

Charcoal Rot

Overview

Charcoal rot, also known as summer wilt or dry-weather wilt, is caused by a soil-borne fungus, *Macrophomina phaseolina*. It is one of the most damaging diseases for soybeans, causing up to 50% yield loss in extreme situations. There are no known treatments once charcoal rot is found in fields.

What you should know

- Charcoal rot is an expansive soybean disease that is prevalent in the south and increasing across the U.S.
- Charcoal rot thrives in hot, dry conditions with temperatures warmer than 85°F.
- Plant symptoms include empty upper pods, splitting stems and premature yellowing of leaves that eventually brown and die. Most notable is the presence of tiny black specks of microsclerotia just beneath the epidermis of the taproot and lower stem.
- The microsclerotia germinate early in the season and infect soybean seedlings through the root system. The fungus develops in the soybean vascular system, interfering with water transport.
- The fungal microsclerotia can survive in the soil for up to two years.
- Identification and prevention methods are vital for protection against this stress-induced disease.

Action steps

1. **Know your risks:** Non-irrigated, double-crop soybeans and late planting are risk factors for charcoal rot infestation.
2. **Take preventive steps:** There are no known treatments for charcoal rot. Seed treatments, fungicides and tillage have shown no significant control or effect in field studies.
3. **Reduce plant stress:** Implement stress-reduction methods, such as decreasing plant populations, increasing fertility, controlling competitive pests and supplemental irrigation. In addition, annual rotation out of soybeans may be needed to reduce future planting risks.



In extreme cases, charcoal rot can cause up to 50% yield loss.



30-Second Summary

- Charcoal rot is caused by a fungus that thrives in hot, dry conditions.
- Charcoal rot can hurt current and future soybean yields, causing yield losses up to 50%.
- There are no known treatments, but reducing plant stress and rotating fields can help reduce the risk.

NOTES:

For more information, contact:



www.nutechseed.com
1-888-647-3478