Pomelo

Pomelo (Citrus maxima)

Tree Characteristics

- 🌳 **Growth Habit:** Pomelo is a medium to large evergreen citrus tree reaching **8–15 meters** tall with a broad, spreading canopy.
- 🍃 **Leaves:** Large, shiny, and leathery leaves with winged petioles – typical of ancestral citrus types.
- 🌸 **Flowers:** Fragrant, white blossoms appearing singly or in clusters. They are highly attractive to pollinators, especially bees.
- 🍈 **Fruit:** Largest citrus fruit in the world (up to **1–2 kg each**).
  - ✓ Thick rind (pale green to yellow), with large juicy segments inside.
  - ✓ Flesh color varies: **pale yellow, pink, and red**, depending on variety.
  - ✓ Flavor profile: mildly sweet, lightly citrusy, less acidic than grapefruit, sometimes
  - ✓ Slightly floral.
- **Climate**: **Thrives in warm, humid, tropical lowlands.**
- **Light Characteristic:**
  - ✓ **Full-sun loving**. Direct sunlight for at least **6–8 hours per day**, which promotes optimal flowering, fruit set, and sweetness of the fruit.
  - ✓ Tolerates **partial shade**, insufficient sunlight may result in **reduced flowering, smaller fruits, and slower growth**.
  - ✓ Young saplings may benefit from **light shading during extreme midday heat** to prevent leaf burn.

Nutritional Profile (per 100 g edible portion)

- Calories: 38–40 kcal
- Vitamin C: 60–120 mg (very high)
- Fiber: 1–2 g
- Carbohydrates: 9–10 g
- Potassium: 200–216 mg
- Vitamin B-complex: small amounts (thiamine, riboflavin, B6)
- Antioxidants: naringin, naringenin, limonoids

- Water Content: ~89%

Health Benefits

- **Heart Health & Reduced Blood Pressure**: R ich in potassium and antioxidants which help regulate blood pressure and reduce inflammation.
- **Strong Immune System Support:** Very high Vitamin C **content improves immunity** and recovery from infections.
- **Digestive Health**: Fiber aids digestion, prevents constipation, and supports gut health.
- **Weight Management**: Low-calorie and high-water content helps with satiety; mild sweetness without high sugar load.
- **Antioxidant & Anti-inflammatory Properties:** Citrus bioflavonoids (naringin, limonoids) help fight oxidative stress and may support long-term metabolic health.
- **Skin and Collagen Production:** Vitamin C promotes collagen synthesis for skin elasticity and wound healing.

How to Use Pomelo in Food and Dishes

Pomelo is extremely versatile in both sweet and savory recipes. Here are the most common ways to enjoy it:

Fresh Consumption

- Eaten fresh as a table fruit.
- Best served chilled and peeled into clean segments.

Salads (very popular)

Pomelo works beautifully in Southeast Asian–style salads:

- **Thai Pomelo Salad (Yam Som O)** – shredded pomelo mixed with shrimp, toasted coconut, peanuts, herbs, and a lime-fish sauce dressing.
- **Pomelo + Cucumber + Mint Salad** – refreshing, light.

Seafood Pairings

- Mix with **shrimp**, **crab**, or **grilled fish** for citrus brightness.
- Works well in **ceviche** or **kinilaw** variations.

Desserts

- Pomelo fruit cups or layered parfaits.
- Pomelo in gelatin or panna-cotta.
- Candied pomelo rind (traditional in some regions).

Drinks

- Pomelo juice (mild and refreshing, less acidic than orange or grapefruit).
- Blended into smoothies with pineapple or mango.
- Infused into iced tea or sparkling water.

Sauces and Marinades

- Mixed with lime, ginger, and honey for a bright sauce over grilled chicken.
- Used in vinaigrettes for salads or fish dishes.

