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Press release

INAPRO aquaponics becomes a reality in Germany

The first catfish and tomatoes produced in the INAPRO demonstration site located in Waren (Germany) have been successfully processed and sold. The construction of the Waren demonstration site was finalised in 2016 and consists of an aquaponic facility exploiting the INAPRO aquaponic system and proving its viability.

The INAPRO demonstration facility has been built in order to demonstrate that the INAPRO system is able to produce sustainable food with a low environmental impact by optimising conventional aquaponics. Aquaponics is a resource-efficient food production system which couples the production of fish and plants while using the nutrient-rich fish tank water for nourishing the plants.

The total area of the INAPRO aquaponic facility is 573m^2 and consists of the fish farm with the recirculating aquaculture system (RAS), a broad-ship greenhouse, a technical room with a combined heat and power plant (CHP) and the computer control system, a feed storage room and an outside secondary clarifier.

The production of fish and tomatoes in Waren started in May 2016, and June 2016, respectively. It is expected to produce around 24 tonnes of African catfish (*Clarias gariepinus*) and 11 tonnes of tomatoes per year.

At the INAPRO demonstration site, there are two independent water recirculation systems: one for the plants and one for the fish. These systems are unidirectionally coupled to transfer the correct amount of nutrient-rich fish water to the hydroponically grown crops. This so-called double water recirculation system provides optimised conditions for the production of fish and plants and increases the productivity of both. Moreover, in order to minimise the fresh water demand, the evapo-transpirated water from the plant area is regained through cooling traps and reinserted into the fish tanks. This feature ensures that the daily water input is less than 3% of the total amount of water circulating in the system.

The whole production process is monitored and controlled through a management execution system (MES). The MES records and evaluates all technical and economic parameters in a single standardized system in order to provide a precise daily overview to the user of the production of both fish and tomatoes. For this purpose, the system includes tools such as a feed and nutrient calculator, a simulator of water and energy consumption and a profitability calculator. The MES is designed to give precise recommendations to the user concerning the status of the whole system and to provide inputs for improving the system's efficiency. In order to make it practical for the end-user, the MES has an intuitive user interface that makes the whole system easily understandable.

The Waren demonstration site is managed by Müritzfischer which is the largest freshwater fishing company in Germany. The company deals with lake and river fisheries, aquaculture, fish processing

and marketing. In particular, the catfishes produced in the INAPRO demonstration site are directly processed and sold on site thanks to Müritzfischer own processing facility which enables the production of frozen, smoked and pickled fish.

Analysis have shown that the tomatoes produced by the INAPRO aquaponics have the same characteristics as the ones produced by conventional hydroponics, confirming that the INAPRO tomatoes are good, healthy and tasty. Until now, the fruits have been sold by Müritzfisher on the premises of the demonstration site and in a local supermarket.

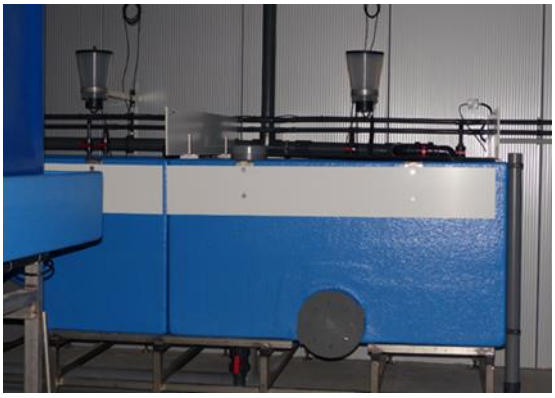
For more information please visit our website: http://www.inapro-project.eu/

Pictures – *more pictures are available upon request*

The greenhouse of the INAPRO demo-site in Waren

Tomato plants inside of the greenhouse

The management execution system (MES)



Fish tanks with automatic feeder

INAPRO
Innovative Aquaponics for Professional Application

Fish store on the premises of the demonstration site

Fish counter with African catfish produced in Waren

INAPRO – Innovative Aquaponics for Professional Application

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