

HETEROSIS IN BOTTLE GOURD (*LAGENARIA SICERARIA* (MOLINA) STANDL) USING L X T

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ABSTRACT

Nine lines and four testers and 36 F₁ hybrids of bottle gourd, obtained from L x T mating, were studied to investigate the extent of heterosis for yield and its contributing characters, during 2011 and 2012, in the Department of Horticulture, Pandit Jawaharlal Nehru College of Agriculture and Research Institute, Karaikal, U.T. of Puducherry. The variety NDBG – 164 (T₂) was used as the standard check variable to estimate the standard heterosis. Negative heterosis was considered to be better for some of the eight characters studied viz., Node at first male flower appears, node at first female flower appears, days to first male flower opening, days to first female flower opening, days to first fruit harvest, fruit cavity, 100 seed weight and number of seeds per fruit with respect to the yield while positive heterosis was considered to be desirable for the remaining 10 traits viz., vine length, number of primary branches, sex ratio, fruit length, fruit width, fruit flesh thickness, number of fruits per vine, number of pickings, fruit weight and yield per vine. The heterobeltiosis for yield per vine was positive and significant in 36 hybrids. The maximum positive and high significant heterotic expression of 133.61 per cent for fruit yield per vine, number of fruit pickings and fruit length was observed in Pusa Naveen x NDBG - 164 (L₇ x T₂) followed by Pusa Naveen x Punjab Komal (L₇ x T₁) with heterotic expression of 132.31 per cent for fruit yield per vine. Therefore, it is concluded that Pusa Naveen x NDBG-164 and Pusa Naveen x Punjab Komal, could be considered for commercial cultivation as F₁ hybrids after conducting confirmatory trials (MLT and ART) in farmer's holdings.

KEYWORDS: F₁ Hybrids, Heterosis, Bottle Gourd, L X T