



Mangga Cebu Research

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Mangga Cebu

Mangga Cebu (*Mangifera indica*), often known as **Cebu Mango** or **Carabao Mango**, is prized for its exceptional sweetness, smooth texture, and rich aroma. It is one of the Philippines' most famous tropical fruits and a major export variety. Grown widely in Cebu's warm, dry climate, this mango is celebrated for its vibrant yellow flesh, thin skin, and versatile culinary uses, from fresh eating to premium processed products.

Culinary Uses (Dishes)

- Mango float or refrigerator cake
- Mango sago dessert
- Mango cheesecake and pastries
- Green mango with bagoong
- Mango salsa for grilled meats
- Mango jam and preserves
- Mango sticky rice (Filipino-Thai fusion)
- Mango ice cream



Simple Ways to Eat

- Fresh ripe slices
 - Green mango with salt or chili
 - Peeled and eaten whole
 - Cubed and added to salads
 - Mango on toast with yogurt
 - Frozen mango chunks as snacks
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Drinks

- Fresh mango shake
- Mango smoothie with milk or yogurt
- Mango juice or nectar
- Mango iced tea
- Mango lassi
- Mango cocktail (mango rum, margarita, or mojito)



Nutrients (per 100 g)

Vitamins

- **Vitamin C:** 35–45 mg
- **Vitamin A (as Beta-Carotene):** 530–650 IU (≈30–35 µg RAE)
- **Vitamin E:** 0.9 mg
- **Vitamin K:** 4–5 µg
- **Folate (B9):** 40–45 µg

Minerals

- **Potassium:** 150–170 mg
- **Magnesium:** 10–12 mg
- **Calcium:** 10–12 mg
- **Phosphorus:** 12–15 mg
- **Iron:** 0.1–0.2 mg

Health Benefits

- Supports strong immunity (high Vitamin C)
- Promotes healthy vision (beta-carotene)
- Aids digestion and gut health (fiber)
- Helps maintain electrolyte balance (potassium)
- Anti-inflammatory and antioxidant protection
- Supports skin health and collagen formation





Tree Characteristics

- **Tree Size:** Medium to large; typically **8–12 meters**, can reach **15 meters** when old.
- **Growth Habit:** Upright to spreading canopy; dense foliage.
- **Leaves:** Dark green, leathery, lance-shaped; new flushes reddish before turning green.
- **Fruit Characteristics:** Thin peel, golden-yellow color, soft and fiberless flesh, intense sweetness.
- **Flowering:** Panicle-type inflorescences; blooms during dry months (usually December–March).
- **Fruit Maturity:** 100–120 days after flowering.
- **Lifespan:** Long-lived, **40–60+ years** with good care.
- **Climate Suitability:** Best in tropical climates with distinct dry seasons, like Cebu and parts of Mindanao (Bukidnon lowlands).

Root Characteristics

- **Root Type:** Deep taproot system with strong lateral roots.
- **Taproot:** Extends deep into the soil, especially in well-drained loam.
- **Laterals:** Spread widely and help stabilize the tree.
- **Feeder Roots:** Close to the soil surface (top 30–50 cm), responsible for nutrient absorption.
- **Soil Preference:** Well-drained sandy loam to clay loam; avoids waterlogged soils.

Growing Implications (Based on Root Behavior)

1. Soil and Drainage

- Deep roots require **good drainage**; waterlogging leads to root rot.
- Ideal soils are **loam, volcanic soils, and light clays** with aeration.

2. Spacing

- Roots spread wide; recommended spacing:
 - **8–10 meters** for orchard planting
 - Wider spacing improves canopy development and fruiting.



3. Drought Tolerance

- Taproot allows **strong drought resistance**, especially once mature.
- Young trees need regular watering for root establishment.

4. Wind Resistance

- Deep root system increases wind sturdiness.
- However, excessive wind exposure may damage flowers and affect fruit set.

5. Nutrient Uptake

- Feeder roots near the surface respond well to mulching and manure.
- Avoid deep tilling near the trunk to prevent root injury.

