

IMAZAMOX&MCPA COMPARED TO STANDARD HERBICIDES IN WHEAT. Patrick W. Geier and Phillip W. Stahlman, Assistant Scientist and Professor, Kansas State University Agricultural Research Center, Hays, KS 67601.

Two field trials were conducted near Hays, KS in 2005-06 to determine the efficacy of and wheat response to an imazamox&MCPA premix alone and in combinations with standard treatments. In the first experiment, herbicide treatments were applied on October 25, 2005 to wheat that had four to eight leaves and less than two tillers. Treatments were applied on November 23, 2005 in the second experiment when wheat had 9 to 12 leaves and three tillers. All treatments included nonionic surfactant at 0.25% v/v and 28% urea ammonium nitrate at 2.5% v/v.

Downy brome was controlled 91% or more by treatments containing imazamox or imazamox&MCPA in the first experiment. Trisulfuron&dicamba, chlorsulfuron&metsulfuron, propoxycarbazone, or propoxycarbazone&mesosulfuron controlled downy brome 47 to 67% in the first experiment, and 35 to 60% in the second experiment. The best (90% or more) downy brome control in the second experiment was with tank mixtures of imazamox&MCPA at 43&350 or 70&420 g/ha with triasulfuron&dicamba or chlorsulfuron&metsulfuron, imazamox&MCPA at 35&280 g/ha plus propoxycarbazone at 45 g/ha, or imazamox&MCPA at 35&280 g/ha plus propoxycarbazone&mesosulfuron at 30&20 g/ha. Flixweed control exceeded 94% with most treatments, regardless of experiment, and henbit control was 93% or more. Propoxycarbazone alone or with mesosulfuron was less effective on flixweed and henbit than other treatments. Imazamox&MCPA caused 16 to 28% wheat stunting at 15 days after treatment in the first experiment, regardless of rate or tank mix partner. Stunting was more severe with the higher rates of imazamox&MCPA or when tank mixed with chlorsulfuron&metsulfuron. By 133 days after treatment, injury ranged from 10 to 35%. No visible injury was observed in the second experiment. Grain yields in the first experiment were highest from wheat receiving triasulfuron&dicamba, chlorsulfuron&metsulfuron, or propoxycarbazone, alone or with mesosulfuron. The treatments caused the little or no wheat injury. Conversely, yields in the second experiment were generally best with herbicides that provided the best downy brome control. Though early-season applications of imazamox&MCPA resulted in injury and yield reductions in wheat, later applications prevented wheat yield losses due to weed competition compared to the standard treatments.