

## Using the North Carolina leaf spot advisory

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### Sample peanut leaf spot advisory

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Line
1 June 30, 2008 PEANUT LEAF SPOT ADVISORY FOR BUCK
2 Buckland Elementary (Buckland, NC)
3 setDate = 2008-06-18 19:00:00
4 lethal conditions = false
5 favorable hours = 26
6 LESD = 0000-00-00
7 BUCK Advisory: do not spray today
8 Growing degree days (base 56 F) since LESD = 0
9 Growing degree days (base 56 F) since May 1 = 1226.4
10 Records count: 275 out of 277
11 Most recent db ob to 8am EDT: 2008-06-30 06:00:00
    
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The North Carolina peanut leaf spot advisory is a cooperative effort by the State Climate Office of North Carolina and the Department of Plant Pathology at NC State University. The advisory is a safe way to minimize fungicide applications by spraying only when weather conditions favor disease.

In well-rotated fields, **the first fungicide spray should be applied at the very early pod stage (R3)**, which usually occurs in the first week of July. After the first spray, apply fungicides according to the leaf spot advisory.

Each day's advisory contains several lines of information for each location (see sample). **Each day's advisory ("spray today" or "do not spray today") can be found on the 7<sup>th</sup> line.** This is all you really need to know for your location. The other lines give additional information that you may find useful.

#### Advisory information:

line 1 - Date and location. ECONET stations are indicated by an abbreviated name; airport stations are indicated by call letters. In general, ECONET stations are more reliable than airport stations. It is a good idea to check the two stations nearest you.

line 2 - Station location.

line 3 – Set date. This is used to calculate the advisory.

line 4 – Lethal conditions. A temperature of 99°F or higher for 5 consecutive hours OR RH is less than 40% for 8 consecutive hours will kill the pathogen. If lethal conditions = true, favorable hours (below) are reset to 0.

line 5 - Favorable hours. Any hour when RH is at least 95% and temperature is between 61°F and 90°F is a favorable hour. A spray is advised when there are at least 48 favorable hours since the set date.

line 6 – LESD (last effective spray date). Regardless of today's advisory, you **do not** need to spray if you have sprayed since the LESD. The LESD accounts for 14 days of protection provided by the fungicide.

**line 7 – Today's advisory.** If the advisory is "spray today" conditions are favorable for leaf spot and you should spray if no fungicide has been applied in the past 14 days. If the advisory is "do not spray today" a spray is not required.

lines 8 & 9. Growing degree days for peanuts (base 56) since the LESD and since May 1.

line 10 – Records count. The number of hourly weather observations out of the total possible observations. The advisory may not be reliable if there is a lot of missing weather data.

line 11 – Most recent hourly observation. This usually will be 6:00.

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July 7, 2008 PEANUT SCLEROTINIA ADVISORY FOR WILL
Highway Patrol Comm Station (Williamston, NC)
For 2008-07-02: MI=0, TI=1, EI=0
For 2008-07-03: MI=0, TI=1, EI=0
For 2008-07-04: MI=0, TI=0, EI=0
For 2008-07-05: MI=1, TI=1, EI=1
MI from RH, MI from 5-day rain
For 2008-07-06: MI=1, TI=2, EI=2
MI from RH, MI from 5-day rain, MI from 10-day rain
Row Index = 2
setDate = 2008-06-29 07:00:00
Five Day Index = 18
Last Effective Spray Date = 2008-06-05
Advisory: do not spray today
Disease level: LOW
Growing degree days (base 56) since LESD = 830.8
Growing degree days (base 56) since May 1 = 1515
Records count: 192 out of 193
Most recent db ob to 8am EDT: 2008-07-07 07:00:00

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**The row index and the day's advisory are circled in the sample Sclerotinia advisory above.**

## Using the North Carolina Sclerotinia advisory

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The North Carolina Sclerotinia advisory is a cooperative effort by the State Climate Office of North Carolina and the Department of Plant Pathology at NC State University. The advisory helps to identify periods that are favorable for Sclerotinia blight development so that protective sprays can be applied.

**Sclerotinia advisories account for favorable weather only; they do not account for field history.** Fields with no history of disease do not need to be sprayed unless a new outbreak is confirmed. In fields with a history of disease, careful scouting should begin the second week in July.

**There are two advisories for each location.**

Use the advisory for **row index = 2** if rows are within 6" of touching.

Use the advisory for **row index = 3** if rows are touching.

Sprays normally are not needed if rows are more than 6" apart.

### Line-by-line advisory details:

**Date and location** - ECONET stations are indicated by an abbreviated name; airport stations are indicated by call letters. In general, ECONET stations are more reliable than airport stations. It is a good idea to check advisories for the two closest weather stations.

**Sclerotinia index values** for the last 5 days. Three index values are given for each day:

**MI** - moisture index. MI = 1 (favorable) if RH is 95% or higher for at least 8 consecutive hours OR if there has been one-half inch of rain in the past 5 days OR 1 inch of rain in the last 10 days. The advisory output lists all of the moisture criteria that have been satisfied. If your rainfall history is different from that listed, the advisory may not apply to you. MI = 0 means that moisture is too low for disease.

**TI** - temperature index. TI = 0 when the day's average temperature is more than 82°F; TI = 1 at 77 to 82°F; TI = 2 at 72 to 77°F; and TI = 3 at 72°F or lower.

**EI** - environmental index. EI = MI x TI. The daily index (not shown in the output) = EI x row index x 3

**Row index** – circled above. Use the advisory for row index = 2 for rows within 6" of touching. Use the advisory for row index = 3 for rows touching.

**setDate** - used to calculate the advisory

**Five day index** – this is the total of the daily index values for the past 5 days. A spray is advised when the five day index is greater than 32.

**Last effective spray date (LESD)** - regardless of today's advisory, you **do not** need to spray if you have sprayed since the LESD. The LESD accounts for 21 days of protection provided by the fungicide.

**Advisory** – circled above. If the advisory is "spray today" conditions are favorable for Sclerotinia blight and you should spray if no Sclerotinia fungicide has been applied in the past 21 days. If the advisory is "do not spray today" a spray is not required.

**Disease level** - the five day index is used to rate the disease hazard as low (<32), moderate (32-47), high (48-98), or very high (≥99).

**Growing degree days** - for peanuts (base 56) since the LESD and since May 1.

**Records count** - number of hourly weather observations out of total possible observations. The advisory may not be reliable if there is a lot of missing data.

**Most recent hourly observation** – should be 6 or 7 a.m. on today's date.