AMS	100%	SG	8.5lb/100 gal	LPost	E				
14	Prowl H20	3.8lb/gal	AS	2.5pt/a	Preplt	A	114	206	302	409
	Optill	68%	WG	2oz/a	Preplt	A				
	Roundup PowerMax	4.5lbae/gal	SL	22fl oz/a	LPost	E				
	Activator 90	100%	SL	0.25% v/v	LPost	E				
	AMS	100%	SG	8.5lb/100 gal	LPost	E				
15	Prefix	2.59lb/gal	SL	2pt/a	Pre	B	115	210	317	410
	Roundup PowerMax	4.5lbae/gal	SL	22fl oz/a	LPost	E				
	Activator 90	100%	SL	0.25% v/v	LPost	E				
	AMS	100%	SG	8.5lb/100 gal	LPost	E				
16	Fierce	76%	WDG	3oz/a	Pre	B	116	219	310	407
	Roundup PowerMax	4.5lbae/gal	SL	22fl oz/a	LPost	E				
	Activator 90	100%	SL	0.25% v/v	LPost	E				
	AMS	100%	SG	8.5lb/100 gal	LPost	E				
17	Valor SX	51%	SG	3oz/a	Pre	B	117	220	313	408
	Roundup PowerMax	4.5lbae/gal	SL	22fl oz/a	LPost	E				
	Activator 90	100%	SL	0.25% v/v	LPost	E				
	AMS	100%	SG	8.5lb/100 gal	LPost	E				
18	Authority Assist	4lb/gal	SC	12fl oz/a	Pre	B	118	221	309	401
	Roundup PowerMax	4.5lbae/gal	SL	22fl oz/a	LPost	E				
	Activator 90	100%	SL	0.25% v/v	LPost	E				
	AMS	100%	SG	8.5lb/100 gal	LPost	E				
19	Optill	68%	WG	2oz/a	Pre	B	119	211	320	416
	Zidua	85%	WDG	2.5oz/a	Pre	B				
	Roundup PowerMax	4.5lbae/gal	SL	22fl oz/a	LPost	E				
	Activator 90	100%	SL	0.25% v/v	LPost	E				
	AMS	100%	SG	8.5lb/100 gal	LPost	E				
20	Optill Pro			2oz/a	Pre	B	120	202	311	415
	Optill	68%	WG	2oz/a	Pre	B				
	Outlook	6lb/gal	EC	10fl oz/a	Pre	B				
	Roundup PowerMax	4.5lbae/gal	SL	22fl oz/a	LPost	E				
	Outlook	6lb/gal	EC	10fl oz/a	LPost	E				
	Activator 90	100%	SL	0.25% v/v	LPost	E				
	AMS	100%	SG	8.5lb/100 gal	LPost	E				



Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate	Rate Unit	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
21	Fierce	76%		WDG	3oz/a		Pre	B	121	203	316	412
	Roundup PowerMax	4.5lb	gal	SL	22fl oz/a		LPost	E				
	Warrant	3lb	gal	ME	3pt/a		LPost	E				
	Activator 90	100%		SL	0.25% v/v		LPost	E				
	AMS	100%		SG	8.5lb/100 gal		LPost	E				
22	Prowl H20	3.8lb	gal	AS	2pt/a		Preplt	A	122	205	321	411
	Optill	68%		WG	2oz/a		Preplt	A				
	Roundup PowerMax	4.5lb	gal	SL	22fl oz/a		LPost	E				
	Outlook	6lb	gal	EC	10fl oz/a		LPost	E				
	Activator 90	100%		SL	0.25% v/v		LPost	E				
	AMS	100%		SG	8.5lb/100 gal		LPost	E				
23	Nontreated								123	222	305	413
21	Fierce	76%		WDG	3oz/a		Pre	B	121	203	316	412
	Roundup PowerMax	4.5lb	gal	SL	22fl oz/a		LPost	E				
	Warrant	3lb	gal	ME	3pt/a		LPost	E				
	Activator 90	100%		SL	0.25% v/v		LPost	E				
	AMS	100%		SG	8.5lb/100 gal		LPost	E				
22	Prowl H20	3.8lb	gal	AS	2pt/a		Preplt	A	122	205	321	411
	Optill	68%		WG	2oz/a		Preplt	A				
	Roundup PowerMax	4.5lb	gal	SL	22fl oz/a		LPost	E				
	Outlook	6lb	gal	EC	10fl oz/a		LPost	E				
	Activator 90	100%		SL	0.25% v/v		LPost	E				
	AMS	100%		SG	8.5lb/100 gal		LPost	E				
23	Nontreated								123	222	305	413

**Trial:** Soybean Systems Approach to Maximize Yields **Trial #** SB11

**Project:** To compare different combinations of seed treatments, herbicides, fungicides, and insecticides to improve soybean yield  
**Goal:**  
**Location:** Arlington Research Station

#### Site Description:

<b>Field no.:</b>	362	<b>Crop:</b>	Soybean
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	ASGROW 2130
<b>% OM:</b>	3.6	<b>Date planted:</b>	5/7/13
<b>pH:</b>	6.9	<b>Planting pop.:</b>	154,000 seeds/acre
<b>Fertilization:</b>	None	<b>Planting depth:</b>	1 in.
<b>Previous cropping and tillage:</b>	Corn	<b>Row spacing:</b>	30 in.
		<b>Plot size:</b>	10 by 100 ft
<b>Principal weeds present:</b>	Giant foxtail (SETFA), common lambsquarters (CHEAL), velvetleaf (ABUTH), common ragweed (AMBEL)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	5/7/2013	6/17/13
Treatment:	PRE	EPOST
Soil moisture [surface]:	DRY-MOIST	Dry moist
Soil temperature (°F) [2 in depth]	68	88
Air temperature (°F)	76	80
Wind speed (mph)/direction	0 (NA)	2-5/W/NW
Relative humidity (%)	33	56
Cloud cover (%)	10	5

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:		5/7/13	6/17/13
Crop	Height (in)	PRE	
	Stage (lf)		V2
SETFA	Height (in)	PRE	4-7
	Stage (lf)		4-6
CHEAL	Height (in)	PRE	1-2
	Stage (lf)		4-6
AMBEL	Height (in)	PRE	4-7
	Stage (lf)		6-8

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	2	3	4
1	NK S22-S1- nontreated						101	204	305	402
	Touchdown Total	4.17lbae/gal	SL	24fl oz/a	EPost	B				
	AMS	100%	SG	17lb/100 gal	EPost	B				
	Touchdown Total	4.17lbae/gal	SL	24fl oz/a	Post	C				
	AMS	100%	SG	17lb/100 gal	Post	C				
2	S22-S1- treated						102	201	306	408
	Prefix	2.59lb/gal	SL	2pt/a	Pre	A				
	Touchdown Total	4.17lbae/gal	SL	32fl oz/a	EPost	B				
	Fusilade DX	2lb/gal	EC	4fl oz/a	EPost	B				
	COC	100%	EC	2qt/100 gal	EPost	B				
	AMS	100%	SG	17lb/100 gal	EPost	B				
3	S20-T6- nontreated						103	202	304	405
	Touchdown Total	4.17lbae/gal	SL	24fl oz/a	EPost	B				
	AMS	100%	SG	17lb/100 gal	EPost	B				
	Touchdown Total	4.17lbae/gal	SL	24fl oz/a	Post	C				
	AMS	100%	SG	17lb/100 gal	Post	C				
4	S20-T6 treated						104	203	307	406
	Prefix	2.59lb/gal	SL	2pt/a	Pre	A				
	Touchdown Total	4.17lbae/gal	SL	32fl oz/a	EPost	B				
	Fusilade DX	2lb/gal	EC	4fl oz/a	EPost	B				
	COC	100%	EC	2qt/100 gal	EPost	B				
	AMS	100%	SG	17lb/100 gal	EPost	B				
5	NK S22-S1- nontreated						105	208	303	404
	Touchdown Total	4.17lbae/gal	SL	24fl oz/a	EPost	B				
	AMS	100%	SG	17lb/100 gal	EPost	B				
	Touchdown Total	4.17lbae/gal	SL	24fl oz/a	Post	C				
	AMS	100%	SG	17lb/100 gal	Post	C				
	Quilt XL	2.2lb/gal	SC	10.5fl oz/a	LPost	D				
	Endigo ZC	20.6lb/gal	ZC	3.5fl oz/a	LPost	D				
	COC	100%	EC	1% v/v	LPost	D				
6	S22-S1- treated						106	205	301	403
	Prefix	2.59lb/gal	SL	2pt/a	Pre	A				
	Touchdown Total	4.17lbae/gal	SL	32fl oz/a	EPost	B				
	Fusilade DX	2lb/gal	EC	4fl oz/a	EPost	B				
	COC	100%	EC	2qt/100 gal	EPost	B				
	AMS	100%	SG	17lb/100 gal	EPost	B				
	Quilt XL	2.2lb/gal	SC	10.5fl oz/a	LPost	D				
	Endigo ZC	20.6lb/gal	ZC	3.5fl oz/a	LPost	D				
	COC	100%	EC	1% v/v	LPost	D				
7	S20-T6- nontreated						107	206	302	401
	Touchdown Total	4.17lbae/gal	SL	24fl oz/a	EPost	B				
	AMS	100%	SG	17lb/100 gal	EPost	B				
	Touchdown Total	4.17lbae/gal	SL	24fl oz/a	Post	C				
	AMS	100%	SG	17lb/100 gal	Post	C				
	Quilt XL	2.2lb/gal	SC	10.5fl oz/a	LPost	D				
	Endigo ZC	20.6lb/gal	ZC	3.5fl oz/a	LPost	D				
	COC	100%	EC	1% v/v	LPost	D				
8	S20-T6 treated						108	207	308	407
	Prefix	2.59lb/gal	SL	2pt/a	Pre	A				
	Touchdown Total	4.17lbae/gal	SL	32fl oz/a	EPost	B				
	Fusilade DX	2lb/gal	EC	4fl oz/a	EPost	B				
	COC	100%	EC	2qt/100 gal	EPost	B				
	AMS	100%	SG	17lb/100 gal	EPost	B				
	Quilt XL	2.2lb/gal	SC	10.5fl oz/a	LPost	D				
	Endigo ZC	20.6lb/gal	ZC	3.5fl oz/a	LPost	D				
	COC	100%	EC	1% v/v	LPost	D				

