

USING HYBRIDIZATION VIA CONVENTIONAL AND TISSUE CULTURE TECHNIQUES IN PRODUCTION OF SOME INTERSPECIFIC TOMATO HYBRIDS.

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ABSTRACT

Three tomato species were used for interspecific crossing i.e. *L. esculentum*, *L. peruvianum* and *L. chilense*. Four cultivars for the first species i.e. UC-97/3 Castle Rock, Peto-86 and Heins. Three accessions for the second species i.e. LA: 1292, 385 and 111. While one accession (LA:1963) represented the third species, were used for crossing in this study.

For the conventional way of crossing, only one hybrid was succeeded; UC-97/3 x LA: 1292. Some important morphological characters were studied. Plant height, early flowering and long style were superior in F₁ as compared to parents. While plant shape, Number of leaflets, determinant inflorescence, number of anthers and fruit shape were showed complete dominance as wild type parent. Moreover, fruit color and weight and fruit maturity date were greatly differed from parents.

For using unconventional methods as embryo callus techniques, it was found that cross UC-97/3 x LA: 385 revealed a high percentage of embryos which formed calli after