

# Application of Garden Plants in Real Estate Landscape in Northeast China

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**Abstract.** Taking the real estate landscape of 10 communities in northeastern China as the research object, the paper investigates the types, application frequency, spatial distribution, growth status, ornamental characteristics of garden plants in residential areas, and analyzes the application status and cost control of garden plants in residential areas. The causes of differences in the application of garden plants in real estate landscape are pointed out and suggestions are given.

**Keywords:** Northeast China; Real estate landscape; Garden plants; Applied.

## 1. Introduction

Real estate landscape is relative to the urban landscape, landscape gardens and other government investment projects, especially for real estate investment and construction for commercial purposes and commercial purposes of landscape engineering. In recent years, there is still a lot of room for development in the arrangement of plants in the real estate landscape, both in terms of artistic construction and the intervention of science and technology. Taking typical representatives of four residential areas in northeast China as the research object, this paper investigates and analyzes the application of garden plants in real estate landscape, and gives suggestions for real estate landscape design in northeast China and its surrounding cities.

## 2. Survey Content and Methodology

### 2.1 Location of the Investigation

#### 2.1.1 Low-level Settlements: Whistler Town, Yidajiu, Lanqiaoshengfei

#### 2.1.2 Multi-storey Residential Areas: Maple King Shangcheng, Shuimu City Code

#### 2.1.3 High-rise Residential Areas: Scenery New World, Hengdajiang Bay, Vancobertree Garden

#### 2.1.4 Level Mixed Residential Areas: Xinyi Mansion, Oak Bay

### 2.2 Research Content and Methodology

#### 2.2.1 Survey on Application of Garden Plants

① Composition of plant species: All garden plant species applied according to systematic classification.

② Plant application frequency:  $\text{application frequency}(f) = (\text{number of times a plant appears in the sample point} / \text{total number of sampling points}) * 100$  <UNK>.

③ Plant spatial distribution: Analyzed by classification of plants such as trees, shrubs, herbs, vines, and aquatic plants.

#### 2.2.2 Survey on Garden Plants

① Plant growth status: According to good growth, general, relatively poor statistical analysis.

② Plant ornamental characteristics: According to the observation, observation of leaves, observation of branches (observation of dry), observation of flowers, observation of fruit and other statistical analysis.

### 2.2.3 Cost Control of Garden Plants

Based on the results of the previous investigation and analysis and combining with the characteristics of garden plant materials and cost control factors, the paper gives some reasonable suggestions on the cost control of garden plant in residential landscape.

## 3. Survey Results and Analysis

### 3.1 Analysis of Application Status of Garden Plants in Residential Areas

Of the 10 residential areas surveyed, the garden plant species covered 53 families, belonging to 104 genera and a total of 150 species. Among them, there are 61 species of trees, 30 species of shrubs, 49 species of herbaceous plants, 3 species of vines, and 7 species of aquatic plants. There are 31 species of garden plants whose application frequency( $f$ )  $\geq 50$ . There are 106 species of garden plants that apply frequency( $f$ )  $\geq 1$ , as shown in table 1.

