

Character Association and Path Coefficient Analysis for Morpho-Physiological Traits in Groundnut (*Arachis hypogaea* L.)

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ABSTRACT

Correlation and path coefficients were worked out for twenty three traits involving twenty eight hybrids in groundnut. Pod yield per plant had significant positive association with plant height, number of well-filled and mature pods per plant, 100-kernel weight and kernel yield per plant in F_1 s. Significant positive association with sound mature kernel per cent was observed among the F_1 crosses. These characters can be considered as criteria for selection for higher yield, as these were mutually and directly associated with pod yield. SCMR had significant negative association with specific leaf area. Path coefficient analysis revealed that kernel yield per plant had maximum positive direct effect on pod yield per plant indicating that kernel yield is the important yield contributing character. A perusal of path coefficients in F_1 generation revealed the moderate direct positive effect of number of well-filled and mature pods per plant on pod yield in groundnut. The high direct effect of pods per plant was appeared to be the main factor for its strong positive correlation with pod yield. Hence, a direct selection for this trait would be effective.

Key words : Groundnut, Characters association, Path analysis, Physiological traits, Yield.