

CONTROL OF COCKLEBUR IN SOYBEAN. Nader Soltani, Chris Kramer, Joshua Vyn, and Peter H. Sikkema, Research Associate, Research Assistant, Research Technician, and Associate Professor, University of Guelph Ridgetown Campus, Ridgetown, ON, Canada.

Field trials were conducted in 2006 on three Ontario farms with heavy infestations of cocklebur to determine the effectiveness of various PRE- and POST-emergence herbicides for the control of cocklebur in soybean. There was no injury to soybean at 7, 14, and 28 DAE from any of the PRE-emergence and POST-emergence herbicides evaluated. Cloransulam-methyl applied PRE provided 96% visual control, reduced density 87%, and reduced dry weight of cocklebur 98%. Flumetsulam applied PRE provided 71% visual control, reduced density 56%, and reduced dry weight of cocklebur 81%. Linuron, metribuzin, imazethapyr, and clomazone applied PRE provided little (15-49%) visual control and reduced density and dry weight of cocklebur minimally (50% or less) compared to the weedy check. Cloransulam-methyl applied POST provided 89% visual control, reduced density 83%, and reduced dry weight of cocklebur 99%. Chlorimuron-ethyl, imazethapyr, imazethapyr plus bentazon, and glyphosate applied POST provided 72-79% visual control, reduced density 60-77%, and reduced dry weight of cocklebur 90-98%. Acifluorfen, fomesafen, bentazon, and thifensulfuron-methyl applied POST provided 14-34% visual control, reduced density 0-47%, and reduced dry weight 0-86% compared to the weedy check. Based on these results, cloransulam-methyl applied PRE or POST-emergence provides excellent control of cocklebur in soybean. Flumetsulam applied PRE and chlorimuron-ethyl, imazethapyr, imazethapyr plus bentazon, and glyphosate applied POST have some potential for cocklebur control in soybean. Linuron, metribuzin, imazethapyr, and clomazone applied PRE and acifluorfen, fomesafen, bentazon, and thifensulfuron-methyl applied POST do not provide adequate control of cocklebur in soybean at the rates evaluated.