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Assessing Urban Agriculture's Potential for Biodiversity Conservation, Carbon Sequestration, and Community Development: A Comparative Study of Residents' Perceptions in Three Western Romanian Cities

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Abstract: Urban agriculture is increasingly recognized as a strategy for enhancing sustainability and well-being in urban areas, mainly through circular economy principles. This study investigates residents' perspectives from three major cities in western Romania—Arad, Timișoara, and Oradea—on the implementation and benefits of urban agriculture. The main goal was to identify differences in opinions regarding urban agriculture's potential to improve biodiversity conservation, enhance carbon dioxide retention, and reduce synthetic compound usage. The research also explored community development through circular economy practices and tools local authorities could use to promote urban agriculture. A survey of 573 respondents utilized variance analysis and the Tukey test to reveal significant opinion differences among residents. The findings showed notable variations in views on biodiversity conservation and community development benefits but no significant differences in opinions on carbon dioxide capture or synthetic chemical use. Residents of Timișoara and Oradea expressed more favorable views on urban agriculture than those in Arad. Participants emphasized the importance of free land allocation and sustainable practices for successful urban agriculture implementation. This study offers valuable insights for policymakers and contributes to the understanding of urban sustainability and the role of urban agriculture in supporting circular economy principles.

Keywords: circular economy in cities; citizen's viewpoint; inhabitants' evaluation; socioeconomic benefits of municipality farming; town planning for sustainability

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1. Introduction

This study investigates the potential of urban agriculture as a transformative approach to advancing sustainability and enhancing well-being in urban environments. Through a detailed analysis of residents' perspectives from three prominent cities in western Romania, the research emphasizes the implications of urban agriculture within the context of a circular economy.

Urban agriculture offers significant environmental advantages [1], particularly in biodiversity conservation, carbon dioxide sequestration, and reducing synthetic chemical

use. Introducing diverse plant species and creating green spaces within urban environments enhance local ecosystems and provide habitats for various organisms. The increased vegetation in cities also acts as a natural carbon sink, helping to mitigate climate change impacts. Additionally, urban farming practices often employ organic methods, reducing reliance on synthetic pesticides and fertilizers, which can harm soil and water quality. These environmental benefits contribute to more sustainable and resilient urban ecosystems, improving city dwellers' overall quality of life.

Urban agriculture initiatives can significantly boost community development and local economies [2]. These projects create opportunities for entrepreneurship and biotech advancements, fostering innovation in food production techniques. By providing fresh, locally sourced produce, urban farms enhance food security and nutrition for city residents. Additionally, community gardens and shared agricultural spaces promote social cohesion, offering venues for residents to interact, collaborate, and develop a sense of shared purpose. However, it is important to note that urban farming in densely populated areas may carry a higher risk of food product contamination, necessitating careful management and monitoring practices.

Urban agriculture catalyzes the implementation of circular economy principles in cities, promoting resource efficiency and waste reduction [3]. Urban farms can produce organic fertilizers for local producers and landscaping projects by integrating composting platforms and utilizing biodegradable wastes from municipal activities. This closed-loop system optimizes resource flows and minimizes waste, aligning with the circular economy's "4R" approach: reduce, reuse, recover, and recycle. Urban farming initiatives can also repurpose underutilized spaces, such as old industrial sites or building infrastructure, for vertical farms, hydroponic, and aquaponic systems [4]. These innovative approaches maximize land use efficiency and contribute to sustainable production practices and ecological improvements in urban environments. Urban agriculture emerges as a multifaceted solution for sustainable urban development, offering environmental, economic, and social benefits while aligning with circular economy principles.

Local authorities face both challenges and opportunities when implementing urban agriculture initiatives. The study highlights the need for free land allocation and sustainable tools to support these projects. Key policy considerations include revising urban planning regulations to accommodate agricultural spaces; developing incentives for property owners to convert unused areas into community gardens; establishing guidelines for safe and hygienic urban farming practices; creating educational programs to train residents in sustainable agricultural techniques and implementing mechanisms to integrate urban agriculture with existing waste management systems. These policy interventions can help overcome barriers to implementation while maximizing urban agriculture's potential benefits in fostering sustainable urban development and circular economy principles.

Urban agriculture encounters several key challenges that impede its growth and sustainability [5–8]. For example, densely populated cities restrict the variety and scale of crops that can be cultivated; pollutants such as heavy metals pose health risks to both farmers and consumers; access to essential resources, including water and quality seeds, is often difficult to secure; complex permitting processes can hinder the establishment and operation of urban farms; high startup costs and labor expenses impact the economic feasibility of urban agricultural initiatives.

To overcome these barriers, developing innovative solutions and fostering collaboration among urban planners, policymakers, and community organizations is essential, fully realizing urban agriculture's potential in creating sustainable cities.

The research problem addressed in the attached article focuses on determining the opinions and attitudes of residents from three major cities in western Romania (Arad,

Timișoara, and Oradea) regarding urban agriculture and its potential benefits for sustainable development and a circular economy.

Specifically, the study aims to investigate:

- The differences in opinions among residents of the three cities concerning the benefits of implementing urban agriculture for improving biodiversity conservation, increasing carbon dioxide capture, and decreasing synthetic chemical compound usage, as well as community development through circular economy principles;
- The residents' views on the most feasible interventions by local authorities to implement urban agriculture concepts;
- The willingness of residents to participate in urban agriculture activities and their perceptions of its potential contributions to the community;
- This research employs a comprehensive analysis of survey data gathered from a sample of 573 respondents across three urban settings to empirically test a range of hypotheses pertinent to the study's central inquiries. The objective of this investigation is to yield substantive insights that can assist local authorities and policymakers in the formulation and implementation of sustainable urban agriculture initiatives, while simultaneously facilitating their integration into broader circular economy strategies. Such efforts are critical for promoting urban resilience and sustainability in the face of contemporary environmental challenges.

This investigation shows how urban dwellers perceive the potential benefits of integrating agricultural practices within city environments. By exploring these viewpoints, the study seeks to contribute valuable insights into the feasibility and public reception of urban agriculture initiatives in this region, potentially informing future urban planning and sustainability efforts.

The study delves into three main objectives of urban agriculture implementation:

- Assessing differences in residents' opinions on its impact on biodiversity conservation, carbon dioxide capture, and reduction in synthetic chemical usage;
- Evaluating perspectives on urban agriculture's role in community development through circular economy principles;
- Identifying preferred local authority interventions to support urban agriculture initiatives.

These objectives aim to comprehensively understand public perception and potential support for urban farming practices in the three western Romanian cities. By examining these distinct areas, the research informs policymakers and urban planners about the feasibility and potential benefits of integrating agricultural activities within urban environments.

This study addresses the pressing need for sustainable urban development in the face of growing urbanization trends. Examining citizens' perceptions in the three western Romanian cities provides valuable insights into the potential for implementing urban agriculture and circular economy principles. The research explores synergies between urban planning, agriculture, and circular economy, offering a comprehensive approach to creating more resilient and sustainable urban systems. Additionally, it investigates policy instruments and governance approaches that could support the expansion of urban agriculture, contributing to the development of practical strategies for local authorities and policymakers.

2. Literature Review

2.1. Urban Agriculture's Contribution to Circular Economy

Agriculture has historically demonstrated its fundamental significance to society and the economy. It plays a crucial role in securing nutrient availability and safety, creates a

vast array of employment opportunities, and facilitates a robust economic market that is essential for international trade [9]. Disruptions in agricultural practices can lead to adverse collateral effects extending beyond the sector, influencing various national and global dimensions. These impacts can permeate multiple aspects of life, intricately linking economic stability with public health and overall well-being [9,10].

The concept of the circular economy emerges as a progressive paradigm that fundamentally redefines conventional production and consumption paradigms. It advocates for a robust and systematic approach to rethinking, redesigning, reducing, reusing, recycling, and recovering resources across various economic sectors, thereby facilitating a transition from a linear economic model to a circular one [11]. In agricultural contexts, the circular economy underscores the imperative of closing nutrient loops, which ensures the continual recycling of valuable resources—including organic matter and essential nutrients—within the ecosystem, rather than permitting disposal. This strategic approach contributes to the preservation of soil health and promotes the vitality of ecosystems, both of which are indispensable for effective agricultural practices [12]. By implementing these principles, the farm sector can evolve towards a more sustainable model that aligns with ecological and economic objectives.

