

MSU Weed Science Research Program

Systems approach to no-till wheat production II

Trial ID: WT03-12 Study Dir.: Sprague, Powell  
 Conducted: C-25 Crops Investigator: Christy Sprague

**Date Planted:** Nov/04/2011 **Row Spacing:** 7.5 IN  
**Variety:** Hopewell **No. of Reps:** 6  
**Population:** 2 million seeds/A **% OM:** 3.7  
**Soil Type:** Loam **pH:** 6.7  
**Plot Size:** 10 X 25 FT **Design:** RANDOMIZED COMPLETE BLOCK

**Tillage:** Drilled into soybean stubble  
**Fertilizer:** None at planting

**Crop and Weed Description**

Weed	Code	Common Name	Scientific Name
1.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
2.	AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
3.	STEME	CHICKWEED, COMMON	STELLARIA MEDIA (L.)
Crop	Code	Common Name	
1.	TRZAW	WHEAT, WINTER	

**Application Description**

	A	B	C	D
<b>Application Timing:</b>	PRE	POST	FLAGLEAF	FLOWER
<b>Date Treated:</b>	Nov/04/2011	Apr/12/2012	May/15/2012	May/31/2012
<b>Time Treated:</b>	12:00 PM	7:00 PM	11:30 AM	2:30 PM
<b>% Cloud Cover:</b>	30	50	0	100
<b>Air Temp., Unit:</b>	44 F	60 F	75 F	56 F
<b>% Relative Humidity:</b>	73	30	39	65
<b>Wind Speed/Unit/Dir:</b>	5 mph NE	3 mph W	5 mph S	4 mph E
<b>Soil Temp., Unit:</b>	43 F	56 F	56 F	61 F
<b>Soil/Leaf Surface M:</b>	4 5	5 5	2 5	5 5
<b>Soil Moist (1=w 5=d):</b>	3	5	2	4

**Crop Stage at Each Application**

	A	B	C	D
<b>Crop Name:</b>	TRZAW	TRZAW	TRZAW	TRZAW
<b>Height (In.):</b>	-	8"	25"	38"
<b>Stage (L):</b>	-	FEEKES 6	FEEKES 9	FKS 10.5

**Weed Stage at Each Application**

	A	B	C	D
<b>Weed 1 Name:</b>	CHEAL	CHEAL	CHEAL	CHEAL
<b>Height (In.):</b>	-	1"	-	-
<b>Stage (L):</b>	-	5	-	-
<b>Weed 2 Name:</b>	AMBEL	AMBEL	AMBEL	AMBEL
<b>Height (In.):</b>	-	0.5"	-	-
<b>Stage (L):</b>	-	2	-	-
<b>Weed 3 Name:</b>	STEME	STEME	STEME	STEME
<b>Height (In.):</b>	1.5"	-	-	-
<b>Stage (L):</b>	10"	-	-	-

**Application Equipment**

Appl	Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom Width	GPA	Carrier	PSI
A	Cub	3.8	AirMix	11003	24"	20"	100"	19	Water	28
B	Cub	3.8	AirMix	11003	26"	20"	100"	19	Water	28
C	Cub	3.8	AIXR	11003	35"	20"	100"	19	Water	28
D	Cub	3.8	AIXR	11003	49"	20"	100"	19	Water	28

**Comments:** 4/12/12 - Control of no-till weeds was 100%.  
 6/14/12 - Plant health was evaluated on a 0 to 100% scale. Differences in plant health were mostly attributed to leaf rust.

