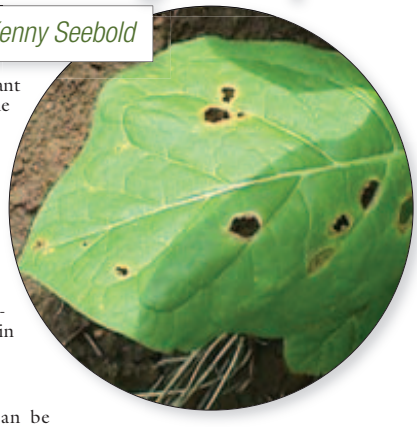
Effectively manage target spot

Yield and quality losses from this disease can be cut *By Kenny Seebold*



Target spot is fast becoming a serious problem on burley and dark tobacco around the Southeast. First found in the early 1980s on flue-cured tobacco in North Carolina, target spot now occurs in nearly every tobacco-producing state. Losses tend to be low most years, but can exceed 50% on certain farms or several farms in a region when the environment favors disease.

The causal agent of target spot is the fungus *Thanatephorus cucumeris* (*Rhizoctonia solani*). Target spot begins as small, water-soaked spots that expand into large lesions with a zonate (concentric rings) appearance. Lesions can expand rapidly when humidity is high and will have a translucent, greenish appearance.

As lesions age, they become tannish brown and brittle, and may cover large portions of the leaf. Brittle tissues tend to fall away, leaving holes in affected leaves and reducing yield. Leaf quality also is affected.

Target spot is favored by high humidity and temperatures between 68 to 86 degrees F. Spores produced on plant debris or hosts in and around the tobacco field contribute to early disease development; however, secondary spread of target spot is a result of spores produced on infected tobacco — or tobacco tissues that have dropped to the ground.

High levels of disease early in the season tend to result in heavy losses later. Under favorable conditions, spores are distributed within tobacco fields by air movement.

CONTROL METHODS

Management of target spot can be difficult in areas with a history of the disease. Deep-turning fields will bury crop residue that may carry the pathogen between seasons.

Controlling target spot in transplant production may reduce losses later in the season by preventing the introduction of diseased plants into a field. Planting in areas with good air movement will discourage long periods of leaf wetness and high humidity in the plant canopy, as will increasing plant spacing.

We know that target spot is aggravated by poor nitrogen fertility, so adequate — not excessive — N in the soil is an important consideration.

Burley varieties tend to be susceptible

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Target spot control with Quadris compared to other chemicals

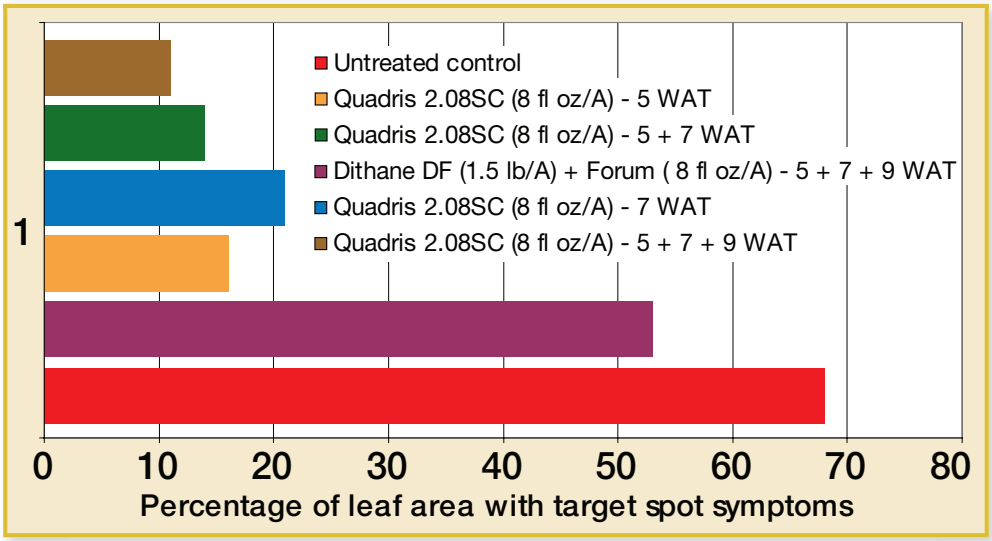

FIGURE 1. Effect of timing on the control of target spot with Quadris, Owsley Co., Ky., 2006. WAT=weeks after transplanting.