

Plant Cultivation Techniques in Landscaping and Greening

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Abstract: This article explores the current status of garden plant cultivation techniques and their importance in urban construction. With the advancement of urbanization, garden plants not only bring greenery to cities, but also play a crucial role in improving the environment and enhancing the quality of life of residents. The color effect and ecological benefits of garden plants are the focus of cultivation and maintenance. Through scientific and reasonable planning and management, they can create beautiful scenery with changing seasons and promote the balance of urban ecosystems. Adequate preparation and post planting care are equally important during the planting process, as they together ensure the survival rate and healthy growth of garden plants. At the same time, with the advancement of technology and the improvement of the aesthetic level of citizens, the cultivation technology of garden plants is also constantly improving, paying more attention to interaction and participation with citizens. Looking ahead to the future, the cultivation and maintenance of garden plants will play a more important role in urban construction, bringing more greenery and vitality to the city.

1. Introduction

With the acceleration of urbanization, people's living environment has undergone earth shaking changes, and high-rise buildings and bustling traffic have become synonymous with cities. However, behind this prosperity, people's pursuit of quality of life and their desire for the ecological environment are also increasing. As an important component of urban ecological construction, forest greening not only adds a touch of green to the city, but also plays an indispensable role in improving the urban environment and enhancing the quality of life of residents. The cultivation of garden plants is the core link of forest greening. It not only involves the planting and maintenance of plants, but also is a comprehensive technology that involves knowledge from multiple disciplines such as biology, ecology, aesthetics, etc[1]. Effective cultivation of garden plants can fully utilize their ecological functions, such as cooling, noise reduction, and air purification, to create a more livable environment for cities. At the same time, garden plants can also provide citizens with a place for leisure and entertainment, allowing them to enjoy the gifts of nature and feel the beauty of life in their busy work[2]. In recent years, China has attached great importance to the cultivation and maintenance techniques of garden plants. Not only has it increased research investment and promoted innovation and development of related technologies, but it has also provided strong support in policies and funding. The implementation of these measures not only enhances the professional level of garden plant cultivation, but also provides strong guarantees for the role of garden plants in urban ecological construction[3]. However, we should also be aware that the current cultivation of garden plants still faces many challenges. How to choose plant species that are suitable for the local climate and soil conditions? How to ensure the survival rate and growth quality of plants? How to maximize green benefits on limited land resources? These issues require us to constantly explore and practice. Therefore, improving the cultivation and maintenance techniques of garden plants is not only an urgent task, but also a long-term and arduous task[4]. We need to constantly learn new knowledge, master new technologies, combine theory with practice, and continuously improve our professional literacy and practical abilities. Only in this way can we better play the role of garden plants in urban ecological construction, and make greater contributions to improving and enhancing social and environmental benefits. Looking ahead to the future, with the continuous progress of technology and the increasing awareness of environmental

protection among people, the cultivation and maintenance technology of garden plants will undoubtedly usher in a broader development space[5]. Let's work together and strive to create a more beautiful and livable urban environment!

2. Current status of application of cultivation and maintenance techniques for garden plants

With the advancement of urbanization, the cultivation and maintenance of garden plants have become an indispensable part of urban construction. This is not only because garden plants can bring greenery and vitality to cities, but also because they play an irreplaceable role in improving the urban environment and enhancing the quality of life of residents[6].

In the cultivation and maintenance of garden plants, color effect is crucial. Different plants bring rich visual experiences to gardens due to their unique colors, shapes, and growth habits[7]. For example, peach blossoms and cherry blossoms in spring, lotus and sunflowers in summer, maple leaves and chrysanthemums in autumn, and pine and cypress in winter all bring a beautiful scenery of seasonal changes to the city with their distinct colors and unique forms. These colors not only beautify the urban environment, but also provide citizens with a good place for leisure and entertainment. In addition to color effects, the cultivation and maintenance of garden plants also pay attention to ecological benefits. In plant configuration, full consideration should be given to the interactions and symbiotic relationships between species to form a balanced ecosystem. For example, planting multi-level plant communities such as trees, shrubs, and ground cover plants can not only increase greenery and improve air quality, but also reduce noise, regulate temperature, and provide biological habitats[8]. The realization of these ecological benefits has made garden plants an indispensable part of urban ecosystems.

In recent years, with the increasing attention and investment of the country in urban greening construction, the area of garden greening has been continuously expanding, and the green coverage rate has also been increasing year by year. This provides a broader stage for the cultivation and maintenance of garden plants. Meanwhile, with the advancement of technology and the improvement of people's aesthetic standards, the cultivation techniques of garden plants are also constantly improving. In terms of plant configuration, more emphasis is placed on color matching and highlighting plant characteristics, making garden plants not only have higher ornamental value, but also better meet the pursuit of a better life for citizens[9]. It is worth mentioning that in the cultivation and maintenance of garden plants, attention should also be paid to their growth habits and environment. Different plants have different requirements for conditions such as light, water, and soil, so scientific and reasonable maintenance needs to be carried out according to the characteristics of the plants during the cultivation process. Only in this way can we ensure the healthy growth and good ornamental effects of garden plants.

