

## **Examining Peanut Rx 2.0 and the Component Models to Improve Forecast of Spotted Wilt Severity on Peanuts in Georgia**

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The use of a risk index, Peanut Rx, was critical in managing the thrips-transmitted spotted wilt disease (SW) in the southeastern US. In this study the ability of Peanut Rx 2.0 in predicting spotted wilt severity at six locations in Georgia was tested. Based on Peanut Rx, combinations of production inputs were chosen to create different levels of risk to spotted wilt. A strong relationship between Peanut Rx risk points and observed spotted wilt severity was found. However, Peanut Rx alone did not explain the high variability in spotted wilt severities at the highest risk situations across locations. Higher numbers of tobacco thrips collected from April to May, were counted in traps from Midville, Plains, and Reidsville compared with other locations. Regression analysis showed a positive relationship between the observed spotted wilt severity and tobacco thrips counts. The TSWV and Thrips Risk Forecasting (TTRF) Tool closely estimated the peak of thrips dispersal overtime across locations, but predictions for the magnitude of peaks for dispersing tobacco thrips was inconsistent. This was linked to the inability of Peanut Rx 2.0 to more accurately predict spotted wilt severity at these locations. When the actual number of tobacco thrips from aerial traps was used in place of the TTRF model estimates, the accuracy of Peanut Rx 2.0 predictions was greatly improved.