The foundational principles of the circular economy in agriculture encompass several critical elements aimed at fostering sustainability and resource efficiency. Firstly, enhancing resource efficiency entails effectively utilizing inputs—such as water, seeds, and fertilizers—to optimize food production while minimizing environmental impact. Secondly, waste reduction is paramount, as it seeks to diminish the generation of unused surplus and byproducts, thereby streamlining agricultural processes. Nutrient cycling is another essential principle, emphasizing the importance of reinstating nutrients into the soil to promote and sustain crop growth over time [13]. Additionally, promoting biodiversity is crucial in maintaining ecological balance, which is vital for fostering resilience against pests and diseases. Moreover, the implementation of regenerative agricultural practices contributes to soil health but also aids in rehabilitating and revitalizing agricultural landscapes, thereby ensuring long-term productivity and sustainability of farming systems.

Urban agriculture encompasses a multifaceted concept that primarily pertains to the cultivation of crops and the rearing of animals within urban and peri-urban landscapes. The significance of this practice has evolved over the years, shaped by various determinants including geographic context, societal dynamics, and the influence of political decision-makers. As a result, the interpretation and implementation of urban agriculture have undergone significant transformations, reflecting urban populations' diverse needs and challenges. This shift underscores the adaptability of agricultural practices to urban environments and highlights their potential role in addressing food security, social equity, and sustainability within cities [14]. The existing literature on this topic underscores the multifaceted advantages of this concept, highlighting its substantial role as a food source while contributing to enhancements in atmospheric quality [15]. Furthermore, it facilitates opportunities for local entrepreneurial ventures and biotechnological advancements. However, it is crucial to acknowledge certain critical considerations [16]. Notably, food product contamination in these regions is more likely, which warrants careful examination [17].

The aspects mentioned above serve as the foundational basis for our study. Its originality is underscored by an empirical investigation conducted among residents of three significant urban centers in the western region of Romania. These cities were selected due to the notable modifications in their local urban planning frameworks observed in recent years. The prevailing trend indicates a movement towards integrating urban areas with their peri-urban counterparts, thereby fostering the development of metropolitan regions. Residential structures—primarily single-family homes or low-rise apartment

complexes—are predominant in these contexts. These developments often retain the advantage of surrounding undeveloped land, which presents opportunities for establishing community gardens [18], orchards, and composting facilities. Also, in the cities, the infrastructure of the old buildings and big industrial companies could be redesigned and organized as vertical farms, hydroponic and/or aquaponic farms. Historically, all three towns served as significant industrial hubs; however, much of this industrial activity has since been relocated to areas outside the urban centers. There has been a notable development of residential complexes, which are anticipated to be consolidated soon, surrounding the central districts of each town.

The existing literature illustrates that the interconnections between circular economy principles and sustainable development can be conceptualized as a dynamic and evolving system. Various definitions of circular economy have emerged, highlighting its multifaceted nature. It is imperative to harmonize stakeholder actions to optimize resource utilization and maximize beneficial outcomes. A substantial body of research underscores the advantages of urban agriculture, particularly in terms of enhancing resource consumption efficiency and promoting sustainability within urban ecosystems [3]. In her study, Salis emphasized the constraints that could be addressed by developing measures and models derived from established best practices. She identified the efficiency disparity between linear and cyclical systems as a potential focal point for further exploration. The study specifically examined urban agriculture as a vehicle for promoting flow recovery, revealing that the positive outcomes thus far have predominantly pertained to environmental considerations, such as the optimization of water and fertilizer usage [19]. However, these findings are limited by their omission of economic and social dimensions. It is imperative to integrate these three facets—environmental, financial, and social—into a cohesive framework to enhance the rigor and applicability of future research.

The four main "R" characteristics specific for cost-effectiveness actions (reduce/reuse/recover/recycle) [20] could be effectively sustained through the implementation of urban agriculture. This approach encompasses a comprehensive perspective, addressing critical sustainability and resource management aspects. Urban farming initiatives provide fresh produce for local consumption and serve as a source of raw materials in the form of biodegradable waste and byproducts [21]. Moreover, urban agriculture can connect scientific research and industrial practices, fostering a synergistic relationship that enhances community well-being. This integration can empower local authorities to undertake sustainable initiatives for ecosystem protection and financial viability. Promoting urban agriculture can ultimately contribute to a more equitable community environment, benefitting both present and future generations [22].

Urban farming represents a framework for agricultural activities that are typically conducted on a relatively small scale. Implementing these practices at a broader zonal level, encompassing multiple administrative units, can potentially enhance the efficiency of circular economy processes. This expanded spatial approach may facilitate improved resource utilization, waste reduction, and sustainable development within urban environments, thereby contributing to overall circular economy objectives [23] Urban agriculture can serve as both a supplier and consumer within the framework of the local circular economy. This dual role facilitates the recycling of resources and promotes sustainability by optimizing the local food system. By producing food within urban areas, urban agriculture reduces transportation costs, enhances access to fresh produce, and minimizes waste by reusing organic materials. Furthermore, it encourages community engagement and fosters resilience within local economies, making it a vital component of contemporary economic models aimed at sustainability [24]. The diverse array of biodegradable waste generated from municipal activities, alongside organic residues from agricultural practices, has the

potential to serve as a valuable source of organic fertilizers for local producers engaged in vegetable cultivation and the enhancement of urban landscaping. Furthermore, the surplus of these composted materials could be valorized, thereby providing an additional income stream for communities involved in such practices. This approach promotes sustainable waste management, enhances agricultural productivity, and contributes to the economic viability of local producers.

2.2. Circular Economy and Sustainable Development

The possibility of designing community gardens, vertical farms [25], or implementing aquaponic horticulture [26] principles could be easier to accomplish in a city. However, integrating these elements specific to urban agriculture can be achieved by considering two of the principles of the circular economy: recycling and waste reduction. In this sense, plant waste from harvesting and processing various plant products or municipal platforms [27], foods, and organic waste from animal farms can be transformed into compost. The platforms could be located in the peripheral areas of large metropolises.

The design of local urban plans, considering the specificities of implementing urban agriculture, will touch on two other elements characteristic of the circular economy. These relate to an ecological approach and sustainable production, Figure 1. Another aspect that can be noticed is the possibility of optimizing resource flows.

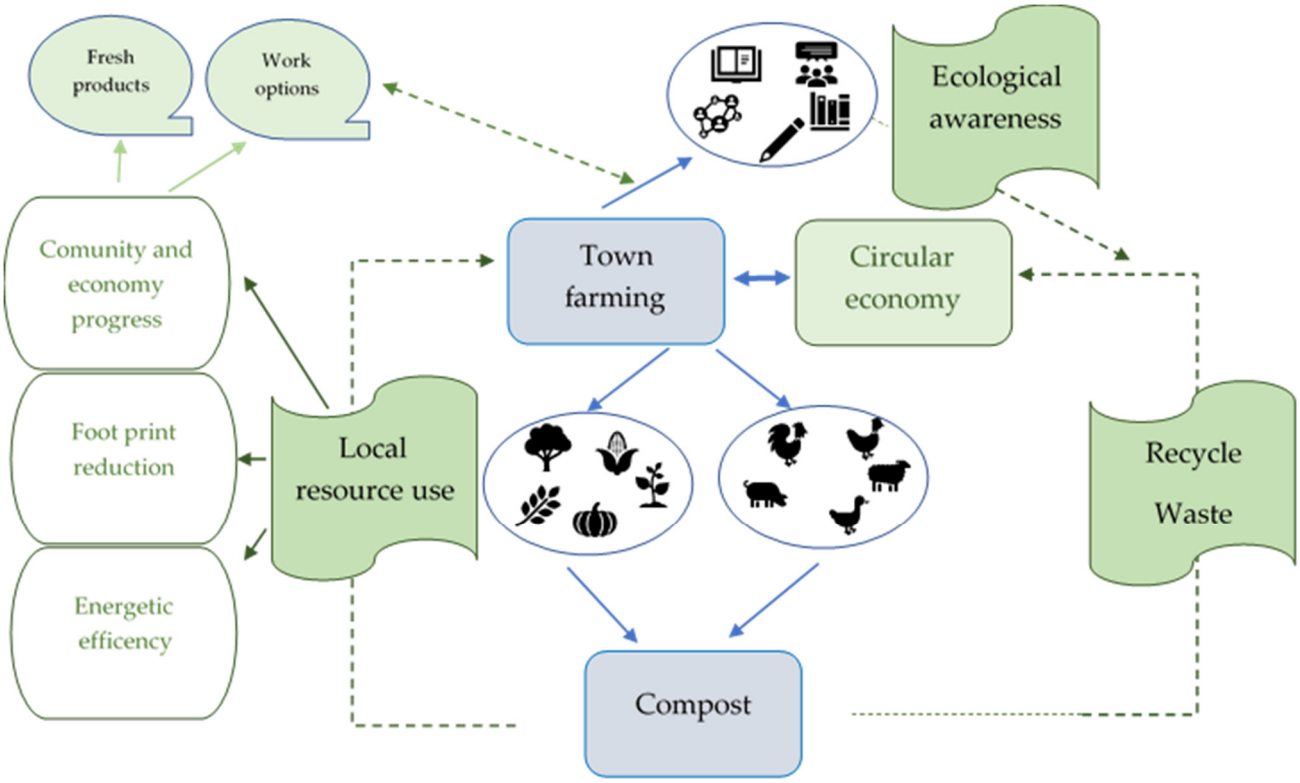


Figure 1. Perspectives regarding town agriculture contributions to the circular economy.

