

Field Facts: Phytophthora

Phytophthora can attack soybeans at any time during the growing season and may present as seed rot, seedling blight or root/stem rot.

- **Common names:** Phytophthora, Phytophthora root rot (PRR), Phytophthora stem rot
- **Scientific name:** *Phytophthora sojae*
- **Symptoms:** Stem discoloration, discolored roots with less mass, yellow leaves, wilting and plant death, especially during stress periods.
- **Conditions for development:** PRR commonly occurs with heavy, poorly drained or compacted soils and can occur on any soil saturated for an extended period of time. The ideal temperature for infection is 60 F to 80 F. Successive years of soybeans on the same acres may increase the potential for damage.



FAST FACTS

- *Phytophthora sojae* is one of the most destructive soybean pathogens in the northern growing regions and a major cause of stand establishment problems.
- The Phytophthora fungus can kill plants at all stages of growth.
- Above-ground symptoms of PRR may not be evident for several weeks after the initial infection.
- Yield reductions can range from as little as 5% to more than 50%, depending on the severity of the infection.
- Phytophthora can survive in soybean residue and in the soil.

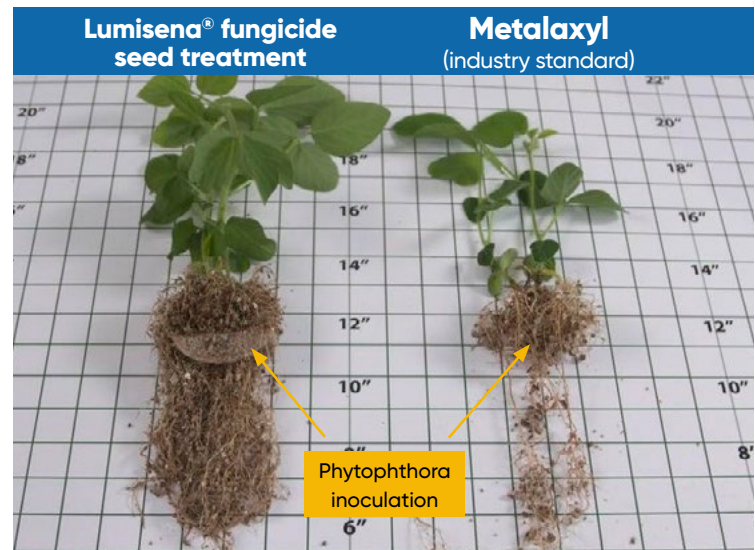
CONTROL TIPS

Phytophthora cannot be managed in season but can be controlled through a combination of approaches.

- 1. Planting timing:** For an area with high infection, consider planting that field last to give the soil time to warm and dry out.
- 2. Genetics:** Plant a soybean variety with a Phytophthora resistant gene and/or one that is rated for Phytophthora field tolerance. Pairing field tolerance and a resistant gene provides the best control. Many Enlist E3[®] soybean varieties are rated for PRR tolerance to make it easy for farmers to choose the right varieties for their acres.
- 3. Seed treatments:** Choose an option with strong protection against Phytophthora, like Lumisena[®] fungicide seed treatment.

Lumisena[®]

FUNGICIDE SEED TREATMENT



Soybean seedlings inoculated with *Phytophthora sojae* disease disk. Lumisena fungicide seed treatment remains in the root system, offering protection even in a Phytophthora "hot zone" as demonstrated with the roots growing through the diseased disk. Metalaxyl translocates upward, so roots die or are severely injured upon contact with the diseased disk.

Affects a novel target site of action to deliver best-in-class protection against Phytophthora.

First fungicide seed treatment to use oxathiapiprolin, a Group 49 fungicide.

Affects multiple stages of the Phytophthora life cycle, resulting in better efficacy and length of control.

Provides systemic uptake and translocation through seeds and roots, into the plant shoots.

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