Sunshine & Shade Demand

- **Sunshine Requirement:**
 - Requires **full sun (6–8+ hours/day)** for optimal flowering and high sugar content.
 - More sunlight = sweeter fruit.
- **Shade Tolerance:**
 - **Low shade tolerance.**
- Heavy shade results in:
 - Poor flowering
 - Reduced fruiting
 - Increased disease pressure
- **Best Practice:**
 - Plant in open areas or at field edges, not under taller canopy trees.





Growing Characteristics Table

Characteristic	Description
Tree Height	8–12 m (up to 15 m when mature)
Canopy Shape	Dense, spreading, rounded
Growth Rate	Moderate
Root System	Deep taproot with wide laterals
Soil Preference	Well-drained loam to clay loam; avoids waterlogging
Sunlight Needs	Full sun; 6–8+ hours/day
Shade Tolerance	Low; shade reduces flowering & yield
Water Needs	Moderate; drought tolerant after establishment
Flowering Season	Typically dry months (Dec–Mar)
Fruit Maturity	100–120 days after flowering
Spacing	8–10 meters
Climate Suitability	Tropical climates with pronounced dry seasons
Lifespan	40–60+ years

Small Summary

Mangga Cebu, a form of Carabao Mango, is a robust, long-lived tropical fruit tree with a deep taproot system and a wide, productive canopy. It thrives in full sun, well-drained soils, and climates with distinct dry periods. Because its roots require aerated soil and space, proper spacing and drainage are essential. With good sunlight, the tree produces high-quality, sweet mangoes ideal for fresh eating and commercial production.



Mango Varieties in the Philippines

Top 5 Mango Commercial Varieties

Variety Name	Type / Lineage	Fruit Characteristics	Commercial Strengths	Typical Use
Carabao Mango (Super Manila / Sweet Elena strains)	Philippine native	Small–medium, very sweet, thin peel, fiberless	Top export , high consumer preference, premium pricing	Fresh eating, processing
Guimaras Mango (Carabao strain – A, M, and P selections)	Carabao selection	Extra sweet, aromatic, smooth flesh	Disease-free reputation, high export grade , strong branding	Fresh, dried mangoes
Apple Mango	Hybrid/introduced	Firm flesh, apple-like shape, mild tangy taste	Good shelf life, durable for transport	Fresh, salads, processing
Katchamita (Indian Mango)	Indian-type	Greenish skin, crunchy flesh, tangy flavor	Long shelf life, strong in local markets	Pickles, green mango snacks, bagoong
Pico / Piko	Philippine traditional variety	Medium, tangy-sweet, firmer flesh	Heavy bearer, reliable mid-tier commercial fruit	Juice, puree, dried mangoes
Purple Mango	Philippine selection	Purple-red skin when ripe, sweet-tart flesh	Unique color attracts niche markets, good for branding	Fresh, desserts, juices

Short Notes

- **Carabao Mango** remains the most profitable and most exported.
- **Guimaras selections** are considered premium and command higher prices.
- **Apple Mango and Pico** provide stability due to hardiness and transport durability.
- **Purple Mango** is gaining popularity for its **unique skin color**, niche market appeal, and use in juices and desserts.
- **Katchamita** is essential for markets that demand green/tangy mangoes.
- Mangga Cebu is a type of Carabao Mango, but with its own regional identity and reputation.
- Carabao Mango is the species/variety, while Cebu Mango refers to Carabao Mango grown and branded in Cebu, famous for its exceptional sweetness and thin, delicate skin.



Intercropping Varieties for Mango Trees

Key Principles

- Mango is a **full-sun, low shade tolerance tree**.
- Intercropping should **avoid tall trees that compete for sunlight** near young mangoes.
- Wide spacing allows lateral root development and reduces nutrient competition.
- Include only **value crops / fruit trees** (from Jessie's Sunshine Farm: coconuts, lemons, limes, Tabon-Tabon, Bangkok Santol, Pomelo, Rambutan, Durian, and Valencia Oranges).

