



This project has received funding from the European Union's H2020 Programme under grant agreement no 633571

# LANDRACE TOMATOES IN HUNGARY

## AT FIRST GLANCE

Landrace tomatoes are especially interesting and valuable due to their rich taste, and a great variability in color and shape. The lack of available seeds and high sensitivity to post-harvest handling limits the further development of the market.

Embedding crop diversity and  
networking for local high quality  
food systems

## Introduction

Consumers and producers as well as representatives of gastronomy are showing increased interest toward landrace tomato varieties because they have an abundant range of colors, shapes, sizes, and flavors. Landrace tomatoes are valuable due to their genetic diversity and adaptability, but many do not meet the requirements of industrialized production and therefore have largely disappeared from cultivation. However due to some of their other favorable characteristics (high local adaptation, rich taste, special cultural value), some local varieties may perform very well under organic cultivation.



In order to raise awareness and interest in landrace tomato varieties throughout the whole supply chain, the Hungarian Research Institute of Organic Agriculture (ÖMKi) launched in 2012 a comparative on-farm study with participation of up to 40 farmers. An on-farm network covering four regions of Hungary and involving 15 landrace tomato varieties was established. Upon this, in 2015, in the framework of a PhD research, ÖMKi started a trial on two organic farms in Central Hungary with 12 landraces under polytunnel and in open field, focused on the characterization and evaluation of the landrace tomatoes in terms of yield, resistance and fruit quality parameters. Every year, results from the experiments are disseminated in roundtable discussions and assessment meetings for farmers, accompanied by tastings and nutritional evaluation (Brix, pH) are organized.

## DIVERSIFOOD approach

In the framework of the DIVERSIFOOD project, a case study about the Hungarian supply chain of landrace tomatoes was conducted in 2016. The surveys were carried out with a total of 11 actors (breeders, producers, processors, researchers, chefs and retailer), who had first-hand experience with landrace tomatoes. The report on the case study depicts the current status of their market development in Hungary and helps to identify potential for new market players interested in this product.



### DIVERSIFOOD first results and outlook

The exquisite taste and color-diversity of landrace tomato fruits compared to the modern



varieties are what makes landraces so attractive for consumers as well as for chefs. Farmers are reporting that there is currently more demand for landraces than what they could offer in the market. They also highlight that many landraces are possessing very interesting traits, which makes them very suitable for organic production. At the moment, the sales is usually organized through the box scheme, i.e. Community Supported Agriculture, farmers markets or even social media, like Facebook. Unfortunately, the

whole supply chain does not stand alone on its feet yet and it requires continuous mentoring and development.

At the same time, a limitation of available seedlings holds the development of the whole sector. Seeds and seedling producers reported that they noticed increased demand for organic and

landrace seedlings, but because of the seed marketing law they do not have much space to extend their production. For this reason, it was very beneficial for the farmers to cooperate in ÖMKi landrace tomato trials, where we could provide them with the seedlings, and also support them with professional advice on how to maintain the plants. ÖMKi also organized yearly events where farmers, processors and consumers could meet and exchange their knowledge



and experiences. Raised issues that should be addressed and improved in the future are linked to landrace tomatoes' unpredictable yield and quality, short shelf-life, poor transportability and high sensitivity to post-harvest manipulation. Interviewers expressed that there is no real marketing strategy for the landraces since it is such a small scale production. Nevertheless, according to the number of participants at the tomato events and the number of involved farmers in the on-farm trials, it can be concluded that the movement has positive growth.

### Suggested readings

Boziné Pullai K, Reiter D, Mali K, Makra M, Cseperkálóné Mirek B, Csambalik L, Divéky-Ertsey A, Nagy P, Turóczy G, Drexler D, Tóth F (2016) *Takácsatka- és fonálféreg-kártétel összehasonlító vizsgálata paradicsom tájfajtákon két ökológiai gazdaságban*, *Növényvédelem* 52(8): 413-421 page.

Boziné Pullai K, Drexler D, Tóth F (2016) *Tájfajta paradicsomok kártevőkkel szembeni ellenállóságának vizsgálata*. *Biokultúra* 27(4-5): 26-27 page.

Boziné Pullai K, Reiter D, Cseperkálóné Mirek B, Mali K, Makra M, Vajnai A, Grózinger Sz, Csambalik L, Divéky-Ertsey A, Turóczy G, Nagy PI, Drexler D, Tóth F (2016) *Tájfajta paradicsomokon vizsgált takácsatka és fonálféreg kártétel összehasonlító vizsgálata két ökológiai gazdaságban*. In: Tóth Csilla (szerk.). *Őshonos- és tájfajták - Ökotermékek - Egészséges Táplálkozás - Vidékfejlesztés: A XXI. század mezőgazdasági stratégiái*. 399 p. Konferencia helye, ideje: Nyíregyháza, Magyarország, 5<sup>th</sup>-7<sup>th</sup> of October. Nyíregyháza: Nyíregyházi Egyetem Műszaki és Agrártudományi Intézet 313-321 page.

Csambalik L, Orbán Cs, Stéger-Máté M, Pusztai P, Divéky-Ertsey A (2016) *Antioxidant profile of tomato landraces for fresh consumption*, *Acta Biologica Szegediensis* 60(2): 177-182 page.

Cseperkálóné Mirek B, Reite D, Divéky-Ertsey A, Drexler D (2016) *On-farm assessment of landrace of tomato (*Lycopersicon esculentum* L.) under organic conditions in Hungary*. *Acta Fytotechnica et Zootechnica* 18(5): 134-137.