



Project LIFE17 ENV/IT/347

“Sustainable substrates for agriculture from dredged remediated marine sediments: from ports to pots”
(SUBSED)



5th October 2018, Pescaia - Italy



MIGUEL HERNÁNDEZ UNIVERSITY (UMH)



The Miguel Hernández University of Elche (UMH) has four campuses located in the Province of Alicante

The 4 campuses comprising the UMH are located within a 50-km radius around the city of Alicante. Thanks to its proximity to Alicante's airport (ALC), the seaport of Alicante, and its train stations, the University boasts excellent transportation and communication systems.





MIGUEL HERNÁNDEZ UNIVERSITY

- ✓ Public University founded in 1996
 - ✓ More than 14,500 students
 - ✓ Total personnel: 1,632
- Faculty: 1,063
Contracted to projects: 182
Administration and Services
Personnel: 387
- ✓ Organised in 4 Campus locations:
Altea, Elche, Orihuela & Sant Joan d'Alacant





ACADEMIC OFFERING

- ✓ 24 Bachelor Degrees
- ✓ 40 Master Degrees
- ✓ 16 Doctoral /PhD Programmes



ORIHUELA CAMPUS (1971, UPV. 50' Experimental Station)



- ✓ Degree in Agro-Food & Environmental Engineering
- ✓ Degree in Food Science and Technology





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Fecha de las imágenes: 3 de Abr. de 2007

38°03'58.94" N 0°58'49.27" O elev. 26 m

Alt. ojo 130 m







HIGH POLYTECHNICAL SCHOOL OF ORIHUELA





HIGH POLYTECHNICAL SCHOOL OF ORIHUELA

Research and teaching laboratories



HIGH POLYTECHNICAL SCHOOL OF ORIHUELA

Fruit juice extraction pilot plant



HIGH POLYTECHNICAL SCHOOL OF ORIHUELA

Standardized room for sensory analysis







Research Group in Plant Production and Technology



**Dr. Pablo
Melgarejo**



**Dr. Juan José
Martínez**



**Dra. Francisca
Hernández**



**Dr. Rafael
Martínez**



**Dra. Pilar
Legua**



PROPOSED ACTIONS FOR UMH

ACTION A.1: Review of the EU and national regulations on the use of sediments for plant nursery and of the analytical protocols

ACTION B.4: Demonstration of the use of remediated sediments as a substrate for food crops production

ACTION B.5: Training courses, workshops and guidelines for project replicability and transferability

ACTION C.3: Monitoring and validation of the use of remediated sediments as a substrate for nursing and cultivation: food crops production

ACTION C.4: Monitoring of socio-economic impact of the project and LCA

ACTION C.5: Performance indicators monitoring

ACTION D.2: Project dissemination plan: events, networking and contacts with Institutions and policy makers

ACTION E.1: Project management by FLORA

ACTION E.3: SUBSED After-LIFE plan



ACTION B.4: Demonstration of the use of remediated sediments as a substrate for food crops production



3 Growing substrates
25% Treated Sediments/peat
50% Mixture
75% Treated Sediments/peat

Citrus limon (cvr Fino 95)

{
C. macrophylla
C. aurantium
Forner-Alcaide nº5 (*C. volkameriana*)

90 lemon plants cultivated in pots of 40 liters



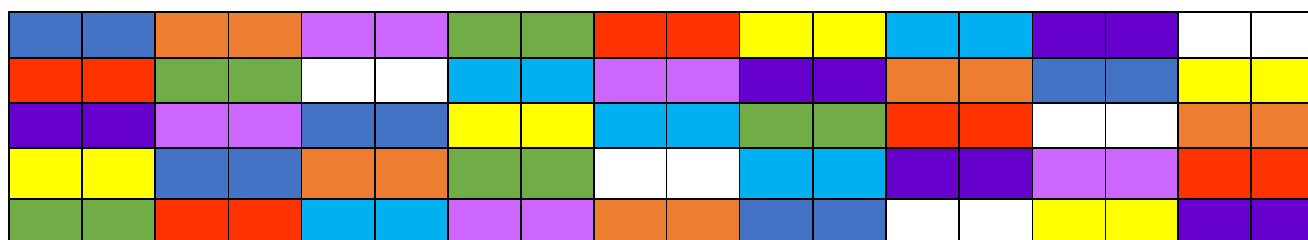
ACTION B.4: Demonstration of the use of remediated sediments as a substrate for food crops production



