



LANDSCAPE DESIGN OF URBAN AGRICULTURAL SPACES: SPATIAL AND ARTISTIC INTEGRATION

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Urban agricultural landscapes are becoming a key element of sustainable city planning, providing both environmental and social benefits. However, their integration into urban environments poses challenges in harmonizing productivity with aesthetic and spatial coherence. This paper examines the spatial composition, materiality, and artistic solutions in modern urban farms, evaluating their role in enhancing urban environments beyond ecological benefits. The study categorizes various typologies of urban agricultural spaces and explores how design principles such as form, texture, and color contribute to their successful integration into cityscapes. Through case studies, effective design strategies that balance functionality and visual appeal are identified, demonstrating how urban farms can serve as both productive and engaging public spaces.

Keywords: urban agriculture, landscape design, spatial composition, aesthetic integration, typology

INTRODUCTION

With the increasing adoption of urban agriculture as part of sustainable city planning, there is a growing need to examine how these spaces can be seamlessly incorporated into the urban landscape. While extensive research has been conducted on the ecological and environmental contributions of urban farming—such as improving biodiversity, reducing carbon footprint, and enhancing microclimates—far less attention has been given to their aesthetic and spatial integration. This study aims to address this gap by focusing on the landscape design principles that define successful urban farms, emphasizing how these spaces can be both visually appealing and functionally efficient. The research explores the relationship between spatial layout, material choices, and artistic elements in urban farm design.

PURPOSE

The purpose of this study is to classify typologies of urban agricultural landscapes based on spatial organization and compositional principles; to evaluate how materiality, form, and color influence the integration of urban farms into public spaces; to identify best practices in the aesthetic and functional design of urban agricultural spaces through case studies.

RESULTS AND DISCUSSION

The study identifies key compositional and artistic strategies used in the design of urban agricultural spaces. Effective urban farm landscapes are not just sites for food production but also aesthetically engaging public spaces that



contribute to the urban fabric. Successful designs incorporate elements of visual rhythm, material harmony, and user interaction, ensuring that these spaces function both as agricultural sites and as integral parts of the city's green infrastructure.

1. Spatial Typologies of Urban Agricultural Landscapes Urban farms can be categorized into several spatial typologies, each employing distinct compositional strategies. These include:

- Rooftop farms: utilize underutilized roof areas for agriculture while maintaining aesthetic appeal through structured plant arrangements and green infrastructure. They often feature organized planting beds, trellises, and modular green walls that enhance the visual and ecological aspects of urban rooftops.

- Vertical farms: extend agricultural functions along building facades, incorporating modular hydroponic systems and artistic structures to create a visually engaging presence in the cityscape. These designs maximize space efficiency while contributing to an urban aesthetic that merges greenery with contemporary architectural elements

- Community gardens: Small-scale urban farms that serve both social and recreational purposes, fostering community engagement while ensuring productive landscapes. These gardens often include informal seating areas, decorative pathways, and multi-purpose green zones.

- Integrated urban farms: Hybrid spaces where food production is embedded within larger urban parks or mixed-use developments, creating a seamless blend of agricultural and recreational landscapes.

2. Aesthetic and Compositional Elements in Urban Farms Effective design of urban farms requires careful attention to spatial coherence and user experience. Key design principles include:

- Material selection is crucial in ensuring the seamless integration of agricultural environments within the urban setting. Sustainable materials such as reclaimed wood, perforated metal screens, and natural stone contribute to both functional resilience and visual cohesion.

- Color and texture establish the spatial character of urban farms, with plant arrangements creating dynamic contrasts between soft greenery and structured, built forms. This interaction between vegetation, architectural elements, and hardscape materials fosters visual depth and diversity.

- Spatial rhythm and accessibility influence user experience, where the arrangement of pathways, seating areas, and green zones determines how visitors engage with the space. Well-designed urban farms integrate intuitive circulation patterns, ensuring both inclusivity and aesthetic appeal.

In contemporary urban design practice, several successful examples of urban farms illustrate the effectiveness of these principles. One of the most prominent examples is Brooklyn Grange in New York (Fig. 1) [1], a rooftop farm that integrates ecological productivity with aesthetic appeal through structured planting arrangements and designated community engagement spaces. The careful organization of pathways and seating areas allows for both functional farming and an inviting public atmosphere. Another notable project is Singapore's Edible Garden City (Fig. 2) [6], which demonstrates the integration of vertical farming techniques



with modular plant beds and artistic facades, enhancing the city's visual appeal while ensuring high food yield. Additionally, Parc de la Villette in Paris (Fig. 3) [4] serves as an innovative urban farm embedded within a larger public park, balancing productive landscapes with recreational spaces. The incorporation of organic pathways, seating zones, and multifunctional green areas highlights the potential of agricultural landscapes to serve both functional and aesthetic purposes.



Fig. 1. Brooklyn Grange in New York



Fig. 2. Edible Garden City in Singapore



Fig. 3. Parc de la Villette in Paris



CONCLUSIONS

This study highlights the significance of spatial composition, material selection, and artistic integration in the design of urban agricultural landscapes. By categorizing typologies and analyzing case studies, the research identifies key principles for balancing productivity with aesthetic value. The findings suggest that successful urban farm designs rely on a cohesive approach that considers spatial rhythm, color integration, and accessibility to create multifunctional spaces that benefit both urban agriculture and public engagement. Future research should explore adaptive design techniques that respond to climate challenges while enhancing the aesthetic appeal of urban agricultural spaces.

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ЖЕНЬ Сяосюань, БУЛГАКОВА Т.

ЛАНДШАФТНИЙ ДИЗАЙН МІСЬКИХ СІЛЬСЬКОГОСПОДАРСЬКИХ ПРОСТОРІВ: ПРОСТОРОВА ТА ХУДОЖНЯ ІНТЕГРАЦІЯ

Міські аграрні ландшафти стають ключовим елементом сталого міського планування, забезпечуючи як екологічні, так і соціальні переваги. Проте їх інтеграція в міське середовище створює виклики щодо гармонізації продуктивності із просторовою та естетичною цілісністю. У цій статті розглядаються просторові композиції, матеріальність та художні рішення в сучасних міських фермах, оцінюється їхня роль у покращенні міського середовища, що виходить за рамки екологічних переваг. Дослідження класифікує типології міських аграрних просторів та аналізує, як дизайн-принципи, такі як форма, текстура та колір, сприяють їхній успішній інтеграції в міський ландшафт. На основі аналізу успішних проєктів визначено ефективні дизайн-стратегії, які поєднують функціональність і естетичну привабливість, демонструючи, як міські ферми можуть слугувати одночасно продуктивними та привабливими громадськими просторами.

Ключові слова: міське сільське господарство, ландшафтний дизайн, просторова композиція, естетична інтеграція, типологія.