Integrating fungicide and biocontrol foliar spray on maize grain yield and fumonisin content/ Combinação da aplicação foliar de fungicida e biocontrole no rendimento de grãos e no teor de micotoxinas em milho. R.A. Guimarães[1]; E. Zanotto[2]; L.A.S. Zanotto[2]; J.C. Machado[1]; I.S. Melo[3]; R.G Von Pinho[4]; F.A.M.F. Pinto[1]; P.H.O.S. Fortês[1]; H. N. Medeiros[1]; F.H.V. Medeiros[1]. [1]Department of Plant Pathology/UFLA, Lavras, MG. [2]Biovalens, Rio Verde, GO. [3]Embrapa Environment, Jaguariúna, SP. [4]Department of Agriculture/UFLA, Lavras, MG.Email: rafaela_argui@hotmail.com

The adoption of biocontrol is low in maize production, although it has been reported reduction in fumonisin levels when combined with fungicides. The objective of this work was to evaluate the potential of *Streptomyces araujoniae* (BC1) and *Bacillus* sp. (BC2) combined or not with the fungicide azoxystrobin+ciproconazol (FG), on grain yield, *Fusarium verticillioides* incidence and fumonisin (B1 and B2) content. Maize plants were sprayed two times, at V9 and R1 with Water, BC1, BC2, Fungicide alone or in different combinations two by two. All plants were inoculated with *F. verticillioides*. Upon harvest, treatments were evaluated for total yield, *F. verticillioides* grain contamination (blotter test) and total fumonisin (B1+B2) contents. FG (V9) + BC1 (R1) resulted in increased yield in three out of four field trials, while all other treatments increased yield in only two. All treatments except FG (V9 + R1) reduced *F. verticillioides* incidence. None of the treatments reduced fumonisin levels, but FG (V9 + R1), BC1 (V9) + FG (R1) and BC1 (V9) + BC1 (R1) resulted in higher mycotoxin content compared to the control. FG (V9) + BC1 (R1) increased yield, reduced grain contamination and didn't contribute to higher fumonisin levels compared to control. Therefore, it can contribute to qualitative and quantitative maize grain yield improvement.

Keywords: Fumonisin, biological control, integrated management.

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