

ADZUKI BEAN: WEED CONTROL AND PRODUCTION ISSUES. Gary E. Powell, Christy L. Sprague, and Karen A. Renner, Research Assistant, Assistant Professor, and Professor, Department of Crop and Soil Sciences, Michigan State University, East Lansing, MI 48824.

Michigan adzuki bean (*Vigna angularis*) production for southeast Asian export has increased in the past decade. Because of limited herbicide registrations, growers ask questions on weed control and crop tolerance. Field studies were conducted in 2001, 2002, and 2004 to assess crop tolerance, weed control, and control of volunteer adzuki bean in succeeding crops. Herbicides were applied to adzuki bean at rates labeled for dry edible bean or soybean. Adzuki bean injury from preplant applications of trifluralin, pendimethalin, and ethalfluralin was less than 5%, 12%, and 13%, respectively, in 2002 and 2004. Preplant applications of EPTC in 2004 caused 30% adzuki bean injury. Metribuzin and S-metolachlor preemergence resulted in adzuki bean injury ranging from 2% to 20% and 12% to 44%, respectively, in 2001, 2002 and 2004. Injury from dimethenamid-P ranged from 35% to 68% in 2001 and 2004. Injury from alachlor preemergence ranged from 28% to 48% in 2001 and 2002. Imazethapyr + pendimethalin preemergence injured adzuki bean 7%, while imazethapyr preemergence caused 4% adzuki bean injury in 2004. Cloransulam-methyl preemergence injured adzuki bean 12%; while postemergence applications resulted in adzuki bean injury of 24% in 2004. Applications of fomesafen postemergence injured adzuki bean from 14% to 28% in 2001 and 2004. Imazamox applied postemergence injured adzuki bean from 8% to 17%, while addition of bentazon to imazamox increased injury 10% to 15% while increasing control of common lambsquarters. Lack of black nightshade control from metribuzin without a postemergence or tank-mix partner resulted unharvestable treatments. Overall weed control in adzuki bean was consistent with a given herbicides performance in dry edible bean or soybean. Volunteer adzuki bean in a subsequent corn crop was controlled by atrazine + acetachlor (92%), and dicamba + diflufenzopyr (95%). Volunteer adzuki bean in soybean was controlled by chlorimuron ethyl + thifensulfuron-methyl (90%) and flumioxazin (100%). Sulfentrazone controlled volunteer adzuki bean 75% and reduced seed yield by 85%.