



TAAT Technology: Mobile Cassava Processing Plant

Link: <https://propas.iita.org/solutions/mobile-cassava-processing-plant/7/details/>

Technology

- Specially constructed mobile processing plant includes six-wheel truck with crane, processing machinery, electric generator, water pump, water storage tank, and other accessories.
- Unit driven to farmgate for processing roots into cassava products of choice
- Sides and tailgate of truck open flat for a larger platform or processing workspace
- Equipped with specific set of machinery tailored to process a targeted, shelf-stable, and market-demanded cassava product (high-quality cassava cake, wet fufu, or wet starch, and gari)
- Processed product transported with ease, at low cost to centrally located factory for drying and packaging

Geography Coverage

- Nigeria

Commodity

- Cassava

Problems Solved and Benefits

- Mobile plant avoids problems associated with investment in expensive processing factories with challenges of insufficient electricity and inconsistent and inadequate supply of roots
- Avoids cost of transporting bulky fresh roots to distant factories
- Processes cassava at farmgate into non-perishable, semi-processed products that are 20–50% of the weight of fresh roots
- Less bulky, semi-processed products are transported from the farms at lower transportation cost to factories for final drying and packaging



Value Chain Position

- Postharvest

What is it for

- Cassava processing investors

Costs

- US\$40,000–US\$48,500
- including electric generator, six-wheel truck and loader crane
- depending on final cassava products required (gari, wet starch, wet fufu, or high-quality pressed cake for cassava flour (HQCF))

Sample IRR/FOI

- US\$52,900 start-up capital needed for gari production. Sample loan of US\$37,000, with three-month moratorium, 36-month loan tenure and 17% interest rate, the net profit after tax is estimated at US\$82,600, net present value (NPV) is US\$79,524, the internal rate of return (IRR) is 49%, and return on investment (ROI) is 156.2
- US\$49,386 start-up capital for processing high quality cassava cake (HQCC), Sample loan of US\$34,570 with three-month moratorium, 36-month loan tenure and interest rate of 17%, net profit after tax approximately US\$77,000; net present value (NPV) of US\$75,346, internal rate of return (IRR) of 50%, and return on investment (ROI) of 155.9

Links to Associated Technologies

Aflatoxin management (Aflasafe): <https://propas.iita.org/solutions/aflatoxin-management-eg-aflasafe-atoxic-fungi/77/details/>

"Hello Tractor" - Contract mechanization ap: <https://propas.iita.org/solutions/contract-mechanization-apps-eg-hello-tractor/75/details/>

"Six Steps" cassava weed management: <https://propas.iita.org/solutions/six-steps-cassava-weed-management/70/details/>

Semi Autotrophic Hydroponics for Cassava Multiplication: <https://propas.iita.org/solutions/semi-autotrophic-hydroponics-for-cassava-multiplication/58/details/>