The tendency to integrate short circuits of production and consumption can be observed by deeply analyzing the circuits suggested in the above figure. Urban agriculture represents a pragmatic solution to various sustainability challenges contemporary metropolises face. Urban farmers can use market scraps as compost to create nutrient-rich soils that enhance local food production while addressing waste management issues. This direct-to-consumer model fosters a resilient food system, promoting local economies and reducing the carbon footprint associated with food transportation. The relevance of urban

agriculture is accentuated in the context of global warming and potential isolation periods due to public health or security concerns. In such scenarios, cultivating food within urban environments can mitigate food insecurity and dependence on external supply chains. Consequently, implementing urban agriculture mechanisms not only contributes to the sustainable development of cities but also plays a crucial role in ensuring a robust and adaptable food resource system for urban populations [28,29]. Zhao et al. underlined the potential impact of urban agriculture on specific city habitat facilities [30]. Using local resources will leave a mark by making energy more efficient. One point in this sense is related to the decrease in the fuel quantity needed for raw materials and product transport along the production distribution chain. Implicitly, this action method will also reduce the carbon footprint resulting from human activities. Also, the communities will be less dependent on imported nourishment. The possible impact of projecting rainwater collection systems for irrigation also came in the same direction. The contribution could be significant, especially to the cities with limited natural water resources.

Adjacent aspects that bring consistency to the consideration of urban agriculture as a valuable contributor to a healthy circular economy are those related to the socioeconomic and educational fields. The sustainable development concept has to be viewed as a whole. Zimek et al. sustained that such an idea could be viewed as an one integrative of at least two main aspects: the environment and the community [31]. All activities must be designed and implemented having, as a target, system performance and the relevance of actions in mind. Complementary to this view, Ruggerio added an economic dimension to the concept. All three together create interconnections that contribute to general well-being [32]. Such a target could be achieved based on new scientific developments that efficient ecosystem management actions should back. Technological advancement must be underpinned by two fundamental principles: reducing pressure on natural resources and minimizing environmental impact. As Parkin emphasizes, sustainable evolution is contingent upon initiatives prioritizing viability as a core objective [33].

Locally produced merchandise allows small to medium enterprises to develop, activate, and be a source of income for some city residents. The delivered products are fresh and unprocessed, and there is less need for preservation compounds to be used. Such a mechanism contributes to job generation and increasing access to secure and quality food sources [34]. Although the considered mechanism has an ecological approach, there could be areas where the practices are more like traditional ones. Respectively, nongreen practices are used, and a certain reluctance of farmers for reconversion has been observed [35]. Implementing an informative and educational attitude from local representatives could contribute to developing a pro-environmental attitude of entrepreneurs involved in urban farming activities. A less evident practical environmental role of urban agriculture has also been demonstrated in the Shangshang et al. study. The economic aspect seems to exceed it currently [36]. Another important aspect relates to the local administration intervention through specific mechanisms to tip the balance towards highlighting the environmental benefits that arise from this approach and, gradually, the economic and, respectively, social ones [37]. In a particular study case, Abdoellah et al. suggest a significant function of urban agriculture more from the financial point of view and less for food provision [38]. The main role of this approach had to be determined considering local specificities, such as topographic, climacteric, land disponibility, or national legislation factors, and the households involved [2,39–41].

The dissemination of outcomes associated with the expansion of green zones at the local level plays a crucial role in enhancing ecological awareness among residents, particularly through active citizen engagement and their substantial contributions to mitigating the impacts of global warming. Ideally, initiatives to foster this awareness should commence

in childhood, guiding the younger generation toward understanding the importance of selective waste collection. Specifically, these efforts can be directed at minimizing food waste through localized initiatives that promote the procurement of locally sourced foods and the diversion of organic waste for composting purposes. Engaging communities in such practices cultivates environmental stewardship and underscores the significance of sustainable consumption and waste management strategies.

The current research primarily focuses on the feasibility of integrating flora, specifically plants and trees, within a metropolitan context. The growth and sustainability of animal populations necessitate specific infrastructural provisions, which can be challenging to implement in urban environments. Consequently, such initiatives are more appropriately situated in regions close to extensive urban agglomerations. This study explores the potential benefits and logistical considerations of such integrations, contributing to the broader discourse on urban biodiversity and ecological planning.

For this purpose, working hypotheses were initially established. These hypotheses were validated or invalidated through statistical tests utilizing data obtained from administered questionnaires. Since the implementation of town agriculture implies the preservation and expansion of green areas, we formulated the first (H1) assumption, which considered that the residents of the three cities in the west of the country would have different opinions regarding the benefits of implementing urban agriculture by improving the state of biodiversity conservation in their town.

The second presumption (H2) came to complete the considered context, so it was assumed that there are significant differences in opinion between the residents of the three cities under study regarding the extent to which urban agriculture can contribute to increasing the amount of CO_2 captured and decreasing the amount of synthetic chemical compounds used. The concept of town farming has only recently been brought into the citizens' foreground. Knowing its potential benefits, we wanted to establish their awareness level, so the H3 thesis was formulated. It postulated that the residents of the three cities have different opinions regarding the benefits of urban agriculture in community development through the circulating economy.

3. Materials and Methods

Following the research phases, consisting of collecting and recording digital data, processing, analysis, and statistical interpretation by verifying research hypotheses, this investigation included dwellers from three major cities west of Romania: Arad, Timișoara, and Oradea. Five hundred seventy-three respondents from the mentioned municipalities completed the survey between April and August 2024.

The selected towns were identified based on their strategic location within the Western Plain, historically characterized by agricultural activities. This study aims to investigate whether the enduring rural legacy in these areas can positively influence the quality of life among urban residents. Given that all three municipalities are equipped with substantial industrial infrastructure, we aim to explore the potential benefits of integrating contemporary urban agriculture practices into their socio-economic frameworks. This integration could enhance the overall well-being of the inhabitants by fostering sustainable development and improving local food systems.

3.1. Materials

The specific research technique consisted of collecting primary data. The quantitative research method was applied to validate the proposed hypotheses empirically, using the questionnaire as a research instrument. It was designed to include questions classified according to content (factual and opinion) and queries classified according to their form,

semi-open or closed, and scaled. A standard protocol for administering the questionnaire was used [42].

The degree of confirmation for the initial assumptions was based on the responses registered for the survey-specific theme. Several independent inquiry spectrums were used. Most of the queries were designed using a Likert-Scale type [43]. The first, fourth, and fifth were a five-point frequency evaluation type. The sixth, seventh, and eighth evaluated the considered level of impact of town farming activities on improving different environmental aspects. In the case of the second and ninth ones, the interviewees were asked to establish a priority level for the issues discussed. The established degree was two. The third one had only one focus rank.

The chosen stratification factor was the respondent's residence city (Arad, Oradea, and Timișoara). Knowing the distribution of the analyzed statistical population by the environment of origin, the final selected sample had the same percentage distribution as the total population. The stratification factor used led to the formation of independent quotas.

Almost two-thirds of the respondents were female. Regarding their origin, the majority are from towns, around 87%. The distribution considering the actual residence reflects the percentage of the total inhabitants of the cities considered, as seen in Table 1.

Table 1. Interviewee anthropometric particularities.

