

TOLERANCE OF SIX POPCORN HYBRIDS TO BAS 781. Thomas T. Bauman and Michael D. White, Professor and Research Associate, Department of Botany and Plant Pathology, Purdue University, West Lafayette, IN 47907.

BAS 781 is a premix of dimethenamid-P + saflufenacel and is used as a soil applied pre emergence herbicide in corn. A field trial was conducted in 2008 to test the tolerance of six popcorn hybrids to three rates of BAS 781 (0.98, 1.47, and 1.95 kg ai/ha) and dimethenamid + atrazine (2.45 kg ai/ha). Plots were maintained weed free for the entire growing season with two mechanical cultivations (27 and 37 DAE).

A common injury symptom of BAS 781 is a necrotic lesion on leaves after they emerge from the soil. Significant necrosis was observed (17 DAE) on two hybrids treated with BAS 781 at the 1.95 kg/ha rate. Symptoms were not observed at the 49 DAE evaluation date. The 1.95 kg/ha rate of BAS 781 caused a reduction in crop stand with all six hybrids. A significant reduction in plant height was observed with all six hybrids treated at the two higher rates of BAS 781. No differences in plant height observed at harvest however. The high rate of BAS 781 caused a significant reduction in crop yield in all six hybrids at 10% level significance level but not at the 5% level. No significant effect on any hybrid was observed following application of a 0.98 kg/ha (X) rate of BAS 781.