

Agriculture in an  
Urbanizing Society  
Volume Two



# Agriculture in an Urbanizing Society Volume Two:

*Proceedings of the Sixth  
AESOP Conference on  
Sustainable Food Planning*

Edited by

Rob Roggema

Cambridge  
Scholars  
Publishing



Agriculture in an Urbanizing Society Volume Two: Proceedings  
of the Sixth AESOP Conference on Sustainable Food Planning

Edited by Rob Roggema

This book first published 2017

Cambridge Scholars Publishing

Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK

British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

Copyright © 2017 by Rob Roggema and contributors

All rights for this book reserved. No part of this book may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the copyright owner.

ISBN (10): 1-4438-9984-4

ISBN (13): 978-1-4438-9984-0

# TABLE OF CONTENTS

## Volume One

List of Illustrations .....	ix
List of Tables .....	xix
Preface .....	xxi
Introduction .....	1

### **PART I: Spatial Design**

Chapter One.....	7
Planning the Urban Food System of the Lisbon Metropolitan Area in Portugal: A Conceptual Framework Rosário Oliveira and Maria João Morgado	
Chapter Two .....	31
Metropolitan Foodsheds as Spatial References for a Landscape-Based Assessment of Regional Food Supply Dirk Wascher, Michiel van Eupen, Stefano Corsi, Guido Sali, and Ingo Zasada	
Chapter Three .....	59
Via Emilia: Infrastructure for Cultural Landscape and Food Heritage Anna Chiara Leardini and Stefano Serventi	
Chapter Four .....	85
Food Flows and Food Systems in Desert Landscapes: Edible Landscapes in Qatar and the Arabian Gulf Anna Grichting, Reem Awwaad, Luzita Ball and Paige Tantillo	

Chapter Five .....	111
The Rotterdam Metabolists: A Step Further than the Ecopolis Strategy for Urban Food Production Jeroen de Vries	
Chapter Six .....	127
Agri-itecture in a Row. Urban Agriculture for Creative Housing as a Way of Smart Living: The Case Study of Woensel-West, Eindhoven Natalia Mylonaki, Bauke de Vries, Maarten Willems, and Tom Veeger	
Chapter Seven.....	165
The Open Food-Production University of the Danube: Landscape as Educational Interface Nikolaos Margaritis and Daniel Jauslin	
Chapter Eight.....	191
Contesting Western Agricultural Models in Queens, New York Steven Buchanan	
<b>PART II: Urban Planning</b>	
Chapter Nine.....	209
Agriculture in the Mediterranean Urban Phenomenon: Rome FoodScapes as an Infrastructure Benedetta Di Donato, Aurora Cavallo, and Davide Marino	
Chapter Ten .....	235
Urban Gardening in the Ruhr Metropolis: Methods and Criteria for Identification of Areas for Urban Gardening Denise Kemper and Wiebke Weltring	
Chapter Eleven .....	261
A Review of the Main Concepts of Integrating Agriculture in Public Landscapes and Open Spaces Seyyed Mohammad Reza Khalilnezhad and Kai Tobias	
Chapter Twelve .....	283
Finding Spaces for Urban Food Production: Matching Spatial and Stakeholder Analysis with Urban Agriculture Approaches in the Urban Renewal Area of Dortmund-Hörde, Germany Michael Roth, Miryam Frixen, Carlos Tobisch, and Thomas Scholle	

Chapter Thirteen .....	299
Urban Gardening: Is It Really About Food Security?	
Elizabeth Brabec	
Chapter Fourteen .....	315
Top-Down Policies and Bottom-Up Practices in Urban and Peri-Urban Agriculture: An Italian Dilemma	
Giuseppe Cinà and Francesco Di Iacovo	
Chapter Fifteen .....	337
Controversies and Opportunities for Chinese Urban Agriculture	
Ning Gao and Shenxuan Zhu	
Chapter Sixteen .....	353
Food Planning and Landscape in the “Gastropolis” of New York	
Arnold van der Valk	

### **Part III: Governance**

Chapter Seventeen .....	381
Urban Agriculture Quick Scan Map: Meta-Design as a Strategic Tool for Collaborative Urban Planning	
Berit Piepgras	
Chapter Eighteen .....	405
Twenty-Five Years of the Emscher Regional Landscape Park: Evaluation and Perspectives for Agriculture in 2014	
Denise Kemper and Bernd Pölling	
Chapter Nineteen .....	431
Urban Agriculture in São Paulo, Brazil: Actors, Spaces, and Governance Models	
Giulia Giacchè and Wânia Rezende Silva	
Chapter Twenty .....	453
From a Twentieth-Century Utopia to a Twenty-First-Century Refuge?	
Kumru Arapgirlioglu and Deniz Altay Baykan	
Chapter Twenty-One .....	487
The “Cultivated Urban Gardens” Role within the Industrial Renewal Context: the Case of Villeurbanne, France	
Mónica A. Hernández H.	

