CUBES Circle

Future Food Production

HUMBOLDT-UNIVERSITÄT ZU BERLIN

AGRICULTURAL SYSTEMS OF THE FUTURE

Sustainable, resource-efficient and adaptable production of food

STATUS QUO

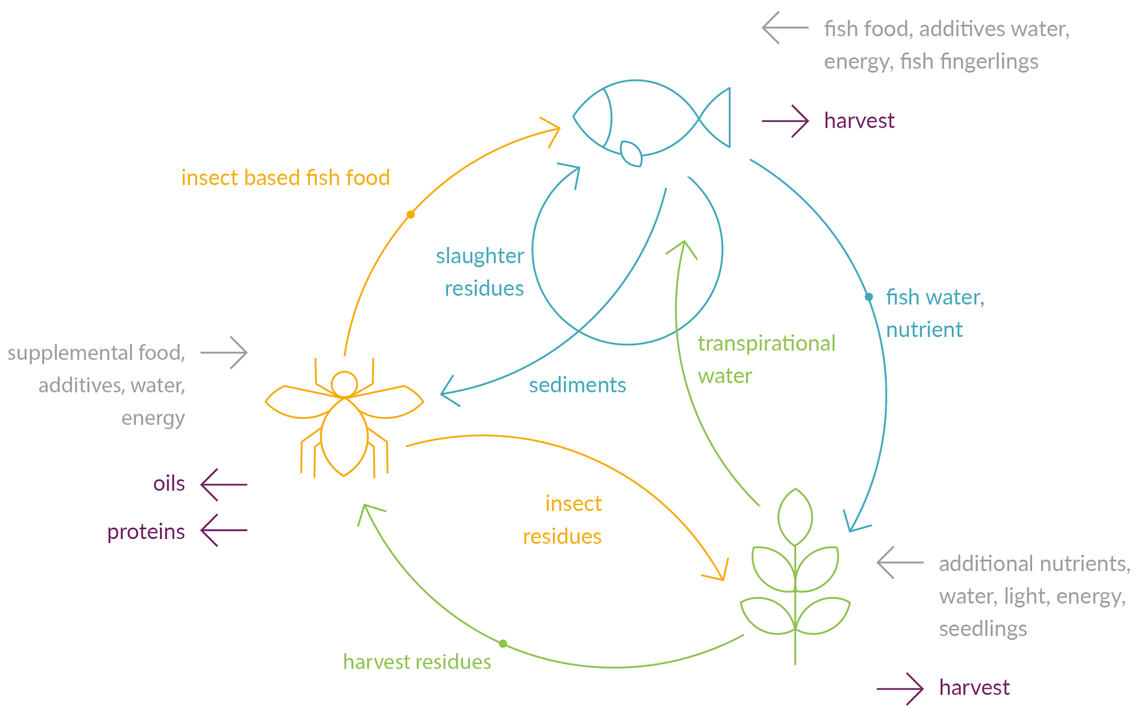
Besides population growth and climate change, urban growth is one of the largest challenges of the 21st century. The ever increasing scarcity of cultivation areas can neither be compensated by current innovations in animal breeding and plant cultivation nor by measures for increasing productivity.

VISION

Our vision of agricultural systems of the future is based on the idea that food will be produced in connected, mutually communicating and standardized production units, the so-called CUBES. Those CUBES are the basis for a system with largely closed energy- and nutrient fluxes.

OBJECTIVE AND INNOVATION

of the project is the smart connection of intensive agricultural production systems, using the organisms **plants, insects and fish** (CUBES), to an overall system (CUBES Circle).
A focus of the project is the development of innovative, standardized and largely closed produciton units for agricultural production with connected energy- and nutrient fluxes.



The principle of circular flow for the production of biomass reduces and avoids waste.

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IMPLEMENTATION

The scientific work is carried out in **9 subprojects (SP)**:

SP 1 investigates the project form a holistic perspective while considering the individual innovations as well as their interplay within the CUBES Circle.

SP 2, 3 and 4 represent the modular production entities for the production of plants, insects and fish.

The methods for the regulation of the CUBES Circle are developed by **SP 5**.

SP 6 is responsible for the connection of the three production units to a common production system.

The evalution of the efficiency of nutrient fluxes between the different trophic levels is carried out by **SP 7**.

SP 8 aims at analyzing the relevant innovation systems for different applications and locations to develop a systematic approach for defining determinants of innovation diffusion.

SP 9 organizes and coordinates the CUBES Circle consortium.

CONTACT

Prof. Dr. Dr. Christian Ulrichs & Dr. Zoltan Ferenczi
Humboldt-Universität zu Berlin
Faculty of Life Sciences

Albrecht Daniel Thaer-Institute for Agricultural and Horticultural Sciences
Division Urban Plant Ecophysiology
Lentzeallee 55-57
14195 Berlin

Phone: +49 30 2093 46420
Fax: +49 30 2093 46440
E-Mail: mail@cubescircle.de

For further information visit: **www.cubescircle.de**

GEFÖRDERT VOM
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Projektträger Jülich Forschungszentrum Jülich

PROJECT PARTNERS

CUBES Circle is a research project with an interdisciplinary consortium of researchers and partners with expertise in industry, production, consulting and commerce.

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