

**USING SOME EGYPTION MELON
LANDRACES AND INTRODUCED GENOTYPES
FOR OBTAINING NEW HYBRIDS WITH BEST
YIELD AND QUALITY**

By

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ABSTRACT

The study included two trials, the first experiment was conducted during the period from 2012 to 2014 at Kaha vegetable research farm, Qalubia Governorate to evaluate five melon landraces [Quena 2(1), BeniSwif 1(2), Fayoum(3), Ismailawi(4), Giza-Berkash 2(5)] and diallel cross to produce hybrids in the summer planting date. The results showed significant differences among the evaluated melon landraces and hybrids and revealed a wide range of variation for this trait. The two F1 hybrids (2x3 and 2x4) had the lowest significant number of days to flowering (i.e; flowering earliness) across significant number of days to ripening in 2014 among the evaluated ecotypes was produced by the melon landraces and hybrids 1, 3, 2, and 1x4) without across over all evaluated melon landraces and hybrids The lowest significant differences among them. F1 hybrids (4x1, 4x2, 3x2 and 3x4) produced the highest significant total yield / plant across all evaluated melon landraces and hybrids. In contrast, there were no significant differences among them with respect to total yield. In 2014, three F1 hybrids (2x3, 5x1 and 4x5) produced the highest significant TSS value (13.5, 13.4 and 12.0 %, respectively) across all evaluated entries. Besides, hybrids 2x3, 5x3, 2x5 and 3x5 produced the highest significant values for netting but without significant differences among these three F1 hybrids. In brief, F1 hybrid (2x3) could be recommended as the best for several desired traits. The second experiment was conducted during the period from 2012 to 2014 at Kaha Vegetable Research Farm, Qalubia governorate to evaluate six introduced genotypes of melon {PI 414723 (1), PI 124111 (2), PI 140471 (2), PI 313970 (3), PI 124112 (4), PI 140417 (5)} and their diallel F₁ hybrids in summer season. The results showed that the introduced genotype (1) and the hybrids 2x1 and 2x4 recorded the highest significant values for average plant length compared to the other introduced genotypes and the hybrids in summer season 2014 without significant differences between them 4x1, 5x3 and the hybrid Primal produced the highest significant TSS values over all evaluated introduced genotypes and hybrids without significant differences between them. genotype 4 and hybrid 3x1 recorded the lowest significant TSS values. 6 The introduced genotypes and hybrids displayed the largest number of relevant fruits per plot (82) among all genotypes and hybrids introduced, but the lowest significant fruits number per plot was found in 1x4 and 3x1 hybrids. without significant differences between them. Mean while, the hybrid 4x5 produced the highest significant total yield per plant over all evaluated introduced genotypes and hybrids.

Key words: Melon Introduced Genotypes, F1 hybrids, Cucumis melo. Melon Landraces,

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