SANDBUR CONTROL IN SOYBEAN WITH IMAZETHAPYR. Peter H. Sikkema, Joshua D. Vyn, Chris Kramer, and Nader Soltani*. University of Guelph Ridgetown Campus, Ridgetown, Ontario, Canada. N0P 2C0.

Five field trials were conducted at various locations in Ontario over a two year period (2005 and 2006) to study the efficacy of imazethapyr applied at various timing for the control of sandbur in soybean. Treatments consisted of a weedy check, a weed-free check, early and delayed preemergence (PRE) imazethapyr (100 g ai/ha) and postemergence (POST) applied imazethapyr (100 g ai/ha) at spike to five-leaf stage of sandbur. There was no visible injury to soybean 7, 14 and 28 days after treatment (DAT). Imazethapyr PRE treatments provided 46 to 66% control of sandbur. Imazethapyr POST provided up to 72, 66, 78, 91, 78 and 71% control of sandbur when applied at spike, one-, two-, three-, four-, and five-leaf stage, respectively. Sandbur density (#/m^{-2}) and biomass (g/m^{-2}) corresponded with the level of sandbur control. Generally, there was an improvement of sandbur control as the imazethapyr application timing was delayed until the three-leaf stage and then the control decreased when the application timing was delayed past this stage. Yield was reduced as much as 30% when sandbur was not controlled. Imazethapyr PRE treatments did not affect yield but imazethapyr POST when applied at spike, one-, two-, three-, four-, and five-leaf stage increased yield 44, 28, 39, 24, 38, and 20%, respectively. Based on these results, imazethapyr PRE does not provide adequate control of sandbur in soybean however, imazethapyr applied POST at three-leaf stage has potential for the control of sandbur in soybean.

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