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**TO DETERMINE THE EFFICACY OF CHA 7950 COMPARED TO ACCENT APPLIED POST ON
CULTIVATED WHEAT OR SUSCEPTIBLE GRASS WEED AS MODEL PLANTS IN 2007.**

Trial ID: 07S-THP-CTC-11 Protocol ID: HZEAMXNICO0702
Location: U.S. Study Director:
Investigator: Dr. William G. Johnson

General Trial Information

Study Director: Vince Davis / Kevin Westerfeld **Title:** Research Associate
Affiliation: Purdue University
Postal Code: 47907 **E-mail:** davisv@purdue.edu/kwesterf@purdue.edu
Investigator: Dr. William G. Johnson **Title:** Associate Professor
Affiliation: Purdue University
Postal Code: 47097 **E-mail:** wgj@purdue.edu
Keywords: NICOSULFURON OD, ACCENT, MODEL GRASS, EFFICACY

Trial Location

City: Lafayette **Trial Status:** ESTABLISHED
State/Prov.: IN
Postal Code: 47909-9049
Country: USA
Directions:
Field 4B

Objectives:

TO COMPARE THE EFFICACY OF CHA 7950 TO ACCENT ON KEY GRASS WEEDS/WHEAT

Cooperator/Landowner

Cooperator: Throckmorton-Purdue Ag Center (TPAC) **Country:** USA
Organization: Purdue University **Phone No:** (765) 538-3422
Address 1: 8343 US 231 South **Fax No:** (765) 538-3423
City: Lafayette
State/Prov: IN
Postal Code: 47909-9049

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: DKC 60-18 **Description:** RR2, YGPL
BBCH Scale: BCOR **Planting Date:** Apr/23/2007
Planting Method: DIRECT DRILLED **Rate, Unit:** 31000 S/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN
Seed Bed: MEDIUM **Soil Temperature, Unit:** 59 F
Soil Moisture: Moist **Emergence Date:** May/02/2007

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail

Pest 2 Type: W **Code:** TRZAW *Triticum aestivum* (winter)
Common Name: Winter wheat

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD
Plot Length, Unit: 30 FT **Tillage Type:** CONVENTIONAL-TILL
Replications: 4 **Study Design:** Randomized Complete Block
Soil Drainage: G Good

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.	Apr/23/2007	UAN	28	%	L	56	gpa

Field Prep./Maintenance:

Field disked on 4/21/07; field cultivated on 4/23/07

Soil Description

Description Name: TPAC Field 4B
% OM: 2.9 **Texture:** Silty loam
pH: 6.2 **Soil Name:** Toronto-Millbrook
CEC: 13.3

Analyzed By:

A&L Great Lakes Laboratories, INC.

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Additional Measured Elements

Element	Quantity	Unit
K	124	PPM
Mg	430	PPM
Ca	1400	PPM

Moisture and Weather Conditions

Closest Weather Station: On research station Distance: 0.5 Unit: MI

Application Description

	A
Application Date:	May/18/2007
Time of Day:	10:00 AM
Application Method:	Spray
Application Timing:	A: POST
Application Placement:	BROFOL
Applied By:	BN KW JD
Air Temperature, Unit:	57 F
% Relative Humidity:	47
Wind Velocity, Unit:	4 MPH
Wind Direction:	NE
Dew Presence (Y/N):	Y
Water Hardness:	Hard
Soil Temperature, Unit:	52 F
Soil Moisture:	Moist
% Cloud Cover:	0

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMX BCOR
Height, Unit:	4.5 IN
Height Minimum, Maximum:	4 5

Pest Stage At Each Application

	A
Pest 1 Code, Disc., Scale:	SETFA W
Pest 2 Code, Disc., Scale:	TRZAW W
Height, Unit:	5 IN
Height Minimum, Maximum:	4 6
Density, Unit:	150 YD2

Application Equipment

	A
Appl. Equipment:	Backpack
Operating Pressure, Unit:	15 PSI
Nozzle Type:	XR11002
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	8
Boom Length, Unit:	10 FT
Boom Height, Unit:	15 IN
Ground Speed, Unit:	3 MPH
Carrier:	TPAC H2O
Spray Volume, Unit:	15 GAL/AC
Mix Size, Unit:	1.8 Liters
Propellant:	CO2

Date By
Jul/30/2007 Kevin

Notes
Plots 202 and 302 were thrown out. Believe to be a mis-spray with one of the checks.

