Soybean Lines with Superior Resistance to Sclerotinia Stem Rot

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in several soybean lines with high resistance to *Sclerotinia* stem rot.

Overview

Sclerotinia stem rot, caused by the fungus *Sclerotinia sclerotiorum*, is a major disease of crop plants in the north-central United States and southern Canada. Although soybean cultivars have been identified that show partial resistance to *Sclerotinia* infection, resistance among commercial varieties is limited.

The Invention

A team of UW-Madison plant pathologists has now selected and developed several soybean lines with high resistance to *Sclerotinia* stem rot. The team used a highly efficient petiole inoculation technique to evaluate soybean germplasm for resistance to *S. sclerotiorum*. Once resistant plants were identified, the researchers employed a selection procedure aimed at increasing the frequency of these plants in breeding lines. In this procedure, only seed from plants that survived multiple rounds of petiole inoculation with *S. sclerotiorum* was used to create breeding populations. These breeding lines can be used to create commercial soybean cultivars with superior resistance to *Sclerotinia* infection.

Applications

- Production of soybeans resistant to *Sclerotinia* stem rot

Key Benefits

- Provides several soybean lines with superior resistance to *Sclerotinia* stem rot that can be used to develop commercial cultivars

Tech Fields

- Animals, Agriculture & Food : Plant varieties

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