

Preliminary data on graft compatibility and water physiology in interspecific rootstock selections

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Interspecific hybrids Myrobalan x peach, Myrobalan x almond and Myrobalan x (almond x peach) were evaluated for root-knot nematode resistance, adaptation to chlorosis, water-logging, drought and graft compatibility with peach and nectarine, through a collaborative project supported by EU (1999-2003).

We report here the preliminary results on graft compatibility and some aspects of water physiology in a trial located at CITA, Zaragoza, Spain. Ten rootstocks were grafted with 'NJ-C' peach and Big Top' nectarine during summer 2009 and trees were established in the trial during winter 2011-2012. Myrobalan 29C rootstock was used as reference. The effect of each rootstock on trunk cross sectional area (TCSA) and stomatal conductance under water deficit was evaluated.

The overall graft compatibility was higher with the peach 'NJ-C' than with the nectarine 'Big top'. The values of stomatal conductance showed that the hybrids 'P.2175 x Garnem-4', 'P.2175 x Alnem1-12' and 'P.2175 x Alnem88-2' had a high adaptation to different soil water moisture. The lowest vigour was observed on 'P.2175 x Garnem-8', 'P.2175 x Alnem88-6', 'P.2980 x Garnem-9' and 'P.2980 x Felinem-23'. Two of the ten combinations evidenced an intermediate vigour with nectarine 'Big Top' and a low vigour with the peach 'NJ-C'.

The agronomic evaluation is still in progress and the results will allow, over the next few years, to select a wider range of rootstocks for the Mediterranean conditions.

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