

URBAN GARDENING – AN INTEGRATIVE APPROACH

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ABSTRACT

This paper opens the following question: Is urban gardening a fashion trend, utopia or our future? The aim is to examine the literature and practice to find the answers to the above question respecting the integrative approach. The goal is to compare those three aspects of urban gardening searching for the dominant one.

Methodology is based on The World Café Method with participants who are experts from the fields of biology, chemistry and geography.

Research results show that the future aspect of urban gardening has a primary and dominant role, although the aspects of fashion and utopia deliver interesting impulses provided by interdisciplinary approach.

The contribution of the paper is multidimensional. On the theoretical level, it provides an overview of urban agriculture and gardening. On the empirical level, it reflects complexity of urban gardening and its importance for the future. On both levels, this paper raises the awareness of sustainability.

Keywords: *urban agriculture, sustainability, world café method, interdisciplinary approach*

INTRODUCTION

Approximately 80 % of the population lives in metropolitan areas [1]. Projections indicate that by 2020, there will be more than 500 cities with a million or more residents, and that the average size of the world's 100 largest cities will be 8.5 million up from around 7.6 million in 2011 [2]. While cities are considered to be the main engines of economic growth, accounting for 80 % of global Gross domestic product (GDP) while occupying only three percent of the land surface, they are severely

responsible for unsustainable rates of resource consumption and environmental problems.

The growing practice of urban agriculture is expected to build the resilience of cities in India and other emerging economies for longer-term sustainability as well as for short-term crisis management. These include the ecological dimension of the ecosystem approach, which focuses on minimizing greenhouse gas (GHG) emissions and the ecological footprint of cities for sustainability [3]. Sustainable urban agriculture is an

essential tool that addresses a city's problems in innovative ways [1].

As more and more of the world's population begins to move into urban centers, it is becoming increasingly important for natural growth and gardens to find a way to survive in cities [4].

According to United States Department of Agriculture about 15 percent of the world's food supply is now grown in urban centers [5].

In this paper it is examined the literature and varieties in understanding of urban gardening, its benefits and impacts. The World Café Method was used in this empirical research in order to find answers to research questions. Research results could be interesting for experts in biology, agriculture, economists as well as for city governments and politicians. Urban gardening is the most relevant topic for sustainable cities.

URBAN GARDENING: FASHION, UTOPIA OR OUR FUTURE?

Attention to urban agriculture has increased during the last couple of decades. Greening urban spaces creates functioning ecological spaces, alternative sites for food production, and provides solution to the effects of climate change [6].

Urban agriculture is growing, processing, and distribution of food and other products through intensive plant cultivation and animal husbandry in and around cities [7].

According to Golden, urban agriculture is strictly for home consumption or educational purposes, production, distribution and marketing of food and other products within the cores of metropolitan areas and at their edges. Examples include community, school, backyard, and rooftop gardens with a purpose extending beyond home consumption and education, innovative food-production methods that maximize production in a small

area, farms supplying urban farmers markets, community supported agriculture, and family farms located in metropolitan greenbelts [8].

Food insecurity is recognized as a huge opportunity of urban agriculture [9], as a way to survive in cities.

Urban agriculture is a complex system encompassing a spectrum of interests, from a traditional core of activities associated with the production, processing, marketing, distribution, and consumption, to a multiplicity of other benefits and services that are less widely acknowledged and documented. These include recreation and leisure, economic vitality and business entrepreneurship, individual health and well-being, community health and well-being, landscape beautification as well as environmental restoration and remediation [10]. Urban agriculture encompasses community gardens, urban farms or entrepreneurial gardens, community supported agriculture and farmers markets [8]. There are several types of urban farms: commercial, community gardens and backyard gardens [1].

Community gardens are large lots of land that have been divided into smaller plots for each household's use. These lots can be owned by a municipality, an institution, a community group, a land trust, or private ownership [1].

Urban backyard gardens are plots around homes, including balconies, decks, and rooftops. High yields can be raised even in the simplest of containers. Backyard gardeners grow or raise produce, honey, small animals and fish [1].

There are plenty of impacts of urban agriculture (Figure 1.) which are categorized in social, health and economic dimensions [8].

Urban agriculture provides many benefits to cities including increased access to fresh and culturally-acceptable food, venues for environmental and nutrition education, green space and, as a form of green infrastructure,

absorption of storm water and support for urban biodiversity [11].

