

## **Peanut Cultivar Response to Residual Soil Test Potassium Amounts in North Mississippi**

D. DYGERT, **B. ZURWELLER\***, B. WHITTENTON, J. MAY, J. VARCO, Department of Plant and Soil Sciences, Mississippi State University, Mississippi State, MS 39762.

The average U.S. peanut (*Arachis hypogaea* L.) yield has increased by approximately 25% with the adoption of Georgia-06G. Since this adoption, many new runner cultivars have been released with similar yield potential and possibly greater soil nutrient requirements to achieve high yields. The objective of this study was to evaluate the growth and yield response of recently released peanut cultivars to soil test potassium (STK) amounts. Cultivars Georgia-06G, Georgia-16HO, Georgia-18RU, FloRun™ '331', and AU-NPL-17 were planted across Mississippi State Soil Test Potassium ranges of low, medium, and high based on a soil cation exchange capacity (CEC)  $\geq 14$ . A positive pod yield response occurred in both site-years when average STK increased from 143 kg K ha<sup>-1</sup> to 187 kg K ha<sup>-1</sup>. No additional yield was gained when STK amounts were greater than 187 kg K ha<sup>-1</sup>. These results demonstrate the need to adjust peanut soil potassium sufficiency levels for CEC. The positive yield response to STK was similar among all peanut cultivars indicating that soil potassium management does not need to be altered for specific runner cultivars. Further evaluation of peanut soil test K sufficiency levels is needed for soils with a more moderate CEC range.