

Barley Diseases and Management

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PP-894 (Revised)

Common Barley Diseases in North Dakota

Hosts – Symptoms – Controls

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Agricultural Experiment Station

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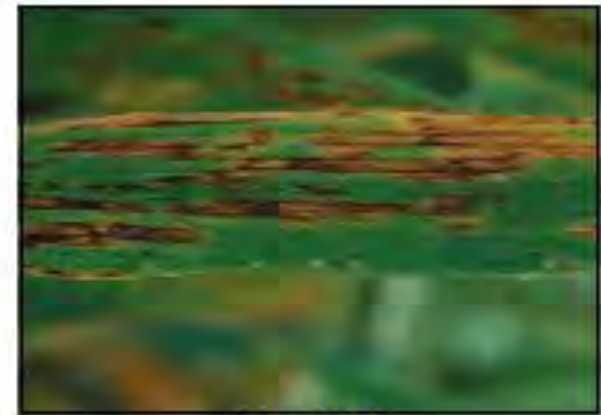
Vernyl Pederson
Professor Emeritus
Agricultural Experiment Station



1. Common Root Rot



2. Spot Blotch



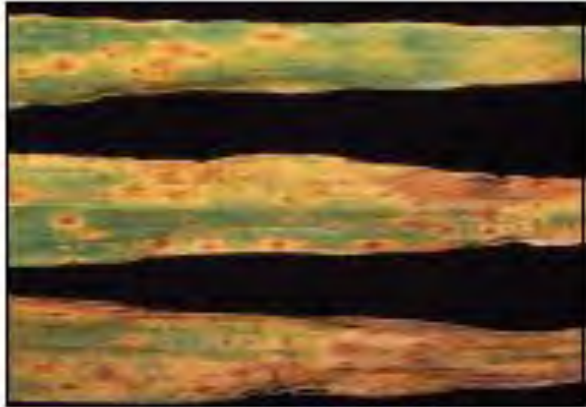
3. Net Blotch



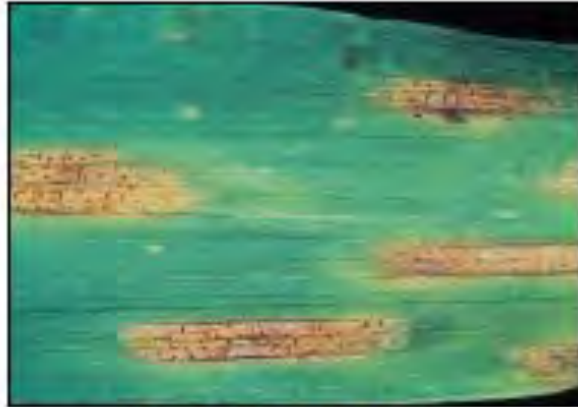
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Common Barley Diseases



