

GROWING 100,000 MT OF DURIANS ANNUALLY IN THE DOMINICAN REPUBLIC





#### **EXECUTIVE SUMMARY**

Microbebio proposes the development of a large-scale, organic durian production project on the Samaná Peninsula in the Dominican Republic. The goal is to produce 100,000 metric tons annually, leveraging Microbebio's microbial technology to enhance yield, resist disease, and extend shelf life to 17 days using organic treatments. The region's tropical climate closely mirrors Southeast Asia's duriangrowing conditions, while proximity to U.S. and European markets positions the project for efficient export and premium pricing. With an initial investment of \$24.2M, the project is projected to generate over \$460M in annual profit by Year 7 and maintain strong returns over a 10-year horizon.

## **GLOBAL DURIAN IMPORT MARKET OVERVIEW** (2023–2024)

Durian imports are rising steadily across Asia and Western markets. With China leading global consumption and new interest emerging in the U.S. and Europe, producers with reliable supply chains, extended shelf life, and organic certification will be highly competitive.



ESTIMATED ANNUAL DURIAN IMPORTS							
REGION	VOLUME (Metric Tons)	VALUE (USD)	NOTES				
China	1.43M (2023) / 1.56M (2024 est.)	\$6.7B (2023) / \$6.99B (2024 est.)	Largest global importer; Vietnam & Thailand dominate supply				
USA	1,000–2,000	\$5–10M	Niche demand; growing among Asian-American communities				
Europe	500–1,000	\$2–5M	Premium organic demand rising; air and sea freight viable				
Canada	100–200	\$0.5–1M	Mirrors U.S. market; primarily frozen pulp imports				



- 1. CULTIVATE 100,000 MT OF EXPORT-QUALITY ORGANIC DURIANS ANNUALLY.
- 2. APPLY SPECTRAL IMAGING FOR REAL-TIME RIPENESS AND QUALITY ASSESSMENT.
- 3. EXTEND SHELF LIFE TO 17 DAYS USING MICROBEBIO'S ORGANIC FORMULATIONS.
- 4. ESTABLISH
  SUSTAINABLE PRODUCTION
  ON 7,500 HECTARES IN
  SAMANÁ.
- 5. CREATE OVER 7,000
  JOBS AND GENERATE HIGH
  LONG-TERM RETURNS.

### SITE SELECTION: SAMANÁ PENINSULA



**ALTITUDE:** COASTAL LOWLANDS UNDER 800M—OPTIMAL FOR DURIAN GROWTH.

ACCESS: CLOSE TO SAMANÁ BAY FOR PORT INFRASTRUCTURE AND EXPORT LOGISTICS.



CLIMATE: 2,000–2,500 MM RAINFALL, 80%+ HUMIDITY, 25–30°C YEAR-ROUND.

SOIL: WELL-DRAINED LOAM, SUITABLE FOR ORGANIC AMENDMENTS (PH 5.5–6.5).





#### **TARGET YIELD:**

10-15 MT/HA AT MATURITY.

#### **LAND REQUIRED:**

7,500 HECTARES (MID-RANGE ESTIMATE).

#### **ORCHARD PLANTING:**

2,500 HA/YEAR OVER 3 YEARS, WITH YIELDS RAMPING FROM YEAR 5.

#### **DURIAN TREES:**

~1.17 MILLION TREES (156 TREES/HA WITH 8X8M SPACING).

## PRODUCTION PLAN



**CULTIVARS:** 'Monthong' (Thailand) and 'D24' (Malaysia)—high-yield, export-preferred.

**POLLINATION:** Manual pollination and hive deployment to ensure fruit set.

**IRRIGATION:** Drip systems to supplement seasonal rainfall.

#### **ORGANIC INPUTS:**

- **Fertilizer:** \$1,200/ha/year using organic compost, fish emulsion, trace minerals.
- Microbebio Products:
  - Nature Phenom GRW<sup>™</sup> for root development, nutrient uptake, and yield.

    Nature Phenom X2<sup>™</sup> for ethylene suppression.
  - Nature Phenom X3<sup>™</sup> for fungal and soil-borne pathogen control.



### SPECTRAL IMAGING FOR RIPENESS MONITORING

**Technology:** Portable NIR devices (780–860 nm)

**Deployment:** 50 units integrated with farm-level

data systems

Purpose: Real-time harvest planning, quality

grading, export decision-making



#### Ripening:

3-day controlled ethylene exposure

#### Packaging:

- MAP bags (3–5% O<sub>2</sub>, 5–15% CO<sub>2</sub>)
- PET/PE micro-perforated films

**Cold Chain:** 14–16°C shipping containers to slow respiration and avoid chilling injury

#### **Organic Treatments:**

- Essential oil coatings (lemongrass, clove)
- Microbebio antifungal sprays for post-harvest hygiene



