Report to the Georgia Agricultural Commodity Commission for Peanuts-2020
Adaptation of New Fungicides and Application Strategies for Control of Early and Late Leaf Spot of Peanut

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In recent years, multiple strobilurin fungicides such as Headline and Abound have not performed as well for leaf spot control as in previous years. However, Priaxor, which includes pyraclostrobin is comparable to or better than Bravo for leaf spot control, and both are superior to Headline alone. Elatus, which includes azoxystrobin + solatenol, has performed much better for leaf spot control under heavy late-season pressure in fields where full rates of Abound alone provided little control. Resistance to the strobilurin fungicides has not been confirmed, but is strongly suspected. The mixture of fungicides with two different modes of action, such as those used in Priaxor or Elatus may help prolong the efficacy of a fungicide even when resistant populations of leaf spot fungi develop to one of the fungicides in the mixture.

With the exceptions of prothioconazole and provysol, available sterol inhibiting fungicides (such as tebuconazole and cyproconazole) have also lost much of their efficacy against leaf spot. Across trials in 2017-2020, addition of Microthiol Disperss sulfur at 3.75 lb/A significantly improved leaf spot control with sterol inhibiting fungicides such as Alto, Tebuzol, or Provost, and in 2019-2020 both Abound and Headline although the sulfur alone provided little leaf spot control. In 2020, improvement in leaf spot control with Tebuzol, Revysol, Headline, and Abound was observed with several liquid flowable and dry formulations of sulfur with particle size averaging ~3 microns. However, control was not enhanced with one formulation with larger particle size. Although sulfur alone would not provide adequate control of leaf spot, sulfur looks to be as good as or better than 1.0 pint of Bravo as a mixing partner with other fungicides from multiple modes of action.

In-furrow applications of the nematicide/fungicides Velum Total or Propulse have provided extended control of late leaf spot and should be able to replace the typical initial leaf spot fungicide spray in most cases. Although Velum Total will likely be replace byVelum Prime, our results from 2020 indicate that the two products have similar effects on leaf spot epidemics. Foliar applications of Propulse provided leaf spot control for 21 days or more after application. Propulse showed very strong residual activity against peanut rust as well.

The new SDHI fungicide “Miravis” continues to be the most effective leaf spot fungicide evaluated in our program. It does not provide white mold or rust control, but can be used in combination with other fungicides that provide control of those diseases. Miravis has exceptional residual control, with an application capable of providing 30 days of protection.

Provysol is a new generation sterol inhibitor fungicide that provides much better leaf spot control than most other sterol inhibitor fungicides such as tebuconazole or cyproconazole. It shows potential to provide good leaf spot control and serve as a resistance management tool for use with SDHI fungicides or strobilurin fungicides. It should be an effective and versatile mixing partner for several different fungicides.

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