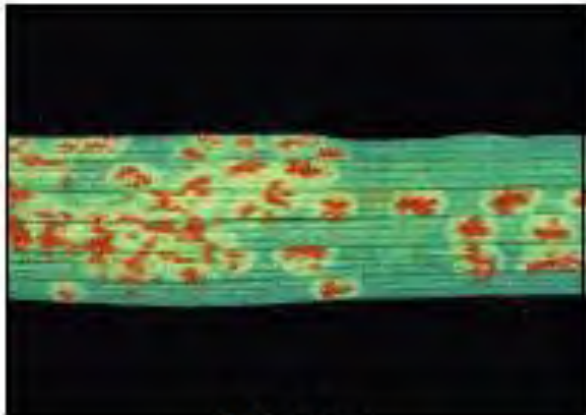
4. Stagonospora Leaf Blotch



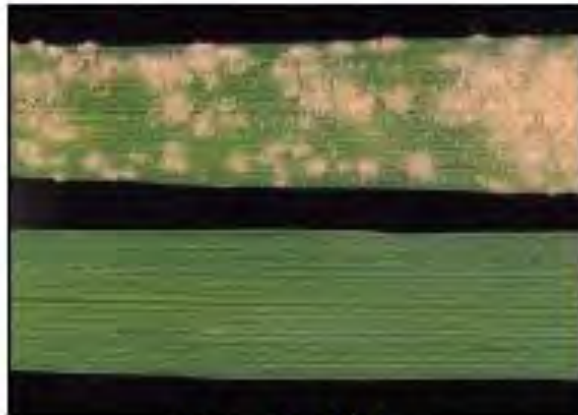
5. Septoria Leaf Blotch



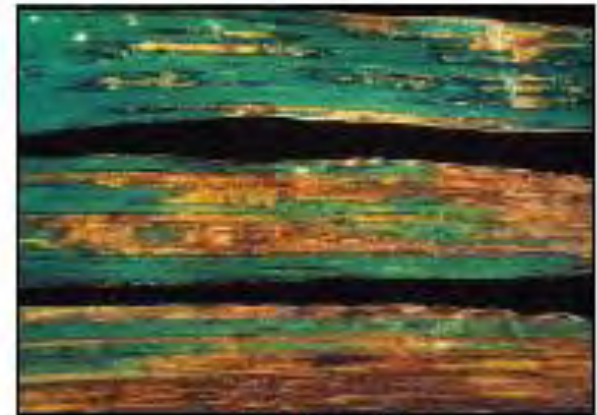
6. Scald



7. Leaf Rust



8. Powdery Mildew



9. Bacterial Blight



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Fusarium head Blight (Scab)

