White Mold (a.k.a. sclerotinia stem rot) is a disease caused by the pathogen Sclerotinia sclerotiorum, and if present, can devastate soybean yield. Farmers are often faced with making management decisions that leave them choosing between what is best for disease management and what is best for maximum yield potential.

**Immediate Risk Factors for White Mold**

- During the flowering period, typically the R1 through R3 growth stage
  - Cooler temperatures below 85°F
  - Average to above average rainfall, especially in areas with reduced drainage or with periods of prolonged fog during the early morning.
- Early planting resulting in early canopy closure
  - This can reduce airflow and create an environment that is very conducive to disease development.
- Narrow row spacing
  - Similar to the outcome of early canopy closure, narrower row spacing (20 in. or less) can also reduce airflow throughout the field.
- Fields with a history of heavy White Mold pressure
  - Sclerotia (the small, black structures) overwinter and increase the inoculum load in the field.
- Variety selection
  - This is perhaps the most important factor to disease management. There are no completely resistant varieties; however, some varieties tolerate White Mold pressure better than others.

**Long-Term Risk Factors**

- Field cropping history
  - Longer intervals between susceptible crops can reduce inoculum levels.
- Field topography
  - Natural barriers to airflow like tree lines, low areas, wind breaks, etc. can create long-term, problematic areas.
- Weed management
  - Many weed species can serve as alternative hosts for the White Mold pathogen and can increase inoculum levels if left unchecked.
- High-fertility fields
  - Often, fields with a history of manure or that have high levels of fertility can become problematic. This is due to excessive vegetative growth that restricts airflow within the canopy.
- Containment
  - White mold can move easily between fields via tillage or harvest equipment on contaminated soil or soybean stover.

**Disease Cycle**

- Sclerotia (the overwintering structure) can persist in fields with a previous history for long periods of time (up to 9 years).
- Sclerotia germinate in the right field conditions and produce apothecia (living fungal cells), which produces spores.
- Spores must colonize dead plant tissue (i.e. senescing soybean flowers) before infecting the rest of the plant.
- Infection results in water soaked lesions around the nodes on the stem that progress to white mycelium (fungal bodies) under conditions conducive to disease progression.
- Disease can spread from plant to plant, but the primary source of inoculum is soil-borne.
- Sclerotia are produced within the stems and returned to the soil after harvest.
Management

White Mold in soybean can be somewhat episodic: in the absence of conducive environmental conditions, little to no disease is present. If the right conditions occur, the effects of disease can be devastating. Management requires a multi-faceted approach and usually means finding common ground between disease management and production practices aimed at maximizing yield potential.

Important Factors for Management

- **Variety selection**
  - For known problematic fields, this means selecting varieties with good White Mold resistance.
  - Your maturity group may need to be adjusted outside of normal range to get the variety you need rather than one that fits within the normal range for your operation.

- **Wider row spacings and reduced seeding rates can increase airflow within the canopy.**

- **Fungicides**
  - There are many products that are rated as “good” for control of White Mold when sprayed at the proper timing.
  - The ideal timing for a fungicide application is at first flower (R1). However, research has shown that fungicides can provide worthwhile control up to the R3 growth stage, but after that, have little effect.
  - Sporecaster is a free app available in the App Store that can help you make the best decision on when to spray fungicides for White Mold control.
  - There is a seed treatment option that can help suppress and reduce the severity of infection.

**FOR ADDITIONAL INFORMATION:**

https://fyi.extension.wisc.edu/fieldcroppathology/soybean_pests_diseases/white_mold_soybean/
https://fieldcrops.cals.cornell.edu/soybeans/diseases-soybeans/white-mold-or-sclerotinia-stem-rot/