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Mid-Season Soybean Diseases: Scouting and Management

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Mid-Season Soybean Diseases: Scouting and Management

Abstract

This is another unusual growing season, with a cool and wet spring followed by the hot and rainy summer. The cool weather that continued into the first week of July suddenly changed when a heat wave accompanied with rainy days arrived. The hot and wet final two weeks of July remind me of the subtropical weather in the Gulf Coast of Louisiana where I did my graduate study and where foliar diseases are a major issue in crop protection each year.

Keywords

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Mid-Season Soybean Diseases: Scouting and Management

XB Yang, Department of Plant Pathology

This is another unusual growing season, with a cool and wet spring followed by the hot and rainy summer. The cool weather that continued into the first week of July suddenly changed when a heat wave accompanied with rainy days arrived. The hot and wet final two weeks of July remind me of the subtropical weather in the Gulf Coast of Louisiana where I did my graduate study and where foliar diseases are a major issue in crop protection each year.

Such a unique season leads to the occurrence of different diseases in corn and soybean, testing disease management skills of the producer. In corn, gray leaf spot risk is higher than last year and common corn rust spores arrived in Iowa two weeks earlier than normal. Both diseases can be found in almost any corn field with varying severity from south to north and from field to field. Soybean brown spot has been wide spread since early season and other diseases are likely to show up when fields are scouted this summer.

Sudden death syndrome (SDS) is likely to be wide spread in Iowa the rest of season, as parameters in critical weeks suggest favorable conditions for occurrence of this disease. The disease showed up as early as mid-July in southern Iowa, according to ISU Extension Field Agronomist Mark Carlton. SDS also can be found in fields in central Iowa. With high pressure, some tolerant varieties may not hold up in some fields. The disease, if found, will be an indication of variety tolerance. Good recordkeeping of the disease location will help variety selection strategy for next soybean planting.



Soybean white mold

Soybean white mold was wide spread last year and was a concern for many growers this season although the warmer weather this year has been generally less favorable to the disease. The exception was a period early in the flowering season which was favorable for white mold infection. Some fields will have the disease; we have found white mold infected plants in northern Iowa. For management options, see my ICM article on [2010 white mold management](#).

Downy mildew, a later season disease in Iowa, likes cool temperatures and rain. The lesions are found in the upper plant because the fungal spores are airborne. Infected soybean leaves have regular shaped small lesions. The lesions are pale or light yellow in color on the upper surface of the leaves. On the underside of the infected leaves, the lesions are grey in color with turf like mycelium which can be seen with the bare eye. This year the disease showed up earlier due to frequent rains and will be most likely found in northern Iowa or in fields along the rivers. The disease may buildup later in the season in regions where temperatures are cool. The disease mainly affects seed quality and it can be controlled by fungicide spray.



Downy mildew

As mentioned earlier, this year **brown spot pressure** is unusually high due to weather conditions with many reports of outbreaks. The disease had caused defoliation in fields before R2 stage. Because the weather conditions have been good for this disease since spring, there are a lot of inoculums in soybean fields and the risk of brown spot remains high for many soybean fields. The level of damage will vary from field to field, depending on the current level of disease. Spray is recommended for fields when the disease

level is high.

Other foliar diseases, such as Cercospora leaf spot and frogeye leaf spot, will likely show up during the rest of the season. Producers should treat foliar diseases as a group. Use of fungicides is the most effective way to control foliar diseases.

XB Yang is a professor of plant pathology with research and extension responsibilities in soybean diseases. Yang can be reached at (515) 294-8826 or by emailing xbyang@iastate.edu.

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