Social	<ul style="list-style-type: none"> • creating safe places/ reducing blight • access to land • community development/building social capital • education and youth development opportunities • cross-generational and cultural integration
Health	<ul style="list-style-type: none"> • food access and security • increased fruit and vegetable consumption • food and health literacy • general well-being (mental health and physical activity)
Economic	<ul style="list-style-type: none"> • job creation, training, and business incubation • market expansion for farmers • economic savings on food • savings for municipal agencies • increased home values

Figure 1. The impacts of urban agriculture

"The most obvious benefit of urban agriculture is that it improves access to healthy foods," said co-author Michelle Stuhlmacher. "In addition to considering yield, our analysis evaluates the potential ecosystem services, such as urban nitrogen fixation, pollination, biological control of pests, control of damaging storm water runoff and energy conservation, that result from urban agriculture." [12].

Urban agriculture is thought to have social, economic and environmental benefits for urban areas. Urban gardening is the process of growing plants of all types and varieties in an urban environment [13]. Urban agriculture is part of the urban ecological and long term sustainable system. According to all of its potential benefits, urban agriculture is important contributor to urban sustainability.

A disconnect from nature and from the food production process has a lot of people concerned over their health and quality of life. Urban gardening has nine important benefits [14]:

1. improved indoor air quality,
2. lowered risk of respiratory disorders, as well as chronic headaches and eye irritation,
3. increased levels of empathy and compassion through attention and care given to plants,
4. improved human mental wellbeing as well as productivity levels,
5. access to fresh kitchen ingredients in your own home,
6. reduced risk of chemical ingestion found in foods that have been transported to grocery stores,
7. increased awareness about the need for improving our environmental impact,
8. reduced maintenance requirements as plants are relatively safe from pests and disease,
9. increased availability of low-maintenance, automated indoor gardening systems for the home or office.

Benefits of urban farming [5]:

1. increases food security,
2. creates a sense of belonging,
3. produces healthy food you can respect,
4. provides a learning opportunity,
5. makes efficient use of land.

Compared to traditional farming, there are six benefits of urban farming [15]:

1. it is more productive,
2. it is more sustainable,
3. organic produce becomes more accessible,
4. it is small space friendly,
5. it enables you to enjoy fresh produce all-year-round,
6. it is simple.

Health professionals increasingly recognize the value of farm- and garden-scale urban agriculture for nutritional health, personal

wellness, urban greening, and an engaged and active citizenry. Research shows that gardening is a preferred form of exercise across age, gender and ethnicity. Furthermore, approximately every \$1 invested in a community garden plot yields \$6 worth of vegetables [16].

Since urban agriculture can increase food access for low income city residents, all forms of farming and gardening are presumed to do so. This narrative often gives short shrift to social, political and economic equity [11].

RESEARCH METHODOLOGY & WORLD CAFÉ METHOD

Attention to urban gardening, as a form of urban agriculture, has increased during the last couple of decades. The main research question in this paper is formulated as follows: Is urban gardening a fashion trend, utopia or our future? The goal is to find answers to the above question and compare those three aspects of urban gardening discovering the dominant one. The question will be answered by using The World Café Method.

Cafés in different contexts have been named in many ways to meet specific goals, for example Creative Cafés, Strategy Cafés, Leadership Cafés, and Community Cafés [17]. Moreover, the literature shows terms like The Community Cafés, The World Café, World Café conversations and World Café events.

World Café is an easy-to-use method for creating a living network of collaborative dialogue around questions that matter in service to real work. World Café conversations are based on the principles and format developed by the World Café, a global movement to support conversations that matter in corporate, government, and community settings around the world [17].

World Café is also a provocative metaphor enabling us to see new ways to make a difference in our lives and work. Once we

become aware of the power of conversation as a key process in all aspects of our lives, we can use it more effectively for our mutual benefit [17]. The Community Cafés provide a safe and informal space for groups of residents to challenge and learn from each other, providing a communication environment that rarely exists in the everyday world [18].

The World Café is a methodology for hosting group dialogue which emphasizes the power of simple conversation in considering relevant questions and themes. The metaphor of a real-life café is used: in a World Café session, participants, of any number, are encouraged to take part in a collaborative conversation within an environment typically modeled after such a café [19].

The core design philosophy of a World Café session is that people possess an intrinsic ability and insights to address issues of decision-making or planning effectively, and that natural conversation is one of the best options for eliciting such dialogue [19].

The World Café is a whole group interaction method focused on conversations. A Café Conversation is a creative process for leading collaborative dialogue, sharing knowledge and creating possibilities for action in groups of all sizes. People sit four to a table and hold a series of conversational rounds lasting from 20 to 45 minutes about one or more questions which are personally meaningful to them. At the end of each round, one person remains at each table as the host, while the other three travel to separate tables. Table hosts welcome newcomers to their tables and share the essence of that table's conversation so far. The newcomers relate any conversational threads they are carrying and then the conversation continues, deepening as the round progresses. The World Café is appropriate to use for sharing experiences, stories and results, problem solving and planning [20].

