

Peanut Response to Co-Application of Pyroxasulfone with Paraquat, Bentazon, and Acephate

D. L. JORDAN*, A. T. HARE, and C. W. CAHOON, North Carolina State University, Raleigh, NC 27695.

Pyroxasulfone is registered for postemergence application in peanut and the most likely timing of application of this herbicide is within the first month after peanut emergence. Lack of appreciable foliar activity on weeds will require that this herbicide be co-applied with contact herbicides. Field studies were conducted from 2014-2017 to determine peanut response to pyroxasulfone applied with paraquat plus bentazon either alone or with acephate 3 weeks after planting. Foliar pesticide combinations were applied either following phorate applied in the seed furrow or when no systemic insecticide was applied at planting. Visible estimates of percent peanut injury associated with plant stunting were recorded 2 to 3 weeks after application. Pod yield was also recorded. Visual injury and pod yield were similar when comparing among treatments regardless of whether or not paraquat plus bentazon was applied alone or with pyroxasulfone plus acephate or pyroxasulfone alone when phorate was applied in the seed furrow at planting. Greater stunting of plants due to a combination of paraquat and thrips injury was noted when phorate was not applied in the seed furrow at planting. Including acephate in the mixture resulted in less stunting regardless of herbicide combination and in some instances increased peanut yield over treatments not including phorate at planting or acephate applied to emerged peanut.