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A Case Study on the Farming Experience to Spread the Value of Urban Agriculture

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Abstract

Recently, an increasing number of urban farmers are growing fresh vegetables and fruits themselves using urban garden or weekend farms. In other words, this is called urban agriculture.

After the Industrial Revolution in the 18th century, the agricultural society changed from an agricultural society to an industrial society, and the population began to flock to the cities. With the continued increase of urban population, countries with abundant capital were able to control the distribution structure of food supplies and trade agreements among countries. Since energy consumption and carbon dioxide emissions caused by agricultural product movements have emerged as the main culprits of global warming, and our table is threatened by safety due to food supply that has no genetic modification or knowledge of the cultivation process, urban agriculture is already taking hold in the West. In other words, as agriculture met cities, its role grew.

Each region actively conducts agricultural activities for raising poultry as well as growing vegetables and fruits by using flower beds of detached houses in the city center, rooftops of high and low buildings, or school playgrounds and small tributaries of land.

The purpose of this study is to analyze and understand the significance and type of urban agriculture and to examine the cases of domestic and foreign urban agriculture based on this and to seek the developing direction of urban agriculture, which is gradually increasing. Tired of growing competition and rapid change, urbanites are seeking health and relaxation and are planning to present development measures for urban farming and conduct follow-up research to ensure safe food.

Keywords: Urban agriculture, weekend farms, rooftop gardens, veranda gardens

1. Introduction

1.1. Background and purpose of study

An increasing number of urban farmers are raising their own fresh vegetables by using the city's small garden or by using apartment rooftops and banners. Urban agriculture is actively moving in order to utilize leisure time or to stabilize the people's emotions. In the industry that produces food, the role of urbanites, such as health, environment and education, and community recovery, has grown.

The improvement of diet affects the survival of mankind, and this requires human protection.

Interest in urban farming has increased, and urbanites have enjoyed pluralistic values such as community revitalization, leisure selection, emotional purification, resource circulation, reduction of urban heat island,

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and job creation through farming activities in various spaces.[1]

Park Tae-ho (2012) said in his book "The Impact of the Program of Operation of Urban Garden on the Community Consciousness of Participants" that in order to enhance the sense of community in urban gardens, the interaction between participants should be increased through appropriate gardening environment and regular garden programs, and that the management organization of urban gardens plays an important role in this.[2]

I hope that the function of urban farming will play an important role in alleviating urban problems, changing the lives of the people and fostering young farmers based on a sense of community.

Various model development for the expansion of urban agriculture is necessary for the effective promotion of urban agriculture, and a systematic system suitable for urban farming should be established. In addition, since the development of a program for training urban farmers is necessary, we intend to explore the developmental direction of urban agriculture after analyzing the case of urban agriculture. The purpose of this study is to derive the analysis results and present basic data on the development of urban agriculture.

1.2. Research method and scope

In the introduction, the background and purpose of the study and the method of study were summarized. The scope of the study was given to urban farming cases, such as apartment veranda gardens, rooftop gardens with landscaped buildings in rooftop spaces, weekend farms sold, and small-town plum gardens, referring to their respective characteristics. Through the literature study, we will look at domestic and foreign cases and look for recent trends. The study was organized in three stages: theoretical considerations, case analysis, and development proposals.

Theoretical considerations sought to find the definition and concept of urban agriculture, the case of urban agriculture, the value analysis of urban agriculture and the ways to promote urban agriculture.

The chapter of the type of urban agriculture seeks to explore strategies for future urban farming by examining various forms of urban farming.

Finally, the conclusions of this study and the future direction of the study were discussed.

2. Main text

2.1. The definition and origin of urban agriculture

Agriculture is the activity of raising animals and plants useful to humans using land to obtain products. Agriculture is the first primitive industry to be born and started on Earth, and it has the longest history of many industries. in Figure 1



Figure 1. The Neolithic Or Organic Revolution, 12,500-3,000 BC
<Source: Historical Events that Changed The World TOP 10 >

Agriculture is closely linked to the development of mankind, directly and indirectly. The definition of agriculture depends on scholars, who said, "Agriculture is a kind of subsistence that produces vegetable and animal substances and is sometimes aimed at re-processing their products or gaining profits or earning money." and T.F.Goltz said, "Agriculture is an economic product, especially food and industrial products that are produced using natural forces that are included in land or act on land. The word "arculture" is a combination of Latin agri and culture, meaning to cultivate crops by plowing the ground.

