

Evaluation of fungicides for reduction of Common Bean Rust *Uromyces appendiculatus* in snapbean (*Phaseolus vulgaris*), 2005.

R. J. McGovern and C. R. Semer IV

University of Florida-IFAS

Plant Pathology Department and Plant Medicine Program

Gainesville, FL

This test, conducted in Marion County, Florida (Pine Acres Farm) was a randomized complete block test design with five replications. Each plot consisted of four rows planted on 30 inch centers and 20 feet in length. Snap bean variety 'Dusky' was planted on July 9, 2005 and the center two rows of each plot were treated, inoculated and harvested. Treatments were applied using a CO₂ pressurized backpack in 50 gpa of water at 30 psi with a 20 inch band sprayed over each row center with one LE 8004 nozzle centered over each row. The first fungicide application was made on June 9, 2005 and subsequent applications were made weekly until the test terminated on July 15, 2005. Even though SBR (soybean rust -*Phakopsora pachyrhizi*) was detected in a soybean sentinel plot at the UF research farm and in an adjacent variety evaluation trial permission to inoculate with *Phakopsora pachyrhizi* into this test was first given and then rescinded. We waited as long as possible for natural inoculation to take place and when it didn't we inoculated the untreated check rows by placing four leaves infected with *Uromyces appendiculatus* into the canopy of each row on July 1, 2005. Disease evaluations were made starting July 6, 2005, by randomly collecting ten leaves within the canopy from each of 2 twenty foot rows. The number of leaves with rust lesions per twenty leaves was counted for each plot and the data was recorded. The plots were harvested July 15, 2005 and the yield was recorded in pounds per plot. The results show that there were no statistically significant differences among the treatments and all treatments were better than the untreated check for control of common rust of bean. The treatments did effect the bean yields.

Treatment and rate/100 gal	Rust incidence (%) 6 July ^z	Rust incidence (%) 13 July	Yield (lbs)/plot
1-Untreated Check	54.0 a ^y	65.0 a	3.4 a
2-Folicur 4oz/A *	0.0 b	7.0 b	3.1 a
3-Stratego 7 oz/A*	14.0 b	17.0 b	2.6 a
4-BravoUltrax 2.7Lb/A	5.0 b	11.0 b	4.9 a
5-Headline 6oz/A**	0.0 b	7.0 b	3.1 a
6-Headline 4.7oz/A + Folicur 3.1oz/A**	0.0 b	0.0 b	4.0 a
7-Headline .4oz/A+ Caramba 7.5oz/A**	0.0 b	0.0 b	2.4 a
8-Armicarb 5lb/100gpa	13.0 b	13.0 b	2.1 a
9-Armicarb 2.5lb /100+Tilt 2 oz/A	0.0 b	1.0 b	2.8 a
10-Quilt 14 oz/A	0.0 b	1.0 b	2.4 a
11-Quadris Xtra 4 oz/A	0.0 b	0.0 b	3.1 a

^zIncidence based on a random sample of 20 leaves per 12.2m plot. Square root transformation was used prior to data analysis; non-transformed means are presented.

^yMeans followed by the same letter are not significantly different by Fisher's Protected LSD ($P=0.05$).

* indicates the addition of Induce at 0.125% v/v and ** indicates the addition of NIS at 0.125% v/v