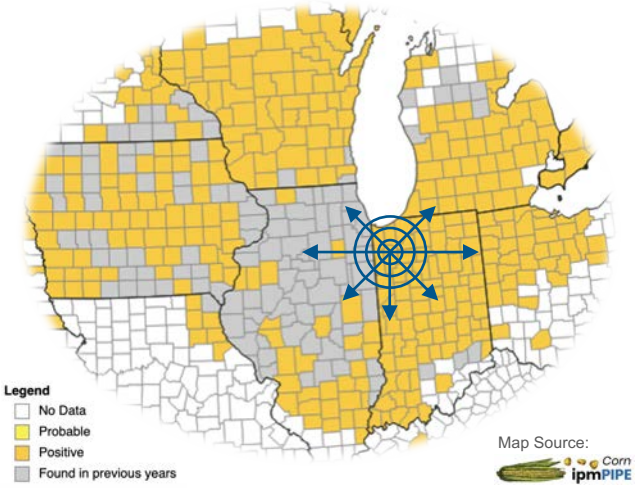
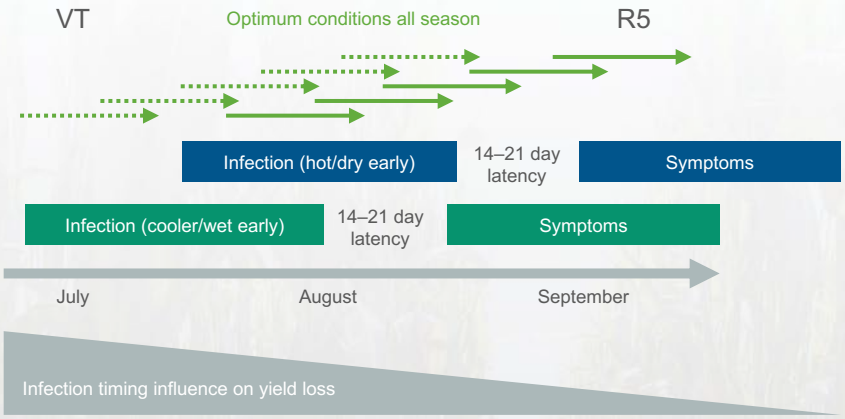
Tar Spot:
Proactive Management

Quick Facts

- Caused by *Phyllachora maydis*
- Introduced in 2015 and spread rapidly across multiple states
- Spreads via wind and machinery
- Overwinters and considered established in Midwest
- Polycyclic – infects, develops, and produces spores in 21-days, resulting in overlapping cycles if conditions are favorable
- Development driven by environment
  1. Needs extended periods of leaf wetness (7+ hours)
  2. Average daily temperatures of 60-70°F, driven by cool night temperatures
  3. High relative humidity (>75%)



Tar Spot Infection/Symptom Timeline Example



Factors Impacting Tar Spot Losses

- Hybrid susceptibility
- Inoculum presence and quantity in a field
- Environmental conditions favorable for infection and spread
- The growth stage of corn when lesions appear
- Effectiveness of management practices

Crop Stage When Infection Occurs Dictates Yield Loss Severity

- Favorable conditions in July-August allow spore populations to multiply, creating potential for development throughout grain fill and likely causing significant yield loss
- Hot and dry conditions typically delay infection so that leaf lesions develop near the end of or after grain fill, negating most yield loss

Adjust Fungicide Strategy Based on Disease Development Timing

- Time fungicide application early if conditions warrant early infection (~V10-VT)
- Follow early applications with 2nd application if conditions persist for infection (VT-R3)

Comprehensive Management Practices Required

HYBRID SELECTION

- Hybrids differ in susceptibility
- Hybrids with more tolerance can delay disease development, helping minimize yield loss in early grain fill stages
- Ask your NK representative for more information on hybrid susceptibility

FUNGICIDE

- Can be effective on tar spot
- Important to use multiple active ingredients
- Second application may be needed if environment is conducive for continued disease development or field history of tar spot or susceptible hybrid was planted

APPLICATION TIMING CRITICAL

- Application must occur before lesions become easily visible
- Scout lower canopy to avoid missing early disease development
- Environmental risk predictors like Tarspotter app can help dial in application timings

LIMITED VALUE WITH CULTURAL PRACTICES

- Managing residue with crop rotation and tillage shows low value
- Irrigation can promote disease development. Adjusting Irrigation timing may reduce risk

Infection occurs 14-21 days before lesions appear. Fungicide effectiveness decreases if applied after disease establishment.

▲ Susceptible Hybrid ▲ More Tolerant Hybrid

Syngenta Trial, Baraboo, WI (Photo 9-13-21 JJL)

▲ Untreated

▲ Miravis® Neo, VT/R1 fb R3

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Product performance assumes disease presence. Performance assessments are based upon results or analysis of public information, field observations and/or internal Syngenta evaluations. Trials reflect treatment rates and mixing partners commonly recommended in the marketplace.

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