

RESPONSES OF FOUR ORNAMENTAL CROPS AND SELECTED WEEDS TO HERBICIDES.

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A field study was conducted in 2003 and 2004 in Benton Harbor, MI to evaluate herbicides for use in four ornamental crops: Vinca (*Vinca minor*), burning bush (*Euonymus alatus*), creeping phlox (*Phlox subulata*), and lily turf (*Liriope muscari*). The weeds evaluated were common ragweed, wild buckwheat, Pennsylvania smartweed, common lambsquarters, hairy nightshade, and carpetweed. Herbicide treatments included sprayable formulations of isoxaben (1.49 kg ai/ha) plus metolachlor (2.13 kg /ha), isoxaben plus dithiopyr (0.56 kg /ha), mesotrione (0.28 kg /ha), trifloxysulfuron (0.004 kg /ha), and halosulfuron (0.07 kg /ha), and granular formulations of flumioxazin (0.42 kg /ha), oxadiazon (3.36 kg /ha), pendimethalin (2.1 kg /ha) plus oxadiazon (3.36 kg /ha), and a handweeded control. The greatest injury was observed with mesotrione at 60%, 55%, 45%, and 13% in lily turf, burning bush, creeping phlox, and vinca, respectively. Burning bush was sensitive to all herbicides (12 to 55% injury), except metolachlor, pendimethalin plus oxadiazon and flumioxazin, which resulted in less than 12% injury. Vinca was fairly tolerant of all the herbicides, with less than 3% visible injury one month after application. Ornamental plant size was not significantly different throughout the treatments. Ragweed control was 82% or greater with mesotrione, trifloxysulfuron, and halosulfuron. All herbicides evaluated, except trifloxysulfuron and halosulfuron, gave common lambsquarters control of 89% or greater. Hairy nightshade control was 92% or greater with isoxaben plus metolachlor, isoxaben plus dithiopyr, mesotrione, flumioxazin, and pendimethalin plus oxadiazon.