



Title	Linking genetic resources, genomes and phenotypes of Solanaceous crops
Number	677379
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Abstract: G2P-SOL is a research alliance bringing together the major European and International repositories of germplasm with public and private institutions active in genomics, phenotyping and breeding in the four major Solanaceous crops: potato, tomato, pepper and eggplant. These four crops constitute 66% of the value of European horticultural production, and over 65,000 accessions are available within the consortium. By harnessing the available global biodiversity, novel genotyping and phenotyping concepts and data analysis tools, the G2P-SOL project will link the genetic code underlying Solanaceae biodiversity with the traits that improve productivity, adaptation and human health. By making this information accessible to end-users, the awareness of the available diversity will be increased and use of this genetic diversity in breeding programs will be stimulated, resulting in diversified production chains. The phenotypes and traits of material held in European and major international collections will be described using common ontology terms developed in this project and this information will be housed in an open source software platform, allowing easy interfacing with existing platforms for germplasm cataloguing. G2P-SOL will develop shared values in science and education in the following areas: 1) Defining and maintaining genetic pools for crop improvement. 2) Phenomic and genomic data: generation, analysis, storage, and linkage with gene banks. 3) Pre-breeding and germplasm enhancement. 4) Training, workshops and public outreach. G2P-SOL will redefine how to manage and organize genetic resources and linked genomic and phenomic information in a manner that will make them accessible to naturalists, geneticists and breeders for conservation, scientific research, and breeding in the post genomic era, in compliance with the objectives of the International Treaty on Plant Genetic Resources and the Nagoya Protocol.

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- The Hebrew University of Jerusalem, Israel (Prof. Dani Zamir)
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