Assessment of a Digital Imaging System for Determining Peanut Maturity: Plot and On-Farm Trials.

B.C. COLVIN*, D.L. ROWLAND, Agronomy Department, The University of Florida, Gainesville, FL 32611; W.H. FAIRCLOTH, USDA-ARS, National Peanut Research Lab, 1011 Forrester Dr. SE, Dawson, GA, 39842; and J.A. FERRELL, Agronomy Department, The University of Florida, Gainesville, FL 32611.

A system using the color analysis of scanned pod images was developed in 2011 and was found to provide an objective estimation of pod color classification and correlation with yield. The method involves placing blasted pods (exocarp removed) on a standard color scanner and acquisition of a high resolution digital image. The image is then analyzed using a software program that determines pixel area of defined colors. In an effort to validate the method, continued testing of the system was carried out in research plot and on-farm trials. In the research plot trials, studies were conducted in North Florida and South Georgia and involved serial harvests of GA-06G and Georgia Green cultivars. In the on-farm trials, samples were collected close to harvest at five different farms. In both trials, pod samples were blasted and placed on the standard profile maturity board and then they were analyzed using the digital color classification system. The results from the digital system and the profile board were compared in their prediction of maturity. The digital system may provide a quantitative and unbiased harvest prediction that could ultimately improve economic returns.