

One-pass early postemergence (EPOS) strategies for weed control in corn

Trial ID: C08-16 Study Dir.: Sprague, Powell, Stiles
 Conducted: Campus T-17 Investigator: Christy Sprague

Planting Date: May-18-2016 **Row Spacing:** 30 IN
Variety: DKC49-72 **No. of Reps:** 3
Population: 32000 seeds/A **% OM:** 2.8
Soil Type: L loam **pH:** 6.2
Plot Size: 10 X 30 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: Fall chisel plowed; spring soil finished twice
Fertilizer: 300 lb urea incorporated 200 lb 19-19-19 starter

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1	ANGR	mainly foxtail species	Annual grass
2	CHEAL	lambsquarters, common	Chenopodium album
3	AMAPO	amaranth, Powell	Amaranthus powellii
4	AMBEL	ragweed, common	Ambrosia artemisiifolia
5	ABUTH	velvetleaf	Abutilon theophrasti
Crop	Code	Common Name	
1	ZEAMX	Corn	

Application Description

Application Timing: A
EPOS
Date Treated: Jun-9-2016
Time Treated: 9:30 AM
% Cloud Cover: 30
Air Temp., Unit: 60 F
% Relative Humidity: 49
Wind Speed/Unit/Dir: 2 mph SW
Soil Temp, Unit: 62 F
Leaf Moist/Dew Presence (Y/N): 5
Soil Moist: 4

Crop Stage at Each Application

A
Crop 1 Name: ZEAMX
Height: 12 "
Stage: V4

Weed Stage at Each Application

A
Weed 1 Name: ANGR
Height: 3 "
Stage: 4L
Weed 2 Name: CHEAL
Height: 2-3 " (2)
Stage: 2L
Weed 3 Name: AMAPO
Height: 2 "
Stage: 2L
Weed 4 Name: AMBEL
Height: 3 "
Stage: 2L
Weed 5 Name: ABUTH
Height: 3 "
Stage: 2L

Application Equipment

Appl	Sprayer Type	Ground Speed	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	Spray Volume	Carrier	Operation Pressure
A	CUB	3.8 mph	AIXR	11003	22 "	20 "	100 "	19 GAL/AC	WATER	30 PSI

Comments:

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Pest Code		ANGR	CHEAL	AMAPO	AMBEL	ABUTH
Crop Code	ZEAMX					
Rating Date	Jun-16-2016	Jun-16-2016	Jun-16-2016	Jun-16-2016	Jun-16-2016	Jun-16-2016
Rating Type	injury	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code						
1	Capreno	3 fl oz/a	A		15	99	100	100	100	100
1	Atrazine	0.56 lb/a	A							
1	Crop oil concentrate	1 % v/v	A							
1	AMS	17 lb/100 gal	A							
2	DiFlexx Duo	24 fl oz/a	A		0	98	100	100	100	92
2	Atrazine	0.56 lb/a	A							
2	Crop oil concentrate	1 % v/v	A							
2	AMS	17 lb/100 gal	A							
3	DiFlexx Duo	32 fl oz/a	A		10	99	100	100	100	100
3	Atrazine	0.56 lb/a	A							
3	Crop oil concentrate	1 % v/v	A							
3	AMS	17 lb/100 gal	A							
4	Armezon	0.57 fl oz/a	A		0	100	100	100	93	97
4	Status	3 oz/a	A							
4	Atrazine	0.56 lb/a	A							
4	Surfactant	0.25 % v/v	A							
4	AMS	17 lb/100 gal	A							
5	Armezon PRO	16 fl oz/a	A		0	93	100	93	100	100
5	Atrazine	0.56 lb/a	A							
5	Surfactant	0.25 % v/v	A							
5	AMS	17 lb/100 gal	A							
6	Untreated				0	0	0	0	0	0
7	Roundup PowerMax	32 fl oz/a	A		0	100	100	100	93	93
7	AMS	17 lb/100 gal	A							
8	Atrazine	0.56 lb/a	A		0	100	100	100	92	98
8	Roundup PowerMax	32 fl oz/a	A							
8	AMS	17 lb/100 gal	A							
9	Capreno	3 fl oz/a	A		0	100	100	100	99	100
9	Atrazine	0.56 lb/a	A							
9	Roundup PowerMax	32 fl oz/a	A							
9	AMS	17 lb/100 gal	A							
10	DiFlexx Duo	24 fl oz/a	A		0	100	100	100	100	100
10	Atrazine	0.56 lb/a	A							
10	Roundup PowerMax	32 fl oz/a	A							
10	AMS	17 lb/100 gal	A							

