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Manage Soybean Diseases at Harvest Time

Xiao-Bing Yang
Iowa State University, xbyang@iastate.edu

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Abstract
Two soybean diseases - sudden death syndrome (SDS) and soybean white mold - are wide spread in Iowa this season. In August SDS showed up in almost every Iowa region, with some regions having high disease intensity. Large patches of soybean with SDS symptom are obvious from south to north. White mold, a disease that can drastically cut yields, started to get the attention of producers in late August. This year white mold is so wide spread that agronomists report observing it in many soybean fields in southern Iowa. In northern Iowa, patches of soybean killed by this disease were so abundant that I found them in nearly every soybean field while attending a field day Sept. 18. Before this year, the highest loss from white mold in my book was about $32K in a farm. This year, a farmer told me he estimated a loss of $40K to his farm from this disease.

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XB Yang, Department of Plant Pathology

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In the past, rotation effect made white mold outbreaks an even year occurrence. This year, is the first time we have seen a wide occurrence in an odd year. For most of the fields where white mold was found, the disease was scatted in small patches. To prevent the disease from developing into an every year problem, we should minimize the spread of this disease at harvest by limiting the size of disease patches. When combining a soybean field infested with white molds, harvest the disease patches last so that the combine will not spread infested plant materials to non-infested area.

As for SDS, the management of its risk for future soybean fields should start when you harvest your corn fields. Our greenhouse and field studies show that corn is a good crop for harboring SDS pathogen, especially corn kernels. We compared the survival of SDS fungus in different crop residues (corn or soybean) which included different parts of a crop (root, seed, straw). We found that treatment that had corn kernel density equal to average harvest loss consistently had the highest SDS fungus population. Our finding is consistent with producers' observations that severe outbreaks of SDS can occur after a few years of continued corn production. Our results suggest that a nice and clean harvest of corn field should help reduce the risk of SDS, while a high amount of harvest loss increases SDS risk the next time soybean is planted.

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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