**Trial:** Liberty Link Soybeans: Sequential Herbicide Evaluation **Trial #** SB12

**Project Goal:** To evaluate pre- and post-emergence herbicide programs in Liberty Link soybeans

**Location:** Arlington Research Station

#### Site Description:

<b>Field no.:</b>	454	<b>Crop:</b>	Soybeans
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	Comanche 1325 LL
<b>% OM:</b>	3.7	<b>Date planted:</b>	6/13/13
<b>pH:</b>	6.7	<b>Planting pop.:</b>	154,000 seeds/acre
<b>Fertilization:</b>	None	<b>Planting depth:</b>	1 in.
<b>Previous cropping and tillage:</b>	Corn	<b>Row spacing:</b>	30 in.
		<b>Plot size:</b>	10x25 ft.
<b>Principal weeds present:</b>	Giant foxtail (SETFA), velvetleaf (ABUTH), common lambsquarters (CHEAL), pigweed (AMARE), Eastern black nightshade (SOLPT), common ragweed (AMBEL)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	6/3/2013
Treatment:	PRE
Soil moisture [surface]:	DRY-MOIST
Soil temperature (°F) [2 in depth]	--
Air temperature (°F)	69
Wind speed (mph)/direction	3 (S)
Relative humidity (%)	37
Cloud cover (%)	75

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:	6/3/13	
Crop	Height (in)	PRE
	Stage (lf)	
SETFA	Height (in)	PRE
	Stage (lf)	
ABUTH	Height (in)	PRE
	Stage (lf)	
CHEAL	Height (in)	PRE
	Stage (lf)	
AMARE	Height (in)	PRE
	Stage (lf)	
SOLPT	Height (in)	PRE
	Stage (lf)	
AMBEL	Height (in)	PRE
	Stage (lf)	

Trt No.	Treatment Name	Form Conc.	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	2	3	4
1	Non-treated						101	204	310	408
2	Authority XL	70%	DF	3.2oz/a	Pre	A	102	209	306	402
	Liberty 280	2.34lb/gal	SL	29fl oz/a	MPost	C				
	AMS	100%	SG	8.5lb/100 gal	MPost	C				
	Liberty 280	2.34lb/gal	SL	29fl oz/a	LPost	D				
	AMS	100%	SG	8.5lb/100 gal	LPost	D				
3	Valor XLT	40.3%	WDG	2.5oz/a	Pre	A	103	201	307	405
	Liberty 280	2.34lb/gal	SL	29fl oz/a	MPost	C				
	AMS	100%	SG	8.5lb/100 gal	MPost	C				
	Liberty 280	2.34lb/gal	SL	29fl oz/a	LPost	D				
	AMS	100%	SG	8.5lb/100 gal	LPost	D				
4	Valor SX	51%	SG	2oz/a	Pre	A	104	207	302	407
	Liberty 280	2.34lb/gal	SL	29fl oz/a	EPost	B				
	Zidua	85%	WDG	2oz/a	EPost	B				
	AMS	100%	SG	8.5lb/100 gal	EPost	B				
	Liberty 280	2.34lb/gal	SL	29fl oz/a	LPost	D				
	AMS	100%	SG	8.5lb/100 gal	LPost	D				
5	Liberty 280	2.34lb/gal	SL	29fl oz/a	EPost	B	105	210	301	410
	Prefix	2.59lb/gal	SL	2pt/a	EPost	B				
	AMS	100%	SG	8.5lb/100 gal	EPost	B				
	Liberty 280	2.34lb/gal	SL	29fl oz/a	Post	C				
	Zidua	85%	WDG	2oz/a	Post	C				
	AMS	100%	SG	8.5lb/100 gal	Post	C				
6	OpTill	68%	WDG	2oz/a	Pre	A	106	202	304	403
	Outlook	6lb/gal	EC	10fl oz/a	Pre	A				
	Liberty 280	2.34lb/gal	SL	29fl oz/a	MPost	C				
	AMS	100%	SG	8.5lb/100 gal	MPost	C				
	Liberty 280	2.34lb/gal	SL	29fl oz/a	LPost	D				
	AMS	100%	SG	8.5lb/100 gal	LPost	D				
7	Enlite	47.86%	DG	2.8oz/a	Pre	A	107	208	305	404
	Valor	51%	SG	1.98oz/a	Pre	A				
	Classic	25%	DG	0.32oz/a	Pre	A				
	Harmony	50%	DG	0.49oz/a	Pre	A				
	Liberty 280	2.34lb/gal	SL	29fl oz/a	EPost	B				
	Outlook	6lb/gal	EC	14fl oz/a	EPost	B				
	AMS	100%	SG	8.5lb/100 gal	EPost	B				
	Liberty 280	2.34lb/gal	SL	29fl oz/a	LPost	D				
	AMS	100%	SG	8.5lb/100 gal	LPost	D				
8	Liberty 280	2.34lb/gal	SL	29fl oz/a	EPost	B	108	205	309	406
	Warrant	3lb/gal	ME	3pt/a	EPost	B				
	AMS	100%	SG	8.5lb/100 gal	EPost	B				
	Liberty 280	2.34lb/gal	SL	29fl oz/a	Post	C				
	Outlook	6lb/gal	EC	14fl oz/a	Post	C				
	AMS	100%	SG	8.5lb/100 gal	Post	C				
9	Prefix	2.59lb/gal	SL	2pt/a	Pre	A	109	203	308	409
	Liberty 280	2.34lb/gal	SL	29fl oz/a	MPost	C				
	AMS	100%	SG	8.5lb/100 gal	MPost	C				
	Liberty 280	2.34lb/gal	SL	29fl oz/a	LPost	D				
	AMS	100%	SG	8.5lb/100 gal	LPost	D				
10	Fierce	76%	WDG	3oz/a	Pre	A	110	206	303	401
	Liberty 280	2.34lb/gal	SL	29fl oz/a	MPost	C				
	AMS	100%	SG	8.5lb/100 gal	MPost	C				
	Liberty 280	2.34lb/gal	SL	29fl oz/a	LPost	D				
	AMS	100%	SG	8.5lb/100 gal	LPost	D				

**Trial:** Tillage effects on pigweed, *Amaranthus spp.*, emergence **Trial #** SB18

**Project Goal:** To evaluate pigweed emergence rates in no-till, spring till, and spring till with cultivation.

**Location:** Arlington Research Station

#### Site Description:

<b>Field no.:</b>	454	<b>Crop:</b>	Non-crop
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	--
<b>% OM:</b>	3.4	<b>Date planted:</b>	--
<b>pH:</b>	6.7	<b>Planting pop.:</b>	--
<b>Fertilization:</b>	None	<b>Planting depth:</b>	--
<b>Previous cropping and tillage:</b>	Corn	<b>Row spacing:</b>	--
		<b>Plot size:</b>	6.5 by 6.5 ft
<b>Principal weeds present:</b>			
<b>Other pesticides used:</b> None			
<b>Experimental design and statistical analysis:</b> 8 reps, RCB			

#### Herbicide Application Information:

Date treated:	5/13/13
Treatment:	PREPLANT
Soil moisture [surface]:	Moist
Soil temperature (°F) [2 in depth]	71
Air temperature (°F)	71
Wind speed (mph)/direction	6/W
Relative humidity (%)	34
Cloud cover (%)	30

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

Trt No.	Type	Treatment Name	Form Conc.	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
1	CULT	NO-TILL				PREPLA	B	101	105	109	112	203	206	208	211
	HERB	Roundup WeatherMax	4.5LBA/GALAS		22fl oz/a	EARPREA									
	ADJ	Ammonium Sulfate	100%	SG	8.5lb/100 gal	EARPREA									
2	CULT	1X TILLAGE				PREPLA	B	102	104	107	110	201	205	209	212
	HERB	Roundup WeatherMax	4.5LBA/GALAS		22fl oz/a	EARPREA									
	ADJ	Ammonium Sulfate	100%	SG	8.5lb/100 gal	EARPREA									
3	CULT	1X TILLAGE				PREPLA	B	103	106	108	111	202	204	207	210
	CULT	2X TILLAGE				30DAP	C								
	HERB	Roundup WeatherMax	4.5LBA/GALAS		22fl oz/a	EARPREA									
	ADJ	Ammonium Sulfate	100%	SG	8.5lb/100 gal	EARPREA									

