

Corporate Introduction

YenTing Chen, General Manager



Company Brief



Established:

Founded in 2018, by Chairman Yin-Jun Chen and Taipei Medical University

R&D team:

Lead by Prof. Rong-Hong Hsieh, Dean of the College of Nutrition

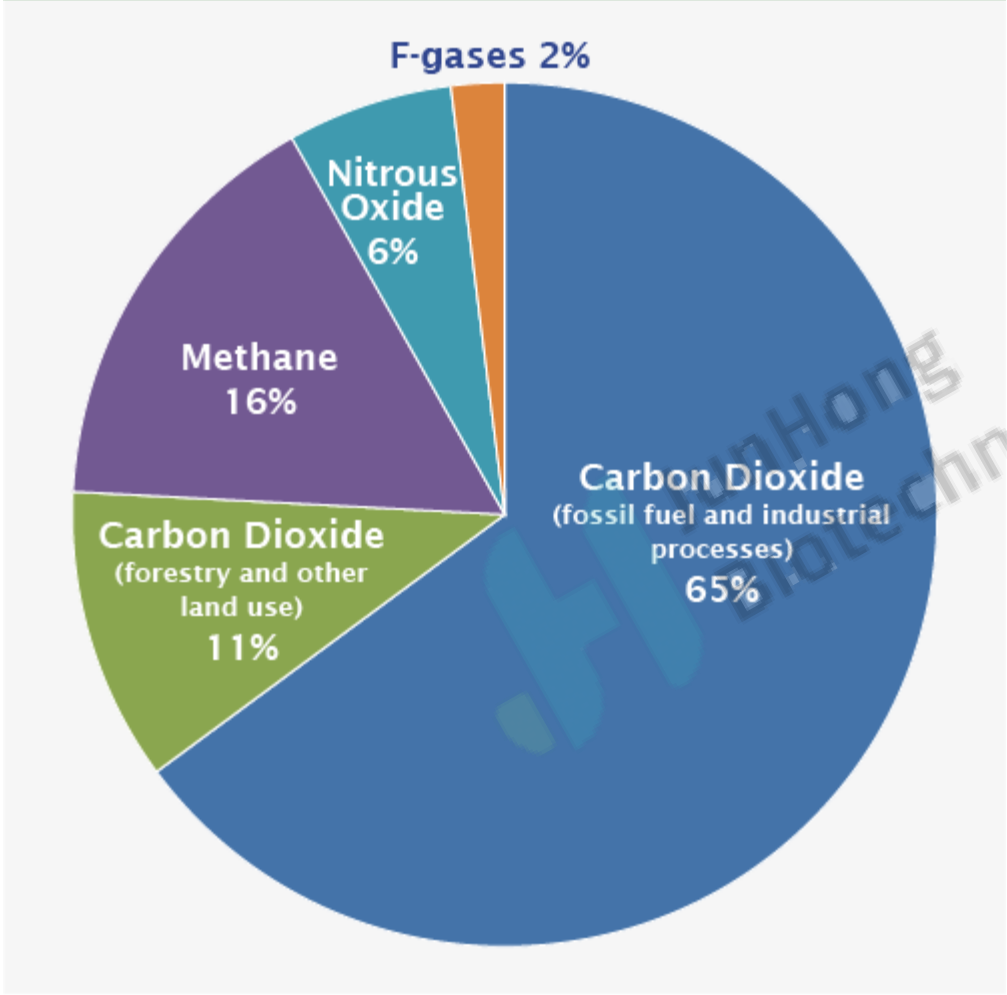
Core value:

