New Peanut Cultivar Response to Paraquat Applications

E.P. PROSTKO*, Department of Crop & Soil Sciences, The University of Georgia, Tifton, GA 31794.

Paraquat was first registered for use in peanut in 1988. Since that time, there have been significant changes in the peanut cultivars planted. In Georgia, the most popular cultivar currently grown is Georgia-06G. Newer, high-oleic peanut cultivars, such as Georgia-09B, are preferred by certain manufacturers. Limited field trials have evaluated the tolerance of Georgia-06G and Georgia-09B to herbicides registered for use prior to 2006. In 2013, four, replicated, weed-free, irrigated, small-plot field trials were conducted in southern Georgia to evaluate the response of Georgia-06G and Georgia-09B to various postemergence (POST) treatments of paraquat (0.06 lb ai/A) + NIS (0.25% v/v), paraquat (0.19 lb ai/A) + acifluorfen (0.17 lb ai/A) + bentazon (0.33 lb ai/A) + NIS (0.25% v/v), paraquat (0.19 lb ai/A) + acifluorfen (0.17 lb ai/A) + bentazon (0.33 lb ai/A) + s-metolachlor (0.95 lb ai/A), paraquat (0.19 lb ai/A) + acifluorfen (0.17 lb ai/A) + bentazon (0.33 lb ai/A) + s-metolachlor (0.95 lb ai/A) followed by imazapic (0.06 lb ai/A) + s-metolachlor (0.95 lb ai/A), and imazapic (0.06 lb ai/A) + s-metolachlor (0.95 lb ai/A). All POST treatments were applied with a CO₂-powered backpack sprayer calibrated to deliver 15 GPA between 13 and 39 days after planting. All data were subjected to ANOVA (P=0.10). Peanut leaf burn and plant stunting were frequently observed, especially with any paraquat treatment. However, peanut yields were not significantly reduced by any herbicide treatment.