Information	Division	Ratio
Gender	Masculine	35.37
	Feminine	64.63
Residence town	Arad	26.83
	Oradea	34.15
	Timișoara	39.02
Background media	Urban	87.20
	Rural	12.80

3.2. Methods

The research was conducted online via Google Forms, indirectly, through self-administration. No contact with the respondents was made. They were ensured regarding the anonymity of their responses and the intended use beingfor statistical purposes only. In this situation, respondents had time to think and to corroborate their own experiences, favoring introspection regarding what was stated by the research objective, summarizing as faithfully as possible what they believe is necessary to answer. Another reason we decided to apply the questionnaire indirectly was related to the diversity of the issues addressed by the research topic regarding the territorial dispersion of the respondents.

The data collected were statistically analyzed using SPSS software 29.0.0 (IBM SPSS Statistics Standard, provided by IBM Corp.) software facilities, namely, evaluating the information variance for factorial ANOVA models to determine if there were significant differences between groups and subsequent Tukey test results if the situation indicated its possible utility. Analysis of variance tests the hypothesis that the group means of the dependent variable are equal. The implicit ANOVA is the full factorial model used here, because there are fewer than five factors. Specifically, we will use one-way ANOVA because the data are divided into groups according to a single factor, and will use the Tukey interval test to determine the confidence interval for all matched sets [44].

The dependent variable of this study (residents' perception of the benefits of implementing the following urban agriculture activities: biodiversity conservation, increased carbon sequestration, reduced consumption of synthetic compounds, and community development through circular economy principles) is at the interval level, and the categorical variable defines the groups (the respondent's residence). This categorical variable is called a

factor [45]. Once we had established differences between means, post hoc interval tests and multiple pairwise comparisons were used to determine which means differ. Comparisons were then made on unadjusted values. In the case of the present study, we tested several pairs of means using the Tukey test, which is more powerful than the Bonferroni test. The method controls for type 1 error very well and is generally considered an acceptable technique used in this case.

Furthermore, Tukey allows for the detection of subsets of homogeneity compared to the other tests. It is a multiple comparison test that uses the standardized interval statistic to make all pairwise comparisons between groups. It sets the error rate according to the experiment to the error rate for the collection for all pairwise comparisons. These tests are used only for fixed between-subjects factors [46].

4. Results and Discussions

In this study, we investigated the opinions of residents of three cities on the impact of urban agriculture on biodiversity conservation, carbon sequestration, and community development. The analysis of the results obtained from the completed questionnaires provides valuable insight into the perceptions and attitudes of the community towards these essential aspects of urban life.

The data interpretation focused on identifying common trends and significant differences between city inhabitants, highlighting how the residents from different urban environments understand and appreciate the role of urban agriculture. We also analyze the level of awareness of this practice's benefits and the community's expectations and challenges in implementing sustainable solutions considering their possible contact with the rural media during the growing-up period. This research aimed to provide a clear understanding of public opinions and contribute to formulating recommendations for promoting urban agriculture as a tool for a more sustainable and balanced future in our cities.

4.1. Respondent's Background Concerning Farming Skills Formation and Development

Several pivotal aspects merit consideration concerning the sociodemographic transformations observed over the past several decades. Notably, the migration trend from rural to urban areas has been significant, revealing complex dynamics that warrant exploration. A particular limitation of this phenomenon is evident in the challenges faced by youth in accessing fresh, nutritious foods, which are closely tied to their families' preferences for healthy eating. This foundation is often established during childhood [47]. Family income levels, access to educational resources, and involvement in community activities are crucial in shaping dietary choices [48]. A focal point of our investigation rests on the extent to which respondents experienced rural life during their formative years. The early cultivation of beneficial habits is often linked to one's upbringing in rural settings, where exposure to natural environments fosters behaviors centered around sustainability, including waste reduction and recycling. Such competencies are inherently influenced by the rural ethos of coexisting harmoniously with nature, which is a vital source of fresh, safe food and maintains the ecological integrity of surrounding ecosystems. Based on these premises, skills and attitudes acquired during youth may significantly affect an individual's openness to engage in urban agricultural initiatives in adulthood. This engagement reflects personal growth and contributes to the broader sustainable development of urban communities. In Romania, rural life is predominantly characterized by agricultural practices, encompassing activities from gardening and cultivating extensive crops to personal consumption and animal husbandry, with participation from all family members. These activities provide a practical foundation for future urban residents and can serve as the initial mechanisms through which eco-economy principles are enacted within urban contexts [49].

Regarding this, we can note that the highest amount, 45%, spent their vacations in the countryside, and another 27% spent their entire childhood in rural areas. Only 6% of respondents claim they did not go to village areas during their childhood, Figure 2.

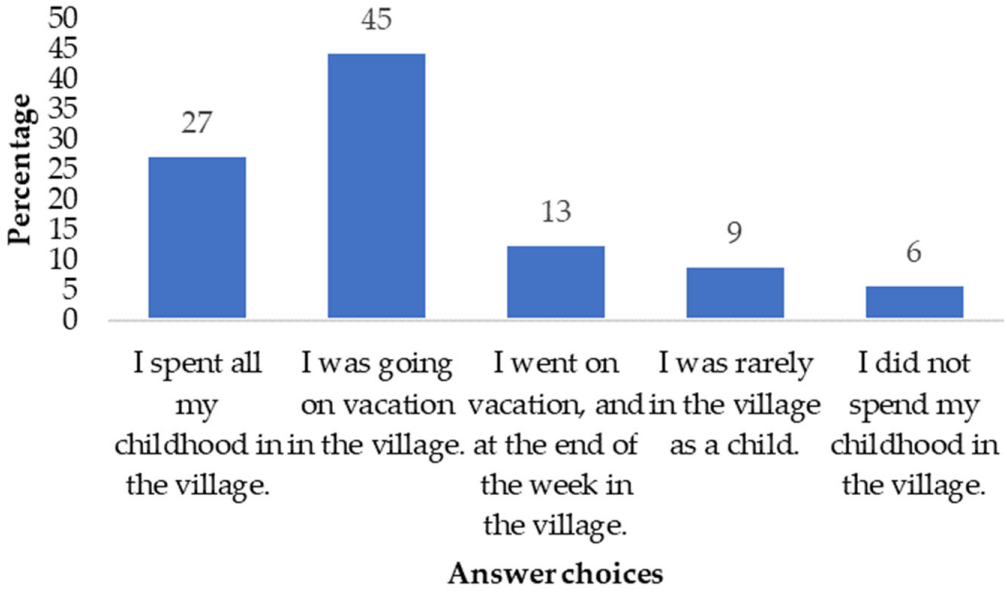


Figure 2. Response evaluation regarding the youth period played out in rural areas. Source: Data from field quizzes, 2024.

As mentioned before, considering that the region may ensure an agricultural background, we wanted to determine what agrarian products the respondents deemed suitable for town farming. The results are relevant and were considered by case because, as previous data show, over 70% of the respondents had contact with the specificities of rural life, as seen in Figure 1. Precisely, regarding these products grown in an urban environment, we note that, first of all, the respondents consider that the most important to be cultivated are vegetables, with a proportion of 73%, followed by those who think it important to grow fruit, at 13%. Secondly, they indicated fruits as being preferred. The Romanian gastronomic culture could have been determinate in forming such an opinion, as vegetables are significant in daily dishes. The Lequeux-Dincă et al. study detailed some traditional foods requiring substantial quantities of vegetables such as onions, carrots, peppers, or cabbages [50]. The surface needed for orchard development may determine the relatively low percentage encountered regarding possible fruit cultivation. The values that resulted in the case of aromatic plants being chosen by 11% of respondents are unsurprising. The reasons that sustain these findings could be the tradition of using them for different purposes such as medicine, gastronomy [51], or biocomposites [52], and the reduced space needed for cultivation and less technical requirements for sowing and development. Such data came in addition to sustaining the region's choice to implement the survey since, in Romanian gastronomy, there is a tradition of vegetable production that dates back in time, both for their consumption and medicinal value. Vegetables have been used for their medicinal properties for centuries [53].

Regarding the edible flower's possible cultivation and the micro-culture, we observed a minimum percentage of 3% for cereals and seeds or plant germs, Table 2. The relatively new popularization of such a concept might be a determining factor for this. The study published by Hervé-Gruyer suggested the possibility of successfully implementing the idea of agroecology in city areas, integrating such vision into the circular economy concept [54].

These aspects highlight where the respondents spent their childhood and their connection with everything that means rural space, respectively: agriculture with fresh fruits

and vegetables, how they are obtained, and the culinary and cultural traditions specific to each rural area. All these leave their mark on lifestyle.

