

**EVALUATION OF SIX EGGPLANT ACCESSIONS AND THEIR F1  
HYBRIDS FOR MORPHOLOGICAL, AGRONOMICAL AND  
ORGANOLEPTIC INTEREST**

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Eggplant (*Solanum melongena* L.) is a major vegetable crop grown in Sri Lanka having higher farmer and consumer demand. Progress of eggplant hybrid breeding is hindered due to lack of good combiner parents to exploit heterosis. Present study was conducted to identify desirable genotypes in terms of morphological, yield, fruit quality characteristics and resistance to major pest and diseases of six eggplant accessions and their F1 hybrids with reference variety (HORDI Lenairi 1). The experiment was carried out in the field of Horticultural Crop Research and Development Institute, Gannoruwa during *Maha* 2015/2016 by using Randomized Complete Block Design with two replicates for each treatment. Morphological characters related to vegetative and reproductive stages were assessed based on the eggplant descriptor (IBPGR, 1990). Analysis of variance was carried out for quantitative characters such as plant height, number of primary branches, number of leaves, number of inflorescence, days to 50% flowering, number of fruits per plant and single fruit weight. Data for each trait were used to estimate mid parent heterosis, heterobeltiosis and standard heterosis. Means of most of the F1 hybrids and their respective parental values were significantly different for the traits observed. Among F1 hybrids, minimum days to 50% flowering were observed for MEL4×MEL2. The highest mid parent heterosis and heterobeltiosis values (61.24% and 46.75%) for single fruit weight were observed for MEL3×MEL6 and the maximum mid parent heterosis value (111.07%) was observed for total yield per plant for MEL4×MEL2. The highest mid parent heterosis values (94.10% and 43.30%) for total yield were observed for MEL4×MEL2 and MEL5×MEL1 respectively. MEL4×MEL2 and MEL3×MEL6 were least susceptible to bacterial wilt (6.67% and 6.67% respectively). MEL5×MEL1 recorded higher consumer preference to fried fruit slices for different organoleptic qualities. The results revealed that MEL4×MEL2, MEL3×MEL6 and MEL5×MEL1 performed better for the traits observed.

**Keywords:** Combiner parents, F1 Hybrids, Heterosis, Heterobeltiosis, Standard heterosis