

WEED CONTROL AND CROP SAFETY WITH GLYPHOSATE AND FOLIAR INSECTICIDES IN GLYPHOSATE RESISTANT SOYBEANS. Philip Boeve, Paul Ratliff, Troy Roebke, Rod Stevenson, Carl Urwin, and Greg Elmore, Monsanto Company, St. Louis, MO 63167.

Studies were conducted in 2002 to determine the compatibility of glyphosate tank mixed with seven commonly recommended foliar insecticides for bean leaf beetle and soybean aphid control in glyphosate-resistant soybean. Insecticides tested were carbaryl, chlorpyrifos, dimethoate, esfenvalerate, lambda-cyhalothrin, methyl-parathion, and zeta-cypermethrin. Weed control, crop response, and soybean yield were evaluated at six Midwest field locations and crop response was evaluated at a Monsanto Company greenhouse. No differences were found in common lambsquarters, giant foxtail, or velvetleaf control rated 21 DAT among the seven tank-mix combinations of glyphosate plus insecticide compared to glyphosate alone. Of the seven tank-mix combinations, only carbaryl and chlorpyrifos showed significant chlorosis and necrosis four DAT in the field and greenhouse studies and growth reduction 14 DAT compared with glyphosate alone in the greenhouse study. No yield reductions were found with the seven tank-mix combinations compared with glyphosate alone.