Urban farming is an agricultural activity in urban areas, which refers to growing poultry as well as growing vegetables and fruits by using flower beds of single houses in the city center, rooftops of high and low buildings, or school playgrounds and small plum land as farmland. Under the Act on the Promotion and Support of Urban Agriculture, which took effect in May 2012, urban agriculture is defined as "the act of cultivating or growing crops by utilizing land, buildings or various living spaces in urban areas."[3]

Urban farming is not just for food production, but for various purposes such as hobbies, leisure activities and learning or experience. It can be seen that the spatial categories of urban agriculture are limited to residential, commercial, industrial, and green areas in urban areas as provided under the Act on Planning and Utilization of National Land. [4]

Originally, agriculture and cities were one, and in the history of urban agriculture, the cities in human history began to form around agriculture. These examples can be found in terrace-type farmland that existed in Peru's aerial city of Machu Picchu or in the queen's garden and cabin at the Versailles Palace in France. in Table 1

Table 1. International Case of Urban Agriculture



| Number | Public City of Peru Tune-pikchu terrace type farmland | The rustic garden of Queen Versailles of France. |
|--------|---|--|
| 1 |  |  |
| 2 |  |  |

The attractiveness and value of source and urban agriculture, Rural Development Administration, 2011.2.16.

In Seoul, the active development of urban agriculture during the Joseon Dynasty includes Jamsil and Jamwon-dong, which used to sleep, Kwonnong-dong, Jongno-gu where Poe used to supply vegetables to the royal court, and Yeonhui-dong, where the royal red pepper redistribution was located. Joseon was the country of Neo-Confucianism. In order to stabilize the people's livelihoods, which is the biggest goal pursued in the field of sex, Joseon placed agriculture as the most important thing to ensure that farmers, most of the people, could live in a stable condition. In other words, the traces appear in the data because agriculture is encouraged and commerce is restrained. The traces include "Kwonnong-dong," which means encouraging the cultivation of vegetables, or "Sam-sil," the name of the area where people were taking a nap. in Table 2

It is post-industrial phenomenon that agriculture is separated from the city. Recently, however, agriculture has shown a tendency to enter cities again.

Table 2. Domestic Cases of Urban Agriculture

| Number | Photo | Comment |
|--------|---|---|
| 1 |  | <ul style="list-style-type: none"> •The name Jamshil derives from the name of an organization called 'Jamshil Dohoe' that used to sleep there during the Joseon Dynasty. •Gyeongdo Obu and Bukhansan Province in the 1750s. Dongjam-sil and Samjeondo are attached to the northern part of the river and you can see Songpa-jin on the opposite side. |
| 2 |  | <ul style="list-style-type: none"> •The name Kwon Nong-dong is derived from the presence of Nongpo-seo, which encourages the cultivation of vegetables, and Nae-po, which has the intention of recommending farming •The name Kwonnongnongnong is because there is a Kwon Nongseo that encourages growing vegetables. •Naenongpo, located in the upper right corner of Donggung-do, is a typical example of a field in which the Joseon Dynasty's Hwangwan used to grow vegetables for royal purposes •There are 11 rice paddies in the royal palace, and the king built them to experience farming himself. There is a reservoir at the top and a crown angle at the bottom. Japanese occupation chundang in turned into a pond, but what was known as the root of the country farmers that royalty and contained. |

The oldest cookbook in the country was recognized as the "first cookbook of the country" after the discovery of "San Ga-rok" in 2001. It is made of paper made of dakwood and is a comprehensive farming book that covers all the skills required for the lives of ordinary people, including crops, gardening, livestock, sheep sleep and food. "San Ga-rok" literally means a book that records the various skills needed to live in a mountain house, a house in a mountain village, but in fact, it's easy to understand, but it's an ordinary working class. The contents of agriculture are much in line with Goryeo's "nongsangjipyo" and are a collection of writings on agriculture, food cooking and food storage and dyeing methods.

The most notable part is the greenhouse design method, which features the world's first greenhouse development law detailing how to build a greenhouse on an item called "dongnyangchae," which means growing vegetables in winter.

It was heated with yellow soil walls and ondol, and controlled ventilation with oiled hanji-covered windows, which improved the heating effect through natural lighting so that spring greens could be eaten in winter. The independent greenhouse design using ondol and mining windows proves the excellent farming techniques of the ancestors. The greenhouse technology recorded in "The San Diego Rock" is 170 years ahead of the simple heating greenhouse that used the stove in Heidelberg, Germany, in 1619, and is considered the world's first. in Figure 2







Figure 2. Reproduction of a greenhouse in accordance with the “Dongjeolchae” greenhouse construction

2.2. Types and Types of Urban Agriculture

The types of urban farming range from urban farming, which utilizes the interior and exterior of buildings, handrails and rooftops of houses, or land adjacent to buildings such as houses and public housing, to urban agriculture, which uses land or buildings in schools for the purpose of learning and experiencing students. Kim Tae-gon, Park Moon-ho and Heo Ju-nyeong of the Korea Rural Economic Institute put together five representative types of urban farming in their 'Vision and Tasks of Urban Agriculture'. [5] These five types include: industrial agriculture that provides fresh and safe agricultural products to urbanites, such as facility gardening and fruit farming, experienced agriculture such as home garden or rooftop farming, learning-type agriculture that provides learning or education for farming experience, exchange-type farming for urban and rural exchanges for agricultural trade, and a cycle of practicing eco-friendly farming such as curbing the release of carbon dioxide in agricultural production processes and saving resources. The types of urban farming account for most of the weekend farms, rooftop gardens, veranda gardens, and jaturi gardens, each with its own characteristics, so the operation depends on the choice of urban farmers. The veranda garden or weekend farm allows growing children to experience field experience learning and is beneficial as a place for natural learning and theme travel. Each feature is summarized in <Table 3>.

