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Target Spot in Southern Soybeans

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What is Target Spot?

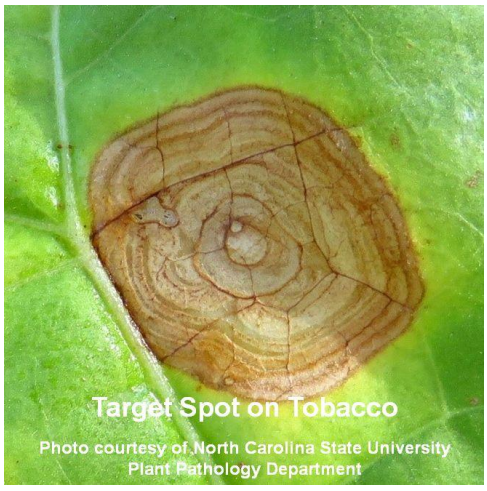
Target Spot in soybeans, not to be confused with **Tar Spot** in corn, is a disease that has been an "off and on issue" in the Mid-South and South for many years. This disease is caused by the fungus *Corynespora Cassiicola* and can overwinter in diseased debris and can survive in fallow soils for 2 years. Another issue with target spot is that the disease can also infect other cultivars such as cotton and tobacco.

The Impact of the Disease

In most years target spot may be present but cause little to no yield issues. However, it can be devastating in some years in the right conditions. Soybean yield losses of up to 50% have been reported and in cotton it can severely reduce plant canopy. Soybean yield losses are a result of lost leaf canopy which in turn reduces yield capability of the crop. A secondary part of the yield decreases it the ability of other disease complexes to prosper in the weakened plants. Rarely will you see one disease by itself cause major yield loss.

Identification and Causes

As the name would indicate it will generally have concentric, target-shaped lesions. Lesions start in the lower canopy and steadily become larger as they move up within the canopy. Reddish-brown lesions may also be found on the petioles, pods and stems. Usually, uppermost canopy may never be affected.



Growing conditions, especially moisture within the canopy is the major trigger to this disease. Extended periods of rain and high humidity along with warm temperatures are the decisive factors in disease development. Early, thick canopy of the crop can also influence the onset of the disease. Continuous soybeans and irrigated fields are most at risk.

With target spot, you manage to lower your risk because complete control is nearly impossible.

1. Environment is the major factor in determining the severity of this disease
2. Rotate soybeans to corn, rice or grain sorghum to reduce the inoculum
3. Don't "overwater" irrigated fields. (There is a lot debate on watering for maximum yield vs. watering to manage yield loss for a disease like this.)
4. Consider lowering seeding rates to allow more air movement within the canopy. 30-inch rows will usually be less prone to the disease than 15-inch or less rows.
5. Fungicide applications are generally not economically feasible. However, if applied at initial disease onset, may lessen the impact. Any fungicide applied after full canopy is going to have little effect on a disease that flourishes in the lower canopy.
6. Popular fungicides used today vary greatly in their impact on this disease. Products with dual mode of action may be more beneficial. (Consult your local distributor)
7. Soybean varieties greatly differ in their tolerance to this disease but scoring for this disease is complicated by changing growing environments year to year, and by the fact that a complex of diseases may be present at any one time in the crop.

Sources and additional information:

1. Dr. Bob Kemerait, Plant Pathology Professor, University of Georgia "Managing Target Spot of Soybeans:2016 Fungicide Trial Efficacy Results"
2. Terry Kirkpatrick and Travis Fraske Plant Pathologist, University of Arkansas, "Target Spot in Soybeans"
3. Tom Allen, Extension Plant Pathologist-Soybean Specialist, Mississippi State University