

## **ESTIMATION OF SEED GERMINATION USING PIECEWISE REGRESSION MODEL**

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*Often there are data which do not meet the assumptions of linearity to implement the linear regression model. Further it had been a practice to fit quadratic regression to estimate maximum values for the response function if the scatter plot resembles a sort of a parabola. The quadratic fit may reveal a dramatic change in the slope at a particular value on the horizontal axis. However, this underestimates the estimation particularly when the data contains discontinuities (jumps). A possible remedy for this will be fitting piecewise regression models for the non-linearity that may have occurred by the discontinuities. This paper attempted to compare the estimates of the percentage germination of five species of Vigna with varying accessions. The rate of germination fitted from quadratic regression ranged from 0.235 to 0.872 while that of piecewise regression from 0.296 to 0.753. Thus the under-estimation from the quadratic regression ranged from 26.2% in accession 7534 of Vigna Membranacea to 82.6% in accession 61 of the Vigna Vexillata.*