

CONTROL OF VOLUNTEER ADZUKI BEAN IN CORN AND SOYBEAN. Chris Kramer, Josh Vyn, Christy Shropshire, Nader Soltani, and Peter H. Sikkema. Undergraduate student, Research Technician, Research Technician, Research Associate, and Assistant Professor. Ridgetown College, University of Guelph, Ridgetown, ON, Canada. NOP 2C0.

There is currently little knowledge of herbicides that may provide effective control of volunteer adzuki bean in corn and soybean. Field studies were conducted in 2005 at Exeter and Ridgetown, Ontario to evaluate the performance of various pre- and post-emergence herbicides to control volunteer adzuki bean in soybean and corn. The pre-emergence application of cloransulam-methyl, linuron, metribuzin, flumetsulam, and imazethapyr did not control volunteer adzuki bean in soybean. The post-emergence application of glyphosate provided 83% control of adzuki bean, reduced adzuki bean dry weight, and increased soybean yield compared to the weedy check. The postemergence application of chlorimuron suppressed the growth of volunteer adzuki bean in conventional soybean. The post-emergence application of acifluorfen, fomesafen, bentazon, thifensulfuron, cloransulam-methyl, imazethapyr, and imazethapyr + bentazon did not have any effect on visual control, dry weight of volunteer adzuki bean, or soybean yield. Of the pre-emergence herbicide options in corn, dicamba/atrazine provided the best control and reduced adzuki bean dry weight to the level of the weed free check. None of the pre-emergence treatments had any effect on corn yield compared to the weedy check. The post-emergence application of atrazine, dicamba, dicamba/diflufenzopyr, dicamba/atrazine, 2,4-D/atrazine, bromoxynil + atrazine, prosulfuron + dicamba, primisulfuron/dicamba, mesotrione, and mesotrione + atrazine controlled volunteer adzuki bean 82-96%, reduced dry weight 90-100%, and increased corn yield 26-35% over that of the weedy check. Dicamba/atrazine was the most effective herbicide while mesotrione was the least effective herbicide option in controlling volunteer adzuki bean among the post-emergence herbicides evaluated in corn.