The Calabria region is characterized by its extraordinary variety of microclimates that favor the cultivation of a wide variety of fruit trees, including the sweet cherry. Until the middle of last century, the sweet cherry was widely represented in all the territories, cultivated at altitudes ranging from 200 to 1000 meters above sea level. Unfortunately, in recent decades, the drastic abandonment of the countryside caused a gradual process of decline and the abandonment of ancient landraces and cultivars. The objective of this work was to study the diversity of indigenous sweet cherry genetic resources, for planning their conservation and improvement.

### Materials and methods

The research started in 2008 with a preliminary screening of the Calabrian sweet cherry genotypes still present in orchards and gardens. The indigenous genotypes were marked, georeferenced and characterized morphologically, following the descriptor proposed by Bellini et al., (2007).

### Results and discussion

35 indigenous sweet cherries from Calabria, cultivated at altitudes ranging from 200 to 1000 m a.s.l., were identified and characterized.

- **Full blooming time** was restricted to about 2 weeks (2nd-18th of April). Regarding the ripening time, most of the accessions were harvested during the month of June. However, "Maiolina" genotypes, were early ripening (third decade of May); 'Abenevoli nero', 'Carrammendula 2', 'Lombardune' were late ripening (Tab. 1).

- The fruits had small or medium-size with weight ranging from about 3 to 8 g (Fig. 1), the shape was generally spherical, in some case cordate; the stalk was short. A considerable variability was recorded about the color of the epicarp (from light red to black) and flesh (from yellow to dark red).

Among the Calabrian germplasm, 12 local genotypes showed superior traits (Tab. 2).

### Conclusions

This research showed the richness of the indigenous genetic heritage of sweet cherry in this region and encouraged us to continue with actions in order to preserve and improve best genotypes. Although, fruits of most local accessions did not fully meet the quality standards required by today’s market, some of them (e.g. ‘Malatiza rossa’ genotype) (Tab. 2) deserve attention for having traits of interest, such as early ripening, low chilling requirement, firm flesh, good taste and great rusticity. Therefore, they should be safeguarded from the risk of extinction and employed in breeding programmes.

### References: