Biological Control of Sclerotinia Sclerotia

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Sclerotia are the hard, black bodies which grow within the white mold formed by Sclerotinia. Aside from contaminating harvested grain, sclerotia fall to the ground and overwinter. Over the next several years, many of these sclerotia germinate and form apothecia (flesh-colored mushrooms which resemble golf tees). When mature, apothecia forcibly eject ascospores, which may infect nearby plants or be carried by wind to neighboring fields. Besides aerial infection, sunflower root wilt is the result of plant roots coming in contact with sclerotia in the soil.

In the war against Sclerotinia, a great deal of research effort is being directed toward identifying genetic resistance and effective chemical control measures. Another important battleground is the control of sclerotia. By reducing the number of sclerotia, ascospore production is reduced and, consequently, so is disease pressure. One possible method of controlling sclerotia is the application of naturally-occurring fungi which attack sclerotia. *Coniothyrium minitans* is one such fungus which is currently marketed as Intercept®.

In the fall of 2001, a field experiment was begun at the Carrington Research Extension Center to evaluate the effectiveness of Intercept. The trial is comparing rates of Intercept and fall vs. spring application in three crops: canola, dry bean, and sunflower. In a companion experiment, Intercept is being evaluated in 1- and 2-year rotations of wheat and dry bean under tillage and no-till systems. The results of these studies will hopefully provide information on management factors and the use of Intercept for managing sclerotia.