

Cassava virus indexing: Molecular diagnostics for cassava seed health certification

Virus diagnostic tool for cassava seed health certification by seed producers and seed certifiers.

Cassava virus indexing is a method used to detect and remove virus-infected cassava plants early in the seed production process. It uses advanced diagnostics like **PCR** and **LAMP** to ensure only virus-free plants are used. This helps maintain seed quality, strengthens crop health, and supports seed certification efforts, making it essential for seed producers and certifiers in cassava-growing regions.



Commodities

Cassava

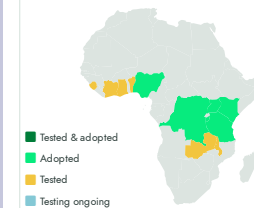
Sustainable Development Goals



Categories

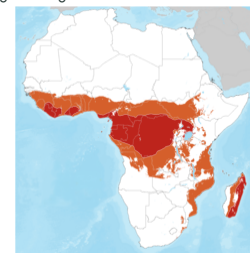
Pre-production, Practices,
Pest control (excluding weeds), Seed system

Tested/adopted in



Where it can be used

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



Target groups

Breeders, Seed companies,
Advisory and Extension Services,
Seed Regulators

 This technology is **pre-validated**.

 9.8

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

Gender assessment



Climate impact



Problem

- Virus-infected cassava planting materials are often unknowingly used in seed production.
- Vegetative propagation (e.g., stem cuttings) increases the risk of virus transmission.
- Cassava crops are highly vulnerable to damaging viruses like CMD (Cassava Mosaic Disease) and CBSD (Cassava Brown Streak Disease).
- Lack of effective screening tools leads to poor seed quality and crop losses.

Solution

- Accurate detection** of viruses using PCR and LAMP techniques.
- Virus-free planting material** selection for better seed quality.
- Improved seed certification** by enabling diagnostic-based certification.
- Increased crop resilience** and yield by using healthy seeds.

Key points to design your project

Cassava Virus Indexing helps improve seed quality and prevent virus spread in cassava production. It supports food security and seed certification by detecting infected planting materials early.

To adopt it in your projects:

- Estimate testing needs and equipment (PCR, LAMP kits, reagents).
- Budget for lab setup (USD 3/sample).
- Train staff on sample collection, diagnostics, and analysis.
- Create awareness materials for seed stakeholders.
- Partner with research centers and seed certifiers for smooth integration.

20,000 USD

Initial setup cost for a diagnostic lab

3 USD

Cost per sample for testing



No formal IP rights



Cassava virus indexing

<https://taat.africa/tsk>

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Enquiries e-catalogs@taat.africa