# Stevia – The Natural Zero-Calorie Sweetener

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Stevia is a **plant-based, zero-calorie sweetener** made from the leaves of *Stevia rebaudiana* Bertoni, a shrub native to Paraguay, Brazil, and surrounding regions in South America.(Wikipedia)
Its sweet taste comes from **steviol glycosides**, compounds that are about **200–400 times sweeter than table sugar**, yet provide **no calories** because the body does not metabolise them as energy.(Wikipedia)

Today, stevia is widely used as a **sugar substitute** in drinks, foods, and specialised health products, especially for people managing **weight, blood sugar, and overall calorie intake**.(IFIC)

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**What Stevia Is**

**Botanical Source**
Stevia is obtained from the **leaves** of the *Stevia rebaudiana* plant, a member of the Asteraceae (sunflower) family.(Stevia Voice)

**Sweetness & Calories**

- Active compounds: **steviol glycosides** (e.g., stevioside, rebaudioside A)(Wikipedia)
- Sweetness: typically **200–400× sweeter than sucrose**(PMC)
- Calories: essentially **zero**, as they are considered non-nutritive and are not metabolised to provide energy.(WebMD)

**Forms on the Market**

- High-purity powdered extract (often ≥95% steviol glycosides)
- Liquid drops
- Tablets
- Dried leaves and "green powder"
- Blends (stevia + erythritol or other carriers) for easier measuring and better taste

**Taste Profile**

- Very sweet, often with a **slight licorice or bitter aftertaste** depending on purity, formulation, and personal sensitivity.(WebMD)

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**Uses and Potential Benefits**

**1. Sugar Replacement**

Stevia is widely used to substitute sugar in:

- hot & cold beverages (tea, coffee, juices, sodas)
- yoghurts, cereals and snacks
- jams, sauces, and dressings
- baked goods and desserts

Because it is **heat-stable and pH-stable**, it can be used in many cooking and baking applications without losing sweetness.(Wikipedia)

**2. Blood Sugar & Metabolic Health**

- Pure steviol glycosides **do not raise blood sugar** and are generally considered suitable for people with type 2 diabetes when used in moderation.(Verywell Health)

- Clinical and review studies suggest potential benefits in **glucose regulation, insulin response, and blood pressure**, though results are mixed and depend on dose and formulation.(PMC)

**3. Other Functional Properties (Under Study)**

Research has reported that stevia preparations may show:

- **anti-inflammatory** and **antioxidant** effects
- support for **oral health** and **blood pressure reduction**
- possible **chemopreventive** and cardiometabolic benefits at appropriate doses.(ScienceDirect)

These findings are promising but still under active investigation; stevia should be viewed primarily as a **safer sugar alternative**, not a medicine.

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**Safety and Regulatory Status**

Global food-safety authorities have evaluated high-purity steviol glycosides:

- The **Joint FAO/WHO Expert Committee on Food Additives (JECFA)** established an **Acceptable Daily Intake (ADI) of 0–4 mg/kg body weight per day (as steviol equivalents)** and found no safety concern at this level.(apps.who.int)
- The **European Food Safety Authority (EFSA)** and other regulators have repeatedly concluded that authorised steviol glycosides are **safe as food additives** within the ADI.(PMC)
- In contrast, **raw stevia leaves and crude extracts are not approved as food additives in some markets (e.g., the U.S.)**, though they may still be sold as dietary supplements.(Verywell Health)

**Considerations**

- **Allergy:** As a member of the sunflower family, individuals with ragweed/aster allergies may be more likely to react, though this appears uncommon.(PeaceHealth)
- **Pregnancy & breastfeeding:** Current evidence does not show major safety problems at normal intakes, but data are still limited; most medical sources recommend moderation and consultation with a health professional.(WebMD)

- **Commercial blends:** Many retail stevia products contain bulking agents or other sweeteners – these additives (not stevia itself) can affect **blood sugar, digestion, or tolerance**.(Verywell Health)

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**Economic & Agricultural Value of Stevia**

Stevia is not a "micro-volume luxury" crop like saffron, but it is strategically important because it feeds **huge, long-term demand** for:

- reduced-sugar drinks and foods,
- diabetic-friendly products, and
- "natural" clean-label sweeteners.

