



## [WWW.MSSOY.ORG](http://WWW.MSSOY.ORG) ⇒ MSPB WEBSITE WITH UP-TO-DATE SOYBEAN PRODUCTION INFORMATION

---

### SOYBEAN NEMATODE MANAGEMENT FACT SHEET

This is one in a series of fact sheets from the Mississippi Soybean Promotion Board and the soybean checkoff. Each sheet presents a brief overview of a topic important to Mississippi soybean production. More information on each topic can be accessed through the link at the bottom of the sheet. To see other fact sheets, click [here](#).

Soybean producers in the Midsouth must contend with nematode pests, several species of which may inhabit a single field.

**Soybean Cyst Nematode.** SCN is the most damaging pest to soybean in the Midsouthern US. The biggest challenge facing producers with SCN is that this soil-borne pathogen can impact yield with no or few visible aboveground symptoms.

- Use of SCN-resistant varieties is the best tactic to prevent yield-reducing damage from SCN, and their use does not compromise yield potential compared to using SCN-susceptible varieties.
- Soil texture affects movement of SCN in the soil and also may affect its reproduction and development. Basically, major damage to soybean by SCN occurs when the crop is grown on coarser-textured soils.
- A variety with resistance to a specific population of a race of SCN should not be planted year after year because SCN adapts to varieties. Continuous planting of such a variety could lead to the development of a different SCN race that damages the crop, making that variety useless for SCN control.
- Crop rotation is an effective tool for managing SCN. Nonhost crops such as corn, cotton, grain sorghum, and rice successfully reduce SCN populations.
- Resistant varieties are more reliable and cost-effective than nematicides for managing and/or reducing SCN populations. In fact, a nematicide seed treatment product should never be used instead of using a resistant variety; rather, use it on a resistant variety.
- In areas with severe infestations, soybean production without control measures is not economically feasible. Conversely, soybean production can be profitable with proper SCN management.
- The HG Type Test is an excellent tool for determining if SCN-resistant varieties with the same source of resistance that have been grown for an extended period in the same field have resulted in the selection of the SCN population in that field against the resistance acquired from PI 88788, the most-used resistance source.
- Merely changing varieties for a given field that is

infested with SCN will be ineffective if these different varieties all have SCN resistance acquired from the same source. This could explain why soybean growers may be seeing declining performance from SCN-resistant varieties in SCN-infested fields.

Results from long-term research in Missouri indicate that inclusion of a cover crop in a no-till corn-wheat-soybean rotation system will significantly reduce SCN egg densities in a silt loam soil. For details of that research, click [here](#).

**Root-Knot Nematode.** RKN tends to be associated with sandy soils on sites that have previously been devoted to cotton production in the Midsouth, where the combination of root damage and the reduced water-holding capacity of the soil can result in wilting of infected plants during the heat of the day.

- Management of RKN by crop rotation is complicated by the wide range of hosts for the nematode. This is especially true for Midsouth producers where the common rotational crops are corn, cotton, and wheat, which all serve as hosts for RKN. Thus rotation of soybeans with these crops is not a management option for this nematode. Rotation of soybeans with grain sorghum or flood-irrigated rice will lower RKN numbers dramatically.
- The use of resistant varieties (click [here](#) to access updated ratings and [here](#) for genetic resistance update) is the most effective tool for management of RKN. However, the number of current varieties that are resistant to colonization is low. Using varieties that are only moderately resistant will allow RKN populations to be maintained or increased.

**Reniform Nematode.** RN will infect soybeans, but has not been a major threat to Midsouth soybean production. Where RN is a threat to soybeans, use resistant varieties as an effective management tactic, especially since breakdown of resistance has not been reported. A biennial rotation of soybeans with corn, rice, grain sorghum, or wheat, which are poor hosts for RN, is an effective management tactic. Rotation of soybeans with cotton, which is an excellent host for RN, should not be done on infested fields.

Click [here](#) for a detailed discussion of this topic, and [here](#) for the Miss. Soybean Scouting Guide.

*Composed by Larry G. Heatherly, Updated July 2022,  
[larryheatherly@bellsouth.net](mailto:larryheatherly@bellsouth.net)*