MSU Weed Science Research Program

Systems approach to no-till wheat production II

Trial ID: WT03-12 Study Dir.: Sprague, Powell  
 Conducted: C-25 Crops Investigator: Christy Sprague

Weed Code	TRZAW	TRZAW	TRZAW	CHEAL
Crop Code	injury	injury	injury	control
Rating Data Type	percent	percent	percent	percent
Rating Unit	Apr/12/2012	Apr/20/2012	Apr/26/2012	Apr/26/2012
Rating Date	0 DA-B	8 DA-B	14 DA-B	14 DA-B
Trt-Eval Interval				
ARM Action Codes				
# Subsamples, Dec.	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code				
1	Untreated seed							0	9	0	98
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A				
	AMS		WG	17	lb/100 gal	PRE	A				
	Huskie	2.06	L	11	fl oz/a	POST	B				
	Activator 90		L	0.25	% v/v	POST	B				
	AMS		WG	1	lb/a	POST	B				
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D				
2	Untreated seed							0	9	0	99
	Sharpen	2.85	L	2	fl oz/a	PRE	A				
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A				
	MSO		L	1	% v/v	PRE	A				
	AMS		WG	17	lb/100 gal	PRE	A				
	Huskie	2.06	L	11	fl oz/a	POST	B				
	Activator 90		L	0.25	% v/v	POST	B				
	AMS		WG	1	lb/a	POST	B				
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D				
3	Untreated seed							0	10	0	99
	Sharpen	2.85	L	2	fl oz/a	PRE	A				
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A				
	MSO		L	1	% v/v	PRE	A				
	AMS		WG	17	lb/100 gal	PRE	A				
	Twinline	1.75	L	6	fl oz/a	POST	B				
	Huskie	2.06	L	11	fl oz/a	POST	B				
	Activator 90		L	0.25	% v/v	POST	B				
	AMS		WG	1	lb/a	POST	B				
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D				
4	Untreated seed							0	8	0	99
	Sharpen	2.85	L	2	fl oz/a	PRE	A				
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A				
	MSO		L	1	% v/v	PRE	A				
	AMS		WG	17	lb/100 gal	PRE	A				
	Huskie	2.06	L	11	fl oz/a	POST	B				
	Activator 90		L	0.25	% v/v	POST	B				
	AMS		WG	1	lb/a	POST	B				
	Twinline	1.75	L	9	fl oz/a	FLAG	C				
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D				
5	Untreated seed							0	7	0	99
	Sharpen	2.85	L	2	fl oz/a	PRE	A				
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A				
	MSO		L	1	% v/v	PRE	A				
	AMS		WG	17	lb/100 gal	PRE	A				
	Headline SC	2.08	SC	3	fl oz/a	POST	B				
	Huskie	2.06	L	11	fl oz/a	POST	B				
	Activator 90		L	0.25	% v/v	POST	B				
	AMS		WG	1	lb/a	POST	B				
	Twinline	1.75	L	9	fl oz/a	FLAG	C				
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D				