From a farmer and processor point of view, stevia fits well into **health-focused, export-driven agriculture**.

**Global Price Ranges**

Prices vary by quality, purity, and contract terms, but recent international data show:

- **Stevia extract (steviol glycosides) export/import prices (2023–2024):** roughly **USD 11–93 per kg** across different grades and markets.(Tridge)
- Wholesale listings for **pure stevia extract powders** often fall within about **USD 5–100 per kg** depending on concentration (90–99% stevioside/Reb-A) and order size.(Alibaba)

For a practical planning range, we can think in three simple tiers:

| Product Type (illustrative) | Typical Price Range (USD/kg) | Approx. BWP/kg* |
|---|---|---|
| Dried stevia leaves (farm/co-op level) | USD 2 – 4 | ≈ **BWP 27 – 54** |
| Standard extract (food-grade) | USD 10 – 40 | ≈ **BWP 135 – 540** |
| High-purity extract (Reb-A ≥95%) | USD 40 – 100 | ≈ **BWP 540 – 1,350** |

*Using a working assumption of **1 USD ≈ 13.5 BWP** for illustration (actual rates fluctuate).

These numbers show that stevia can be a **valuable cash crop**, especially when farmers participate in:

- organised **leaf production**,

- **contract farming** with processors, and
- **value-addition chains** (drying, extraction, blending, branded retail packs).

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**Key References and Weblinks for Further Study**

For scholars, investors, and technical partners who want deeper reading, the following are useful starting points:


1. **International Stevia Council – About Stevia & History**
   https://internationalsteviacouncil.org/about-stevia/history-of-stevia (Stevia Voice)
2. **IFIC – "Everything You Need to Know About Stevia Sweeteners"**
   https://ific.org/resources/articles/everything-you-need-to-know-about-stevia-sweeteners (IFIC)
3. **WebMD – "What Is Stevia?" (Health overview & safety)**
   https://www.webmd.com/food-recipes/what-is-stevia (WebMD)
4. **PeaceHealth – Stevia Monograph (Herbal use & background)**
   https://www.peacehealth.org/medical-topics/id/hn-2169001 (PeaceHealth)
5. **FAO/WHO JECFA Database – Steviol Glycosides Safety Evaluation**
   https://apps.who.int/food-additives-contaminants-jecfa-database/chemical.aspx?chemID=267 (apps.who.int)
6. **Scientific Review – "Natural Sweetener Stevia rebaudiana: Functionalities, health benefits and potential risks" (2021, open-access)**
   https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8600158/ (PMC)
7. **Scientific Review – "The functional and health-promoting properties of Stevia and steviol glycosides" (Kurek et al., 2019)**
   https://www.sciencedirect.com/science/article/abs/pii/S1756464619303895 (ScienceDirect)
8. **Verywell Health – Stevia and Blood Sugar**
   https://www.verywellhealth.com/does-stevia-raise-blood-sugar-11746526 (Verywell Health)
9. **Tridge – Global Stevia Extract (Steviol Glycosides) Price Trends**
   https://dir.tridge.com/prices/stevia-extract-steviol-glycosides (Tridge)

10. **Example Wholesale Listings – Pure Stevia Extract Price Ranges**
    https://www.alibaba.com/showroom/pure-stevia-price.html (Alibaba)

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If you wish, Hunter, I can now:

- turn this into a **PDF or web section outline** for your site,
- add a **small investor sidebar** ("Why Stevia Matters for Africa's Agro-Export Model"), or
- design a **1-page farmer fact sheet** comparing Stevia vs sugar vs artificial sweeteners.

Just instruct me, and I will build the next layer.