

# Plant Landscaping - An Overview of Special Plant Landscaping in Therapeutic Landscapes Based on Traditional Chinese Medicine

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## Abstract:

This paper focuses on special plant landscaping in therapeutic landscapes rooted in traditional Chinese medicine (TCM). Against the backdrop of accelerating urbanization, increasing social pressure, and a growing aging population, it explores how to integrate TCM culture with landscape design to balance ecological sustainability and human health needs. The paper elaborates on the application mechanism of TCM theory in rehabilitative landscapes, which acts on the human body through three dimensions: physical, psychological, and cognitive, and analyzes its advantages in terms of economy, aesthetics, and applicability. It lists plant configuration schemes of medicinal plants such as *Prunus mume* (plum blossom), *Nelumbo nucifera* (lotus leaf), and *Platycodon grandiflorus* (balloon flower). Combined with the case of the Popular Science Lingnan Herbal Garden in Guangdong Provincial Hospital of Integrated Traditional Chinese and Western Medicine, it proposes landscaping strategies based on plant growth habits and functional characteristics. Additionally, it discusses the practice of the “homology of medicine and food” concept in the selection and application of landscape plants, emphasizing the realization of physical and mental healing through multi-sensory experiences. This study aims to provide theoretical and practical references for integrating TCM culture into modern rehabilitative landscape design and promote the localization of horticultural therapy.

## Keywords:

Traditional Chinese Medicine, Therapeutic Landscape, Plant Landscaping, Homology of Medicine and Food, Horticultural Therapy

## 1. Introduction

In recent years, with the continuous growth of China's economic level, the rapid development of urbanization has led to increasing degradation of ecosystems. Social problems caused by the high-pressure and fast-paced social environment have occurred frequently. In addition, the aging problem is prominent, so the adaptability to

the elderly in the current landscape design is particularly obvious, especially in plant landscaping, which emphasizes more on the medicinal healing and health-preserving properties of plants.

In response to the national call for building a “Healthy China”, various fields have begun to advocate the construction of sustainable ecological environments. Therefore, in the process of localizing horticultural therapy, how to fully apply Chinese characteristic elements and build rehabilitative landscapes suitable for China to coordinate the balance between humans and nature has become a research hotspot [1].

TCM culture refers to a cultural form that includes and goes beyond TCM itself, integrating with other forms of traditional Chinese culture and permeating people’s daily cultural life. With the changes in people’s health concepts and the transformation of medical models, traditional Chinese medicine has increasingly shown unique advantages [2].

The plant configuration in therapeutic landscape design, combined with the pharmacology of traditional Chinese plants and Chinese medicinal materials, can create a garden space that is both beautiful and has certain health-care functions. Using traditional Chinese medicinal materials to configure plants in the garden endows the plant configuration with not only ornamental value but also certain medicinal value and therapeutic effects, which is highly consistent with the TCM concept of “harmony between man and nature” and the core idea of natural therapy [3].

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## 2. Recommended Chinese Medicinal Plant Configuration Schemes

(1) *Prunus mume* (plum blossom): Plum blossom has beautiful flowers and a pleasant fragrance. In TCM, its flower buds (plum blossom) have the effects of relieving depression, harmonizing the middle energizer, resolving phlegm, and relieving cough. The blooming of plum blossom in early spring symbolizes tenacity and hope, bringing vitality and vigor to the garden.

(2) *Nelumbo nucifera* (lotus leaf): In TCM, lotus leaf is used to clear away heat and relieve summer heat, elevate lucid yang, and descend turbid yin. Its fresh green color and reflection on the water can create a peaceful atmosphere, helping to relieve stress and anxiety, which is consistent with the research conclusion in aromatherapy that “volatile components of plants affect emotional regulation” [4].

(3) *Platycodon grandiflorus* (balloon flower): Balloon flower has bright-colored flowers. In TCM, its roots are used to ventilate the lung, relieve cough, expel pus, and reduce inflammation. Planting balloon flower can not only beautify the garden but also provide medicinal resources.

