

## 2. What is SCN?

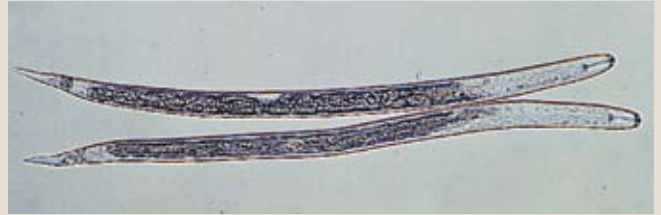
SCN, like all plant-parasitic nematodes, is a microscopic roundworm – a very simple animal, related to the animal-parasitic roundworms that infect livestock and pets. The juvenile nematode [top right] is the infective stage of SCN – the stage that actually enters the soybean root. It hatches from an egg [right].

The juveniles penetrate soybean roots and cause the formation of specialized feeding cells in the vascular system (veins) of the roots. If the juveniles become males, they leave the root after feeding for a few days, move through the soil, and do not contribute further to plant damage. If the juveniles become females, they lose the ability to move and swell into lemon-shaped objects as they mature. Females become too large to remain completely embedded within the root. Their heads remain embedded while the rest of their bodies break out of the root [young female, right]. The young adult female is referred to as a white female. Plant damage is primarily due to the feeding of females and the indirect effects of such feeding.

White females become yellow as they age and then turn brown after they die [right]. The brown stage is the cyst for which the nematode is named. Each cyst can contain up to 500 eggs [lower right], but under field conditions they usually contain many fewer eggs. The cyst protects the eggs from the harsh soil environment, helping them to persist for years in a dormant state.

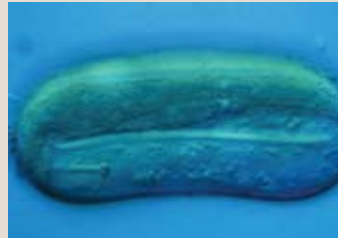
SCN can theoretically complete up to six generations during the growing season, depending mainly on:

- Host suitability
- Geographic location
- Length of growing season
- Planting date
- Presence of weed hosts
- Soil temperature



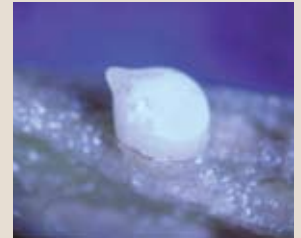
### Juveniles

Juvenile (infective stage) SCN after hatching. The nematodes are about 1/64-inch long, invisible to the unaided eye.



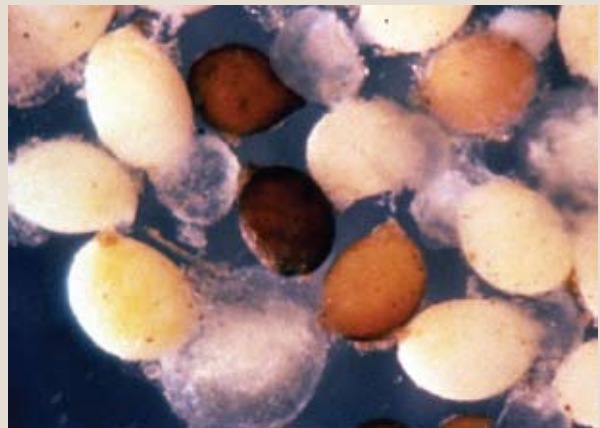
### SCN Egg

The juvenile worm can be seen folded up inside. (*M. Mota, Universidade de Evora, Portugal*)



### Young Female

A maturing SCN female, too large to be contained within the root. (*T. Jackson, University of Nebraska*)



### SCN Cysts

SCN cysts of different ages: white females are young, yellow to brown females are older and dying or dead.



### Broken Cyst

A dark brown cyst, broken open to reveal the eggs and juvenile nematodes within. (*E. Sikora, Auburn University*)