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Interreg Europe



European Union
European Regional
Development Fund

Food from Foods: An Innovative Process for Converting Hotel Residences to Animal Feed

Skarvelakis Manolis
Environmentalist

19th November 2019
Thematic Seminar 2

“Innovative Models for Waste Collection, Prevention and Recycling”

Project partners

- Crete Waste Management Association (ECHR) - Lead Partner
- Harokopio University of Athens
- Agricultural University of Athens
- Freie Universität Berlin
- TEI of Crete

Duration: 1/9/2016 to 28/2/2020

Budget: € 2,580,619.00 (60% co-financed by Life)

Intervention area: Heraklion, Crete

Objectives of the project

- The development of an efficient network for the collection and transport of hotel food waste
- Development, validation, evaluation and optimization of the proposed solar drying pasteurization process
- Assessment of feed produced in productive animals (hens and pigs) and in pet animals (cats and dogs)
- Environmental and financial evaluation of the project
- A variety of publicity and dissemination actions

Flow chart



Collection of food waste in hotel units

Refrigerator collection on a daily basis and

transfer to the pilot unit

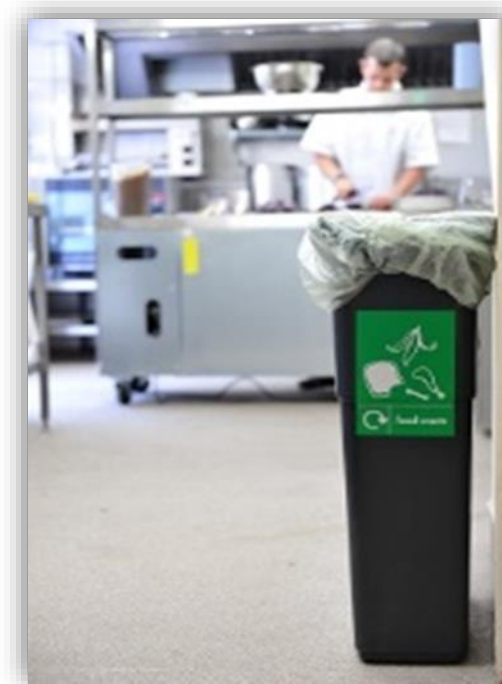
Sorting, Shredding, Solar Drying & Pasteurization

Evaluation of the product produced for use as a feed

Main Actions of the Project

B1: Development of a hotel waste collection system

- Analysis of waste composition
- Design of a food waste collection system
- Design of optimal routes
- Development of cost estimation methodology