Fusarium graminearum

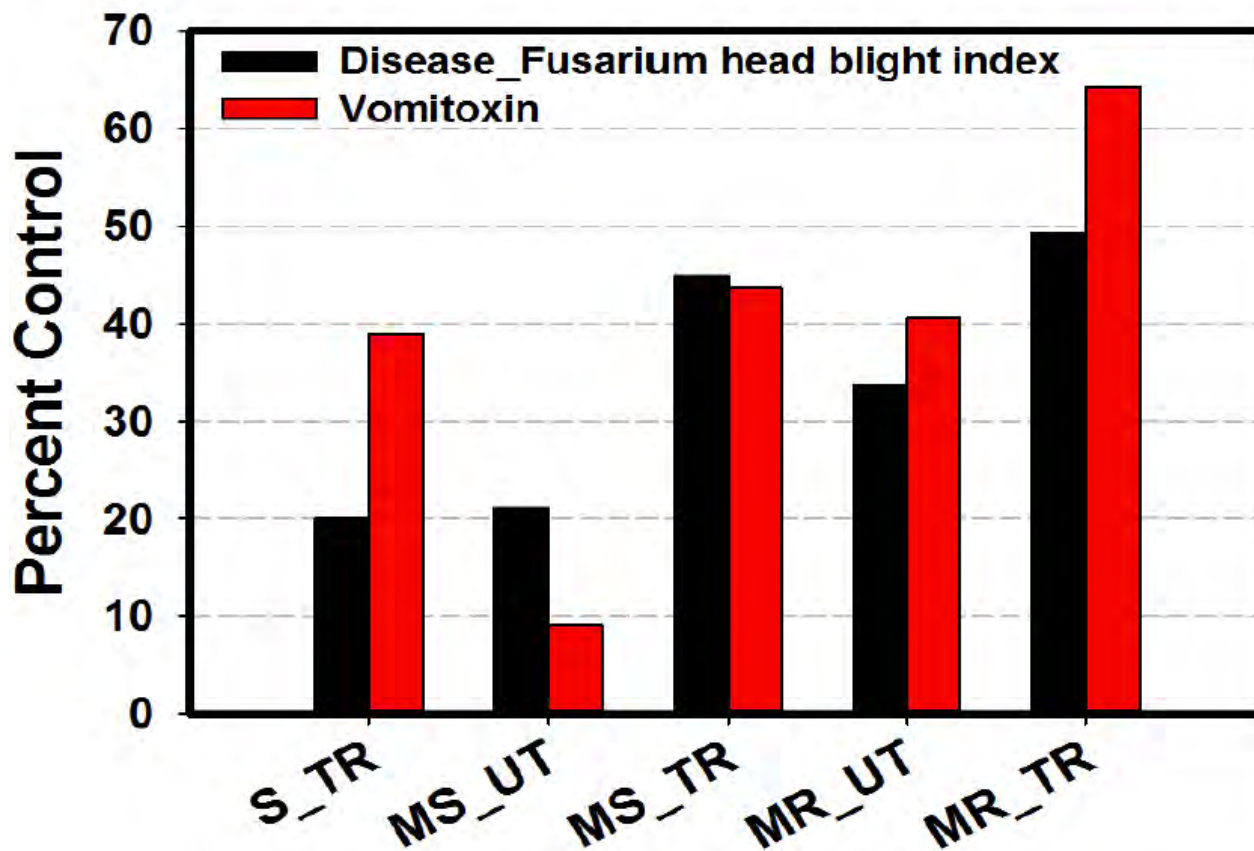


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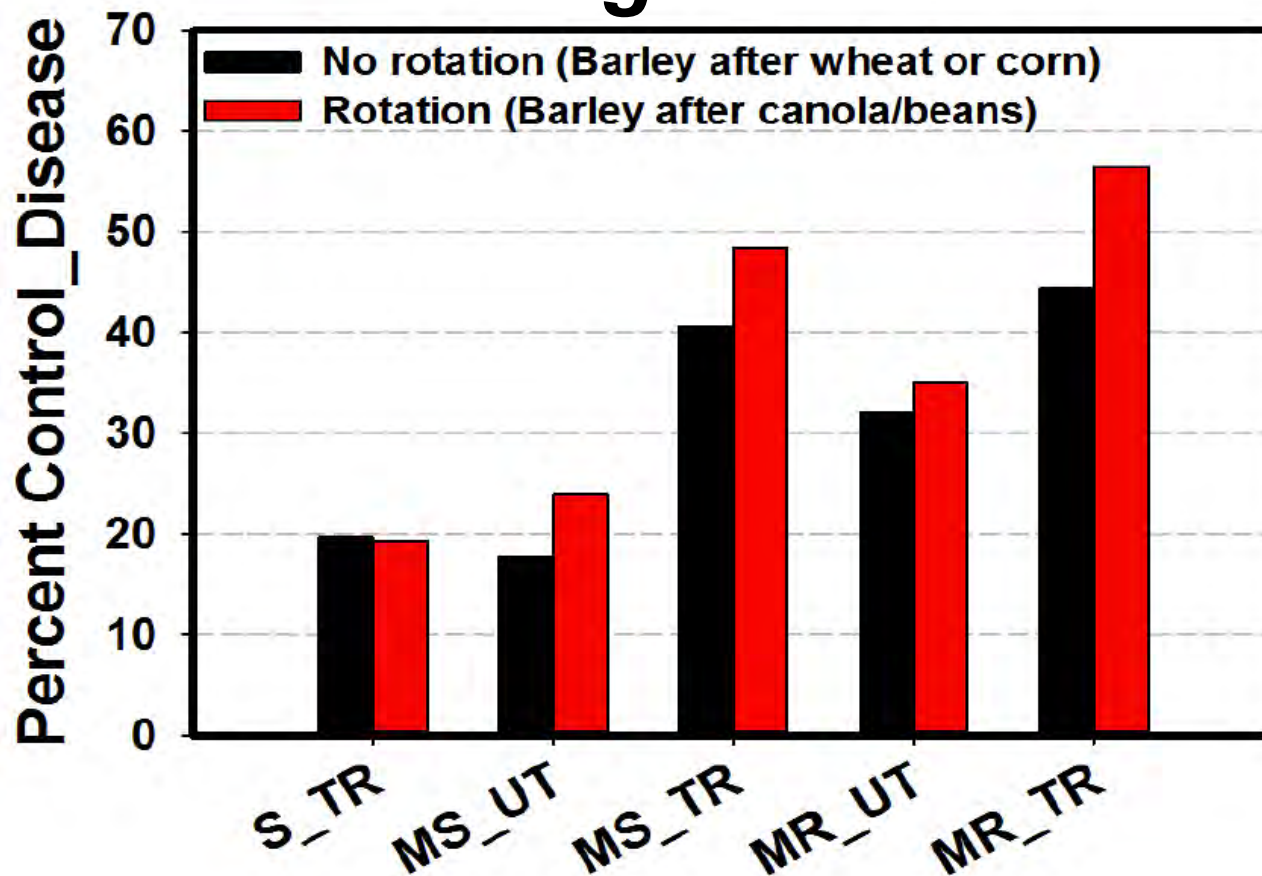


