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Southeastern Peanut Research Initiative  
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Grant Title: Modification of AU-Pnut Disease Advisory and Assessment of Fungicide Inputs on the Control of Foliar and Soilborne Diseases, as well as on the Yield of Selected Disease Resistant Peanut Genotypes.

Key Cooperators:

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Objectives:

1. Evaluate new and registered fungicides for the control of leaf spot diseases, peanut rust, southern stem rot, Rhizoctonia limb rot, and Cylindrocladium root rot on commercial lines and experimental genotypes in an irrigated and dryland production system.
2. Assess the impact of surfactants on the efficacy of Folicur and Abound for the control of leaf spot diseases, peanut rust, and southern stem rot.
3. Compare the efficacy of fungicides applied according to the original and modified AU-Pnut Disease Advisory on commercial lines and peanut genotypes with partial resistance to leaf spot and southern stem rot at locations in Alabama and Georgia.
4. Determine the economic return from the used of the original and modified AU-Pnut disease advisory.

Recommended fungicide programs were evaluated at the Wiregrass Research and Extension Center for the control of leaf spot diseases and southern stem rot, as well as their impact on the yield of rainfed and irrigated peanuts. While early leaf spot was predominating, late leaf spot was noted in both studies on the Folicur-treated 'Carver' peanuts. Significant differences in leaf spot control were observed between the fungicide programs. The Headline program gave the best control of both leaf spot diseases on both the rainfed and irrigated peanuts, while Folicur was noticeably less effective on the irrigated peanuts. Although little SSR damage was seen in the rainfed trial, disease incidence was high in the irrigated trial, particularly on the Headline, Bravo Ultrex, and Abound-treated peanuts. Folicur, and both Bravo + Moncut programs were equally effective in controlling this disease. On the irrigated peanuts, the best yield gains were obtained with both of the Bravo + Moncut programs. The efficacy of recommended fungicide for the control of peanut diseases was evaluated at 2-, 3-, and 4-wk intervals, as well as when applied according to the AU-Pnut advisory. On rainfed Florida C-99R peanuts, treatment interval has a significant impact on the control of early leaf spot with Bravo Ultrex, Folicur, and Abound. For all of the above fungicides, the leaf spot ratings for the 2-wk calendar program and the AU-Pnut advisory were similar. Due to low disease activity, treatment interval had no effect on the performance of any fungicide treatment. Also, yield for each of the three fungicide programs were similar for all treatment intervals and the AU-Pnut leaf spot advisory. Calendar 2-, 3-, and 4-wk Abound programs were compared with the standard and modified AU-Pnut advisory for the control of leaf spot and SSR diseases on irrigated Florida C-99R peanuts. With 1.2 pt/A of Abound, better disease control was provided by the 7-application 14-day calendar program than the 5-application and 4-application 3- and 4-wk intervals, respectively. Among the AU-Pnut advisory programs, 8/4 modified program gave the best control of early leaf spot. Generally, few differences in SSR incidence or yield were noted between the calendar and advisory programs. The best control of leaf spot was given by both rates of Headline applied on a 2-wk and according to the AU-Pnut advisory than the same fungicide applied at 3- and 4-wk intervals. Headline application rate and treatment interval had no impact on SSR control. Similar yields were noted for the 9 and 15 lb oz/A of Headline applied every 2 wk.

This report was prepared by Austin Hagan