Estimation hybrid vigor for Yield quality and quantity characters of tomato grown under plastic tunnels.

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ABSTRACT

Seven tomato genotypes were used in a study , four of them was well known varieties such as Early Person represented in this study (1), Special Pack (2) , Super Qween (5) and Castel Rock (6). The other three parents was local deviser progency they are : SL3 , represented by (3) , WL4 (4) and LL1 represented by (7). The seeds were planted in February 2002, using full diallel crosses with first method of fixed model Griffing 1965(18). The first hybrid seeds which then planted with their parents in January under plastic house condition until these seedlings reached a size suitable to be planted under plastic tunnel during February 2003 and 2004 seasons at a private farm, Beni Saaid district, Diala governorate. Using RCBD with three replicates, each replicate contain all the hybrids and their parents as well as the hybrid control. The following characters such as , mean of fruit weight (gm) early and total yield (t/ha) , fruit hardness, T.S.S % total acidity and vitamin C contain in fruit. The experiment results shows that the parents 1 and 7 was superior in early yield, but while the parents 2 and 4 superior in total yield and the parent 1 which was best in the fruit quality . While the parent 2 which was lowest in fruit hardness and v.c content. The diallel hybrid (2×4) was superior in fruit weight and early yield in

both seasons, the diallel hybrids (2×3) and (3×7) and reciprocal hybrid (7×1) which was superior in total yield in both seasons. The reciprocal hybrid (7×1) was superior in fruit hardness and the fruits of diallel hybrids (3×7) which was best in the T.S.S.