

# TTWRDC (W) SURYAPET

## BOTANICAL GARDEN

Botanical gardens are the places that maintain the different varieties of living plant species such as ornamental, cultivated, wild, medicinal, economically importance plants of various geographical regions of special interest etc.

The botanical garden in college was established in February 2023. The garden is full of valuable flowers and fruit bearing plants such as guava, mango, Amla, Papaya, Teak, Tamarindus, Hibiscus, Roses, Casia, Jasmin, chikoo etc. The garden has one small pond also which has submerged and floating plants both. It has wide utility for the students to understand the practical related with the morphology and anatomy of various stems and flowers.

### Functions of Botanical Gardens:

- 1. Taxonomic Studies:** Botanical gardens provide valuable information on various plants Local flora, bonsai, rare plants etc. They act as “outdoor laboratories” for students and researchers.
- 2. Botanical Research:** Botanical gardens supply wide range of plant species, seeds, flowers, fruits for botanical research.
- 3. Conservation:** Botanical gardens conserve and propagate rare species and genetic diversity.
- 4. Education:** They supply facilities for courses in local flora, horticulture, hybridization, plant propagation, etc. There educational programmes such as workshops, training sessions for teachers, students, naturalists etc.
- 5. Public Services:** They help the public in identifying the local and exotic plant species; provide instructions for home gardening's, propagation of plants; supply plant resource; through sale or exchange.
- 6. Aesthetics and Recreation:** They attract people who have made gardening their hobby.
- 7. Employment:** They create job opportunities for a large number of young botanists.







# TTWRDC(W),SURYAPET

## MEDICAL GARDEN

### **Introduction:**

Among ancient civilizations, India has been known to be rich repository of medicinal plants. The forest in India is the principal repository of large number of medicinal and aromatic plants, which are largely collected as raw materials for manufacture of drugs and perfumery products. Medicinal plants have played an important role in human healthcare as the essential ingredients of traditional medicines for thousands of years. Traditional systems of medicine continue to be widely practised on many accounts. Population rise, inadequate supply of drugs, prohibitive cost of treatments, side effects of several synthetic drugs and development of resistance to currently used drugs for infectious diseases have led to increased emphasis on the use of plant materials as a source of medicines for a wide variety of human ailments.

Medicinal plant gardens are primarily focused on the conservation, cultivation, research and educational activities related to plant species known for medicinal purposes. However, these gardens also equally provide services related to other plant species whose primary use is not for therapeutic practice.

### **What is a medicinal plant?**

Any plant which, in one or more of its organs and /or whole plant contains substances that can be used for therapeutic purposes and/or which can be used as precursors for the synthesis or preparation of useful drugs either pharmacopoeial, non- pharmacopoeial is a medicinal plant. Generally medicinal plants are considered as a rich resources of such ingredients. Those chemical compounds may be secondary metabolites and including alkaloids, glycosides, essential oils and other miscellaneous active substances.

Medicinal plants will be useful for Maternal and Child health care, as essential drugs, in food and nutrition, for common illnesses and injury, for endemic infectious diseases, mental health and oral health.

A part from that, these plants play a critical role in the development of human cultures around the whole world.

### **History and current status of medicinal plant garden:**

Keeping in the mind the importance of medicinal plant garden college authority decided to prepare a medicinal plant garden. The garden establishment initiation was started in the year 2014-15 in the leadership of Principal and other faculty members. Plantlets of medicinal plants were collected from various nurseries of different parts of South Bengal. Initially it was started with few plants but gradually this encouraged the faculty members and they cordially donated some plantlets from their personal collections. With little steps it reached into rich medicinal plant garden.

Medicinal plant garden is currently situated within the campus. It is fenced by iron-net to protect the garden from trespasser. The garden is well maintained by a whole time gardener throughout the year. Manuring, pest and insect control is done on regular basis. Gardening care is taken under the supervision of learned teachers.

### **Conservation of medicinal plants:**

TTWRDC(W)SURYAPET College Medicinal Plant Garden has a plan to collect and cultivate as many medicinal plants as possible. As of December 2023, 20 numbers of important medicinal plants has been listed. This garden is conserving some rare medicinal plants through ex-situ conservation. The institution has a plan to cultivate some of the important medicinal plants on a large scale basis. The future plan is to collect and cultivate more medical plant and to conserve properly.

### **Conclusions:**

Medicinal plant gardens are integral parts of the institution to teach about the various aspects of medicinal plants in human healthcare. The general public can also get benefited from the medicinal plant gardens by participating in various educational and training events/ activities. In future, wide sharing of scientific knowledge among multiple stakeholders could generate larger stewardship for conservation of traditional knowledge and medicinal plants. Medicinal plant gardens are appropriate tools for conservation of medicinal plants and preservation of traditional knowledge that help collaborate more local communities, academicians, students, researchers and pharmacists for generating greater conservation benefits and promote science communication.