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Pest Code		ANGR	CHEAL	AMAPO	AMBEL	ABUTH
Crop Code	ZEAMX					
Rating Date	Jun-16-2016	Jun-16-2016	Jun-16-2016	Jun-16-2016	Jun-16-2016	Jun-16-2016
Rating Type	injury	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code					
11	DiFlex Duo	24 fl oz/a	A	0	98	100	100	100	100
11	Atrazine	0.56 lb/a	A						
11	Liberty	22 fl oz/a	A						
11	AMS	17 lb/100 gal	A						
12	Armezon	0.57 fl oz/a	A	0	99	100	100	98	98
12	Status	3 oz/a	A						
12	Atrazine	0.56 lb/a	A						
12	Roundup PowerMax	32 fl oz/a	A						
12	AMS	17 lb/100 gal	A						
13	Armezon PRO	16 fl oz/a	A	0	100	100	100	100	100
13	Atrazine	0.56 lb/a	A						
13	Roundup PowerMax	32 fl oz/a	A						
13	AMS	17 lb/100 gal	A						
14	Halex GT	3.6 pt/a	A	0	100	100	100	100	100
14	Atrazine	0.56 lb/a	A						
14	Surfactant	0.25 % v/v	A						
14	AMS	17 lb/100 gal	A						
15	SureStart II	1.75 pt/a	A	0	100	100	100	92	98
15	Atrazine	0.56 lb/a	A						
15	Roundup PowerMax	32 fl oz/a	A						
15	AMS	17 lb/100 gal	A						
LSD P=.05				.	5.3	.	5.0	5.6	6.1
Standard Deviation				0.0	3.2	0.0	3.0	3.4	3.6
CV				0.0	3.41	0.0	3.21	3.7	3.96

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Pest Code		ANGR	CHEAL	AMAPO	AMBEL	ABUTH
Crop Code	ZEAMX					
Rating Date	Jun-23-2016	Jun-23-2016	Jun-23-2016	Jun-23-2016	Jun-23-2016	Jun-23-2016
Rating Type	injury	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code					
1	Capreno	3 fl oz/a	A		0	98	100	100	100
1	Atrazine	0.56 lb/a	A						
1	Crop oil concentrate	1 % v/v	A						
1	AMS	17 lb/100 gal	A						
2	DiFlexx Duo	24 fl oz/a	A		0	100	100	100	100
2	Atrazine	0.56 lb/a	A						
2	Crop oil concentrate	1 % v/v	A						
2	AMS	17 lb/100 gal	A						90
3	DiFlexx Duo	32 fl oz/a	A		0	100	100	100	100
3	Atrazine	0.56 lb/a	A						
3	Crop oil concentrate	1 % v/v	A						
3	AMS	17 lb/100 gal	A						
4	Armezon	0.57 fl oz/a	A		0	100	100	100	100
4	Status	3 oz/a	A						
4	Atrazine	0.56 lb/a	A						
4	Surfactant	0.25 % v/v	A						
4	AMS	17 lb/100 gal	A						97
5	Armezon PRO	16 fl oz/a	A		0	99	98	100	98
5	Atrazine	0.56 lb/a	A						
5	Surfactant	0.25 % v/v	A						
5	AMS	17 lb/100 gal	A						95
6	Untreated				0	0	0	0	0
7	Roundup PowerMax	32 fl oz/a	A		0	100	97	100	100
7	AMS	17 lb/100 gal	A						
8	Atrazine	0.56 lb/a	A		0	100	100	100	97
8	Roundup PowerMax	32 fl oz/a	A						
8	AMS	17 lb/100 gal	A						100
9	Capreno	3 fl oz/a	A		0	100	100	100	100
9	Atrazine	0.56 lb/a	A						
9	Roundup PowerMax	32 fl oz/a	A						
9	AMS	17 lb/100 gal	A						
10	DiFlexx Duo	24 fl oz/a	A		0	100	100	100	100
10	Atrazine	0.56 lb/a	A						
10	Roundup PowerMax	32 fl oz/a	A						
10	AMS	17 lb/100 gal	A						97

