Stem Canker Threat in Wisconsin

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Plant Pathology

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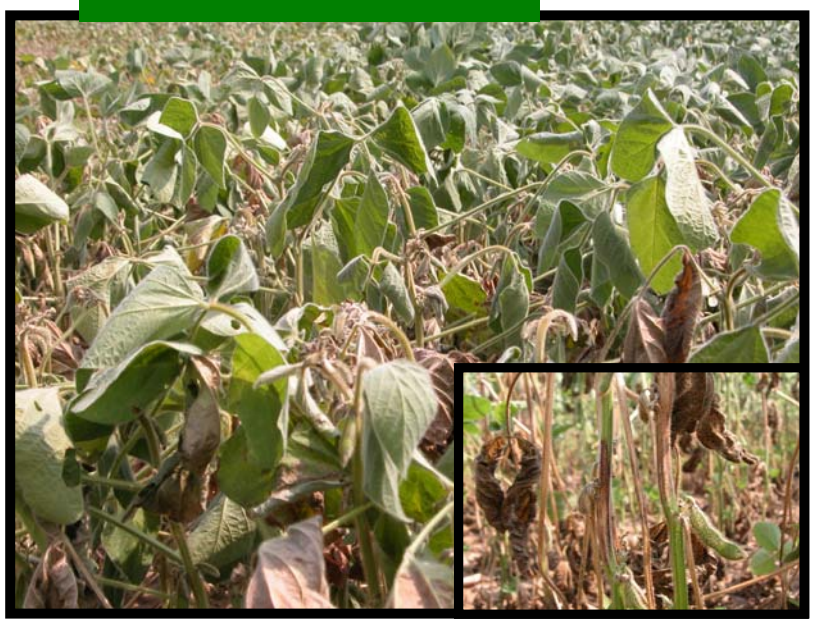
Late Season Plant Mortality in Soybean

Retention of dead leaves

Stem Canker



White Mold

Brown Stem Rot

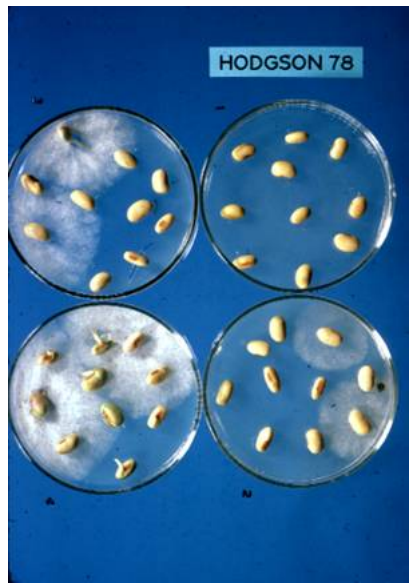
Stem canker has been sporadic prior to 2000