(4) *Salvia miltiorrhiza* (danshen): Danshen has elegant purple flowers. Its root is an important Chinese medicinal material with the effects of promoting blood circulation, removing blood stasis, clearing the heart, and relieving restlessness. Planting danshen can add a touch of color to the garden while bringing medicinal value.

(5) *Polygonum multiflorum* (fleeceflower root): Fleeceflower root is a vine plant. In TCM, its root is used to nourish the liver and kidney, benefit essence and blood, and blacken hair. The climbing characteristic of fleeceflower root is suitable for vertical greening in the garden, increasing the sense of spatial hierarchy.

(6) *Lonicera japonica* (honeysuckle): Honeysuckle has white and yellow flowers blooming in pairs, with the effects of clearing away heat and toxic materials, and dissipating wind-heat. Its fresh fragrance can attract bees and butterflies, increasing biodiversity.

(7) *Chrysanthemum morifolium* (chrysanthemum): Chrysanthemum is one of the traditional top ten famous flowers in China. Its flowers can be used as medicine, with the effects of clearing the liver, improving eyesight, and dissipating wind-heat. The various colors and forms of chrysanthemum can enrich the color and structure of the garden.

(8) *Panax ginseng* (ginseng): Ginseng is a famous tonic medicinal material, with the effects of greatly invigorating primordial qi, restoring pulse, and rescuing from collapse. The green leaves and red fruits of ginseng bring vitality to the garden and symbolize health and longevity.

(9) *Paeonia suffruticosa* (tree peony): Tree peony is known as the "king of flowers". In TCM, its root bark (moutan bark) has the effects of clearing heat, cooling blood, promoting blood circulation, and removing blood stasis, and can be used to treat residual heat after febrile diseases, irregular menstruation, and other symptoms.

(10) *Chrysanthemum morifolium* (chrysanthemum): In TCM, chrysanthemum is used to clear away heat and toxic materials, calm the liver, and improve eyesight, and is suitable for treating headache, eye fatigue, hypertension, and other diseases. Planting chrysanthemum in the garden allows people to enjoy its beautiful flowers and smell its fresh fragrance, helping to relax.

(11) *Lycium barbarum* (wolfberry): Wolfberry is a traditional tonic medicinal material, with the effects of nourishing the liver and kidney, and improving eyesight. Planting wolfberry in the garden not only allows people to enjoy its red fruits but also pick them for making tea or medicinal meals.

(12) *Mentha haplocalyx* (peppermint): Peppermint has the effects of dispelling wind-heat, clearing the head and eyes, and benefiting the throat, and can be used to treat cold fever, headache, sore throat, etc. Planting peppermint in the garden, its cool fragrance can refresh the mind and relieve fatigue.

(13) *Astragalus membranaceus* (astragalus): Astragalus is a commonly used qi-tonifying medicine, with the effects of enhancing immunity, promoting diuresis, and reducing swelling. Planting astragalus in the garden, its yellow flowers and green leaves set off each other, and it can also be used as a medicinal material.

(14) *Ginkgo biloba* (ginkgo): In TCM, ginkgo leaves are used to promote blood circulation, remove blood stasis, dredge collaterals, and relieve pain, and have a certain auxiliary effect on the prevention and treatment of cardiovascular and cerebrovascular diseases. Ginkgo trees have a beautiful shape, with yellow leaves all over the tree in autumn, which is highly ornamental.

(15) *Glycyrrhiza uralensis* (liquorice): Liquorice is a commonly used medicinal material in TCM, with the effects of harmonizing the middle energizer, benefiting qi, clearing away heat and toxic materials, and harmonizing various medicines. Planting

liquorice in the garden, its purple flowers and green leaves complement each other, and it can also provide medicinal value.

(16) *Poria cocos* (poria): Poria is a commonly used medicinal material for promoting diuresis and excreting dampness, with the effects of strengthening the spleen and calming the mind. Planting poria in the garden, its sclerotium can be used as medicine, and its growing environment can also add a touch of natural wildness to the garden.

