

New Soybean Diseases for Wisconsin: SDS and Stem Canker

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Premature Death Common in 2003

Dry soils? Disease or Aphids?



Combination??



Sudden Death Syndrome

Sudden death of leaves
Petioles remain attached



Sudden Death Syndrome

Leaf Symptoms



Comparison of SDS and Brown Stem Rot



SDS

**Leaf symptoms but no
stem browning**



Sudden Death Syndrome

- **Common in states south of Wisconsin**
- **Commonly associated with SCN**
- **Most severe in high yield potential fields**
- **Symptoms appear at early pod set**
- **Favored by wet soils prior to flowering**
- **10-25% yield loss**

Sudden Death Syndrome

Fusarium solani



**Soybean varieties differ in
response to SDS**

Management of SDS

- Management of soil compaction
- Crop rotation
- Many SCN resistant varieties are “less susceptible”
- Watch for partially resistant varieties

Dead and dying plants common in 2003 pockets or scattered throughout fields



**Leaves yellow followed by wilt, leaf death
and leaves remain attached to stems**

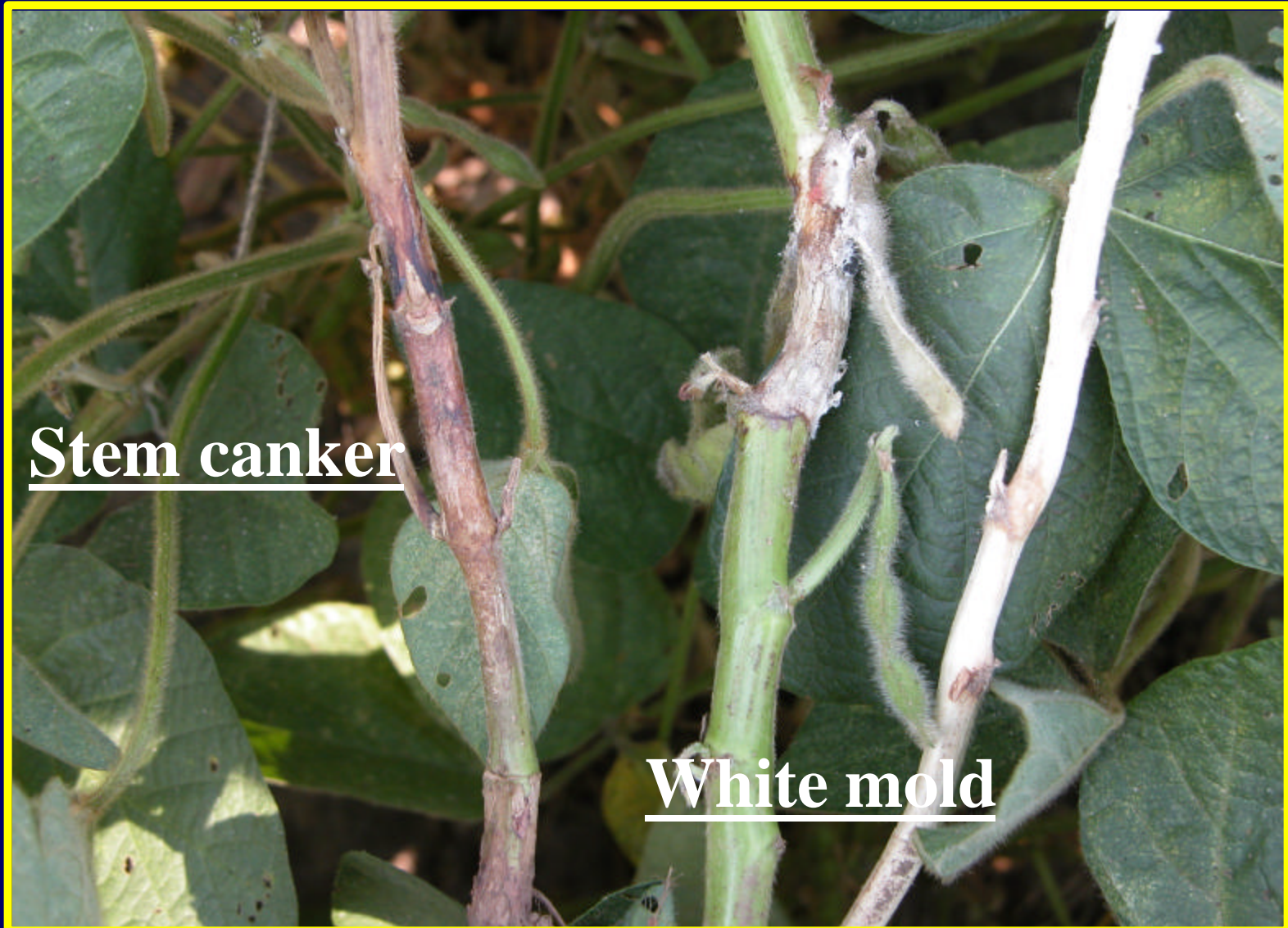


Stem Canker Diagnosed

Characterized by brown stem lesions



Comparison of stem canker and white mold



Stem Canker

- Caused by a fungus
- Two types
- Northern common in 1950's
- Southern appeared in 1980's
- Southern form in Wisconsin
- Carried with seed



Stem Canker

- Varieties differ in response
- Soybean residue Management
 - Pathogen survives in residue
 - Less tillage and short rotations will likely enhance stem canker



Fungicide Seed Treatments and Stem Canker

- **Fungicides with following active ingredients would reduce seed transmission of stem canker pathogen**
 - **Azoxystrobin - SoyGard**
 - **Thiabendazole -Rival**
 - **Carboxin - Vitavax**
 - **Mefenoxam - ApronMaxx**

Information on Soybean Plant Health

- 2001 Wisconsin Soybean Variety Test Results; UWEX A 3654
- Pest Management in Wisconsin Field Crops 2002; UWEX A3646
- Soybean Plant Health Website
 - www.plantpath.wisc.edu/soyhealth
- Soybean Plant Health Initiative; North Central Soybean Research Program
<http://www.ncrsp.com/planthealth>

Research Funding

- **Wisconsin Soybean Marketing Board**
- **North Central Soybean Research Program**
- **USDA North Central IPM Program**
- **College of Agriculture & Life Sciences UW-Madison**

