## Non-linear mixed regression model applied to pepper Biquinho growth

César Gonçalves de LIMA<sup>1</sup>, Simone Daniela Sartório de MEDEIROS<sup>2\*</sup>, Larissa de Oliveira CHICAGLIONE<sup>3</sup>, Victor Augusto FORTI<sup>2</sup>, Adriano Sebastião dos SANTOS<sup>4</sup>, Fernando Cesar SALA<sup>5</sup>

**Abstract**: Mixed logistic nonlinear model was used in a genetic improvement study of one cultivar and two strains of Biquinho pepper. The model with random effect in asymptote explained better the fruit length and width fruits over time and produced important changes in the final conclusions, replacing the classic logistic model.

**Keywords**: Longitudinal data; growth curve; heteroscedasticity.

<sup>&</sup>lt;sup>1</sup>Docente do ZAB/FZEA/USP, Pirassununga/SP, Brasil.

<sup>&</sup>lt;sup>2</sup>Docente do DTAiSeR-Ar/CCA da Universidade Federal de São Carlos (UFSCar). CEP: 13600-970, Araras/SP, Brasil, \*E-mail: sisartorio@ufscar.br

<sup>&</sup>lt;sup>3</sup> Discente do curso de Bacharelado em Engenharia Agronômica do CCA/UFSCar, Araras/SP, Brasil.

<sup>&</sup>lt;sup>4</sup> Mestre do PPG em Agroecologia e Desenvolvimento Rural do CCA/UFSCar, Araras/SP, Brasil.

<sup>&</sup>lt;sup>5</sup> Docente do DBPVA/CCA/UFSCar, Araras/SP, Brasil.