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Nutraceuticals in Mauritius: A game changing opportunity in the food and healthcare industry



Why Mauritius?

Shifting consumer behaviour

There is a shift from curative to preventive care in the global world. With immunity taking centre stage due to the onset of the pandemic, consumers are relying more on nutraceuticals

Availability of scientific information on identified nutraceutical plants

a database of the most appropriate species for nutraceutical production has been developed via literature search and scoring in order to assist potential operators/farmers in the transformation of terrestrial plants into nutraceuticals as a feasible economic venture

Potential for Cultivation

Mauritius enjoys a mild tropical maritime climate throughout the year



A rich biodiversity

Mauritius has a rich biodiversity characterized by a high level of unique & diverse species which has immense potential for the development of nutraceutical products



Rise in ageing population

Mauritius is facing an ageing population, wherein the consumers are focusing more on preventive healthcare. There is a shift in increasing consumption of supplements in the earlier ages in order to prevent them from permanently depending on pharmaceutical drugs



Potential use against chronic diseases

Cancer, diabetes, cardiovascular diseases and other non-communicable diseases (NCDs) are prevalent within the Mauritian population. Therefore, in the local context, plants with potential to manage these chronic diseases will shine as potential future nutraceutical products






List of 7 Priority Plants	Benefits/ Applications	Plant Part(s) Used	Potential Nutraceutical Products
 <p>Pineapple - Rich in Bromelain</p>	Therapeutic applications include cardiovascular and circulation effects, treatment of chronic inflammatory, malignant, and autoimmune diseases	Fruit Crown leaf (on fruit)	Pineapple peel vinegar Pineapple peel powder (mixed with Vanillin) Bromelain extract (enzyme)
 <p>Pawpaw - a Highly promising nutraceutical</p>	Products derived from pawpaw confer physiological protection against diabetes, cancer & respiratory diseases	Fruit, Leaf, Seeds & Flower bud	Pulp powder, fermented products, encapsulated extracts, herbal tea



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 <p>Moringa - The miracle plant</p>	Anti-inflammatory and boost immunity	Leaf Flower Root Bark Seed	Herbal Tea Pills Oil Concentrated Powder
 <p>Tea</p>	Cholesterol lowering and cardio-protective effect	Leaf	Catechin capsule Green tea capsule Concentrated extract (Catechin and green tea) Catechin gel Herbal tea (with tulsi, turmeric, Cardamom, etc.) Tea wine



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 <p>Strawberry Guava - an innovative nutraceutical</p>	Rich in antioxidants, vitamin C, potassium, and fiber	Fruit Leaf	Low GI diabetic jellies, jams etc. Concentrated extract Essential oil
 <p>Noni - A superfruit appealing to the masses</p>	Antioxidant and antidiabetic	Fruit Leaf Flower	Pulp powder Capsule Juice concentrate Flavoured honey Concentrated extract Herbal tea Flavoured honey
 <p>Pomegranate - Opportunity to exploit the underexplored virtues of the non-edible parts</p>	Anti-cancer properties Anti-diabetic virtue Heart benefits	Fruit Fruit peel Seeds Flower	Water-soluble powder Ellagitannins capsule Peel extract powder



Investment Opportunities

Target Areas	Potential stakeholders
Large scale cultivation for production of nutraceuticals	<i>Farmers</i>
	Agro-mechanical companies
Extraction of active ingredients	Laboratories
	Pharmaceutical/Nutraceutical companies
	Equipment suppliers/manufacturers
Production of nutraceuticals	Pharmaceutical/Nutraceutical companies
	Contract manufacturing organisations
	Food processing companies
	Equipment suppliers/manufacturers
Clinical trials	Clinical Research Organizations



Key Incentives

To establish the right ecosystem for the transformation of crops with high nutraceutical potential into value-added products, the Government of Mauritius will grant an **8 years tax holiday** to foreign companies investing in the nutraceutical sector

Food Processing Scheme (Medicinal Plants)

- 8-year income tax holiday
- Exemption from payment of Registration
- Duty and Land Transfer Tax for the purchase of immovable property
- Exemption from payment of value added tax (VAT) on equipment and machinery



A database (<http://app-edb-nutra.azurew>) containing the following information is accessible to the general public at the Economic Development Authority, Mauritius:

- List of nutraceutical plants (120) with potential to be cultivated in Mauritius
- Information pertaining to nutraceutical plants, their characteristics & their properties
- List of land sites that are vacant and may be considered for the cultivation of nutraceutical plants

- List of nutraceutical plants (120) that have the potential to be cultivated in Mauritius
- Information pertaining to nutraceutical plant characteristics & their properties
- List of land sites that are vacant or abandoned and may be considered for the cultivation of nutraceutical plants

available species with nutraceutical potential

Scientific name
<i>Morus nigra</i> Linn.
Family
moraceae
Commonly known as
Morus, Bamon Mouroum, black tree, "miracle tree", "wonder tree"

Nutrients
protein, vitamin E, beta-carotene, vitamin B-6, vitamin C, minerals (calcium, phosphorus, magnesium, potassium, sodium, sulphur, zinc, copper, manganese, iron, selenium), 17 fatty acids.

Phytochemicals
phenolic compounds (gallic and chlorogenic acids) and flavonoids (rutin, luteolin, quercetin, apigenin, and kaempferol), alkaloids, tannins, saponins, glycosides, steroids, carotenoids.

Health Benefits
hypolipidemic, anticancer, antibacterial, antimicrobial, anti-inflammatory, antiseptic, antihelminthic, antioxidant, hypoglycemic, antiobesity, hypotensive, hepatoprotective, cardioprotective, anti-atherosclerotic activities.

Remarks
Grows well in well-drained soil in a sunny position, tolerating a wide range of soil types. It is tolerant to shallow soil, low fertility and drought resistant.

Traditional Uses
Used as antidiabetic, antiparasitic, antipruritic, purgative, vermifuge, and has ability to manage low blood pressure.
Part: Leaves and pods
Mode: Oral

Food Applications
Used as a food fortificant (e.g. in biscuit, bread, yoghurt, cheese)
Part: Leaves

Agro-Climatic Parameters

Growth Rate (m/Yr)	10
Productivity (kg/ha/Yr)	200
Economic Life Cycle (Yr)	10-15
First Harvest After Planting (d)	750
Agro-climatic zone	Hot
Rainfall (mm/year)	700
Temperature (°C)	20-30
Soil pH	5-8

Suitable locations that are suitable to cultivate the selected plant species

Location	Land Status	Land Acreage (Ha)	Agro Climatic	Min Temperature (°C)	Max Temperature (°C)	Min Rainfall (mm/year)	Max Rainfall (mm/year)	Altitude (m above sea level)
Olina	Abandoned	3.8	Humid	20	27	1200	1800	105
Bera Champ FA	Abandoned	4.2	Humid	20	27	1200	1800	30
Bera Champ FA	Abandoned	4	Humid	20	27	1200	1800	38