Chapter Twenty-Two.....	511
Fooding the City: Everyday Food Practices and the Transition to Sustainability	
Nevin Cohen and Rositsa Ilieva	

Appendix A: Abbreviations, Acronyms, and Initialisms.....	539
---	-----

Contributors to Volume One .....	545
----------------------------------	-----

## Volume Two

List of Illustrations .....	xiii
-----------------------------	------

List of Tables.....	xxi
---------------------	-----

Preface to Volume Two.....	xxiii
----------------------------	-------

Introduction to Volume Two .....	601
----------------------------------	-----

## PART IV: Entrepreneurship

Chapter Twenty-Three.....	607
---------------------------	-----

Empiric Survey on Business Models and Success Factors of Urban  
Agriculture in Europe—First Results from the Ruhr Metropolis

Bernd Pölling, Oscar Alfranca Burriel, Elisabete Alves,  
Gunilla Anderson, Ingve Berntsen, Paola Branduini,  
Galina Koleva, Wolf Lorleberg, Pedro Mendes Moreira,  
André Miguel, Terje Ong, Oleg Paulen, Maria Jose Prados,  
Bruno Roncchi, Andreas Spornberger, Biancamaria Torquati,  
Jan-Willem van der Schans, and Helene Weissinger

Chapter Twenty-Four .....	633
---------------------------	-----

Artisan Food Producers in Detroit: Promoting and Performing  
Local Food in the Post-Modern City

Erica Giorda

Chapter Twenty-Five.....	659
--------------------------	-----

Living Labs: Innovating Environments for Metropolitan Food Production

Rik Eweg and Jos van Hal

Chapter Twenty-Six.....	683
New Urban–Rural Relationships and the Emerging of Places for Joint Consumption and Innovation of Food	
Pierluigi Milone, Flaminia Ventura, and Paul Swagemakers	
Chapter Twenty-Seven .....	705
Antifragile Urban Entrepreneurialism as a Contributor to Food Security in Europe	
Howard Lee	
Chapter Twenty-Eight .....	731
Faux Paradis: Regenerative Agroecology via Fair Trade: A Political Ecology Perspective	
Konstantinos Christodoulidis	
Chapter Twenty-Nine .....	753
Solving Urban Food Security Through Rooftop Hydroponics	
R. W. Taylor, J. S. Carandang, C. Alexander, and J. S. Calleja	
 <b>PART V: Environmental Flows</b>	
Chapter Thirty .....	779
The Role of Urban Agriculture in Urban Organic Waste Management in The Hague, the Netherlands	
Angela Anastasiou, Anne de Valenca, Ermias Amare, Gerardo Montes de Oca, Ike Widyaningrum, Koen Bokhorst, and Shuang Liu	
Chapter Thirty-One .....	801
Roof Water-Farm: Participatory and Multifunctional Infrastructures for Urban Neighborhoods	
Angela Million, Grit Bürgow, Anja Steglich, and Wolf Raber	
Chapter Thirty-Two.....	833
Designing Edible Landscapes: The Social Construction of Green Infrastructure in Vigo, Spain	
Paul Swagemakers, Lola Domínguez García, Pierluigi Milone, Xavier Simón Fernández, and Flaminia Ventura	

**PART VI: Health**

Chapter Thirty-Three.....	847
Shrimp Waste for Shrimp Taste: Toward Sustainable Healthy Applications of Shrimp Shells for Human Consumption Esther E. van Wezel, Frédérique F. R. Vrinte, and Feike R. van der Leij	
Chapter Thirty-Four.....	857
Personalized Food: The Role of Patient Organizations as Emergent Critical Change Agents in the Food System Gaston Remmers	
Chapter Thirty-Five.....	879
Can Urban Social Sustainability in Times of Scarcities Be Achieved by Cities Alone? Francesco Di Iacovo	
Chapter Thirty-Six.....	905
Growing for Health: Community Agriculture in Sandwell Veronica Barry	

**PART VII: Social Innovation**

Chapter Thirty-Seven .....	927
The Significance of Urban Farming Training Programs to the Development of Alternative Food Systems: Toward a Topology of Agrarian Space Across Urban Environments Joëlle Rondeau	
Chapter Thirty-Eight .....	955
At the Nexus of Urban Agriculture, Social Innovation, and Planning Policy: The Case of the Yorklands Green Hub, Ontario, Canada Karen Landman and Alison Blay-Palmer	
Chapter Thirty-Nine .....	975
Finding Space for Sustainable Food in Urban Communities: Experiences from an URBACT Thematic Network François Jégou and Joy Carey	

Chapter Forty .....	1007
From Consumer to Co-Producer: Birth and Growth of Community-Supported Agriculture in Sweden Jenny Sjöblom	