Stem Canker Symptoms

Wilt and Stem Lesions

Stem Canker Disease Cycle

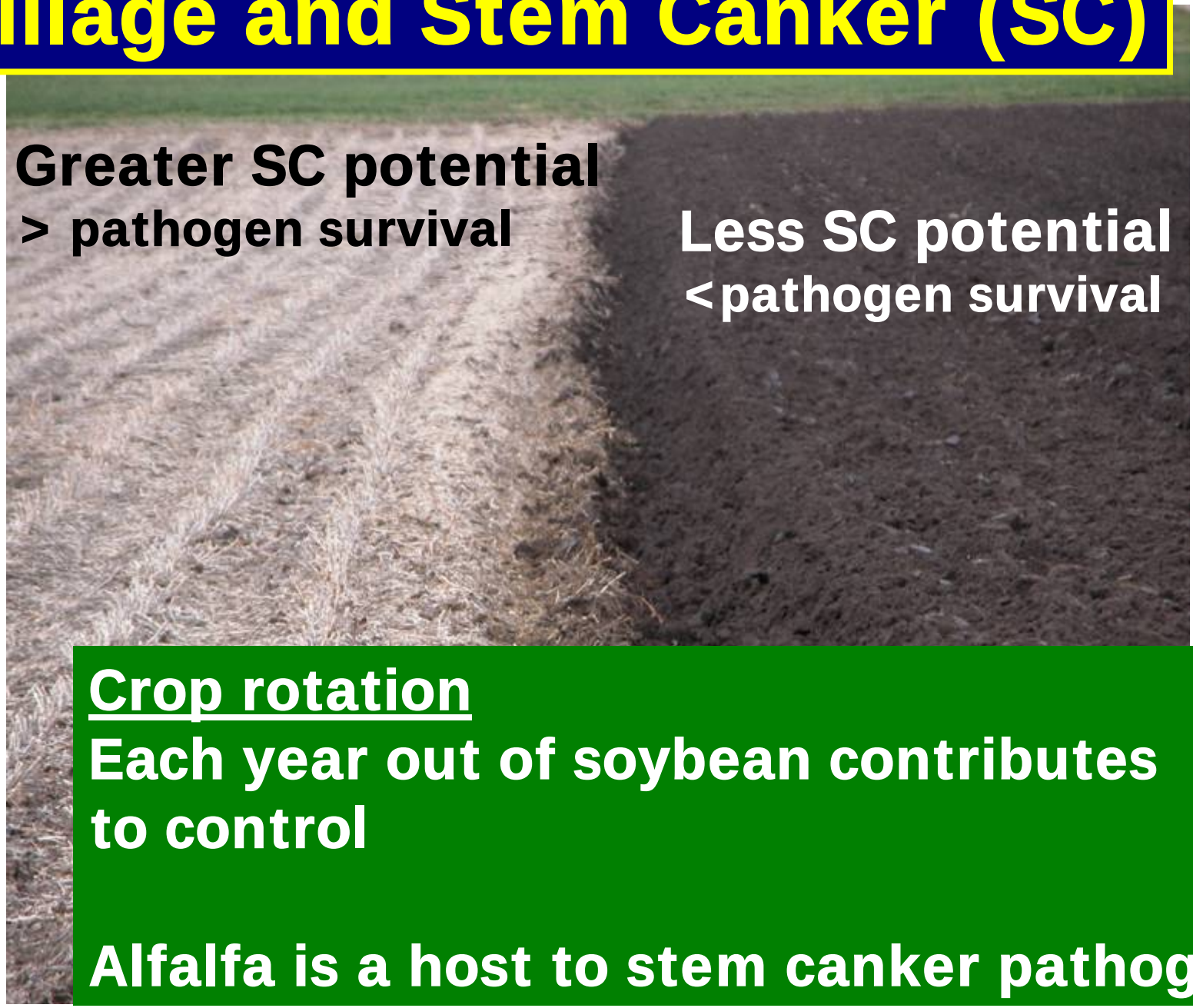
Source of inoculum = Crop residue



Seed
minor source

Black spots on residue
Spore bearing structures

Tillage and Stem Canker (SC)

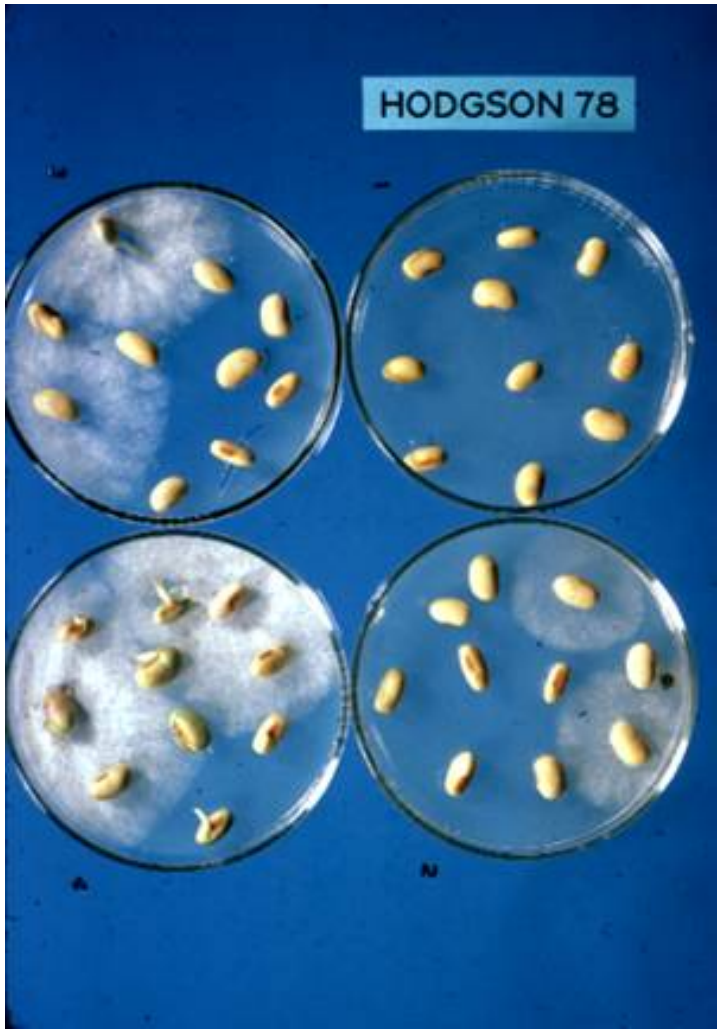


Crop rotation

Each year out of soybean contributes to control

Alfalfa is a host to stem canker pathogen

Management of seed borne inoculum



Inoculum from seed is of minor importance

Fungicide treatment to seed would reduce effect of seedborne inoculum

Stem Canker Disease Cycle

Infection court = leaf petioles, pathogen progresses into stem nodes

<u>Action:</u>

Foliar fungicides?