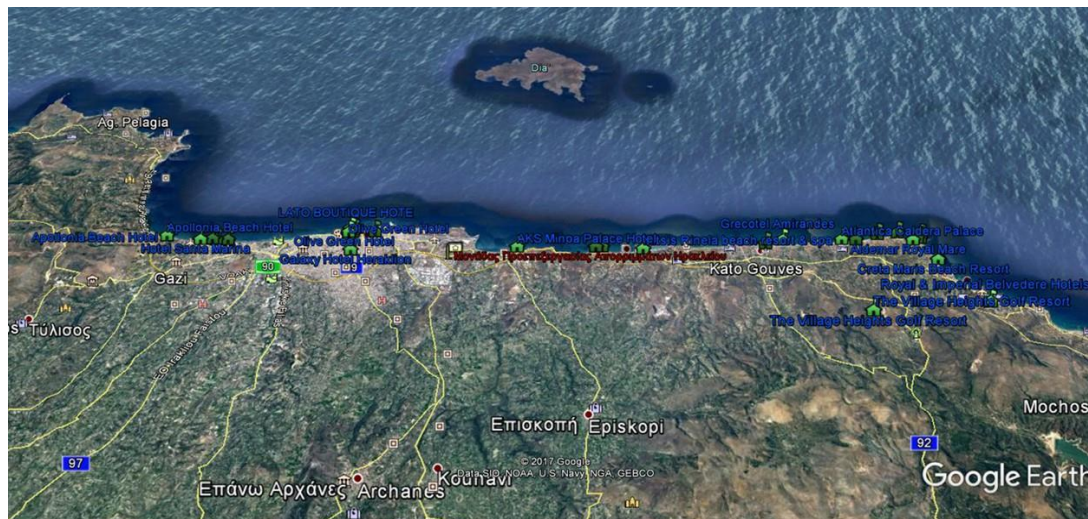
Partner hotels

Creta Maris Beach Resort

Galaxy Hotel

Aquila Atlantis Hotel

Olive Green Hotel



B2: Construction of the pilot solar drying unit

Module components

Pilot unit area: 880m²

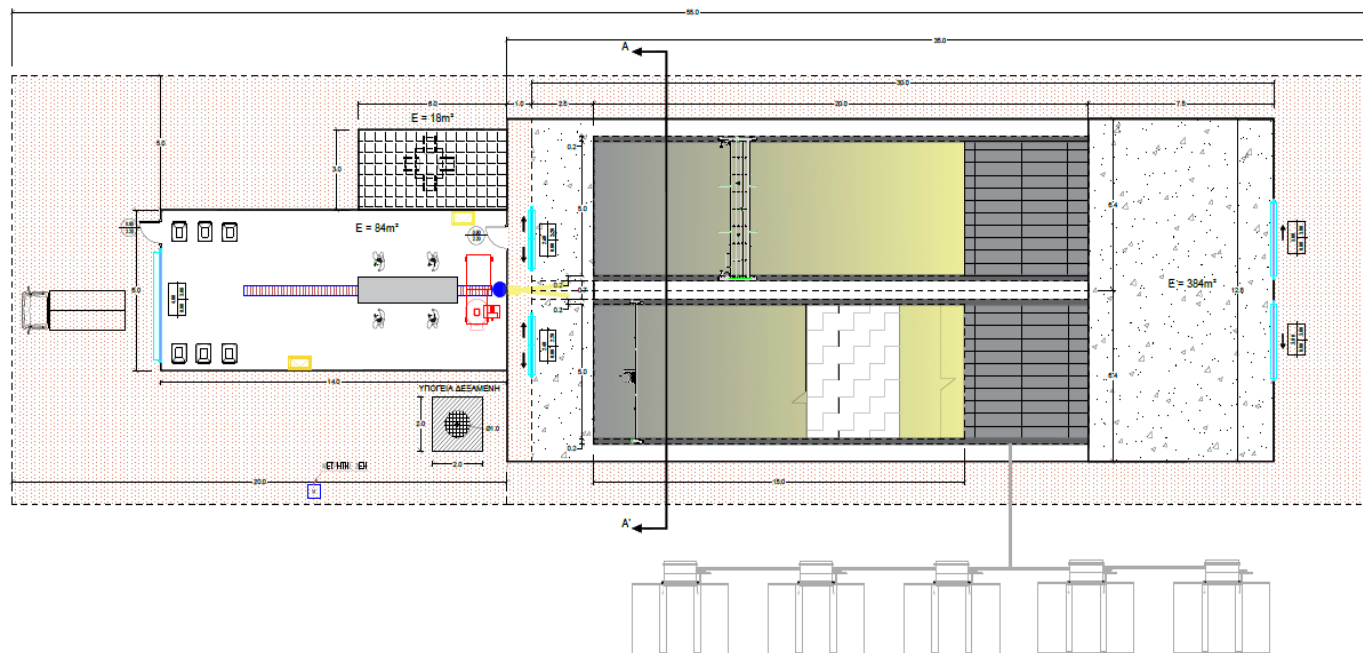
Unit capacity: 1.5 tn per day

Opening Period: April 1 to October 31












Estimation of quantity produced: 40-50 tn of product produced



Life F4F Program: Pilot unit



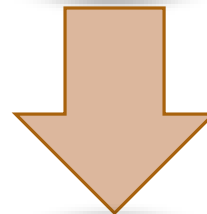
ΥΠΟΜΝΗΜΑ

-  ΑΝΤΛΙΑ
-  ΤΕΜΑΧΙΣΤΗΣ
-  ΗΛΙΑΚΟΙ ΘΕΡΜΟΣΙΦΩΝΕΣ
-  ΣΩΛΗΝΑΣ
-  ΕΝΔΟΔΑΠΕΔΙΑ ΘΕΡΜΑΝΣΗ
-  ΜΕΤΑΦΟΡΙΚΗ ΤΑΙΝΙΑ
-  ΑΝΟΔΕΙΔΩΤΟ ΑΤΣΑΛΙ
-  ΚΛΙΜΑΤΙΣΤΙΚΟ
-  ΤΕΝΤΑ
-  ΑΣΦΑΛΤΟΣ
-  ΣΚΥΡΟΔΕΜΑ