**A list of medicinal plants present in the garden is as follows:**

S.No	Local Name	Scientific Name
1	ThippaTheega	Tenospora cordifolia (willd) mieres
2	Nelausiri	Phyllanthus amaras L.
3	Kalamanda	Aloe vera (L.) Burm.f.
4	Thulasi	Ocimum tenuifloram L
5	Tangedu	Senna auriculata (L.) Roxb.
6	Kanuga	Pongamia pinnata L
7	Jiledu	Calotropis gigantia .
8	Galivana chettu	Croton banplandianus
9	Vepa	Azadirachta indica L.
10	Teku	Tectona grandis L.
11	Nalla Reni	Albizia amara L.
12	Tumma	Prosopis juliflora L.
13	Veduru	Bambusa vulgaris L.
14	Kanuga chettu	Millettia pinnata L.
15	Lemon grass	Cymbopogon flexosus

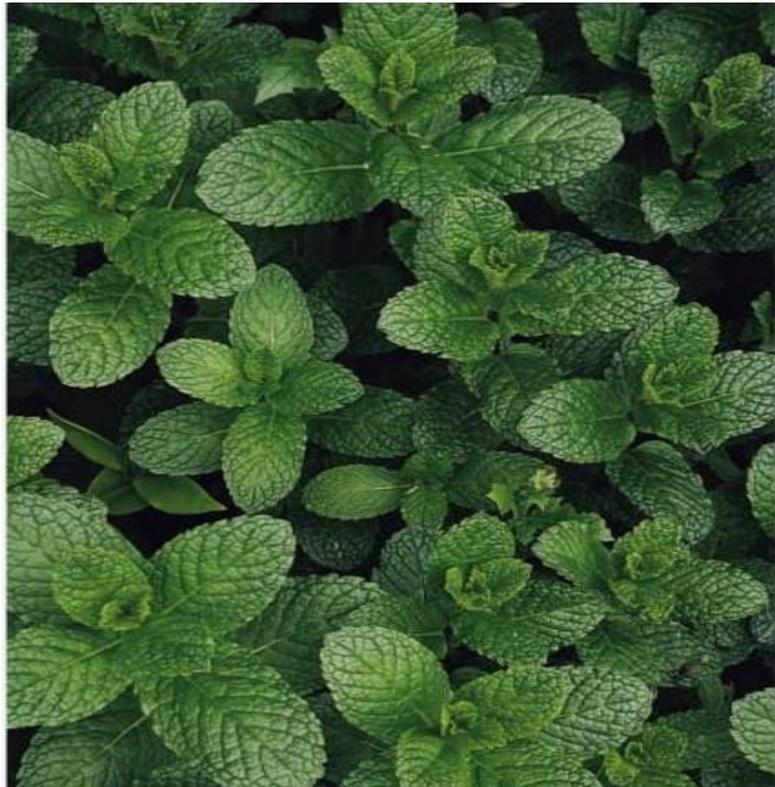














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## DEPARTMENT OF BOTANY

### QR CODING OF PLANTS IN THE COLLEGE CAMPUS

During 2022-23, the Department of Botany implemented an extensive QR coding of plants within the institution. This innovative project aims to revolutionize the way we interact with plant specimens and provide enhanced access to botanical information.

QR (Quick Response) codes are two-dimensional barcodes that can be scanned using Smartphones or specialized scanners, enabling instant access to digital content. The Botany Department has recognized the potential of QR codes in providing detailed information about plant specimens, facilitating seamless data retrieval, and enhancing the overall learning experience for students and researchers.

**QR coding of the plants was done with the following objectives:**

- **Enhanced Plant Information:** Each plant specimen within our collection will be assigned a unique QR code, linking it to a digital database. This database will contain comprehensive information such as species name, taxonomic

classification, habitat, growth patterns, medicinal uses, and other relevant details. Researchers, students, and visitors can access this information by simply scanning the QR code using their smartphones or scanning devices.

- **Real-time Updates:** The digital database associated with the QR codes will be regularly updated to ensure the accuracy and relevance of the information. As new discoveries are made or additional research is conducted, the QR codes will provide the most up-to-date data, ensuring users have access to the latest botanical knowledge.

- **Seamless Accessibility:** QR codes eliminate the need for manual searching or consulting printed material to obtain plant information. By scanning the QR codes, anyone can access the digital database instantly, enabling quick and efficient retrieval of plant-related information. This accessibility promotes self-directed learning and encourages curiosity among students and enthusiasts.

- **Educational Applications:** QR coding of plants opens up new possibilities in botanical education. Students can use their smart phones to scan QR codes during field trips, plant identification exercises, or laboratory sessions, instantly accessing relevant information about the plants they encounter. This hands-on approach fosters interactive learning and deepens understanding of plant biology and ecology.

- **Research Collaboration:** QR coding of plants facilitates collaboration among researchers, both within our department and beyond. By sharing QR-coded plant information, researchers can easily exchange data and findings, promoting interdisciplinary research and the advancement of botanical knowledge. The implementation of QR coding of plants represents a significant step forward in our department's mission to enhance botanical education, research, and

engagement. We anticipate that this initiative will greatly benefit our students, researchers, and the broader community interested in plant sciences.





Students fixing QR Code to the Plants





