



Business Investment Profile

Turmeric Field Cultivation – 1 Acre Trial

Financial and Technical Fact Sheet for one acre of turmeric field cultivation

BUSINESS OVERVIEW

Turmeric is in high demand from fresh exporters and local processors. Annual demand for turmeric is over 2,500 MT and current production is only filling 30% of this demand. A small commercial trial of cultivated turmeric will provide the opportunity to test optimal production practices specific to your environmental and enter the market prior to any expansion of this lucrative crop.



Product: Green Turmeric

Planting Material Source: Single turmeric buds from seedling nursery operator

Facility Requirements: Irrigation system

Production Season: May – December (7 – 9 month production cycle)

Anticipated yield rate: 10 MT per acre

Main buyers: Local Exporters shipping green turmeric to US;
Local processors in spice and beverage industry

Gross Revenue Range per cycle*: J\$800,000 - \$1,000,000

Net Profit*: J\$330,000 – 450,000

Profit Margin per Cycle*: 65%

* Under favourable conditions



FINANCIAL OVERVIEW*

One Acre of Cultivated Turmeric

Establishment Cost: J\$400,000

Cost includes: drip irrigation system; farming equipment

Operational Cost per Cycle: J\$450,000

(7-9 months) Cost includes: labour; single bud seedlings; water; fertilizer; chemicals; financing costs; annual depreciation of irrigation equipment

UNIT COP

GROSS REVENUE RANGE

PROFIT MARGIN PER CYCLE

NET PROFIT PER CYCLE

J\$20/lb

**\$800,000-
\$1,000,000**

65%

**\$330,000-
\$450,000**

BASED ON MARKET PRICE @35-50/LB

*Based on a theoretical financial and technical model specific to Jamaican conditions; 7-9 month production cycle; purchase of seedlings for turmeric nursery; recommended green sales price of J\$35-50/lb; includes annual depreciation on capital investment (shade house & equipment).

PRODUCTION INFORMATION:

Turmeric (*Curcuma longa*) (Family: Zingiberaceae) is used most commonly as a condiment, in flavourings and fragrances, and in the health and beauty market. Traditionally Jamaica has reaped wild-grown turmeric. It is, however, proven that the climate in Jamaica is suitable for commercial cultivation of turmeric. With irrigation, application of good agricultural practices, and good farm management, it is estimated that turmeric can reach a yield of 25 MT/Ha, and a unit cost of production as low as J\$20/lb.

Production Timeline: May – December (7-9 months)

Irrigation Requirements: Drip or sprinkler system

Water Use Requirement: Average of 600m³ per production cycle (156,000 Gallons)

Climatic Requirements: From sea level to 1,500m at a temperature of 20-35°C. Well-drained sandy or clay loam soils with a pH range of 4.5 - 7.5 is preferred.

Land Preparation: Bed width of 1.0 m, 30 cm height and of convenient length are prepared with a spacing of 45 cm between beds. Planting is also done by forming ridges and furrows.

Planting Density: 45 * 30cm (18 * 12 inches)
31,000 single turmeric buds per acre.

Mulching: Mulched with green leaves immediately after planting.

Weeding: Weeding has to be done thrice at 60, 90 and 120 days after planting.

Application of Nutrients: Recommended blanket nutrient dosage for turmeric is 27 kg of N, 23 kg of P₂O₅, and 54 kg of K₂O per acre. Integrated application of coir compost (@ 2.5 t/ha) combined with manure, biofertilizer (azospirillum) and half dose of NPK is also recommended.

Mixed cropping: Turmeric can be grown as an intercrop in coconut plantations and raised as a mixed crop with chillies, onion and cereals like maize.



BUSINESS ADVANTAGE

- Local market conditions for turmeric are excellent with two main markets showing robust and increasing demand for local turmeric: Export market (in green form) and, local spice and beverage manufacturers (in dried fingers form).
- There are several primary processors able to transform green to dried fingers on the island or if you are interested in investing in primary processing, information is available
- Local processors are interested in sourcing Jamaican turmeric for its pungency and colour
- Annual demand in both export and processing markets is expected to grow over the coming years
- Current farm gate price of local fresh turmeric ranges from J\$30 – J\$60 per lb. Commercial production has the potential to bring the cost of production down significantly and increase producer profit margins and offer high returns on investment
- JACRA, the MoAF and FAO are promoting development of the full turmeric value chain for farmers and processors to realise the revenue potential of the crop. JACRA/FAO are leading a Turmeric Development Pilot to bring actors together, coordinate and structure the process.

PUBLIC SUPPORT AVAILABLE

- Training:**
- Good agricultural practices for turmeric nursery and field production
- Support:**
- Extension support
 - Full Financial Business Models
 - Record keeping templates
 - Extension visits
 - R&D trials to increase farm productivity
- Market linkages:**
- Facilitation of linkages to nurseries to source planting material
 - Facilitation of linkages to secure buyers through the Turmeric Development Pilot

BUSINESS RISKS & MITIGATION

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| Main production risks: | <ul style="list-style-type: none">• Contaminated turmeric seedlings/seed• Severe climate conditions and other yield limiting factors | <p>Suggested mitigation actions:</p> <ul style="list-style-type: none">• Purchase turmeric seedling from trusted nursery operator under the turmeric pilot <p>Suggested mitigation actions:</p> <ul style="list-style-type: none">• Invest in a drip irrigation system• Carefully select production site• Test soils• Apply for an agro-park lease where good public support is available |
| Main market risks: | <ul style="list-style-type: none">• Fluctuating market price | <p>Suggested mitigation actions:</p> <ul style="list-style-type: none">• Secure agreements with buyers prior to production• Mixed cropping with other cash crops to diversify income streams |



CONTACT & FURTHER INFORMATION ON TURMERIC CULTIVATION:

If this Business Opportunity is interesting for you, we are interested in knowing more about you!

- Where are you located?
- Do you have a field irrigation system or are interested in investing in one?
- What scale of production would you be interested in getting into?
- Do you need support in linking to buyers to sell your produce?
- Are you interested in investing in your own nursery to produce quality planting material and sell to other farmers?
- Are you willing to work in a facilitated partnership with buyers, JACRA, MoAF and FAO to build the industry?

For more information on this Business Opportunity and discuss how you could join the pilot please contact:

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