

POTENTIAL HERBICIDE- FUNGICIDE INTERACTIONS IN SOYBEAN PRODUCTION SYSTEMS. Rebecca Bierman, Wayne Pedersen, Christy Sprague and Dean Riechers, Graduate Research Assistant, Associate Professor, Assistant Professor and Assistant Professor, Department of Crop Sciences, University of Illinois, Urbana, IL 61801.

Fungicide seed treatments are becoming increasingly popular for use with glyphosate- tolerant soybeans. A field study was conducted to determine whether particular combinations of fungicide seed treatments and POST- applied herbicides affect soybean yield. Thirty- six treatments were evaluated, involving six fungicide treatments [Rival, thiabendazole (TBZ), pentachloronitrobenzene (PCNB), captan, Maxim (fludioxonil) and a fungicide- free control] and six herbicides [imazethapyr, imazamox, glyphosate, glyphosate + imazethapyr, glyphosate + cloransulam-methyl and a hand-weeded control]. The study was repeated at three locations across Illinois during the summer of 2002.

Statistical analysis showed that herbicide- fungicide interaction significantly affected yield. However, neither herbicide nor fungicide were independently significant. The mechanism of the observed interaction is unclear. The results of this study do not support our original hypothesis, based on preliminary data, that the combination of Rival and imazethapyr is associated with decreased yields. It is possible that the observed yield effects may be due to fungicide treatments affecting plant health and, therefore, tolerance to herbicide stress. More research will be needed to further investigate this possibility.