

Aquaculture in urban areas – development of an innovative vertical aquaponics system for urban agriculture

Problem / Motivation

- Climate change leads to significant regional climatic shifts and requires reduction of CO₂ emissions
- CO₂ emissions from supply chains play a key role
- Aquaponics in urban areas enables sustainable, resource-efficient production with low CO₂ emissions
- Potentials for vertical use and direct food supply in urban areas



Solution

- Research into commercial, aquaponic plant production in terms of novel, vertically oriented seed strings
- Analysis of aquaponics systems with regard to fish and plants, such as feed materials, nutrient concentration or root and biomass development
- Development of textile-based seed strings including functionalisation for enhanced process monitoring

Project Launch

04/2025

Project Partner

Hansabred GmbH & Co. KG

KARREE49

Universität Hohenheim

Universität Rostock

Wirth & Co. GmbH



Vertical aquaponics systems in urban areas

Project manager



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