Table 2. Response evaluation regarding the main crops considered advisable for town farming.

Plant Type	Choice Ratio [%]	
	First	Second
vegetables	73	17
fruits	13	52
aromatic plants	11	17
edible flowers	0	7
micro-agriculture (cereals, seeds)	3	7

Source: Data from field quizzes, 2024.

Evaluating the previously collected responses, we observe a significant link between childhood being spent in the countryside and the type of plant products consumed in adulthood. This is because most respondents who declared that they grew up in rural areas indicated that they were exposed from an early age to a diet based on fresh vegetables and fruits, which came directly from family gardens or local production systems. This early experience had a lasting impact on food preferences, and many of them continue to choose natural, organic, and regional products, even after moving to urban areas. The tendency is evident for both stages, seen in the data exceeding half of the degree of choices. The outcome could be supported by valuable references highlighting the taste predilection shaping in the youthhood period [55–57].

The presumed possibility of having contact with traditional agriculture due to the time played out in the Romanian villages made us want to know what the respondents consider to be the contribution of farming for the town citizens. Principally, their answers show that 31% believe urban agriculture would be necessary to educate and raise awareness regarding the human community. Another 30% think it would contribute to uniting the human community in the urban environment through outdoor activities, and 21% believe it could constitute a successful business by producing consumer goods. At the same time, 13% consider that this can create a space for active recreation, as seen in Figure 3. The same tendency was observed if the respondents were asked what their second option would be.

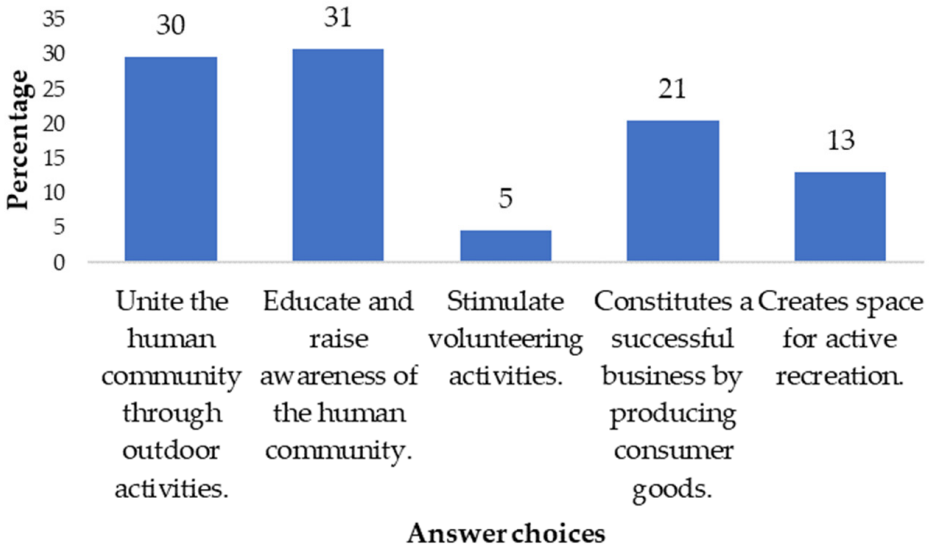


Figure 3. Interviewee's considerations regarding the main role of urban agriculture role in the city. Source: Data from field quizzes, 2024.

An additional dimension of lifestyle that may be correlated with habits established during formative years spent in rural environments is the inclination toward engaging with nature. This affinity is subsequently adapted to the opportunities available within urban settings, manifesting in sports participation, walking, or various forms of physical exercise. In light of this perspective, the present study seeks to ascertain the frequency with which respondents incorporate these activities into their daily lives. Among the respondents, 37% claim that they practice a sport or walk 2–3 times a week, while 20% equally claim that they do these activities daily, i.e., at least once a week, or less often, 16%, and 7% claim that they practice a sport or take a walk 2–3 times a month, Figure 4.

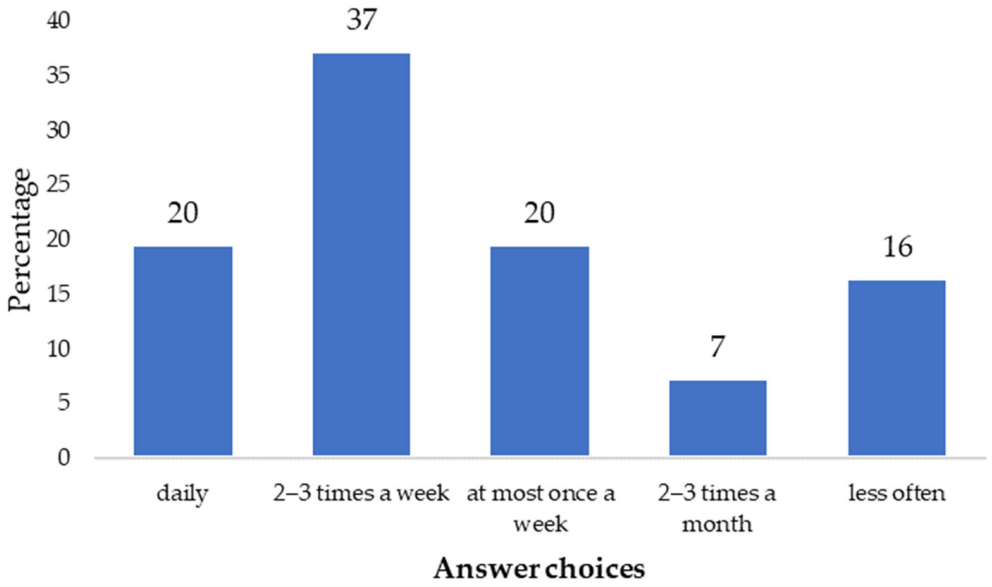


Figure 4. Interviewee's frequency of practicing different physical activities. Source: Data from field quizzes, 2024.

As emphasized in the preceding discussion, and as illustrated in Figure 3, respondents recognize that engaging in activities pertinent to urban agriculture—including sowing and planting for the development and maintenance of green spaces—can provide significant educational benefits for the local community. Additionally, these activities facilitate the provision of fresh produce and create opportunities for outdoor recreational activities, thereby enhancing the overall well-being of town residents. The data from the literature underline the importance of forming good habits from the early stages for good eating [58] and sports practice [59]. At the same time, it can be considered a cause–effect relationship between the parent's and children's power of being examples to each other [60]. In contextualizing the information presented, our objective was to assess the respondents' willingness to engage in urban agriculture initiatives. These actions are designed to serve as examples for youth involvement in cultivating fresh produce, fostering social interaction, and promoting various physical activities. Through this exploration, we aim to understand the potential for urban agriculture to enhance community well-being and cultivate a sense of responsibility and environmental stewardship among the younger population. Figure 5 shows how much of their free time they would be willing to allocate to the practice of urban agriculture. In it, 65% say they would allocate up to 2 h, and 30% claim to be willing to allocate between 2 and 4 h.

A clear link could be established between childhood experiences spent in the countryside and perceptions of the role of urban agriculture in adult life, especially in terms of physical activities and the intention to practice urban agriculture, in assessing the registered data. Those who grew up in rural areas are usually more familiar with physical work in

the garden and growing food. This early experience makes them appreciate the benefits of the physical activities involved in town farming and consider them a natural and enjoyable way to maintain an active lifestyle.

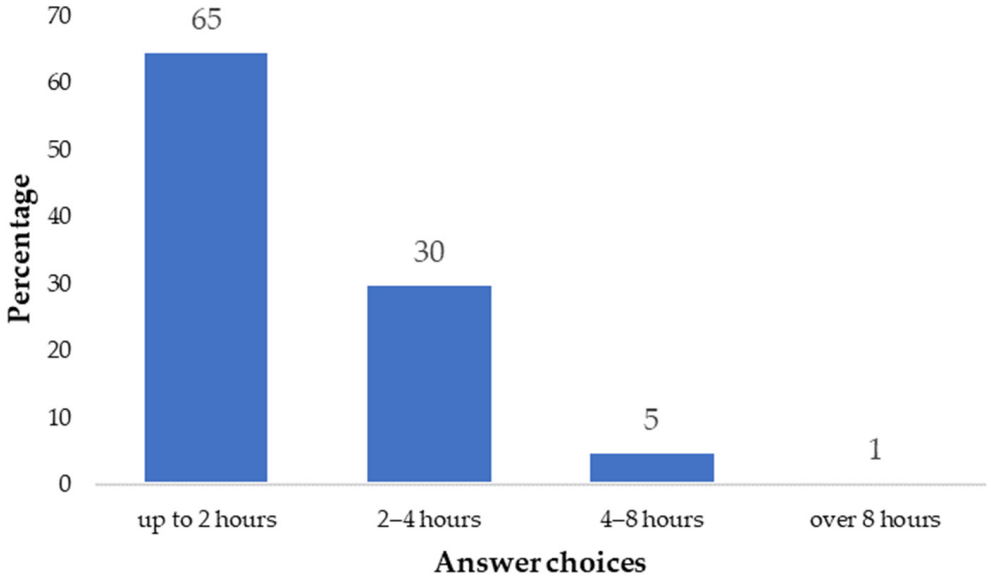


Figure 5. Interviewee's possible intention to practice urban agriculture. Source: Data from field quizzes, 2024.

