



## **Evaluation of Hydrus-2D model for solute distribution in subsurface drip**

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The competition for water use between agriculture, industry and population has become intense over the years, requiring a rational use of this resource for food production. The subsurface drip irrigation can help producers with the optimization of operating parameters such as frequency and duration of irrigation, flow, spacing and depth of the dripper installation. This information can be obtained by numerical simulations using mathematical models, thus the aim of this study was to evaluate the HYDRUS-2D model from experimental data to predict the size of the wet bulbs generated by emitters of different application rates (1.0 and 1.6 L h<sup>-1</sup>). The results showed that horizontal displacement (bulb diameter) remained the largest in all the bulbs, observed both in experimental trials and estimated by the model and the correlation between them was high, above 0.90 to below 16% error. We conclude that the HYDRUS-2D model can be used to estimate the dimensions of the wet bulb getting new information on the sizing of the irrigation system.