Table 3. Domestic Cases of Urban Agriculture

| Kind | Photo | Characteristics |
|--|---|--|
| apartment veranda garden |  | <ul style="list-style-type: none"> •Use it as a vegetable garden and rooftop garden •Pursue the health and well-being of the body and mind through productive human-centered leisure activities by eating, seeing, and enjoying through farming activities •The longer food is transported, the more carbon dioxide it releases, preventing it from causing environmental strain. •Get growing children to experience on-site experience and be safe from pesticides or pesticides |
| Roof Garden of the Yuchae Flower Garden with Landscape in the Roof Space of the Building |  | <ul style="list-style-type: none"> •Rooftop garden to make our living space pleasant, etc. •Is this part of the purchase considered? |

| | | |
|---|---|---|
| <p>a weekend farm on sale</p> |  | <ul style="list-style-type: none"> •a small farm in the suburbs of the city for farming on the weekend •Non-farmers, including urbanites, can experience farming on weekends •Utilization of land acquired by people who do not farm as their main occupation to operate as an experience farming experience •For children and young people who only live in cities and do not know nature, it is useful as a place for natural learning and theme travel. |
| <p>a garden in the middle of the city</p> |  | <ul style="list-style-type: none"> •School's self-toothed space turns into a healing garden in the city center •Providing residents with opportunities to experience urban farming by utilizing idle spaces in the inner city •Establishment of a garden in a school facility to contribute to the emotional development of residents. Various crops such as lettuce, cucumbers, cherry tomatoes, peppers, chicory, scallions, and eggplant are grown in the garden. |

Urban farming is important because cultivating food by farming in cities gives pleasure as well as health of the body and mind. Human beings have proven that experiencing nature restores their energy, and in particular the green color of plants has psychological effects that give them rest and stability. Dr. B.C. Wolverton, an atmospheric environment expert in the U.S., said that people feel comfortable in the vicinity of plants or taking care of plants, and the results show that the release of serotonin, a happy hormone, is facilitated through forest therapy and guardings.

3. Conclusion

This study recently conducted a survey of urban farming, which grew fresh vegetables and fruits directly using urban garden or weekend farm. The reason is that we want to improve our dining table through agricultural activities such as weekend farms, outdoor gardens and rooftop gardens, as the Korean table is threatened by pollution and energy consumption and carbon dioxide emissions caused by agricultural movement are the main culprits of global warming. The purpose of this study is to analyze and understand the significance and type of urban agriculture and to examine the cases of domestic and foreign urban agriculture based on this and to seek the developing direction of urban agriculture, which is gradually increasing. From the point of view of protecting the urban environment, farmland inside the city is not only a source of agricultural products, but also responsible for the absorption and circulation promotion of rainwater, prevention of urban warming and air purification. In addition, it is an important element for creating an efficient urban environment, such as one that can be used as a shelter in the event of a disaster.

Through weekend farms, outdoor gardens, rooftop gardens, and veranda gardens, the government is also carrying out public-interest functions such as forming a strong bond between family and neighbors or reminding them of the importance of farming and rural areas. Urban farming, which has provided growing children with field experience learning, is safe from pesticides or pesticides, and is beneficial as a place for natural learning and theme travel, has established itself as a leisure activity, not just a production activity. But the failure to obtain clear findings on the preference of urban agriculture remained a marginal point.

The practical implications of urban farming are that cultivating food through urban farming is not only good for the health of the body and mind, but also pleasure.

Three measures have been proposed and summarized as follows for the effective promotion of urban farming today. First, it is necessary to develop various models for the expansion of urban agriculture. It is important to select the type and type of agriculture suitable for the city. For example, in cities, there is especially a lot of fine dust and it is to build plant farming that absorbs it. This is because fine dust plants for air purification help clean up indoor and outdoor air without needing electricity. Second, a systematic system

should be established for revitalizing urban agriculture. Third, it is necessary to develop a program of training, which is urban agriculture, to encourage urban farming communities. The government hopes to present development measures for urban farming, which are essential for the health and relaxation of the city's increasingly competitive and fast-changing population, and conduct follow-up research in the hope of being used as data for urban agriculture, which is increasingly in demand. In the future, the research task is to carry out systematic research on the preferences of urban agriculture and the types of agriculture, and make suggestions on strategies and methods of urban agriculture.

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