**Trial:** Effect of Nitrogen Rate and Weed Management on N<sub>2</sub>O Emissions in Corn

**Trial #** CN21

**Project Goal:** To evaluate the impact early-season, POST-controlled weeds have on N<sub>2</sub>O emissions in corn production as influenced by N management  
To compare N<sub>2</sub>O emissions before and after weed termination

**Location:** Arlington Research Station

**Graduate Research Assistant:** Becky Redline

#### Site Description:

<b>Field no.:</b>	455	<b>Crop:</b>	Corn
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	DKC 5204
<b>% OM:</b>	3.4	<b>Date planted:</b>	6/4/13
<b>pH:</b>	6.3	<b>Planting pop.:</b>	32,000 seeds/acre
<b>Fertilization:</b>	VARIABLE	<b>Planting depth:</b>	1.5 in.
<b>Previous cropping and tillage:</b>	Soybean	<b>Row spacing:</b>	30 in.
		<b>Plot size:</b>	10 by 25 ft
<b>Principal weeds present:</b>	Common lambsquarters (CHEAL)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	6/4/13
Treatment:	PRE
Soil moisture [surface]:	Dry moist
Soil temperature (°F) [2 in depth]	--
Air temperature (°F)	69
Wind speed (mph)/direction	1.5-2.5/SE
Relative humidity (%)	65
Cloud cover (%)	100

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	2	3	4
5	Urea Roundup PowerMax Ammonium Sulfate	46%N 4.5LBAE/GAL 100%	GR SL SG	80lb/a 22fl oz/a 17lb/100 gal			101	203	304	403
3	Urea Verdict	46%N 2LBA/GAL	GR EC	160lb/a 15fl oz/a		POS PRE A	102	204	306	401
4	Urea Roundup PowerMax Ammonium Sulfate	46%N 4.5LBAE/GAL 100%	GR SL SG	0lb/a 22fl oz/a 17lb/100 gal			103	206	305	406
2	Urea Verdict	46%N 2LBA/GAL	GR EC	80lb/a 15fl oz/a		POS PRE A	104	201	302	405
6	Urea Roundup PowerMax Ammonium Sulfate	46%N 4.5LBAE/GAL 100%	GR SL SG	160lb/a 22fl oz/a 17lb/100 gal			105	202	303	404
1	Urea Verdict	46%N 2LBA/GAL	GR EC	0lb/a 15fl oz/a		POS PRE A	106	205	301	402



**Trial:** Effect of N rate and weed density on nitrous oxide emissions **Trial #** CN23

**Project Goal:** To evaluate the effect of weed density and nitrogen rate on N<sub>2</sub>O emissions  
To understand how weeds, before and after termination, impact N<sub>2</sub>O emissions apart from crop competition

**Location:** Arlington Research Station

**Graduate Research Assistant:** Becky Redline

#### Site Description:

<b>Field no.:</b>	454	<b>Crop:</b>	Non-crop
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	--
<b>% OM:</b>	3.4	<b>Date planted:</b>	--
<b>pH:</b>	6.7	<b>Planting pop.:</b>	--
<b>Fertilization:</b>	VARIABLES	<b>Planting depth:</b>	--
<b>Previous cropping and tillage:</b>	Corn	<b>Row spacing:</b>	--
		<b>Plot size:</b>	10 by 10 ft
<b>Principal weeds present:</b>	Common lambsquarters (CHEAL), Powell amaranth (AMAPO)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, CRD		

#### Herbicide Application Information:

Date treated:	6/7/13
Treatment:	PRE
Soil moisture [surface]:	Dry
Soil temperature (°F) [2 in depth]	70
Air temperature (°F)	75
Wind speed (mph)/direction	0.5-3.5/W
Relative humidity (%)	38
Cloud cover (%)	20

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	2	3	4
2	Urea Harness	46%N 7.5LBA/GAL	GR EC	200lb/a 2.5pt/a		PREPRE A	101	103	301	403
3	Urea Roundup PowerMax Harness Ammonium Sulfate	46%N 4.5LBAE/GAL 7.5LBA/GAL 100%	GR SL EC SG	0lb/a 22fl oz/a 1.5pt/a 17lb/100 gal		POS POS POS POS	102	203	302	304
4	Urea Roundup PowerMax Harness Ammonium Sulfate	46%N 4.5LBAE/GAL 7.5LBA/GAL 100%	GR SL EC SG	200lb/a 22fl oz/a 1.5pt/a 17lb/100 gal		POS POS POS POS	104	202	402	404
1	Urea Harness	46%N 7.5LBA/GAL	GR EC	0lb/a 2.5pt/a		PREPRE A	201	204	303	401

**Trial:** Herbicide carryover in silage corn **Trial #** CN18

**Project Goal:** To compare residual herbicide carryover effects on cover crop establishment in Fall 2013  
**Location:** Arlington Research Station  
**Graduate Research Assistant:** Daniel Smith

#### Site Description:

<b>Field no.:</b>	455	<b>Crop:</b>	Corn
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	DKC 55-09
<b>% OM:</b>	3.4	<b>Date planted:</b>	6/3/13
<b>pH:</b>	6.3	<b>Planting pop.:</b>	32,400 seeds/acre
<b>Fertilization:</b>	145 lbs N per acre	<b>Planting depth:</b>	1.5 in
<b>Previous cropping and tillage:</b>	Soybean	<b>Row spacing:</b>	30 in
		<b>Plot size:</b>	10 by 45 ft
<b>Principal weeds present:</b>	Common Lambquarters (CHEAL) Giant Foxtail (SETFA) Pigweed (AMARE)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	5/9/13	6/3/13
Treatment:	PREPLANT	PRE
Soil moisture [surface]:	Dry moist	Dry moist
Soil temperature (°F) [2 in depth]	63	--
Air temperature (°F)	63	69
Wind speed (mph)/direction	3/S	0-3/S
Relative humidity (%)	74	37
Cloud cover (%)	90	75

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:		5/9/13	6/3/13
Crop	Height (in)	PREPLANT	PRE
	Stage (lf)		
CHEAL	Height (in)	PREPLANT	PRE
	Stage (lf)		
SETFA	Height (in)	PREPLANT	PRE
	Stage (lf)		
AMARE	Height (in)	PREPLANT	PRE
	Stage (lf)		

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
2	Princep 4FL	4LBA/GALF		2qt/a	EPOST V2B		101	207	305	414
15	Sharpen	2.85LBA/GALF		2.0fl oz/a	PREPLA A		102	204	303	404
12	Fierce	76%	WG	3oz/a	PREPLA A		103	214	301	406
7	Python NIS	80%	WG	1oz/a	EPOST V2B		104	206	310	403
		100%	SL	0.25% v/v	EPOST V2B					
6	Stinger	3LBA/GALL		0.5pt/a	EPOST V2B		105	213	307	412
1	No-residual						106	210	311	407
9	Accent Q	54.5%	WG	0.9oz/a	EPOST V2B		107	208	313	415
	COC	100%	SL	1% v/v	EPOST V2B					
	Ammonium Sulfate	100%	SG	2lb/a	EPOST V2B					
8	Resolve	25%	DF	1oz/a	EPOST V2B		108	202	308	402
	NIS	100%	SL	0.25% v/v	EPOST V2B					
	Ammonium Sulfate	100%	SG	2lb/a	EPOST V2B					
11	Zemax	3.67LBA/GALL		2qt/a	PREPLA A		109	201	306	409
	Halex GT	4.389LBA/GALL		3.6pt/a	V4 POST C					
	NIS	100%	SL	0.25% v/v	V4 POST C					
	Ammonium Sulfate	100%	SG	8.5lb/a	V4 POST C					
10	SureStart	4.25LBA/GALL		1.5pt/a	EPOST V2B		110	212	309	410
3	Callisto	4LBA/GALL		6fl oz/a	EPOST V2B		111	209	315	408
	COC	100%	SL	1% v/v	EPOST V2B					
	Ammonium Sulfate	100%	SG	8.5lb/100 gal	EPOST V2B					
13	Basis Blend	30%W/W	SG	0.33oz/a	EPOST V2B		112	215	302	411
	COC	100%	SL	1% v/v	EPOST V2B					
	Ammonium Sulfate	100%	SG	2lb/a	EPOST V2B					
14	Verdict	5.57LBA/GAL	EC	15fl oz/a	PREPLA A		113	211	304	405
	MSO	100%	SL	1% v/v	PREPLA A					
	Ammonium Sulfate	100%	SG	8.5lb/100 gal	PREPLA A					
4	Laudis	3.5LBA/GALL		3fl oz/a	EPOST V2B		114	205	314	401
	MSO	100%	SL	1% v/v	EPOST V2B					
	Ammonium Sulfate	100%	SG	1.5lb/a	EPOST V2B					
5	Impact	2.8LBA/GALL		0.75fl oz/a	EPOST V2B		115	203	312	413
	MSO	100%	SL	1% v/v	EPOST V2B					
	Ammonium Sulfate	100%	SG	8.5lb/100 gal	EPOST V2B					

**Trial:** Herbicide carryover in soybean **Trial #** SB19

**Project Goal:** To compare residual herbicide carryover effects on cover crop establishment in Fall 2013  
**Location:** Arlington Research Station  
**Graduate Research Assistant:** Daniel Smith

