



## Guavapple Research

Characteristics of Guavapple .....	2
Culinary Uses.....	2
Simple Ways to Eat.....	2
Drinks.....	2
Nutrients per 100 g (approx.) .....	3
Health Benefits.....	3
Tree Characteristics .....	4
Root System .....	4
Growing Implications.....	4
Sunshine & Shade Demand.....	4
Table: Growing Characteristics.....	5
Small Summary.....	5
Varieties in the Philippines — What the Evidence Says.....	6
Psidium guineense (Guavapple / Brazilian Guava).....	6
Psidium guajava (Common/Apple Guava) .....	6
Table: Top Guava Varieties Relevant for Commercial.....	7
Interpretation & Implications.....	7
Intercropping Notes for Guavapple.....	7
Intercropping Table — Value Trees (Good & Bad) .....	8
Summary .....	8
Market Demand & Acceptance (Southern Bukidnon / Valencia) .....	9
Best Local Markets for Guava/Guavapple Varieties.....	10
Risks & Challenges.....	10
Opportunities .....	10
Summary (Southern Bukidnon + Valencia Context).....	11



## *Characteristics of Guavapple*

Guavapple (*Psidium guineense*) is a small-fruited tropical species in the guava family, valued for its aromatic, mildly sweet–tart flavor, and crunchy flesh. Native to Central and South America, it is now naturalized in Southeast Asia and grows well in warm, well-drained areas. The fruit ranges from yellow to light green when ripe, with soft edible seeds and a distinct floral scent. Guavapple is appreciated fresh, processed, and as a resilient backyard or mixed-crop tree.

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### *Culinary Uses*

- Jams, jellies, and preserves
- Pie and tart filling
- Guava–apple chutney
- Fruit salads and mixed dessert bowls
- Cooking base for sauces and glazes (fish or pork)
- Candied guavapple
- Fermented vinegar or paste

### *Simple Ways to Eat*

- Fresh and chilled as a snack
- Sliced with salt or chili-salt
- Added to yogurt or oats
- Mixed with other tropical fruits
- Mashed for baby food
- Dehydrated into fruit chips



### *Drinks*

- Fresh juice or blended smoothie
  - Guavapple shake with milk or yogurt
  - Iced tea infusion with sliced fruit
  - Fermented fruit wine
  - Cocktail mixer (rum, gin, or citrus blends)
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### *Nutrients per 100 g (approx.)*

- Energy: **52–60 kcal**
- Carbohydrates: **13–14 g**
- Fiber: **5–6 g**
- Vitamin C: **60–90 mg**
- Vitamin A: **200–300 IU**
- Potassium: **180–220 mg**
- Calcium: **12–18 mg**

*(Values vary by ripeness and variety.)*



### *Health Benefits*

- Supports immunity due to high vitamin C
- Promotes digestion with dietary fiber
- Antioxidants may reduce inflammation
- Helps hydration and electrolyte balance (potassium)
- Low-calorie, good for weight-conscious diets
- May aid blood sugar moderation when eaten whole (fiber-rich)





## *Tree Characteristics*

- **Growth habit:** Small evergreen tree or large shrub, typically **2–6 m** tall
  - **Crown:** Rounded, dense, moderately spreading
  - **Leaves:** Oval, aromatic when crushed, light to medium green, **4–10 cm** long
  - **Flowers:** White, fragrant, solitary or clustered, attracting bees
  - **Fruit:** Round to slightly oblong, **2–5 cm**, thin skin, soft edible seeds
  - **Growth rate:** Moderate and resilient
  - **Lifespan:** Long-lived and productive for many years
  - **Adaptability:** Tolerant of poor soils, wind, and seasonal dry periods
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## *Root System*

- **Type:** Shallow to moderately deep lateral roots with a small taproot
- **Spread:** Wide-spreading fine feeder roots near the soil surface
- **Behavior:** Non-aggressive compared to larger guavas; can sucker mildly

## *Growing Implications*

- **Soil Needs:**
    - Prefers **well-drained** sandy-loam or loam
    - Avoids water-logging—susceptible to root stress
  - **Planting Considerations:**
    - Mulching improves moisture retention for shallow roots
    - Sensitive to prolonged drought despite drought-tolerance—requires watering during establishment
  - **Spacing & Competition:**
    - Avoid planting too close to heavy feeders (e.g., large mango or coconut root zones)
    - Intercropping suitable with small to medium trees due to light root competition
  - **Wind & Stability:**
    - Shallow roots mean young trees benefit from staking in exposed areas
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## Sunshine & Shade Demand