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Trial Comments

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							W Weed		W Weed	W Weed	W Weed	W Weed	W Weed		
							TRZAW		TRZAW	SETFA	TRZAW	SETFA		TRZAW	
							Winter wheat		Winter wheat	Giant foxta>	Winter wheat	Giant foxta>		Winter wheat	
Pest Type	Pest Code	Pest Name	Crop Code	BBCH Scale	Crop Name	Crop Variety									
							ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	
							BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	
							Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn	
							DKC 60-18	DKC 60-18	DKC 60-18	DKC 60-18	DKC 60-18	DKC 60-18	DKC 60-18	DKC 60-18	
							May/25/2007	May/31/2007	May/31/2007	May/31/2007	Jun/07/2007	Jun/07/2007	Jun/07/2007	Jun/14/2007	
							CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	
							%	%	%	%	%	%	%	%	
							V3	V5	V5	V5	V7	V7	V7	V7-V8	
								12-16"	12-16"	12-16"	12-20"	12-20"	12-20"		
									4-6"	6-8"	6-8"	8-12"		6-12"	
									117 YD2	45 YD2	117 YD2	270 YD2		117 YD2	
							KW+BN	WGJ	WGJ	WGJ	MK	MK	MK	KW+VM	
							7 DAT	14 DAT	14 DAT	14 DAT	21 DAT	21 DAT	21 DAT	28 DAT	
							7 7	13 13	13 13	13 13	20 20	20 20	20 20	27 27	
							7 DA-A	13 DA-A	13 DA-A	13 DA-A	20 DA-A	20 DA-A	20 DA-A	27 DA-A	
							32 DP-1	38 DP-1	38 DP-1	38 DP-1	45 DP-1	45 DP-1	45 DP-1	52 DP-1	
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Code	Plot	1	2	3	4	5	6	7	8
01	CHA 7950	0.023 lb ai/a	1.47 fl oz/a		A	101		20.0	0.0	80.0	80.0	75.0	85.0	0.0	96.0
	Superb HC	1 % v/v	1 % v/v		A	403		22.0	0.0	95.0	85.0	85.0	90.0	0.0	97.0
	28% Nitrogen	3 % v/v	3 % v/v		A	601		30.0	0.0	95.0	95.0	98.0	95.0	0.0	100.0
						804		40.0	0.0	80.0	80.0	70.0	95.0	0.0	93.0
							Mean =	28.0	0.0	87.5	85.0	82.0	91.3	0.0	96.5
02	CHA 7950	0.047 lb ai/a	3.00 fl oz/a		A	102		27.0	0.0	90.0	80.0	85.0	85.0	0.0	100.0
