Winter Annual Weeds and SCN – Is There Cause for Concern?

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Abstract
The frequency of occurrence of winter annual weeds in Iowa fields has increased as more fields are managed with no-till production practices. And in recent years, scientists have discovered that the winter annual weeds purple deadnettle, henbit and field pennycress are moderate to good hosts for the soybean cyst nematode (SCN). Iowa growers and crop advisors are inquiring whether winter annual weeds could be supporting SCN reproduction leading to increases in SCN population densities. The answer depends on soil temperature.

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By Greg Tylka, Department of Plant Pathology

The frequency of occurrence of winter annual weeds in Iowa fields has increased as more fields are managed with no-till production practices. And in recent years, scientists have discovered that the winter annual weeds purple deadnettle, henbit and field pennycress are moderate to good hosts for the soybean cyst nematode (SCN).

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SCN juveniles cannot develop in roots at temperatures below 50°F. But if purple
deadnettle, henbit, and field pennycress are growing in SCN-infested fields and soil temperatures are greater than 50°F, SCN reproduction and increases in population densities can occur.

Soybean cyst nematode female on root of purple deadnettle (E. Creech, Purdue University).

The SCN life cycle takes about 24 days to complete at ideal temperatures (76°F) and it takes 4 or more weeks at colder temperatures. So depending on the year, there may be a limited time when soil temperatures are warm enough for SCN reproduction to occur on winter annual weeds growing in Iowa fields.


Greg Tylka is a professor of plant pathology with extension and research responsibilities in management of plant-parasitic nematodes.

**Category:** Crop Production

**Crop:** Soybean

**Tags:** soybean cyst nematode, Soybean, winter annuals, Weeds
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