Cooking the Rind

Although thick and bitter, the rind can be:

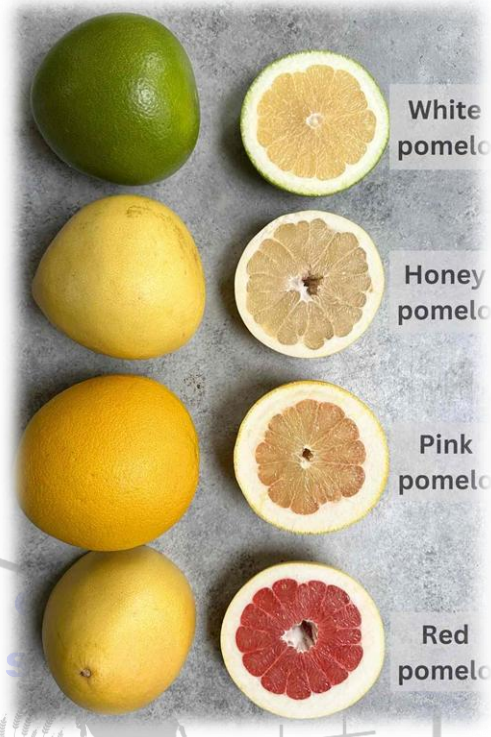
- Made into **marmalade**,
- Cooked into **candied peel**,
- Used as natural flavoring in traditional sweets.

Root System

- **Type:** Deep and extensive root system, tap root.
- **Anchorage:** Provides strong support for large tree canopy
- **Soil Preference:** Well-drained, loose, slightly sandy or loamy soils
- **Drought Tolerance:** Moderately tolerant once established
- **Water Needs:** Performs best with regular watering, especially during flowering and fruit development
- **Vulnerability:** Susceptible to root rot in waterlogged soils
- **Nutrient Uptake:** Deep roots help access nutrients from lower soil layers
- **Feeder Roots:** Thrive in aerated soil, supporting healthy growth and productivity

Pomelo Varieties in the Philippines

- **Amoy Mantan** — One of the common local pink-fleshed pomelos. Cabi Digital Library+2researchgate.net+2
- **Magallanes** — A popular cultivar in the Philippines, produces medium-sized fruit (~0.7–0.9 kg) with **pink flesh**. TFNet+2Scribd+2
- **Panacan** — Another local variety mentioned in Philippine pomelo production. Scribd+2researchgate.net+2
- **Mintal** — Named among the common Philippine pomelo cultivars. researchgate.net+1
- **Aroman** — Also part of the commonly grown varieties. Scribd+1
- **Sunwui Luk** — Listed among Philippine pomelo cultivars. Scribd+1
- **Siamese Selections / Siamese** — Imported or selected varieties; also grown in the Philippines.



Top 5 Commercial & Marketable Pomelo Varieties

Magallanes

- Very popular local cultivar, especially in Davao. TFNet+1
- Medium-sized fruit (~0.7–0.9 kg) with **pink flesh** and decent sweetness (~9 °Brix). TFNet+1
- Well-adapted locally and has established domestic markets. Philstar

Amoy Mantan

- Imported/origin from China but widely grown in PH. SRG Smart
- Known for high yield; mentioned in local pomelo guides. Crops Review+1
- Pink-fleshed variety that appeals to domestic consumers. Cabi Digital Library

Siamese / Sweet Abulug

- Registered and certified variety: NSIC 2008 Pm 04. Issaas Phil
- Very sweet: Brix around 10.9–12.5 according to ISSAAS research. Issaas Phil
- Long shelf life, making it good for transport and market. Cagayan Valley Agri Dept.

Mintal

- Listed among common Philippine cultivars in government commodity reports. Scribd+1
- Being a local cultivar, it's well-adapted to Philippine growing conditions.
- Good potential for farmers because of local recognition and demand.

