MASS PRODUCTION OF PREMIUM DATE PALM PLANTING MATERIALS USING TISSUE CULTURE MULTIPLICATION TECHNIQUES

PROJECT NAME: Premium Date Propagation Project

TAGLINE: 'Scaling sustainable date palm production from laboratory to plantation'.

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THE PROBLEM

- Date palm is dioecious and seed derived seedlings are highly heterozygous.
- Traditional propagation is laborious and slow(off-shoot produce few suckers/tree/year) Seedlings from seeds are often 50% male to female ratio.
- Therefore serious shortage of high yielding early maturing and disease resistant female date palm seedlings
- Plantation expansion and commercial production are limited.
- Growing demands for commercial plantations unmet.

THE SOLUTION

- Upgrade and rehabilitate an already functional tissue culture laboratory and greenhouse.
- Produce 500,000 disease free high yielding and early maturing female date palm seedlings through tissue culture technique by year 5
- Ensure consistent supply for farmers plantations, governments and NGOs.

MARKET OPPORTUNITY

- Global date market: over $20, billion, growing(steadily)
- Africa has favorable climate for date production. There is also rising consumption of date fruits, export potential.
- Large plantations and governments looking for certified seedlings.
- High unmet demand for seedlings immediate and long term market.

BUSINESS MODEL

- Direct sales of seedlings to farmers and plantations (see below)
- Contract propagation for governments and NGOs
- Consultancy and training service for orchard development
- Long-term: licensing/ royalty agreements for elite variaties
- Development agencies/NGOs(Youth/women empowerment, reforestation)
- Expert partners in the Middle East.

TECHNOLOGY AND PROCESS

- Tissue Culture Techniques(*in-vitro* micropropagation:Rapid multiplication of premium(elite) palms
- Major upgrade and expansion of facilities will be required to meet the demand
- Reconstruction of dilapidated greenhouse and nursery capacity for acclimatization and hardening
- Quality control protocols to ensure uniformity and disease-free materials

COMPETIVE ADVANTAGE

- Faster orchard establishment(3-4 years saved)
- Uniform, high-yielding, disease free seedlings
- Local production reduces import cost
- Partnership with Universities and Research Institutes for innovation

TRACTION AND MILESTONES

- Pilot work on laboratory and greenhouse established(year 1)
- Proof of concept seedlings successfully weaned

- Partnerships initiated by year 2

- 500,000 seedlings by year 5

FINANCIAL PROJECTIONS(SUMMARY)

- Year 1: Set-up plus pilot-No revenue

- Year 2 1/2: 1000-3000 seedlings at ₦ 5,000 each = ₦5,000,000 - ₦15,000,000
- Year 3: 10,000 seedlings at ₦5,000 each = ₦50,000,000

- Year 5: 300,000-500,000 at ₦5,000each = ₦ 1,500,000,000-
  ₦ 2,500,000,000

FUNDING NEEDS

We are seeking funding to support upgrades and expansion. Allocation will be as follows:

1. Laboratory and technology upgrades: ₦120,000,000
2. Greenhouse and Nursery rehabilitation: ₦15,000,000
3. Staffing and training: ₦20,000,000
4. Consumables and maintenance: ₦20,000,000
5. Marketing and operations: ₦10,000,000
6. Others(project vehicle etc.): ₦45,000,000

CALL TO ACTION

- Partner with us to build Africa’s capacity in premium date palm production.
- Contact: Nigerian Institute for Oil Palm Research(NIFOR).