Chapter Forty-One .....	1025
Creating and Promoting Sustainable Agriculture: The Milan Protocol Call to Action Sonia Massari	

### **PART VIII: Local Initiatives**

Chapter Forty-Two .....	1047
Toward a Local Food Agenda in Turin: Mapping Practices and Processes Through Resilience Egidio Dansero, Piero Bonavero, Giacomo Pettenati, and Alessia Toldo	

Chapter Forty-Three .....	1071
Urban Food Initiatives in North West England: Manchester Veg People, FarmStart, and Land Army Mark Stein	

### **PART IX: Extraordinary Ideas**

Chapter Forty-Four .....	1097
Extracting Urban Green Potential: Critical Design-Based Use of Digital and Bodily Cartography Methods Anna Maria Orrù	

Chapter Forty-Five .....	1123
Organizing the Urban Agriculture Movement: Actors and Networks In and Around Paris Christine Aubry, Anne-Cécile Daniel, and Joe Nasr	

Chapter Forty-Six .....	1141
Urban Agriculture for Nutrition Security, Livelihood Opportunities, and Sustainable Development P. J. Christabell	

Chapter Forty-Seven.....	1173
Yield Operations: (Re)Fitting Urban Agriculture in Existing Green Spaces for Economic and Other Benefits Joshua Zeunert	
Chapter Forty-Eight.....	1209
Agro-Biodiversity, Green Agriculture, and Sociocultural Heritage: A Case Study of Recovery and Valorization of Local Resources Cristiana Peano, Nadia Tecco, Elena di Bella, and Francesco Sottile	
Chapter Forty-Nine.....	1227
Urban Agriculture in Contemporary Israel—Place, Community, and Values: Two Case Studies Tal Alon-Mozes	
Chapter Fifty.....	1249
Urban Transformations: Pathways from Practice to Policy for Productive Urban Landscapes Andre Viljoen and Katrin Bohn	
Appendix A: Abbreviations, Acronyms and Initialisms.....	1261
Contributors to Volume Two.....	1267

## ILLUSTRATIONS

- Fig. 23-1 Urban agriculture consists of professional urban agriculture, urban gardening, and innovative concepts.
- Fig. 23-2 Business Model Canvas, with short descriptions of the nine basic building blocks.
- Fig. 23-3 Multi Stage business model.
- Fig. 23-4 Cobweb diagram.
- Fig. 23-5 Conducted interviews (to April 2014) divided into types of urban agriculture and countries.
- Fig. 23-6 The Ruhr Metropolis in Germany, localizing the fourteen interviewed professional urban farms.
- Fig. 23-7 Unique selling propositions of the fourteen interviewed urban farms in the Ruhr Metropolis, Germany.
- Fig. 23-8 Business Model Canvas for Schultenhof.
- Fig. 23-9 Cobweb diagram for Schultenhof.
- Fig. 24-1 Detroit Eastern Market Shed 2.
- Fig. 24-2 Brother Nature's salad mixes stand.
- Fig. 24-3 Lava cakes from Paris.
- Fig. 24-4 Lava cakes stand—notice the color coordination.
- Fig. 24-5 Salsa stand no. 1.
- Fig. 24-6 Salsa stand no. 2.
- Fig. 24-7 From India, homemade spiced relish.
- Fig. 24-8 From Michigan, homemade jams.
- Fig. 24-9 From Ecuador, hand-wrapped chocolate bars.
- Fig. 24-10 Homemade protein bars.
- Fig. 24-11 Homemade popcorn, family recipe.

- Fig. 25-1 Scheme for an action-research process.
- Fig. 25-2 Diversity of ABIs: the entrepreneurship/knowledge matrix, using examples from Kopicki et al. (2011).
- Fig. 25-3 International Master's students work with entrepreneurs in the Gelderse Vallei.
- Fig. 25-4 Indian growers explain their methods.
- Fig. 25-5 Learning journey of Dutch entrepreneurs and researchers to Macedonia.
- Fig. 26-1 The mediating role of institutions.
- Fig. 26-2 Biodegradable packaging.
- Fig. 26-3 Recyclable packaging.
- Fig. 26-4 Zero-emission delivery car.
- Fig. 26-5 Attitude of respondents to getting meals outside the home.
- Fig. 26-6 Average price paid per meal.
- Fig. 26-7 Expectations of respondents with respect to the quality of the supply.
- Fig. 26-8 Expectations of respondents with respect to the variety of the supply.
- Fig. 26-9 Satisfaction of respondents with respect to the quality and variety of supply available in the present shop.
- Fig. 26-10 Orientation of respondents with respect to the shop being managed directly by farmers.
- Fig. 26-11 Orientation of respondents with respect to the shop being inspired by zero miles and traceability concepts.
- Fig. 26-12 Orientation of respondents with respect to meals made with fresh products.
- Fig. 26-13 Orientation of respondents with respect to home delivery of meals.
- Fig. 26-14 Interest of respondents in buying food in a shop managed directly by local farmers.
- Fig. 26-15 Concept format of the Campoverde Farmers' Shop in the University of Calabria.