Intercropping Table – Good and Bad Combinations

Tree / Crop	Good / Bad	Reason / Notes	Shade Consideration	Recommended Spacing from Mango
Coconut	Good	Deep-rooted, minimal canopy overlap, compatible for partial shading when young	Low to medium shade; young mango may tolerate partial shade	6–8 m from mango
American Lemon / Valencia Orange	Good	Shallow roots, complementary harvest seasons, high market value	Full sun preferred; avoid dense canopy overlap	5–7 m
American Lime / Persian Lime	Good	Similar to lemons; citrus roots shallow, minimal competition	Full sun; tolerate slight shade from mango canopy	5–6 m
Tabon-Tabon (Atuna racemosa)	Good	Medium tree, fruit adds value; compatible root depth	Partial shade tolerated	4–6 m
Bangkok Santol	Bad	Dense canopy and large root competition; shades mango flowers	Avoid close proximity	≥10 m if unavoidable
Pomelo	Good (with spacing)	Large fruits; can interplant at periphery; manage shading	Full sun preferred; avoid shading young mango	8–10 m
Rambutan	Bad	Tall, spreading canopy; aggressive root system; shades mango	Avoid under mango canopy	≥10 m if planted nearby
Durian	Bad	Very tall, dense canopy; high nutrient competition	Not suitable for close planting	≥12 m if planted in same farm block

Spacing Guidelines

- **Mango tree spacing:** 8–10 m between mangoes.
- **Intercropped trees:** Maintain **minimum root competition distance** (see table).
- Avoid planting aggressive, tall fruit trees (Durian, Rambutan, Bangkok Santol) too close to mango.
- Use smaller, shallow-rooted, high-value trees like citrus, Tabon-Tabon, and coconut near mango for added revenue.

Summary

Mangga Cebu thrives under **full sun with wide spacing**; intercropping is best with **shallow-rooted, high-value fruit trees** like coconuts, citrus, and Tabon-Tabon. Large, tall trees (Durian, Rambutan, and Bangkok Santol) are **not recommended nearby** due to shade and root competition. Proper planning of tree distance ensures mangoes receive enough sunlight, nutrients, and space to develop sweet, high-quality fruits while providing additional farm income from complementary crops.

Market Demand & Acceptance

Crop	Market Demand	Consumer Acceptance
Mangga Cebu (Carabao Mango)	High local and export demand; popular in Metro Manila, Cebu, and international markets	Widely accepted for sweetness, fibreless flesh, and premium quality; used for fresh fruit, dried mangoes, desserts
Valencia Orange	Moderate to growing demand; widely consumed locally	Well-accepted for juice and fresh eating; preferred in wet-season production; less known for export compared to mango

Insights:

- Mangga Cebu dominates **premium fruit market**; seasonal peak (March–June) aligns with dry season.
- Valencia oranges provide **off-season fruit supply** and supplement income.





Risks & Challenges

Crop	Key Risks / Challenges
Mangga Cebu	<ul style="list-style-type: none"> - Pests: Mango seed weevil, fruit flies - Diseases: Anthracnose, powdery mildew - Weather: Heavy rain or typhoons can damage flowers and fruits - Market volatility during off-season
Valencia Orange	<ul style="list-style-type: none"> - Citrus pests (leafminer, aphids) - Diseases: Citrus greening (HLB), citrus canker - Frost is rare but can affect young orchards - Price fluctuation due to import competition

Opportunities

Crop	Opportunities
Mangga Cebu	<ul style="list-style-type: none"> - Export opportunities (dried, fresh) - Value-added products: mango juice, jams, puree - Agro-tourism and farm branding - Intercropping with citrus, coconuts, and other high-value crops
Valencia Orange	<ul style="list-style-type: none"> - Off-season production for local markets - Juice processing for commercial markets - Complementary intercropping with mango or coconut for diversified income

Summary for Southern Bukidnon

Southern Bukidnon offers **favorable climate and soil** for Mangga Cebu and Valencia oranges. Mango enjoys **strong market demand and premium pricing**, while Valencia oranges provide **off-season fruit supply** with growing local demand. Intercropping with **coconuts, citrus, and other shallow-rooted fruit trees** optimizes land use and reduces risk. Challenges include pest management, disease control, and seasonal weather hazards, but opportunities exist in **export, value-added products, and farm diversification**.

Key Takeaways:

- Mangoes: high-value, high-demand; careful pest/disease management required
- Valencia: medium-value, supports income diversification and off-season production
- Intercropping: enhances land productivity while reducing economic risk