

NEW HERBICIDE FORMULATION FOR WEED CONTROL IN CORN

Willian Daróz Matte¹, Rubem Silvério de Oliveira Jr.², Jamil Constantin³, Denis Fernando Biffe⁴, Fellipe Goulart Machado⁵, Jonas Rodrigo Henckes⁶, Rodrigo Barilari Baladeli⁷

Universidade Estadual de Maringá - UEM¹, Universidade Estadual de Maringá - UEM², Universidade Estadual de Maringá - UEM³, Universidade Estadual de Maringá - UEM⁴, Universidade Estadual de Maringá - UEM⁵, Universidade Estadual de Maringá - UEM⁶, Universidade Estadual de Maringá - UEM⁷

To provide new tools to deal with weed resistance to herbicides and to increase the spectrum of weed control in corn, herbicide formulations that combine different modes of action are an important alternative. The objective of this experiment was to evaluate control of *Conyza bonariensis*, *Urochloa decumbens*, *Cenchrus echinatus*, *Digitaria horizontalis*, *Urochloa plantaginea*, *Ipomoea grandifolia*, *Euphorbia heterophylla*, *Bidens pilosa*, *Glycine max* and *Commelina benghalensis*, as a function of the post-emergence application of a new formulated mixture containing [atrazine+mesotrione], alone or in tank mixtures with glyphosate, tembotrione or nicosulfuron. The experiment was carried out in greenhouse conditions from March to May 2017. The statistical design was a completely randomized with 16 treatments and four replicates for each weed. Weed control (%) was evaluated in relation to the plants present in check without herbicide at 7, 14 and 28 days after the application of herbicide treatments. The data were submitted to analysis of variance by the F test and the means were compared by the Scott-Knott test ($p < 0.05$). All treatments with isolated [atrazine+mesotrione] and with associations provided above 99% control for *C. bonariensis*, *C. benghalensis*, *G. max*, *U. plantaginea*, *B. pilosa* and *I. grandifolia*. Control of *E. heterophylla*, *D. horizontalis*, *C. echinatus* and *U. decumbens* with [atrazine+mesotrione] alone was less efficient than when it was associated to glyphosate, tembotrione or nicosulfuron. The association of glyphosate with the formulated mixture [atrazine+mesotrione] resulted in effective control all species evaluated.

Palavras-chave: [atrazine+mesotrione], post-emergence, *Conyza bonariensis*, *Eleusine indica*.

Apoio: Núcleo de Estudos Avançados em Ciência das Plantas Daninhas (NAPD/UEM); Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq); Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES).