Report to the Georgia Agricultural Commodity Commission for Peanuts-2013
Adaptation of New Fungicides and Application Strategies for Control of Early and Late Leaf Spot of Peanut

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Recent promising results with in-furrow applications of Proline fungicide for CBR control, and early season applications for white mold suppression have prompted us to study the effects of these applications on early season leaf spot epidemics in multiple experiments in 2012-2013. In trials planted in August or September in which leaf spot epidemics in the border rows were already severe, in-furrow applications of Proline provided excellent control of leaf spot for a approximately 30 days, but residual effects were not long enough to indicate that in-furrow applications would be of much benefit for leaf spot control in typical situations. Application of Proline or Headline fungicides in a 12-inch band 3 weeks after planting (with leaf spot infections having already occurred) prevented leaf spot increase for 3 weeks or longer. Results from both years indicate that banded applications of these fungicides 3 weeks after planting may provide adequate control of leaf spot until subsequent applications are needed for white mold control.

Trials were conducted in 2012 and 2013 comparing broadcast vs banded (12 inch band) applications of Proline, Headline and Abound fungicides, with 1 application made 49 days after planting in 2012 and . There was no difference in leaf spot control for banded vs broadcast applications of Headline, but leaf spot control was better with banded applications of Proline and Abound in 2012. In 2013, there was little difference in leaf spot rating 120 days after planting for banded vs broadcast applications of Proline, Headline or Abound. Late season levels of leaf spot control with banded applications of Proline were similar to those in the Headline treatments. Leaf spot control with Abound was not as good as with Proline or Headline.

Leaf spot trials were conducted at the Plains in 2013 to compare fungicide efficacy in situations where leaf spot infections had already occurred. Across "delayed application" tests conducted from 2009-2013, applications of Proline alone or Proline + Topsin show potential as an alternative to Headline for use in a situation where leaf spot epidemics are in progress before initial fungicide applications are made. Mixtures of Proline and Topsin provided leaf spot control that was very similar to that of 9.0 fl oz/A of Headline. Likewise, combining 7.2 fl oz of Muscle (tebuconazole) with 6.0 fl oz of Headline, provided leaf spot control that was comparable to the Proline and Headline 9.0 fl oz treatments.

In 2013 Georgia-06G, Georgia-07W, Georgia Greener, Georgia-09B, Georgia-10T, Georgia-12Y, and Tifguard cultivars were combined with fungicide treatments of 1) nontreated; 2) 4 fungicide applications (chlorothalonil (Bravo pt/A) plus tebuconazole (Muscle 7.2 fl oz/A)); and 3) 7 applications (4 of chlorothalonil (Bravo pt/A) plus tebuconazole (Muscle 7.2 fl oz/A) and three of chlorothalolnil alone. Final leaf spot severity was highest in GA-09B in nontreated plots. Midseason leaf spot severities in Tifguard, Georgia-10T, and Georgia-12Y were lower than for GA-06G or Georgia Greener in the 4 application fungicide treatment. In nontreated plots, yields of Tifguard and Georgia-12Y ranked higher than any other entry. There was little difference in yield among Georgia-06G, Georgia Greener, or Tifguard in the 7 application fungicide treatment. Across cultivars, yields were 3875, 5497, and 5725 lb/A for the nontreated, 4 spray and 7 spray treatments, respectively.