WEED CONTROL AND SOIL LONGEVITY OF KIH-485, ACETOCHLOR, DIMETHENAMID, AND S-METOLACHLOR. Chad D. Dyer, Thomas T. Bauman, Michael D. White, Department of Botany and Plant Pathology, Lilly Hall of Life Sciences, 915 W. State Street, Purdue University, West Lafayette, IN 47907-2054.

Two field studies were conducted at the Agronomy Center for Research and Education (ACRE) located in West Lafayette, Indiana. The first field study was conducted on a Chalmers silt loam soil with 3% organic matter, and was setup in a randomized complete block design with four replications. The efficacy of KIH-485 60%WG applied at three rates, .75oz ai/ac, 1.49oz ai/ac and 2.98oz ai/ac was compared to acetochlor applied as Harness 7EC at the rate of 1.75lb ai/ac and S-metolachlor applied as Dual II Magnum at the rate of 1.52lb ai/ac using four weed species, jimsonweed, velvetleaf, ivyleaf morningglory, and shattercane. KIH-485 provided significantly superior control in every specie; and most species were controlled at 90% or higher.

The second field trial was conducted at the ACRE on a Chalmers silt loam soil with 3% organic matter and was setup in a randomized complete block design with four replications. The soil persistence of KIH-485 60%WG, acetochlor applied at Harness 7EC, S-metolachlor applied as Dual II Magnum, and dimethenamid applied as Outlook 6EC was determined 10wks after application using three grass species, barnyardgrass, wild oat and green foxtail. KIH-485 60%WG applied at 2.98oz ai/ac provided 69%, 80% and 95% control of green foxtail, wild oat and barnyardgrass, respectively. Acetochlor applied at 1.75lb ai/ac provided 0%, 3% and 46% control of green foxtail, wild oat and barnyardgrass, respectively. S-metolachlor applied at 1.52lb ai/ac provided 10%, 0% and 55% control of green foxtail, wild oat and barnyardgrass, respectively. Dimethenamid applied at .94lb ai/ac provided 10%, 8% and 24% control of green foxtail, wild oat and barnyardgrass, respectively.

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