



**AN EXAMINATION OF NAVGRAHA VATIKA: A SUSTAINABLE APPROACH TO  
LANDSCAPE GARDENING**

**Satendra Babu**

Assistant professor, (Horticulture)  
School of Agricultural Sciences,

Uttar Pradesh Rajarshi Tandon Open University, Prayagraj U.P. (India)

*Corresponding Author Email: [agragsa@mail.com](mailto:agragsa@mail.com)*

**Abstract**

The term "Navgraha Vatika" refers to a unique gardening practice that involves cultivating nine distinct plants, each representing one of the nine planets in Indian astrology. These gardens, often found near sacred sites, adhere to sacred geometric designs with deep religious significance. The Navgraha Vatika is characterized by symmetrical and geometric forms, reflecting the formalism inherent in its astrological foundations. In Indian astrology, the nine planets, or "grahas," are believed to maintain the balance of cosmic energy. By creating Navgraha Vatika, ancient Indians aimed to bring the celestial energies closer to Earth. An intriguing aspect of these plants is their high oxygen production, which surpasses that of other plants. The branches and twigs of these nine plants are also used in yagnas, or sacred rites, highlighting their spiritual importance. This review study explores the impact of Navgraha Vatika on both humans and the Earth, detailing the nine planets and their corresponding flora. It provides a comprehensive plan for establishing these gardens, emphasizing their historical, astrological, and environmental significance.

**Key words:** Indian custom and traditions, landscape gardening, navgraha vatika, rashi vatika

## **Introduction**

As landscape gardening gains popularity, the need for environmentally conscious practices has become critical. In response to urbanization and environmental challenges, innovative techniques that harmonize human settlements with nature are essential. One such method is the "Navgraha Vatika," rooted in ancient Vedic concepts, which creates eco-friendly landscapes that enhance biodiversity, cultural connectedness, and visual appeal. The Navgraha Vatika, or "Garden of Nine Planets," originates from Vedic astrology, revering celestial bodies. Each planet, or "Graha," embodies unique energies and elements that maintain harmony between humans and nature. The aim is to integrate these planetary influences into landscape design, fostering a balance between natural and human-made environments.

Navgraha Vatika emphasizes using native plants and materials in alignment with planetary influences and environmental energy flows. This approach minimizes the environmental impact of traditional landscaping techniques and supports local wildlife. Utilizing organic fertilizers, water-efficient irrigation, and minimal chemical inputs, Navgraha Vatika exemplifies sustainable land management. Moreover, Navgraha Vatika preserves ancient knowledge systems like Feng Shui and Vaastu Shastra, ensuring that the garden's layout promotes positive energy flows and overall wellness. This practice not only enriches the aesthetic and functional aspects of gardens but also fosters cultural heritage.

This study explores the real-world applications of Navgraha Vatika in contemporary landscape and urban planning. Through case studies and empirical data, it evaluates the effectiveness of these gardens in reducing environmental impact, enhancing community well-being, and strengthening cultural identity. Additionally, it assesses the economic feasibility and long-term sustainability of such practices. By merging traditional wisdom with modern environmental concerns, Navgraha Vatika offers a compelling framework for sustainable landscape design that honors both nature and human heritage.

## **OBJECTIVES**

1. To study the specific tree associated with the specific planet.
2. To study the establishment and management of navgraha vatikas

## **Trees Associated with the Planets**

### **Surya (Sun)**

Plant associated - *Calotropis gigantea*

When it comes to the planets, the Sun is the most powerful. Everything in your body, including your heart, skull, brain, right eye, bones, and so on, is exposed to the intense sun. Both "Madar" and "Wasteland weed" are colloquial names for the companion plant, which is known scientifically as *Calotropis gigantea*. One of the most important plants for the production of latex, which has applications in ethnopharmacology, *Calotropis gigantea* is abundant in proteolytic enzymes and is also one of the most important plants. The leaves and flowers of the Calotropis plant are presented to God during religious ceremonies. This plant is considered to be sacred. Using ear drops that are produced from fresh madar leaves that have been cooked in ghee, it is possible to treat an ear infection. A variety of hypotheses have been proposed to account for the anticancer properties of *C. gigantea* extract. In the presence of colon cancer cells, there is evidence to suggest that the bark extract of *C. gigantea*, which contains the dichloromethane component, suppresses the expression of antioxidant genes and enhances the generation of reactive oxygen species (ROS).

