

Soybean Cyst Nematode (SCN) has been around since the early '80s, silently causing havoc and reducing yields in our soybean fields. Plants infected with SCN often have poorly developed root systems that cannot efficiently utilize nutrients and water available in the soil. The results are stunted plants with chlorotic foliage. Other than planting an alternative crop to soybeans, like corn or alfalfa, for years and years, it is almost impossible to rid soils of SCN. It is possible, however, to somewhat control the population growth by avoiding certain winter annual weeds and planting nematode resistant soybean varieties.

SCN injury is commonly undetected for several years because the symptoms are attributed to other causes. Often, above ground symptoms of SCN are mistaken for damage from compaction, iron deficiency chlorosis and other nutrient deficiencies, drought stress, herbicide injury or other plant diseases. The first obvious symptom of SCN injury in soybeans is the appearance in the field of circular or oval shaped areas of stunted less vigorous plants. These infested areas will vary in their size, often showing a sharp dividing line at the edges between stunted and apparently healthy plants. Injury is usually more severe in light, sandy soils, but it can also occur in heavier soil. The adult female nematodes and cysts appear as tiny, lemon-shaped objects on the roots. They can be seen with the unaided eye, but a magnifying glass is very helpful. The best way to detect if SCNs are present in a field is to send soil samples, in the fall, to private laboratories to determine egg counts, which will help diagnose the severity of the problem.

There are six winter annual weeds and one cool season perennial that have been identified as alternate hosts to SCN. Purple deadnettle and henbit have been identified as strong hosts. Field pennycress has been identified as a moderate host, and Shepherd's purse, Small-flowered bittercress and common chickweed have been identified as weak hosts. Mouseear chickweed, a cool season perennial, has also been identified as a weak host. Most of these weeds start to emerge during late August and September. Fields with these weed hosts may be increasing SCN population densities at a faster rate than fields without weed hosts. A study was done in Indiana and SCN weed hosts were present in 93% of the fields surveyed, indicating a possibility of a statewide increase in nematode population densities due to weeds (Creech and Johnson, 2006). In 2006, SCNs were found in 82 of the 93 counties in Indiana (Faghihi, et. al., 2006)

A fall chemical application for the treatment of these winter annual weeds would help solve this "host" problem. Working the ground in the fall might also help control these weed hosts, but caution needs to be taken to prevent the spread of contaminated soil moving to an uncontaminated field via machinery. There are also many soybean varieties that are nematode resistant. There used to be somewhat of a yield drag with these varieties but that is no longer the case. SCNs can also be spread in ways that cannot be prevented via, wind, water and animals. SCNs are definitely a problem to be aware of, and measures taken to prevent or reduce the effects of it, are highly recommended