



## **Time of day does not influence the efficacy of auxin herbicides and paraquat on regrowth of *Conyza bonariensis***

Diecson Ruy Orsolin da Silva<sup>1</sup>; Dionei Schmidt Muraro<sup>2</sup>; Adalin Cezar Moraes de Aguiar<sup>3</sup>; Douglas Peron Gheller<sup>1</sup>; Luiz Henrique da Silva Fagundes Marques<sup>4</sup>; Rogério da Silva Rubin<sup>4</sup>

Universidade Federal de Santa Maria, campus Frederico Westphalen<sup>1</sup>; Universidade Federal de Santa Maria, campus Santa Maria<sup>2</sup>; Universidade Federal de Viçosa<sup>3</sup>; Dow Brasil<sup>4</sup>

The efficacy of auxin herbicides and paraquat can vary depending on the time of day (TOD) of application. A field experiment was carried out to evaluate the efficacy of the combination of synthetic auxin herbicides and paraquat at different TOD in *Conyza bonariensis*. The herbicides 2,4-D (1005 g ae.ha<sup>-1</sup>), dicamba (720 g ae.ha<sup>-1</sup>) and MCPA (879 g ae.ha<sup>-1</sup>) were applied alone, plus (+) and followed (→) by paraquat (400 g ia.ha<sup>-1</sup>) at morning and night. Sequential applications of paraquat were applied seven days after first application. The treatments were applied on *C. bonariensis* (50 cm height). The control and regrowth were evaluated at 42 days. There was not effect of TOD on the control and regrowth, but dicamba alone provided highly effective control compared to 2,4-D or MCPA alone. *C. bonariensis* control from dicamba alone, dicamba+paraquat and dicamba→paraquat were not significantly different, improved the level of control to 80, 90 and 95%, respectively. The herbicides 2,4-D and MCPA alone or in any combination with paraquat provided poor control (below 40%), but the control of 2,4-D and MCPA followed by paraquat ranged from 83 to 96%. Dicamba alone and dicamba→paraquat were highly effective to avoid regrowth, followed by applications of dicamba+paraquat and 2,4-D→paraquat. The other treatments herbicides provided high plant regrowth. Application of TOD not affected *C. bonariensis* control and regrowth, regardless combination of herbicides. Dicamba was more effective than 2,4-D and MCPA, and the efficiency is maintained regardless of paraquat. The 2,4-D and MCPA are more efficacious when applied followed with paraquat.

**Palavras-chave:** 2,4-D, dicamba, MCPA, sequential, mix tank.

**Apoio:** Universidade Federal de Santa Maria e Dow AgroSciences.



Sociedade Brasileira da  
Ciência das Plantas Daninhas  
(Brazilian Weed Science Society)