

MandiPlus: Cutting dipping in insecticides for management of cassava whiteflies

Dip once, Defend for months — MandiPlus controls whiteflies, reduces viruses and boosts cassava yield

MandiPlus is a simple treatment for cassava cuttings that protects them from pests and diseases by soaking them in a mix of insecticide, fungicide, and a binder. This helps farmers use shorter cuttings, improves plant growth and yield, and makes planting cheaper and easier, especially for small farmers.



Cassava & Fruits

Embrapa; Syngenta Foundation, IITA
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Commodities

Cassava

Sustainable Development Goals



Categories

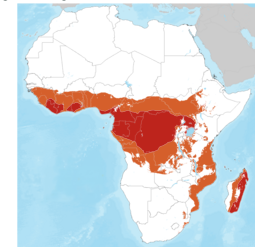
Production, Inputs, Pesticide

Tested/adopted in



Where it can be used

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



Target groups

Breeders, Farmers, Seed companies



This technology is **pre-validated**.



Scaling readiness: idea maturity 9/9; level of use 7/9

Cost: \$\$\$ **600 USD/Ha**

Pesticide cost

ROI: \$\$\$ **471 %**

Return with MandiPlus-treated cuttings



Open source / open access

Problem

- Whiteflies damage cassava plants by feeding on them and spreading viruses
- Viruses like Cassava Mosaic Disease (CMD) and Cassava Brown Streak Disease (CBSD) cause up to 50% or more yield losses
- These issues have led to food insecurity and repeated famines in parts of Africa
- Economic losses from pest and virus damage exceed US\$1.25 billion in several countries
- Rising whitefly populations worsen crop damage and disease spread
- Smallholder farmers struggle to access healthy, disease-free planting materials
- MandiPlus protects cassava cuttings from pests and diseases, improving plant health and yields

Solution

- MandiPlus coats cassava cuttings with insecticide, fungicide, and binder to protect against whiteflies and diseases.
- It reduces whitefly populations by 85-88% and lowers virus diseases like CMD and CBSD by nearly half.
- The treatment improves sprouting and growth, increasing stem number by 119% and root yield by 50%.
- Allows use of shorter cuttings, reducing planting material needs and costs.
- Simple soaking application makes it easy for small farmers to use without complex equipment.
- Safety gear is recommended to protect farmers during application.
- Affordable and scalable, designed to boost cassava yields and incomes in virus-affected regions.

Key points to design your business plan

- **For Resellers:** Need strong farmer networks and supply chains. Focus on bulk sourcing, transport, and partnerships with manufacturers and agro-dealers. Current markets: Nigeria, Tanzania, and beyond.
- **For Farmers:** Simple soaking treatment raises cutting survival, reduces pests/diseases, and can increase yields by up to 50%. Costs ~USD 5–10/ha, offering strong income gains and supporting food security.

Inclusion assessment

Climate impact



MandiPlus

<https://taat.africa/gcw>

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