Plant Growth and Leaf Spot Control of Peanut Plants Treated with Different Fungicide Programs

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One of the most spread disease in peanut crop is leaf spot, which can decrease plant growth and yield. To control this disease and reduce its severity, many fungicide programs have been developed and used in recent years. However, studies relating the effect of fungicides on the physiology and growth of peanut plants are still needed. Therefore, the aim of this study was to evaluate the effect of different fungicide programs on the control of leaf spot (caused by *Nothopassalora personata* and *Passalora arachidicola*) and plant physiology and growth in peanut. This experiment was conducted at the University of Georgia Attapulgus Research and Education Center. Treatments consisted of three cultivars, 1) Georgia-06G, 2) Georgia-18RU and 3) TifNV-High O/L and four fungicides programs, 1) Non-treated Control (NTC), 2) chlorothalonil applied five times (30, 45, 60, 90, and 120 days after planting [DAP]; RED), 3) chlorothalonil applied seven times (30, 45, 60, 75, 90, 105, and 120 DAP; CL), and 4) chlorothalonil applied three times (30, 45, and 120 DAP) plus Miravis applied two times (60 and 90 DAP; CLM). The experimental design was a randomized complete block with five replications. Measurements included leaf area index (LAI), disease severity and yield. Results showed lower severity of leaf spot in plots planted with TifNV-High O/L and in plots treated with CL and CLM. Therefore, LAI was greater in plots planted with the cultivar TifNV-High O/L and treated with CL and CLM. A negative correlation between leaf spot and LAI was observed, suggesting that greater leaf spot intensity corresponded to lower LAI. Plots treated with CL and planted with TifNV-High O/L yielded more compared to the other fungicides and cultivars. Overall, results demonstrated that the use of CL and TifNV-High O/L increased the control of leaf spot incidence without negatively affecting plant growth (LAI) and yield.