



Your Questions Answered: Managing Soybean Diseases with Harvest Planning

// What do I need to know about soybean diseases before harvest?

As harvest approaches, the focus turns to equipment maintenance, yield monitors, and grain bins. But late-season scouting in soybean is important to accurately diagnose any soybean diseases present. This will aid in harvest decisions and in choosing soybean products with the best disease resistance package for your farm in future growing seasons.

Analyzing field health images in the Climate FieldView™ platform is a great way to observe variation in field conditions and provides insight into where to focus scouting activities first (Figure 1). The common late-season root and stem rot diseases of soybean are sudden death syndrome (SDS), soybean cyst nematode (SCN), stem canker, white mold (northern growing regions), brown stem rot, and charcoal rot (Figure 2). Infections by these pathogens happen early in the growing season, but symptoms typically develop later and can be exacerbated by environmental stresses.

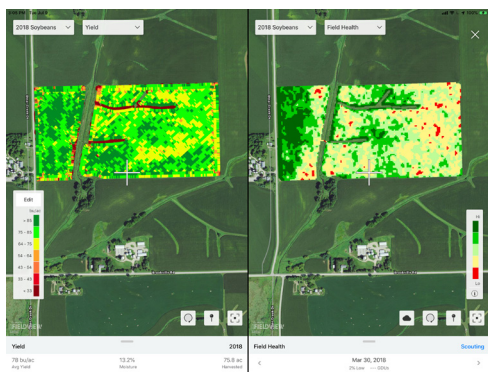


Figure 1. FieldView™ scouting map (right) shows variability to help direct scouting efforts within a field. The scouting map can later be compared to a yield map (left) for additional end-of-season insight.

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- Sources Verified 7/10/19

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// If late-season diseases are identified, what factors should be considered for harvest?

Once late-season diseases appear, it is too late to do much to control them in the current season; however, by knowing the diseases present, management strategies can be employed to prevent or minimize disease in the future.

Soybean diseases, specifically viral diseases, can contribute to symptoms of green stem syndrome in soybean. Green stem syndrome refers to plants that maintain green stems long after pods have reached maturity. There are a number of causes including viral infections, insect feeding, and certain environmental factors or stresses. Plants exhibiting symptoms of green stem have reduced yield potential and can create problems at harvest.

For diseases like SDS, stem canker, brown stem rot, and charcoal rot the main management strategies include the use of resistant soybean products and crop rotation. With SDS, infection occurs early in the growing season and is greatest in cool, wet conditions. ILeVO® soybean fungicide seed treatment provides another layer of SDS protection in addition to using genetic resistance, delayed planting, crop rotation, and avoiding crop stress including soybean cyst nematode. When late-season diseases are present, fields should be harvested in a timely fashion to avoid further yield loss.

In contrast to those diseases listed above where harvesting early is the preferred method, the harvest strategy for white mold is different. The white mold fungus forms sclerotia in and on soybean stems. Sclerotia serve as the primary inoculum for the next soybean crop and can get caught in combines during harvest. Therefore, non-infested fields should be harvested first, followed by white mold-infested fields. If this is not an option, the combine should be cleaned between fields.



Figure 2. Late-season soybean disease symptoms including SDS, stem canker, brown stem rot, charcoal rot, and white mold sclerotia.