A professional nutriology brand dedicated to improving public health

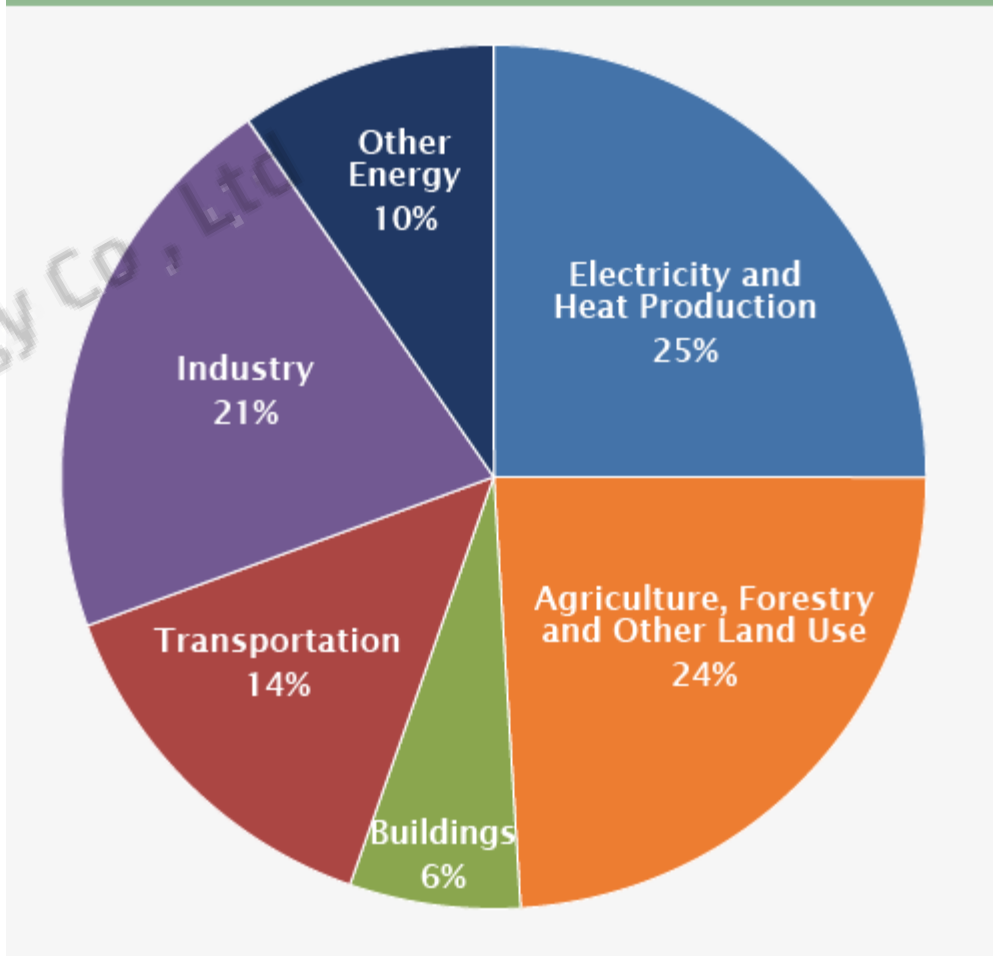
Mission:

Bring out the specific phytochemicals to benefit the society

Global Greenhouse Gas Emissions by Gas



Global Greenhouse Gas Emissions by Economic Sector



<https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data>

Properties of Methane

Chemical Formula: CH₄

Lifetime in Atmosphere: 12 years

Global Warming Potential (100-year):

28¹

Methane's lifetime in the atmosphere is much shorter than carbon dioxide (CO₂), but CH₄ is more efficient at trapping radiation than CO₂. Pound for pound, the comparative impact of CH₄ is 28 times greater than CO₂ over a 100-year period



**Food waste alone
causes 10% of
greenhouse gases**

Linear economy

Industrial processing

Processed products

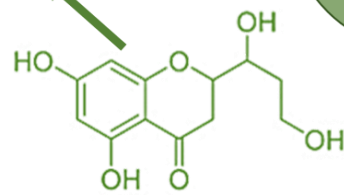
For sale and use

Organic waste



Industrial applications

- Nutraceuticals
- Pharmaceuticals
- Cosmeceuticals
- Bioenergy



Bioactive compounds

Circular economy

Revalorization



Extraction



By-products





Agricultural farm



Agricultural produces



Green energy

Utilization of Green energy in various applications



Fertilizer and Biogas



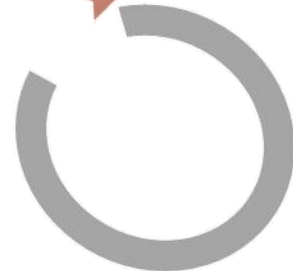
Anaerobic co-digestion



Hydrolysis
Acidogenesis, Acetogenesis
Methanogenesis



Acidogenesis, Acetogenesis
Methanogenesis



High Solid Hydrolysis,
Acetogenesis, Wet methanogenesis



Circular bioeconomy

Metabolites

Organic acids, ethanol,
CO₂, H₂O₂

Antimicrobials:
bacteriocins(e.g. nisin),
reuterin, reuterocycline

Acetaldehyde, diacetyl,
acetoin

Peptides, amino acids,
fatty acids

Polyols

Vitamins: B12, folate

Phenolic acids and
phenolic aglycones

Exopolysaccharides
(glucans, fructans)

