Traditional tomato varieties and cultural practices: a case for agricultural diversification with impact on food security and health of European population

Tomato is the second most consumed vegetable in the EU and a major dietary source of many nutrients, vitamins and antioxidants. Consumers’ complaints about the loss of flavour in modern tomatoes provide an opportunity for the valorisation of traditional tomato varieties, in order to protect them from genetic erosion and the replacement by higher-yielding, pest resistant modern cultivars. Genetic, epigenetic and phenotypic variability and knowledge from farms and in public repositories will be concentrated in a TRADITOM database and seed repository. The available genetic and phenotypic variability present in TRADITOM varieties, and the genetic and epigenetic differences from modern cultivars will be assessed. For varieties whose cultivation is not sustainable due to unacceptably low yield and/ or pathogen resistance, novel F1 hybrids will be generated, retaining the quality characteristics of traditional varieties and incorporating yield and disease resistance traits. Finally, traditional varieties and the impact of traditional cultivation methods will be valorised through a thorough characterization of their composition in term of flavour- and health-related compounds, the identification of consumer preferences, the evaluation of socio-economic factors limiting their market diffusion, and the protection of the most significant case studies through PDO or PGI denominations. TRADITOM is a multidisciplinary translational, multi-actor research project bringing together scientists working in academia, local farmers communities, consumer experts and small seed companies that have preserved the local germplasm, in order to bring to fruition and apply to traditional tomato varieties the enormous knowledge generated on tomato genetics, genomics and metabolomics. This will help the conservation of traditional tomato varieties and enhance the competitive advantage of rural communities based on their production.

**Status:**
Active

**Start/ending dates:**
Sunday, 1 March, 2015 to Wednesday, 28 February, 2018

**Budget:**
4,372,015.25€

**Contact e-mail:**
agranell@ibmcp.upv.es

**Objectives (original language):**
The aim of TRADITOM is to valorise the genetic diversity stored in traditional tomato varieties in order to protect them from genetic erosion and the replacement by more productive modern
cultivars. TRADITOM seeks to provide traditional tomato farmers with a strong science-based knowledge platform on the identity of traditional tomato varieties.

Concrete problems addressed by project (original language):

Modern tomato breeding has resulted in uniform, high-yielding tomato cultivars, whose cultivation is widespread and has progressively replaced the use of traditional varieties. This has led to a decrease in genetic variation, so-called genetic erosion. The strong focus on yield and pathogen resistance has resulted in a loss of taste in modern cultivars, a general complaint of European consumers. In contrast, traditional varieties are largely recognized by consumers as ‘more authentic’ and ‘tastier’ than modern ones but have lower yield.

Target group (original language):

TRADITOM is a multidisciplinary, multi-actor and pan-European project. The research results generated within TRADITOM aim to satisfy wider consumer choices, impact local communities of farmers and SMEs and additionally the health of consumers.

Practice oriented results (English):

TRADITOM set out to provide traditional tomato farmers with a science-based knowledge platform on the identity and variability of traditional tomato varieties, which are grown on the farm or available in public repositories, such as the tomato seed banks available within the TRADITOM consortium. This will provide an evidence-based rational approach for the valorisation of traditional tomatoes in terms of consumer preference, and added value for the different actors of the food chain from farm to fork.

Attachments:

[ factsheet_traditom.pdf ]

Project acronym / Project code:

TRADITOM

Project name (English):

Traditional tomato varieties and cultural practices: a case for agricultural diversification with impact on food security and health of European population

Funding source:

Horizon 2020

Description in english:

See above.

Partners:

Organization/Institution name (original language)
Agencia Estatal Consejo Superior de Investigaciones Cientificas

Organization/Institution name (original language)
Agenzia Nazionale Per Le Nuove Tecnologie, L’Energia E Lo Sviluppo Economico Sostenibile

Organization/Institution name (original language)
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**Links**
[1] mailto:agranell@ibmcp.upv.es