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## VARIABILITY OF CHIASMATA FREQUENCY IN DIFFERENT TOMATO SPECIES

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In the paper, the comparative studies of frequency and distribution of chiasmata in pollen mother cells (PMC) of five diploid species of tomato, viz. *Solanum lycopersicum*, *S. pimpinellifolium*, *S. peruvianum*, *S. habrochaites*, *S. neorickii*, and of one autotetraploid *Solanum pimpinellifolium* are presented. It was established that in the same conditions of vegetation the total frequency of chiasmata was dependent on the species. Specifically, the green-fruited species *S. peruvianum*, *S. neorickii*, and *S. habrochaites* differed in frequency of distal chiasmata while red-fruited species *S. lycopersicum* and *S. pimpinellifolium* differed in frequency of interstitial chiasmata. It was demonstrated that total

chiasmata frequency in PMC of plants of one species is a sufficiently stable indicator of recombinational potential independent of vegetation conditions. Chiasmata redistribution between distal and interstitial positions turned out more variable depending on the species, year and geographic conditions of vegetation. The autotetraploid featured lower chiasmata frequency per bivalent than diploid *S. pimpinellifolium* first of all due to interstitial chiasmata which had a frequency typical for diploid plants. It was concluded that the recombinational plasticity of tomato genomes is controlled by the redistribution of chiasmata along bivalents and not by change of their total number within the cell.

**Keywords:** tomato, *S. lycopersicum*, *S. pimpinellifolium*, *S. peruvianum*, *S. habrochaites*, *S. neorickii*, recombination, chiasmata, meiosis