- Fig. 29-1 Urban metabolism model.
- Fig. 29-2 The hydroponics setup enclosed in a net-wrapped shed.
- Fig. 29-3 The closed hydroponics setup using PVC pipes.
- Fig. 29-4 Lettuce plants being sold by RFM Hydroponics at ₱30 per pot.
- Fig. 30-1 Map of The Hague with several urban agriculture initiatives.
- Fig. 30-2 Roof garden on the Kobus restaurant.
- Fig. 30-3 Course description of the Edible Balcony project.
- Fig. 31-1 Research framework of Roof Water-Farm: status quo versus the guiding principles of LoopCity.
- Fig. 31-2 The RWF variants combining building-integrated water reuse and water-farming that are investigated in the Roof Water-Farm project.
- Fig. 31-3 Greenhouse in the courtyard of Block 6.
- Fig. 31-4 Map of Roof Water-Farm spatial diffusion potentials for RWF Variant I: aquaponics with treated graywater.
- Fig. 31-5 Roof Water-Farm variants and their application to buildings.
- Fig. 31-6 One of the Roof Water-Farm campaign photos.
- Fig. 31-7 Student campaign encouraging graywater recycling in Berlin–Charlottenburg, produced in the “Participatory Blue-Green Infrastructure” Master class in the Urban Design and City and Regional Planning program at the TU Berlin.
- Fig. 33-1 Peeled shrimps. Meat of the species *Crangon crangon* is gathered after peeling. Bar represents 1 centimeter.
- Fig. 33-2 Shrimp waste. The peeled shells were traditionally considered as waste, with applications as fish feed at best. Nowadays, human food applications are within reach as well. Bar represents 1 centimeter.
- Fig. 34-1 Food should fit both the stage of treatment and the life phase one is in.
- Fig. 34-2 Common food and personalized food.

- Fig. 34-3      Personalized food systems: a diversity of target groups, coalitions, networks, and markets on a gradient between common food and individualized food.
- Fig. 34-4      Key stakeholders involved in formation of new co-creative business coalitions in personalized food, including some of the questions they deal with.
- Fig. 36-1      Where UA can fit.
- Fig. 36-2      Construction of Salop Drive, 2000.
- Fig. 36-3      Planning meeting at Salop Drive, 2004.
- Fig. 36-4      Salop Drive Market Garden.
- Fig. 36-5      Gardening at Salop Drive.
- Fig. 36-6      Focus group of twenty individuals who had completed twelve weeks or more of social and therapeutic horticulture activities.
- Fig. 37-1      Locations of Concordia University's two campuses. While the Loyola campus is located in a low-density neighborhood, the Sir George Williams campus is located in the heart of downtown Montreal.
- Fig. 37-2      Hegamonic and counter-hegemonic dynamics that dialectically produce urban space.
- Fig. 37-3      Vibrant materiality introduced into the counter-hegemonic and hegemonic dynamic.
- Fig. 37-4      Areas cultivated by the City Farm School Market Gardener internship program on the Loyola campus of Concordia University, located in the Notre-Dame-de-Grâce neighborhood of the City of Montreal.
- Fig. 37-5      Detail of the Loyola Market Garden production sites.
- Fig. 37-6      Partial view of production plot A, illustrating bio-intensive farming practices.
- Fig. 37-7      The sequence illustrates the effectivity of the hula hoe in relation to the human female body (center of photo) pulling the blade of the tool through the soil as she takes each step, in order to cut weeds' roots next to cultivated species. Through this practice, the human body, the tool, and the

object of labor fuse together. It generates for the farmer an intimate and sensate knowledge of the responsiveness of the tool and soil microorganisms in relation to her body.

- Fig. 37-8 Earthworms and lively agglutinations of nutrients and microorganisms on plants' roots, encountered when pulling weeds out of the ground.
- Fig. 37-9 Current and prospective (2014) urban farming prospects of interviewed CFS graduates.
- Fig. 38-1 Location of the Yorklands Green Hub within the City of Guelph's industrial, residential, and institutional lands.
- Fig. 38-2 Boundaries to the proposed Yorklands Green Hub.
- Fig. 38-3 Master Plan for the Yorklands Green Hub.
- Fig. 39-1 The ten cities participating in the URBACT thematic network Sustainable Food in Urban Communities.
- Fig. 39-2 The Feed Bristol project and Sims Hill Shared Harvest, Bristol, U.K.
- Fig. 39-3 Pré Santy Inclusion Garden, Lyon, France.
- Fig. 39-4 "Gardens Bank": recovering food production areas in the outskirts of Ourense, Spain.
- Fig. 39-5 Cuppari Agricultural Institute in Messina, Italy, and wine produced under the Faro DOC.
- Fig. 39-6 Landwinkel shops at the farm gate, Amersfoort, the Netherlands.
- Fig. 39-7 La Super Halle in Lyon, France.
- Fig. 39-8 The Square Food Foundation Cookery School and Kitchen, Bristol, U.K.
- Fig. 39-9 Food challenge for families in Brussels, Belgium.
- Fig. 39-10 Lundby local administration is serving almost-50-percent-organic meals in public canteens, Gothenburg, Sweden.
- Fig. 39-11 Geitmyra Culinary Centre for Children, Oslo, Norway.
- Fig. 39-12 Eleonas urban farm project in Athens, Greece.
- Fig. 39-13 Social and solidarity grocery shop in Lyon, France.

