



SOIL SAMPLING AND TESTING FOR NEMATODES 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. Significant yield losses caused by soybean cyst nematode (SCN), southern root-knot nematode (RKN), and reniform nematode (RN) can occur in Mississippi soybeans.

The change in cropping systems and crop rotations in Mississippi in recent years has led to increased concerns about nematode infestations of soybeans. Thus, the need to sample for nematodes has become even more important. The following points should be considered when sampling and testing for nematodes.

- Properly collected and evaluated soil samples are the best tool for detecting the presence and species of nematodes in the soil.
- To assess potential damage from nematodes in soybean fields, growers must determine which nematode or nematodes are present to make appropriate nematode management decisions.
- Accurate identification of the nematode species and population levels present in a field requires that soil samples be collected and sent to a diagnostic lab for evaluation.
- The best time to sample for nematodes is generally near or just after harvest. Sampling in the fall will allow enough time for analysis so that results can be used as a guide for variety selection or choosing an alternative crop for the next growing season.
- If test results indicate that the above nematode species are not present in a field, care should be taken to prevent their introduction since nematodes can be moved from field to field by soil that is transported on field equipment.

- If test results indicate the presence of nematodes, the goal is to use management practices that will keep the nematode population as low as possible since they are very difficult to eliminate.
- Soil texture affects movement of SCN in the soil and also may affect its reproduction and development. Basically, major damage to soybean by SCN infestation occurs when the crop is grown on medium- and coarse-textured soils. Apparently, damaging populations of SCN are not sustainable in soils series classified as clay. RKN tends to be associated with sandy soils on sites that have previously been devoted to cotton production, 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.
- Determination of the density and race or HG type of SCN present in individual fields is required to prevent losses and determine management and control practices to apply. Determination of the race or HG type is especially important because the different SCN resistance sources convey differing levels of resistance against the varied SCN types.
- Sampling for nematodes should be considered as important as sampling for soil fertility. This is especially true if there is no history of nematode sampling on either old or new soybean production sites. Once documentation of the absence or presence of nematodes is established for given fields, appropriate management options can be adopted.

Click [here](#) for a detailed discussion of this topic, and [here](#) to access a Nematode White Paper on this site.

*Composed by Larry G. Heatherly, Updated Mar. 2020,
larryheatherly@bellsouth.net*