

## MONREPOS, A PLUM ROOTSOCK FOR CHERRIES

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During the last years, the necessity of new rootstocks for sweet cherry in order to solve the problems of soil adaptation, vigour and graft incompatibility of the traditionally used rootstocks has been reported. Myrobolan type plum rootstocks present a good adaptation to several soil types, and provide a wide range of invigorating and water-logging tolerant rootstocks.

'Monrepos' is a *Prunus*-plum rootstock for sour cherry developed at the Centro de Investigación y Tecnología Agroalimentaria in Zaragoza, Spain. It was selected from an open-pollinated population of Myrobolan (*P. cerasifera* Ehr.).

'Monrepos' genotype was analysed and compared with the genotypes of two *P. domestica*, two *P. insititia*, two *P. cerasifera* and two *P. persica* cultivars, using 15 microsatellite markers. The UPGMA grouping resulting from the similarity matrix from the microsatellite loci analysed, grouped 'Monrepos' in the same cluster as the two *P. cerasifera* varieties analysed and separated from the rest of the genotypes. These results indicate that it is more genetically similar to the *P. cerasifera* genotypes than to the rest of genotypes, and probably also *P. cerasifera*.

'Monrepos' was selected from eight initial cultivars for its good compatibility behaviour, without external symptoms of incompatibility. It was grafted with 29 cherry varieties considered among the most important commercially. One, two, three, four and five year old unions of each combination were studied macroscopically according to the technique described by J. Herrero in 1951. At the same time, one year old unions with eight of the above mentioned cultivars were examined microscopically to study the number of well differentiated sieve tubes and the deposits of callose on the slime plugs.

'Monrepos' has a higher than 90% root ratio by multiplication by hardwood, which means a good aptitude for propagation. Also, the in vitro micro-propagation shows a high proportion of rooting.

During the first five years of field trials, under compact and limy soil conditions, in comparison with the cherry rootstocks Gisela 5 (*P. cerasus* x *P. canescens*), Saint Lucia 64 (*P. mahaleb*), CAB6P (*P. cerasus*) and Masto de Montañana (*P. cerasus*), 'Monrepos' has shown a vigour and productive capacity close to Saint Lucia 64 and a better adaptation to this type of soils than Gisela 5 as well as a better productive capacity than CAB6 and Masto de Montañana.

This rootstock provides a good choice for the development of cherry cultivars in a wide range of soils and may be suitable due to its good compatibility. Its use for other species such as apricots is also being analysed.