

عنوان مقاله:

The effect of adjuvants on nicosulfuron efficacy for controlling *Amaranthus retroflexus*, *Chenopodium album*, and *Echinochloa crus-galli*

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خلاصه مقاله:

Three dose-response experiments were conducted separately to study the effect of several adjuvants on nicosulfuron efficacy for controlling *Amaranthus retroflexus* L., *Chenopodium album* L. and *Echinochloa crus-galli* L. The experiments were arranged in a completely randomized block design with a factorial arrangement of the treatments and four replications. The treatments consisted of six doses of nicosulfuron at 0 (control), 5, 10, 20, 40, and 80 g a.i.ha⁻¹ of the recommended dose with and without the adjuvants of cotton oil, rocket oil, soybean oil, maize oil, Adigor®, Volck®, HydroMax™ at 0.5% (v/v), Cytogate, Trend® 90, and D-octil® at 0.2% (V/V). The efficacy of nicosulfuron in control of *A. retroflexus*, *C. album*, and *E. crus-galli* increased significantly when the adjuvants were used. HydroMax™ and Trend® 90 were the best adjuvants, considering enhanced nicosulfuron efficacy for controlling *C. album*, *E. crus-galli*, and *A. retroflexus*. In the presence of HydroMax™ nicosulfuron efficacy was raised by a factor of 4.02, 3.45, and 1.65-fold for controlling *A. retroflexus*, *E. crus-galli*, and *C. album*, respectively. In general, the efficacy of nicosulfuron to control *A. retroflexus* and *E. crus-galli* was higher than *C. album*.

کلمات کلیدی:

dose-response, herbicide, surfactant, vegetable oil

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