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Crop Code	ZEAMX					
Rating Date	Jun-23-2016	Jun-23-2016	Jun-23-2016	Jun-23-2016	Jun-23-2016	Jun-23-2016
Rating Type	injury	control	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A
Number of Decimals	0	0	0	0	0	0

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code					
11	DiFlex Duo	24 fl oz/a	A	0	98	100	100	98	100
11	Atrazine	0.56 lb/a	A						
11	Liberty	22 fl oz/a	A						
11	AMS	17 lb/100 gal	A						
12	Armezon	0.57 fl oz/a	A	0	100	100	100	100	97
12	Status	3 oz/a	A						
12	Atrazine	0.56 lb/a	A						
12	Roundup PowerMax	32 fl oz/a	A						
12	AMS	17 lb/100 gal	A						
13	Armezon PRO	16 fl oz/a	A	0	100	100	100	100	100
13	Atrazine	0.56 lb/a	A						
13	Roundup PowerMax	32 fl oz/a	A						
13	AMS	17 lb/100 gal	A						
14	Halex GT	3.6 pt/a	A	0	100	100	100	100	100
14	Atrazine	0.56 lb/a	A						
14	Surfactant	0.25 % v/v	A						
14	AMS	17 lb/100 gal	A						
15	SureStart II	1.75 pt/a	A	0	100	100	100	98	100
15	Atrazine	0.56 lb/a	A						
15	Roundup PowerMax	32 fl oz/a	A						
15	AMS	17 lb/100 gal	A						
	LSD P=.05			.	1.9	1.7	.	2.5	6.7
	Standard Deviation			0.0	1.2	1.0	0.0	1.5	4.0
	CV			0.0	1.24	1.1	0.0	1.6	4.36

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Pest Code		ANGR	CHEAL	AMAPO	AMBEL	ABUTH		
Crop Code	ZEAMX							ZEAMX
Rating Date	Jul-7-2016	Jul-7-2016	Jul-7-2016	Jul-7-2016	Jul-7-2016	Jul-7-2016	Jul-21-2016	
Rating Type	injury	control	control	control	control	control	control	injury
Rating Unit	percent	percent	percent	percent	percent	percent	percent	percent
Trt-Eval Interval	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A	28 DA-A	42 DA-A
Number of Decimals	0	0	0	0	0	0	0	0

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code							
11	DiFlex Duo	24 fl oz/a	A		0	100	100	100	100	100	0
11	Atrazine	0.56 lb/a	A								
11	Liberty	22 fl oz/a	A								
11	AMS	17 lb/100 gal	A								
12	Armezon	0.57 fl oz/a	A		0	99	100	100	100	100	0
12	Status	3 oz/a	A								
12	Atrazine	0.56 lb/a	A								
12	Roundup PowerMax	32 fl oz/a	A								
12	AMS	17 lb/100 gal	A								
13	Armezon PRO	16 fl oz/a	A		0	100	100	100	100	100	0
13	Atrazine	0.56 lb/a	A								
13	Roundup PowerMax	32 fl oz/a	A								
13	AMS	17 lb/100 gal	A								
14	Halex GT	3.6 pt/a	A		0	100	100	100	100	100	0
14	Atrazine	0.56 lb/a	A								
14	Surfactant	0.25 % v/v	A								
14	AMS	17 lb/100 gal	A								
15	SureStart II	1.75 pt/a	A		0	100	100	100	100	100	0
15	Atrazine	0.56 lb/a	A								
15	Roundup PowerMax	32 fl oz/a	A								
15	AMS	17 lb/100 gal	A								
LSD P=.05					.	2.0	0.5	.	1.6	2.1	.
Standard Deviation					0.0	1.2	0.3	0.0	0.9	1.2	0.0
CV					0.0	1.3	0.32	0.0	1.01	1.32	0.0

