



Glyphosate-resistant palmer amaranth (*Amaranthus palmeri*) confirmed in Brazil

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A glyphosate-resistant biotype of *Amaranthus palmeri*, was confirmed in central Mato Grosso, Brazil, which is a newly introduced species in the country. In order to confirm that, the susceptibility level of the population to glyphosate was obtained by trials of dose-response curves, conducted under greenhouse conditions.

However, due to the fact the species was introduced in a single site in the country, no comparison was possible to be made with a known susceptible population of *A. palmeri* to glyphosate from the same area, since the population is unique in the country, very likely the only one biotype introduced. In the greenhouse glyphosate was applied to 5 to 10-cm-tall palmer amaranth at the rates of 180; 360; 720; 1,440; 2,880; 5,760 and 11,520 g of glyphosate/ha. I₅₀ values (rate necessary for 50% inhibition) for visual control, expressed as percentage of the nontreated, was 10,833.8 g/ha of glyphosate. Considering that in obtained average I₅₀ value for the other species of amaranth, like *Amaranthus hybridus* is 239.0 g/ha, the R/S value calculate is 45.33, confirming the high level degree of resistance of *A. palmeri* introduced in Brazil. The result may also infer that glyphosate can no longer be an alternative of controlling this weed biotype in Brazil.

Palavras-chave: *Amaranthus hybridus*, dose-response, glyphosate, EPSPs, weed management

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