- **Full sun:** Best fruiting and flowering
- **Partial shade (up to 30%):** Tolerated, but leads to reduced fruit size and sweetness
- **Dense shade:** Poor yield and elongated growth

*Table: Growing Characteristics*

Attribute	Details
Tree height	2–6 m (small evergreen)
Crown type	Dense, rounded, moderate spread
Root type	Shallow lateral roots with minor taproot
Soil preference	Well-drained loam to sandy-loam; pH 5.5–7.0
Water needs	Moderate; regular during establishment
Sun requirement	Full sun ideal; tolerates light shade
Wind tolerance	Good, but young trees may need support
Temperature range	Warm tropical; sensitive to frost
Bearing age	2–4 years from seed
Productivity	Medium but reliable and consistent

## Small Summary

Guavapple is a hardy, small tropical fruit tree suited to mixed orchards and backyard planting. Its shallow but wide root system requires good drainage and benefits from mulching. Full sun delivers the best yield and fruit quality, though it tolerates light shade. With moderate water needs, wind tolerance, and early bearing, Guavapple is a low-

maintenance, adaptable option for diversified farms and small-scale production





## *Varieties in the Philippines — What the Evidence Says*

### *Psidium guineense* (Guavapple / Brazilian Guava)

- There is limited documentation of named *P. guineense* cultivars in the Philippines.
- *P. guineense* is recognized more as a wild or underutilized species rather than a commercial crop locally. ECHO's plant fact sheet describes it as a small tree/shrub with 2–3 cm wide yellow fruit, white acidic pulp, and several seeds. [Echo Community](#)
- A review on wild relatives of guava mentions *P. guineense* as having disease resistance (e.g., Fusarium wilt) compared to commercial guava, but does not list Philippine-named cultivars. [justagriculture.in](#)
- Genetic studies show *P. guineense* has at least four chemotypes (i.e., chemical profiles in leaves/fruit) which could be promising for breeding, but again, no widely marketed Philippine commercial clones. [Docslib](#)

### *Psidium guajava* (Common/Apple Guava)

- This is the dominant guava species cultivated and sold in the Philippines. [Business Diary](#)
- There are several varieties or “strains” (local and introduced) of *P. guajava* used in commercial production and for processing. The *Guava Production Guide (Philippines)* lists: Supreme, Red Indian Rolfs & Ruby, seedless guava, NSIC 02 Gv-01 (“Goyena Quezo de Bola”), and other “outstanding varieties” such as Bangkok, Java, Vietnamese, and Hawaiian. [Business Diary+1](#)
- For example: **NSIC 02 Gv-01 “Goyena Quezo de Bola”** is a Philippine-registered variety, prolific, yellow-green skin, smooth texture, pleasant aroma, ~575 g fruit. [Scribd+1](#)
- “Red Indian Rolfs & Ruby” produces ovate fruit (~75 g), red flesh, aromatic, very sweet. [Scribd](#)
- Seedless variety: described as having very thick flesh and almost no seed cavity. [Scribd](#)
- “Vietnam Guava” (used in the Philippines according to the guide) produces medium to large fruit (200–1,000 g), creamy-white flesh, very sweet, good for fresh eating and processed uses. [Scribd](#)



*Table: Top Guava Varieties Relevant for Commercial*

Here's a table with **top 5 commercial-relevant guava varieties (mostly *P. guajava*)** in the Philippine context, since true guavapple (*P. guineense*) commercial varieties are not well documented locally:

Variety Name	Species	Key Traits for Commercial	Use Case (Local Market)
<b>NSIC 02 Gv-01</b> "Goyena Quezo de Bola"	<i>P. guajava</i>	High yield, large fruit (~575 g), smooth texture, pleasant aroma. <a href="#">Scribd+1</a>	Ideal for fresh markets, processing (jams, juice) due to good size and aroma.
<b>Red Indian Rolfs &amp; Ruby</b>	<i>P. guajava</i>	Ovate fruit (~75 g), red flesh, very sweet and juicy, aromatic. <a href="#">Scribd</a>	Premium fresh guava, niche specialty markets, possibly high-margin for direct-to-consumer.
<b>Supreme (Florida strain)</b>	<i>P. guajava</i>	Bright yellow fruit when ripe, thick white flesh, good yield, moderate disease resistance. <a href="#">Business Diary</a>	General-purpose guava for both fresh consumption and preserving.
<b>Seedless Variety</b>	<i>P. guajava</i>	Very thick flesh, almost no seed cavity. <a href="#">Scribd</a>	Excellent for processing (purees, juices) because fewer seeds to remove; also good for table guava.
<b>Vietnam Guava (local strain)</b>	<i>P. guajava</i>	Large fruit (200–1,000 g), creamy-white flesh, sweet, good keeping quality. <a href="#">Scribd</a>	Fresh-market guava; also strong candidate for export or value-added products due to size and sweetness.

