



Mesonet Agweather Peanut Leaf Spot Advisor Description

The Mesonet Agweather Peanut Leaf Spot Advisor is a Web based weather tool that has been developed to warn growers about the risk for early leaf spot, a foliar disease of peanuts, and to aid growers in proper timing of fungicide application for its control. Using the Oklahoma Mesonet, the state's automated weather station network, the model calculates daily "leaf spot hours" for each Mesonet site. Leaf spot hours measure the duration of favorable weather for development of the disease.

Leaf Spot Hour:

A leaf spot hour is defined as one hour with relative humidity greater than or equal to 90% and temperature between 60.5°F and 86°F. Research has shown it takes 36 leaf spot hours for leaves to become infected and for the disease to first develop or increase above current levels.

Advisor Rules:

Using weather data from the Oklahoma Mesonet, the advisory calculates the number of "leaf spot hours" that have accumulated from either 30 days after planting or ten days after the last spray. If the number of infection hours equals or exceeds 36 hours, peanuts are at risk and the advisory recommends a fungicide application.

Leaf Spot Advisor Season:

The Peanut Leaf Spot Advisor runs from May 1 to October 31.

Leaf Spot Advisor Updates:

The Peanut Leaf Spot Advisor is updated hourly. Each hour Mesonet data replaces forecast data. The forecast data are updated four times a day. All times and dates use Central Standard Time (CST).

Data Displays:

Statewide Maps

Last 14 days Peanut Leaf Spot Hours Map

Oklahoma map showing peanut leaf spot hours for the last 14 days. Updated hourly. Disease risk is increased as more leaf spot hours accumulate.

Season-long Peanut Leaf Spot Hours Map

Oklahoma map showing peanut leaf spot hours from May 1st. Updated hourly.

Local Mesonet Site

Leaf Spot Spray Advisor

Interactive advisory that shows a graph of accumulated leaf spot hours beginning 30 days after planting or 10 days after the last fungicide application for a single Mesonet site. Peanuts are at risk and application of a fungicide is recommended when 36 leaf spot hours have accumulated. The 15-year average and last season's leaf spot hours are included in the graph for reference. Fields are included for entering **Planting Date** and **Date of Last Spray** to get a specific recommendation. Updated hourly.

Last 14 days and Forecast Leaf Spot Hours Graph

Graph that shows the leaf spot hours accumulated over the last 14 days and forecast for the next 84-hours for a single Mesonet site. The forecast provides advanced warning on the risk for leaf spot development. The 15-year average and last season's leaf spot hours are included in the graph for reference. Updated hourly.

Season-long Leaf Spot Hours Table

Table that shows the daily leaf spot hours accumulated since May 1st for a single Mesonet site. The table includes: last effective spray date, air temperature, and relative humidity



maximums and minimums. Updated daily.

The "last effective spray date" is an alternative method for determining the need to make a fungicide application. The last effective spray date moves forward in time as leaf spot hours accumulate. Using this method, the first fungicide application is made when the Last Effective Spray Date first exceeds 30 days after planting. Additional applications are recommended when the last fungicide was applied on or before the Last Effective Spray Date.

Forecast Leaf Spot Hours Table

Table that shows the hour-by-hour forecast of leaf spot hours over the next 84-hours for a single Mesonet site. The table includes hourly air temperature, relative humidity, wind speed, wind direction, and 1-hour Rainfall. Updated four times a day.

Past Years

Past Years Leaf Spot Comparison Graph

Graph showing season-long accumulation of leaf spot hours from May 1st through October 31st for the current season, last year's season, season 2 years ago, and the 15-year average for a single Mesonet site. Updated daily.

Three-year Leaf Spot Comparison Table

Table with season-long accumulation of leaf spot hours from May 1st through October 31st for the current season, last year's season, season 2 years ago, and the 15-year average for a single Mesonet site. Updated daily.

Past Years Leaf Spot Daily Comparison Graph

Graph showing season-long daily leaf spot hours from May 1st through October 31st for the current season, last year's season, season 2 years ago, and the 15-year average for a single Mesonet site. Updated daily.

Authors: John Damicone, J.D. Carlson, Albert Sutherland and Maggie Hoey. November 19, 2009.

