

Potentialities of wild relatives for eggplants and eggplants rootstocks breeding

Marie-Christine Daunay, F. Bletsos, J.W. Hennart, J.P.W. Haanstra, G. van Der Weerden

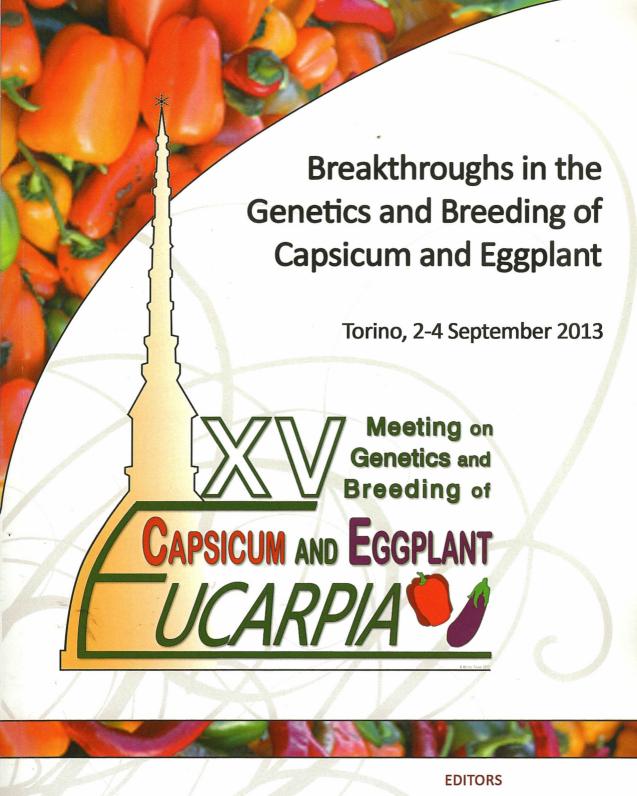
▶ To cite this version:

Marie-Christine Daunay, F. Bletsos, J.W. Hennart, J.P.W. Haanstra, G. van Der Weerden. Potentialities of wild relatives for eggplants and eggplants rootstocks breeding. 15. Eucarpia Meeting on Genetics and Breeding of Capsicum and Eggplant, Sep 2013, Torino, Italy. hal-02748311

HAL Id: hal-02748311 https://hal.inrae.fr/hal-02748311

Submitted on 3 Jun 2020

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers. L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Sergio Lanteri Giuseppe Leonardo Rotino

Potentialities of wild relatives for eggplants and eggplants rootstocks breeding.

Daunay M.C.¹, Bletsos F.², Hennart J.W.³, Haanstra J.P.W.⁴, van de Weerden G⁵.

¹INRA, Génétique et Amélioration des Fruits et Légumes, UR 1052, Montfavet, France

²Agricultural Research Centre of Macedonia and Thrace, Thermi-Thessaloniki, Greece

³Vilmorin Cy, France

⁴Rijk Zwaan Cy, the Netherlands

⁵Radboud University, Nijmegen, The Netherlands

Abstract

Cultivated eggplants (S. melongena, S. aethiopicum, S. macrocarpon) and their wild relatives belong to genus Solanum subgenus Leptostemonum. Although most species of this subgenus are native from the American continent, the eggplants and their closest relatives originate mostly from Africa and Asia. The largest living collections of wild Solanum species are maintained at Radboud University (Nijmegen, The Netherlands) and at INRA (Montfavet, France). Part of these collections has been characterized for traits of agronomic interest during the so called EGGNET project (1999-2004) within the frame of the European Union GENRES programme, project. Verticillium wilt and root knot nematode (Meloidogyne incognita) resistances have been screened for by artificial inoculation on young plantlets. Good levels of resistance have been identified in other Solanum species than the well known and partially resistant S. torvum and S. sisymbriifolium. Graft affinity experiences using the wild material as rootstock and S. melongena as scion have been carried out on young as well as on adult plants and various levels of grafting affinity have been identified. The characterization results obtained are discussed in the light of the present understanding of interspecific cross compatibility between wild and cultivated eggplants. The results obtained clearly indicate the high potential of the wild diversity for eggplants and eggplants rootstocks breeding, as well as the need to intensify the characterization of these collections for traits of agronomic interest.

Keywords: Eggplant, *S. melongena*, *S. aethiopicum*, *S. macrocarpon*, wild *Solanum*, *Verticillium*, *Meloidogyne incognita*, resistance, grafting, genetic resources, breeding, rootstock