

Effect of Mixing Elemental Sulfur with Demethylation Inhibitors (DMI) And Quinone Outside Inhibitors (Qoi) on the Management of Late Leaf Spot (*Nothopassalora Personta*) and Rust (*Puccinia Arachidis*) Of Peanut (*Arachis Hypogaea*)

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Peanut (*Arachis hypogaea*) has many foliar diseases that decrease pod yield. Some of the most devastating diseases are caused by fungal pathogens such as late leaf spot (LLS) caused by *Nothopassalora personta* and peanut rust caused by the fungus *Puccinia archidis*. Some demethylation inhibitor (DMI) and quinone outside inhibitor (Qoi) fungicides have lost efficacy due to resistance development within these fungal populations. A recent study found that adding elemental sulfur to a DMI with poor efficacy significantly improved control of LLS in the field. The purpose of this study was to see if adding elemental sulfur to a Qoi with poor leaf spot control would show the same effect, and to see if sulfur mixtures enhance DMI and Qoi efficacies for rust. A field study was conducted in Tifton, Ga in 2020 with four replications of the following treatments: 1) nontreated control, 2) elemental sulfur, 3) Tebuzol 4) sulfur mixed with Tebuzol, 5) Abound and 6) sulfur mixed with Abound. Late leaf spot severity was assessed using the Florida 1-10 scale and rust severity was assessed using a modified ICRISAT 1-9 scale. Assessments were made weekly following the onset of disease. Results showed that adding sulfur to both fungicide classes significantly decreased LLS, but did not reduce rust.