- Fig. 39-14 Bristol Food Policy Council.
- Fig. 39-15 Job creation policies in urban agriculture and sustainable food businesses, Brussels, Belgium.
- Fig. 39-16 *Who Feeds Bristol* report.
- Fig. 39-17 Food market program / Central Market in Vaslui, Romania.
- Fig. 39-18 “Lyon, Fair and Sustainable City” label.
- Fig. 39-19 Amersfoort, “Capital of Taste of the Netherlands” 2012.
- Fig. 41-1 Milan Protocol Call to Action timeline.
- Fig. 41-2 An analysis of the present-day global scenario and its continual and rapid evolution highlights a world of unsustainable paradox.
- Fig. 41-3 JCAMs’ roles and tasks chart.
- Fig. 41-4 The CSA team’s first infographic.
- Fig. 42-1 Food-related practices in relation to the four spheres of urban resilience.
- Fig. 43-1 Produce is harvested the day before delivery.
- Fig. 43-2 Manchester Veg People brings growers and buyers together.
- Fig. 43-3 Manchester Veg People celebrate their Crowdfunding success.
- Fig. 43-4 FarmStart at Abbey Leys Farm—first harvest, 2013.
- Fig. 44-1 Map of existing gardens in Stockholm.
- Fig. 44-2 Urban CoMapper Interface (three screen shots). The survey offers registration to both city inhabitant and city professional, creating a cohesive approach to gathering data.
- Fig. 44-3 Urban CoMapper diagram showcasing the framework for data gathering and communication.
- Fig. 44-4 The first Gröna Linjen safari, on June 15, 2014.
- Fig. 44-5 Gröna Linjen Safari #1 map: an agenda/itinerary to visit five Stockholm gardening sites with staged events.
- Fig. 44-6 Gröna Linjen Safari #1 survival guide.

- Fig. 44-7 Artist Malin Lobell's exhibition on the politics of plants.
- Fig. 44-8 Artists Malin Lobell and Ulrika Jansson in discussion.
- Fig. 44-9 Andrea Hvistendahl serving to participants. Ingredients were foods from local markets, destined to be thrown away.
- Fig. 44-10 Urban CoMapper Interface (three screen shots): survey categories for locating existing and potential sites of urban agriculture.
- Fig. 44-11 Urban CoMapper: Preliminary visualized map after Gröna Linjen Safari #1. Red pins—potential gardens. Green pins—existing gardens.
- Fig. 44-12 Andrea Hvistendahl's *No Waste Cooking* cuisine.
- Fig. 45-1 The *Charte Main Verte*.
- Fig. 45-2 Map of shared gardens in Paris in 2013.
- Fig. 45-3 *Végétalisations Innovantes* poster and one of its chosen projects, V'ile Fertile, a participatory urban farming venture.
- Fig. 45-4 The professional backgrounds of intra-urban UA project leaders.
- Fig. 46-1 Vegetable farming in terraces of residences.
- Fig. 46-2 Vegetable farming in schools.
- Fig. 46-3 Focus group discussions in progress.
- Fig. 46-4 Location maps of India, Kerala, and study areas.
- Fig. 46-5a Distribution of beneficiaries in the clusters, based on age.
- Fig. 46-5b Distribution of beneficiaries in the clusters, based on assistance received.
- Fig. 46-6 SWOT Analysis of Scheme from farmers' perspective.
- Fig. 46-7 Cluster meetings in progress.
- Fig. 46-8 Vegetable farming in grow bags.
- Fig. 46-9 Produce transported to market.
- Fig. 46-10 Water holes drying up.
- Fig. 46-11 Use of biopesticides on vegetable farms.

