1-25-08 (07-ARC-17-100-N50)

Southern Illinois University

Aphid Management in Winter Wheat.

Project Code: 07-ARC-17-100-N50 Location: Agronomy Research Center
Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Carbondale IL 62901 USA
Trial Status: Final **Updated:** 1-23-08

Objective:
Evaluate the residual control of aphids with Cruiser seed treatment and the benefit of combining with foliar applications of Warrior.

Crop 1: TRZAW wheat, winter **Variety:** FS 645
Planting Method: Seeded **Planting Date:** 10-13-06
Rate: 1.3 mil. S/A **Depth:** 1.0 IN
Row Spacing: 7.5 IN

Plot Width, Unit: 5 FT **Plot Length, Unit:** 24 FT **Reps:** 4
Tillage Type: Reduced-Till **Study Design:** Randomized complete block
Previous Crop, Year: GLXMA, 2006
Field Prep./Maintenance: 18-46-0 applied preplant on 10-1-07. 95 lb N in early spring on 3-7-07.

Soil Name: Stoy **% OM:** 1.5 **pH:** 6.3 **CEC:** 7.4
Texture: Silt loam **Fert. Level:** P1: 70 LB/A, K: 241 LB/A

APPLICATION DESCRIPTION

	A	B	C
Application Date:	10-18-06	11-27-06	3-27-07
Time of Day:	8:00	14:00	11:30
Application Method:	SEED	Spray	Spray
Application Timing:	SEED TRT	FALL	SPRING
Applic. Placement:		BROFOL	BROFOL
Air Temp., Unit:		68 F	83 F
% Relative Humidity:		58	40
Wind Velocity, Unit:		3-5 MPH	3-5 MPH
Dew Presence (Y/N):		N	N
Soil Moisture:		NORMAL	NORMAL
% Cloud Cover:		75	20

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	TRZAW NA	TRZAW 3 LVS	TRZAW 4-5LVS
Height, Unit:	NA NA	3 IN	12-14 IN

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	SEED TRT	CO2 sprayer	CO2 sprayer
Operating Pressure:	NA	40 PSI	35 PSI
Nozzle Type:	NA	Flat fan	Flat fan
Nozzle Size:	NA	8002	8003
Boom Length, Unit:		5 FT	5 FT
Spray Volume, Unit:		20 GPA	20 GPA

NOTES:

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	TRZAW Yield bu/A 6-14-07	TRZAW Aphids 1.0 sqft 11-27-06 0 DA-B	TRZAW Aphids 1.0 sqft 3-26-07 -1 DA-C	TRZAW BYD Percent 5-14-07	TRZAW BYD Percent 5-30-07
1	FS 645													
1	DIVIDEND EXTREME ST					2	oz/cwt	SEED	A					
2	FS 645									17 ab	0.9 ab	52 a	1 ab	3 a
2	DIVIDEND EXTREME ST					2	oz/cwt	SEED	A					
3	FS 645									15 b	0.2 bc	34 b	3 a	3 ab
3	DIVIDEND EXTREME ST					2	oz/cwt	SEED	A					
3	CRUISER ST					1	oz/cwt	SEED	A					
4	FS 645									18 ab	1.3 a	49 a	2 ab	2 ab
4	DIVIDEND EXTREME ST					2	oz/cwt	SEED	A					
4	WARRIOR	1	CS	0.02	lb ai/a	2.56	oz/a	FALL	B					
5	FS 645									15 b	0.0 c	44 ab	2 ab	3 ab
5	DIVIDEND EXTREME ST					2	oz/cwt	SEED	A					
5	CRUISER ST					1	oz/cwt	SEED	A					
5	WARRIOR	1	CS	0.02	lb ai/a	2.56	oz/a	FALL	B					
6	FS 645									24 ab	0.9 ab	52 a	1 b	2 b
6	DIVIDEND EXTREME ST					2	oz/cwt	SEED	A					
6	WARRIOR	1	CS	0.02	lb ai/a	2.56	oz/a	SPRING	C					
7	FS 645									16 ab	0.1 c	44 ab	1 b	2 b
7	DIVIDEND EXTREME ST					2	oz/cwt	SEED	A					
7	CRUISER ST					1	oz/cwt	SEED	A					
7	WARRIOR	1	CS	0.02	lb ai/a	2.56	oz/a	SPRING	C					
8	FS 645									25 a	0.3 bc	52 a	1 b	1 b
8	DIVIDEND EXTREME ST					2	oz/cwt	SEED	A					
8	WARRIOR	1	CS	0.02	lb ai/a	2.56	oz/a	FALL	B					
8	WARRIOR	1	CS	0.02	lb ai/a	2.56	oz/a	SPRING	C					
LSD (P=.05)										8.8	0.78	14.6	1.5	1.6
Replicate F										0.628	2.129	2.387	0.861	0.600
Replicate Prob(F)										0.6063	0.1322	0.1028	0.4794	0.6233
Treatment F										1.835	3.581	1.887	1.733	2.014
Treatment Prob(F)										0.1485	0.0163	0.1384	0.1706	0.1167

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

Trial Comments

1. Protocol: Syngenta, Growmark.
2. Ratings: Aphid count at fall threshold timing, Aphid count at spring threshold timing, % BYDV, Yield (bu/A).
3. Maintain weed-free with a burndown herbicide if applicable and Harmony Extra if needed.
4. Treatment 1 was planned as "no seed treatment" but "naked seed" was not available at planting, so treatment 1 and 2 are the same.
5. An extended period of below freezing air temperatures in early April caused severe crop stand reduction making BYD evaluations difficult and reducing yield.
6. DA-B and DA-C = Days after FALL and SPRING applications, respectively.