Sunwui Luk

- Another variety frequently mentioned in Philippine pomelo varietal lists. Scribd
- Unique appeal: likely has different flavor or texture that can attract niche or specialty markets.
- Helps diversify a pomelo farm's variety portfolio (pink, white, different sizes).

Why These Varieties Are Marketable / Good for Commercial Farming

- **Local Adaptation:** Many are already proven to grow well in the Philippines' climate (especially in Mindanao).
- **Consumer Preference:** Varieties like Magallanes and Amoy Mantan (pink flesh) are popular in local markets.
- **Shelf Life / Transportability:** Varieties like Sweet Abulug have good shelf life, which is key for shipping and marketing.
- **Yield Potential:** Some (e.g., Amoy Mantan) are known for good yields, improving farm economics.
- **Diversification:** By planting a mix (pink vs. white, different sizes), you can buffer market risks and appeal to broader consumer preferences.

Magallanes pomelo variety grown in Davao, Philippines.

Intercropping Tree Crops for Pomelo

Criteria: Compatible with sunlight needs, moderate root competition, complementary growth cycles, and economic value.

With Coconuts

- Coconut + Pomelo: Both are tropical, deep-rooted, and can coexist if spacing is enough.
- Benefits:
  - Coconuts provide partial shade when young.
  - Dual fruit harvest from same plot.

Here's a **practical intercropping table for Pomelo with Coconuts**, showing good and bad options, including spacing and yield considerations:

Intercrop Type	Crop Examples	Good / Bad	Reason / Notes	Spacing / Notes
Other Fruit Trees	Calamansi, Banana (small plantain), Papaya	Good	Fast yield, marketable, attracts pollinators	Plant 3–5 m from pomelo trunk; avoid shading young pomelo
Coconuts	Tall Tacunan, Dwarf Catigan	Good	Can share space, partial shade for young trees	Maintain 8–10 m between coconut and pomelo for root space
Vegetables / Herbs	Ginger, Turmeric, Lemongrass, Thai Chili, Basil	Good	Short-cycle crops, low root competition, extra income	Plant in rows between trees; ensure 1–2 m spacing from trunks
Legumes / Nitrogen-Fixers	Mung bean, Peanut, Cowpea	Good	Improves soil fertility, reduces fertilizer need	Plant between tree rows; rotate yearly for best effect
Large / Dense Trees	Mango, Jackfruit, Durian, Mahogany	Bad	Compete for sunlight and nutrients, overshadow pomelo	Avoid planting in pomelo row or close vicinity
Water-Intensive Crops	Rice, Taro	Bad	Excess water stresses pomelo roots	Avoid near pomelo; choose well-drained spots
Root-Competitive Crops	Cassava, Sweet Potato	Bad	Deep roots compete with pomelo, reduce growth	Avoid direct row planting with pomelo
Shade-Sensitive Crops	Lettuce, Spinach	Bad	Poor growth under partial shade from trees	Only plant in fully sunny gaps, if any
Allelopathic Plants	Eucalyptus, some Acacia	Bad	Chemicals inhibit pomelo growth	Do not plant within orchard

Why Coconut + Pomelo Intercropping Works Great

Perfect Climate Match (Tropical, Warm, Humid)

Both crops thrive in:

- 26–32° C temperatures
- High humidity
- Distinct dry and wet seasons
- Abundant sunlight

Mindanao's climate provides **year-round growth**, ensuring high productivity for both coconut and pomelo.

Compatible Root Systems

- **Coconuts**: Have a **fibrous root system** that stays mostly in the top 60–80 cm of soil.
- **Pomelo**: Has a **deep taproot-like system** with lateral branches.

Because they occupy **different soil layers**, they do not aggressively compete for nutrients and water. This allows both trees to grow strongly side-by-side.

Light-Sharing Works Well

- Coconut canopies are tall and open.
- Pomelo has a shorter, fuller canopy.

In Mindanao's high sunlight conditions, pomelo can grow **comfortably beneath or beside** coconuts without losing productivity. Coconut's height also provides light **filtering during very hot months**, reducing sunburn on young pomelo leaves.

