

Evaluation of Fluridone in Peanut

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As PPO and ALS inhibitor resistant weed species continue to expand in the southeast, peanut producers need to utilize a new mode of action to control these weeds and prevent further resistance from developing. Fluridone, a PDS carotenoid biosynthesis inhibitor, has a mode of action new to peanut but not currently labeled in peanut. Further research needs to be conducted on peanut response and tolerance to fluridone to determine if it is a viable option for weed control in peanut. Therefore, the objective of this study was to evaluate Georgia 06G peanut tolerance to fluridone alone and tank mixes with frequently used preemergent herbicides. In 2018, field studies were conducted in Henry and Escambia County in Alabama. Herbicide treatments included fluridone at 168 and 336 g ai ha⁻¹ on its own as well as tanked mixed with flumioxazin, diclosulam, acetochlor, and pendimethalin at 1X and 2X of the label rates. Experiments were conducted as completely randomized block designs with 4 replications at each location. Henry County was under irrigation while Escambia County was dryland. Peanuts were planted June 6 and June 5, 2018 in Henry and Escambia County, respectively. Treatments were applied the day for planting with Teejet TTI110025 nozzles calibrated at 20 GPA output with a hand held boom. Peanut growth parameters including stand count, plant heights and widths were collected 3 and 7 weeks after planting as well as yield of each plot at harvest. Fluridone did not cause any significant reductions of stands or plant height and width reductions. Fluridone also did not cause any significant yield loss at either location. Overall, our data suggests Georgia 06G is tolerant to fluridone up to 336 g ai ha⁻¹ and is a promising option for tank mixing with other preemergent herbicides for weed control in peanut.