



Production of interspecific hybrids between commercial cultivars of the eggplant (*Solanum melongena* L.) and its wild relative *S. torvum*

J. Kumchai¹, Y.-C. Wei², C.-Y. Lee², F.-C. Chen² and S.-W. Chin²

¹Department of Tropical Agriculture and International Cooperation, National Pingtung University of Science and Technology, Pingtung, Taiwan

²Department of Plant Industry, National Pingtung University of Science and Technology, Pingtung, Taiwan

Corresponding authors: S.-W. Chin / F.-C. Chen

E-mail: swchin@mail.npust.edu.tw / fchen@mail.npust.edu.tw

Genet. Mol. Res. 12 (1): 755-764 (2013)

Received June 5, 2012

Accepted November 14, 2012

Published March 13, 2013

DOI <http://dx.doi.org/10.4238/2013.March.13.4>

ABSTRACT. Interspecific hybrids between cultivars of eggplant (*Solanum melongena* L.) and its wild relative *S. torvum*, which has disease resistance and desirable traits for crop improvement, were obtained by cross-hybridization and embryo rescue. Twenty-one hybrid progenies were obtained and examined based on morphological traits, RAPD and ISSR markers. Five of them were confirmed to be true interspecific hybrids. Eighteen and 14 bands from 7 RAPD and 14 ISSR primers, respectively, were polymorphic and present in all five hybrid seedlings and their parents. The morphological characteristics of leaf margin, inflorescence type and spine positions of the five seedlings were intermediate to the parents. These interspecific hybrids had low pollen viability, probably due to abnormal meiosis.

Key words: Interspecific hybrids; Morphological trait; RAPD; ISSR; *Solanum melongena*; *Solanum torvum*