INAPRO
Innovative Aquaponics for Professional Application

A new water-saving combination principle of aquaculture and hydroponics to provide optimal production conditions both for the fish and the plant unit

FACTSHEET

At a Glance

Title: Innovative model and demonstration based water management for resource efficiency in integrated multitrophic agriculture and aquaculture systems

Programme: ENV.2013.WATER INNO&DEMO-1 Water innovation demonstration projects

Total Budget: 9,229,598.78 €

EC Contribution: 5,981,587.00 €

Duration: January 2014- December 2017 (48 months)

Coordinator: Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB) in the Forschungsverbund Berlin e.V.

Consortium: 17 partners from 7 countries

Web: www.inapro-project.eu

The Challenge

The growing world population and therefore the rising demand for food increase the pressure on water resources, land use and ecosystems.

The collaborative project INAPRO implements innovative water, energy and nutrient management solutions to exploit all available opportunities of resource efficiency in rural and urban aquaponic facilities. The ambitions of INAPRO meet perfectly well the recent EU strategies under the new Horizon 2020 framework to face the challenges of the dramatic development of the water resource situation in Europe and worldwide.

INAPRO aquaponics, as a double-recirculation system consisting of hydroponics and aquaculture elements, contributes to addressing these problems by producing healthy food in a particularly sustainable way.

Project Objectives

INAPRO has established a series of objectives:

- Implement cutting edge technical and technological approaches into an aquaponic system, which allow a water and energy-saving, nearly emission-free production of fish and vegetables to contribute markedly to sustainable food security for the 21st century
- Apply a new combination principle for aquaponic systems to provide optimal conditions both for the fish and the plant unit
- Develop standardised and modular configurable solutions, scalable and adaptable to different local requirements
- Achieve a real breakthrough towards commercialisation and open new market opportunities for the innovative aquaponic system

Methodology

- INAPRO will provide a model-based concept and a functional specification
- The aquaponic components and modules will be developed and tested
- The demonstration systems will be build in different regions: Germany, Spain, Belgium and China
- The technical and economic feasibility will be demonstrated
- Different dissemination and exploitation activities will be used to convince different stakeholders of the new and innovative technology

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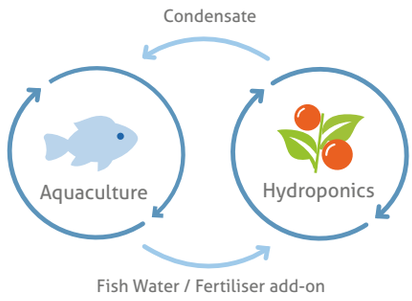
Results

The INAPRO project will mobilise industry, member states and stakeholders into promoting the new technical and technological approach for INAPRO aquaponics, which reduces the water and carbon footprint significantly compared to current systems by minimising emissions, optimizing reusable water flows, recovering material and nutrients from waste water, reducing energy demands while lowering the operating costs.
INAPRO will provide market advantages for manufacturers, technology suppliers as well as for fish and vegetable farmers. Special attention will be given to relate INAPRO to parallel funded complementary EU projects and to serve as a seed project to initialise follow up activities.



The double recirculation system provides optimized conditions for the fish and plant part independently from one another to increase the productivity of both.

Project Partners

Belgium

AliénorEU sprl (SME)

INAGRO VZW

China

Beijing CAUIOT Co. Ltd. (SME)

China Agricultural University

Yellow Sea Fisheries Research Institute

Germany

automation & software Günther Tausch GmbH (SME)

Fischerei Müritz-Plau GmbH (SME)

Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung e.V. – Application Center System Technology

IFQ GmbH Wismar Gesellschaft für Informationsverarbeitung, Fertigungssteuerung und Qualitätssicherung (SME)

Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB) in the Forschungsverbund Berlin e.V.

PAL-Anlagenbau GmbH Abtshagen (SME)

Italy

EUROVIX SPA (SME)

Netherlands

Fytagoras B.V. (SME)

Stichting Dienst Landbouwkundig Onderzoek

Wageningen University

Norway

Havforskningsinstituttet

Spain

Jardineria y viveros la noria S.L. (SME)

Contact

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