Innovative Urban Agriculture Sustainable Solutions for Key Urban Challenges

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Introduction

Urban agriculture (UA) is increasingly recognized for its multifunctional nature and its ability to address diverse urban challenges—ranging from food provision and social inclusion to environmental resilience and circular resource use.

Located in urban or peri-urban areas, UA systems contribute to food production while being socially, economically, and ecologically integrated into the urban aera. The diversity of forms:

demonstrates the adaptability of UA, but also its complexity. As such, understanding and supporting the development of UA requires a cross-disciplinary approach.

Within this context, innovation emerges as a key driver for the sustainable transformation of urban food systems. However, innovation in agriculture has traditionally been understood in narrow terms—mostly technological, production-oriented, and technique-based. In urban agriculture, innovation is not only about new tools or infrastructures, but also about rethinking relationships, practices, and purposes.

This study is grounded in these reflections and seeks to address three key questions: What are the main challenges faced by urban agriculture today? How can innovation provide effective responses to these challenges in urban contexts? How can such innovations be made sustainable and locally relevant over time?

FOODCITY BOOST

Develop and implement a comprehensive assessment

Environmental | Economic | Social

Fostering innovation in Urban Agriculture systems

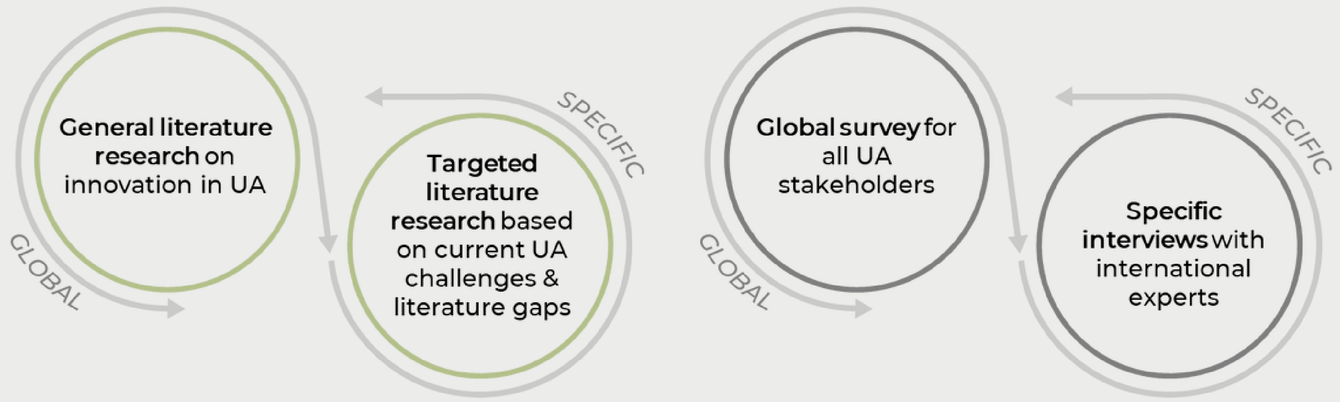
Urban
Peri-urban
Rural

Funded by the European Union

Methodology

State of the art of current innovative practices around the world

THEORETICAL DATA — APPLIED DATA



outcomes

- Global overview of innovation in UA
- Research avenues or ideas from current UA challenges
- First data base of supposedly innovative urban agricultural systems

Selection of the most innovative practices

Creation of indicators to select the most innovative and sustainable Urban Agriculture practices

- Existence of the practice - does this practice still exist?
- Sources robustness - Do we have enough solid sources?
- Invention (prototype, idea not tested yet) or innovation (an invention put in place)
- Transformative potential - transformational, adjacent, core innovation
- Respond to a need
- Newness of the practice
- Bring a positive impact
- Sustainability - from the Doughnut Theory

outcomes

- Involving a group of experts for the selection
- Gain an in-depth understanding of the UA forms in Europe and the key innovative practices
- Final database of innovative urban agricultural systems

Results

This poster presents a selection of key innovations identified in the field of urban agriculture. These innovations were gathered through a comprehensive literature review, a stakeholder survey, and interviews with urban agriculture experts. Each innovation was selected based on its potential to drive transformation within UA systems, its positive impact on European urban contexts, and its relevance to local territorial conditions. All of them directly address the major challenges currently faced by urban agriculture—whether technical, social, economic, or spatial—offering tangible pathways toward more sustainable and resilient urban food systems.

Economic

- New fundings opportunities
- New business models
- Policies measures
- Economic circularity

Social

- Create links
- Provide education and teaching
- Improve quality of life

Agronomic

- Localisation of production
- Production controlled
- Technics of production
- Products

Environmental

- Improve water accessibility
- Improve circularity
- Shared resources
- Biodiversity and ecosystem preservation

Territorial

- Policies for zoning regulations
- Urban policies integrating agriculture
- Multi-stakeholders approaches
- Create new outlet network
- Develop regional products labels

Conclusions & prospects

Identifying key innovation themes helps reveal the realities of urban farming practices across Europe. A selection of these initiatives will be featured in an Innovation Catalogue, serving as a basis for developing design recommendations to guide the implementation of innovative and context-relevant urban agriculture systems.