CONTROL OF *AMARANTHUS PALMERI* WITH RESISTANCE TO INHIBITORS OF EPSPS AND ALS IN THE SUCCESSION OF SOYBEAN-COTTON. F. S. Ikeda*[1], S. D. Cavalieri[1], F. Poltronieri[2], A. Deon[2]; [1]Embrapa, Sinop, Brazil, [2]Federal University of Mato Grosso, Sinop, Brazil (77)

ABSTRACT

As a result of the potential problem that *Amaranthus palmeri* presents for Brazilian agriculture and because it has been identified as glyphosate and ALS inhibity herbicides resistant in the state of Mato Grosso, this study aimed to evaluate the application of herbicides in pre- and post- emergence in the soybean-cotton succession for the control of *A. palmeri*, aiming to provide alternatives of management of the species to the properties with their occurrence, as well as in the case of the species dissemination. The experimental design was a randomized complete block design with four replications and 14 treatments. The herbicide treatments (g ha^{-1}) were: two doses of pendimethalin (1,400 and 1,820) in pre-emergence (PRE) combined with fomesafen (250), lactofen (180), bentazon (600) and bentazon + imazamox] in post-emergence (POST) in soybean, followed by s-metolachlor (1,200) and trifluralin (1800) herbicides in PRE combined with two doses of ammonium glufosinate (400 and 600) in POST in cotton crop. The applications of pendimethalin (1,820) in PRE in soybean and cotton crops were also studied, followed by bentazon + imazamox [600 + 28] and ammonium-glufosinate (600) in POST in the respective crops, as well as the applications in PRE with pendimethalin (1,400) on soybean and s-metolachor (1,200) on cotton, pendimethalin (1,820) on soybean and trifluralin (1,800) on cotton and pendimethalin (1,820) on both crops. In addition, weeded and non-weeded controls were included. In the control percentage evaluation of *A. palmeri* at 7 and 14 days after the last application in soybean (DAA), satisfactory control (> 80%) was observed only for the application of pendimethalin in PRE with fomesafen or lactofen in post-emergency. In cotton crop, all combinations in pre- and post-emergence had a percentage of control greater than 95%. There was no effect of the treatments for plant height, the insertion height of the 1st. number of beaks per plant, stand and cotton yield, according to analysis of variance. It was concluded that the most recommended treatments for the control of *A. palmeri* in the soybean-cotton succession are those with the application of pendimethalin in pre and fomesafen or lactofen in post-emergence in soybean with s-metolachlor or trifluralin in pre and ammonium glufosinate in post-emergence in cotton crop.