

Evaluation of Seed Treatments for Soybean Insect Management - 2002:

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Two plantings of Round-Up Ready 'CL-48" soybeans were planted at Baker Farms Inc. near Middletown, DE and one planting at the University of Delaware Research and Education Center near Georgetown, DE. Ten-row 46-ft. long plots on 15-inch center were replicated 4 times in a RCB design. Gaucho seed treatments were applied commercially by Clark Seed Company and Cruiser was applied by Syngenta seeds. Insect populations were evaluated weekly for six weeks after plant emergence by counting the bean leaf beetle damage on 20 plants per plot, examining 20 leaflets per plot for thrips and counting the number of potato leafhoppers in 20 sweeps per plot. Stand counts were evaluated for the first two weeks after emergence by counting the number of plants in 4 throws of a 33.5" diameter hula-hoop. At physiological maturity, all plots were harvested and the yields calculated. Data were analyzed using ANOVA and means were separated by Ryan's q-test (P=0.05).

Insect population pressure was low in all three plantings. At the Georgetown location, no differences were observed between the treatments and the untreated checks. At the Middletown location, all treatments provided better thrips control compared to the untreated check for both plantings. In the May planting at Middletown, all treatments provided significantly better potato leafhopper control compared to the untreated check. In the July planting at Middletown, the high rate of Gaucho and the Cruiser treatment resulted in a significantly higher stand count compared to the untreated check. No phytotoxicity was observed.

I. University of Delaware, Research and Education Center, Georgetown, DE

Planting Date: May 13

Harvest Date: October 28

Treatment	Rate/100 lbs of seed	Yield - BU/A	Mean Stand Count (33.5" diameter hula hoop)	Mean Thrips per 20 leaves		Mean Percent Bean Leaf Beetle Damaged Plants	
			June 10	June 4	June 10	June 4	June 10
Gaucho 480	2 oz	20.42a	78.50a	45.75a	109.57a	0.50a	1.25a
Gaucho 480	3 oz	23.89a	61.25a	36.25a	74.00a	0.75a	1.25a
Cruiser 5FS	50 g ai/kg seed	19.97a	69.00a	45.75a	110.75a	3.00a	1.50a
Untreated	-----	24.64a	62.25a	59.75a	89.25a	2.25a	2.75a

Means within a column followed by the same letter are not significantly different (Ryan's q-test; P=0.05).

II. Baker Farms Demonstration Site, Middletown, DE

Planting Date # 1: May 22

Harvest Date: November 5

Treatment	Rate/100 lb of seed	Yield - BU/A	Stand Count		Mean # Thrips/ 20 leaves			Mean Number Potato Leafhoppers/20 sweeps		
			May 31	June 7	June 17	June 26	July 9	June 17	June 26	July 9
Gaucha 480	2 oz	12.35a	76.25a	80.00a	33.5b	32b	15.50b	1.00b	0.5b	1.50b
Gaucha 480	3 oz	13.11a	74.5a	85.75a	27.5b	25b	10.25bc	0.25b	0.0b	1.00bc
Cruiser 5FS	50 g ai/kg seed	15.19a	74.25a	77.00a	23.3b	27.2b	8.00c	0.75b	0.5b	0.25c
Untreated	-----	12.42a	71.25a	80.50a	52.0a	45.5a	26.25a	2.50a	2.5a	2.50a

Means within a column followed by the same letter are not significantly different (Ryan's q-test; P=0.05).

Planting Date # 2: July 17

Harvest Date: December 3

Treatment	Rate/100 lb of seed	Yield - BU/A	Stand Count July 31	Mean Number Potato Leafhopper per 20 sweeps - 7/31	Mean #Thrips per 20 Leaves	
					7/31	8/22
Gaucha 480	2 oz	32.02a	66.5ab	0.75a	7.25b	38.75ab
Gaucha 480	3 oz	31.42a	72.5a	0.00a	3.50bc	34.00ab
Cruiser 5FS	50 g ai/kg seed	32.43a	78.0a	0.50a	0.50c	26.50b
Untreated	-----	29.34a	59.23b	0.50a	15.25a	47.75a

Means within a column followed by the same letter are not significantly different (Ryan's q-test; P=0.05).