Variety resistance

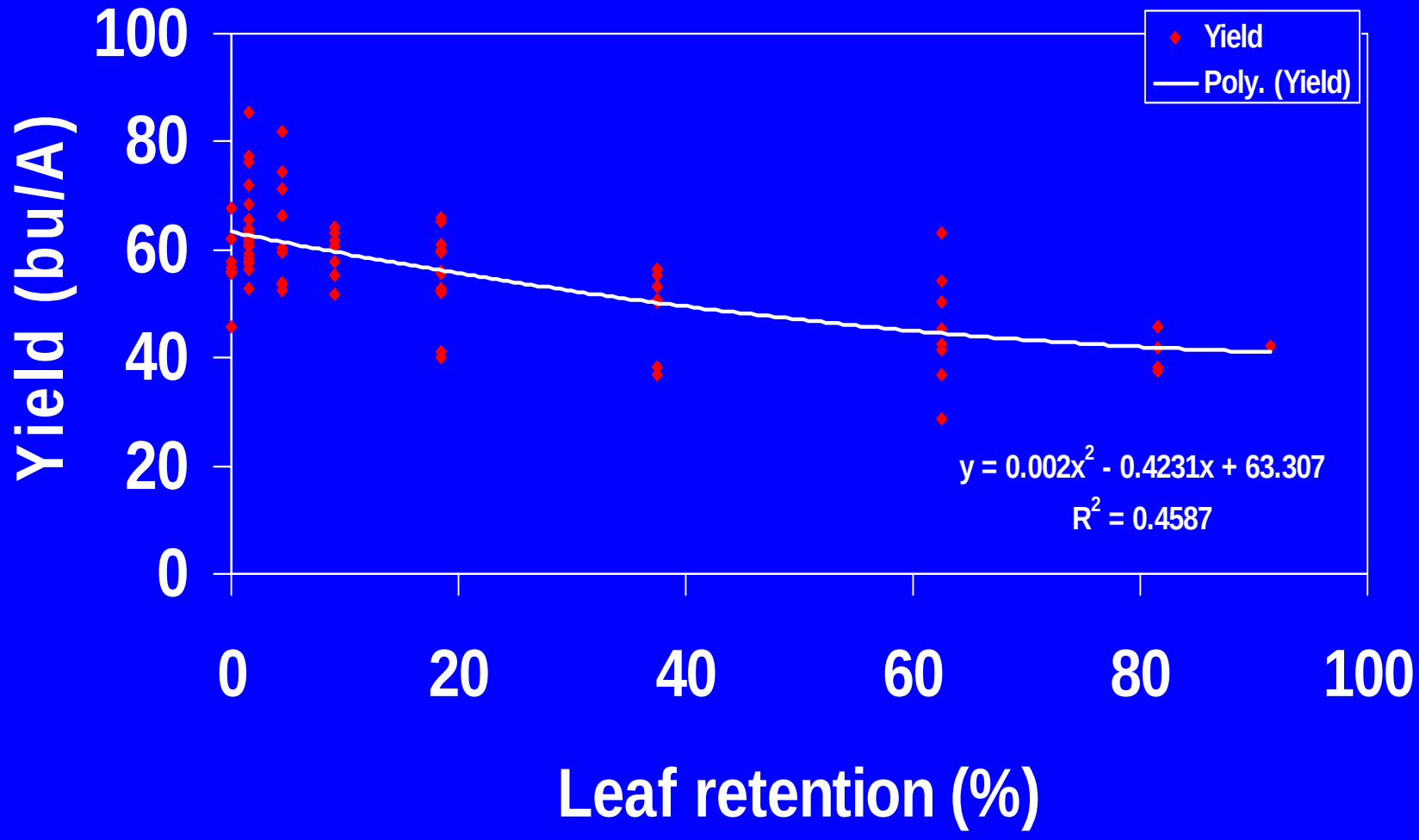
Do foliar applied fungicides have a role in stem canker control?

- **Suggested spray timing for leaf disease control**
  - **R1, R2, and R5**
  - **Stem canker infection occurs during early vegetative growth stages**
  - **Fungicide application timings need to be modified to control stem canker**

Soybean varieties differ in reaction to stem canker pathogen

Is leaf retention at harvest maturity a reliable symptom of stem canker?

Relationship between yield and leaf retention



Conclusions

- **Stem canker has increased in Wisconsin**
- **Severity greater in drier years**
- **Stem lesions are diagnostic but are not always present**
- **Leaf retention at maturity is inversely related to yield**
- **Resistant varieties are available**

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