Functionality

Safety and stability



Flavour and taste



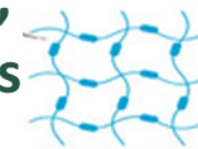
Nutrition



Bioactivity and health



Texture, rheology,
surface, properties



Applications

Fermented foods

Yoghurt, cheese,
Sourdough bread,
Sausage, kimchi



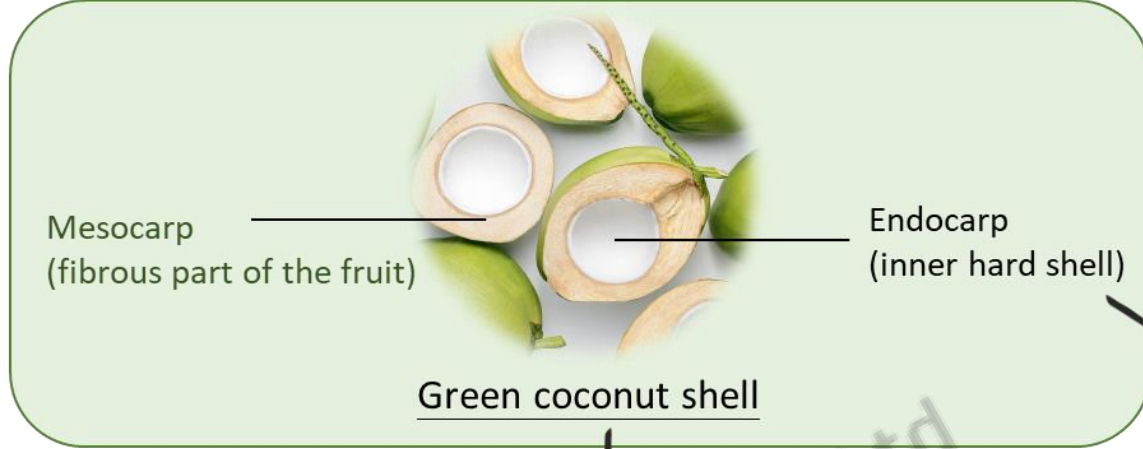
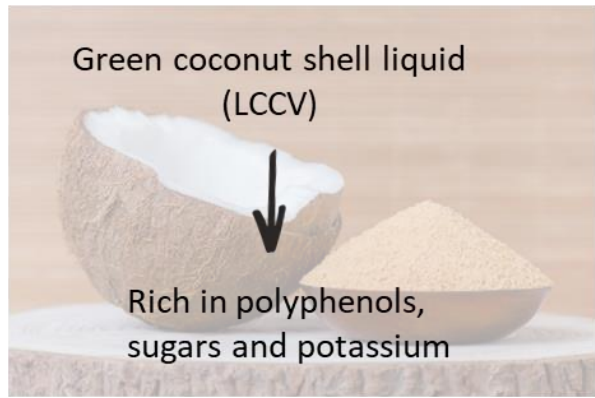
Food ingredients

Bacteriocins,
Organic acids,
dextran

Nutraceuticals

Vitamins,
probiotics,
peptides





Almost nonexistent in green coconut and mixed with coconut powder

Crushing and pressing the shell

Screening

Milling

Fiber and coconut powder

Micronized coconut shell powder

Products

Products that use only fibers

Products

Composites or miscellaneous compounds

Polymeric Materials



Acoustic and thermal plates

Vehicles upholstery



Shoe soles

Bricks and Mortars



Ecological tiles

Gardening products or handicrafts



Briquettes




Bioethanol

Flesh 40 %

Pericarp 60 %

Contain xanthenes
 - α -mangostin: 75-85 %
 - γ -mangostin: 5-15%

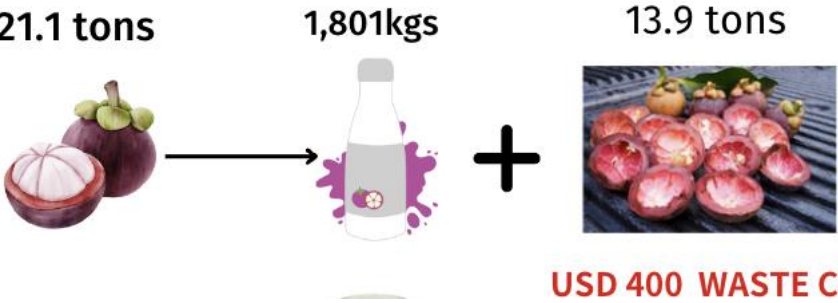


Mangosteen

21.1 tons

1,801kgs

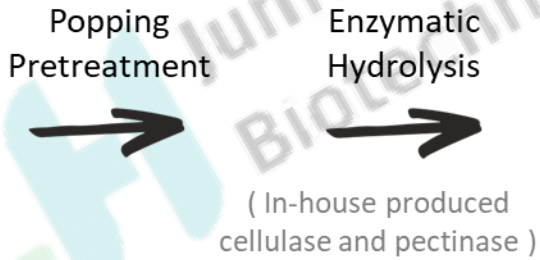
13.9 tons



USD 400 WASTE COST



Mangosteen Pericarp Waste (MPW)



