

MSU Weed Science Research Program

Comparison of adjuvants for use with 2,4-D tank-mixtures in corn

Trial ID: C12-13 Study Dir.: Sprague, Powell  
 Conducted: Campus C-28 Investigator: Christy Sprague

**Date Planted:** May/06/2013 **Row Spacing:** 30 IN  
**Variety:** DKC 48-12 **No. of Reps:** 4  
**Population:** 32,000 seed/A **% OM:** 3.4  
**Soil Type:** Loam **pH:** 6.5  
**Plot Size:** 10 X 30 FT **Design:** RANDOMIZED COMPLETE BLOCK

**Tillage:** Fall chisel, spring soil finish x2  
**Fertilizer:** 300 lb urea broadcast, 150 lb 19-19-19 starter

**Crop and Weed Description**

Weed	Code	Common Name	Scientific Name
1.	ANGR	mainly foxtail species	SETARIA SP.
2.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
3.	AMAPO	AMARANTH, POWELL	AMARANTHUS POWELLII S.WATS.
4.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
5.	CAPBP	SHEPHERDSPURSE	CAPSELLA BURSA-PASTORIS (L.) MEDIK.
Crop	Code	Common Name	
1.	ZEAMX	CORN, FIELD	

**Application Description**

**Application Timing:** POST  
**Date Treated:** Jun/15/2013  
**Time Treated:** 12:45 PM  
**% Cloud Cover:** 100  
**Air Temp., Unit:** 76 F  
**% Relative Humidity:** 52  
**Wind Speed/Unit/Dir:** 3 mph SW  
**Soil Temp., Unit:** 68 F  
**Soil/Leaf Surface M:** 2 5  
**Soil Moist (1=w 5=d):** 2

**Crop Stage at Each Application**

**Crop Name:** ZEAMX  
**Height (In.):** 14-16"  
**Stage (L):** V5

**Weed Stage at Each Application**

**Weed 1 Name:** ANGR  
**Height (In.):** 3.5"  
**Stage (L):** 3  
**Weed 2 Name:** CHEAL  
**Height (In.):** 3"  
**Stage (L):** 10  
**Weed 3 Name:** AMAPO  
**Height (In.):** 2.5"  
**Stage (L):** 7  
**Weed 4 Name:** ABUTH  
**Height (In.):** 4"  
**Stage (L):** 7  
**Weed 5 Name:** CAPBP  
**Height (In.):** 6"  
**Stage (L):** flowering

**Weed Density (plants/sq. ft.)**

Date:	1	2	3	4	5
	Jul/11/2013	Jul/11/2013	Jul/11/2013	Jul/11/2013	Jul/11/2013
<b>Weed Name:</b>	ANGR	CHEAL	AMAPO	ABUTH	CAPBP
<b>Density:</b>	2	3	2	<1	3

**Application Equipment**

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom			
	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI
A	Cub	3.8	AIXR	11003	29"	20"	100"	19	water	30

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Trial ID: C12-13 Study Dir.: Sprague, Powell  
 Conducted: Campus C-28 Investigator: Christy Sprague

