

## **Virginia-Carolina Peanut iPiPE: Data Sharing to Improve Disease Risk Models**

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Peanuts are an important crop in areas throughout the southeastern United States including Virginia and North Carolina. In this region, over 100,000 acres are planted to peanut with an annual value of over \$85 million. Peanut is a relatively high value crop on a per acre basis, but inputs for controlling diseases can make peanut production cost prohibitive for some growers. Weather-based disease advisory programs have reduced the number of fungicide sprays required for control of peanut diseases, thereby reducing total fungicide inputs and costs in peanut production. However, disease risk is impacted not only by environmental conditions but also by field history and disease susceptibility of the peanut cultivar planted in a field. New tools that incorporate current information technology and weather-based modeling are needed to improve and disseminate disease advisories for peanut. The Integrated Pest Information Platform for Extension and Education (iPiPE) is a set of information technology tools that allow for the collection and dissemination of crop pest observations and integrated pest management (IPM) based management recommendations. iPiPE Crop-Pest Programs are coordinated by extension personnel and pest observations are collected by student interns who are trained in the concepts of IPM and crop pest diagnostics. The Virginia-Carolina Peanut iPiPE was established in 2017. Eleven fields in VA and NC were selected, and portions of fields were marked with flags and left unsprayed. Fields were scouted weekly for disease, and results were uploaded to iPiPE using a mobile app. Current disease advisory models were run using weather data and compared to disease observations. Dates for when the leaf spot model predicted disease risk ranged from late May to mid-August, but little leaf spot was observed prior to September. The model predicted Sclerotinia blight risk at all locations around July 20, and the first disease observation was August 1. The current disease risk models may overestimate disease risk in some fields, and it may be possible to raise the spray thresholds and reduce and/or delay fungicide applications when moderately resistant varieties are planted and/or fields do not have a history of severe disease outbreaks. Additional data will be collected and uploaded to the iPiPE during the 2018 growing season. Ultimately, data will be used to update the leaf spot and Sclerotinia advisory models and to develop a stem rot risk model for the Virginia-Carolina peanut growing region.