MSU Weed Science Research Program

Weed Code										
Crop Code									CHEAL	
Rating Data Type							TRZAW	TRZAW	TRZAW	
Rating Unit							injury	injury	injury	
Rating Date							percent	percent	percent	
Trt-Eval Interval							Apr/12/2012	Apr/20/2012	Apr/26/2012	
ARM Action Codes							0 DA-B	8 DA-B	14 DA-B	
# Subsamples, Dec.							0	0	0	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code			
6	Stamina treated seed							0	8	
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A			
	AMS		WG	17	lb/100 gal	PRE	A			
	Huskie	2.06	L	11	fl oz/a	POST	B			
	Activator 90		L	0.25	% v/v	POST	B			
	AMS		WG	1	lb/a	POST	B			
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D			
7	Stamina treated seed							0	8	
	Sharpen	2.85	L	2	fl oz/a	PRE	A			
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A			
	MSO		L	1	% v/v	PRE	A			
	AMS		WG	17	lb/100 gal	PRE	A			
	Huskie	2.06	L	11	fl oz/a	POST	B			
	Activator 90		L	0.25	% v/v	POST	B			
	AMS		WG	1	lb/a	POST	B			
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D			
8	Stamina treated seed							0	10	
	Sharpen	2.85	L	2	fl oz/a	PRE	A			
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A			
	MSO		L	1	% v/v	PRE	A			
	AMS		WG	17	lb/100 gal	PRE	A			
	Twinline	1.75	L	6	fl oz/a	POST	B			
	Huskie	2.06	L	11	fl oz/a	POST	B			
	Activator 90		L	0.25	% v/v	POST	B			
	AMS		WG	1	lb/a	POST	B			
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D			
9	Stamina treated seed							0	7	
	Sharpen	2.85	L	2	fl oz/a	PRE	A			
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A			
	MSO		L	1	% v/v	PRE	A			
	AMS		WG	17	lb/100 gal	PRE	A			
	Huskie	2.06	L	11	fl oz/a	POST	B			
	Activator 90		L	0.25	% v/v	POST	B			
	AMS		WG	1	lb/a	POST	B			
	Twinline	1.75	L	9	fl oz/a	FLAG	C			
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D			
10	Stamina treated seed							0	8	
	Sharpen	2.85	L	2	fl oz/a	PRE	A			
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A			
	MSO		L	1	% v/v	PRE	A			
	AMS		WG	17	lb/100 gal	PRE	A			
	Headline SC	2.08	SC	3	fl oz/a	POST	B			
	Huskie	2.06	L	11	fl oz/a	POST	B			
	Activator 90		L	0.25	% v/v	POST	B			
	AMS		WG	1	lb/a	POST	B			
	Twinline	1.75	L	9	fl oz/a	FLAG	C			
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D			
LSD (P=.05)							0.0	2.8	0.0	0.6
CV							0.0	28.66	0.0	0.52

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

MSU Weed Science Research Program

Weed Code								AMBEL	TRZAW	TRZAW	TRZAW
Crop Code								control	Plt Health	moisture	yield
Rating Data Type								percent	percent	percent	bu/acre
Rating Unit								Apr/26/2012	Jun/14/2012	Jul/10/2012	Jul/10/2012
Rating Date								14 DA-B	14 DA-D	249 DA-A	at 13% M
Trt-Eval Interval											TY1
ARM Action Codes											
# Subsamples, Dec.								0	0	1	1
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Grow Stg	Appl Code				
1	Untreated seed							99	85	12.9	90.3
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A				
	AMS		WG	17	lb/100 gal	PRE	A				
	Huskie	2.06	L	11	fl oz/a	POST	B				
	Activator 90		L	0.25	% v/v	POST	B				
	AMS		WG	1	lb/a	POST	B				
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D				
2	Untreated seed							98	86	12.6	89.1
	Sharpen	2.85	L	2	fl oz/a	PRE	A				
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A				
	MSO		L	1	% v/v	PRE	A				
	AMS		WG	17	lb/100 gal	PRE	A				
	Huskie	2.06	L	11	fl oz/a	POST	B				
	Activator 90		L	0.25	% v/v	POST	B				
	AMS		WG	1	lb/a	POST	B				
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D				
3	Untreated seed							99	89	12.6	96.0
	Sharpen	2.85	L	2	fl oz/a	PRE	A				
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A				
	MSO		L	1	% v/v	PRE	A				
	AMS		WG	17	lb/100 gal	PRE	A				
	Twinline	1.75	L	6	fl oz/a	POST	B				
	Huskie	2.06	L	11	fl oz/a	POST	B				
	Activator 90		L	0.25	% v/v	POST	B				
	AMS		WG	1	lb/a	POST	B				
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D				
4	Untreated seed							98	93	12.6	91.2
	Sharpen	2.85	L	2	fl oz/a	PRE	A				
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A				
	MSO		L	1	% v/v	PRE	A				
	AMS		WG	17	lb/100 gal	PRE	A				
	Huskie	2.06	L	11	fl oz/a	POST	B				
	Activator 90		L	0.25	% v/v	POST	B				
	AMS		WG	1	lb/a	POST	B				
	Twinline	1.75	L	9	fl oz/a	FLAG	C				
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D				
5	Untreated seed							99	94	12.5	93.4
	Sharpen	2.85	L	2	fl oz/a	PRE	A				
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A				
	MSO		L	1	% v/v	PRE	A				
	AMS		WG	17	lb/100 gal	PRE	A				
	Headline SC	2.08	SC	3	fl oz/a	POST	B				
	Huskie	2.06	L	11	fl oz/a	POST	B				
	Activator 90		L	0.25	% v/v	POST	B				
	AMS		WG	1	lb/a	POST	B				
	Twinline	1.75	L	9	fl oz/a	FLAG	C				
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D				
6	Stamina treated seed							98	86	12.5	88.4
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A				
	AMS		WG	17	lb/100 gal	PRE	A				
	Huskie	2.06	L	11	fl oz/a	POST	B				
	Activator 90		L	0.25	% v/v	POST	B				
	AMS		WG	1	lb/a	POST	B				
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D				

