

## **TRIPLOIDY EVENTS IN COMMON FIG (*FICUS CARICA* L.)**

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*Ficus carica*, molecular cytogenetics, rDNA, FISH, unreduced gametes

The common fig (*Ficus carica* L.), a typical fruit tree of the Mediterranean area, is characterized by a complex breeding system which consists of two forms of tree, three functional floral forms and the symbiosis with the agaonid *Blastophaga psenes*, the wasp pollinator. The relationship between the reproduction of the plant and that of the insect is mutually obligatory because the pollen grains are transferred to the female flowers, only by the pollinator. On the other hand the wasps depend on the figs for their reproductive sites. Although genetic studies on common fig are recent, they allowed a rapid progress in the knowledge of biodiversity and germplasm characterization. Instead, the cytogenetics of the species is still unknown. The results of a research project dealing with the study of the biological diversity of *F. carica* following the cytogenetic approach are reported. Forty four genotypes, including wild plants, either caprifigs and female plants and cultivated common figs were examined. The chromosome count revealed that the majority of plants were  $2n=26$ , as expected, but three were triploid with  $2n=39$ . This result suggests that variations of the chromosome number could play a role in the evolution of the fig germplasm and induces to consider the important function of the wild forms as source of variability. This appears not only as genetic recombinants but also as polyploid variants. The analysis of pollen grains collected from caprifigs provided evidences in favour of this hypothesis with twice larger pollen grains found, as an indication of unreduced gametes. Moreover, the spreading of the mutants are facilitated by the vegetative propagation normally used by man in this fruit crop. This study contributed also to gain knowledge on the cytogenetics of *F. carica* by means the karyomorphological analysis and FISH mapping of rDNA sequences.