

An Evaluation of Fungicide Programs in Two Peanut Genotypes with Contrasting Disease Resistance

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Fungicides and cultivar selection are key components of a peanut integrated disease management plan. However, the interaction between these components on peanut diseases (e.g. white mold (*Athelia rolfsii*) and leaf spots (*Passalora arachidicola*; *Nothopasslora personata*) is unclear. The objective of this experiment was to quantify differences in disease response between peanut genotypes FloRun 331™ (FR331) and Georgia 06G (GA06) under seven Peanut Rx based fungicide programs and two controls. Leaf spot (LS) defoliation was estimated using the Florida 1-10 scale. Foliar disease onset occurred between 75 and 90 days after planting (DAP) with scale ratings ranging from 5 to 8 at 135 DAP. Stem rot incidence was recorded throughout the season as the number of 1-ft foci/90 ft of row with below ground hit ratings collected 148 DAP at digging. Fungicide program did not have an impact on stem rot hits, but incidence was numerically lower with FR331™ having 0.53 hits per treatment compared to GA06's 2.75 hits. Yield responses related to fungicide program varied between cultivars, however, both cultivars saw significant ($p < 0.01$) yield savings when fungicides were applied. These yield savings were larger on average for GA06 (1,825 lb/acre) than FR331 (1,588 lb/acre), especially for chlorothalonil alone applications (GA06 = 1827 lb/acre, FR331=997 lb/acre). Cultivar resistance as well as yield potential is critical to determining the impact fungicide programs will have on yield savings.