

Assessment of Peanut Fungicide Programs and Sulfur in Irwin County, GA, 2020-2021

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Disease management is essential for profitable peanut production in Irwin County; however, cost of fungicide programs is among the greatest expenses for our farmers. The objective of this multiyear study was to provide peanut growers with information from local data to aid in their selection of a “best” fungicide program. A replicated, large-plot, on-farm fungicide study was conducted in Irwin County, GA in 2020 and 2021 to assess the efficacy of several fungicide programs for the management of late leaf spot (*Nothopassalora personata*) and southern stem rot (*Scelrotium rolfsii*). The fields selected for this study were in cotton, cotton, peanut rotations which are common in this county. Both trials were planted to ‘Geogia-06G’ on 18 May, inverted in late Oct, and harvested soon thereafter. Plots were 18-rows wide by the length of the field and were arranged in a randomized complete block design with four replications. Plots were rated for severity of leaf spot disease and incidence of stem rot immediately prior to and immediately after the peanuts were inverted. Fungicide treatments included: 1) – Priaxor (6 fl oz/A) – Umbra/Echo (36 fl oz/A, 1 pt/A) – Muscle ADV (2 pt/A) – Umbra/Echo-Muscle ADV; 2) - Priaxor-Umbra/Microthiol Disperss (5 lb/A)-Muscle ADV – Umbra/Microthoil Disperss – 3) - Priaxor – Convoy/Echo (32 fl oz/A, 1.5 pt/A) - Muscle ADV – Convoy/Echo- Muscle ADV and 4) – Lucento (5.5 fl oz/A) – Elatus (9.5 oz/A) – Lucento (5.5 fl oz/A) – Convoy/Equus (21 fl oz/A, 1.5 pt/A) – Muscle ADV. Fungicides were applied on a 14-day interval beginning approximately 45 days after planting. Leaf spot/rust ratings (FLA 1-10 scale/ICRISAT 1-9 scale) were 3.19/1.06 (treatment 1, Umbra program), 2.48/1.00 (treatment 2, Umbra sulfur program), 3.81/1.00 (treatment 3, Convoy/Echo program), and 3.29/1.00 (treatment 4, Lucento/Elatus/Convoy program). Stem rot ratings (hits per 200 ft) were 5.0 (treatment 1), 5.8 (treatment 2), 9.5 (treatment 3), and 3.1 (treatment 4). Average yields from treatments 1-4 combined across 2020 and 2021 were (1. 5401.076), (2. 5514.923), (3. 5370.718) and (4. 5509.426) lb/A. Based upon results from this study, peanut growers have multiple programs of similar efficacy from which to choose for management of leaf spot and stem rot diseases. Perhaps of greatest interest, growers can substitute specific sulfur products (5 lb/A) for Echo (chlorothalonil) (1.0 pt/A) and maintain yield, reduce cost while slightly improving leaf spot control.