

Response of Peanut to Exposure Timing and 2,4-D choline plus Glyphosate Rate
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Peanut is commonly grown in close proximity to Enlist cotton, soybean, or corn fields in the southeastern US. 2,4-D choline plus glyphosate is primarily applied for weed control in Enlist system, so there is potential for herbicide drift to adjacent peanut. A field research was conducted to evaluate response of peanut exposure timing (at 25, 50, and 75 days after planting) to different rates of 2,4-D choline plus glyphosate applied at: 2.1 plus 2.2; 8.4 plus 8.8; 33.6 plus 35.2; and 134.4 plus 140.8 g ae ha⁻¹, respectively. Significant interaction was observed between peanut exposure timing and 2,4-D choline plus glyphosate rate on peanut injury, and canopy width, height, and yield reduction. The interaction illustrated that peanut injury, canopy height or width reduction was higher when exposed during early growth timing with the higher herbicide rate. At 2 WAT, peanut injury was ≥14% when exposed at 25 DAP compared to 75 DAP. Similar result was observed at 4 or 8 WAT where injury was higher on peanut exposed to 2,4-D choline plus glyphosate at 25 compared to 75 DAP. Herbicide rate effect was observed for peanut injury where higher rate resulted in greater injury at all the evaluation timings. 2,4-D choline plus glyphosate exposure at 25 DAP resulted higher peanut canopy (≥13%) and height (≥6%) reduction compared to 75 DAP exposure. Difference in peanut canopy and height reduction was observed with herbicide rate. Yield reduction was not influenced by peanut exposure timing; however, significant difference was observed with 2,4-D choline plus glyphosate rate. This research highlighted that 2,4-D choline plus glyphosate drift can cause significant injury on peanut depending on herbicide rate and exposure timing, and yield reduction could depend on the 2,4-D choline plus glyphosate exposure rate.