

## "Plant breeding in the framework of HARNESSTOM WP8 GUIDE: improved materials of local landraces and hybrids obtained by participatory plant breeding"

In a collaborative effort with farmers, consumers, and chefs, partners involved in WP8 of the HARNESSTOM project have conducted various tomato breeding programs. The aim is to develop new varieties adapted to local agroclimatic conditions and shaped by consumer and chef preferences. Researchers from Spain, Italy, and Bulgaria have shared their experiences and designed participatory methodologies to implement these breeding programs. Researchers have focused on updating the agronomic behavior of renowned tomato landraces, striving to enhance the resilience and resistance to pests and diseases of these esteemed local varieties. By combining traditional breeding approaches with molecular marker-assisted (MAS) breeding, they have developed novel genotypes that retain the original qualities of the varieties while incorporating pest and disease resistance.

Additionally, researchers have generated new diversity to create varieties with promising agronomic performance in local environments. Through participatory approaches, they have selected the best individuals generation after generation. The goal is to develop a novel generation of local varieties that meets consumer expectations, offering new shapes and aromas in the market.

This document presents the varieties obtained through the different breeding programs. Seeds of these varieties are available in each respective country.



