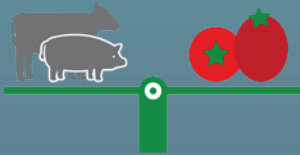




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HORIZON 2020 PROJECT

TOMGEM - A holistic multi-actor approach for towards the design of new tomato varieties and management practices to improve yield and quality in the face of climate change

Practical problem

Climate change calls for designing new strategies for growing crops under harsh conditions. TomGEM addresses yield stability in high temperature conditions with the aim to produce or yield superior genotypes that are better adapted to high temperature conditions.

Partners

Names:

Institut National Polytechnique de Toulouse (FR); John Innes Centre (UK); Max-Planck- Gesellschaft Zur Forderung Der Wissenschaftem Ev (DE); Royal Holloway and Bedford New College (UK); Agencia Estatal Consejo Superior de Investigaciones Cientificas (ES); Universita degli Studi di Napoli Federico II (IT); Asian Vegetable Research and Development Center (TW); Universidad de Buenos Aires (AR); Institut National de la Recherche Agronomique (FR); Maritsa Vegetable Crops Research Institute (BG); Alma Seges Societa Cooperativa (IT); Enza Zaden Centro de Investigacion Sociadade Limitada (ES); Biotecgen SRL (IT); Fundacion Cajamar de la Comunidad Valenciana (ES); European Research and Project Office GMBH (DE); National Taiwan University (TW); Rougeline (FR); Norfolk Plant Sciences Limited (UK)

Project

Objectives:

- Select superior tomato genotypes.
- Identify genetic variations associated with heat tolerance of fruit yield.
- Set up optimal growing conditions.
- Design innovative breeding and management strategies for a broad range of geographical conditions.

Expected results:

- New improved varieties and management strategies:
- Evaluation of a tomato germplasm pool including heat tolerant wild relatives.
 - Identification of most suitable genotypes for hot climates.
 - New knowledge on plant-environment interactions and suitable combinations.
 - of genotypes, breeding and management practices.
 - Novel breeding strategies transferred to the breeding sector.

Results so far/first lessons:

A collection of tomato germplasm was phenotyped in different geographical locations (Spain, Italy, Bulgaria and Argentina) in greenhouse and open field. A phenotyping database has been generated. Highly performing genotypes are being grown in different locations for genetic characterization to uncover/capture genes and loci responsible for heat tolerance/sensitivity.
Project website: <http://tomgem.eu/>

Who will benefit:

Farmers, breeders and consumers.



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