Table 1. Frequency of application of garden plants in real estate landscape

Numble	Application Frequency(%)	Plant species
1	Wujiaofeng, apricot, Mongolian quail, spruce, oil pine, Ziye Xiaoyu, Red Prince Jinjie, Lianqiao, Jade, grassland precocious	$80 \leq f < 100$
2	Guoxuan, Hawthorn, Northeast China cypress, water wax, Huangcimei, Yumei, Shanwei, Babao Jingtian, Jinyanxiu	$60 \leq f < 80$
3	White wax, silver poplar, eucalyptus, Baomadingxiang, Pearl embroidered chrysanthemum, Tianmu Qionghua, gold leaf bellows, Korean yellow poplar, five- leaf brocade, gold doll grass, Jinshan embroidered chrysanthemum, Japanese embroidered chrysanthemum	$50 \leq f < 60$
4	Clustered five-pointed maple, clustered Birch, thorn, Congshengmengguli, Beijing peach, lilac, clove, northeast Pearl plum, Jinyinmu	$40 \leq f < 50$
5	Shui Qu Liu, Feng Yang, Hua Qu Liu, Saponin, Skunk, Thorn Tree, Purple Leaf Lee, Sandy Park, Paddy Park, Jinyeyu, Redwood, Big Flower Water Yagi, Thousand Quercus	$30 \leq f < 40$
6	Abies, Xinjiang Poplar, Thick Plum, Purple Plum, Ginkgo biloba, Hickory, Golden Crow Willow, Walnut Sorbus, Eucalyptus, Dry Willow, Purple Leaf Dwarf, Multi- season Rose	$20 \leq f < 30$
7	Jiujiao Maple, Shanjingzi, Torch Tree, Peach Yeweimao, Jiaodong Euonymus, Elderwood, Jinlumei, Water Lotus, Black Heart Chrysanthemum, Beauty Canna, Wolf Tail Grass	$10 \leq f < 20$
8	White Birch, Liaodong, Hawthorn, Mao Baiyang, Apple, Shantou Liu, Shuizhan flower pot, Northeast Mountain Plum Blossom, African Phoenix Fairy, Dwarf Malin, Feng Hua Yue Ji, Ying Hong Du Fu, Cai Ye Cao	$5 \leq f < 10$
9	Apricot, Purpura, Tohoku yew, Canadian poplar, Lee, Mao cherry, goldfish grass, goldenrod chrysanthemum, Persian chrysanthemum, Vine this season, cattail, beautiful cherry, Sanqi Jingtian, Cuiju, Four Seasons Begonia, Clover	$1 \leq f < 5$

From the results of the survey in Table 2, it can be seen that in the spatial distribution of plants, there are more applications of mixed species of Arbor garden plants, 56 species, and less applications of multi-layer communities, 30 species; The species of shrubs and herbaceous garden plants in the lower floors are the most used, with a total of 75 species; There are 44 species of shrub and herbaceous garden plants in high level and multi-layer communities.

Table 2. Statistics on plant species by settlement (unit: species)

Type of settlement	tree	shrub	Herbs	Lianas	Aquatic plants	total
Lower Class	36	30	45	3	7	121
Multilayer Class	30	22	22	1	0	75
Upper Class	48	20	24	1	2	95
Mixed Class	56	26	25	0	0	107
Total plant species	61	30	49	3	7	150

### 3.2 Analysis of Life Style of Garden Plants in Residential Areas

From the above survey statistics, it can be seen that the land landscape in Northeast China is rich in the application of plant species. According to the ornamental part, it can be divided into trees, branches, leaves, flowers, fruits, roots, etc. From the results of the survey, the selected plant materials in each residential area are shrubs and herbs, mainly flowering plants., In addition to the aroma of the flower, the ornamental characteristics reflect stronger; Shrubs and herbaceous plants are the most selected in the lower residential areas, so the plant landscape is the best.

### 3.3 Cost Control Analysis of Landscape Plants in Residential Areas

According to the survey, the low-rise residential areas have the largest green space, the most abundant plant species, and the most diverse plant allocation patterns due to the large amount of funds invested. It can be seen that the scientific rationality of plant configuration is one of the factors that affect the cost of landscape of garden plants; Due to the fact that the upper residential area usually occupies a small area, the investment in the landscape is not high, so the plant landscape effect will also be limited.

## 4. Summary

### 4.1 Highlight the Community Characteristics of Beauty

Each species of garden plant has its own unique characteristics. Residential areas can be equipped with certain flowers and fruit plants. At the same time, the diversity of plant species in different residential areas is rich and not chaotic. Good planting design can be a prominent feature of residential areas.

### 4.2 Tree Species Selection

Usually in the plant selection should pay attention to the use of less pollen, no pollution, and non-toxic, no flocculating, no irritating odor, strong anti-fouling. Plants that are drought-tolerant, water-tolerant, drought-tolerant, barren soil, and tolerant of extensive management, especially local Native tree species.

### 4.3 Combination of Joe, Irrigation, Herbs, and Rattan to Increase Vertical Greening

The green area of the community is often limited, and efforts are made to increase the green area. Qiaoguancao combines the flowers, especially to promote vertical greening and pay attention to three-dimensional effects.

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