

Waxing of fresh cassava roots to extend the shelf-life and increase marketability



International Institute of Tropical Agriculture (IITA)
Adebayo Abass

Extend shelf-life of fresh cassava

The waxing technology for cassava roots starts from careful cultivation to produce commercially acceptable roots. Before harvest, leaves are pruned to prevent damage. After harvest, roots are sorted, washed, weighed, disinfected, and dried at a pack-house. Finally, a food-grade wax is applied to extend their shelf-life.

This technology is **TAAT1 validated**.

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

Gender assessment

Climate impact

Technology originally documented by
ProPAS

Commodities
Cassava

Sustainable Development Goals

Categories
Prevention & storage, Practices, Post-harvest management

Tested/adopted in

■ Tested & adopted
■ Adopted
■ Tested

Problem

- Deterioration:** Cassava roots deteriorate rapidly post-harvest.
- Marketability:** Their size, shape, and harvest damage affect marketability.
- Food Security:** Short shelf-life limits availability, affecting food security.

Solution

- Preservation:** Waxing extends freshness and protects cassava roots.
- Shelf-life:** It significantly extends the roots' shelf-life.
- Food Security:** The technology enhances food security by ensuring longer availability of cassava roots.

Where it can be used

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

Key points to design your project

The waxing technology for cassava roots boosts climate resilience and aligns with SDGs 2, 8, and 13 by extending shelf-life, enhancing marketability, and promoting a climate-resilient crop.

For its adoption, the following steps are essential:

- Training and Cultivation:** Conduct educational programs on the waxing technology and guide farmers on producing commercially viable cassava roots.
- Harvesting and Post-Harvest Handling:** Train farmers on pruning and harvesting to avoid damage, and instruct on post-harvest procedures including transporting, sorting, washing, weighing, and disinfecting the roots.
- Waxing and Pack-house Operations:** Demonstrate the process of drying and waxing the roots, and assist in setting up a pack-house if necessary.
- Market Linkages and Evaluation:** Establish market linkages for selling waxed cassava roots, and monitor the technology's adoption and evaluate its impact.

Target groups
Farmers

<p>126 USD/ton total cost for waxing</p>	<p>32 % Marginal rate of return when compared to unwaxed roots.</p>
<p>3,000—5,000 USD Estimated investment cost for an "all-inclusive" packhouse or processing centre, including water supply</p>	<p> IP Open source / open access</p>