#### Site Description:

<b>Field no.:</b>	455	<b>Crop:</b>	Soybean
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	ASGROW 2130
<b>% OM:</b>	3.4	<b>Date planted:</b>	6/3/13
<b>pH:</b>	6.3	<b>Planting pop.:</b>	154,000 seeds/acre
<b>Fertilization:</b>	None	<b>Planting depth:</b>	1 in.
<b>Previous cropping and tillage:</b>	Corn	<b>Row spacing:</b>	30 in.
<b>Principal weeds present:</b>		<b>Plot size:</b>	10 by 50 ft
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	6/4/13
Treatment:	PRE
Soil moisture [surface]:	Dry moist
Soil temperature (°F) [2 in depth]	--
Air temperature (°F)	66
Wind speed (mph)/direction	3.5-5.5/SW
Relative humidity (%)	57
Cloud cover (%)	90

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

Trt No.	Treatment Name	Form Conc.	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
15	Cobra	2LBA/GALL		12.5fl oz/a	EPOST B		101	211	309	412
	COC	100%	SL	1pt/a	EPOST B					
5	Classic	25%AW/W	DF	1oz/a	PRE	A	102	207	314	404
14	Extreme	2.17LBA/GALL		3pt/a	EPOST B		103	213	302	413
	NIS	100%	SL	0.125g ai/unit	EPOST B					
	Ammonium Sulfate	100%	SG	8.5lb/a	EPOST B					
1							104	206	301	402
13	Pursuit	2LBA/GALL		4fl oz/a	EPOST B		105	215	312	415
	NIS	100%	SL	1qt/100 gal	EPOST B					
	Ammonium Sulfate	100%	SG	2.5lb/a	EPOST B					
6	Authority MTZ	45%AW/W	WDG	12oz/a	PRE	A	106	201	307	403
11	Warrant	3LBA/GALL		1.5qt/a	EPOST B		107	212	310	405
8	Zidua	85%AW/W	WG	3fl oz/a	PRE	A	108	203	315	406
4	Sencor 75DF	75%AW/W	DF	0.5lb/a	PRE	A	109	202	303	401
10	Dual II Magnum	7.64LBA/GALL		1.33pt/a	EPOST B		110	204	311	410
7	Gangster	55.8%AW/W	WG	3.6oz/a	PRE	A	111	210	313	408
12	Flexstar	1.88LBA/GALL		16fl oz/a	EPOST B		112	208	305	414
	COC	100%	SL	1% v/v	EPOST B					
	Ammonium Sulfate	100%	SG	4lb/a	EPOST B					
2	Spartan	4LBA/GALL		8fl oz/a	PRE	A	113	214	304	407
9	Firstrate	84%	DF	0.3oz/a	EPOST B		114	205	308	409
	NIS	100%	SL	0.25% v/v	EPOST B					
	Ammonium Sulfate	100%	SG	2lb/a	EPOST B					
3	Valor	51%	WDG	2.5oz/a	PRE	A	115	209	306	411

**Trial:** Timing of Reduced Rates of Atrazine in Corn **Trial #** CN10

**Project Goal:** Evaluate efficacy of reduced rates of atrazine both PRE and POST when applied in combination with 3 other POST Programs

**Location:** Rock County

**Graduate Research Assistant:** Ross Recker

#### Site Description:

<b>Field no.:</b>	--	<b>Crop:</b>	Corn
<b>Soil type:</b>	Silt Loam	<b>Variety:</b>	P0448 AMX
<b>% OM:</b>	3.8	<b>Date planted:</b>	5/15/13
<b>pH:</b>	6.7	<b>Planting pop.:</b>	32,400
<b>Fertilization:</b>		<b>Planting depth:</b>	1.5 in
<b>Previous cropping and tillage:</b>	Soybean, Conventional	<b>Row spacing:</b>	30 in
		<b>Plot size:</b>	25 x 10 ft.
<b>Principal weeds present:</b>	Velvetleaf(ABUTH), Giant Ragweed(AMBTR), Lambsquarters(CHEAL), Giant Foxtail (SETFA)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	5/16/13	6/10/13
Treatment:	PRE	POST
Soil moisture [surface]:	Dry	Dry
Soil temperature (°F) [2 in depth]	70	76
Air temperature (°F)	82	84
Wind speed (mph)/direction	4/NE	4/W
Relative humidity (%)	35	50
Cloud cover (%)	10	10

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in

#### Crop and Weed Information at Application:

Date:		5/16/13	6/10/13
Crop	Height (in)	-	10
	Stage (lf)	-	V4
AMBTR	Height (in)	-	2 – 4
	Stage (lf)	-	2 -3
ABUTH	Height (in)	-	1 – 2
	Stage (lf)	-	2 – 4
CHEAL	Height (in)	-	.5 – 1
	Stage (lf)	-	0 – 2

Trt No.	Treatment Type	Treatment Name	Form Conc	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
1	HERB	AAtrex	4LBA/GAL	F	1lb ai/a	PRE	A	205	409	506	701
	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A				
	HERB	Ignite	2.34LBA/GAL	L	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
2	HERB	AAtrex	4LBA/GAL	F	0.5lb ai/a	PRE	A	109	301	607	804
	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A				
	HERB	Ignite	2.34LBA/GAL	L	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
3	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	203	407	605	703
	HERB	Ignite	2.34LBA/GAL	L	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
4	HERB	AAtrex	4LBA/GAL	F	1lb ai/a	PRE	A	105	402	603	809
	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A				
	HERB	Laudis	3.5LBA/GAL	L	3fl oz/a	POST	B				
	ADJ	MSO	100%	SL	1gal/100 gal	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	1.2% v/v	POST	B				
5	HERB	AAtrex	4LBA/GAL	F	0.5lb ai/a	PRE	A	201	308	507	805
	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A				
	HERB	Laudis	3.5LBA/GAL	L	3fl oz/a	POST	B				
	ADJ	MSO	100%	SL	1gal/100 gal	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	1.2% v/v	POST	B				
6	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	209	403	502	807
	HERB	Laudis	3.5LBA/GAL	L	3fl oz/a	POST	B				
	ADJ	MSO	100%	SL	1gal/100 gal	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	1.2% v/v	POST	B				
7	HERB	AAtrex	4LBA/GAL	F	1lb ai/a	PRE	A	208	405	509	802
	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A				
	HERB	Roundup WeatherMax	4.5LBAE/GAL	SC	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
8	HERB	AAtrex	4LBA/GAL	F	0.5lb ai/a	PRE	A	108	404	501	705
	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A				
	HERB	Roundup WeatherMax	4.5LBAE/GAL	SC	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
9	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	207	302	601	706
	HERB	Roundup WeatherMax	4.5LBAE/GAL	SC	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
10	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	102	304	609	707
	HERB	AAtrex	4LBA/GAL	F	1lb ai/a	POST	B				
	HERB	Ignite	2.34LBA/GAL	L	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
11	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	202	309	503	806
	HERB	AAtrex	4LBA/GAL	F	0.5lb ai/a	POST	B				
	HERB	Ignite	2.34LBA/GAL	L	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
12	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	107	307	606	708
	HERB	AAtrex	4LBA/GAL	F	1lb ai/a	POST	B				
	HERB	Laudis	3.5LBA/GAL	L	3fl oz/a	POST	B				
	ADJ	MSO	100%	SL	1gal/100 gal	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	1.2% v/v	POST	B				
13	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	104	305	608	801
	HERB	AAtrex	4LBA/GAL	F	0.5lb ai/a	PRE	B				
	HERB	Laudis	3.5LBA/GAL	L	3fl oz/a	POST	B				
	ADJ	MSO	100%	SL	1gal/100 gal	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	1.2% v/v	PRE	B				



Trt No.	Treatment Type	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate	Rate Unit	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
14	HERB	Dual II Magnum	7.64	LBA/GAL	EC	1.67	pt/a	PRE	A	103	401	604	709
	HERB	AAtrex	4	LBA/GAL	F	1	lb ai/a	POST	B				
	HERB	Roundup WeatherMax	4.5	LBAE/GAL	SC	22	fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%		SG	2%	v/v	POST	B				
15	HERB	Dual II Magnum	7.64	LBA/GAL	EC	1.67	pt/a	PRE	A	106	406	504	803
	HERB	AAtrex	4	LBA/GAL	F	0.5	lb ai/a	POST	B				
	HERB	Roundup WeatherMax	4.5	LBAE/GAL	SC	22	fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%		SG	2%	v/v	POST	B				
16	HERB	Dual II Magnum	7.64	LBA/GAL	EC	1.67	pt/a	PRE	A	206	408	602	808
17	HERB	Dual II Magnum	7.64	LBA/GAL	EC	1.67	pt/a	PRE	A	101	303	505	704
18	HERB	Lumax			L	2.5	qt/a	PRE	B	204	306	508	702
	HERB	Roundup WeatherMax	4.5	LBAE/GAL	SC	22	fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%		SG	2%	v/v	POST	B				

**Trial:** Timing of Reduced Rates of Atrazine in Corn      **Trial #** CN11

**Project Goal:** Evaluate efficacy of reduced rates of atrazine both PRE and POST when applied in combination with 3 other POST Programs