The job of the Café Host is to see that the seven design principles, the guidelines for dialogue and engagement, are put into action. Hosting a Café requires thoughtfulness,

artistry and care. The Café Host can make the difference between an interesting conversation & one that truly matters [17]. The questions used for a World Café conversation are critical to its success. A powerful question is simple and clear, is thought-provoking, generates energy, focuses inquiry, surfaces unconscious assumptions and opens new possibilities [17].

World Café Conversations are an intentional way to create a living network of conversation around questions that matter. Café Conversations are one way that communities, businesses, governments, and people from all walks of life are using to create a common purpose, share knowledge, make more intelligent decisions, and call forth life-affirming action together [21]. Cafés build a collective network of authentic knowledge amongst the participant community [22].

The use of The World Café Method requires the respect of seven design principles also known as World Café Guidelines [17, 21]:

1. set the context,
2. create hospitable space,
3. explore questions that matter,
4. encourage everyone's contribution,
5. cross-pollinate and connect diverse perspectives,
6. listen together for patterns, insights, and deeper questions,
7. harvest and share collective discoveries.

It can be concluded that The World Café Method is a creative process of group interaction and conversation. It fosters collaborative dialogue around questions that matter. The challenge is to formulate a powerful and relevant question and form teams. It decided to use The World Café Method in this research because it renders service to real work and it leads to action with all positive impacts.

The sample includes four conversational rounds lasting around 30 minutes each with eight experts from the fields of biology, chemistry and geography. In the research process World Café Guidelines were followed. The main question was: Is urban gardening a

fashion trend, utopia or our future? During the collaborative conversation and group interaction, various perspectives and arguments were recorded in the three columns: fashion, utopia and our future. The research was conducted in April 2018 in Daruvar, Croatia, during the 6th Croatian National meeting entitled "Values and attitudes in the context of sustainable development". Research results are presented below.

RESULTS AND DISCUSSION

The implementation of The World Café Method in this research aimed to discover if urban gardening is a fashion trend, utopia or our future. The purpose was to find answers to the above question, compare those three aspects and find out how these three aspects are ranked. The following figure (Figure 2.) presents research results.

According to this research results urban gardening as our future is of prime importance. The implementation of The World Café Method enables to share collective discoveries. The conclusion is that all three aspects of urban gardening have credible arguments. Participated biology, chemistry and geography experts discovered that urban gardening as our future has immense importance supported by numerous arguments. Answers to the question were ranked according to the number of the arguments for each of the three aspects.

Urban gardening can be seen as utopia and there are valuable arguments for it, but very few one. It is useful to be aware of them so they can be perceived as a challenge. For example, how to deliver healthy food in polluted cities? How to avoid stealing of yields?

There are convincing arguments for urban gardening as a fashion trend, more than for utopia. Some plants are temporarily very "in" on a worldwide scale. Interest in fashionable plants increases and decreases fast ignoring its environmental needs.

