

Pest Alert

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Florida Department of Agriculture and Consumer Services Division of Plant Industry

Phyllachora maydis, Corn Tar Spot

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INTRODUCTION: In early June 2016, a University of Florida researcher collected a corn (*Zea mays* L.) leaf sample with tar spot symptoms similar to those caused by *Phyllachora maydis* Maubl. from a South Florida corn field. The researcher's initial diagnosis was confirmed by the USDA Systematic Mycology and Microbiology Laboratory in Beltsville, Maryland. Prior to this finding, *P. maydis* was first reported and confirmed in both Indiana and Illinois in September 2015.

IDENTIFICATION: Sweet and field corn are grown throughout Florida and corn is the only known host of *P. maydis*. Symptoms of tar spot include smooth and shiny oval to circular lesions, made of fungal tissue (stroma), surrounded by chlorotic borders (Figures 1 and 2). Infections of *P. maydis* first appear on the lower leaves, usually 10-18 days before silking.

According to the literature, *P. maydis* alone causes moderate symptoms on leaves, however a more severe form of tar spot complex occurs when there is a joint infection of *P. maydis* and *Monographella maydis*. To date, *M. maydis* has not been reported in the United States. The inoculum source for *P. maydis* infections is windborne ascospores which can disperse up to 75 meters from their source. Long distance dispersal of *P. maydis* through tropical storms or hurricanes is hypothesized but not confirmed. *Phyllachora maydis* infections have not been shown to be associated with seed. Conditions conducive to disease development are high relative humidity, leaf wetness of at least seven hours at night, low light intensity, high levels of nitrogen fertilizer and two continuous crops of corn per year.

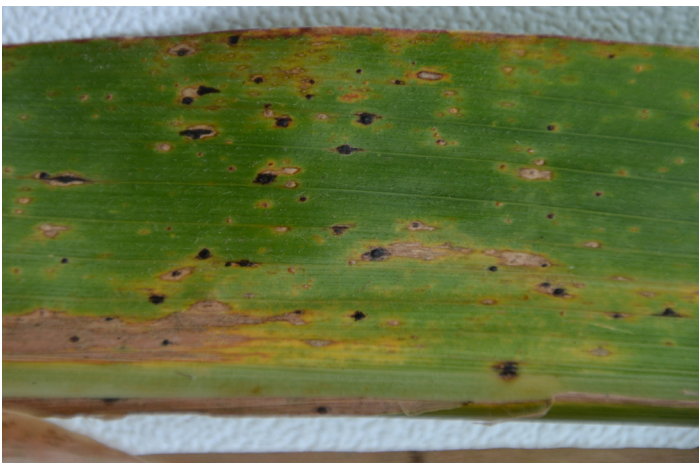


Fig. 1. Leaf lesions caused by *Phyllachora maydis*.
Photo credit: Richard Higgins, University of Illinois

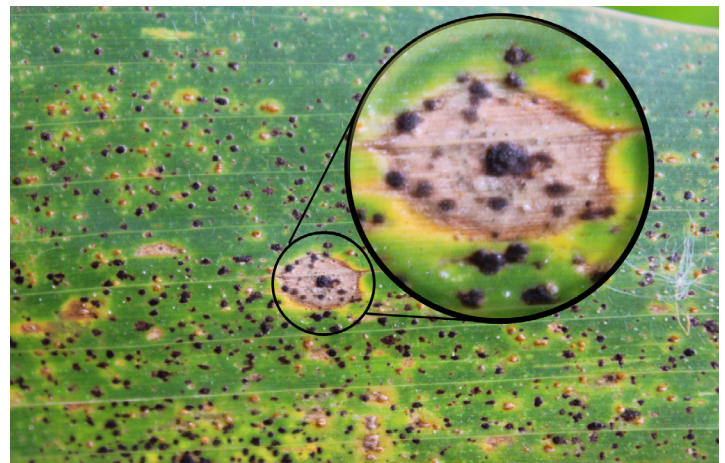


Fig. 2. Leaf lesions caused by *Phyllachora maydis*.
Photo credit: Richard Raid, University of Florida

REFERENCES:

USDA, NPAG report 2015. *Phyllachora maydis* Maubl: Tar spot. IFAS, Summary of Florida Corn Production 2014. <http://erec.ifas.ufl.edu/fciig/sfcp.htm>



Florida Department of Agriculture and Consumer Services
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