The influence of early ages being spent in the countryside play a significant role in the openness and motivation of adults to practice urban agriculture. Such activity could become an important component of urban life, contributing to residents' physical health and strengthening community cohesion, since a little over 60% of respondents agree with the attribute of community connection and the possibility of it acting as an informal learning medium. Additionally, this observation is supported by approximately similar percentages of the interviewees who declare that they practiced physical activities daily and 2–3 times a week, 57%, and those who could be involved in specific activities for up to 2 h, 67%.

Urban agriculture can represent an opportunity to return to traditional roots, offering city dwellers the chance to experience beneficial physical activities while contributing to developing a more sustainable urban environment and one more connected to nature. Such outcomes of town farming activities were also outlined in several studies [61–63].

4.2. The Cities Residents' Differences in Opinion Concerning Specific Urban Farming Benefits on Environmental Quality Aspects

A notable area of focus in our investigation pertained to the perceptions among respondents regarding the potential of urban agriculture to contribute to biodiversity conservation. This aspect is particularly relevant for expansive urban environments, where the trend has often prioritized industrial and residential developments at the expense of traditional landscapes. A paradigm shift in urban planning principles is increasingly leading to advocating for the comprehensive integration of natural spaces, emphasizing conventional green spaces value as parks and gardens and the value of innovative formats like community gardens and sustainable architectural designs [20,64]. This inclusive vision plays a pivotal role in fostering natural diversity, as introducing various plant genera can enhance air quality and help mitigate the risk of extinction of diverse species across multiple trophic levels [65,66].

Thus, most of the respondents believe that urban agriculture can contribute to the improvement of the state of conservation and biodiversity in their city to a very large extent, 22%, and to a large extent, 40%, Figure 6.

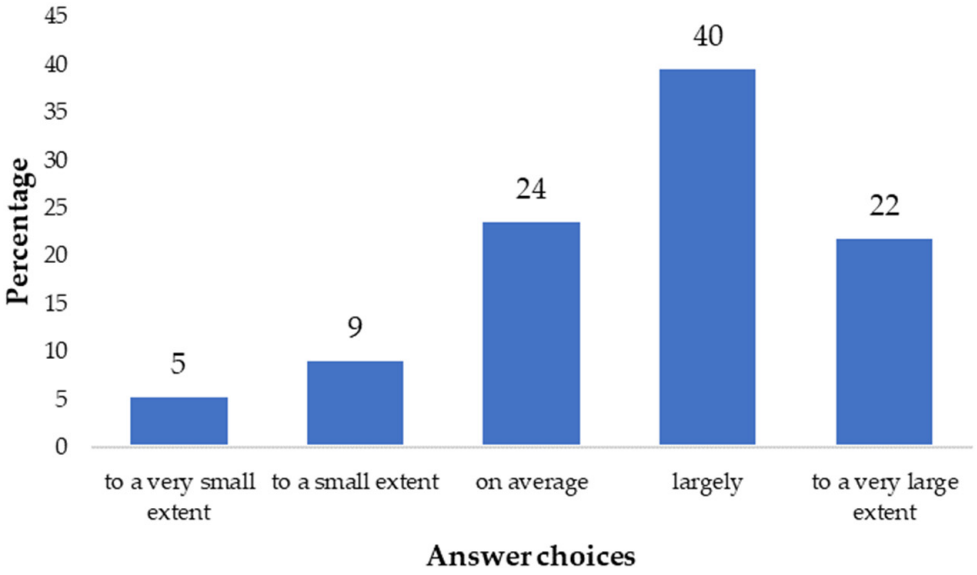


Figure 6. Interviewee's consideration concerning urban agriculture's contribution to ecosystem preservation. Source: data from field quizzes, 2024.

These points of view are also reflected in various studies presented in the literature. Several highlight the benefits of implementing different town farming concepts in natural biodiversity development or restoration [67,68], targeting both the environment and the economy.

The first (H1) assumption was made, and it was supposed that the residents of the three cities in the west of the country would have different opinions regarding the benefits of implementing urban agriculture by improving the state of biodiversity conservation in their town. Following the application of the ANOVA test, it can be seen that this hypothesis is confirmed. There are notable differences in opinion, depending on the city where the respondents live, regarding the supposition made; F = 10.367 and p = 0.000, Table 3.

Table 3. AVONA parameters for testing the possible differences between the respondent's points of view regarding the advantages of implementing town farming concepts on natural diversity depending on their residence.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	24.000	2	12.000	10.367	0.000
Within Groups	659.763	570	1.157		
Total	683.763	572			

Multiple comparisons using the Tukey HSD test show important differences in opinion depending on the city where the respondents come from; for example, those who live in the town of Arad give notably lower values than those who live in the city of Oradea. The mean difference is −0.512 and p = 0.000. They also value the tested aspect much less than the inhabitants of Timisoara, with the mean difference being −0.369, and p = 0.003, Table 4. The situation could be determined by the city's degree of development. In the last period, the two neighboring cities saw more modernization, becoming more cosmopolitan and having larger university centers. These aspects lead to a higher influx of tourists and students, which can contribute to adopting a novel vision regarding these aspects. Due to such a

positive environment, the degree of optimism is higher among the Oradea and Timișoara inhabitants than Arad, since the mean difference has a positive value in their cases.

Table 4. Multiple comparisons Tukey HSD parameters' correlations between the interviewee's residence and considerations regarding the benefits of performing town farming on natural diversity.

(I) Current Residence	(J) Current Residence	Mean Difference (I–J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Arad	Oradea	−0.512 *	0.115	0.000	−0.78	−0.24
	Timisoara	−0.369 *	0.113	0.003	−0.63	−0.10
Oradea	Arad	0.512 *	0.115	0.000	0.24	0.78
	Timisoara	0.142	0.106	0.370	−0.11	0.39
Timisoara	Arad	0.369 *	0.113	0.003	0.10	0.63
	Oradea	−0.142	0.106	0.370	−0.39	0.11

* The mean difference is significant at the 0.05 level.

Among the benefits of implementing urban agriculture is the increased amount of captured CO_2 and the decrease in synthetic chemical compounds used. In this sense, 22% of the respondents believe that such activity can contribute to a very large extent, and 37% to a large extent, in such directions, as seen in Figure 7. The respondents' points of view are sustained by current research in the domain. Borna et al. investigated the possibility of enveloping buildings with microalgae capable of increasing the degree of absorption of carbon dioxide [69]. Valuable support in this direction also been brought forward by Sagar et al., who concentrated their investigation on the capacity of pre-urban farming activities to act as reservoirs for carbon dioxide resulting from urban anthropic and natural activities [70] Promising perspectives have been obtained when discussing the possibilities of using natural fertilizers in urban agriculture [71]. In this way, the amount of synthetic compounds could be reduced. Some aspects that still need to be further investigated include to the crop types that are more suitable for planting considering the yield result and the environmental aspects of the supposed process of obtaining biofertilizers [72], respectively, and the possible changes in the soil characteristics [73]. Such a perspective highlights the synergetic contribution of urban agriculture to the principle of the circular economy by opening different organic waste reuse possibilities and, consequently, their decrease.