MSU Weed Science Research Program

Weed Code								AMBEL	TRZAW	TRZAW	TRZAW
Crop Code								control	Plt Health	moisture	yield
Rating Data Type								percent	percent	percent	bu/acre
Rating Unit								Apr/26/2012	Jun/14/2012	Jul/10/2012	Jul/10/2012
Rating Date								14 DA-B	14 DA-D	249 DA-A	at 13% M
Trt-Eval Interval											TY1
ARM Action Codes											
# Subsamples, Dec.								0	0	1	1
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Grow Stg	Appl Code				
7	Stamina treated seed							99	85	12.4	84.9
	Sharpen	2.85	L	2	fl oz/a	PRE	A				
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A				
	MSO		L	1	% v/v	PRE	A				
	AMS		WG	17	lb/100 gal	PRE	A				
	Huskie	2.06	L	11	fl oz/a	POST	B				
	Activator 90		L	0.25	% v/v	POST	B				
	AMS		WG	1	lb/a	POST	B				
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D				
8	Stamina treated seed							98	89	12.4	88.4
	Sharpen	2.85	L	2	fl oz/a	PRE	A				
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A				
	MSO		L	1	% v/v	PRE	A				
	AMS		WG	17	lb/100 gal	PRE	A				
	Twinline	1.75	L	6	fl oz/a	POST	B				
	Huskie	2.06	L	11	fl oz/a	POST	B				
	Activator 90		L	0.25	% v/v	POST	B				
	AMS		WG	1	lb/a	POST	B				
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D				
9	Stamina treated seed							98	93	12.5	90.9
	Sharpen	2.85	L	2	fl oz/a	PRE	A				
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A				
	MSO		L	1	% v/v	PRE	A				
	AMS		WG	17	lb/100 gal	PRE	A				
	Huskie	2.06	L	11	fl oz/a	POST	B				
	Activator 90		L	0.25	% v/v	POST	B				
	AMS		WG	1	lb/a	POST	B				
	Twinline	1.75	L	9	fl oz/a	FLAG	C				
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D				
10	Stamina treated seed							98	93	12.5	89.6
	Sharpen	2.85	L	2	fl oz/a	PRE	A				
	Roundup PowerMax	4.5	SL	22	fl oz/a	PRE	A				
	MSO		L	1	% v/v	PRE	A				
	AMS		WG	17	lb/100 gal	PRE	A				
	Headline SC	2.08	SC	3	fl oz/a	POST	B				
	Huskie	2.06	L	11	fl oz/a	POST	B				
	Activator 90		L	0.25	% v/v	POST	B				
	AMS		WG	1	lb/a	POST	B				
	Twinline	1.75	L	9	fl oz/a	FLAG	C				
	Caramba	0.75	L	13.5	fl oz/a	FLOWER	D				
LSD (P=.05)								1.3	1.5	0.40	8.41
CV								1.12	1.44	2.75	7.99

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