Int. J. Agricult. Stat. Sci. Vol. 14, No. 1, pp. 23-34, 2018

**ORIGINAL ARTICLE** 

ISSN: 0973-1903



## COMPARISON BETWEEN REGRESSION ANALYSIS AND ANALYSIS OF VARIANCE TECHNIQUES

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**Abstract :** In this investigation, we have shown that two statistical data analysis procedures, namely, Analysis of Variance and Regression Analysis can be interchangeably used on the same data-set, if the format of the data permits. Further, we have also discussed that this investigation expresses the confidence for using the regression data for forming a layout of design experiment without actually conducting the experiment. We have also tried an effort to make a comparison between Regression Analysis and Analysis of Variance techniques using two different examples. We observed that the regression analysis and analysis of variance methods give the same result for the same data. This, we have shown using the graphical techniques and data analyzed by both the methods.

Key words : Regression analysis, Analysis of variance, Explanatory variables, Response variable, Interaction effects.