**Location:** Columbia County

**Graduate Research Assistant:** Ross Recker

#### Site Description:

<b>Field no.:</b>	--	<b>Crop:</b>	Corn
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	Pioneer 0448 AMX
<b>% OM:</b>	--	<b>Date planted:</b>	5/16/13
<b>pH:</b>	--	<b>Planting pop.:</b>	36,0000
<b>Fertilization:</b>	45#N starter, 145#N Urea at V4	<b>Planting depth:</b>	2 in
<b>Previous cropping and tillage:</b>	Corn/No-till	<b>Row spacing:</b>	30 in
<b>Principal weeds present:</b>	Giant ragweed (AMBTR)	<b>Plot size:</b>	25 ft. x 10 ft.
<b>Other pesticides used:</b>	Capture and Ascend in Furrow		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	5/10/13	5/18/13	6/11/13
Treatment:	Burndown	PRE	POST
Soil moisture [surface]:	Wet	Moist	Moist
Soil temperature (°F) [2 in depth]	60	65	78
Air temperature (°F)	54	67	81
Wind speed (mph)/direction	2 /NW	2.5/SE	3/SW
Relative humidity (%)	76	73	53
Cloud cover (%)	100	95	30

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in

#### Crop and Weed Information at Application:

Date:		5/10/13	5/18/13	6/11/13
Corn	Height (in)	-	-	7-8
	Stage (lf)	-	-	V3
AMBTR	Height (in)	1 – 2	-	1 – 4
	Stage (lf)	2	-	2 – 3

Trt No.	Treatment Type	Treatment Name	Form Conc	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
1	HERB	AAtrex	4LBA/GAL	F	1lb ai/a	PRE	A	109	215	307	418
	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A				
	HERB	Ignite	2.34LBA/GAL	L	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
2	HERB	AAtrex	4LBA/GAL	F	0.5lb ai/a	PRE	A	209	212	305	318
	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A				
	HERB	Ignite	2.34LBA/GAL	L	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
3	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	103	210	308	316
	HERB	Ignite	2.34LBA/GAL	L	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
4	HERB	AAtrex	4LBA/GAL	F	1lb ai/a	PRE	A	118	203	312	401
	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A				
	HERB	Laudis	3.5LBA/GAL	L	3fl oz/a	POST	B				
	ADJ	MSO	100%	SL	1 gal/100 gal	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	1.2% v/v	POST	B				
5	HERB	AAtrex	4LBA/GAL	F	0.5lb ai/a	PRE	A	201	216	304	416
	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A				
	HERB	Laudis	3.5LBA/GAL	L	3fl oz/a	POST	B				
	ADJ	MSO	100%	SL	1 gal/100 gal	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	1.2% v/v	POST	B				
6	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	105	117	404	411
	HERB	Laudis	3.5LBA/GAL	L	3fl oz/a	POST	B				
	ADJ	MSO	100%	SL	1 gal/100 gal	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	1.2% v/v	POST	B				
7	HERB	AAtrex	4LBA/GAL	F	1lb ai/a	PRE	A	115	202	306	313
	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A				
	HERB	Roundup WeatherMax	4.5LBAE/GAL	SC	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
8	HERB	AAtrex	4LBA/GAL	F	0.5lb ai/a	PRE	A	108	218	405	413
	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A				
	HERB	Roundup WeatherMax	4.5LBAE/GAL	SC	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
9	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	104	211	309	410
	HERB	Roundup WeatherMax	4.5LBAE/GAL	SC	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
10	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	206	214	310	403
	HERB	AAtrex	4LBA/GAL	F	1lb ai/a	POST	B				
	HERB	Ignite	2.34LBA/GAL	L	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
11	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	101	113	408	415
	HERB	AAtrex	4LBA/GAL	F	0.5lb ai/a	POST	B				
	HERB	Ignite	2.34LBA/GAL	L	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
12	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	106	110	407	414
	HERB	AAtrex	4LBA/GAL	F	1lb ai/a	POST	B				
	HERB	Laudis	3.5LBA/GAL	L	3fl oz/a	POST	B				
	ADJ	MSO	100%	SL	1 gal/100 gal	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	1.2% v/v	POST	B				

Trt No.	Treatment Type	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
13	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	114	204	317	409
	HERB	AAtrex	4LBA/GAL	F	0.5lb ai/a	PRE	B				
	HERB	Laudis	3.5LBA/GAL	L	3fl oz/a	POST	B				
	ADJ	MSO	100%	SL	1 gal/100 gal	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	1.2% v/v	PRE	B				
14	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	107	213	302	314
	HERB	AAtrex	4LBA/GAL	F	1lb ai/a	POST	B				
	HERB	Roundup WeatherMax	4.5LBAE/GAL	SC	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
15	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	116	205	301	311
	HERB	AAtrex	4LBA/GAL	F	0.5lb ai/a	POST	B				
	HERB	Roundup WeatherMax	4.5LBAE/GAL	SC	22fl oz/a	POST	B				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	B				
16	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	102	112	303	412
17	HERB	Dual II Magnum	7.64LBA/GAL	EC	1.67pt/a	PRE	A	208	217	315	406
18	HERB	Lumax		L	2.5qt/a	PRE	A	111	207	402	417
	HERB	Roundup WeatherMax	4.5LBAE/GAL	SC	22fl oz/a	POST	C				
	ADJ	Ammonium Sulfate	100%	SG	2% v/v	POST	C				

**Trial:** Planting Dates **Trial #** SB15

**Project Goal:** Evaluate POST weed control timings based on residual herbicide use following different planting dates

**Location:** Arlington Research Station

**Graduate Research Assistant:** Ryan DeWerff

#### Site Description:

<b>Field no.:</b>	371	<b>Crop:</b>	Soybean
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	DSR 2105/R2Y
<b>% OM:</b>	3.5	<b>Date planted:</b>	4/29/13, 5/14/13, 6/3/13
<b>pH:</b>	6.8	<b>Planting pop.:</b>	120,000 seeds/acre
<b>Fertilization:</b>	None	<b>Planting depth:</b>	1.25 in
<b>Previous cropping and tillage:</b>	Corn	<b>Row spacing:</b>	30 in.
		<b>Plot size:</b>	10 by 50 ft
<b>Principal weeds present:</b>	common ragweed (AMBEL), giant foxtail (SETFA), common lambsquarters (CHEAL), redroot pigweed (AMARE)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, Split plot design, Main plots: planting dates, Subplots are arranged in a two- by four factorial treatment structure		

#### Herbicide Application Information:

##### Early Planting Date 4/29/13

Date treated:	4/29/13	6/3/13	6/8/13
Treatment:	PRE	POST V1	POST V2
Soil moisture [surface]:	Moist/Wet	Moist	Dry/Moist
Soil temperature (°F) [2 in depth]	59	75	78
Air temperature (°F)	64	62	84
Wind speed (mph)/direction	3-6/S	0-5/S	2-5/NW
Relative humidity (%)	76	51	56
Cloud cover (%)	90	5	25

##### Mid Planting Date 5/14/13

Date treated:	5/14/13	6/14/13	
Treatment:	PRE	POST V1	
Soil moisture [surface]:	Moist	Moist	
Soil temperature (°F) [2 in depth]	73	69	
Air temperature (°F)	74	75	
Wind speed (mph)/direction	6-10/W	0-3/SE	
Relative humidity (%)	50	67	
Cloud cover (%)	0	5	

##### Late Planting Date 6/3/13

Date treated:	6/3/13		
Treatment:	PRE		
Soil moisture [surface]:	Moist		
Soil temperature (°F) [2 in depth]	75		
Air temperature (°F)	62		
Wind speed (mph)/direction	0-5/S		
Relative humidity (%)	51		
Cloud cover (%)	5		

**Application equipment:** CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR11002, Spacing: 15 in, Height: 20 in

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	2	3	4
1	Early Planting Date						105	112	316	419
	Authority First	70%	DF	6oz/a	PRE	A				
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	V1	B				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V1	B				
2	Early Planting Date						211	215	305	420
	Authority First	70%	DF	6oz/a	PRE	A				
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	V2	C				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V2	C				
3	Early Planting Date						115	220	312	405
	Authority First	70%	DF	6oz/a	PRE	A				
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	V4	D				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V4	D				
4	Early Planting Date						111	205	216	320
	Authority First	70%	DF	6oz/a	PRE	A				
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	R1	E				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	R1	E				
5	Early Planting Date						116	212	219	406
	Roundup									
	Weathermax	4.5LBAE/GAL	SL	22fl oz/a	V1	B				
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V1	B				
6	Early Planting Date						119	306	315	411
	Roundup									
	Weathermax	4.5LBAE/GAL	SL	22fl oz/a	V2	C				
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V2	C				
7	Early Planting Date						206	319	412	416
	Roundup									
	Weathermax	4.5LBAE/GAL	SL	22fl oz/a	V4	D				
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V4	D				
8	Early Planting Date						106	120	311	415
	Roundup									
	Weathermax	4.5LBAE/GAL	SL	22fl oz/a	R1	E				
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	R1	E				
9	Mid Planting Date						122	202	313	410
	Authority First	70%	DF	6oz/a	PRE	A				
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	V1	B				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V1	B				
10	Mid Planting Date						101	114	221	409
	Authority First	70%	DF	6oz/a	PRE	A				
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	V2	C				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V2	C				
11	Mid Planting Date						214	309	321	401
	Authority First	70%	DF	6oz/a	PRE	A				
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	V4	D				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V4	D				
12	Mid Planting Date						209	301	413	421
	Authority First	70%	DF	6oz/a	PRE	A				
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	R1	E				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	R1	E				
13	Mid Planting Date						109	213	222	402
	Roundup									
	Weathermax	4.5LBAE/GAL	SL	22fl oz/a	V1	B				
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V	B				