In the design of therapeutic landscapes, appropriate Chinese medicinal plants can be selected for configuration according to the specific environment and design theme of the garden. At the same time, it can be combined with traditional garden elements such as water bodies, rockeries, and pavilions to create a harmonious and peaceful environment to achieve the purpose of healing the body and mind. In garden design, plants can be reasonably matched according to their growth habits, flowering periods, medicinal parts, and other characteristics to create a garden space with scenery in four seasons and diverse functions. In addition, explanation boards can be set up to introduce the medicinal value and therapeutic effects of these plants to visitors, increasing the educational significance and interactivity of the garden. Through such design, the garden is not only a place for leisure and relaxation but also a platform for displaying traditional Chinese medicine culture and promoting physical and mental health.

### **3. Case Study - A Case Study of the Popular Science Lingnan Herbal Garden in Guangdong Provincial Hospital of Integrated Traditional Chinese and Western Medicine**

The specific case: the Popular Science Lingnan Herbal Garden in Guangdong Provincial Hospital of Integrated Traditional Chinese and Western Medicine... In plant landscaping, under the premise of satisfying the therapeutic theme, as many local plants common in the Lingnan region as possible are selected, which is in line with the design principle of “regionality and ecological adaptability of landscapes” [5].

The “homology of medicine and food” means that food is medicine, and there is no absolute boundary between them. Ancient medical scientists applied the theory of “four natures” and “five flavors” of traditional Chinese medicine to food, believing that each kind of food also has “four natures” and “five flavors”. The book *Huangdi Neijing Taisu* (Huangdi's Internal Classic: Grand Compendium) written in the Tang Dynasty states that “what is eaten on an empty stomach is food, and what is eaten by patients is medicine”, reflecting the idea of “homology of medicine and food”. In China, the homology of medicine and food is the essence of TCM culture and a part of Chinese culture [6].

As early as ancient times, Shennong (the legendary founder of agriculture and medicine in China) tasted hundreds of herbs, diligently exploring the functions and effects of plants; later, Li Shizhen's *Compendium of Materia Medica* systematically summarized the theory and practice of medicine-food homologous plants. Modern studies have further confirmed that the dual attributes of medicine-food homologous plants enable them to have both practical value and cultural connotation in landscapes. For example, plants such as mint and perilla have been widely used in the design of olfactory and taste experiences in health-preserving landscapes [7].

#### **4. Homology of Medicine and Food - Landscaping with Medicine-Food Homologous Landscape Plants**

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As early as ancient times, Shennong tasted hundreds of herbs, diligently exploring the functions and effects of plants; later, Li Shizhen’s *Compendium of Materia Medica* systematically summarized the theory and practice of medicine-food homologous plants. The homology of medicine and food, using the natural plant gene pool for our own use, is a concrete manifestation of pragmatism, which has been continuously enriched, explored, and innovated in the 5,000-year inheritance. Although medicine-food homologous plants can meet the functions of food and medicine, from the perspective of landscape, they need to be further understood and screened to be defined as edible landscape plants. As early as 2020, we began to conduct preliminary selection of medicine-food homologous plants (medicinal plants). By 2022, more than 40 kinds of medicine-food homologous landscape plants have been developed, such as old-stem honeysuckle, *Curcuma zedoaria*, wild ginger flower, *Agastache rugosa*, *Echinacea purpurea*, *Stevia rebaudiana*, *Ageratum conyzoides*, *Rudbeckia laciniata*, mugwort, golden-silk imperial chrysanthemum, *Anemarrhena asphodeloides*, *Perilla frutescens*, *Lilium lancifolium*, etc. From the perspective of landscape, screening medicinal plants and developing the medicine-food homologous landscape plant series as edible landscape products not only popularizes the value of medicinal plants but also meets daily life needs.

#### **5. Conclusions**

Plant landscaping plays an important role in traditional Chinese medicine therapeutic landscapes, combining the TCM concept of “harmony between man and nature” with natural therapy. This kind of landscape design emphasizes the use of plants with specific therapeutic effects, aiming to provide an environment for people to relax physically and mentally and recover health through multi-sensory experiences such as vision, smell, and touch.

#### **Conflicts of Interest**

The author declares that there is no conflict of interest regarding the publication of this article.

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