GOMPERTZ GROWTH MODEL IN THE PRESENCE OF NORMAL HETEROSCEDASTIC ERRORS: A CASE STUDY

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- ABSTRACT: This paper referes to weight in grams for 152(262) male(female) quails, measured at 1ª, 7ª, 14ª, 21ª, 28ª and 35ª weeks after birth. The estimates for the parameters of the models (with homoscedasticity or not) are obtained by maximization of the logarithm of the likelihood function assuming normal errors and by MCMC methods. The inferences on the parameters of interest are based on asymptotical normality of the maximum likelihood estimators. The fitted model under the assumption of homogeneity of variances seems to superestimate the true mean weight of the quails which does not occur with the model with different variances for the errors.
- KEYWORDS: Nonlinear regression; growth model; heteroscedasticity; maximum likelihood estimation.

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