

**THE PRODUCTION OF FOUR NEW STRAINS OF TOMATO  
(*Lycopersicon esculentum* MILL.) AND STUDY OF SOME THEIR  
CHARACTERISTICS**

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**ABSTRACT**

For new tomato *Lycopersicon esculentum* Mill. strains were produced through mass selection by using some hybrid varieties introduced in the breeding programme during the years 1994-2001 . the selection criteria used were the phenotypic traits such as ,the vegetation growth size ,yield and fruit hardness. After the seventh segregated generation ,the phenotypic homogenous plants were selected for the traits mentioned previously for each of the varieties in the breeding programme used for the production of the new inbred strains of tomato .

In the season 2001 these new strains were used in a comparative experiment, and the results obtained can be summarized as follows :

- 1- The genotype WL<sub>4</sub> plants showed a higher values regarding, plant length, the number of branches\plant and the number of leaves \plant ,where as the genotype PL<sub>2</sub> plants recorded the higher value of the leaves area.
- 2 - The genotype PL<sub>2</sub> plants were the earlier flowering , whereas genotype SL<sub>3</sub> plants recorded the latest flowering values .
- 3 -The plants of the genotype WL<sub>4</sub> surpassed other genotypes with respect to the inflorescence \plant whereas other genotype (SL<sub>3</sub>,LL<sub>1</sub>,WL<sub>4</sub>) . showed a

higher value regarding number of the flowers \ inflorescence. when compared with the comparison genotype.

- 4 -The genotype SL<sub>3</sub> ,LL<sub>1</sub> and PL<sub>2</sub> showed a higher values of the number of fruit\plant as conpard with the compartive genotype
- 5-The plants of the genotype WL<sub>4</sub> give higher values foe the average fruits weight , the individual plant yield (kg) and the total yield (ton\Donom).
- 6 -The genotype PL<sub>2</sub> plants showed higher total solubli solid materials , as compared with other genotype.