

Evaluating Peanut Fungicide Programs in Mitchell County, Georgia

B.W. Hayes*, C.D. Perry, A.R. Smith, R.C. Kemerait, Mitchell County Cooperative Extension, University of Georgia, Camilla, GA 31730; Stripling Irrigation and Research Park, Camilla, GA 31730; Agricultural and Applied Economics, University of Georgia, Tifton, GA 31793; Department of Plant Pathology, University of Georgia, Tifton, GA 31794.

In 2018, peanut diseases were reported to reduce crop value by 16.1% and to cost Georgia farmers \$160.7 million in terms of management expenses and value of lost yield. White Mold (*Sclerotium rolfsii*) is one of the most destructive diseases that peanut growers face in southwestern Georgia. Leaf spot diseases (*Passalora arachidicola* and *Nothopassalora personata*) are also a chronic problem. Producers in Mitchell County have many fungicide options, but programs vary greatly in cost and efficacy. Since 2019, Mitchell County Extension has conducted large-plot, on-farm field trials in commercial peanut fields. The objective of these trials is to evaluate and compare newer fungicide programs to older standards to provide local growers with additional unbiased, research based data in order to make the best decision for their own operation. Each field trial was planted to a randomized complete block design with three replications. Plots were twelve rows wide by the length of the field, and the center six rows were harvested for yield. Plots were assessed for severity of leaf spot and incidence of white mold immediately prior to harvest. Treatment means were separated using Fisher's Protected LSD and return on investment was calculated using average cost of each treatment. In both years the newer fungicide programs showed decreased disease incidence and increased yield when compared to older fungicide programs. In 2019 White Mold ratings ranged from 6 to 22 hits per 200 feet of row and yield was between 6258 and 6571 pounds per acre. In 2020 White Mold rating ranged from 7 to 34 hits per 200 feet of row and yields were much lower due to weather issues ranging from 2822 to 3474 pound per acre. Leaf Spot was not an issue in either years. Results from these trials are used by peanut producers in Mitchell County and surrounding counties to make fungicide selections for future crops.