Diseases of Field Crops in Indiana
2008 Year in Review

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Diseases of Corn

2008 was a relatively quiet year for diseases of corn in Indiana, despite favorable weather conditions for disease development in June and July. Common rust of corn was observed frequently in fields throughout the state this year, but typically at low levels. Gray leaf spot of corn was found at low levels in most fields late in the season, but generally only moderate to severe infection was observed on susceptible hybrids. Late season stalk rots and Diplodia ear rot were observed more frequently in 2008 than in past years.

Goss's Bacterial Wilt of corn was confirmed in Indiana for the first time this year. The disease was identified on popcorn and hybrid corn in Jasper and Pulaski counties in northwest Indiana. Goss's Wilt is found sporadically throughout the Midwest in limited areas and years, and is manageable through crop rotation and tillage practices.

Diseases of Soybean

Soybean disease throughout Indiana was less than in previous years, although some diseases were locally severe. Sudden death syndrome (SDS) was widespread throughout Indiana this year due to cool, wet soil conditions after planting. The delayed planting season also delayed onset of SDS symptoms in the field, and the disease was not as severe as in past years. Wet weather at flowering contributed to white mold outbreaks in northeastern and central Indiana, and substantial yield loss was observed in some infected fields. Dry conditions late in the growing season in northeastern Indiana may have contributed to the development of charcoal rot of soybean. Charcoal rot symptoms were widespread and severe in this region and reduced soybean yields. Fungal structures produced by the white mold and charcoal rot fungi can survive in the soil for several years, and crop rotation is necessary to reduce the level of disease present in affected fields.

Soybean rust was not detected in Indiana in 2008. The disease developed slowly in the southern U.S. in 2008, and weather patterns were not conducive for soybean rust spore movement into Indiana during the critical soybean growth stages (R1 to R5). However, if rust were to develop and spread in the southern states at an earlier time next year, spores could reach the Indiana soybean crop at a stage where yield loss could occur. The most important and unpredictable variable to determining risk of soybean rust infection in Indiana is the weather, and continued monitoring for soybean rust during the growing season is necessary to ensure that growers are alerted in time to apply a fungicide to prevent yield loss.

Diseases of Wheat

Fusarium head blight (scab) was present at low levels in Indiana in 2008. Reported severity was generally less than 15%. A weather-based model to predict head scab risk during the growing season is available at http://www.wheatscab.psu.edu.