

A COMPARISON OF SAFENERS FOR METOLACHLOR ON CORN. Crystal R. Schulz, James J. Kells, and Donald Penner, Undergraduate Research Assistant and Professors, Department of Crop and Soil Science, Michigan State University, East Lansing, MI 48824.

A field study was conducted in 2004 to compare the safeners benoxacor and dichlormid for efficacy in safening the unresolved isomeric mixture of metolachlor on an inbred corn line. Benoxacor is currently marketed in combination with both the unresolved isomers of metolachlor and the resolved s-metolachlor. Previous research has shown that the safener dichlormid to be an effective corn safener for alachlor and acetochlor on corn. Metolachlor was applied preemergence alone and in combination with benoxacor or dichloramid at rates of 2.24, 4.48, 8.96 kg ai/ha. Corn injury was determined based on visual observation and stand loss at 7, 14, 21, and 28 days after emergence (DAE). At 7 DAE metolachlor applied at rates of 4.48 and 8.96 kg ai/ha caused significant injury compared to corresponding rates with either safener. Metolachlor in combination with benoxacor at rates of 4.48 and 8.96 kg ai/ha resulted in significantly less injury than the same rates of metolachlor combined with dichlormid. The results of this study indicates that both benoxacor and dichlormid increase corn tolerance to metolachlor.