

EVOLUTION OF SOME QUALITY PARAMETERS DURING FRUIT RIPENING IN *SOLANUM MELONGENA* L. INTROGRESSION LINES

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The contents of some nutraceutical and health-promoting fruit compounds were evaluated during ripening in innovative eggplant (*S. melongena* L.) introgression lines, their allied and cultivated parents. Such new genotypes, tolerant and/or resistant to the tracheomycotic fungi *Verticillium dahliae* Kleb. and *Fusarium oxysporum* f. sp. *melongenae*, respectively, were obtained from conventional and non-conventional breeding methodologies (i.e., sexual and somatic interspecific hybridization, androgenesis and backcrosses). The levels of chlorogenic acid, anthocyanins (nasunin and/or delphinidin 3-rutinoside) and glycoalkaloids (solamargine and solasonine) were studied in the flesh and peel of fruits at three phenological stages of ripening in 73 eggplant advanced introgression lines (ILs), 3 eggplant recurrent genotypes and 3 allied species (*S. sodomaeum*, *S. aethiopicum* gr. *gilo* and *S. aethiopicum* gr. *aculeatum*=*S. integrifolium*) during three successive years. Almost all the ILs, derived from several backcrosses cycles, evidenced some positive characteristics compared with the allied parents. Good levels of chlorogenic acid and anthocyanins and, mainly, significantly ($p \leq 0.05$) reduced concentrations of the toxic steroidal glycoalkaloids (SGAs) were detected in the ILs, specially in immature and commercially ripening fruit. In a few ILs, the safety limit (200 mg/100 g of dry weight) of SGAs was often exceeded in physiological ripening fruit; moreover, a marked reduction of chlorogenic acid and peel anthocyanins levels was also evidenced in this fruit stage.

These results confirmed the possibility to obtain new eggplant genotypes characterized by the tolerance/resistance against some tracheomycotic fungi coupled with interesting quality traits.