### *Interpretation & Implications*

Because **Guavapple (*P. guineense*)** doesn't appear to have many (or any) well-characterized, named commercial cultivars in the Philippines, its commercial presence is likely very limited. It may still be underutilized or only grown in informal/wild settings.

The real commercial guava industry in the Philippines relies on *P. guajava* varieties. Therefore, for commercial production, focusing on the top guava strains above makes more practical sense currently.

However, *P. guineense* might have potential for future breeding due to its disease resistance and genetic diversity (as shown by chemo type variation). [Docslib+1](#)

If you're interested in introducing Guavapple commercially, further germplasm work (importing clones or selecting local wild trees) might be required.

### *Intercropping Notes for Guavapple*

- Guavapple prefers **full sun** for fruiting but tolerates **partial shade** (~30% shade)
- Shallow root system: avoid heavy root competition
- Can be used as a **short-term filler or understory tree** in mixed orchards
- Spacing: **3–5 m** from medium trees, **5–6 m** from large trees like mango or coconut



### Intercropping Table — Value Trees (Good & Bad)

Companion Crop	Good / Bad	Shade Compatibility	Recommended Spacing & Notes
Coconut (Cocos nucifera)	✓ Good	Full sun; guavapple tolerates partial shade beneath canopy	Plant guavapple <b>5–6 m</b> from coconut trunks. Roots mostly shallow; can coexist long-term.
Mangosteen (Garcinia mangostana)	✓ Good (with pruning)	Prefers <b>partial shade</b> ; young guavapple provides some protection	Plant <b>4–5 m</b> from guavapple. Ensure airflow; prune to avoid over-shading.
Guyabano / Soursop (Annona muricata)	✓ Good	Partial sun tolerated	Space <b>4–5 m</b> ; shallow roots compatible. Avoid dense shading of guavapple.
Mango (Mangifera indica)	⚠ Moderate	Full sun needed	Plant guavapple <b>5–6 m</b> from young mango; shade will reduce fruit size and sweetness once mango canopy matures.
American Lemon (Citrus limon)	⚠ Moderate	Full sun	Maintain <b>5–6 m</b> distance; prune guavapple to allow sunlight to citrus. Avoid humid, low-lying areas.
American Lime / Persian Lime (Citrus latifolia)	⚠ Moderate	Full sun	Same as lemon; requires strict canopy management.
Tabon-tabon (Atuna racemosa)	✗ Not recommended	Shade-tolerant but forms dense canopy	Avoid planting near guavapple; overshading reduces fruiting and vigor.

### Summary

- **Best companions: Coconut, Mangosteen, Guyabano** — complementary rooting patterns and shade tolerance.
- **Caution:** Citrus trees (lemon/lime) only with **proper spacing and pruning**; avoid close proximity in high-humidity zones.
- **Avoid:** Tabon-tabon and dense shade trees that compete for sunlight.
- **Planting strategy:**
  - ✓ Use guavapple as **understory or filler** in early orchard years.
  - ✓ Maintain **adequate spacing (3–6 m)** depending on companion tree size.
  - ✓ Prune regularly to balance **light and airflow** for optimal fruit quality.





## *Market Demand & Acceptance (Southern Bukidnon / Valencia)*

### *Strong Agri Output Base*

- Bukidnon is a top agricultural producer in the Philippines. [Philippine News Agency+2Philippine Statistics Authority+2](#)
- Its economy is heavily agrarian: many farmers already grow high-value crops, and the provincial government supports agri production. [Bukidnon Provincial Government](#)
- This suggests there's a good base infrastructure for fruit farming, transport, and local trade.

### *Local Market in Valencia*

- Valencia City is a central trade hub in Bukidnon, with strong commercial infrastructure (public market, retail stores, malls). [Wikipedia](#)
- There is a **Valencia Farmer's Market** which serves as a landing area for agricultural products. [Wikipedia](#)
- This means produce (including exotic or niche fruits like guavapple) could be marketed locally through established channels.

### *Export / Processing Potential*

- There is growing interest in processed fruit products (e.g., juices, concentrates). For example, the Philippines fruit concentrate market is projected to grow — this provides an off-take route for non-premium fruit or surplus. [Ken Research](#)
- Bukidnon's agriculture output is high-value, and value-adding (processing) is mentioned as a potential growth area by the provincial government. [Bukidnon Provincial Government](#)
- However, post-harvest losses are a concern: a study noted significant losses for fruits/vegetables in Bukidnon markets. [FAO AGRIS](#)

### *NUS (Neglected & Underutilized Species) Awareness*

- Guavapple (*Psidium guineense*) could fall into a “neglected / underutilized species” (NUS) category. A local study identified many NUS fruit species in Bukidnon, indicating both cultural knowledge and potential conservation + commercialization interest. [nast.dost.gov.ph](#)
- This gives guavapple an opportunity niche: for local farmers who want to diversify, or for specialty markets.