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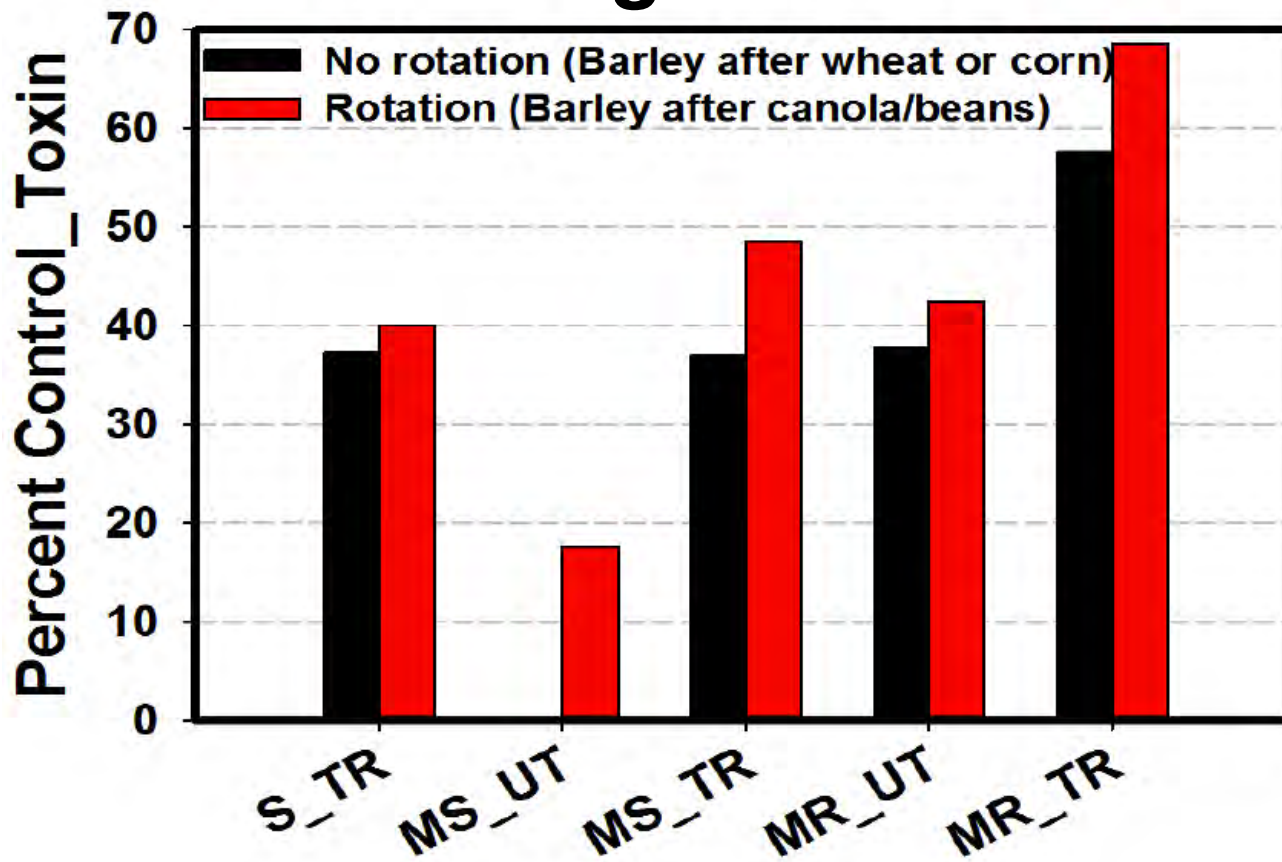


