**Soybean Cyst Nematode**

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The soybean cyst nematode, *Heterodera glycines* (SCN) has historically been the most widespread and important nematode species affecting soybean production in Arkansas. Though SCN do not form gall like root-knot nematodes, SCN can be relatively easily diagnosed in the field with a hand lens because they are visible on the exterior of the root as small white or yellow lemon-shaped females (Fig. 1). As the females age, they turn darker in color and die – becoming the cysts for which the nematode is named (Fig. 2).

![Figure 1. White soybean cyst females attached to soybean roots.](image-url)
Life Cycle: The nematode overwinters primarily as eggs that are encased in the cysts. Both the cysts and the eggs themselves are very resistant to damage from the environment, and some eggs within cysts may remain viable for at least eight years in the absence of a host. In the spring, eggs hatch and the immature (juvenile) nematodes emerge from cysts to infect soybean roots. The juveniles infect the roots and establish a feeding site where they remain through the remaining three molts. In contrast to RKN that reproduces by parthenogenesis so mating of males and females is not necessary, adult SCN males leave the root and mate with adult females who are attached to the roots by their head and neck. Within a few days after mating, females begin to lay eggs that are either retained inside the body or deposited into an egg mass attached to the posterior of the female. The generation time for SCN is around 25 days at favorable soil temperatures (75 to 82°C).

Symptoms: Plant symptoms of SCN infection can range from essentially undetectable to readily apparent depending on the severity of the problem. SCN can occur in the field as a number of biotypes, called “races” or “HG types” that differ in their ability to parasitize different soybean cultivars and breeding lines. Some of these biotypes cause more dramatic symptoms than others on certain cultivars. In general, however, symptoms of severe SCN infection are similar to those with RKN, although it is rare for SCN to result in plant death. Stunted, chlorotic plants, particularly when they occur in patches or localized areas in fields are an indication that SCN may be involved.