- Fig. 46-12 Women in vegetable farming.
- Fig. 47-1 Overgrown planting on bench, Bournbrook, Birmingham, England.
- Fig. 47-2 Although a (re)design of a Palace, Capability Brown's Blenheim Gardens (1764–68) is a blueprint for countless urban parks: a pastoral idyll with a planting duoculture of rolling lawn and specimen deciduous trees, picturesque expansive views, water elements/features, and neoclassical buildings/follies.
- Fig. 47-3 “Art on the Farm” in Grant Park, Chicago, is an urban farm in an inner urban public park; however, it only occupies 0.2 hectare of the 129-hectare park.
- Fig. 47-4 Four Season Farm, Harborside, Maine, USA.
- Fig. 48-1 Analytical background behind the actions of valorization of typical products.
- Fig. 48-2 Evolution of the analytical background behind the actions of valorization of typical products.
- Fig. 48-3 The image (logo) of the Paniere.
- Fig. 48-4 Map of Paniere (Basket) products.
- Fig. 48-5 The image (logo) that marks the Heritage Piedmontese apple varieties.
- Fig. 49-1 A Garden for the Resident.
- Fig. 49-2 Ethiopian Community Garden.
- Fig. 49-3 Urban farms in Kiryat Avoda, mid-1930s.
- Fig. 49-4 A Garden for the Resident in its early days.
- Fig. 49-5 “Saloon” in the Garden for the Resident, Summer 2014.
- Fig. 49-6 Ethiopian community garden in Ramat Eliyahu, Summer 2014.

# TABLES

Table 23-1	Overview of values for the indicators and six levels visualizing societal benefits in the cobweb diagrams.
Table 25-1	Characterization of Metropolitan Agriculture Living Labs.
Table 25-2	Characteristics of Network Initiatives.
Table 26-1	Characteristics of the three modules in the format of the Campoverde farmers' shop (FS) at the University of Calabria.
Table 27-1	Some perceptions of entrepreneur typology in the literature.
Table 27-2	Thematic analysis of interviewees.
Table 29-1	Reduction of carbon dioxide in lettuce supply to Metro Manila through the substitution of rooftop hydroponics for traditional imported lettuce.
Table 30-1	Carbon dioxide emission reduction in grams resulting from the separation of 1 kilogram of the waste type.
Table 30-2	Challenges of contamination and potential solutions.
Table 30-3	List of key informant interviews.
Table 35-1	Social sustainability in agriculture: three dimensions.
Table 35-2	Agricultural processes and social externalities.
Table 35-3	Consumption behavior and societal issues.
Table 35-4	The organization of social sustainability around food and agriculture in the Turin area.
Table 42-1	An overview of food-related projects in Turin, evaluated within the conceptual framework of resilience.
Table 46-1	Distribution of members in clusters on the basis of number of meetings attended.
Table 46-2	Parameters for rating vegetable clusters, and Method of rating.

Table 46-3	Parameters identified under “Cluster Dynamics”.
Table 46-4	Parameters identified under “Economic Dimensions”.
Table 46-5	Parameters identified under “Technical Dimensions”.
Table 46-6	Parameters identified under “Innovative Activities”.
Table 47-1	List of existing green spaces.
Table 47-2 (a, b)	Annual gross return per hectare for each growing system.
Table 47-3a	For each growing system, the per-hectare returns (from Table 47-2) have been extrapolated to production areas from 10 to 1,500 hectares. Hectares corresponding to 25 percent (or less) and 25–50 percent of the areas of the green spaces listed in Table 47-1 are indicated, illustrating the hypothetically possible returns of those Spaces.
Table 47-3b	For each growing system, the per-hectare returns (from Table 47-2) have been extrapolated to production areas from 10 to 1,500 hectares. Hectares corresponding to 25 percent (or less) and 25–50 percent of the areas of the green spaces listed in Table 47-1 are indicated, illustrating the hypothetically possible returns of those Spaces.
Table 49-1	Typology of community gardens and urban agricultural projects in contemporary Israel.
Table 49-2	A comparison of the two urban agricultural projects.

## PREFACE TO VOLUME TWO

The Sixth Annual Conference of the Special Working Group on Sustainable Food Planning of the Association of European Schools of Planning (AESOP) was held at the Post Plaza in Leeuwarden, the Netherlands, November 5–7, 2014. The Conference theme was “Finding Spaces for Productive Cities.” Out of the 128 abstracts received, the Scientific Committee used a blind peer review process to select sixty-two to be presented as full papers at the Conference, representing a broad range of papers of high quality from academics, policy advisors, and practitioners. The authors worked conscientiously and under time constraints, and thanks are extended to all the reviewers on the Scientific Committee for their contributions and comments, sometimes provided in extremely short timeframes, which helped to improve the papers for presentation.

The papers selected for inclusion in these Proceedings have been slightly revised, edited, and (in some cases) updated for publication in two volumes. This Volume Two includes twenty-eight papers submitted under tracks 4–9: Entrepreneurship, Environmental Flows, Health, Social Innovation, Local Initiatives, and Extraordinary Ideas; the papers submitted under tracks 1–3 are published in Volume One.