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Crop Code						ZEAMX	ZEAMX
Rating Date	Jul-21-2016	Jul-21-2016	Jul-21-2016	Jul-21-2016	Jul-21-2016	Oct-24-2016	Oct-24-2016
Rating Type	control	control	control	control	control	test weight	moisture
Rating Unit	percent	percent	percent	percent	percent	lbs/bu	percent
Trt-Eval Interval	42 DA-A	42 DA-A	42 DA-A	42 DA-A	42 DA-A	137 DA-A	137 DA-A
Number of Decimals	0	0	0	0	0	1	1

Trt No.	Treatment Name	Rate Unit	Appl Code	ANGR	CHEAL	AMAPO	AMBEL	ABUTH	ZEAMX test weight lbs/bu	ZEAMX moisture percent
1	Capreno	3 fl oz/a	A	100	100	100	100	100	54.3	17.8
1	Atrazine	0.56 lb/a	A							
1	Crop oil concentrate	1 % v/v	A							
1	AMS	17 lb/100 gal	A							
2	DiFlexx Duo	24 fl oz/a	A	99	100	100	100	99	53.8	17.0
2	Atrazine	0.56 lb/a	A							
2	Crop oil concentrate	1 % v/v	A							
2	AMS	17 lb/100 gal	A							
3	DiFlexx Duo	32 fl oz/a	A	100	100	100	100	100	54.4	17.0
3	Atrazine	0.56 lb/a	A							
3	Crop oil concentrate	1 % v/v	A							
3	AMS	17 lb/100 gal	A							
4	Armezon	0.57 fl oz/a	A	99	100	100	100	100	53.6	16.9
4	Status	3 oz/a	A							
4	Atrazine	0.56 lb/a	A							
4	Surfactant	0.25 % v/v	A							
4	AMS	17 lb/100 gal	A							
5	Armezon PRO	16 fl oz/a	A	96	100	100	99	98	53.5	16.5
5	Atrazine	0.56 lb/a	A							
5	Surfactant	0.25 % v/v	A							
5	AMS	17 lb/100 gal	A							
6	Untreated			0	0	0	0	0	53.0	16.4
7	Roundup PowerMax	32 fl oz/a	A	100	97	100	99	100	54.2	17.3
7	AMS	17 lb/100 gal	A							
8	Atrazine	0.56 lb/a	A	100	100	100	100	100	53.9	17.0
8	Roundup PowerMax	32 fl oz/a	A							
8	AMS	17 lb/100 gal	A							
9	Capreno	3 fl oz/a	A	100	100	100	100	100	54.2	17.8
9	Atrazine	0.56 lb/a	A							
9	Roundup PowerMax	32 fl oz/a	A							
9	AMS	17 lb/100 gal	A							
10	DiFlexx Duo	24 fl oz/a	A	99	100	100	99	100	53.7	16.7
10	Atrazine	0.56 lb/a	A							
10	Roundup PowerMax	32 fl oz/a	A							
10	AMS	17 lb/100 gal	A							

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Crop Code						ZEAMX	ZEAMX
Rating Date	Jul-21-2016	Jul-21-2016	Jul-21-2016	Jul-21-2016	Jul-21-2016	Oct-24-2016	Oct-24-2016
Rating Type	control	control	control	control	control	test weight	moisture
Rating Unit	percent	percent	percent	percent	percent	lbs/bu	percent
Trt-Eval Interval	42 DA-A	42 DA-A	42 DA-A	42 DA-A	42 DA-A	137 DA-A	137 DA-A
Number of Decimals	0	0	0	0	0	1	1

Trt No.	Treatment Name	Rate Unit	Appl Code							
11	DiFlexx Duo	24 fl oz/a	A	100	100	100	100	100	53.6	16.7
11	Atrazine	0.56 lb/a	A							
11	Liberty	22 fl oz/a	A							
11	AMS	17 lb/100 gal	A							
12	Armezon	0.57 fl oz/a	A	99	100	100	100	100	53.5	17.1
12	Status	3 oz/a	A							
12	Atrazine	0.56 lb/a	A							
12	Roundup PowerMax	32 fl oz/a	A							
12	AMS	17 lb/100 gal	A							
13	Armezon PRO	16 fl oz/a	A	100	100	100	100	100	53.8	16.6
13	Atrazine	0.56 lb/a	A							
13	Roundup PowerMax	32 fl oz/a	A							
13	AMS	17 lb/100 gal	A							
14	Halex GT	3.6 pt/a	A	100	100	100	100	100	52.9	16.9
14	Atrazine	0.56 lb/a	A							
14	Surfactant	0.25 % v/v	A							
14	AMS	17 lb/100 gal	A							
15	SureStart II	1.75 pt/a	A	100	100	100	100	100	53.6	16.7
15	Atrazine	0.56 lb/a	A							
15	Roundup PowerMax	32 fl oz/a	A							
15	AMS	17 lb/100 gal	A							
LSD P=.05				3.1	1.1	.	1.3	1.4	1.16	1.08
Standard Deviation				1.9	0.6	0.0	0.7	0.8	0.69	0.65
CV				2.01	0.7	0.0	0.8	0.9	1.29	3.82