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	2	3	4
14	Mid Planting Date						110	113	201	322
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	V2	C				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V2	C				
15	Mid Planting Date						210	302	314	422
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	V4	D				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V4	D				
16	Mid Planting Date						102	121	310	414
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	R1	E				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	R1	E				
17	Late Planting Date						104	208	323	417
	Authority First	70%	DF	6oz/a	PRE	A				
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	V1	B				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V1	B				
18	Late Planting Date						108	118	324	404
	Authority First	70%	DF	6oz/a	PRE	A				
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	V2	C				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V2	C				
19	Late Planting Date						117	203	307	424
	Authority First	70%	DF	6oz/a	PRE	A				
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	V4	D				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V4	D				
20	Late Planting Date						123	303	318	407
	Authority First	70%	DF	6oz/a	PRE	A				
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	R1	E				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	R1	E				
21	Late Planting Date						207	217	403	423
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	V1	B				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V1	B				
22	Late Planting Date						103	218	223	408
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	V2	C				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V2	C				
23	Late Planting Date						107	124	304	418
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	V4	D				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	V4	D				
24	Late Planting Date						204	224	308	317
	Roundup	4.5LBAE/GAL	SL	22fl oz/a	R1	E				
	Weathermax									
	Ammonium Sulfate	100%	SG	17lb ai/100 gal	R1	E				

**Trial:** Soybean Seeding Rates **Trial #** SB16

**Project Goal:** Establish the effectiveness of weed suppression from increased soybean population in relation to preemergence herbicide control.

**Location:** Arlington Research Station

**Graduate Research Assistant:** Ryan DeWerff

#### Site Description:

<b>Field no.:</b>	371	<b>Crop:</b>	Soybean
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	DSR 2105/R2Y, DSR-2118
<b>% OM:</b>	3.5	<b>Date planted:</b>	5/8/13
<b>pH:</b>	6.8	<b>Planting pop.:</b>	VARIES
<b>Fertilization:</b>	None	<b>Planting depth:</b>	1.25 in
<b>Previous cropping and tillage:</b>	Corn	<b>Row spacing:</b>	Varies
		<b>Plot size:</b>	7.5 by 21 ft
<b>Principal weeds present:</b>	Common ragweed (AMBEL), giant foxtail (SETFA), common lambsquarters (CHEAL), redroot pigweed (AMARE)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	5/8/13
Treatment:	PRE
Soil moisture [surface]:	Dry moist
Soil temperature (°F) [2 in depth]	75
Air temperature (°F)	74
Wind speed (mph)/direction	1-3/SW
Relative humidity (%)	44
Cloud cover (%)	75

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR11002, Spacing: 15 in, Height: 20 in



Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	2	3	4
1	2105R2Y			190000 seeds/a			103	403	605	809
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	Roundup	4.5LBAE/GALS	SL	22 fl oz/a	V4	B				
	Weathermax									
	NIS	100%	SL	0.25 % v/v	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
2	2105R2Y			190000 seeds/a			110	303	508	703
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	MSO	100%	SL	1 gal/100 gal	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
	Fusilade DX	2LBA/GAL	EC	12 fl oz/a	V4	C				
	COC	100%	SL	0.5 gal/100 gal	V4	C				
	N-PAK AMS	100%	SL	4 gal/100 gal	V4	C				
3	2105R2Y			190000 seeds/a			106	402	507	708
	Prefix	5.29LBA/GAL	EC	2 pt/a	PRE	A				
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	Roundup	4.5LBAE/GALS	SL	22 fl oz/a	V4	B				
	Weathermax									
	NIS	100%	SL	0.25 % v/v	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
4	2105R2Y			190000 seeds/a			201	306	509	807
	Prefix	5.29LBA/GAL	EC	2 pt/a	PRE	A				
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	MSO	100%	SL	1 gal/100 gal	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
	Fusilade DX	2LBA/GAL	EC	12 fl oz/a	V4	C				
	COC	100%	SL	0.5 gal/100 gal	V4	C				
	N-PAK AMS	100%	SL		V4	C				
5	2105R2Y			120000 seeds/a			209	305	603	710
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	Roundup	4.5LBAE/GALS	SL	22 fl oz/a	V4	B				
	Weathermax									
	NIS	100%	SL	0.25 % v/v	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
6	2105R2Y			120000 seeds/a			104	309	505	702
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	MSO	100%	SL	1 gal/100 gal	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
	Fusilade DX	2LBA/GAL	EC	12 fl oz/a	V4	C				
	COC	100%	SL	0.5 gal/100 gal	V4	C				
	N-PAK AMS	100%	SL		V4	C				
7	2105R2Y			120000 seeds/a			107	310	506	701
	Prefix	5.29LBA/GAL	EC	2 pt/a	PRE	A				
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	Roundup	4.5LBAE/GALS	SL	22 fl oz/a	V4	B				
	Weathermax									
	NIS	100%	SL	0.25 % v/v	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
8	2105R2Y			120000 seeds/a			105	404	602	709
	Prefix	5.29LBA/GAL	EC	2 pt/a	PRE	A				
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	MSO	100%	SL	1 gal/100 gal	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
	Fusilade DX	2LBA/GAL	EC	12 fl oz/a	V4	C				
	COC	100%	SL	0.5 gal/100 gal	V4	C				
	N-PAK AMS	100%	SL		V4	C				

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	2	3	4
9	2105 R2Y 2118 Conv			120000 seeds/a 70000 seeds/a			208	405	609	802
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	Roundup	4.5LBAE/GAL	SL	22 fl oz/a	V4	B				
	Weathermax									
	NIS	100%	SL	0.25 % v/v	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
10	2105R2Y 2118Conv			120000 seeds/a 70000 seeds/a			102	408	504	706
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	MSO	100%	SL	1 gal/100 gal	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
	Fusilade DX	2LBA/GAL	EC	12 fl oz/a	V4	C				
	COC	100%	SL	0.5 gal/100 gal	V4	C				
	N-PAK AMS	100%	SL		V4	C				
11	2105R2Y 2118Conv			120000 seeds/a 70000 seeds/a			205	307	502	806
	Prefix	5.29LBA/GAL	EC	2 pt/a	PRE	A				
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	Roundup	4.5LBAE/GAL	SL	22 fl oz/a	V4	B				
	Weathermax									
	NIS	100%	SL	0.25 % v/v	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
12	2105R2Y 2118Conv			120000 seeds/a 70000 seeds/a			109	304	610	704
	Prefix	5.29LBA/GAL	EC	2 pt/a	PRE	A				
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	MSO	100%	SL	1 gal/100 gal	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
	Fusilade DX	2LBA/GAL	EC	12 fl oz/a	V4	C				
	COC	100%	SL	0.5 gal/100 gal	V4	C				
	N-PAK AMS	100%	SL		V4	C				
13	2105R2Y 2118Conv			60000 seeds/a 35000 seeds/a			202	409	503	808
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	Roundup	4.5LBAE/GAL	SL	22 fl oz/a	V4	B				
	Weathermax									
	NIS	100%	SL	0.25 % v/v	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
14	2105R2Y 2118Conv			60000 seeds/a 35000 seeds/a			101	308	510	805
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	MSO	100%	SL	1 gal/100 gal	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
	Fusilade DX	2LBA/GAL	EC	12 fl oz/a	V4	C				
	COC	100%	SL	0.5 gal/100 gal	V4	C				
	N-PAK AMS	100%	SL		V4	C				
15	2105R2Y 2118Conv			60000 seeds/a 35000 seeds/a			204	410	606	801
	Prefix	5.29LBA/GAL	EC	2 pt/a	PRE	A				
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	Roundup	4.5LBAE/GAL	SL	22 fl oz/a	V4	B				
	Weathermax									
	NIS	100%	SL	0.25 % v/v	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	2	3	4
16	2105R2Y			60000 seeds/a			108	301	608	705
	2118Conv			35000 seeds/a						
	Prefix	5.29LBA/GAL	EC	2 pt/a	PRE	A				
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	MSO	100%	SL	1 gal/100 gal	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
	Fusilade DX	2LBA/GAL	EC	12 fl oz/a	V4	C				
	COC	100%	SL	0.5 gal/100 gal	V4	C				
	N-PAK AMS	100%	SL		V4	C				
17	2105R2Y			60000 seeds/a			203	401	607	810
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	Roundup									
	Weathermax	4.5LBAE/GAL	SL	22 fl oz/a	V4	B				
	NIS	100%	SL	0.25 % v/v	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
18	2105R2Y			60000 seeds/a			207	302	604	707
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	MSO	100%	SL	1 gal/100 gal	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
	Fusilade DX	2LBA/GAL	EC	12 fl oz/a	V4	C				
	COC	100%	SL	0.5 gal/100 gal	V4	C				
	N-PAK AMS	100%	SL		V4	C				
19	2105R2Y			60000 seeds/a			210	406	501	803
	Prefix	5.29LBA/GAL	EC	2 pt/a	PRE	A				
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	Roundup									
	Weathermax	4.5LBAE/GAL	SL	22 fl oz/a	V4	B				
	NIS	100%	SL	0.25 % v/v	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
20	2105R2Y			60000 seeds/a			206	407	601	804
	Prefix	5.29LBA/GAL	EC	2 pt/a	PRE	A				
	Raptor	1LBA/GAL	EC	5 fl oz/a	V4	B				
	MSO	100%	SL	1 gal/100 gal	V4	B				
	Ammonium Sulfate	100%	SG	17 lb ai/100 gal	V4	B				
	Fusilade DX	2LBA/GAL	EC	12 fl oz/a	V4	C				
	COC	100%	SL	0.5 gal/100 gal	V4	C				
	N-PAK AMS	100%	SL		V4	C				

