

Aphid Management with Seed and Foliar Insecticide Treatments - Syngenta - 2.

Trial ID: 08-ARC-N9-Syngenta-2 Location: Agronomy Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Carbondale IL 62901 USA
 Trial Status: FINAL Initiation Date: 11-01-07

Objectives: Evaluate Cruiser followed by Warrior, and Warrior followed by Warrior, compared to competitive treatments for BYDV control in wheat.

Crop 1: TRZAW wheat, winter Variety: AgriPro Branson
 Planting Method: Seeded Planting Date: 11-01-07
 Rate, Unit: 0.9 mil. S/A Depth, Unit: 1.0 IN
 Row Spacing, Unit: 7.5 IN Seed Bed: MEDIUM/TRASHY
 Soil Moisture: ABOVE NORMAL

Plot Width, Unit: 5 FT Site Type: FIELD
 Plot Length, Unit: 24 FT Tillage Type: NO-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year

1. GLXMA 2007

Field Prep./Maintenance: N 90 LB/A as 32% UAN applied on 3-25-08

% OM: 1.7 Texture: SILT LOAM
 pH: 6.3 Soil Name: WEIR
 CEC: 8 Fert. Level: P1: 78 LB/A, K: 399 LB/A

Application Description

	A	B	C
Application Date:			04-23-08
Time of Day:			18:00
Application Method:	SEEDTRT	Spray	Spray
Application Timing:		FALLTHLD	SPRGTHLD
Application Placement:		BROFOL	BROFOL
Applied By:			NRJ
Air Temperature, Unit:			78 F
% Relative Humidity:			53
Wind Velocity, Unit:			1 MPH
Dew Presence (Y/N):			N
Soil Temperature, Unit:			69 F
Soil Moisture:			ABONOR
% Cloud Cover:			90

Crop stage at application: 04-23-08
 Height Min, Max (inch): FK8
 14 17

Pest Stage At Each Application

Application Date: 04-23-08

Application Equipment

	Seedtrt	CO2 sprayer	CO2 sprayer
Operating Pressure:		30 PSI	30 PSI
Nozzle Type:		Flat fan	Flat fan
Nozzle Size:		XR 8002	XR 8002
Boom Length, Unit:		5 FT	5 FT
Spray Volume, Unit:		15 GPA	15 GPA

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Pest Code																
Crop Code																
Rating Date		TRZAW	TRZAW	TRZAW	TRZAW	TRZAW	TRZAW	TRZAW								
Rating Data Type		07-01-08	07-01-08	07-01-08	11-27-07	04-07-08	11-27-07	04-07-08								
Rating Unit		Moisture	Test wt.	Yield	Stand	Stand	Vigor	Vigor								
Rating Timing		Percent	lb/bu	bu/A	Percent	Percent	1-5	1-5								
Trt-Eval Interval																
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
1	NONTREATED									13.0 a	54.7 a	89 a	93 a	91 a	3.0 a	3.3 a
2	DIVIDEND EXTREME 0.96 FS					2 fl oz/cwt		SEEDTRT	A	12.7 a	53.8 a	83 a	92 a	91 a	3.0 a	3.3 a
3	DIVIDEND EXTREME 0.96 FS					2 fl oz/cwt		SEEDTRT	A	12.7 a	54.1 a	87 a	92 a	87 a	3.0 a	3.3 a
3	CRUISER 5 FS					1 fl oz/cwt		SEEDTRT	A							
4	DIVIDEND EXTREME 0.96 FS					2 fl oz/cwt		SEEDTRT	A	12.7 a	54.2 a	98 a	93 a	92 a	3.0 a	4.0 a
4	WARRIOR	1 CS		0.0195	lb ai/a	2.5 fl oz/a		FALLTHLD	B							
4	WARRIOR	1 CS		0.0195	lb ai/a	2.5 fl oz/a		SPRGTHLD	C							
5	DIVIDEND EXTREME 0.96 FS					2 fl oz/cwt		SEEDTRT	A	12.8 a	54.1 a	93 a	92 a	92 a	3.0 a	3.3 a
5	CRUISER 5 FS					1 fl oz/cwt		SEEDTRT	A							
5	WARRIOR	1 CS		0.0195	lb ai/a	2.5 fl oz/a		SPRGTHLD	C							
LSD (P=.05)										0.51	1.03	26.1	5.2	6.1	0.00	1.14
Replicate F										1.080	1.185	0.347	1.556	0.695	0.000	2.364
Replicate Prob(F)										0.3844	0.3541	0.7168	0.2687	0.5271	1.0000	0.1561
Treatment F										0.522	1.238	0.506	0.333	0.923	0.000	0.727
Treatment Prob(F)										0.7228	0.3680	0.7336	0.8482	0.4961	1.0000	0.5977