	Superb HC	1 % v/v	1 % v/v		A	401		35.0	0.0	90.0	90.0	98.0	93.0	0.0	99.0
	28% Nitrogen	3 % v/v	3 % v/v		A	604		30.0	0.0	80.0	90.0	85.0	95.0	0.0	100.0
						905		60.0	0.0	90.0	80.0	100.0	90.0	0.0	100.0
							Mean =	38.0	0.0	87.5	85.0	92.0	90.8	0.0	99.8
03	CHA 7950	0.023 lb ai/a	1.47 fl oz/a		A	103		23.0	0.0	80.0	60.0	78.0	70.0	0.0	90.0
	Prime Oil	1 % v/v	1 % v/v		A	404		27.0	0.0	90.0	90.0	90.0	90.0	0.0	100.0
	28% Nitrogen	3 % v/v	3 % v/v		A	704		40.0	0.0	95.0	85.0	90.0	95.0	0.0	98.0
						802		35.0	0.0	85.0	70.0	80.0	93.0	0.0	100.0
							Mean =	31.3	0.0	87.5	76.3	84.5	87.0	0.0	97.0
04	CHA 7950	0.047 lb ai/a	3.00 fl oz/a		A	104		35.0	0.0	90.0	70.0	85.0	75.0	0.0	93.0
	Prime Oil	1 % v/v	1 % v/v		A	304		37.0	0.0	95.0	95.0	98.0	98.0	0.0	100.0
	28% Nitrogen	3 % v/v	3 % v/v		A	702		30.0	0.0	80.0	90.0	93.0	95.0	0.0	100.0
						901		40.0	0.0	90.0	83.0	90.0	90.0	0.0	98.0
							Mean =	35.5	0.0	88.8	84.5	91.5	89.5	0.0	97.8
05	CHA 7950	0.023 lb ai/a	1.47 fl oz/a		A	105		22.0	0.0	60.0	80.0	70.0	90.0	0.0	95.0
	Agridex	1 % v/v	1 % v/v		A	305		40.0	0.0	80.0	90.0	80.0	95.0	0.0	96.0
	28% Nitrogen	3 % v/v	3 % v/v		A	801		40.0	0.0	80.0	70.0	80.0	90.0	0.0	94.0
						1002		50.0	0.0	97.0	80.0	98.0	90.0	0.0	100.0
							Mean =	38.0	0.0	79.3	80.0	82.0	91.3	0.0	96.3
06	CHA 7950	0.047 lb ai/a	3.00 fl oz/a		A	201		25.0	0.0	90.0	95.0	94.0	95.0	0.0	100.0
	Agridex	1 % v/v	1 % v/v		A	504		37.0	0.0	95.0	95.0	90.0	96.0	0.0	98.0
	28% Nitrogen	3 % v/v	3 % v/v		A	705		45.0	0.0	98.0	98.0	85.0	98.0	0.0	100.0
						1003		45.0	0.0	95.0	93.0	100.0	90.0	0.0	100.0
							Mean =	38.0	0.0	94.5	95.3	92.3	94.8	0.0	99.5
07	CHA 7950	0.023 lb ai/a	1.47 fl oz/a		A	202	
	NIS	0.5 % v/v	0.5 % v/v		A	405		25.0	0.0	85.0	85.0	87.0	97.0	0.0	100.0
	28% Nitrogen	3 % v/v	3 % v/v		A	701		27.0	0.0	65.0	80.0	77.0	92.0	0.0	97.0
						803		47.0	0.0	80.0	75.0	95.0	90.0	0.0	95.0
							Mean =	33.0	0.0	76.7	80.0	86.3	93.0	0.0	97.3