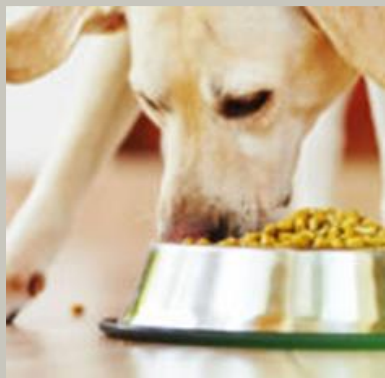
ΚΑΛΥΨΗ - ΕΜΒΑΔΟΝ
ΧΩΡΟΣ ΠΡΟΔΙΑΛΟΓΗΣ = 84m²
ΧΩΡΟΣ ΞΗΡΑΝΣΗΣ = 384m²
ΣΥΝΟΛΟ ΠΙΛΟΤΙΚΗΣ ΜΟΝΑΔΑΣ = 468m²
ΑΣΦΑΛΤΟΣ = 412m²

B3: Pilot unit operation / Evaluation - optimization

- Assignment of food waste collection to partner hotels and operation of the pilot unit
- Operational optimization
- Interaction with hotels to optimize the collection system



B4 & B5: Evaluation of the product for use as feed



- Physicochemical analyzes of the product
- Animal testing (dogs, cats, pigs, poultry)
- Biochemical and hematological analyzes in animals
- Evaluation of the commercial value of the product
- Suggestions for any modifications to the production process

B6: Actions for wider application of the F4F process

- Market research for the product
- Scale up design
- Economic and environmental assessment
- Actions aimed at repeatability and transfer of know-how



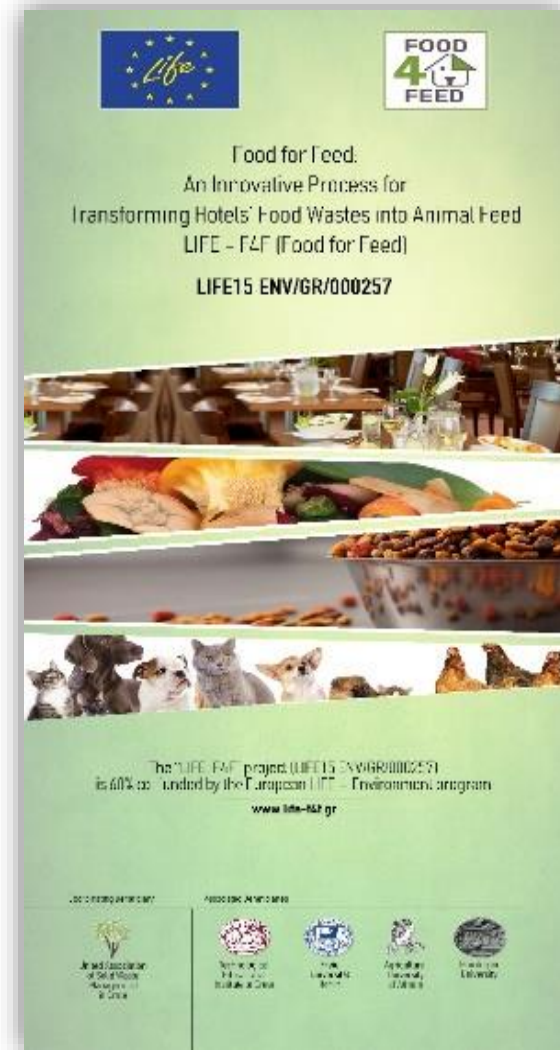
B7: Evaluation and integration of the F4F process as part of EU policies

Undertake initiatives to evaluate the potential of the F4F program for integration into:

- European waste strategy
- Roadmap for the best use of resources



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The course of the program to date ...

- Signing cooperation agreements with hotels
- Tender implementation & contractualization of pilot plant construction
- Conducting a competition & contracting the food waste collection of the partner hotels & operating the pilot unit
- Evaluation of hotel sorting systems by developing relevant questionnaires
- First synthesis analysis and investigation of quality characteristics and optimum treatment conditions for residues



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Thank you for your attention!!!

<https://life-f4f.gr/>
<http://ec.europa.eu/environment/life/>

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www.interregeurope.eu/winpol