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FUNGICIDES AND TIME OF APPLICATION FOR CONTROL OF SNAP BEAN RUST IN TENNESSEE

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Rust has become an annual problem of fall grown snap beans in Tennessee. The Bean Rust Nursery trial led by Dr. J. R. Stavely has been conducted for several years at Crossville, Tennessee. From these trials, five snap bean cultivars with considerable rust resistance and fairly acceptable horticultural characteristics have been selected. These are Resisto, Spurt, Avalanche, Tidal Wave, and Early Bird.

Concurrently, trials to evaluate fungicide control of snap bean rust have been conducted. A 1983 test was planted on July 11 and harvested on September 6. Gallatin 50 was the test cultivar. Manebs of different formulations were compared to Baycor, Tilt, Vanguard, and Bayleton. Part of the test evaluated rates and frequencies of applications. Weekly treatments were applied on August 4, 11, 18, and 25. Bi-weekly treatments were applied on August 4 and 18. Rust was not sufficiently severe to cause defoliation or a yield reduction in the check plots but was sufficient for a good measurement of rust control on September 6.

Baycor at a rate of 57 g. ai/A. applied at 14 day intervals was one of the most effective treatments for rust control. Tilt and Vanguard at 100 g. ai/A. on a 14 day schedule each gave good rust control. Bayleton at rates of 7 to 28 g. ai/A. on a 7 to 14 day schedule gave only moderate rust control. This chemical gave excellent control in the 1982 trials.

The new chemicals tested showed much promise for control of snap bean rust. Effectiveness with only two applications is an important advantage for some of these treatments.

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NO-TILL SNAP BEAN TRIALS

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Several no-till snap bean studies have been conducted previously at this location. Stand establishment and weed control were major problems in these studies. Snap bean seed germinated poorly if covering soil was compacted or if firm contact with the soil was not established. Older herbicides labeled for snap beans required pre-plant incorporation which was impossible with no-till management. Only recently have suitable pre-emergence and post emergence herbicides been labeled for snap beans.