In future urban construction, we should pay more attention to the cultivation and maintenance of garden plants, and through scientific and reasonable planning and management, bring more greenery and vitality to the city.

3. Garden plant planting

3.1. Preparation work before planting garden plants

In the hustle and bustle of the city, green engineering is like a fresh shade of green, bringing peace and comfort to citizens. However, the hard work and careful preparation behind this often go unnoticed. Before carrying out plant planting work, every detail needs to be carefully considered to ensure that the final greening effect can achieve the expected results. The excavation of planting holes is the first and crucial step in plant planting.

Seedling selection is a crucial step in greening engineering. High quality seedlings are the foundation for ensuring the greening effect. When selecting seedlings, it is important to choose seedlings that are robust, free from pests and diseases, and have a beautiful appearance. When raising seedlings, attention should be paid to protecting the root system of the seedlings to avoid

damage during transportation.

The transportation and planting of seedlings are also very important links. During transportation, keep the seedlings moist and avoid wind and sun exposure. After arriving at the planting site, if immediate planting is not possible, artificial planting is required to ensure the survival rate of seedlings.

Pruning is an important task before planting plants. By pruning, weak parts can be removed and healthy growth of plants can be promoted. Meanwhile, reasonable pruning can also shape the shape of plants and enhance their ornamental value.

Design is the soul of green engineering. When designing drawings, full consideration should be given to the configuration of plants, the creation of landscapes, and the realization of functions. At the same time, it is necessary to continuously optimize and adjust the design drawings based on the actual situation. Technical disclosure is an important task in the early preparation stage of greening projects. Through technical disclosure, construction personnel can understand the requirements, process arrangements, and precautions of green construction. This helps to improve construction efficiency and ensure construction quality.

3.2. Maintenance of garden plants after planting

In the life cycle of plants, maintenance is a crucial link. An appropriate maintenance method not only ensures the healthy growth of plants, but also lays a solid foundation for their future development, flowering, and fruiting. However, achieving this goal is not as simple as digging a pit or burying some soil. Before choosing the planting method, we must deeply consider and evaluate the growth characteristics of the plant itself and the influencing factors of the surrounding natural environment. Figure 1 shows the evaluation steps for landscaping projects.

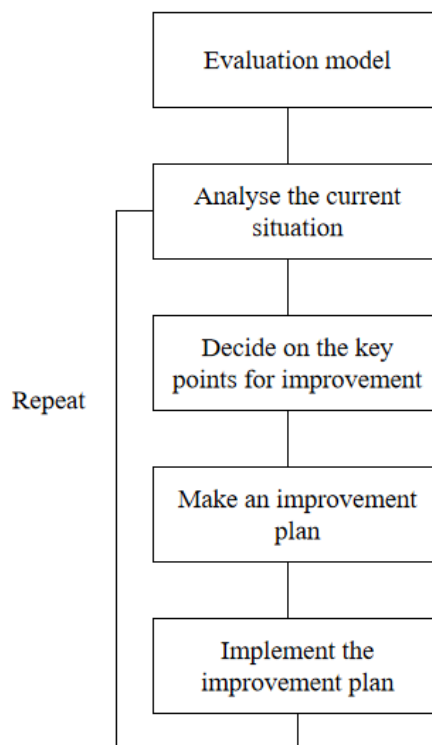


Figure 1 Evaluation Steps for Landscape Greening Projects

In addition to the growth characteristics of the plant itself, the surrounding environmental factors are also important considerations when choosing planting methods. For example, the soil texture, pH, groundwater level, and other factors at the planting site can directly affect the growth of plants. In addition, climate conditions are also an important consideration. For example, in windy areas, it may be necessary to choose a more stable planting method to prevent plants from being blown down by the wind.

For plants that prefer sunlight and have well-developed roots, deep excavation and multiple

fertilization methods can be chosen to ensure that they have sufficient growth space and nutrients. For plants that prefer shade and have shallow roots, shallow excavation and less fertilization methods can be chosen.

Planting is just the starting point of plant growth, and regular pruning is also essential to ensure the healthy growth of plants. By pruning, we can remove the weak parts, reduce water and nutrient waste, and make plants healthier. Meanwhile, pruning can also help plants maintain a balanced growth trend and prevent the spread of diseases and pests. Especially during the dry season, pruning to reduce branches and leaves can reduce water loss and improve plant drought resistance. A proper planting method and regular pruning and maintenance can greatly improve the survival rate of plants. The survival rate is not only related to the healthy growth of plants themselves, but also directly affects the effectiveness and economic benefits of greening projects. Therefore, during the planting process, we should always pay attention to the growth status of plants, adjust planting methods and pruning plans in a timely manner, and ensure the survival rate of plants.