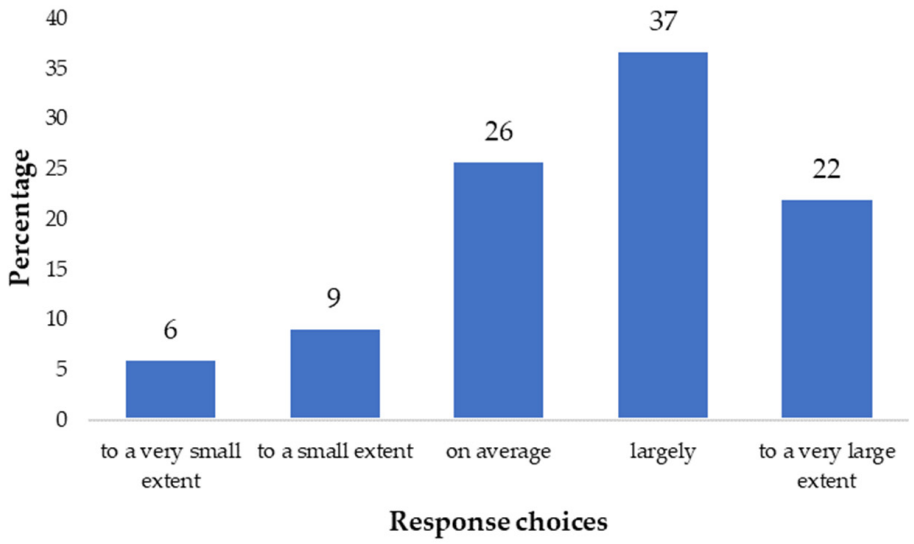


Figure 7. Interviewees' considerations concerning urban agriculture's contribution to the reduction of carbon dioxide and levels of synthetic chemicals. Source: data from field quizzes, 2024.

Based on previous documentation, we formulated the study's second presumption (H2). We assumed that there were significant differences in opinion between the residents of the three cities under study regarding the extent to which urban agriculture can contribute to increasing the amount of CO_2 captured and decreasing the amount of synthetic chemical compounds used. Following the application of the ANOVA test, it is observed that this hypothesis is not confirmed, with no significant differences in opinion depending on the city where the respondents live ($F = 2.942$, $p = 0.054$, Table 5).

Table 5. AVONA parameters for testing the possible differences between the respondent's points of view regarding the advantages of implementing town farming concepts on CO_2 and synthetic compounds' level decreases based on their town of residence.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.497	2	3.748	2.942	0.054
Within Groups	726.298	570	1.274		
Total	733.794	572			

A salient focus of our investigation centered on the respondents' perceptions of urban agriculture's potential to facilitate biodiversity conservation. This inquiry assumes significant relevance within the context of expansive urban settings, where the predominance of industrial and residential developments has frequently overshadowed the preservation of traditional landscapes. A paradigm shift in urban planning principles is increasingly advocating for the holistic incorporation of natural spaces, which encompasses not only conventional green spaces, such as parks and gardens, but also innovative formats like community gardens and sustainable architectural practices. This inclusive vision is instrumental in promoting natural diversity; the integration of a variety of plant taxa can improve air quality and contribute to the mitigation of extinction risks among diverse species across multiple trophic levels [74]. Secondly, the ramifications will be observed in the reduction in prices for agricultural products, attributable to the implementation of short-chain production methods. The respondents believe, to a very large and a large degree, in a proportion of around 56%, that such a vision could have implications for increasing resource use efficiency, Figure 8.

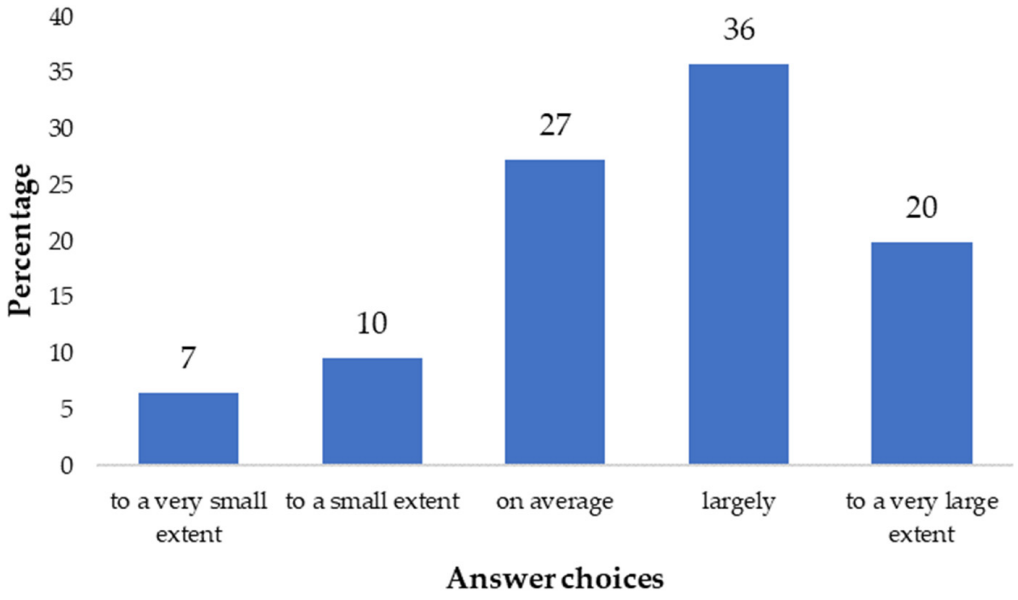


Figure 8. Interviewees' considerations concerning urban agriculture's contribution to community development through circular economy principles. Source: data from field quizzes, 2024.

The third hypothesis (H3) started from this consideration and assumed that the residents of the three cities have different opinions regarding the benefits of urban agriculture in community development through the circulating economy. Applying the ANOVA test, it can be seen that this hypothesis is confirmed, with significant differences in opinion. Thus, we have F = 7.310, and $p = 0.001$, Table 6.

Table 6. AVONA parameters for testing the possible differences between the respondent's points of view regarding the benefits of urban agriculture in community development through the circulating economy.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	18.185	2	9.092	7.310	0.001
Within Groups	708.967	570	1.244		
Total	727.152	572			

Following the multiple comparison analysis, applying the Tukey HSD test, it is observed that there are significant differences in opinion depending on the city from which the respondents come. Thus, the inhabitants of Arad gave much lower value answers than those of Oradea regarding the benefits of urban agriculture in community development through a circulating economy in the city where they live, with a mean difference of −0.360 and $p = 0.007$. Also, we observe lower values compared to the inhabitants of Timisoara. In this case, the mean difference was −0.425, and $p = 0.001$, Table 7. The Arad inhabitants seem to be pessimists compared to those from Oradea and Timișoara in this regard as well.

Table 7. Multiple comparison Tukey HSD parameter correlations between the interviewee's residence and the consideration regarding the benefits of urban agriculture in community development through the circulating economy.

(I) Current Residence	(J) Current Residence	Mean Difference (I–J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Arad	Oradea	−0.360 *	0.119	0.007	−0.64	−0.08
	Timisoara	−0.425 *	0.117	0.001	−0.70	−0.15
Oradea	Arad	0.360 *	0.119	0.007	0.08	0.64
	Timisoara	−0.065	0.110	0.825	−0.32	0.19
Timisoara	Arad	0.425 *	0.117	0.001	0.15	0.70
	Oradea	0.065	0.110	0.825	−0.19	0.32

* The mean difference is significant at the 0.05 level.

It has been observed that the residents of Arad exhibit greater levels of pessimism compared to their counterparts in other regions. Larger university centers and higher economic development in cities such as Oradea and Timișoara may elucidate this phenomenon. These factors indicate advancements in educational and financial standards, which may foster an environment conducive to broader exploration and fulfilling needs as outlined in Maslow's Hierarchy of Needs. The correlations between economic development, educational opportunities, and psychological outlook warrant future investigation to fully understand their implications for the residents' perspectives and well-being.

The borderline decline of the second assumption with a $p = 0.054$ could be viewed as a consequence of the economic, educational, and administrative differences between the three cities, with a slightly deviated balance toward the lack of specific information regarding the facilities brought by urban agriculture. Precisely here, we refer to the contribution of composting and, consecutively, the decreasing use of synthetic fertilizer. The literature

sustains the explanation in the field that primarily links the town's farming activities to vegetable safety production [75] and secondly to its other functionalities, such as recycling.

Urban agriculture plays a key role in promoting a sustainable ecological balance, significantly contributing to the conservation of ecosystems by efficiently using local resources and reducing pressure on traditional agricultural land. It can help reduce carbon emissions by shortening supply chains.