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Fusarium head Blight (Scab)

Fusarium graminearum



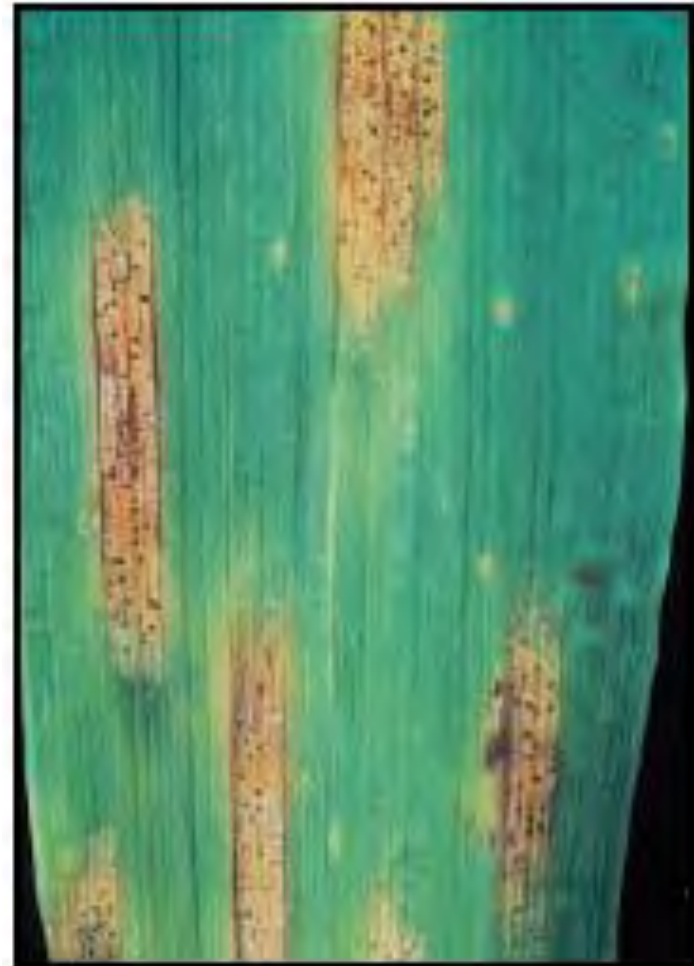
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Speckled/Septoria Leaf Blotch

Septoria passerinii

- Light brown lesions with small black dots (pycnidia)
- Not the same *Septoria* that affects wheat – a different species
- Management:
 - ❖ Resistance
 - ❖ Fungicide
 - ❖ Rotation
 - ❖ Tillage



Stagonospora Leaf Blotch

Stagonospora avenae f. *sp.triticea*

- Not the same *Stagonospora* that affects wheat – a different species – but may affect wheat and other grasses
- Management:
 - ❖ Resistance
 - ❖ Fungicide
 - ❖ Rotation
 - ❖ Tillage



