

## **PCR-Based Detection of *Nothopassalora personata* on Peanut**

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Late leaf spot (LLS), caused by *Nothopassalora personata*, is the most damaging fungal foliar disease of peanut in S.C. Control of LLS typically relies, in part, on repeated applications of fungicide. Spores that cause LLS infections are disseminated via rain and wind. While some fungicides have limited curative activity, most fungicides are more effective in managing LLS when applied preventatively. While recommended guidelines are in place for when to begin fungicide applications in peanut fields, the exact timing of inoculum production and availability depends on several factors. Thus, an accurate and sensitive detection system that can inform growers when *N. personata* spores can be first detected in fields before the development of visual symptoms can be used to better optimize timing of fungicide applications. In this study, a qPCR assay with crude DNA extract was developed for rapid and sensitive detection of *N. personata* spores from a Rotorod-style air sampling spore trap. Species-specific primers were designed based on the ITS region. Primers specifically amplified *N. personata* DNA, and did not amplify the DNA of healthy peanut leaves or different saprophytes isolated from peanut leaves. This detection system has the potential to more accurately detect availability of early-season inoculum and allow for improved prevention of LLS infections through guided fungicide applications.