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

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Pest Code							TRZAW	TRZAW	TRZAW	TRZAW	TRZAW		
Crop Code							12-06-07	04-23-08	05-12-08	04-30-08	06-09-08		
Rating Date							Aphids	Aphids	Aphids	BYD	BYD		
Rating Data Type							1 sqft	1 sqft	1 sqft	Percent	Percent		
Rating Unit							0 DA-C		19 DA-C				
Rating Timing													
Trt-Eval Interval													
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	NONTREATED								0.0 a	23.0 a	0.6 b	0 a	0 a
2	DIVIDEND EXTREME 0.96 FS				2 fl oz/cwt		SEEDTRT	A	0.0 a	21.8 a	1.6 a	1 a	0 a
3	DIVIDEND EXTREME 0.96 FS				2 fl oz/cwt		SEEDTRT	A	0.0 a	23.6 a	0.7 b	0 a	0 a
3	CRUISER 5 FS				1 fl oz/cwt		SEEDTRT	A					
4	DIVIDEND EXTREME 0.96 FS				2 fl oz/cwt		SEEDTRT	A	0.0 a	29.7 a	0.6 b	1 a	0 a
4	WARRIOR	1 CS		0.0195 lb ai/a	2.5 fl oz/a		FALLTHLD	B					
4	WARRIOR	1 CS		0.0195 lb ai/a	2.5 fl oz/a		SPRGTHLD	C					
5	DIVIDEND EXTREME 0.96 FS				2 fl oz/cwt		SEEDTRT	A	0.0 a	19.4 a	0.1 b	0 a	0 a
5	CRUISER 5 FS				1 fl oz/cwt		SEEDTRT	A					
5	WARRIOR	1 CS		0.0195 lb ai/a	2.5 fl oz/a		SPRGTHLD	C					
LSD (P=.05)									0.00	17.68	0.71	1.1	0.5
Replicate F									0.000	1.190	0.211	0.762	1.000
Replicate Prob(F)									1.0000	0.3529	0.8145	0.4979	0.4096
Treatment F									0.000	0.491	5.974	0.286	1.000
Treatment Prob(F)									1.0000	0.7435	0.0158	0.8793	0.4609

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

Trial Comments

1. Protocol: Syngenta (TH150X).
2. BYD incidence and severity, aphid counts in each plot at application B+C and 14 da C
3. Yield, test weight and grain moisture.
4. Stand = Percent of a full stand. Vigor = Combination of plant size and color.
5. Aphid populations were monitored closely with very few aphids found, thus aphid counts were delayed, but were finally counted in advance of cold weather, still no aphids were found in any plots when counted on 12-6-2007. The FALLTHLD application was not made as the threshold was never met. No detection of BYD symptoms as of April 7, 2008.
6. Blanket application of Harmony Extra (0.5 oz/A + 2,4-De (0.5 pt/A) + NIS (0.25%) was applied to all plots on 4-22-08.
7. Test wt. = Test weight. BYD = Barley yellow dwarf. DA-C = Days after SPRGTHLD application.
8. Harvested 07-02-08, (6) 7.5 inch rows by 20 ft.