

B-35 Studies on hybrid vigour in Okra (*Abelmoschus esculentus* (L) Moench)

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Okra is a high nutritive vegetable crop. Exploitation of hybrid vigour for yield has been reported in this crop. However this area of research has not been adequately addressed in the past.

Diallal crosses were made in 3 genotypes of diverse origin [HRB₁₀ (from India), Palvendi (from Vavuniya district) and Batticaloa local (from Batticaloa district)]. The level of hybrid vigour was studied in pod yield, number of pods per plant, pod weight and days to initial flowering and data collection commenced 4 weeks after planting.

First filial generation of the crosses between Palvendi x HRB₁₀, HRB₁₀ x Batticaloa local and Palvendi x Batticaloa local showed hybrid vigour in yield but at different levels. Palvendi x Batticaloa local gave a significant increase (91%) over the mid parent value, while it was 42% and 4% respectively in HRB₁₀ x Batticaloa local and Palvendi x HRB₁₀. The number of pods also expressed hybrid vigour in F₁ indicated by an increase of 58% in Palvendi x Batticaloa local, 10% in HRB₁₀ x Batticaloa local and 3% in HRB₁₀ x Palvendi. Advancement in number of days to initial flowering was observed in the F₁ hybrids HRB₁₀ x Palvendi and Palvendi x Batticaloa local. The weight of the pod expressed hybrid vigour in the crosses between Palvendi x Batticaloa local, Palvendi x HRB₁₀, HRB₁₀ x Palvendi and HRB₁₀ x Batticaloa local by exceeding the value of the mid parent by 22.73%, 10.6%, 9.87% and 14.6% respectively.

From this study it appears that hybrid vigour can be utilized for characters of agronomic importance in self pollinated crops like okra, if genotypes of diverse origin are used in hybridisation.