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Increase of Atmosphere CO2 Concentration and Its Effects on Culture/Weed Interaction

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Abstract : Climate change projections based on the emission of greenhouse effect gases suggest an increase in the concentration of atmospheric carbon dioxide, in up to 750 ppm. In this scenario, we have significant changes in plant development, and consequently, in agricultural systems. This study aims to evaluate the interaction between culture (Glycine max) and weed (Amaranthus viridis and Euphorbia heterophylla) in two conditions of CO₂, 400 and 800 ppm. The results showed that the coexistence of culture with both weed species resulted in a mutual loss, with decrease in dry mass productivity of culture + weeds, in both conditions of CO₂. However, when the culture is grown in association with E. heterophylla, total dry mass of culture + weed was smaller at 800 ppm. Soybean was more aggressive in comparison to the A. viridis in both the concentrations of CO₂, but not in relation to the E. heterophylla.

Keywords : plants interaction, increase of [CO_2], plants of metabolismo C3, glycine max
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