

From Conference Paper No. 8 “New Challenges in the Cassava Transformation in Nigeria and Ghana”

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Nature of the Success

Why is it considered a success?

- Production triples within a decade, from 1984 to 1992
- Nigeria surpasses Brazil as world’s leading cassava producer
- Sixty percent of Nigerian villages plant improved varieties
- Resulting price fall benefits consumers, making cassava a powerful poverty fighter.

Motors of change

- Improved varieties (tropical Manioc Selection (TMS)): high yielding, early bulking, and disease resistant
- Biological control of mealybug epidemic
- Processing technology development: gari (dried prepared cassava porridge), mechanical grater to release processing labor
- Change from inhibiting to favorable trade policies.

What constrains further expansion?

- Harvesting labor bottlenecks
- Market competition from subsidized imported starches.

Aggregate Impact

Scale and productivity gains

- Five million farmers produce cassava

- Cassava accounts for 12 percent of farmers’ cash income.

Equity

- Broad access to improved varieties across farm sizes
- Cash production concentrated, 50 percent among top 10 percent of households, but less concentrated than maize (70 percent cash sales among top 10 percent of farm households)
- Poor consumers are major beneficiaries of a 30-year productivity-induced fall in real cassava and gari prices.

Sustainability

- Financial: highly profitable for smallholders, returns to HYV plus mechanical grating 20 times greater than traditional varieties with hand grating
- Ecological: long-term yields sustainable without fertilizer.

Lessons for Building Future Successes

Resume long-term funding for cassava research

Processing technology necessary for rapid market development

Table L.1: Dynamics and Drivers for Change

Timing	Phase 1 Cassava becomes a staple food, 1910–60	Phase 2 Laying the foundation, 1960–77	Phase 3 Mealybug invasion, 1978–83	Phase 4 The surge, 1984–92	Phase 5 New challenges, 1993 on
Key actors	Immigrants Farmers	Rural artisans IITA Shell Oil	IITA	Government National Root Crop Research Institute Private oil companies	
Motors of change	Severe rural labor shortages (the result of wars and influenza epidemic of 1918) induce a move out of labor-demanding cocoyam and into cassava. Emancipated slaves from Sierra Leone introduce gari processing technology. Immigrants bring in new, bitter varieties.	Mechanical graters imported from Benin and refined by local artisans. Graters spread, releasing processing bottlenecks. TMS varieties developed (1971–77) but fail to spread rapidly.	Mealybug invasion attacks cassava crop.	Biological control of mealybug (1981 on) takes effect. Policy changes stifle food imports —drop food import subsidies —ban on cereal imports —devaluation of the naira raises food import prices. Government includes cassava in extension programs. Oil companies help finance cassava promotion.	Rising wage rates lead to labor constraints in harvesting and processing. Imported corn starch becomes cheaper than cassava starch.
Beneficiaries	Small farmers Urban gari consumers	Small farmers Urban consumers		Cassava farmers Urban consumers	
Production gains	Production doubles from 1948 to 1958	Grater induces 50% increase in production. Annual growth 2.5% per year.	Production falls 20% –3.7% per year.	Production increases 150%. Annual growth rate of 12% per year.	Production up 15% Annual growth rate slows to 1.5% per year.
Impact	Cassava becomes established as a rural food staple. Growing urban markets attract gari trade.		Massive mobilization for biological control of mealybug across Africa.	Real gari prices fall. Gari/yam price ratio falls by 50%. Gari/rice price ratio falls by 25%.	Consumer gari prices trend upward. Industrial demand for cassava starch stalls.