

IMPROVED CONTROL OF FOLIAR AND SOILBORNE DISEASES OF PEANUT WITH NEW CULTIVARS, FUNGICIDES, AND OPTIMUM IRRIGATION TIMING

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Velum Total was compared in twin and single rows applied in furrow for activity on root knot nematode. As seen in 2015, the nematode control was better on single rows, although overall yields were higher in twin rows. In a large block, on-farm test in Decatur county, GA-06G treated with Velum Total at 18 oz in furrow suffered significant damage to root knot where populations were high, but much of the plot area was not infested. There was no difference between the GA-06G treated and Tifguard or GA-14N without Velum in terms of \$/A value, although GA-14N was the highest if a \$50/ton bonus was included for high OL peanuts. This was also true in another on-farm trial in Appling county in a dryland field with no history of peanuts and little disease pressure. However, without the high OL bonus, GA-14N had lower value than either GA-06G or GA-12Y which had the highest yield (5636 lb/A). Across varieties yields were virtually identical comparing a lower cost Bravo/tebuconazole program with a higher input Elatus/Bravo program. This is often not the case in fields with more disease pressure.

The weather this past year was very conducive to white mold, and the disease was severe in some grower fields, especially those without irrigation. Eight of the most recent peanut cultivars were grown in a field heavily infested with white mold in paired plots treated with either Bravo-only or a Bravo plus Provost/Convoy program. As in 2015, the lowest yielding cultivar with the Bravo program was GA-06G at 2378 lb/A. The low yield of GA-06G was primarily due to the extremely high white mold incidence (54%). GA-13M and Tufrunner 297 had similar amounts of white mold as GA-06G, but yielded about 3200 lb/A with only Bravo. TifNV-HiOL, GA-14N and Tufrunner 511 had the highest yields in a Bravo program, but were still only about 3400-3600 lb/A. Where white mold was controlled by the Provost/Convoy program, Tufrunner 511 and TifNV-HiOL had the highest yields. GA-12Y had the least amount of white mold (21%) followed by GA-14N (29%) and TifNV-HiOL (32%).

Five currently labeled fungicides were evaluated in a white mold field when applied via conventional ground sprays versus diluting them in about 2700 gallons per acre in a simulated chemigation treatment. All five fungicides had numerically less disease when applied in the higher volume of water. The biggest difference was with Priaxor, which is known to retained more on the foliage. Chemigated Priaxor plots had about half the disease than the plots receiving the same 3 applications of 8 oz by ground sprays, and yields were similar to the best treatments in the test which were Elatus and Fontelis. Chemigation should be a very effective way to treat white mold for those growers set up to do so. Other studies with Propulse (13.7 fl oz/A) applied via chemigation showed improved white mold control as well as reduced pod galling from root knot nematode. Propulse applied by a conventional sprayer did better if followed by an irrigation event, but further studies are needed to verify efficacy and economics of this treatment. Overall these results demonstrate the importance of both cultivar choice and application method when controlling soilborne problems like nematodes and white mold with foliar-applied materials.