### **Chandra (Moon)**

Plant associated - *Butea monosperma*

The plant commonly referred to as "Palash," scientifically known as *Butea monosperma*, is associated with a graha that governs the lungs, brain, heart, and blood. Various parts of the Palash plant, including leaves, twigs, stalks, bark, roots, and gums, are utilized in traditional medicine for their diverse therapeutic properties. Palash blossoms are particularly valued for treating enlarged spleens, menstrual disorders, and as a brain stimulant. Additionally, Palash has blood-purifying properties and possesses anti-leprotic, anti-bacterial, and anti-ulcer capabilities.

Since ancient times, plant-derived natural substances have been used to treat numerous ailments, and the Palash tree holds a significant place in Indian traditional medicine. Research indicates that the bark of the Palash tree can inhibit proteins that cause cancer. Furthermore, a gargle made from Palash leaves boiled in water can soothe a sore throat, and using Palash twigs for brushing teeth is highly effective in eliminating bad breath. The multifaceted medicinal applications of the Palash plant underscore its importance in traditional healing practices.

### **Budha (Mercury)**

Plant associated- *Acharyanthes aspera*

The plant known as "Apamarg" or "chirchiri," a member of the Amaranthaceae family, is commonly cultivated in tropical regions. Apamarg is associated with Budha, the planet governing hair, face, nose, chest, and tongue. The juice from its leaves, extracted by squeezing, is often used as ear drops to address contamination. Traditionally, Apamarg has been used to treat coughs, asthma, edema, dropsy, piles, and skin eruptions, thanks to its diuretic, laxative, antiperiodic, antiphlegmatic, and pungent properties.

Medicinal applications of Apamarg utilize various parts of the plant, including roots and leaves. According to Ayurveda, this herb is highly recommended for its numerous health benefits. The plant germinates at the start of the monsoon season, matures in winter, and enters senescence in summer. Known as "chaff flower" (*Achyrantes aspera*), Apamarg has a strong fragrance, is low in fat and calories, and rich in minerals and vitamins. Its diverse applications

span culinary uses, religious practices, and medicinal treatments, making it a valuable and versatile herb.

### **Shukra (Venus)**

Plant associated - *Ficus racemosa*

The "Gular" ficus, or *Ficus racemosa*, is a symbol of this planet. The tropical region of India is home to this plant, which is a member of the "Moraceae" family. Vegetables, pickles, curries, and traditional South African liquor all include gular fruits. Curing mouth ulcers and protecting against mosquito bites are two of the many uses for the bark of gular trees. If you suffer from dysentery, drinking tender leaf juice may assist. The plant's leaves contain a wealth of chemicals, including flavonoids, triterpenoids, alkaloids, and more. It has been discovered that soaking leaf latex in cotton and applying it to the afflicted areas helps cure piles. The most important component of gular fruits is gluanol acetate. A new biosorbent was produced by treating the leaves of the *Ficus racemosa* tree with sodium hydroxide. This biosorbent was useful in reducing the amount of lignin in the biomass and encouraging the formation of large pores. It has hepatoprotective and wound healing properties as well. This tree not only improves the property's curb appeal and resale value, but it also absorbs and reduces carbon dioxide levels. The *Ficus racemosa* tree species sequesters 65.367 tons of organic carbon per year, which is more than any other species.

### **Mangal (Mars)**

Plant associated - *Acacia catechu*

In the human body, the vertebrae, the marrow, and the anal region are all under Mangal's control. One of the trees that may be found on this planet is the deciduous *Acacia catechu* tree, which is also commonly referred to as the "khair" tree. One of the various applications for the heartwood of the khair tree is in the creation of furniture. Another application has to do with the production of the "kattha" (catechin) that is used in "paan" after it has been boiled and processed. While "Kattha" is an essential component of chewing betel leaf, "Cuth," which is a byproduct of the production of kattha, is utilized in the region for the purpose of pickling leather and dyeing leather. This tree's Duramen fruit is more desirable than the fruits of other species, and as a result, it fetches a higher price than those of other species. By the same token, the khair tree is revered as holy or sacred in the religion of Hinduism. There are a variety of applications for the wood of this tree, including the usage of it in funerals and other ceremonies. The roots of *A. catechu* not only prevent the soil from moving about, but they also provide the soil with nutrients and reduce the risk that it will be used up by erosion. *Acacia* rhizobial colonies can range in size from very small to quite enormous when they are found in their natural environment. Rhizobial inoculation of plants, which occurs when the number of *acacia* in the plant is low (less than fifty per gram), frequently leads to an increase in nitrogen fixation.

