

## Genetic inter-relationship and cause effect for yield and its attributing traits in finger millet [*Eleusine coracana* (L.) Gaertn.]

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**ABSTRACT:** A study was conducted to estimate genetic parameters for yield and its contributing characters in twenty one finger millet genotypes. The coefficient of variation at phenotypic and genotypic levels were high for length of finger and number of fingers, moderate for the traits like, days to grain yield, number of tillers and plant height. Low phenotypic coefficient of variation (PCV) and genotypic coefficient of variation (GCV) were observed in the trait, days to 50% flowering, days to maturity and fodder weight. From the results, high heritability coupled with high genetic advance was observed in days to 50% flowering, length of finger, days to maturity, fodder weight and grain yield/plant, which indicated the predominance of additive gene effects, in controlling these traits, early and simple selection could be exercised due to fixable additive gene effects. Correlation and path analysis revealed that the traits, productive tillers per plant and finger length are the important yield contributing traits and due emphasis needs to be given to productive tillers per plant and finger length, while selecting for grain yield improvement in finger millet. Since, these traits had significant positive correlation with grain yield and positive inter-correlation among themselves. Days to maturity, fodder weight, days to 50% flowering and length of finger showed positive significance at genotypic level. Path analysis revealed, days to maturity and fodder weight per ear exhibited positive direct effect association and positive direct towards seed yield. The existing variability in the finger millet entries provides opportunities for breeders to select specific donors for genetic improvement.

**Key Words:** Finger millet (*Eleusine coracana* L.), genetic inter-relationship, yield, low phenotypic coefficient of variation (PCV), genotypic coefficient of variation (GCV).