On-Farm Comparison Results

- WALLA

Nebraska Soybean & Feed Grains Profitability Project

Years: 2001 - 2004

Title: Controlling Seedling Insects

Crop: Corn

NSFGPP Operator: Larry Walla, Saunders County

Private Industry Cooperator: Earle Raun

Objective: To determine and document the effect of of controlling seedling insects on the profitability of corn production

Treatments: No insecticide vs. Half-rate of Aztec insecticide in furrow vs. Full-rate of Aztec in furrow in 2001 and 2002. In 2003, a ½ rate of Capture was added. In 2004, treatments were no insecticides vs. ½ rate Capture in furrow vs. low level Cruiser seed treatment vs. full rate Cruiser seed treatment.

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Results: 2001 Corn

Treatment	Yield, bu/ac at 15.5%	Moisture %	Test Wt, lbs/bu	Plants 1000 /ac	Cost $/ac
None	212	15.9	59.4	26.3	-----
Half Rate	213	16.0	59.4	26.8	6.30
Full Rate	215	15.9	59.5	26.2	12.60

Statistical Analysis: (Prob > F)

Treatments	0.019**	0.759 ns	0.689 ns	NA
None vs. Half	0.443 ns	0.715 ns	0.670 ns	----
Half vs. Full	0.026**	0.471 ns	0.403 ns	----

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Results: **2002 Corn (Pioneer 33B51)**

Treatment	Yield, bu/ac at 15.5%	Moisture %	Test Wt, lbs/bu	Plants 1000 /ac	Cost $/ac
None	231**	16.8	60.1	25.4	-----
Half Rate	235	16.8	60.2	25.0	6.95
Full Rate	234	16.8	60.0	25.0	13.90

Statistical Analysis: (Prob > F)

Treatments	0.1007ns	0.914 ns	0.789 ns	0.795 ns
None vs. Half	0.0395**	1.000 ns	0.736 ns	0.607 ns
Half vs. Full	0.4042 ns	0.722 ns	0.505 ns	0.917 ns

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Results: **2003 Corn (Pioneer 31N27)**

Treatment	Yield, bu/ac at 15.5%	Moisture %	Test Wt, lbs/bu	Plants 1000/ac	Cost $/ac
None	229	16.5	60.9	25.4	---
Aztec 1	226	16.3	60.6	25.9	13.84
Aztec 1/2	230	16.5	60.7	26.3	6.92
Capture 1/2	229	16.5	60.8	27.0	6.60

Statistical Analysis: (Prob > F)

Treatments	0.627 ns	0.551 ns	0.800 ns	0.003 ***
None vs. Rest	0.692 ns	0.900 ns	0.409 ns	0.003 ***
A1 vs. A 1/2	0.273 ns	0.184 ns	0.770 ns	0.255 ns
A 1/2 vs. C 1/2	0.933 ns	0.760 ns	0.826 ns	0.048 **

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Results: 2004 Corn (Pio 33B51)

Treatment	Yield, bu/ac at 15.5%	Moisture %	Test Wt, lbs/bu	Plants 1000/ac	Cost $/ac
No Insect.	231	17.5	59.3	26.2	$0.00
Capture 1/2	233	17.7	59.3	28.0	$7.52
Cruiser 1/2	232	17.5	59.5	27.8	$3.27
Cruiser 1	232	17.8	59.5	27.6	$4.65

Statistical Analysis: (Prob > F)

Treatments	0.118 ns	0.0016 ***	0.500ns
None vs. Rest	0.036 **	0.0174 **	0.291 ns
Capture 1/2 vs. Cruiser 1/2	0.241 ns	0.0074 ***	0.345 ns
Cruiser 1/2 vs. Cruiser 1	0.749 ns	0.0007 ***	1.000 ns

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Summary: In 2001, the application of Aztec insecticide at planting increased grain yield slightly, but significantly; however, the full rate was needed. In 2002, the Half Rate of Aztec increased yield significantly. In 2003, insecticide application did not affect grain yield; however, plant population was increased. The half rate of Capture was more effective than the half rate of Aztec. In 2004, yield increases from insecticide were slight. Yield from the no insecticide treatment was slightly lower than from the insecticide treatments; however, there was no difference between insecticide treatments. Grain moisture at harvest was slightly higher from Capture ½ rate and Cruiser full rate.