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© 20. The effect of five pre-emergence herbicides on emergence and establishment of four native wildflowers. Jacobs, J. S., Winslow, S. R., and Pokorny, M. L. Native Plants Journal 8(3):224-231. 2007.

Photo by Susan R Winslow

THE EFFECT OF

FIVE PRE-EMERGENCE HERBICIDES

ON EMERGENCE AND ESTABLISHMENT OF

ABSTRACT

Careful selection of pre-emergence herbicide for control of weeds may improve establishment of native wildflowers grown for seed production. In a 28-d greenhouse herbicide injury experiment, 4 emerging wildflower species were established on soil treated with one of 6 pre-emergence herbicide treatments. No wildflower seedlings survived the atrazine treatment and few survived the sulfentrazone treatment. Of the 5 herbicides tested, DCPA applied at 1100 g active ingredient (ai) per ha (8 lb ai/ac) and trifluralin applied at 184 g ai/ha (2 pt ai/ac) caused the least reduction in wildflower seedling density, height, and shoot dry mass of all species. The densities, however, of *Dalea candida* Michx. ex Willd. (Fabaceae), *Gaillardia aristata* Pursh (Asteraceae), and *Ratibida columnifera* (Nutt.) Woot. & Standl. (Asteraceae) were each reduced in 1 of the 2 experimental runs, whereas the height of *D. candida* and *G. aristata* and the shoot dry mass of *R. columnifera* seedlings were reduced by trifluralin. *Liatris punctata* Hook. (Asteraceae) densities were reduced only by atrazine and sulfentrazone.

Jacobs JS, Winslow SR, Pokorny ML. 2007. The effect of five pre-emergence herbicides on emergence and establishment of four native wildflowers. Native Plants Journal 8(3):224–231.

KEY WORDS

wildflower seed crop, herbicidal weed control, herbicide injury, *Dalea, Gaillardia, Liatris, Ratibida*

NOMENCLATURE

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FOUR NATIVE WILDFLOWERS

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