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**A Comparative Study of Test Procedures used in Assessing the
Forecasting Ability of Linear Models with Applications to Crop Yield data.**

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Abstract

The choice of the appropriate linear model before this can be used for planning and decision making, has been the concern of many statistical workers. Most of the methods in the literature aim at evaluating the descriptive ability of the candidate models.

In the present paper an evaluation scheme of the predictability of a linear model based on a function of the discrepancy of the observed and the corresponding predicted values of the dependent variable is studied. Based on this statistical function, the predictability of a linear model is tested. Considering the ratio of such functions for two linear models, the predictability of these models is compared. Applications on real and simulated data are also presented.

Key words: Linear model; Model Selection; Decision Making; Predictability; χ^2 distribution; F ditribution.