Propagation of Banana and Plantain Disease-Cleaned Suckers

Propagate Success with Clean Suckers

Macro-propagation involves two techniques: field-based (decapitation) and detached corm (beds). It ensures disease-free seedlings, promoting uniform growth and stress resistance. Clean knives and hardened sprouts are vital for success.

Complete decapitation with excised meristem (top) and sprouting suckers (bottom)

This technology is TAAT1 validated.

8·8 Scaling readiness: idea maturity: 8/9; level of use: 8/9

Cost: $$$ **1500 USD per 8000 plantlets**

Nusery four months maintenance

ROI: $$$ **725—1050 USD**

Net profit per cycle

340 USD

2,500 plantlets shade house

2,300 USD

Cost of chamber of 8,000 plantlets

IP

Open source / open access

Problem

- Natural regeneration often results in contaminated banana and plantain planting materials, harming productivity and lifespan.
- Traditional methods result in non-uniform growth, affecting the overall efficiency of banana and plantain cultivation.
- Conventional methods may lead to stress-prone plantlets, negatively impacting their adaptation and performance in the field.

Solution

- Macro-propagation ensures the production of banana and plantain seedlings free from pests and diseases, promoting healthier and more resilient crops.
- Macro-propagation contributes to increased productivity and prolonged lifespan of banana and plantain plants .
- This technique reduces financial barriers by offering a low-cost method of obtaining disease-free seedlings
- Macro-propagation ensures more uniform growth of banana and plantain seedlings.

Key points to design your business plan

The Propagation of Disease-Cleaned Suckers technology enhances banana and plantain production by providing disease-free planting materials, reducing losses from pests and diseases.

- Costs for propagation equipment and infrastructure are relatively low, with decapitation costing about 0.30 USD per 100 plantlets every four months and chamber construction around 2,300 USD.
- A study in South-Kivu DR Congo demonstrates the profitability of macro-propagation, yielding a net profit between 725 and 1,050 USD per cycle.

Gender assessment 4

Climate impact 7

International Institute of Tropical Agriculture (IITA)
Amah Delphine

Technology from

ProPAS

Commodities

Banana/Plantain

Sustainable Development Goals

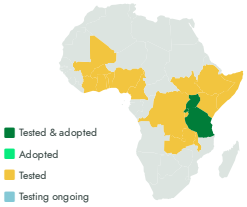
Categories

Production, Practices, Seed system

Best used with

- Improved Varieties of Plantain for Tropical Lowlands ›
- Improved Varieties of Banana for the African Highlands ›

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.