



Nematodes Are Stealing Your Soybean Yields – *Silently, Secretly, Invisibly*

What Are Nematodes and Why Should I Care About Them?

Nematodes are microscopic roundworms that live in the soil and feed on plant roots. Nematodes steal soybean yields from below ground, often **without any unique visible symptoms**. Damage is caused when nematodes enter plant roots and establish feeding sites that steal nutrients and water from the plant, ultimately reducing yield potential. Because the damage occurs below ground, nematodes can cause up to a 30% loss in soybean yield without any visible signs of plant damage.

Which Nematodes Are Stealing My Yields?

Soybean Cyst Nematode (SCN) is the leading cause of soybean yield loss in North America. It is present in nearly all soybean geographies, and continues to spread. In southern geographies, root-knot and reniform nematode also reduce yield potential.

How Do SCN Damage Soybean Plants?

- Soybean Cyst Nematodes enter plant roots and establish feeding sites that **steal resources from the plant**, leading to yield loss
 - Wounds created by feeding **can cause cell death and weaken the plant**
 - Damage increases as nematodes **develop into adults** and approach the reproductive stage
 - Cysts containing hundreds of eggs are formed after mating, leading to an **explosion in the number of nematodes**
- This underground cycle can be **repeated 3-6 times** during a single growing season

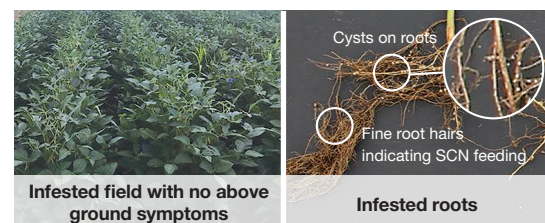
I Am Already Managing SCN With Resistant Varieties, So Why Should I Be Concerned?

Planting SCN-resistant soybean varieties has become a standard management practice. However, continued use of varieties with the same source of SCN-resistant genes (PI 88788) has led to an increased ability of SCN to adapt and reproduce. As SCN reproduction increases, yields decrease, making it necessary to implement additional measures to effectively manage this pest.

What Should I Do to Protect My Soybean Yields?

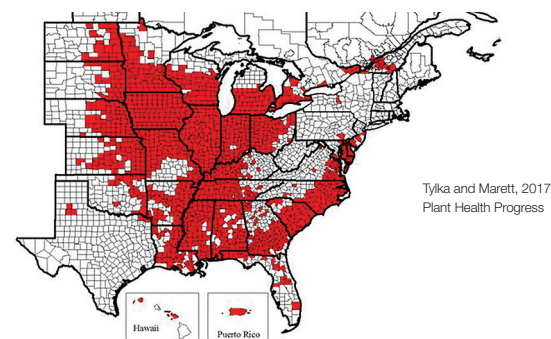
To maintain yield potential, integrated nematode management is crucial, including use of a nematicidal seed treatment such as ILEVO® seed treatment.

SCN Damage Occurs Below Ground, Without Unique Visible Symptoms

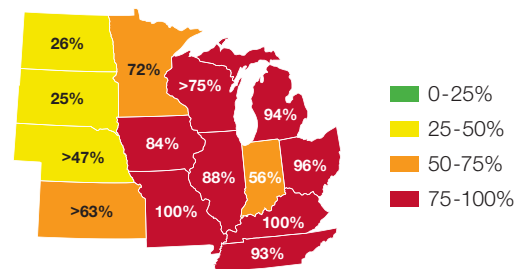


Havana, IL. August 2017.

Known Distribution of SCN



SCN Populations With Increased Ability to Reproduce on PI 88788 Are Spreading



ND: Yan et al., 2016. SD: Acharya, 2016. NE: Broderick, 2016. KS: Rzedkiewicz, 2010. MN: SCN Management Guide, U of Minnesota Extension. IA: Tylka et al., 2016, 2015, 2014, 2013, 2012. MO: Mitchum et al., 2007. WI: MacGuidwin, 2012. IL: Faghihi et al., 2010. TN: Faghihi et al., 2010. MI: Warner et al., 2015. IN: Faghihi et al., 2010. OH: Walsh et al., 2016. DE: Mulrooney and Gregory, 2010. KY: Hershman et al., 2008

SCN Management Options

The SCN Coalition, 2018

- Sample soil to understand pest severity
- Utilize resistant soybean varieties
- Rotate to non-host crops (corn, wheat, small grains)
- Use nematicide-containing seed treatments

Nematodes May Be Hard to See, but ILEVO® Clearly Outperforms Competitors

How Does ILEVO Seed Treatment Protect Against Yield Loss From Nematodes?