Hydrolysate

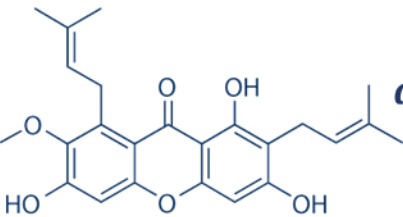
Biosugar

Fermentation

Ethanol

Residue

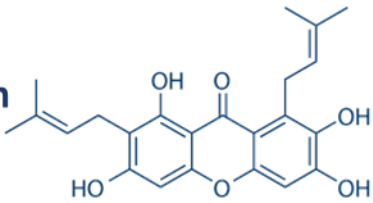
Separation using Magnetic nanomatrix (MNM)



α -mangostin

O-demethylation

γ -mangostin



CREATES more than USD 10 million value



Application



**Mangosteen
Supplemental Drink**



Golden Smart



Synerdrink

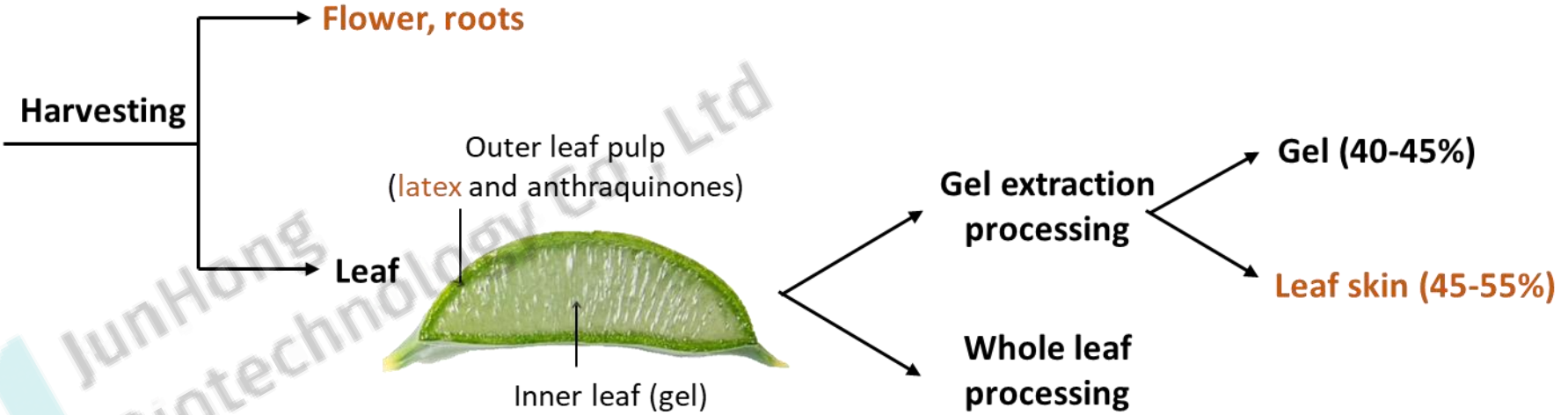
Healthy Food Series



Skin Care Series

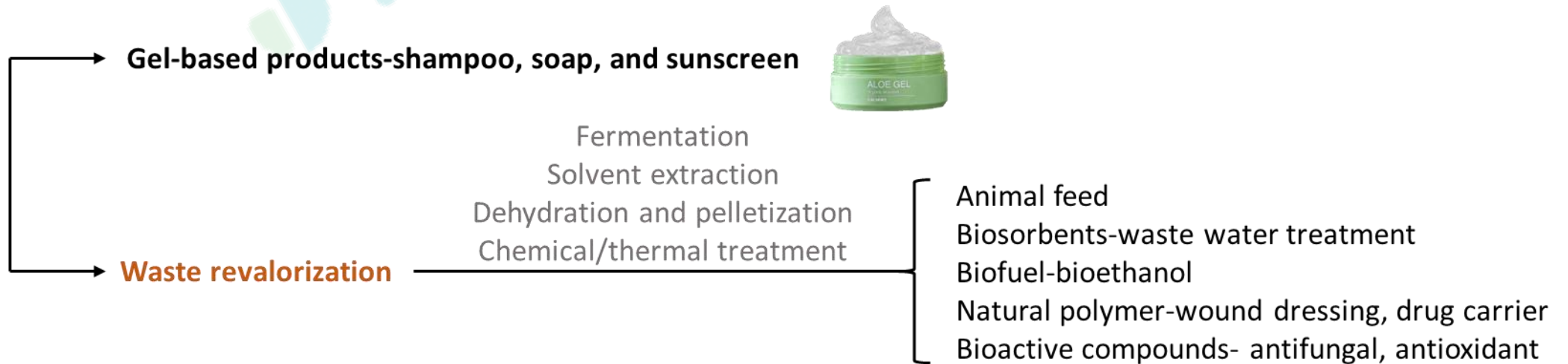
Aloe vera gel processing facility could generate up to 4000 kg of Aloe vera waste per month.

Aloe vera gel processing



The red words indicate aloe vera waste

Applications



Thank you!