Mango

Mangifera indica

Code: XIM-T-009 **Location:** XIM University Campus **Local / Vernacular name:** ଆମ୍ବ

Description

XIM University campus biodiversity register (2026–27). Recorded individuals: 18; abundance rank: 11.

Botanical Details

Leaf habit: Evergreen Flowers / Fruits: Mango trees produce small, fragrant, pinkish or yellowish flowers in large, drooping panicles. These flowers develop into the familiar mango fruit, which varies greatly in size, shape, and color depending on the variety. The flowering process and subsequent fruit development are influenced by several factors, including temperature, humidity, and sunlight. Native range: The mango tree (Mangifera indica) is native to South Asia , specifically the region spanning from northwestern Myanmar, Bangladesh, and northeastern India. It has been cultivated in this area for over 4,000 years and is now found in most tropical countries.

Uses & Importance

Ecological: Mango trees and large-scale orchards play a pivotal role in ecological conservation and environmental stability, serving as robust biological infrastructure. These trees are exceptionally dense and large, making them excellent carbon sinks that actively absorb atmospheric carbon dioxide through photosynthesis to mitigate the effects of climate change. Their extensive, deep-reaching root systems act as natural anchors for the earth, significantly reducing the risk of landslides and preventing soil erosion, which preserves the fertility of the land for future generations. Beyond soil health, mango trees are masters of microclimate engineering; their massive, spreading canopies provide dense shade and facilitate evapotranspiration, which noticeably reduces ambient temperatures in the surrounding areas. This cooling effect creates a sheltered environment that supports the growth of diverse understory flora and provides a sanctuary for wildlife, including numerous bird species, insects, and small mammals. By acting as a windbreak and a source of organic mulch through leaf litter, the mango tree fosters a nutrient-rich ecosystem that sustains local biodiversity while contributing to the overall oxygen-carbon balance of the tropical regions where it thrives.

Medicinal: Revered for over 4,000 years in Ayurvedic and indigenous medical systems, the mango tree is a powerhouse of pharmacological activity. Every part of the tree—from the roots to the fruit— possesses distinct therapeutic attributes, including antidiabetic, antioxidant, anti-viral, cardiotonic, and anti-inflammatory properties. Scientific studies have confirmed its efficacy as an antibacterial, antifungal, and even anti-tumor agent. The primary

bioactive compound responsible for much of this success is Mangiferin, a unique polyphenolic antioxidant and glucosyl xanthone. Mangiferin is celebrated for its potent ability to prevent lipid peroxidation, modulate the immune system, and promote wound healing, while also offering gastroprotective and hepatoprotective benefits. In traditional practice, the bark is used to treat rheumatism and diphtheria, the leaves are used to manage blood pressure and respiratory ailments, and the seeds are utilized for their anthelmintic and anti-diarrheal effects. The tree's complex chemical profile allows it to act as an antispasmodic, antipyretic, and antiallergic agent, making it one of the most versatile plants in the tropical pharmacopeia. Its role in modern medicine continues to expand as research explores its potential in anti-HIV therapies and its ability to prevent bone resorption, cementing its status as a cornerstone of both ancient healing and contemporary drug discovery.

Cultural: Mangoes are far more than just fruit; they are profound symbols of prosperity, love, and fertility, deeply woven into the social and spiritual fabric of South Asian societies. Throughout history, the "King of Fruits" has been immortalized in classical Sanskrit literature, intricate Mughal art, and ancient folklore. In Hindu tradition, the mango tree is associated with the god of love, Kamadeva, and its leaves are considered indispensable for religious rituals, where they are strung into Torans (door hangings) to signify purity and welcome auspicious energy during weddings and festivals like Diwali and Ganesh Chaturthi. The fruit itself is a staple of hospitality and celebration, often exchanged as a gift to strengthen community bonds. Culturally, the mango is a culinary icon, serving as a versatile ingredient that ranges from tangy chutneys and pickles to decadent desserts like Aamras, defining the seasonal identity of entire nations. Its presence in a courtyard is often seen as a sign of a legacy-building household, representing a connection to heritage and the continuity of life. In Buddhist traditions, the mango grove is a place of sacred significance, famously associated with the Buddha's meditation and the gifts of the faithful. Whether through the vibrant celebrations of "Mango Festivals" or its role as a national symbol for India, Pakistan, and the Philippines, the tree stands as a guardian of cultural identity and a testament to the enduring relationship between tropical humanity and the natural world.

Location

GPS: 20.15860192, 85.76535449

Directions: https://www.google.com/maps/dir/?api=1&travelmode=walking&destination=20.15860192%2C85.76535449