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed						
Pest Code	TRZAW	TRZAW	TRZAW	SETFA	TRZAW	SETFA		TRZAW	SETFA						
Pest Name	Winter wheat	Winter wheat	Winter wheat	Giant foxta>	Winter wheat	Giant foxta>		Winter wheat	Giant foxta>						
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX						
BBCH Scale	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR						
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn						
Crop Variety	DKC 60-18	DKC 60-18	DKC 60-18	DKC 60-18	DKC 60-18	DKC 60-18	DKC 60-18	DKC 60-18	DKC 60-18						
Rating Date	May/25/2007	May/31/2007	May/31/2007	May/31/2007	Jun/07/2007	Jun/07/2007	Jun/07/2007	Jun/14/2007	Jun/14/2007						
Rating Data Type	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO						
Rating Unit	%	%	%	%	%	%	%	%	%						
Crop Stage	V3	V5	V5	V5	V7	V7	V7	V7-V8	V7-V8						
Crop Stage Scale		12-16"	12-16"	12-16"	12-20"	12-20"	12-20"								
Pest Stage			4-6"	6-8"	6-8"	8-12"		6-12"	8-18"						
Pest Density, Unit			117 YD2	45 YD2	117 YD2	270 YD2		117 YD2	270 YD2						
Assessed By	KW+BN	WGJ	WGJ	WGJ	MK	MK	MK	KW+VM	KW+VM						
Rating Timing	7 DAT	14 DAT	14 DAT	14 DAT	21 DAT	21 DAT	21 DAT	28 DAT	28 DAT						
Days After First/Last Applic.	7 7	13 13	13 13	13 13	20 20	20 20	20 20	27 27	27 27						
Trt-Eval Interval	7 DA-A	13 DA-A	13 DA-A	13 DA-A	20 DA-A	20 DA-A	20 DA-A	27 DA-A	27 DA-A						
Plant-Eval Interval	32 DP-1	38 DP-1	38 DP-1	38 DP-1	45 DP-1	45 DP-1	45 DP-1	52 DP-1	52 DP-1						
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Appl Unit	Code	1	2	3	4	5	6	7	8	9
01	CHA 7950 Superb HC 28% Nitrogen	0.023 lb ai/a 1 % v/v 3 % v/v	1.47 fl oz/a 1 % v/v 3 % v/v		A		28.0 a	0.0 a	87.5 a	85.0 ab	82.0 a	91.3 a	0.0 a	96.5 a	78.8 a
02	CHA 7950 Superb HC 28% Nitrogen	0.047 lb ai/a 1 % v/v 3 % v/v	3.00 fl oz/a 1 % v/v 3 % v/v		A		38.0 a	0.0 a	87.5 a	85.0 ab	92.0 a	90.8 a	0.0 a	99.8 a	83.8 a
03	CHA 7950 Prime Oil 28% Nitrogen	0.023 lb ai/a 1 % v/v 3 % v/v	1.47 fl oz/a 1 % v/v 3 % v/v		A		31.3 a	0.0 a	87.5 a	76.3 b	84.5 a	87.0 a	0.0 a	97.0 a	70.3 a
04	CHA 7950 Prime Oil 28% Nitrogen	0.047 lb ai/a 1 % v/v 3 % v/v	3.00 fl oz/a 1 % v/v 3 % v/v		A		35.5 a	0.0 a	88.8 a	84.5 ab	91.5 a	89.5 a	0.0 a	97.8 a	75.0 a
05	CHA 7950 Agridex 28% Nitrogen	0.023 lb ai/a 1 % v/v 3 % v/v	1.47 fl oz/a 1 % v/v 3 % v/v		A		38.0 a	0.0 a	79.3 a	80.0 ab	82.0 a	91.3 a	0.0 a	96.3 a	81.3 a
06	CHA 7950 Agridex 28% Nitrogen	0.047 lb ai/a 1 % v/v 3 % v/v	3.00 fl oz/a 1 % v/v 3 % v/v		A		38.0 a	0.0 a	94.5 a	95.3 a	92.3 a	94.8 a	0.0 a	99.5 a	85.8 a
07	CHA 7950 NIS 28% Nitrogen	0.023 lb ai/a 0.5 % v/v 3 % v/v	1.47 fl oz/a 0.5 % v/v 3 % v/v		A		33.0 a	0.0 a	76.7 a	80.0 ab	86.3 a	93.0 a	0.0 a	97.3 a	81.7 a
08	CHA 7950 NIS 28% Nitrogen	0.047 lb ai/a 0.5 % v/v 3 % v/v	3.00 fl oz/a 0.5 % v/v 3 % v/v		A		33.8 a	0.0 a	86.5 a	83.3 ab	94.0 a	89.8 a	0.0 a	100.0 a	88.8 a
09	ACCENT COC 28% Nitrogen	0.023 lb ai/a 1 % v/v 3 % v/v	0.49 oz/a 1 % v/v 3 % v/v		A		27.8 a	0.0 a	83.8 a	80.0 ab	92.8 a	85.8 a	0.0 a	99.3 a	80.8 a
10	ACCENT COC 28% Nitrogen	0.047 lb ai/a 1 % v/v 3 % v/v	1.0 oz/a 1 % v/v 3 % v/v		A		36.8 a	2.5 a	75.0 a	78.8 ab	87.5 a	93.3 a	0.0 a	100.0 a	89.0 a
11	UNTREATED						0.0 b	0.0 a	0.0 b	0.0 c	0.0 b	0.0 b	0.0 a	0.0 b	0.0 b
12	UNTREATED						0.0 b	0.0 a	0.0 b	0.0 c	0.0 b	0.0 b	0.0 a	0.0 b	0.0 b
LSD (P=.05)							11.68	2.15	12.96	10.84	11.55	7.50	0.00	3.10	13.88
Standard Deviation							8.09	1.49	8.97	7.51	8.00	5.20	0.00	2.15	9.61
CV							28.55	714.82	12.71	10.88	10.84	6.88	0.0	2.62	14.16
Bartlett's X2							8.112	0.0	14.041	12.931	5.332	12.989	0.0	16.191	30.117
P(Bartlett's X2)							0.523	.	0.121	0.166	0.804	0.163	.	0.023*	0.001*

