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THE ROLE OF AGRICULTURE IN SUSTAINABLE URBAN DEVELOPMENT

Abstract: urban farming is emerging as a pivotal strategy for sustainable city development, addressing pressing issues such as food insecurity, environmental degradation, and urban sprawl. This paper explores the multifaceted roles of urban farming in promoting sustainability within urban environments. Using a combination of qualitative analyses and quantitative data, it evaluates the environmental, social, and economic benefits of integrating urban agriculture into city planning. The findings highlight that urban farming not only improves local food production but also enhances green spaces, reduces the urban heat island effect, and fosters community engagement.

Keywords: urban farming, sustainable city development, food security

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РОЛЬ СЕЛЬСКОГО ХОЗЯЙСТВА В УСТОЙЧИВОМ РАЗВИТИИ ГОРОДОВ

Аннотация: городское фермерство становится ключевой стратегией устойчивого развития городов, направленной на решение таких насущных проблем, как отсутствие продовольственной безопасности, ухудшение состояния окружающей среды и разрастание городов. В этой статье рассматриваются многогранные принципы городского фермерства, способствующие устойчивому развитию городской среды. Используя комбинацию качественного анализа и количественных данных, он оценивает экологические, социальные и экономические выгоды от интеграции городского сельского хозяйства в городское планирование. Полученные данные свидетельствуют о том, что городское фермерство не только улучшает местное производство продуктов питания, но и увеличивает площадь зеленых насаждений, уменьшает эффект городского теплового острова и способствует вовлечению общественности.

Ключевые слова: городское фермерство, устойчивое развитие городов, продовольственная безопасность

The rapid growth of urban areas has brought challenges including food supply chains, waste management, and the loss of green spaces. Urban farming, defined as the cultivation of crops and rearing of livestock within urban areas, offers a viable solution to these challenges. It plays a crucial role in promoting sustainable city development, addressing food security, and mitigating environmental issues [1].

Environmental Sustainability: Urban farming contributes to reducing the carbon footprint of cities by shortening food supply chains and promoting local consumption. Studies show that urban gardens can sequester approximately 1.2 metric tons of carbon per hectare annually.

Community Engagement: Urban farms serve as community hubs, encouraging social interaction and educational opportunities.

Health Improvements: Increased access to fresh produce reduces dietary-related illnesses and promotes mental well-being.

Economic Impact: Urban farming generates jobs, especially for marginalized communities. A study in Detroit, Michigan, revealed that urban agriculture created 2,000 jobs and contributed over \$3.5 million annually to the local economy [2].

Singapore: Through initiatives like vertical farming, Singapore produces 14% of its vegetables locally despite limited arable land.

Havana, Cuba: Urban agriculture accounts for 70% of the city's fresh produce supply.

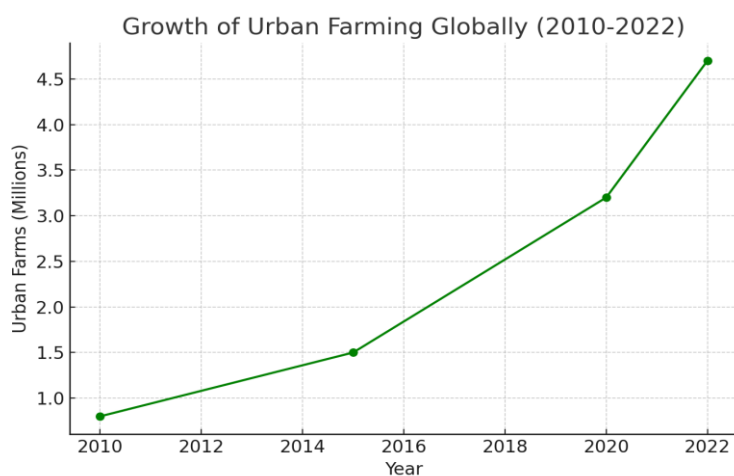


Figure 1 - Growth of Urban Farming Globally

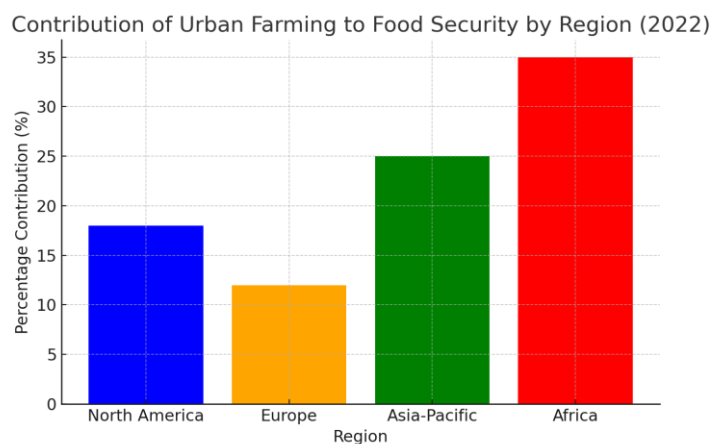


Figure 2 - Contribution of Urban Farming to Food Security

Challenges: Despite its potential, urban farming faces challenges such as:
Limited land availability and high real estate costs.

Regulatory barriers and lack of policy support.

Risks of soil contamination and water scarcity in urban areas.

Recommendations:

Policy Support: Governments should integrate urban farming into urban development plans.

Incentives for Green Practices: Tax breaks and grants for urban farmers adopting sustainable methods.

Community Participation: Encouraging citizen involvement through workshops and cooperative farming initiatives [3].

Conclusion: Urban farming is a transformative approach to achieving sustainability in city development. By reducing food miles, improving air quality, and fostering community resilience, it addresses several Sustainable Development Goals (SDGs). Policymakers and urban planners must prioritize urban farming to build greener, self-sufficient cities.

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