ILEVO seed treatment is a proven nematicide that leads to direct nematode mortality across all stages of nematode development. By preventing nematodes from developing into adults, ILEVO seed treatment reduces plant damage caused by nematode feeding and limits the impact of reproduction.

How Is ILEVO Seed Treatment Different From Other Products Making Nematicidal Claims?

ILEVO seed treatment is a broad-spectrum nematicide that has delivered proven results for over five years and counting. Unlike other products, ILEVO seed treatment has direct nematicidal activity across the nematode lifecycle, making it a more effective choice.

How Does ILEVO Seed Treatment Perform Against Competitors?

ILEVO seed treatment dramatically outperforms competitors against nematodes. The superior efficacy of ILEVO seed treatment in reducing nematode infections in root systems is demonstrated across multiple lab, greenhouse and field assessments.

Is ILEVO Seed Treatment a Good Choice if I Am Concerned About SDS and SCN?

Yes: Overlap between SDS (Sudden Death Syndrome) and SCN is estimated to be very high, with at least 80% of SDS acres also impacted by SCN. To optimize yield potential, it is critical to select a solution that is effective against both pests. ILEVO seed treatment is the only proven winner against *both* SDS and nematodes, year over year over year.

Is ILEVO Seed Treatment a Good Choice if I Am Concerned About Nematodes, but Not SDS?

Yes: For areas without a known or suspected history or risk of SDS, ILEVO seed treatment can be applied at the "Nematode Rate" to specifically target nematodes.

ILEVO Seed Treatment Dramatically Outperforms Competitors Against Nematodes

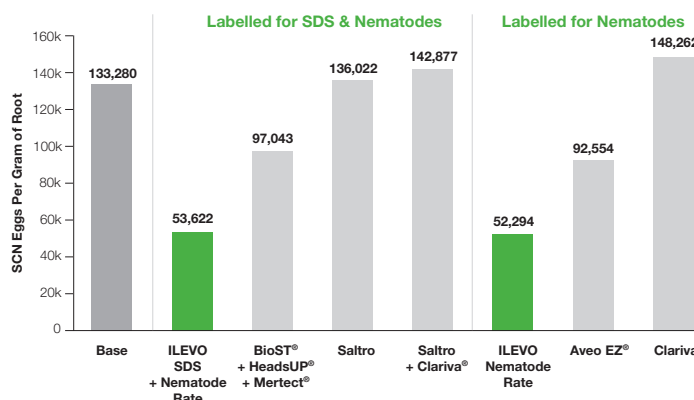
No SCN Females Found on Plant Treated With ILEVO Seed Treatment

SCN Females Circled on Plant Treated With Saltro® Seed Treatment



Valmeyer, IL. Planted: 5/22/2020. Photos: 7/14/2020. Both treatments received the same fungicide + insecticide base.

SCN Eggs per Gram of Root



BASF RTP Seed Treatment Technology Center. Plants harvested at 30 days after inoculation using SCN root extraction method, 2019.

ILEVO Seed Treatment Offers Two Distinct Rates to Meet Different Agronomic Needs

Nematode Rate

Recommended for use in **areas without a known or suspected history or risk of SDS.**

- 0.075 mg ai/seed
- 0.6 fl oz/unit (1.2 fl oz/cwt)
 - Nematodes only
 - **Not Labeled for SDS**
- Under nematode pressure only (no SDS pressure): 2-4 bu/A yield benefit¹

SDS + Nematode Rate

Recommended for use in **areas with known or suspected history or risk of SDS** or in fields that share equipment with such areas.

- 0.15 mg ai/seed
- 1.18 fl oz/unit (2.36 fl oz/cwt)
 - Above and below ground SDS
 - Nematodes
- Under SDS or nematode pressure **with** foliar symptoms of SDS: 4-10 bu/A yield benefit²
- Under SDS or nematode pressure **without** foliar symptoms of SDS: 2-4 bu/A yield benefit^{1,2}

Source: Company sponsored trials.

¹ Based on 355 comparisons vs F+I Base.

² Based on 128 comparisons vs F+I Base.

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We create chemistry

ILEVO
Seed Treatment