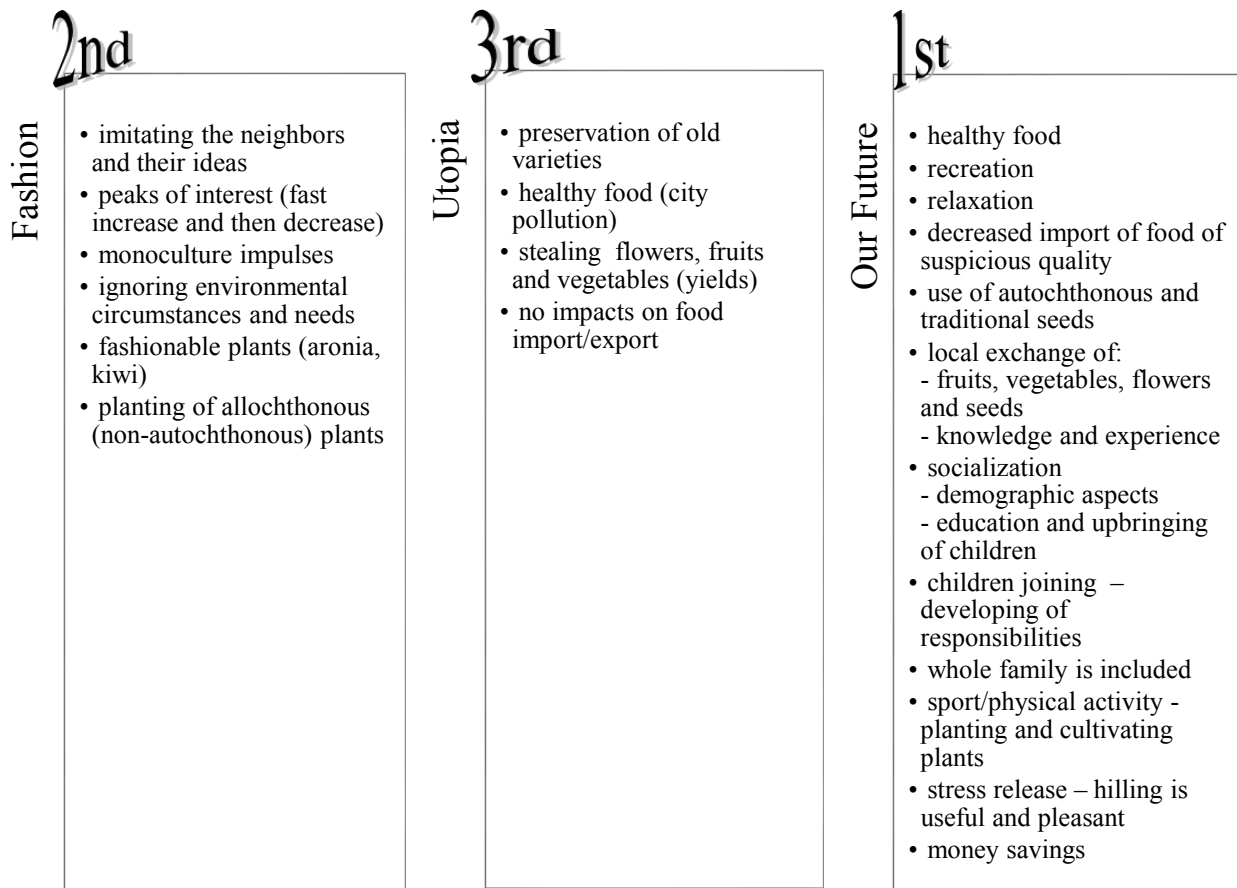


Figure 2. Ranked arguments of urban gardening as fashion, utopia or our future

The common conclusion of participated experts is that urban gardening is our future. This is supported by numerous convincing arguments: urban gardening delivers healthy food, enables recreation and relaxation, people can exchange their flowers, seeds and yields as well as knowledge and experience. Urban gardening also supports socialization, education and developing a wide range of responsibilities in the upbringing of children. Urban gardens also invite for sport and physical activities, promising stress release. Last but not least, urban gardening helps save money.

The number and importance of those arguments prove that urban gardening is our future. Based on the number and importance of presented arguments, it can be concluded that urban gardening is first of all our future followed by fashion and utopia respectively.

CONCLUSION

Urban gardening has developed intensively in the last decades helping people to bring nature back to cities and making life more healthy and sustainable. With urban gardening new generations of gardeners transform the urban landscape into a sustainable environment.

Urban gardening, as a part of urban agriculture, has social, economic and environmental benefits for cities. “To grow your own food gives you power and dignity. You know exactly what you’re eating because you grew it. It’s good, it’s nourishing and you did this for yourself, your family and your community.” [23]. Ecologically sustainable urbanization is also inconceivable without urban and peri-urban agriculture [24]. There are plenty of benefits of urban agriculture. “Urban agriculture is an underdeveloped industry that could produce food, sequester urban nitrogen, generate energy savings, help moderate the urban climate and reduce storm

water runoff, as well as provide more nutritious foods." [12]. And finally, urban gardening helps humanity to understand itself as part of the planetary ecological system." [25].

In this research it is examined if urban gardening is primarily a fashion trend, utopia or our future. The interdisciplinary approach was represented by experts from biology, chemistry and geography. Using The World Café Method it is discovered that urban gardening as our future is of prime importance based on convincing arguments, followed by urban gardening as a fashion trend and utopia. There is no doubt that urban gardening contributes to a healthier environment, stimulates social life and is very attractive economically as well. That emphasises all three sustainable dimensions, so that can be concluded that urban gardening remarkably contributes to sustainability.

Urban gardening is still developing. It has several beneficial aspects: physical & material, emotional & social, mental & educational, establishing the reconnection with nature and widening the awareness of sustainability. This is why researches, practitioners, policymakers and government pay attention to urban gardening progressively. The conclusion is that urban gardening is our future.

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