The delegates to the conference came from all continents (except Antarctica) and from thirty different countries. The range of subjects, contributing disciplines, places of origin, and the actuality and depth of the presented papers and research makes these Proceedings a very good representation of the current state of the art in academic and applied research in urban agriculture and sustainable food systems.

At the end of the conference, three awards were presented. The Scientific Committee selected the best scientific paper, which was awarded to Anna Maria Orrù of Chalmers University in Sweden for her paper, “Extracting Urban Green Potential: Critical Design-Based Use of Digital and Bodily Cartography Methods”, which is published as Chapter Forty-Four in Part IX of this Volume. The award for best oral presentation, chosen by the participants of the conference, went to Angela Million for her presentation of the paper, “Roof Water-Farm: Participatory and

Multifunctional Infrastructures for Urban Neighborhoods”, by Angela Million, Grit Bürgow, Anja Steglich, and Wolf Raber. This paper is also published in this Volume, Chapter Thirty-One, in Part V.

The third award, for best poster, chosen by the participants of the conference, went to Anna Chiara Leardini and Stefano Serventi for their clear poster presentation of “Via Emilia: Infrastructure for Cultural Landscape and Food Heritage”, which is published in Volume One.

In addition to eighteen parallel sessions with oral presentations and design labs/workshops, there were two special sessions, one for local governments and organizations, and one for PhD candidates and young professionals.

The conference included several high-level keynote speeches, which are not included in these Proceedings. After the Opening Address by Isabelle Diks, Alderman of the Municipality of Leeuwarden, and Diane Keizer-Mastenbroek, member of the Board of VHL University of Applied Sciences, Conference Chair Rob Roggema made his Opening Remarks. The keynote addresses, all of high quality, were given by Dan Kinkad (Future City Detroit), Guido Santini (FAO), Greg Keeffe (Queen’s University, Belfast), and Andre Viljoen (Brighton University, and chair of AESOP’s Special Working Group on Sustainable Food Planning).

We would like to thank everyone who contributed to the 6th AESOP Conference on Sustainable Food Planning and made it such a success.

—Dr. Ir. Rob Roggema  
Cittaideale; [rob@cittaideale.eu](mailto:rob@cittaideale.eu)  
Conference Chair and Editor of the Proceedings

## **Members of the Scientific Committee**

Robbert Biesbroek, WUR, the Netherlands

Katrin Bohn, TU Berlin, Germany

Rik Eweg, VHL University of Applied Sciences, the Netherlands

Greg Keeffe, QUB, Northern Ireland

Eric Koomen, VU, the Netherlands

Luis Maldonado, Universitat Politècnica de Catalunya, Spain

John Martin, La Trobe University, Australia

Coline Perrin, INRA, France

J. Sundaresan Pillai, CSIR-NISCAIR, India

Gaston Remmers, CAH, the Netherlands

Rob Roggema, Cittaideale and VHL, the Netherlands

Sven Stremke, WUR, the Netherlands

Nico Tillie, TU Delft, the Netherlands

Wim Timmermans, VHL University of Applied Sciences, the Netherlands

Axel Timpe, RWTH Aachen, Germany

Mikey Tomkins, University of Brighton, UK

Arnold van der Valk, Wageningen University, the Netherlands

Craig Verzone, Verzone Woods Architectes Sàrl, Switzerland

Andre Viljoen, Brighton University, UK

Jeroen de Vries, VHL University of Applied Sciences, the Netherlands

Dirk Wascher, WUR, the Netherlands

## **Conference Chair**

Rob Roggema, Cittaideale, [www.cittaideale.eu](http://www.cittaideale.eu)

## **Members of the Organizing Committee**

Esra Güclü, VHL University of Applied Sciences

Ineke Hoogland, VHL University of Applied Sciences

Lidwien Reyn, Bureau Mozaiek

Tulay Yilmaz, VHL University of Applied Sciences

# INTRODUCTION TO VOLUME TWO

## **Part IV: Entrepreneurship**

In Part IV, the Entrepreneurship section of this Volume, seven papers are collected. The thematic purpose of this part is to discuss how urban agriculture can be realized. It takes into account the entrepreneur as a catalyst for food production in the city, ways of successful implementation of urban food production, ways to realize urban agriculture, and financial models, business cases, and business models. Pölling et al. (Chapter Twenty-Three) found a heterogeneous and multifunctional range of business models in operation in the Ruhrgebiet (Ruhr Valley). Giorda (Chapter Twenty-Four) describes the way local food communities are present in the postmodern city of Detroit's Eastern Market. In Chapter Twenty-Five, Eweg and Van Hal discuss how Living Labs can be used to re-design agricultural value chains and business models, through collaboration and mutual learning. Milone et al. (Chapter Twenty-Six) focus on the benefits a short food chain brings for both farmers and consumers. Lee (Chapter Twenty-Seven) describes how entrepreneurialism could enhance long-term food security, while Taylor et al. (Chapter Twenty-Nine) focus on solving the same problem using rooftop hydroponic farming. In Chapter Twenty-Eight, Christodoulidis discusses the role that social enterprises can play from a political-ecological point of view.