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Pest Type	W Weed		W Weed	W Weed	W Weed	W Weed		W Weed	W Weed
Pest Code	TRZAW		TRZAW	SETFA	TRZAW	SETFA		TRZAW	SETFA
Pest Name	Winter wheat		Winter wheat	Giant foxta>	Winter wheat	Giant foxta>		Winter wheat	Giant foxta>
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
BBCH Scale	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR	BCOR
Crop Name	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn	Corn
Crop Variety	DKC 60-18	DKC 60-18	DKC 60-18	DKC 60-18	DKC 60-18	DKC 60-18	DKC 60-18	DKC 60-18	DKC 60-18
Rating Date	May/25/2007	May/31/2007	May/31/2007	May/31/2007	Jun/07/2007	Jun/07/2007	Jun/07/2007	Jun/14/2007	Jun/14/2007
Rating Data Type	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%	%	%	%
Crop Stage	V3	V5	V5	V5	V7	V7	V7	V7-V8	V7-V8
Crop Stage Scale		12-16"	12-16"	12-16"	12-20"	12-20"	12-20"		
Pest Stage			4-6"	6-8"	6-8"	8-12"		6-12"	8-18"
Pest Density, Unit			117 YD2	45 YD2	117 YD2	270 YD2		117 YD2	270 YD2
Assessed By	KW+BN	WGJ	WGJ	WGJ	MK	MK	MK	KW+VM	KW+VM
Rating Timing	7 DAT	14 DAT	14 DAT	14 DAT	21 DAT	21 DAT	21 DAT	28 DAT	28 DAT
Days After First/Last Applic.	7 7	13 13	13 13	13 13	20 20	20 20	20 20	27 27	27 27
Tri-Eval Interval	7 DA-A	13 DA-A	13 DA-A	13 DA-A	20 DA-A	20 DA-A	20 DA-A	27 DA-A	27 DA-A
Plant-Eval Interval	32 DP-1	38 DP-1	38 DP-1	38 DP-1	45 DP-1	45 DP-1	45 DP-1	52 DP-1	52 DP-1
Replicate F	10.203	0.939	1.583	5.688	1.832	6.812	0.000	1.662	1.984
Replicate Prob(F)	0.0001	0.4335	0.2134	0.0032	0.1619	0.0012	1.0000	0.1954	0.1369
Treatment F	11.497	0.939	55.481	75.311	75.301	185.355	0.000	1274.610	44.752
Treatment Prob(F)	0.0001	0.5177	0.0001	0.0001	0.0001	0.0001	1.0000	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.