

2006 CMDC Jackson

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Goss's Wilt and Blight

- *Clavibacter michiganensis* subsp. *nebraskensis*
- Symptoms:
 - Leaf freckles
 - Bacterial exudate
- Infection may be systemic
 - Orange vascular bundles
- Overwinters in residue
- Infection requires injury
 - Especially hail
- Yield loss may exceed 50%



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Goss's Wilt and Blight

- Favorable Conditions
 - 80°F (27°C) optimal
 - Pathogen decline ≤ 53°F and ≥ 100°F
 - Abundant residue
 - Susceptible hybrids/inbreds
- Management
 - Cultural
 - Rotation and tillage
 - Resistance
 - Multigenic (3-5)
 - Additive effect
 - Tolerant hybrids (unstable?)
 - No yield drag



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Stewart's Disease

- *Pantoea stewartii*
- Corn flea beetle vector
- 2 Phases
 - Seedling blight
 - Silver striping
 - Occasional pith cavities
 - Leaf blight
 - Long wavy lesions
 - Bacterial streaming



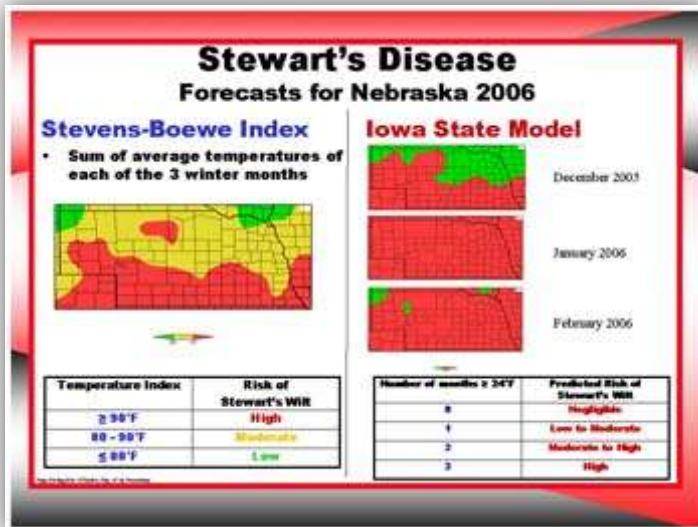
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Stewart's Disease

- Conditions
 - High levels N, P, K, Ca
 - High temperatures & moisture
- Export restrictions
 - 50 countries require phytosanitary certificates
- Management
 - Flea beetle management
 - Resistance
 - Multigenic
 - Additive + dominant genes



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Gray Leaf Spot

- *Cercospora zeae-maydis*
- **Symptoms:**
 - Rectangular lesions
- Overwinters in residue
- Widespread distribution
- Early blighting can cause yield losses > 50%
- Predisposes plants to stalk rot

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Gray Leaf Spot

- **Conditions**
 - RH ≥ 95% for > 12 hrs
 - 70 - 90°F
- **Management**
 - Resistance and tolerance
 - Polygenic and additive
 - Minimize residue
 - Rotation
 - Foliar fungicides are sometimes economical

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