Weed Code	ANGR	CHEAL	AMAPO	ABUTH
Crop Code	ZEAMX			
Rating Data Type	injury	control	control	control
Rating Unit	percent	percent	percent	percent
Rating Date	Jun/22/2013	Jun/22/2013	Jun/22/2013	Jun/22/2013
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A
# Subsamples, Dec.	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate Unit	Grow Stg	Appl Code					
1	Roundup PowerMax	4.5	SL	22 fl oz/a	POST	A	40	99	99	99	99
	Base Camp Amine 4	3.8	SL	1.5 pt/a	POST	A					
	AMS		WG	8.5 lb/100 gal	POST	A					
	WE 1442-1		L	40 fl oz/a	POST	A					
2	Roundup PowerMax	4.5	SL	22 fl oz/a	POST	A	45	99	99	99	99
	AAtrex	4	L	1 qt/a	POST	A					
	Base Camp Amine 4	3.8	SL	1.5 pt/a	POST	A					
	AMS		WG	8.5 lb/100 gal	POST	A					
	WE 1442-1		L	40 fl oz/a	POST	A					
3	Roundup PowerMax	4.5	SL	22 fl oz/a	POST	A	48	99	99	99	99
	Base Camp Amine 4	3.8	SL	1.5 pt/a	POST	A					
	AMS		WG	8.5 lb/100 gal	POST	A					
	WE1258-1		L	1 pt/a	POST	A					
4	Roundup PowerMax	4.5	SL	22 fl oz/a	POST	A	46	98	99	99	99
	AAtrex	4	L	1 qt/a	POST	A					
	Base Camp Amine 4	3.8	SL	1.5 pt/a	POST	A					
	AMS		WG	8.5 lb/100 gal	POST	A					
	WE1258-1		L	1 pt/a	POST	A					
5	Untreated						0	0	0	0	0
6	Roundup PowerMax	4.5	SL	22 fl oz/a	POST	A	45	99	99	99	99
	Base Camp Amine 4	3.8	SL	1.5 pt/a	POST	A					
	AMS		WG	8.5 lb/100 gal	POST	A					
	WE 1177-1		L	8 fl oz/a	POST	A					
7	Roundup PowerMax	4.5	SL	22 fl oz/a	POST	A	43	99	99	99	99
	AAtrex	4	L	1 qt/a	POST	A					
	Base Camp Amine 4	3.8	SL	1.5 pt/a	POST	A					
	AMS		WG	8.5 lb/100 gal	POST	A					
	WE 1177-1		L	8 fl oz/a	POST	A					
8	Roundup PowerMax	4.5	SL	22 fl oz/a	POST	A	38	99	99	99	99
	Base Camp Amine 4	3.8	SL	1.5 pt/a	POST	A					
	AMS		WG	8.5 lb/100 gal	POST	A					
	WE 1095-1		L	10 fl oz/a	POST	A					
9	Roundup PowerMax	4.5	SL	22 fl oz/a	POST	A	31	99	99	99	99
	AAtrex	4	L	1 qt/a	POST	A					
	Base Camp Amine 4	3.8	SL	1.5 pt/a	POST	A					
	AMS		WG	8.5 lb/100 gal	POST	A					
	WE 1095-1		L	10 fl oz/a	POST	A					
10	Roundup PowerMax	4.5	SL	22 fl oz/a	POST	A	39	99	99	99	99
	Base Camp Amine 4	3.8	SL	1.5 pt/a	POST	A					
	AMS		WG	8.5 lb/100 gal	POST	A					
	WE 1279-2		L	5 fl oz/a	POST	A					
11	Roundup PowerMax	4.5	SL	22 fl oz/a	POST	A	34	99	99	99	99
	AAtrex	4	L	1 qt/a	POST	A					
	Base Camp Amine 4	3.8	SL	1.5 pt/a	POST	A					
	AMS		WG	8.5 lb/100 gal	POST	A					
	WE 1279-2		L	5 fl oz/a	POST	A					