INITIAL INVESTMENT (YEARS 1–3)					
Item	Cost				
Land acquisition/lease (7,500 ha)	\$3.75M				
Planting, irrigation, labor, materials	\$15M				
Infrastructure (storage, transport)	\$5M				
Spectral Imaging Tech (50 units)	\$100,000				
Total Initial Investment	\$24.2M				
Total Annual Cost	\$538M				



ANNUAL OPERATING COSTS (YEAR 7+)				
Item	Annual Cost			
Labor (5,000 workers avg. \$5k)	\$25M			
Fertilizer & Microbebio inputs	\$9M			
Irrigation & Energy	\$2M			
Packaging & Export Logistics	\$500M			
Maintenance & Misc.	\$2M			
Total Annual Cost	\$538M			

ANNUAL REVENUE (YEAR 7+)				
Output	Value			
100,000 MT @ \$10,000/MT	\$1B			
Net Profit (Year 7+)	\$462M/year			

10-YEAR ROI PROJECTION (YEARS 1–10)						
Year	Revenue	Cost	Net Profit	Cumulative ROI		
1–3	\$0	\$24.2M	(\$24.2M)	-100%		
4	\$0	\$10M	(\$10M)	-141%		
5	\$250M	\$300M	(\$50M)	-348%		
6	\$600M	\$450M	\$150M	271%		
7	\$1B	\$538M	\$462M	2,174%		
8	\$1B	\$538M	\$462M	4,086%		
9	\$1B	\$538M	\$462M	5,998%		
10	\$1B	\$538M	\$462M	7,910%		

**10-Year Net Profit:** ~\$3.4B

**10-Year ROI:** ~7,910% cumulative return on initial \$24.2M investment





# **SUSTAINABILITY** & ORGANIC COMPLIANCE



USDA/EU ORGANIC
CERTIFICATION WITH
MICROBEBIO FORMULATIONS

NO SYNTHETIC PESTICIDES OR FERTILIZERS

RAINWATER HARVESTING, LOW-IMPACT IRRIGATION

BIOCHAR FROM HUSKS FOR CARBON SEQUESTRATION AND SOIL HEALTH



**Weather Events:** Windbreaks, storm drainage, crop insurance

Market Risk: Staggered planting, pilot scale validation

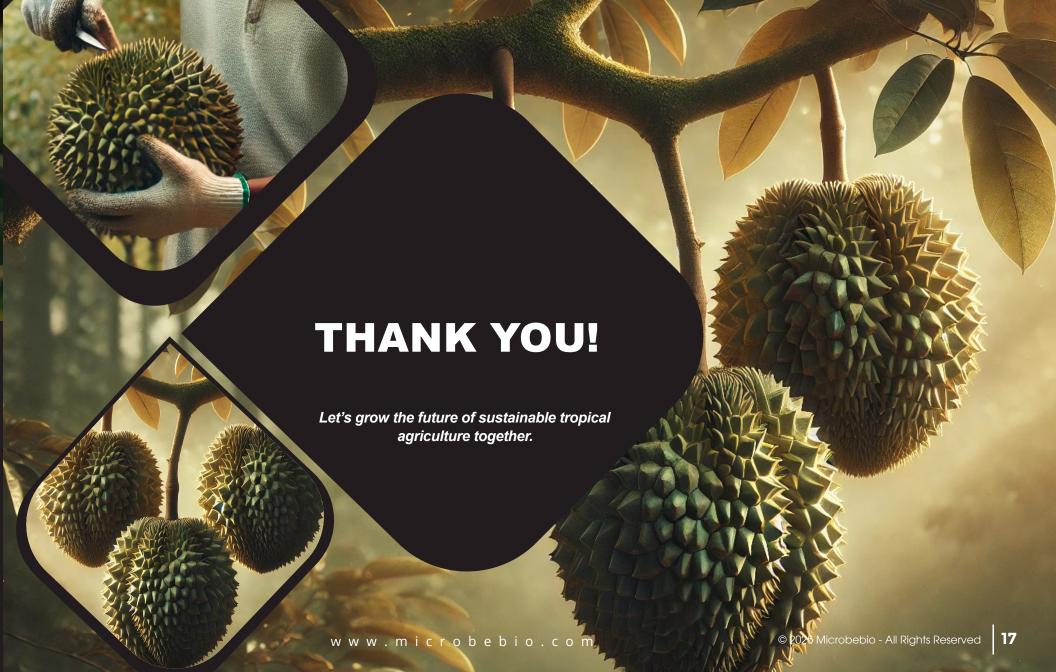
**Agronomic Risk:** 500 ha pilot in Year 1 to test varieties, soil response, logistics



This project transforms the Samaná Peninsula into a durian production and export hub for the Western Hemisphere. Powered by Microbebio's advanced biologicals and sustainable methods, it meets rising global demand for organic, long-shelf-life durian. With \$1B revenue potential, over 7,000 jobs, and nearly 8,000% ROI in 10 years, this is a landmark opportunity for investors, stakeholders, and the Dominican Republic.

Recommendation: Launch 500-hectare pilot in 2025; expand to 7,500 hectares by 2028.

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