### **Bruhaspati / Guru (Jupiter)**

Plant associated - *Ficus religiosa*

Since it is one of the oldest trees in the world, the *Ficus religiosa*, which is more often referred to as the peepal, is the official tree of the state of Bihar. Because the peepal tree is valuable in traditional medicine in every area of its body, it holds a significant position among plants that are used for medicinal purposes. All three of the most important organs in the human

body—the liver, kidneys, and pancreas—are under the control of Planet Guru. All components of this plant, including the leaves, bark, seeds, and fruits, are utilized in the practice of naturopathy and ayurveda. Consuming the juice that is extracted from the leaves can improve kidney function and provide relief from kidney ailments. Bark decoctions have been utilized in the treatment of asthma and whooping cough in traditional medicine. Powdered tender leaves are quite effective at relieving stomach pain when taken with milk. The use of fresh peepal twigs is an alternative to the use of a toothbrush that is as effective. It is believed that the authentication and declaration of *F. religiosa* can be found in sacred literature like as the Puranas, the Ramayana, the Mahabharata, and other sacred texts. There is an abundance of proteins, minerals, and phytochemicals in the fruits of the peepal tree.

### **Shani (Saturn)**

Plant associated - *Prosopis cineraria*

The plant known as *Prosopis cineraria* is held in extremely high regard in India due to the religious, traditional, and medicinal applications it has. In addition to that, this plant is considered to be the lord of the human teeth, muscles, and limbs. This plant is not only an important cultural artifact, but it also has a wealth of resources that are applicable to agriculture, medicine, and other fundamental areas of life. It thrives in temperatures that are hot and dry as well as in regions that are semi-arid all over the world. In order to effectively treat dyspepsia, it has been demonstrated that the consumption of a mixture consisting of fresh leaf extract and lemon is effective. There is a widespread belief that *P. cineraria*, also known as Khejri, plays a significant role in the economy of rural communities. This tree is highly valued by the Hindu religion due to the fact that it may be used as a source of firewood and lumber during times of crisis. It has been demonstrated by researchers that the canopy of this plant results in an increase in both the soil moisture and the biomass. It is also possible for this plant to contribute to the incorporation of microbial nutrients into the soil through the process of nodulation.

### **Rahu (Dragon's head)**

Plant associated- *Cynodon dactylon*

Rahu is usually referred to as the shadow body due to the fact that it is the planet that is responsible for eclipses that concentrate on the ascending node, which is the north lunar node. *Cynodon dactylon*, or "Durva" as it is more often known, is the plant that is associated with the planet Rahu. Locals believe that this plant can be used as an offering to Lord Ganesha as part of a Puja, despite the fact that it is generally considered to be a weed across the nation. This particular plant is referred to as doob or dhuv in Hindi, however in Sanskrit, it is referred to as Shataparva. The words Bermuda grass and Bahama grass are used to refer to it in English. Besides its ability to alleviate period pains and heavy bleeding, *C. dactylon* also possesses features that are associated with diabetes. According to the findings of many investigations, *C. dactylon* has the ability to halt bleeding and hasten the process of wound healing. The utilization of this doob grass, which is sometimes referred to as turf grass, in the design of landscapes is associated with a number of wellness and medicinal benefits. The application of the essence of this medicinal plant has the potential to cure a wide variety of health issues, such as ulcers, arthritis, and bacterial infections.