LSD (P=.05)							8.7	1.0	0.8	0.6	0.6
CV							16.23	0.74	0.6	0.48	0.45

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

## MSU Weed Science Research Program

Weed Code						CAPBP		ANGR	CHEAL	AMAPO
Crop Code							ZEAMX			
Rating Data Type						control	injury	control	control	control
Rating Unit						percent	percent	percent	percent	percent
Rating Date						Jun/22/2013	Jun/29/2013	Jun/29/2013	Jun/29/2013	Jun/29/2013
Trt-Eval Interval						7 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A
# Subsamples, Dec.						0	0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Grow Stg	Appl Code			
1	Roundup PowerMax	4.5	SL	22	fl oz/a	POST A		99	29	99
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST A				99
	AMS		WG	8.5	lb/100 gal	POST A				
	WE 1442-1		L	40	fl oz/a	POST A				
2	Roundup PowerMax	4.5	SL	22	fl oz/a	POST A	99	36	99	99
	AAtrex	4	L	1	qt/a	POST A				
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST A				
	AMS		WG	8.5	lb/100 gal	POST A				
	WE 1442-1		L	40	fl oz/a	POST A				
3	Roundup PowerMax	4.5	SL	22	fl oz/a	POST A	99	39	99	99
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST A				
	AMS		WG	8.5	lb/100 gal	POST A				
	WE1258-1		L	1	pt/a	POST A				
4	Roundup PowerMax	4.5	SL	22	fl oz/a	POST A	99	36	99	99
	AAtrex	4	L	1	qt/a	POST A				
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST A				
	AMS		WG	8.5	lb/100 gal	POST A				
	WE1258-1		L	1	pt/a	POST A				
5	Untreated						0	0	0	0
6	Roundup PowerMax	4.5	SL	22	fl oz/a	POST A	99	49	99	99
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST A				
	AMS		WG	8.5	lb/100 gal	POST A				
	WE 1177-1		L	8	fl oz/a	POST A				
7	Roundup PowerMax	4.5	SL	22	fl oz/a	POST A	99	31	99	99
	AAtrex	4	L	1	qt/a	POST A				
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST A				
	AMS		WG	8.5	lb/100 gal	POST A				
	WE 1177-1		L	8	fl oz/a	POST A				
8	Roundup PowerMax	4.5	SL	22	fl oz/a	POST A	99	26	99	99
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST A				
	AMS		WG	8.5	lb/100 gal	POST A				
	WE 1095-1		L	10	fl oz/a	POST A				
9	Roundup PowerMax	4.5	SL	22	fl oz/a	POST A	99	34	99	99
	AAtrex	4	L	1	qt/a	POST A				
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST A				
	AMS		WG	8.5	lb/100 gal	POST A				
	WE 1095-1		L	10	fl oz/a	POST A				
10	Roundup PowerMax	4.5	SL	22	fl oz/a	POST A	99	41	99	99
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST A				
	AMS		WG	8.5	lb/100 gal	POST A				
	WE 1279-2		L	5	fl oz/a	POST A				
11	Roundup PowerMax	4.5	SL	22	fl oz/a	POST A	99	30	99	99
	AAtrex	4	L	1	qt/a	POST A				
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST A				
	AMS		WG	8.5	lb/100 gal	POST A				
	WE 1279-2		L	5	fl oz/a	POST A				
	LSD (P=.05)						0.0	9.3	0.0	0.0
	CV						0.0	20.17	0.0	0.0