**Trial:** Program approach in managing AMASS utilizing new technologies **Trial #** CN08

**Project Goal:** To investigate the efficacy and interaction of new herbicide formulations to manage pigweeds, *Amaranthus spp.*, in soybean production systems

**Location:** Arlington Research Station

**Graduate Research Assistant:** Tommy Butts

#### Site Description:

<b>Field no.:</b>	Vet Med	<b>Crop:</b>	Non-Crop
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	--
<b>% OM:</b>	--	<b>Date planted:</b>	--
<b>pH:</b>	--	<b>Planting pop.:</b>	--
<b>Fertilization:</b>	None	<b>Planting depth:</b>	--
<b>Previous cropping and tillage:</b>	Fallow	<b>Row spacing:</b>	--
		<b>Plot size:</b>	10 by 25 ft
<b>Principal weeds present:</b>	Redroot Pigweed (AMARE), Wild Buckwheat (POLCO), Common Ragweed (AMBEL), Giant Foxtail (SETFA)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	5/8/13	5-29-13
Treatment:	PRE	Early Post
Soil moisture [surface]:	DRY-MOIST	MOIST
Soil temperature (°F) [2 in depth]	75	78
Air temperature (°F)	78.2	77.5
Wind speed (mph)/direction	3-5	4-8
Relative humidity (%)	35.5	71.2
Cloud cover (%)	80	45

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:		5/8/13	5/28/13
AMARE	Height (in)	PRE	0.25 – 0.50
	Stage (lf)		cotyledon
POLCO	Height (in)	PRE	1 - 2
	Stage (lf)		2 leaf
AMBEL	Height (in)	PRE	0.50 - 1
	Stage (lf)		2 leaf
SETFA	Height (in)	PRE	1 - 2
	Stage (lf)		3 leaf

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
1	Nontreated						101	222	319	407
2	Fierce	76%	WDG	3oz/a	Pre	A	102	212	309	415
3	Clarity	4lb/gal	SL	32fl oz/a	Pre	A	103	211	302	414
	Warrent	3lb/gal	ME	2.75qt/a	Pre	A				
4	Zemax	3.67lb/gal	SE	2qt/a	Pre	A	104	216	301	420
	metribuzin	75%	DF	0.333lb/a	Pre	A				
5	Prefix	5.29lb/gal	SL	1qt/a	Pre	A	105	221	313	403
	metribuzin	75%	DF	0.333lb/a	Pre	A				
6	Fierce	76%	WDG	3oz/a	Pre	A	106	201	322	405
	Dual II Magnum	7.62lb/gal	SL	1pt/a	EPost	B				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	EPost	B				
7	Fierce	76%	WDG	3oz/a	Pre	A	107	213	306	418
	Dual II Magnum	7.62lb/gal	SL	1pt/a	EPost	B				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	EPost	B				
	Clarity	4lb/gal	SL	16fl oz/a	EPost	B				
8	Clarity	4lb/gal	SL	32fl oz/a	Pre	A	108	203	310	422
	Warrant	3lb/gal	ME	2.75qt/a	Pre	A				
	Dual II Magnum	7.62lb/gal	SL	1pt/a	EPost	B				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	EPost	B				
	Clarity	4lb/gal	SL	16fl oz/a	EPost	B				
9	Fierce	76%	WDG	3oz/a	Pre	A	109	202	307	417
	Dual II Magnum	7.62lb/gal	SL	1pt/a	EPost	B				
	Liberty 280	2.34lb/gal	SL	29fl oz/a	EPost	B				
10	Fierce	76%	WDG	3oz/a	Pre	A	110	219	314	401
	Dual II Magnum	7.62lb/gal	SL	1pt/a	EPost	B				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	EPost	B				
	Weedar 64	3.8lbae/gal	SL	1qt/a	EPost	B				
11	Fierce	76%	WDG	3oz/a	Pre	A	111	209	315	416
	Dual II Magnum	7.62lb/gal	SL	1pt/a	EPost	B				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	EPost	B				
	Weedar 64	3.8lbae/gal	SL	1qt/a	EPost	B				
	Liberty 280	2.34lb/gal	SL	29fl oz/a	EPost	B				
12	Zemax	3.67lb/gal	SE	2qt/a	Pre	A	112	215	317	409
	metribuzin	75%	DF	0.333lb/a	Pre	A				
	Flexstar GT	3.5lb/gal	SL	3.5pt/a	EPost	B				
	MSO	100%	SL	1% v/v	EPost	B				
13	Prefix	5.29lb/gal	SL	1qt/a	Pre	A	113	217	316	411
	metribuzin	75%	DF	0.333lb/a	Pre	A				
	Halex GT	4.47lb/gal	SC	3.6pt/a	EPost	B				
	Induce	100%	SL	0.25% v/v	EPost	B				
14	Prefix	5.29lb/gal	SL	1qt/a	Pre	A	114	205	303	421
	metribuzin	75%	DF	0.333lb/a	Pre	A				
	Halex GT	4.47lb/gal	SC	3.6pt/a	EPost	B				
	Clarity	4lb/gal	SL	16fl oz/a	EPost	B				
	Induce	100%	SL	0.25% v/v	EPost	B				
15	Fierce	76%	WDG	3oz/a	Pre	A	115	223	308	406
	Dual II Magnum	7.62lb/gal	SL	1pt/a	LPost	C				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	LPost	C				
16	Fierce	76%	WDG	3oz/a	Pre	A	116	204	321	413
	Dual II Magnum	7.62lb/gal	SL	1pt/a	LPost	C				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	LPost	C				
	Clarity	4lb/gal	SL	16fl oz/a	LPost	C				

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4
17	Clarity	4lb/gal	SL	32fl oz/a	Pre	A	117	206	320	423
	Warrant	3lb/gal	ME	2.75qt/a	Pre	A				
	Dual II Magnum	7.62lb/gal	SL	1pt/a	LPost	C				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	LPost	C				
	Clarity	4lb/gal	SL	16fl oz/a	LPost	C				
18	Fierce	76%	WDG	3oz/a	Pre	A	118	208	311	404
	Dual II Magnum	7.62lb/gal	SL	1pt/a	LPost	C				
	Liberty 280	2.34lb/gal	SL	29fl oz/a	LPost	C				
19	Fierce	76%	WDG	3oz/a	Pre	A	119	220	312	408
	Dual II Magnum	7.62lb/gal	SL	1pt/a	LPost	C				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	LPost	C				
	Weedar 64	3.8lbae/gal	SL	1qt/a	LPost	C				
20	Fierce	76%	WDG	3oz/a	Pre	A	120	207	323	412
	Dual II Magnum	7.62lb/gal	SL	1pt/a	LPost	C				
	Roundup									
	PowerMax	4.5lbae/gal	SL	22fl oz/a	LPost	C				
	Weedar 64	3.8lbae/gal	SL	1qt/a	LPost	C				
	Liberty 280	2.34lb/gal	SL	29fl oz/a	LPost	C				
21	Zemax	3.67lb/gal	SE	2qt/a	Pre	A	121	218	304	410
	metribuzin	75%	DF	0.333lb/a	Pre	A				
	Flexstar GT	3.5lb/gal	SL	3.5pt/a	LPost	C				
	MSO	100%	SL	1% v/v	LPost	C				
22	Prefix	5.29lb/gal	SL	1qt/a	Pre	A	122	214	318	402
	metribuzin	75%	DF	0.333lb/a	Pre	A				
	Halex GT	4.47lb/gal	SC	3.6pt/a	LPost	C				
	Induce	100%	SL	0.25% v/v	LPost	C				
23	Prefix	5.29lb/gal	SL	1qt/a	Pre	A	123	210	305	419
	metribuzin	75%	DF	0.333lb/a	Pre	A				
	Halex GT	4.47lb/gal	SC	3.6pt/a	LPost	C				
	Clarity	4lb/gal	SL	16fl oz/a	LPost	C				
	Induce	100%	SL	0.25% v/v	LPost	C				

**Trial:** New Technology Residual Herbicide Evaluation **Trial #** CN09

**Project Goal:** To investigate the residual activity and efficacy of new herbicide formulations on pigweeds, *Amaranthus spp.*, in soybean production  
**Location:** Arlington Research Station  
**Graduate Research Assistant:** Tommy Butts

#### Site Description:

<b>Field no.:</b>	Vet Med	<b>Crop:</b>	Non-crop
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	--
<b>% OM:</b>	--	<b>Date planted:</b>	--
<b>pH:</b>	--	<b>Planting pop.:</b>	--
<b>Fertilization:</b>	None	<b>Planting depth:</b>	--
<b>Previous cropping and tillage:</b>	Fallow	<b>Row spacing:</b>	--
		<b>Plot size:</b>	5 by 25 ft
<b>Principal weeds present:</b>	Redroot Pigweed (AMARE), Wild Buckwheat (POLCO), Giant Foxtail (SETFA)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, RCB		

