

CORRELATION AND PATH ANALYSIS OF QUANTITATIVE CHARACTERS
IN SESAME (SESAMUM INDICUM L.)

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Nine quantitatively inherited characters were evaluated in twenty seven newly introduced genotypes of sesame of wide ecological divergence, grown in a randomized complete block design with two replications at Mapalana Research Farm during Yala, 1986. The varieties were found to have a wide range of genetic variability for the quantitative characters studied.

Correlation and path coefficient analysis of seed yield and yield components revealed that the genotypic correlations were higher than the phenotypic correlations. Plant height ($r=0.896$), total number of nodes on plant ($r=0.709$), time to flowering ($r=0.859$), height to lowest capsule ($r=0.723$), plant height at flowering ($r=0.914$), height to first flowering node ($r=0.970$), and the number of capsules per plant ($r=0.602$) recorded significantly positive genotypic correlations with yield, whereas 1000 seed weight ($r=-0.636$) and length of capsule ($r=-0.385$) were negatively correlated to it.

Path coefficient analysis revealed that the number of capsules per plant and time to flowering had a considerable direct effect on yield and the other characters such as plant height and number of nodes recorded high indirect influence on yield. Further analysis of the negative correlation of 1000 seed weight showed that it was due to highly negative indirect effects through other yield components, mainly the number of nodes and capsules.