New In-Furrow Fungicide Options Provide Control of Cylindrocladium Black Rot of Peanut in Virginia and Runner Cultivars.

P.M. PHIPPS* and D.E. PARTRIDGE TELENKO, Tidewater Agricultural Research and Extension Center, Virginia Tech, Suffolk, VA 23437; and G.H. MUSSON, Bayer CropScience, Research Triangle Park, NC 27709.

Two trials in 2009 planted with either Brantley (trial 1) or CHAMPS (trial 2) evaluated suppression and control of CBR with foliar sprays of Provost 433SC 8 or 10.7 fl oz/A, and a seed-furrow treatment at planting with Proline 480SC 5.7 fl oz/A or Propulse 400SC 14.69 fl oz/A. Reference standards included 1) three foliar sprays of Provost at the low or high rate followed by Bravo 720SC 1.5 pt/A and 2) Vapam 42% 7.5 gal/A with foliar sprays of Provost followed by Bravo. No significant differences in CBR incidence were found in treatments with the low or high rate of Provost. Proline in the seed furrow and foliar sprays of Provost 10.7 fl oz significantly reduced CBR incidence by 43 and 33% while the Vapam standard reduced incidence by 52 and 55% in trial 1 and 2, respectively. Propulse in furrow reduced CBR incidence by 83% in trial 1 and 57% in trial 2. Yield was increased significantly (P=0.01) by treatments with Propulse in furrow or Vapam in trial 1. No significant differences in yield were detected in trial 2, however, yield was highest for Propulse in furrow or Vapam treatment. The response of peanut cultivars to Proline or Vapam for control of CBR was evaluated in 2009. Main plots were treated with and without Proline or Vapam and subplots were planted to either Virginia- or runner-type cultivars. Proline in furrow suppressed CBR significantly in Virginia-type cultivars on 25 Aug and 11 Sep, but only Vapam significantly reduced CBR incidence on 14 Oct. Bailey and Perry without Proline or Vapam exhibited good CBR resistance, Florida Fancy showed moderate resistance, and CHAMPS was highly susceptible. CBR incidence tended to be lower in runner-type cultivars with the most susceptible cultivar being GA Green and the least susceptible being GA-02C. Treatments with Proline across runner-types suppressed CBR incidence significantly on 11 Sep, whereas only Vapam significantly reduced CBR incidence on 14 Oct. Yield of Virginia-type cultivars tended to increase with Proline and were significantly increased by Vapam. Similarly, runner-type yields were increased significantly by only Vapam. The total value of yield was improved $53 and $75/A by Proline and $172 and $127/A by Vapam on Virginia- and runner-type cultivars, respectively. These studies provided evidence that in-furrow application of Proline suppresses CBR, whereas Propulse provides CBR control that is similar to Vapam. Additional studies in 2010 are designed to determine if Propulse in furrow could become an acceptable replacement for Vapam.