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Scout for Early Summer Diseases

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Abstract

Recent growing seasons have not been typical ones, and this season seems to follow this pattern. Each unusual season has unique disease problems. This year, early planted soybeans are in flowering stage and we are starting to see a different set of issues. There are three things to look for when scouting these fields.

Keywords

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Scout for Early Summer Diseases

By XB Yang, Linus Li, and SS. Navi, Department of Plant Pathology

Recent growing seasons have not been typical ones, and this season seems to follow this pattern. Each unusual season has unique disease problems. This year, early planted soybeans are in flowering stage and we are starting to see a different set of issues. There are three things to look for when scouting these fields.

Rusts in soybean and corn

The national soybean rust website shows that soybean rust has retreated to the very southern corner of Texas. The disease is so far south that it will not be a concern in the near future. This is because cold winters in the south reduced rust infected kudzu leaves. The disease had no buildup in April and May. Despite this, there was limited movement of this disease last week. The risk will be very low even though there has been plenty of rainfall so far in the Delta Region and north central region.

In contrast, common corn rust should have a good spread this season. By our calculations, spores of the disease should have reached central Missouri around mid-May, southern Iowa no later than the end of May, and central Iowa no later than the first week of June. Experienced scouts should be able to detect the first generation of common rust in central Iowa, which is a low level. In wet southeastern Iowa, the chance to find the disease is high. This season this disease seems to be moving north earlier. Keep in mind that the risk of this disease will be determined by July and August weather.

Brown spot

Brown spot is a disease to watch for during the current soybean growth stage. The disease is present in Iowa every year in every field. The fungal pathogen normally infects leaves in the lower portion of the plants. Symptoms of the disease are many irregular, dark brown spots on both upper and lower leaf surfaces. The brown spot pathogen also survives in crop residues and can be seed borne too. In a wet season, it is also dispersed from the soil to soybean plants by splashing rain. In a normal year the disease causes no significant yield losses unless premature defoliation occurs. Frequent rainfall is the primary conditions for an epidemic. In a wet summer, the disease progresses rapidly from lower leaves to upper leaves. Early season buildup increases the risk in fall.

White mold mushrooms

With early planted soybean at R1 growth stage now, some producers may be preparing to spray against white mold infection. To assist in making the decision to spray, one could scout for white mold mushrooms when the canopy is near closure, from late June to early July. White mold mushrooms, also called apothecia, are produced on or near the soil surface. Other mushrooms can occur on the soil surface in soybean fields and be mistaken for white mold mushrooms. The most common is bird's nest mushroom. Bird's nest mushrooms are similar in size and shape to the white mold mushrooms. When bird's nest mushrooms are mature, they darken and have several egg-like "seeds" inside.



Bird's nest mushrooms that can be found in fields right now are easily mistaken for white mold mushrooms.



White mold mushrooms

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