

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)



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Technology from

ProPAS

Commodities

Banana/Plantain

Sustainable Development Goals



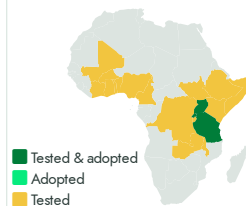
Categories

Production, Practices, Seed system

Best used with

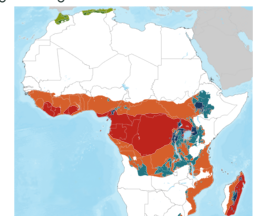
- [Improved Varieties of Plantain for Tropical Lowlands >](#)
- [Improved Varieties of Banana for the African Highlands >](#)

Tested/adopted in



Where it can be used

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



✓ This technology is **TAAT1 validated**.

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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



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

Climate impact



