

# Assessing Risk to Target Spot in Georgia

A draft risk-management tool to be assessed and refined in Georgia

R.C. Kemerait, Jr., PhD | Department of Plant Pathology, The University of Georgia

## Factor with the HIGHEST potential impact on increased risk of target spot is field location:

Score\_\_\_\_\_ SW Georgia, SE Alabama or NW Florida: **25 pts**    Central or SE Georgia: **15 pts**    Eastern Georgia: **5 pts**

## Factors with MODERATE impact on increased risk of target spot:

**1. Field History**—Target spot risk is greater where it has been severe in the past

Score\_\_\_\_\_ Severe in the past: **10 pts**    Observed but not severe: **5 pts**    Never observed: **0 pts**

**2. Rank cotton growth**—Disease development and spread seems closely tied to extended periods of leaf wetness; a dense cotton canopy stays wet longer and is more prone to target spot

Rank growth with dense canopy: **15 pts**    Complete row closure but growth well managed: **5 pts**

Score\_\_\_\_\_ Open canopy with good airflow: **0 pts**

**3. Irrigation**—Irrigation promotes cotton growth and extends periods of leaf wetness

Irrigation during the day greatly extends the dew period from previous night: **10 pts**

Score\_\_\_\_\_ Irrigation at night or early morning minimizes leaf wetness period: **5 pts**    No irrigation: **0 pts**

**4. Extended periods of rainfall and cloudy weather**—Disease development is favored

Frequent rainfall and cloudy weather: **10 pts**    Normal for the season: **5 pts**

Score\_\_\_\_\_ Drought Conditions: **0 pts**

## Factors with LOW impact on increased risk of target spot:

**1. Tillage.** Target spot spores will survive in the crop debris from previous cotton crops; spore survival is likely longer in reduced-tillage and spores may also be splashed to cotton leaves easier from surface debris

Score\_\_\_\_\_ Conservation/reduced tillage: **5 pts**    Conventional tillage with deep turning: **0 pts**

**2. Crop rotation.** Although this remains to be proven, target spot will likely be more severe in continuous cotton fields since spores will survive in crop debris from the year before

Score\_\_\_\_\_ Continuous cotton: **5 pts**    Another crop the year before: **0 pts**

## Factor that MAY impact risk of target spot:

**Variety selection.** Some cotton varieties may be more susceptible to target spot; however, it is not clear if increase in susceptibility is due to the ease of leaf infection or the growth habit of a variety tends to be more rank and thus prone to longer periods of leaf wetness. Also, the relationship between defoliation and yield loss is not completely understood. For example, a variety with more defoliation may not necessarily yield less.

Total Score\_\_\_\_\_

## Your Risk

**40 pts or more » High Risk:** Growers most likely to see a benefit from a fungicide program.

**25 – 35 pts » Moderate Risk:** Growers may benefit from the use of a fungicide.

**25 pts or less » Low Risk:** Growers need to consider other disease threats when considering fungicide use.



## Timing of Fungicide Applications

Growers should begin scouting their fields for target spot at the approach of first bloom. Based on research conducted in Georgia, the optimum timing for an initial fungicide application is between the first and third week of bloom; an additional fungicide application may be needed approximately 2–3 weeks after the first application especially in high risk fields.

## Target Spot Identification



**Target spot** is caused by the fungal pathogen *Corynespora cassiicola*. It is easily identified by the presence of marble-size spots on a leaf that frequently demonstrate a pattern of concentric rings. Infection and premature defoliation typically begin on the lower leaves and progress up the plant. Significant defoliation can occur very quickly after initial detection of the disease.

## BASF Recommendations for Target Spot Control in Cotton

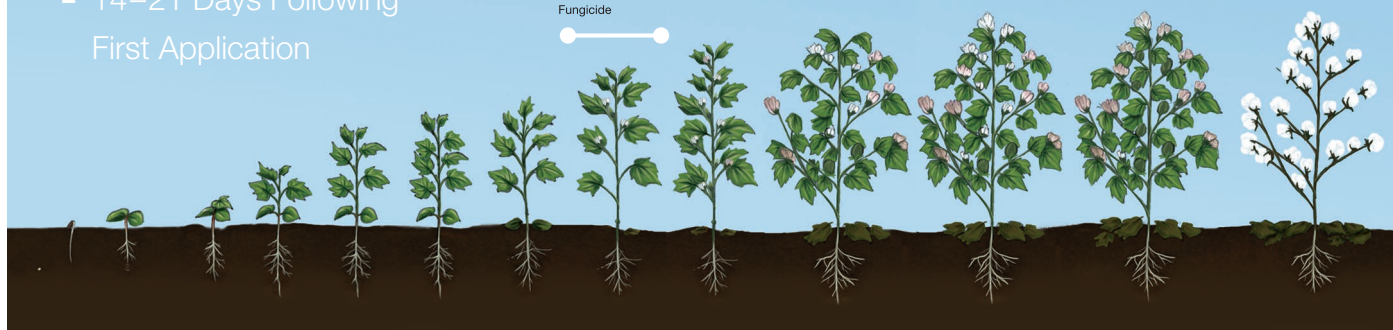
### High Risk for Target Spot

Apply Headline® Fungicide at 8.5 fl oz/A

- 1st Week of Bloom *followed by*
- 14–21 Days Following First Application

Headline®  
Fungicide

Headline®  
Fungicide



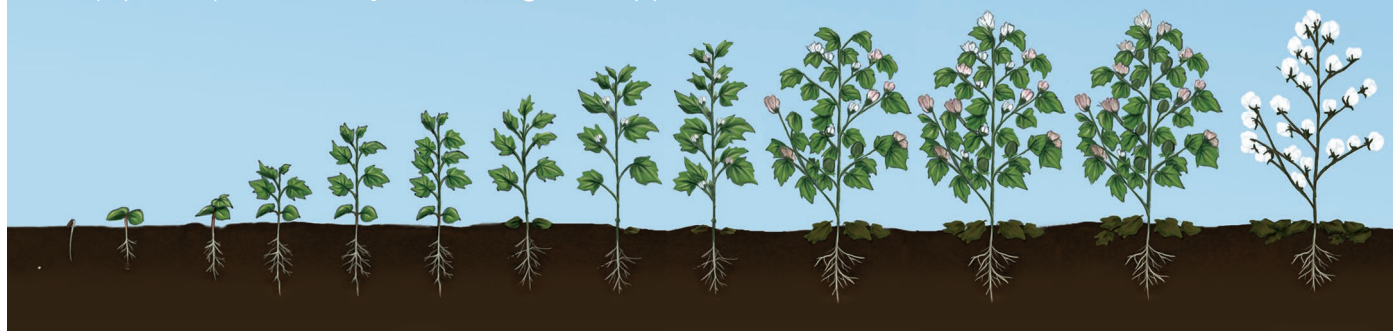
### Low-Medium Risk for Target Spot

Apply Headline Fungicide at 8.5 fl oz/A

- 3rd Week of Bloom *followed by*
- (Optional) 14–21 Days Following First Application

Headline®  
Fungicide

Headline®  
Fungicide



**Always read and follow label directions**

This informational piece sponsored by BASF. Headline is a registered trademark of BASF.  
©2014 BASF Corporation. All Rights Reserved. APN# 1305004-Headline-Target Spot-GA

**BASF**  
The Chemical Company