



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

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 (\approx 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 |

Inspiration and Motivation ng Masa

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