Efficient Use of Land

Farmers in Mindanao often have mixed orchards. Intercropping:

- Increases yield per hectare
- Reduces idle spaces between coconut rows
- Improves farm profitability without additional land clearing

Instead of a single crop, farmers get **two cash crops from the same hectare**.

Increased Biodiversity & Soil Health

Intercropping encourages:

- More organic matter (falling fronds + leaf litter)
- More microorganisms
- Less soil erosion
- Better nutrient cycling

This creates a healthier farm ecosystem, especially in sloping areas of Bukidnon, Davao, and Agusan.

Summary

Coconut + pomelo intercropping works in Mindanao because the two crops **complement each other perfectly** in climate, canopy structure, root systems, and market value. Farmers gain higher yield per hectare, diversified income, and improved overall farm resilience.

Market Demand & Acceptance of Pomelo

Strengths / Opportunities

Growing Regional Demand

- A study on the pomelo industry in Northern Mindanao (which includes Bukidnon) found *strong demand for pomelos outside the region*. eng.vjas.vn
- Local producers in Bukidnon report that many of their pomelos are sold to traders from **Davao City and Cotabato**, indicating a ready inter-provincial market. eng.vjas.vn+1

Export Potential and Value Chain

- Because pomelo is relatively high value (compared to staples) and has niche appeal, farmers in Bukidnon can leverage both **domestic and export markets** if they scale.
- The same value-chain study notes that farmers can capture more value if they improve grading, packaging, and access to buyers. eng.vjas.vn

Fit in Bukidnon's Agricultural Profile

- Bukidnon is a top agricultural province in Mindanao: it leads in agrifishery output value. Philstar+1
- This suggests there is infrastructure and interest in commercial crop production, not just subsistence farming — meaning pomelo farming could align well with local agribusiness orientation.

Room to Improve Local Supply

- The study shows that much of the pomelo consumed in Northern Mindanao actually comes from outside (like Davao), while some locally produced pomelo must be shipped out. eng.vjas.vn

- This could be an opportunity for Bukidnon growers to **capture more of the local market** by increasing production, improving quality, and reducing the need to import from other provinces.

Price Differentiation by Class

- According to the product-flow research, pomelos are graded (Class A, B, rejected), and higher-grade fruit (Class A/B) commands better prices. eng.vjas.vn
- If Bukidnon farmers invest in better sorting and quality control, they can increase profitability and market acceptance.

Risks & Challenges / Demand Constraints

Competition from Other Regions

- As mentioned, many pomelos in the Northern Mindanao market come from **Davao and Cotabato**, which are well-known pomelo producers. eng.vjas.vn
- This external competition could pressure Bukidnon growers, especially if they don't match quality or cost efficiency.

Logistics & Post-Harvest Losses

- For perishable fruit like pomelo, transportation and handling are critical. If infrastructure (roads, cold storage) is weak in southern Bukidnon, losses and costs may erode profit.
- The product-flow study suggests that some farmers sell to outside traders to avoid handling and harvesting costs. eng.vjas.vn

Limited Local Processing / Value Addition

- Without strong local infrastructure for processing (candied rind, juice, marmalade), many pomelos are sold raw. This limits the potential to add value locally and capture more of the downstream market.

Conclusion / Interpretation

- **Overall, demand for pomelo from Bukidnon (including southern Bukidnon) appears promising**: there is proven inter-provincial market flow, and Bukidnon farmers are not just producing for local consumption but also exporting to other regions.
- **The key to increasing market share** for Bukidnon pomelo growers lies in improving quality (grading), reducing post-harvest losses, strengthening logistics, and tapping into value-adding processes.
- **Socioeconomic challenges** (like poverty) are a risk, but with the right support (cooperatives, infrastructure, marketing), pomelo could become a **high-value crop that helps improve farmer incomes**