

In-Furrow Application of Phorate and Development of Late and Early Leaf Spot

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Late and early leaf spot are caused by *Nothopassalora personata* and *Passalora arachidicola*, respectively, and are damaging diseases of peanut (*Arachis hypogaea*) capable of defoliation and yield loss. Management of these diseases is most effective through the integration of tactics that reduce starting inoculum and prevent infection. The insecticide phorate was first registered in 1959 and has been used in peanut production for decades as an in-furrow insecticide to help manage thrips. Many studies have additionally shown significant suppression of *Tomato spotted wilt virus* infections following phorate treatment beyond thrips suppression alone, for which phorate has since been reported to activate defense-related responses in the peanut plant. From 2017 to 2018 in Blackville, SC and in 2018 in Quincy, FL, significantly less leaf spot defoliation was exhibited on peanuts treated with 1.05 kg/ha phorate in-furrow at planting (20.4%) compared to nontreated checks (44.3%). Significant suppression of leaf spot infection was observed for more than 90 days after planting. To our knowledge, these are the first trials in the 60 years since its registration demonstrating significant suppression of late and early leaf spot on peanut following application of phorate in-furrow at planting.