## *Best Local Markets for Guava/Guavapple Varieties*

- **Palengke (Wet/Traditional Markets):** Most common varieties of guava (like Supreme, local guava) are sold in public markets across Luzon, Visayas, and Mindanao.
- **Fruit Stalls / Sidewalk Vendors:** Specialty or red-flesh guavas (e.g., Red Indian Rolfs & Ruby) often appear in more premium or set-up specialty fruit stalls.
- **Processed Goods Outlets:** Jams, jellies, and juices made from guava (or Guavapple if available) are sold in sari-sari stores, small grocers, and local cooperatives.
- **Farmer's Markets / Weekend Markets:** Value-added or large-fruited guava (like “Vietnam Guava”) may be marketed here to consumers looking for fresh eating quality or premium guava.
- **Small-Scale Export / Specialty Fruit Buyers:** For very large or premium fruit, growers could target boutique fruit distributors or exporters, although guava export supply is more limited compared to major crops.

## *Risks & Challenges*

Risk / Challenge	Description
<b>Post-Harvest Losses</b>	High perishability of fruit — local markets (such as Valencia) may not absorb all harvest, leading to waste. <a href="#">FAO AGRIS</a>
<b>Limited Awareness / Demand for Guavapple</b>	Guavapple is likely not widely known among consumers; demand might be low compared to more common fruits (mango, coconut).
<b>Marketing &amp; Distribution</b>	While Valencia has markets, establishing a consistent off-take chain (especially for niche fruit) may require effort (e.g., packaging, cold chain).
<b>Input / Production Risks</b>	If farmers invest in guavapple (or other niche fruit), they may face crop failure risk, pests, or poor yields without proven local practices.
<b>Regulatory / Certification Costs</b>	For processed fruit (juices, concentrate), compliance (food safety, packaging) could raise costs. (General risk, supported by market-concentrate market challenges.) <a href="#">Ken Research</a>
<b>Competition from Mainstream Crops</b>	Guavapple may be competing for land and labor with more proven high-value crops (mango, pineapple, etc.) in Bukidnon.

## *Opportunities*

### *Niche / Specialty Fruit Market*

- Guavapple, being less common, can attract niche consumers: health-conscious buyers, local “gourmet fruit” markets, or eco / sustainable farms.
- Positioning as a “heritage” or “wild guava” fruit can help differentiate it.



### *Value-Added Products*

- Processing guavapple into jam, juice, or concentrate: adding value, reducing risk from fresh market gluts.
- Working with local cooperatives or small-scale processors in Bukidnon to scale.
- Potential for export or regional distribution (if quality is good).

### *Agro-tourism*

- Farms in or near **Valencia City** could combine guavapple cultivation with farm-tourism (u-pick, fruit tasting).
- This could tap into local tourism and the growing “farm experience” trend.

### *Biodiversity / Conservation Funding*

- Because guavapple is underutilized, there may be funding (NGOs, government) for conservation + commercialization of NUS species.
- Breeding or selection programs: developing locally adapted, high-yield guavapple trees could be a long-term investment.

### *Integration into Bukidnon's High-Output Farming System*

- Since Bukidnon is already a major agri-producer (highest in agrifishery value in 2024). [Philippine News Agency+1](#)
- Guavapple can be part of diversification strategy for Bukidnon farmers, reducing reliance on more volatile or saturated crops.

## **Inspiration and Motivation ng Masa**

### *Summary (Southern Bukidnon + Valencia Context)*

- **High Potential:** Guavapple could do well in Southern Bukidnon, particularly around **Valencia**, because of the city's strong agricultural market infrastructure and commercial trade channels.
- **Demand Outlook:** While local demand may be limited initially (because guavapple is niche), there is potential in specialty markets and processed products (juice, jam).
- **Risk Management:** Key risks include post-harvest losses, lack of consumer awareness, and distribution challenges. Mitigating these requires good post-harvest handling, marketing, and possibly value-add processing.
- **Opportunities:** Diversification into a neglected species, tapping niche markets, agro-tourism, and working with cooperatives are promising paths.
- **Strategic Fit:** For farmers in Bukidnon, especially those already producing high-value crops, guavapple offers a way to diversify. With the right support (technical, financial), it could become a valuable ancillary or specialty crop.