Appropriate maintenance methods are key factors in ensuring healthy growth of plants. To achieve this goal, we must comprehensively consider the growth characteristics of plants and the influencing factors of the surrounding natural environment, and choose appropriate planting methods based on this. At the same time, regular pruning and maintenance are also important measures to ensure the healthy growth of plants and improve their survival rate. Only in this way can we ensure that every plant can thrive under our careful care, adding more greenery and vitality to our lives and environment.

4. The problems and development trends of garden plant cultivation techniques

With the acceleration of urbanization, garden plant cultivation plays an increasingly important role in urban greening and beautification. In recent years, the field of garden plant cultivation in China has continuously attempted to introduce new species, in order to add more colors and layers to urban landscapes through diversified plant species. However, during this exploration process, some urgent problems have also been exposed. Figure 2 shows the process of identifying and solving problems in garden plant cultivation techniques.

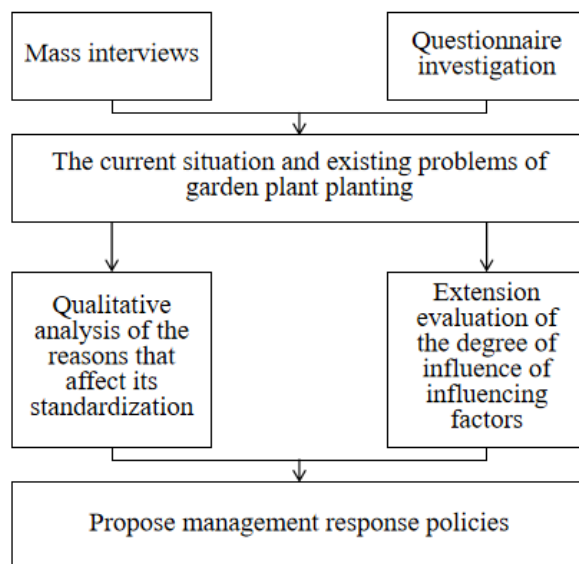


Figure 2 Process for identifying and solving problems in garden cultivation techniques

The high cultivation and maintenance costs of new species have become a major challenge that restricts their widespread application. These newly introduced plants often have special requirements for their growth environment, requiring a significant investment of manpower, material resources, and financial resources for refined maintenance. In the practice of garden plant cultivation, some species that have not achieved the expected growth effect, due to high maintenance costs, not only fail to achieve the expected ecological benefits, but also become an

economic burden. This not only affects the economic benefits of garden plant cultivation, but also restricts the sustainable development of urban greening.

Faced with these challenges, we need to start from multiple aspects and explore new paths for garden plant cultivation. On the one hand, it is necessary to strengthen the screening and domestication of new species, and select plant varieties with strong adaptability and low maintenance costs for cultivation. At the same time, through scientific research and technological innovation, we continuously improve the survival rate and growth quality of new species, reduce maintenance costs, and create conditions for their widespread application.

In addition, it is necessary to strengthen the later management and maintenance of garden plant cultivation. By regularly pruning, fertilizing, watering and other measures, ensure the healthy growth and good condition of plants. At the same time, establishing a sound plant maintenance system and technical standards, improving the professional quality and skill level of maintenance personnel, and providing strong guarantees for the sustainable development of garden plants.

The new path of garden plant cultivation needs to balance economic benefits and sustainable development while ensuring aesthetic value and greening effect. Through various efforts such as screening high-quality new species, optimizing plant configuration, and strengthening post management, we can promote the continuous development of garden plant cultivation and contribute more to urban greening and beautification.

5. Conclusions

As a key means of beautifying urban construction, garden plants not only add vitality and energy to urban landscapes, but also reflect the practice of China's sustainable development strategy. With the deepening of modernization construction, the importance of garden plant cultivation and maintenance has become increasingly prominent, and its development prospects are worth looking forward to.

Currently, although the cultivation and maintenance of garden plants face challenges such as high maintenance costs for new species and a shortage of deciduous tree species, technological progress has made it possible to solve these problems. Through continuous technological innovation, we can select plant varieties with stronger adaptability and lower maintenance costs, optimize plant configuration, enhance seasonal diversity, and better serve urban beautification and ecological construction with garden plants.

Looking ahead to the future, with the continuous progress and application of technology, the technological level of garden plant cultivation and maintenance will undoubtedly be further improved. This will enable garden plants to better utilize their ecological, landscape, and economic benefits, making greater contributions to the sustainable development of cities. We believe that with the promotion of technology and innovation, the cultivation and maintenance of garden plants will usher in a better development prospect.

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