

## **CHARACTERIZATION OF THE TOMATO LANDRACE “A PERA ABRUZZESE”**

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Aim of this study was to characterize 25 tomato accessions belonging to the landrace referred to as “A pera abruzzese”, collected from various local farmers located in the Abruzzo region in central Italy. The accessions were grown in open field during the summer season of 2007 at the CRA-Agricultural Research Council in Monsampolo del Tronto (AP) using standard cropping practices. Eleven morphological-agronomic traits were recorded describing plant, flower and fruit morphology and productivity. At the molecular level, the accessions were analyzed at 18 selected Simple Sequence Repeat (SSR) marker loci. For the SSR analysis, seven control genotypes were added to the collection, representing both morphologically similar landraces (Canestrino di Lucca, Cuor di bue di Albenga) and very differentiated genotypes (San Marzano, Edkawi, Marmande, Spagnoletta).

The morpho-physiological analysis indicated that a considerable variability existed among the 25 accessions; in particular, variation was found for fruit characteristics, such as fruit shape (ranging from pear-shaped to globe-shaped, or even slightly flattened), size (ranging from less than 200 to more than 400 g) and ribbing (ranging from smooth to very ribbed).

Molecularly, the accessions were polymorphic at eight loci (where they yielded 29 alleles); the dendrogram based on genetic distances separated the “A pera” accessions from all the controls (including the Canestrino type), but not from the accession “Cuor di bue di Albenga”. The adoption of a Bayesian grouping approach indicated that the collection was structured into three sub-populations, that only partially corresponded to distance-based clusters.

Taken together, the results suggest that the landrace “A pera abruzzese” represents a heterogeneous and dynamic population that includes a considerable variation for vegetative and reproductive traits. A thorough characterization, using both morphological and molecular descriptors, will help in defining the salient traits of the landrace, ascertain its distinctiveness from similar traditional varieties and put the basis for its inscription to the Register of Conservation Varieties.

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