

Assessment of Evolving Peanut Fungicide Programs for Yield and Value in Southwest Georgia

B.W. HAYES*, University of Georgia Cooperative Extension, Mitchell County, Camilla Georgia 31730; N.M. BOSTICK, University of Georgia Cooperative Extension, Decatur County, Bainbridge Georgia, 39817; R.C. KEMERAIT, Department of Plant Pathology, University of Georgia, Tifton, Georgia 31793

Peanuts (*Arachis hypogea*) are the second largest agronomic commodity in Georgia. Fungicides are heavily applied in peanut production for the protection of the crop from *Sclerotium rolfsii*, *Cercospora arachidicola*, and *Cercosporidium personatum*. Today's peanut fungicide programs can greatly vary in cost. Careful selection of these programs can bring more profit to an agronomic operation, even if the cost of the program is higher. In 1994, the standard program for peanut fungicides was a tebuconazole/chlorothalonil based program, but over the years newer premium products have been developed. The objective of this experiment was to evaluate the yield potential of peanuts using past and presently labeled fungicide programs.

Since 2017 fungicide studies have been conducted at three commercial field sites (Miller and Decatur Counties). Georgia-06G was planted on May 10th (Miller) and June 10th (Decatur) 2017 and May 20th (Decatur) 2018. At each location, five commonly used fungicide programs were initiated approximately 30 DAP with subsequent applications on a 14-day interval until approximately 115 DAP. Fungicides included in this study were Elatus, Miravis, Muscle ADV, Fontelis, Propulse, Provost, and chlorothalonil. Treatments in each trial were replicated three times. Prior to harvest plots were rated for Leaf Spot and ranged from 2.5 to 5 on the Florida leaf spot scale. After inverting the plots white mold hits were counted and ranged from 0 to 40 hits per 200 feet of row. Peanuts at each location were harvested at maturity (~145 DAP) and plot weights (lb ac⁻¹) were collected and averaged over each fungicide treatment replication. Yields ranged from 5219 pounds per acre to 8143 pounds per acre depending on the location and year. All locations displayed higher yield potential for the most current fungicide program of ELATUS (azoxystrobin + benzovindiflupyr/solatenol) plus chlorothalonil when compared to all other fungicide programs. Similarly, the 1994 standard fungicide program of tebuconazole/chlorothalonil displayed the lowest yield potential of all tested programs. Future research will focus on replicating these studies. Growers in Southwest Georgia have greater expectations for yield now than they did in 1994; therefore, growers should be willing to invest in programs that protect that yield expectation. In all locations, the Elatus program was priced higher than the 1994 based program, but was not the most expensive program tested. In all locations, this program produced the lowest disease ratings and highest yield amongst the tested fungicide programs, while the cheapest program of Muscle ADV had the highest disease ratings and lowest yields.