MANAGING DISEASE WITH FUNGICIDES

WHEAT & CANOLA

Wheat – Cereal Fungal Leaf Diseases

Key timing: Full flag leaf

Ideal conditions: Depends on disease, but generally high humidity and warm temperatures favour fungal diseases such as tan spot, septoria, and powdery mildew.

Pathogen information: Most overwinter on cereal stubble and are rain-splashed. Infection can occur as long as there is green tissue available. For cereal rusts, infection is dependent on the arrival of the spores from the south.

Additional management strategies: Variety selection, rotation, tillage

Canola – Sclerotinia Stem Rot

Key timing: 20-30% bloom, counting open flowers and young pods on the main stem will help determine flowering stage:

10 = 10%, **15 = 20%**, **20 = 30%**, >20 = 50%

Ideal conditions: Moist soil conditions, changes in humidity, warm temperatures (15-25°C)

Pathogen information: Long-lived in the soil, wide host range, spores can travel long distances

Additional management strategies: Biological control, rotation in areas where disease is not established

Wheat – Fusarium Head Blight

Key timing: Early flower, usually about 3 days after head emergence

Ideal conditions: 12 hour period of free moisture (humidity, precipitation), warm temperature (16-30°C)

Pathogen information: Overwinters on infected cereal and corn stubble, windborne spores, toxin production

Additional management strategies: Variety selection, rotation, tillage

KEY MESSAGES

TIMING, TIMING, TIMING!!

-more important than product selection or application method

Good coverage and adequate water volume

Don't spray in the absence of disease pressure

It's all about economics:

Calculate your yield potential and your application costs – is it worth it?

Prepared by: Holly Derksen, Field Crop Pathologist, Manitoba Agriculture, Food and Rural Initiatives