Treatments: 1 cvr x 3 rootstocks x 3 substrates = 9

nº trees: 9 treatments x 5 blocks x 2 pots= 90

90 lemon plants cultivated in pots of 40 liters



ACTION C.3: Monitoring and validation of the use of remediated sediments as a substrate for nursing and cultivation: food crops production



Pomological quality

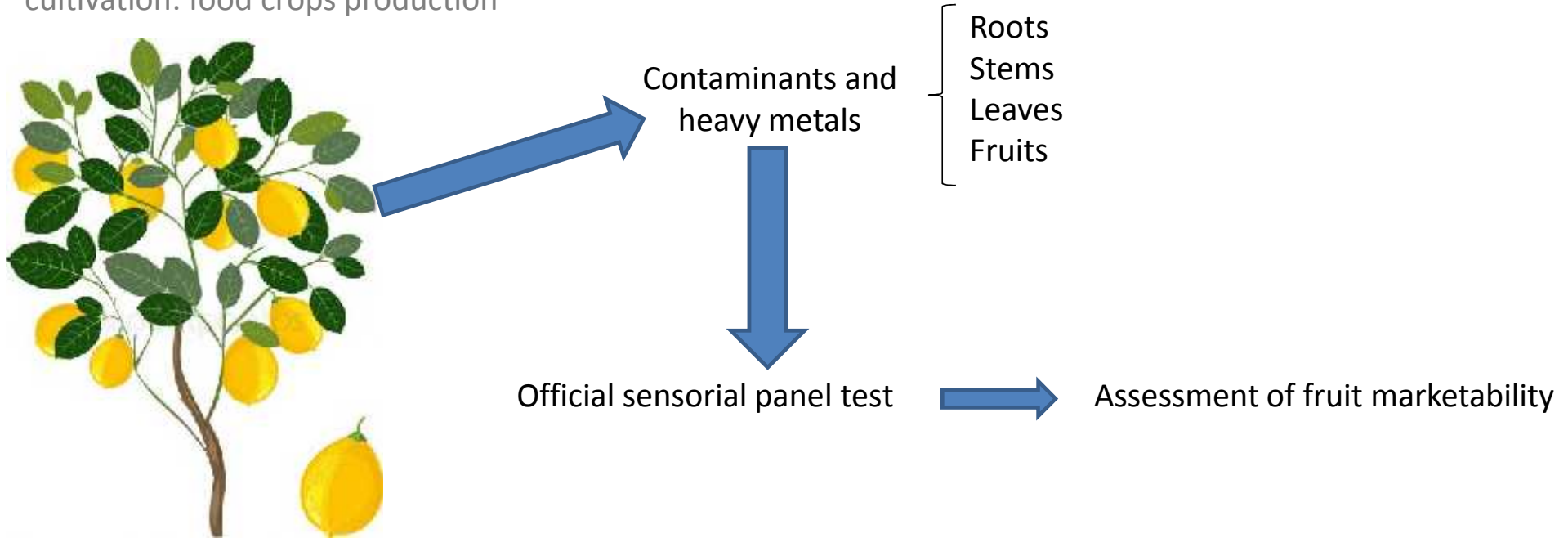
- Fruit fresh
- Dry weight
- Maximum diameter
- Fruit shape
- Skin color
- Flesh firmness

Chemical composition and organoleptic quality

- pH
- Titrateable acidity
- Total Solid Soluble
- Total polyphenols
- Antioxidant activity
- Vitamin C
- Organic acids
- Sugars



ACTION C.3: Monitoring and validation of the use of remediated sediments as a substrate for nursing and cultivation: food crops production





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