

Adarcias, a new hybrid rootstock for peach and other stone fruit species

Adarcias is a new rootstock for different stone fruit species. It was developed by the rootstock breeding program currently led by the researcher MA Moreno at the Experimental Station of Aula Dei – CSIC. Adarcias is an open-pollinated peach-almond hybrid [*Prunus amygdalus x persica*], and it was selected because of its good performance with peach varieties, conferring less vigor than other hybrids, and higher or similar cropping efficiency. Furthermore, it induces better fruit quality.

Nursery companies or fruit growers can apply for License Agreements or Technical assistance from the Experimental Station of Aula Dei-CSIC.

Best nutritional and organoleptic fruit quality

Spain is the second largest European producer for peaches, and the third in the world after China and Italy, largely explained by the new technologies applied and the best agronomic performance of a wider range of peach cultivars and new rootstocks. The main areas of peach cultivation in Spain are the Ebro Valley (Aragon and Catalonia) and the Region of Murcia, with dry and hot climate.

Peach fruit quality can be strongly determined by rootstock, affecting both fruit organoleptic traits and biochemical compounds. The size-controlling rootstock Adarcias increases fruit soluble solid content and individual soluble sugars, as well as antioxidants in peach and nectarine cultivars. It specifically induces higher sucrose content (related to aroma), glucose, fructose (gastrointestinal health), and sorbitol; as well as higher phenolics, flavonoids and anthocyanins, related to higher fruit antioxidant activity and health benefits in the prevention of chronic diseases.

The tendency of Adarcias to induce higher fruit quality could be related with its lower vigor, showing a stronger sink competition of fruits compared to vegetative development.



Tree and fruits of Tebana peach cultivar budded on Adarcias

Main innovations and advantages

- Adarcias could be suitable for peach cultivars to avoid excessive vigor or in cases where control of tree size is needed to increase planting density or to reduce production costs.
- It adapts well to calcareous soils, since it tolerates iron-chlorosis in soils with high pH, total and active lime.
- Easy to be budded and good graft-compatibility with peach and nectarine cultivars.
- In nursery, it is resistant to *Coryneum* blight and rust disease on leaves
- Increased productivity and earlier onset of production.
- It induces better fruit quality to the budded peach and nectarine cultivars.

Patent Status

Protected

For more information, please contact:

Ana Pilar Mata Bordonaba

Estación Experimental Aula Dei

Deputy Vice-Presidency for Knowledge Transfer

Spanish National Research Council (CSIC)

Tel.: +34 – 976 71 60 54

E-mail: amata@eead.csic.es

comercializacion@csic.es