#### Herbicide Application Information:

Date treated:	5/8/13
Treatment:	PRE
Soil moisture [surface]:	Dry moist
Soil temperature (°F) [2 in depth]	75
Air temperature (°F)	78
Wind speed (mph)/direction	3-5/NW
Relative humidity (%)	36
Cloud cover (%)	80

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:	5/8/13	
AMARE	Height (in)	PRE
	Stage (lf)	
POLCO	Height (in)	PRE
	Stage (lf)	
SETFA	Height (in)	PRE
	Stage (lf)	

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	2	3	4
1	Clarity	4lb/gal	SL	16fl oz/a	Pre	A	101	117	213	232
2	Clarity	4lb/gal	SL	32fl oz/a	Pre	A	102	121	207	225
3	Dual II Magnum	7.62lb/gal	SL	16fl oz/a	Pre	A	103	123	211	226
4	metribuzin	75%	DF	8oz/a	Pre	A	104	130	212	220
5	Clarity	4lb/gal	SL	32fl oz/a	Pre	A	105	128	214	223
	Dual II Magum	7.62lb/gal	SL	16fl oz/a	Pre	A				
6	Clarity	4lb/gal	SL	32fl oz/a	Pre	A	106	118	209	224
	metribuzin	75%	DF	8oz/a	Pre	A				
7	Dual II Magum	7.62lb/gal	SL	16fl oz/a	Pre	A	107	132	202	221
	Clarity	4lb/gal	SL	32fl oz/a	Pre	A				
	metribuzin	75%	DF	8oz/a	Pre	A				
8	Weedar 64	3.8lbae/gal	SL	16fl oz/a	Pre	A	108	119	204	228
9	Weedar 64	3.8lbae/gal	SL	32fl oz/a	Pre	A	109	125	215	230
10	Weedar 64	3.8lbae/gal	SL	32fl oz/a	Pre	A	110	124	216	222
	Dual II Magum	7.62lb/gal	SL	16fl oz/a	Pre	A				
11	Weedar 64	3.8lbae/gal	SL	32fl oz/a	Pre	A	111	122	208	217
	metribuzin	75%	DF	8oz/a	Pre	A				
12	Weedar 64	3.8lbae/gal	SL	32fl oz/a	Pre	A	112	129	210	218
	Dual II Magum	7.62lb/gal	SL	16fl oz/a	Pre	A				
	metribuzin	75%	DF	8oz/a	Pre	A				
13	Zidua	85%	WDG	3oz/a	Pre	A	113	120	203	227
14	Fierce	76%	WDG	3oz/a	Pre	A	114	131	206	229
15	Zemax	3.67lb/gal	SE	2qt/a	Pre	A	115	126	201	231
16	Nontreated						116	127	205	219



**Trial:** Row width and seeding rate effects on pigweeds (*Amaranthus spp.*) **Trial #** SB17

**Project Goal:** To investigate soybean row width and seeding rate effect on *Amaranthus* species development and competitiveness.  
To determine the importance of early season weed control with the use of a preemergence herbicide.

**Location:** Arlington Research Station  
**Graduate Research Assistant:** Tommy Butts

#### Site Description:

<b>Field no.:</b>	437	<b>Crop:</b>	Soybean
<b>Soil type:</b>	Plano silt loam	<b>Variety:</b>	LibertyLink 2213
<b>% OM:</b>	3.8	<b>Date planted:</b>	5/14/13
<b>pH:</b>	6.5	<b>Planting pop.:</b>	VARIES
<b>Fertilization:</b>	None	<b>Planting depth:</b>	1 in.
<b>Previous cropping and tillage:</b>	Corn	<b>Row spacing:</b>	VARIES
		<b>Plot size:</b>	50x10 ft.
<b>Principal weeds present:</b>	Common Lambsquarters (CHEAL), Redroot Pigweed (AMARE), Eastern Black Nightshade (SOLPT), Velvetleaf (ABUTH), Ladysthumb Smartweed (POLPE), Giant Foxtail (SETFA)		
<b>Other pesticides used:</b>	None		
<b>Experimental design and statistical analysis:</b>	4 reps, Split-Plot Factorial RCB		

#### Herbicide Application Information:

Date treated:	5/15/13	6/14/13
Treatment:	PRE	POST B
Soil moisture [surface]:	Dry	Moist
Soil temperature (°F) [2 in depth]	80	78
Air temperature (°F)	76	67
Wind speed (mph)/direction	5-8/NW	2-6/SE
Relative humidity (%)	30	66
Cloud cover (%)	80	15

Application equipment: CO<sub>2</sub> backpack sprayer, GPA: 15, PSI: 23, MPH: 3, Nozzle tips: XR8002, Spacing: 15 in, Height: 20 in

#### Crop and Weed Information at Application:

Date:	6-13-13	
Soybean	Height (in)	4 – 5
	Stage (lf)	V1
CHEAL	Height (in)	1 – 2
	Stage (lf)	3 – 4 leaf
AMARE	Height (in)	1 – 2
	Stage (lf)	4 – 5 leaf
SOLPT	Height (in)	0.5 – 1.5
	Stage (lf)	3 – 4 leaf

ABUTH	Height (in)	1.5 – 2.5
	Stage (lf)	3 - 4 leaf
POLPE	Height (in)	1.5 – 2
	Stage (lf)	5 – 6 leaf
SETFA	Height (in)	6 – 7
	Stage (lf)	5 leaf

Trt No.	Type	Treatment Name	Form Conc	Form Type	Rate	Growth Stage	Appl Code	Rep 1	2	3	4
5	CULT	Row Width						101	302	605	705
	CULT	Seeding Rate			130000seeds/a						
	HERB	Prefix	5.29LB/GAL	SL	1qt/a	POST	B				
	HERB	Liberty 280	2.34LB/GAL	SL	29fl oz/a	POST	B				
2	CULT	Row Width						102	303	506	806
	CULT	Seeding Rate			130000seeds/a						
	HERB	Prefix	5.29LB/GAL	SL	1qt/a	PRE	A				
	HERB	Metribuzin	75%	DF	0.333lb/a	PRE	A				
	HERB	Liberty 280	2.34LB/GAL	SL	29fl oz/a	POST	A				
3	CULT	Row Width						103	401	504	706
	CULT	Seeding Rate			190000seeds/a						
	HERB	Prefix	5.29LB/GAL	SL	1qt/a	PRE	A				
	HERB	Metribuzin	75%	DF	0.333lb/a	PRE	A				
	HERB	Liberty 280	2.34LB/GAL	SL	29fl oz/a	POST	A				
9	CULT	Row Width						104	404	601	702
	CULT	Seeding Rate			190000seeds/a						
	HERB	Prefix	5.29LB/GAL	SL	1qt/a	PRE	A				
	HERB	Metribuzin	75%	DF	0.333lb/a	PRE	A				
	HERB	Liberty 280	2.34LB/GAL	SL	29fl oz/a	POST	A				
11	CULT	Row Width						105	306	602	803
	CULT	Seeding Rate			130000seeds/a						
	HERB	Prefix	5.29LB/GAL	SL	1qt/a	POST	B				
	HERB	Liberty 280	2.34LB/GAL	SL	29fl oz/a	POST	B				
12	CULT	Row Width						106	405	501	703
	CULT	Seeding Rate			190000seeds/a						
	HERB	Prefix	5.29LB/GAL	SL	1qt/a	POST	B				
	HERB	Liberty 280	2.34LB/GAL	SL	29fl oz/a	POST	B				
6	CULT	Row Width						201	402	505	704
	CULT	Seeding Rate			190000seeds/a						
	HERB	Prefix	5.29LB/GAL	SL	1qt/a	POST	B				
	HERB	Liberty 280	2.34LB/GAL	SL	29fl oz/a	POST	B				
1	CULT	Row Width						202	403	606	804
	CULT	Seeding Rate			70000seeds/a						
	HERB	Prefix	5.29LB/GAL	SL	1qt/a	PRE	A				
	HERB	Metribuzin	75%	DF	0.333lb/a	PRE	A				
	HERB	Liberty 280	2.34LB/GAL	SL	29fl oz/a	POST	A				
4	CULT	Row Width						203	301	604	805
	CULT	Seeding Rate			70000seeds/a						
	HERB	Prefix	5.29LB/GAL	SL	1qt/a	POST	B				
	HERB	Liberty 280	2.34LB/GAL	SL	29fl oz/a	POST	B				
7	CULT	Row Width						204	304	603	802
	CULT	Seeding Rate			70000seeds/a						
	HERB	Prefix	5.29LB/GAL	SL	1qt/a	PRE	A				
	HERB	Metribuzin	75%	DF	0.333lb/a	PRE	A				
	HERB	Liberty 280	2.34LB/GAL	SL	29fl oz/a	POST	A				
8	CULT	Row Width						205	406	503	701
	CULT	Seeding Rate			130000seeds/a						
	HERB	Prefix	5.29LB/GAL	SL	1qt/a	PRE	A				
	HERB	Metribuzin	75%	DF	0.333lb/a	PRE	A				
	HERB	Liberty 280	2.34LB/GAL	SL	29fl oz/a	POST	A				
10	CULT	Row Width						206	305	502	801
	CULT	Seeding Rate			70000seeds/a						
	HERB	Prefix	5.29LB/GAL	SL	1qt/a	POST	B				
	HERB	Liberty 280	2.34LB/GAL	SL	29fl oz/a	POST	B				