Net Blotch

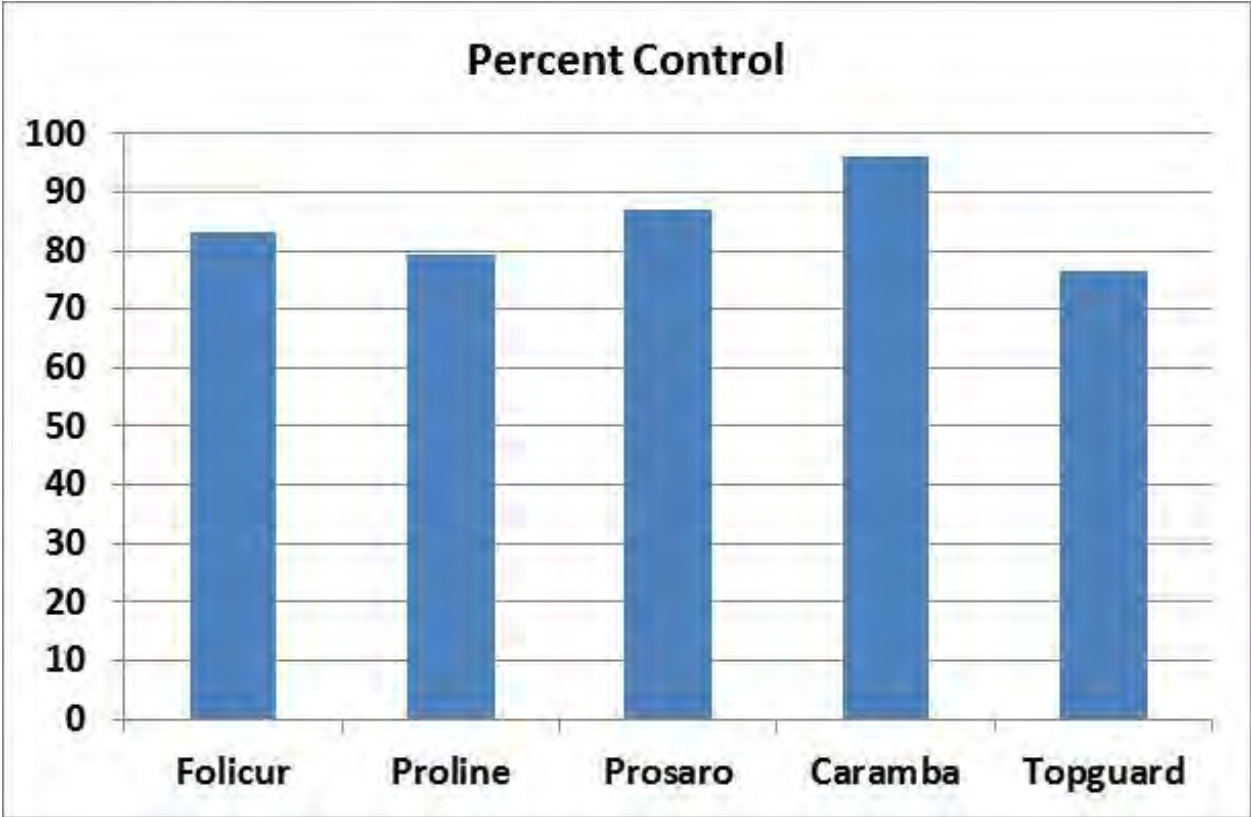
Pyrenophora teres

- **Brown spots that develop in a net-like pattern on leaves and glumes**
- **Not the same Tan Spot on wheat – a different species of the same genus**
- **Management:**
 - ❖ **Resistance**
 - ❖ **Fungicide**
 - ❖ **Rotation**
 - ❖ **Tillage**



Net Blotch

Fungicides at 10.5 (headling)



Spot Blotch

Bipolaris sorokiniana

- Dark chocolate-brown round to elongated spots
- **Mostly a disease of barley, but wheat may be affected – oats, and rye are not hosts**
- **Management:**
 - ❖ Resistance
 - ❖ Fungicide
 - ❖ Rotation
 - ❖ Tillage