## **Part V: Environmental Flows and Circular Economy**

The theme of Part V is environmental flows; three papers appear under this topic. Under this theme, the flows of materials, energy, water, nutrients and waste, the metabolism of urban systems, and resource management are taken into account. Anastasiou et al. (Chapter Thirty) analyze the potential of recycling organic waste in the city of The Hague and how innovative initiatives could help to increase that potential. In Chapter Thirty-One, Million et al. describe the case study of the Roof-Water-Farm, a decentralized system of water recycling and farming technologies in Berlin. The third paper in this section, by Swagemakers et

al. (Chapter Thirty-Two), discusses the role of social groups in the design and maintenance of productive green infrastructure.

## **Part VI: Health**

Part VI contains four papers addressing the theme of Health. This thematic area deals with the benefits of being close to where food is produced; it discusses the potential impact of local production on health, activity, school performance, sport, and the well-being of youth, adults, and the elderly, and the advantages of a clean, controllable, and secure food supply. Van Wezel et al. (Chapter Thirty-Three) discuss the potential benefit of using shrimp shells in shrimp broths and shrimp croquettes in the fight against obesity, among other reasons. Remmers (Chapter Thirty-Four) assesses the claims of patients to good food and the role patients can play in the development of sustainable food systems. Chapter Thirty-Five, by Di Iacovo, focuses on the contributions of cities to developing social sustainability in times of scarcity and crisis. Barry (Chapter Thirty-Six) describes the benefits of urban agriculture to health at both the community and individual levels, meanwhile contributing to health policy.

## **Part VII: Social Innovation**

The five papers under the thematic area of social innovation emphasize new ways of public involvement, innovative coalitions and new alliances, brokerage concepts, the role of NGOs, and eco-innovators. In Chapter Thirty-Seven, Rondeau dives into the role that urban farming training programs can play in the development of alternative food systems. Landman and Blay-Palmer (Chapter Thirty-Eight) explore the potential impact of community collaboration for urban agriculture as a viable contribution to mixed-use sustainability in the Yorklands Green Hub case study in Ontario, Canada. Jégou (Chapter Thirty-Nine) describes how local groups can support municipalities in addressing sustainable food issues, beyond the availability of land, in ten European cities in the URBACT II network. Sjöblom (Chapter Forty) describes the origin and current development of Community Supported Agriculture in Sweden, and Massari (Chapter Forty-One) presents the approach undertaken by the Call to Action in the Milan Protocol.

## **Part VIII: Local Initiatives**

The two papers in the Local Initiatives section discuss case studies of best practices, and the advantages, disadvantages, takeaways, and tips for starting projects. Dansero et al. (Chapter Forty-Two) present the results of interdisciplinary research that examines Turin's assets and skills to build and manage a local food system, following a territorial approach. Stein (Chapter Forty-Three) examines three related urban food initiatives in Greater Manchester, which currently has the lowest level of locally produced food in the U.K.: a co-operative of organic growers and buyers, an incubator farm, and providers of volunteers for organic growers.

## **Part IX: Extraordinary Ideas and Initiatives**

Seven papers are part of the extraordinary ideas and initiatives thematic area. In this section, proposals and projects in unexpectedly related fields such as art, performance, installation, or other impossibilities are presented or researched with viewpoints outside current discourses, and everything else. Orrù (Chapter Forty-Four) presents explorative modes of inquiry incorporating digital and bodily cartography, tools, and platforms that provide an alternative approach to greening the city, engaging citizens as agents, and transforming urban food-related lifestyles. Aubry et al. (Chapter Forty-Five) explore the structure of urban agriculture milieus, the interconnections between urban agriculture actors, and the way they operate as networks. In Chapter Forty-Six, Christabell focuses on approaches in the Indian state of Kerala that support community organizations (including women's initiatives) and food security. Zeunert emphasizes in his contribution (Chapter Forty-Seven) the potential benefits of urban agriculture in existing public green space, in terms of economic viability, crop intensity, and net income. Peano et al. (Chapter Forty-Eight) underpin the statement that conservation of biodiversity, properly integrated with agricultural practices, can generate ecological and socioeconomic benefits, especially for small-scale producers, and have a positive effect on food security. Tal Alon-Mozes compares, in Chapter Forty-Nine, two Israeli case studies of contemporary urban agricultural practice, and discusses their productivity and impact on the participants. In the last chapter of Volume Two, Viljoen and Bohn (Chapter Fifty) draw some future pathways of urban agriculture, consolidating linkages between arts, design, and policymakers to shape emerging productive urban landscapes.

