**Managing Sclerotinia in soybeans with Contans**

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Due to its unique biology, Sclerotinia stem rot (white mold) is a particularly good target for biological control. Unlike most fungal plant pathogens, *Sclerotinia sclerotiorum*, the fungus that causes Sclerotinia stem rot, does not produce spores on diseased tissues. Instead, spores of the fungus are produced when sclerotia (fungal resting structures in the soil) germinate to produce tiny mushroom-like structures called apothecia. Biological control agents that degrade the fungal resting structures in the soil have the capability of significantly reducing Sclerotinia spore production and thereby reducing disease development.

This project evaluated the efficacy of Contans WG, a commercial formulation of the biological control agent *Coniothyrium minitans,* for control of Sclerotinia stem rot of soybean. Application timing (fall versus spring) and application rate (1 versus 2 lb/ac) were tested, and the efficacy of Contans was compared to a single application of the foliar fungicide Endura. Contans was applied to the surface of a disked field on October 9, 2014 and May 27, 2015 and incorporated with a shallow cultivation the same day. Applications of Endura (active ingredient, boscalid) were made at 5.5 oz/ac on July 21 at the early R2 growth stage when 100% of plants had an open blossom at one of the top two nodes. Testing was conducted in large (225 ft x 225 ft = 1.16 acre) plots under a center pivot, with apothecia, disease, and yield evaluated within 30 ft x 50 ft subplots located in the center of each plot.

Contans applications resulted in a strong trend towards reduced apothecia production. In plots treated with Contans on October 9, 2014, an average of 1.1 apothecia were produced per square meter versus 3.5 apothecia per square meter in the non-treated plots (a 68% reduction). In plots treated with Contans on May 27, 2015, an average of 1.3 apothecia were produced per square meter, a 63% reduction relative to the non-treated plots. In both spring and fall applications, a rate response was observed, with an average of 1.5 apothecia were produced per square meter in plots treated with 1 lb/ac of Contans and an average of 0.9 apothecia were produced per square meter in plots treated with 2 lb/ac of Contans. However, considerable variability was observed across replicates of experiments. Differences were not statistically significant, and results should be treated cautiously.

Sclerotinia disease levels and soybean yields were not informative for evaluating treatments in this trial. A severe wind storm in late July interfered with soybean development, and canopy closure was irregular across the experiment. The canopy closed prior to the wind storm in some plots, closed during mid-pod fill in some plots, and remained open through maturity in other plots. Disease pressure was low (7% incidence in the non-treated control) and plot-to-plot differences in disease development and soybean yield were influenced primarily by differences in canopy closure, not the imposed treatments. Yields averaged 48 bushels/acre in plots treated with Contans or with the foliar fungicide Endura, and yields averaged 49 bu/ac in non-treated plots; differences were not statistically significant.