### **Ketu (Dragon's tail)**

Plant associated - *Desmostachya bipinnata*

Ketu, known as the shadow body, is linked to the descending (or south) lunar node and causes eclipses. Associated with Ketu is the flowering plant darbha grass, also known as "Halfa grass" or Kusha in Sanskrit. This grass is notable for its rich antioxidant content and potent tonic properties. Recognized as an exceptionally successful monocotyledon herb, darbha grass thrives despite significant environmental changes due to its substantial phytochemical contents. Its pharmacological and phytochemical properties make it highly valued in traditional medicine and Ayurveda. Economically, this evergreen grass serves as cattle feed and a medicinal plant. Darbha grass, particularly *D. bipinnata*, flourishes in dry, semi-arid, and extremely arid environments, showcasing autecological characteristics. Recent research has revealed its remarkable salt tolerance, further highlighting its resilience and ecological importance.

#### **Establishment and Management of Navgraha Vatikas**

Garden design, in general, is an art form that requires meticulous planning and preparation in order to achieve the desired results. It is necessary to provide thorough consideration and analysis to a number of aspects, including the type of garden, the purpose for which it is intended, the theme, and so on. In the next stage, you will evaluate the practicability of constructing the garden design that you have selected by taking into consideration all of the physical inputs that will be necessary. In the event that the planning stage has been finished, the subsequent step is to conduct an exhaustive analysis of the requirements of the garden in question.

**Table 1: Nine planets and the colour, direction, and plants associated with them**

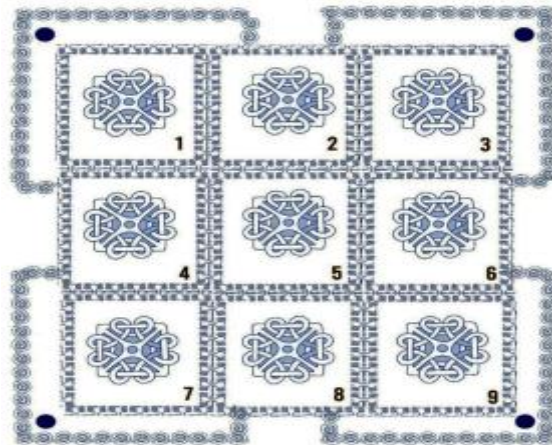
<b>Planet name</b>	<b>Colour</b>	<b>Direction of planting</b>	<b>Name of plant associated</b>
Surya (Sun)	Light pink	Centre	Calotropis gigantea (Madar)
Chandra (Moon)	White	S-E	Butea monosperma (Palash)
Budha (Mercury)	Green	North	Achyranthes aspera (Apamarg)
Shukra (Venus)	White	East	Ficus racemosa (Gular)
Mangal (Mars)	Deep red	South	Acacia catechu (Khair)
Guru (Jupiter)	Yellow	N-E	Ficus religiosa (Peepal)
Shani (Saturn)	Black	West	Prosopis cineraria (Shami)
Rahu (Dragon's head)	Brown	S-W	Cynodon dactylon (Doob grass)

Ketu (Dragon's tail)	Brown	S-W	Desmostachya bipinnata (Kush/Halfa grass)
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## Methodology

### Selection and Survey of Area

In places that are classified as tropical or subtropical, navgraha vatika are more frequently established, either manually or with the use of various pieces of equipment. With the help of this knowledge on natural grades, topography, level difference, and other factors, the region can be utilized to its best potential while yet retaining its natural qualities.



### Soil and Climate

In this particular region, the optimal conditions include soil that is abundant in the macro and micro nutrients that plants require, a sufficient supply of water, and drainage systems that have been thoughtfully planned. In order to assess the type of soil (clay, loam, sandy), pH (acidic, alkaline), and the availability of nutrients for plants, it is essential to conduct a soil test characterization. Loamy soil with a pH ranging from 5.0 to 6.0 is highly recommended for the cultivation of major tree species that are related to one another. Both the type of soil and the climate should be well researched because of the relevance they hold in the process of plant selection.

### Basic Facilities

Prior to beginning the process of constructing a garden, it is necessary to first ascertain the essentials of fundamental utilities, which include power, lighting, water, drainage, and cost estimates. For the purpose of preparing cost estimates that are correct, it is vital to have contemporary market rates.

### Design and Layout

During the process of creating the layout of the garden, it is absolutely necessary to give careful consideration to the orientation and location of each tree. In order to ensure that there is sufficient space between the various tree species, it is essential to take into consideration the size and canopy of each individual tree species. This navgraha vatika layout was designed by me with a focus on geometry and symmetry in mind.