Scald

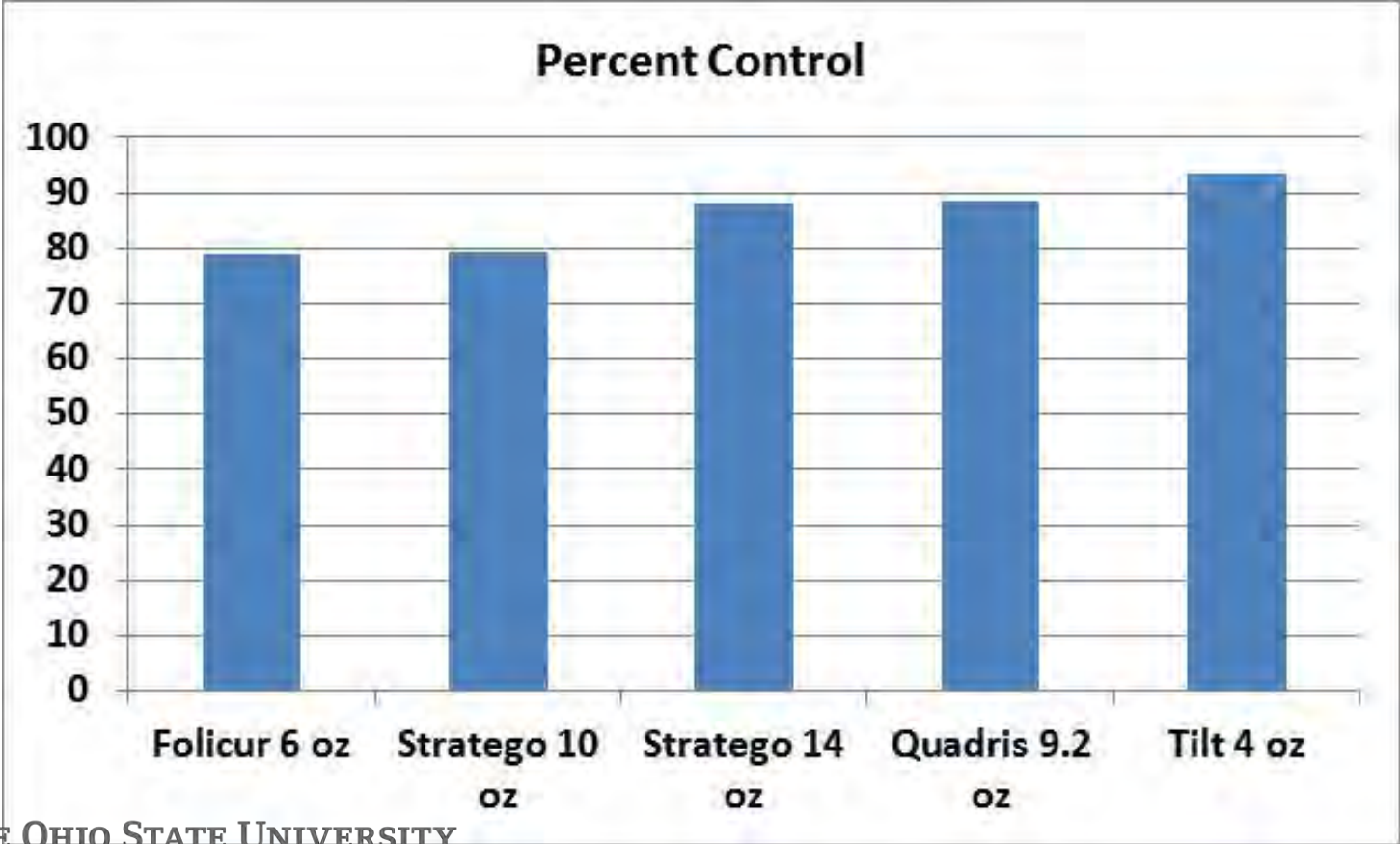
Rhynchosporium secalis

- **Oval spots with a water-soaked appearance, later becoming bleached or straw colored.**
- **Prefers cold, wet weather**
- **Management:**
 - ❖ **Resistance**
 - ❖ **Fungicide**
 - ❖ **Rotation**
 - ❖ **Tillage**



Leaf disease complex

Fungicides at 10.5 (headling)



PATHOLOGY RESEARCH NEEDS!!!!

- **Screen varieties for resistance.**
- **For diseases with different races, determine the race structure of Ohio's populations of these fungi.**
- **Will the heading-timing of fungicide be just as effective in Ohio as in the Dakotas?**
- **While Ohio benefit from a barley scab forecasting system?**
- **WE HAVE WORK TO DO!!**



Acknowledgement

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