

**CLUSTER ANALYSIS APPLIED TO NONLINEAR REGRESSION MODELS  
SELECTION FOR THE DESCRIPTION OF DRY MATTER  
ACCUMULATION OF GARLIC PLANTS**

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- **ABSTRACT:** *This work had as objective the evaluation of nonlinear regression used for description of the dry matter accumulation along the time in plants of garlic, comparing results of quality fit evaluators. Twenty garlic accessions were divided in two groups, evaluated in the characteristics: diameter, length and medium weight of the bulb, number of bulbils and productivity. For the two groups, nonlinear regression models were adjusted to describe the dry matter accumulation of the plant. The models were then grouped according to the fit quality, measured by the coefficient of determination, error mean square, average deviation absolute error, Akaike information criterion, and Bayesian information criterion. The analysis indicated the Logistic model as the most appropriate for the description of dry matter accumulation in garlic, and a test of model identity applied to the models of the two groups indicated that they are statistically similar, and a complete model is valid for both groups of garlic accessions.*
- **KEYWORDS:** *multivariate classification, model identity, Allium sativum L.*

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