Fig. 1: A formal layout and landscaping of navgraha vatika

### Index (fig. 1)

- i. Buddha (*Achyranthes aspera*)
- ii. Shukra (*Ficus racemosa*)
- iii. Chandra (*Butea monosperma*)
- iv. Guru (*Ficus religiosa*)
- v. Surya (*Calotropis gigantea*)
- vi. Mangal (*Acacia catechu*)
- vii. Ketu (*Desmostachya bipinnata*)
- viii. Shani (*Prosopis cineraria*)
- ix. Rahu (*Cyanodon dactylon*)
- x. Concrete walkways
- xi. Hedges
- xii. Fountains/water bodies

This pattern depicts not just the navgraha garden but also the traditions that are customary in India. In the design seen above, the inclusion of a concrete walkway that goes all the way around the garden is indicative of a more formal approach to gardening. There is one plant that is associated with the navgraha in each of the nine equal squares that are located in the middle. It is possible to beautify the four corners of the centerpiece with hedges that are organized in an L-shaped structure. Some examples of hedges that can be used include Alternanthera, Bougainville, Duranta, and Jatropha to name a few. In order to improve the visual value of these L-shaped structures, the plan that was presented earlier calls for the installation of fountains at the corners of the buildings..

### Selection of Planting Material

The selection of plants that are in good health and have not been afflicted by any diseases or pests ought to be the first concern. The garden would be lacking in many attractive and flowering plant species that are capable of displaying a broad range of growth patterns, textures, and colors. In addition to the nine navgraha trees, the garden would be lacking in these aspects



alone. As a consequence of this, secondary plants, which include trees, shrubs, climbers, annuals, and other similar plants, frequently coexist with primary plants in gardens.

### **Planting of the Navgraha Trees**

Plants that are related with the navgraha vatika are often resilient, have a long lifespan, and are simple to cultivate. It is necessary to level the ground and plough it thoroughly before beginning the process of establishing vatika. In the event that the soil has any items that are not desirable, such as pebbles or plant waste, it is necessary to remove them. Covering the top layer of soil with the right quantity of vermicompost, green manure, or farmyard manure is an effective way to enhance the fertility of the soil and increase the availability of nutrients. After that, you should start planting the plants between the months of May and June, which is when the monsoon season starts. It is possible to achieve this goal by digging trenches of the necessary size and filling them with FYM and manures. After the planting is finished, it is important to make sure that each plant is identified with its scientific name, family, and the therapeutic benefits it offers. This will assist visitors in gaining a deeper understanding of the flora. In order for guests to be able to freely roam around and experience the beauty of the vatika, it is essential to ensure that there is a suitable spacing between the plants and the rows.

### **Management Practices**

A robust fence is required for the garden layout during the first few years in order to prevent grazing animals and other unwelcome guests from entering the garden. There are a number of horticultural chores that you will need to complete in order to get the garden up and running. Some of these tasks include weeding, watering, trimming, mulching, manuring, pest management, and more tasks. It is recommended that pruning be done during the monsoon season in order to effectively maintain the shape of the shrubs, encourage new growth and blossoming, and significantly improve the elegance of the garden. When it comes to navgraha vatika care and maintenance, the ultimate objective is to maintain a stunning environment throughout the entire year.

### **Conclusion**

According to the findings of several research, the fact that these trees are associated with the motions of the planets has a considerable impact on the ecosystems in which they are found. They contribute to the process of air purification, which is beneficial to all different kinds of

living organisms. Additionally, the smoke that is produced when they are burned off is efficient against a wide variety of microorganisms that have the potential to cause illness. Considering the numerous benefits it offers, this navgraha vatika is suitable for installation in public spaces, such as the areas surrounding temples. A number of individuals are of the opinion that the region in which the trees are going to be planted possesses an exceptionally high energy frequency, which will bring prosperity to the people who reside there. In this day of rapid technological advancement, when the average longevity of a human being is in peril, there is an urgent need to reawaken our long-lost legacy of regard for navgraha and the flora that they contain. Planting these trees and working together to assure their continuing survival and prosperity is something we should do for the sake of our common natural heritage.

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