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

## MSU Weed Science Research Program

Weed Code	ABUTH	CAPBP	ZEAMX	ANGR	CHEAL
Crop Code					
Rating Data Type	control	control	injury	control	control
Rating Unit	percent	percent	percent	percent	percent
Rating Date	Jun/29/2013	Jun/29/2013	Jul/12/2013	Jul/12/2013	Jul/12/2013
Trt-Eval Interval	14 DA-A	14 DA-A	27 DA-A	27 DA-A	27 DA-A
# Subsamples, Dec.	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code					
1	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	35	99	99
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A					
	AMS		WG	8.5	lb/100 gal	POST	A					
	WE 1442-1		L	40	fl oz/a	POST	A					
2	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	40	99	99
	AAtrex	4	L	1	qt/a	POST	A					
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A					
	AMS		WG	8.5	lb/100 gal	POST	A					
	WE 1442-1		L	40	fl oz/a	POST	A					
3	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	43	99	99
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A					
	AMS		WG	8.5	lb/100 gal	POST	A					
	WE1258-1		L	1	pt/a	POST	A					
4	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	40	99	99
	AAtrex	4	L	1	qt/a	POST	A					
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A					
	AMS		WG	8.5	lb/100 gal	POST	A					
	WE1258-1		L	1	pt/a	POST	A					
5	Untreated							0	0	0	0	0
6	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	40	99	99
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A					
	AMS		WG	8.5	lb/100 gal	POST	A					
	WE 1177-1		L	8	fl oz/a	POST	A					
7	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	40	99	99
	AAtrex	4	L	1	qt/a	POST	A					
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A					
	AMS		WG	8.5	lb/100 gal	POST	A					
	WE 1177-1		L	8	fl oz/a	POST	A					
8	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	40	99	99
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A					
	AMS		WG	8.5	lb/100 gal	POST	A					
	WE 1095-1		L	10	fl oz/a	POST	A					
9	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	33	99	99
	AAtrex	4	L	1	qt/a	POST	A					
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A					
	AMS		WG	8.5	lb/100 gal	POST	A					
	WE 1095-1		L	10	fl oz/a	POST	A					
10	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	38	99	99
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A					
	AMS		WG	8.5	lb/100 gal	POST	A					
	WE 1279-2		L	5	fl oz/a	POST	A					
11	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	35	99	99
	AAtrex	4	L	1	qt/a	POST	A					
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A					
	AMS		WG	8.5	lb/100 gal	POST	A					
	WE 1279-2		L	5	fl oz/a	POST	A					
	LSD (P=.05)							0.0	0.0	5.4	0.0	0.0
	CV							0.0	0.0	10.74	0.0	0.0

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

## MSU Weed Science Research Program

Weed Code	AMAPO	ABUTH	CAPBP
Crop Code			
Rating Data Type	control	control	control
Rating Unit	percent	percent	percent
Rating Date	Jul/12/2013	Jul/12/2013	Jul/12/2013
Trt-Eval Interval	27 DA-A	27 DA-A	27 DA-A
# Subsamples, Dec.	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code			
1	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	99
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A			
	AMS		WG	8.5	lb/100 gal	POST	A			
	WE 1442-1		L	40	fl oz/a	POST	A			
2	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	99
	AAtrex	4	L	1	qt/a	POST	A			
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A			
	AMS		WG	8.5	lb/100 gal	POST	A			
	WE 1442-1		L	40	fl oz/a	POST	A			
3	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	99
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A			
	AMS		WG	8.5	lb/100 gal	POST	A			
	WE1258-1		L	1	pt/a	POST	A			
4	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	99
	AAtrex	4	L	1	qt/a	POST	A			
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A			
	AMS		WG	8.5	lb/100 gal	POST	A			
	WE1258-1		L	1	pt/a	POST	A			
5	Untreated							0	0	0
6	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	99
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A			
	AMS		WG	8.5	lb/100 gal	POST	A			
	WE 1177-1		L	8	fl oz/a	POST	A			
7	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	99
	AAtrex	4	L	1	qt/a	POST	A			
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A			
	AMS		WG	8.5	lb/100 gal	POST	A			
	WE 1177-1		L	8	fl oz/a	POST	A			
8	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	99
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A			
	AMS		WG	8.5	lb/100 gal	POST	A			
	WE 1095-1		L	10	fl oz/a	POST	A			
9	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	99
	AAtrex	4	L	1	qt/a	POST	A			
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A			
	AMS		WG	8.5	lb/100 gal	POST	A			
	WE 1095-1		L	10	fl oz/a	POST	A			
10	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	99
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A			
	AMS		WG	8.5	lb/100 gal	POST	A			
	WE 1279-2		L	5	fl oz/a	POST	A			
11	Roundup PowerMax	4.5	SL	22	fl oz/a	POST	A	99	99	99
	AAtrex	4	L	1	qt/a	POST	A			
	Base Camp Amine 4	3.8	SL	1.5	pt/a	POST	A			
	AMS		WG	8.5	lb/100 gal	POST	A			
	WE 1279-2		L	5	fl oz/a	POST	A			
	LSD (P=.05)							0.0	0.0	0.0
	CV							0.0	0.0	0.0

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