Effect of Paraquat Timing on Yield and Grade of Four Peanut Cultivars.

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Field studies were conducted at the West Florida Research and Education Center, Jay, FL and Plant Science Research and Education Unit, Citra, FL. Paraquat was applied at 0.2 kg/ha both with and without bentazon at three timings (true cracking, 20 days after cracking (DAC) or 40 DAC). A nontreated check was included. All treatments were applied to four peanut cultivars (Florida 07, Georgia 07W, TifGuard, and Georgia 06G). Peanut visual injury and canopy width data were collected during the growing season. At termination of the experiment, peanuts were harvested and graded. The field sites were maintained weed free and under irrigation throughout duration of the experiment. At Jay treatments applied 30 DAC reduced foliar growth more than treatments applied earlier. Mixing bentazon with paraquat reduced foliar injury by 5% or less for all cultivars at all application timings. Peanut yield was not reduced compared to the nontreated when paraquat was applied at true cracking or 20 DAC. However, yield was 10% less than the nontreated when paraquat was applied 30 DAC and adding bentazon improved yield. At Citra, peanut foliar growth was not affected by paraquat applied at true cracking or 30 DAC. However, when applied 20DAC, canopy width was less than the untreated when paraquat was applied alone for all cultivars. The addition of bentazon lessened canopy injury for Florida 07 and TifGuard. Herbicide application at true cracking or 20 DAC did not reduce peanut yield. However, paraquat applied alone reduce yield by 10% and paraquat + bentazon reduced yield by 5%. Peanut grade was not affected by any treatment at either location.