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Pest Code	
Crop Code	ZEAMX
Rating Date	Oct-24-2016
Rating Type	yield
Rating Unit	bu/acre
Trt-Eval Interval	at 15% M
Number of Decimals	0

Trt No.	Treatment Name	Rate	Unit	Appl Code	
1	Capreno	3 fl oz/a		A	246
1	Atrazine	0.56 lb/a		A	
1	Crop oil concentrate	1 % v/v		A	
1	AMS	17 lb/100 gal		A	
2	DiFlexx Duo	24 fl oz/a		A	250
2	Atrazine	0.56 lb/a		A	
2	Crop oil concentrate	1 % v/v		A	
2	AMS	17 lb/100 gal		A	
3	DiFlexx Duo	32 fl oz/a		A	246
3	Atrazine	0.56 lb/a		A	
3	Crop oil concentrate	1 % v/v		A	
3	AMS	17 lb/100 gal		A	
4	Armezon	0.57 fl oz/a		A	244
4	Status	3 oz/a		A	
4	Atrazine	0.56 lb/a		A	
4	Surfactant	0.25 % v/v		A	
4	AMS	17 lb/100 gal		A	
5	Armezon PRO	16 fl oz/a		A	251
5	Atrazine	0.56 lb/a		A	
5	Surfactant	0.25 % v/v		A	
5	AMS	17 lb/100 gal		A	
6	Untreated				232
7	Roundup PowerMax	32 fl oz/a		A	253
7	AMS	17 lb/100 gal		A	
8	Atrazine	0.56 lb/a		A	258
8	Roundup PowerMax	32 fl oz/a		A	
8	AMS	17 lb/100 gal		A	
9	Capreno	3 fl oz/a		A	262
9	Atrazine	0.56 lb/a		A	
9	Roundup PowerMax	32 fl oz/a		A	
9	AMS	17 lb/100 gal		A	
10	DiFlexx Duo	24 fl oz/a		A	249
10	Atrazine	0.56 lb/a		A	
10	Roundup PowerMax	32 fl oz/a		A	
10	AMS	17 lb/100 gal		A	

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Pest Code	
Crop Code	ZEAMX
Rating Date	Oct-24-2016
Rating Type	yield
Rating Unit	bu/acre
Trt-Eval Interval	at 15% M
Number of Decimals	0

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	
11	DiFlex Duo	24 fl oz/a		A	247
11	Atrazine	0.56 lb/a		A	
11	Liberty	22 fl oz/a		A	
11	AMS	17 lb/100 gal		A	
12	Armezon	0.57 fl oz/a		A	251
12	Status	3 oz/a		A	
12	Atrazine	0.56 lb/a		A	
12	Roundup PowerMax	32 fl oz/a		A	
12	AMS	17 lb/100 gal		A	
13	Armezon PRO	16 fl oz/a		A	255
13	Atrazine	0.56 lb/a		A	
13	Roundup PowerMax	32 fl oz/a		A	
13	AMS	17 lb/100 gal		A	
14	Halex GT	3.6 pt/a		A	245
14	Atrazine	0.56 lb/a		A	
14	Surfactant	0.25 % v/v		A	
14	AMS	17 lb/100 gal		A	
15	SureStart II	1.75 pt/a		A	250
15	Atrazine	0.56 lb/a		A	
15	Roundup PowerMax	32 fl oz/a		A	
15	AMS	17 lb/100 gal		A	
	LSD P=.05				18.1
	Standard Deviation				10.8
	CV				4.35