Urban agriculture is an important pillar of the circular economy, as it promotes the efficient use and reuse of local resources, thus contributing to reducing waste and creating a continuous cycle of resources. By valorizing organic compost materials, recycling water, and reducing food waste, urban agriculture supports the principles of the circular economy, encouraging a sustainable system of production and consumption [76]. Thus, urban agriculture improves local food security and creates a more responsible and efficient economic model in line with its principles.

The contributions of town farming to the ecosystem's functionalities were observed in the aspects investigated in this study. These were pointed out to a large extent, 36–40%, equally if we consider the contribution to CO_2 sequestration increase, synthetic chemicals used, or the general outcomes of the circular economy concept on improving ecosystem preservation.

4.3. Cities Inhabitants' Views on Sustainable Development Through Urban Farming Mechanisms

Since the research aimed to determine the position of the city inhabitants concerning a sustainable vision of their town, we also wanted to find out which intervention they considered could more feasibly be implemented by the local authority. Firstly, the inhabitants must have different facilities for the free use of the land and proper sources of durable utilities and raw materials. This idea, based on eco-friendly means of specific activity implementation, is also found in the second selection, where they indicated the possibility of ensuring low-impact products on the ecosystems, Table 8. The necessity to have access to increased soil areas and the guarantee of the possible use for medium to long periods to ascertain secure food chains are also highlighted by other studies [77].

Table 8. Responses evaluation regarding the main direction of local authorities for sustaining the implementation of town farming implementation.

Means	Choice Ratio [%]	
	First	Second
Non-refundable individual financing/preferential loans for the transformation of city roofs into gardens	23	9
Reductions in local taxes for associations that develop community gardens	21	20
The free concession of land in peri-urban areas and the provision of the necessary tools for the development of sustainable agriculture (soil decontamination, provision of quality water resources)	29	19
Organization of training courses in the field of urban agriculture	12	5
Supporting local businesses that provide compost, organic fertilizers, and seeds, as well as pest control services with minimal impact on the environment	7	21
Ensuring strict food safety measures and regular environmental pollution testing to preserve the quality and safety of crops intended for human consumption	2	9
Facilitating the sale of products obtained through the organization of sales places/grocery stores	6	17

Source: data from field quizzes, 2024.

Residents' perspectives can provide valuable insights for local authorities in shaping legislative initiatives to enhance regional autonomy concerning fresh food resources and

improve community income levels. Incorporating landscape development and gardening facilities into urban planning frameworks can significantly contribute to the sustainable advancement of the community. By fostering these elements, local governments can create an environment supporting agricultural practices and economic resilience, promoting long-term well-being and sustainability [78]. Contemporary methodologies have the potential to holistically integrate various components, requirements, and perspectives essential for the development of sustainable communities. In her research, Simon emphasized the opportunity to apply a design thinking framework in this context, facilitating a more inclusive and innovative approach to community development [79]. The capacity of citizens to engage financially in urban agriculture initiatives is likely to be influenced significantly by the trajectory of socioeconomic development. A stable market environment has the potential to catalyze the advancement of urban food production systems, thereby fostering greater community involvement and investment in sustainable agricultural practices [80].

The findings confirmed significant differences in opinions among residents of the three cities regarding the benefits of urban agriculture for biodiversity conservation and community development within the framework of circular economy principles. However, no significant differences were observed concerning urban agriculture's potential to increase carbon dioxide capture and decrease the use of synthetic chemicals. The results indicated that residents of Timișoara and Oradea generally expressed more favorable views regarding the benefits of urban agriculture than their counterparts in Arad. Additionally, respondents highlighted the importance of free land allocation and adopting sustainable practices as critical factors for the successful implementation of urban agriculture.

This study provides valuable insights for local authorities and policymakers, facilitating the development of sustainable urban agriculture initiatives that align with circular economy strategies. It contributes to the expanding body of knowledge on urban sustainability. It establishes a foundation for future research regarding the role of urban agriculture in fostering circular economy principles within urban environments.

5. Conclusions, Limitations, and Future Perspectives

Urban agriculture has emerged as a compelling strategy for enhancing sustainability and well-being in urban settings, particularly within circular economy principles. Such a concept, in principle, offers a pathway toward significantly reducing agriculture's environmental footprint. It allows for more efficient use of resources, contributing to a sustainable food system that can meet the needs of a growing population [81]. Implementing a circular economy in agriculture addresses critical environmental challenges while offering significant economic benefits. This approach fosters a more sustainable agricultural system by reducing input costs and facilitating the development of new revenue streams through the innovative repurposing of materials typically deemed as waste. Furthermore, the circular economy is not merely a reactive solution to existing issues, but encompasses a forward-thinking framework that promotes a sustainable and prosperous future for the agricultural sector.

Childhood experiences related to rural agriculture significantly impact adult food choices, and urban agriculture can play a crucial role in reconnecting urban dwellers with nature and a healthier and more sustainable way of life. The results indicate a growing interest in urban agriculture and recognition of its multiple benefits. However, challenges remain in educating the public and integrating these practices into the urban landscape on a large scale. Relevant authorities and organizations must collaborate to support the development of urban agriculture and maximize its positive impact on the environment and community.

The perspectives of three city residents were assessed and analyzed in the context of an economic model predicated on product and resource reuse and recycling principles aimed at minimizing waste generation and optimizing resource utilization. The primary objective of the research was to determine whether significant differences exist among residents' opinions regarding urban agriculture's potential to improve biodiversity conservation, enhance carbon dioxide retention, and reduce the use of synthetic compounds. Furthermore, the study explored inhabitant's views on community development through circular economy practices and identified the tools that local authorities could employ to promote the implementation of urban agriculture. The study examines the bidirectional relationship between urban agriculture and the circular economy framework. By incorporating these concepts into urban policy and planning, municipalities can foster a circular economic ecosystem where waste is effectively transformed into valuable resources. This approach promotes localized food production and enhances sustainability within urban environments, thereby contributing to a more resilient urban food system.

The analyzed data demonstrated that the three city residents hold relevant opinions about urban farming activities and their potential contributions to the circular economy. The primary insights shared focused on the lower environmental impact of such activities. Additionally, the economic implications were emphasized. The findings from this research reinforce the connection between these two concepts and illustrate how they could influence one another.

The data analysis reveals that respondents from Timisoara ascribed considerably greater significance to the potential contributions of urban agriculture to community development through the principles of the circular economy. Additionally, they exhibit a unified perspective on the anticipated environmental impact, particularly its role in preserving natural biodiversity.

The residents of the three surveyed municipalities exhibit a pronounced preference for initiatives that facilitate access to free land for agricultural purposes and the provision of ecological monitoring tools. Additionally, there is significant support for tax reductions and establishing organized venues to distribute goods. Interestingly, there appears to be a diminished interest in specialized educational programs. These findings may serve as valuable insights for policy-making bodies in determining legislative and administrative priorities to foster sustainable urban communities' development.

Because the survey was conducted online, it might be affected by specific limitations. Regarding this concern, we can mention the impossibility of giving supplementary information to the respondents if they had misunderstandings regarding the subject matter. Another possible constraint refers to the impossibility of controlling the sociodemographic characteristics of the respondents, such as their gender, study level, income or age, etc. Particularly for the residents of the municipalities considered for the study, there was a higher number of women in the 2021 Census than males. The study's weakness in access to internet facilities could have less impact since the target group comprised the urban population, which has access to such commodities. According to the National Authority for Administration and Regulation in Communications (ANCOM), the number of mobile and fixed internet access services in urban areas was around 90% in the first semester of 2024, when the survey was implemented. Under these circumstances, the likelihood of excluding participants lacking internet access is minimal. Consequently, the potential for introducing bias into the findings due to this factor is relatively low.

The concept of urban agriculture has not yet realized its full developmental potential. Future research endeavors could focus on quantifying the numerous benefits derived from urban agricultural practices for community residents. In this context, assessing local communities' economic evolution alongside health and well-being metrics would be

advantageous. Furthermore, the scope of the study could be extended to encompass diverse geographical regions, particularly those with agricultural backgrounds, where respondents may more readily relate to and appreciate the implications of farming-related activities.

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Institutional Review Board Statement: A non-interventional investigation was conducted. The anonymity of all participants was ensured since the survey was completed using digital instruments. No identification data, such as e-mail addresses, were collected. During the research, the Regulation 2016/679-Protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) specifications were considered.

Data Availability Statement: The original contributions presented in this study are included in the article. Further inquiries can be directed to the corresponding authors.

Conflicts of Interest: The authors declare no conflicts of interest.

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