

EFFICACY OF MESOTRIONE PREMIXES IN CORN. Patrick W. Geier and Phillip W. Stahlman, Assistant Scientist and Professor, Kansas State University Agricultural Research Center, Hays, KS 67601.

An experiment conducted near Hays, KS in 2002 compared the efficacy and crop tolerance of mesotrione premixes in corn. The premixes included mesotrione&S-metolachlor at 187&1870 or 224&2240 g/ha and mesotrione&S-metolachlor&atrazine at 187&1870&700 or 224&2240&840 g/ha, each at two times of application. Preemergence applications of the premixes were applied alone, whereas early-postemergence (EPOST) applications included nicosulfuron at 17 g/ha. All treatments controlled redroot pigweed, Palmer amaranth, and narrowleaf lambsquarters >95% at 100 days after postemergence (POST) applications. Treatments containing atrazine controlled kochia 95% or more, and 85 to 90% without atrazine. Puncturevine control ranged from 78 to 88% and did not differ between treatments. Preemergence treatments controlled longspine sandbur <50%, whereas PRE followed by POST or EPOST treatments controlled sandbur 63 to 79%. Corn in plots receiving herbicide treatments was 43 to 63 cm taller and matured 5 to 7 days earlier than untreated corn. Corn treated EPOST or PRE followed by POST tended to be taller than corn in plots treated PRE alone. The two- or three-way premixtures applied PRE did not improve corn yields relative to nontreated corn. However, corn treated with isoxaflutole plus atrazine PRE, dimethenamid PRE followed by dicamba&atrazine POST, or the two- and three-way premixes plus nicosulfuron EPOST yielded 1460 to 2200 kg/ha more grain than untreated corn.