DATE PALM TISSUE CULTURE TECHNOLOGY

INFORMATION DOSSIER

VITROPALM TECHNOLOGY

www.vitropalm.com
The Firm

Vitropalm owns a technology in Date Palm Tissue Culture that can be applied to any variety resulting in a true-to-type and healthy micro-propagated Date Palm plants.

Vitropalm offers consulting in:

- Selection of varieties and suitable domestic genotypes based on commercial interests.
- Design of the facilities necessary to build an in vitro culture plant laboratory.
- Staffing requirements.
- Elaborating the entire budget.
- Getting the laboratory set-up and running to a high standard.
- Training services aimed at helping teams to manage the technique.

About us

Vitropalm Technology (VPT) is a team made up of an Agronomy engineer and a Biologist who have well over 18 years of experience in the field of Date Palm tissue culture.

Our experience has been acquired at the research station on Date Palm in Elche, Spain, called “Estación Phoenix” where well known partners have taken part in the project, such as Elche City Council, the “Generatitat Valenciana”, Alicante University, Elche University, the National Institute of Agronomic Research (INRA-France) and the Centre of International Cooperation of Agronomic Research for Development (CIRAD-France).
We have propagated quality adult Date Palm genotypes, without offshoots, from the Palm Grove of Elche, creating new commercial varieties. Moreover, we have also achieved the multiplication of international varieties, from its offshoots. These include Medjool, Zahidi, Thori, Bouffegous and others.

The extensive knowledge and experience we have accumulated over the years has enabled us to multiply any variety from adults or juvenile samples of date palm with excellent results.

**Our Technique**

We have developed a technique based on organogenesis. Refined and improved during the first years, this technique has been adjusted in order to ensure true-to-type plants and good productivity.

With this technique we have propagated some varieties from their offshoots, using portions of the terminal apex such as explants. After some months, the first shoots appear, from which we obtain the proliferation explants stock, after that, we start the plants development.

From the varieties cultured, we have selected “Medjool” to go to the production process because it adapted astonishingly well to, and thrived under the local eco-climatic conditions of Elche. It was also chosen for its international interest.

Furthermore, have we adjusted the technique to achieve the multiplication of adult Date Palms from the Palm Grove of Elche, using their terminal apex as explant.

Samples of superior quality have been chosen to create new varieties called “Confitera”, “Lucerga” and “León”.
Moreover, we have developed a new propagated procedure using the terminal apex of Date Palm plants between 4 or 6 leaves that we use to renew proliferation series, when there are not enough offshoots to regenerate them.

During the course of these years, we have experimented with inflorescences as explants trying both organogenesis and embryogenesis techniques. In doing so, we have successfully multiplied some of the genotypes.

Developing and rooting phases were improved to reach high parameters and were carried out without major problems.

The acclimatization of the plants was achieved in eight weeks with more than 90% survival rate.
5. Rooting phase

6. Acclimatized plants

7. In vitro Date Palm nursery
8. Medjool Date Palm production field

**Our results**

In 2002, the first Date Palms were planted in the field. Since then, every year, thousand more have been planted, ensuring an excellent establishment rate.

Apart from Elche (Spain) some thousands plants have been distributed across the world, to Mali, Niger, Mauritania, Peru, Morocco and Yibuti.

In 2006, the first inflorescences appeared in Elche, proving along the following years the true-to-typeness and the high quality of production.

**Contact**

**VITROPALM TECHNOLOGY**
Partida Peña de las Águilas, 1 - 217
03205 Elche (Alicante) Spain
Phone: +34 678 52 16 91

vitropalm@vitropalm.com

www.vitropalm.com