Case Study Summary
Cassava Transformation in Nigeria

from Conference Paper No.11a
"New Challenges in the Cassava Transformation in Nigeria and Ghana,"
by Felix Nweke

1. Nature of the Success

a. Why is it considered a success?

- production triples within a decade, from 1984 to 1992
- Nigeria surpasses Brazil as world's leading cassava producer
- 60% of Nigerian villages plant improved varieties
- resulting price fall benefits consumers, making cassava a powerful poverty fighter

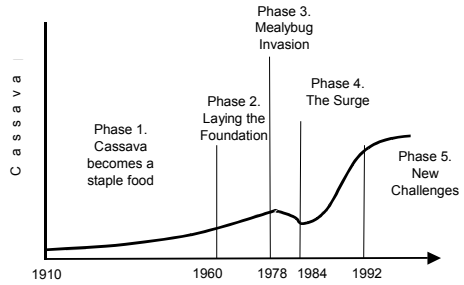
TMS varieties (right) outyield traditional varieties (left)

b. 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

c. What constrains further expansion?

- harvesting labor bottlenecks
- market competition from subsidized imported starches



2. Aggregate Impact

a. scale and productivity gains

- 5 million farmers produce cassava
- cassava accounts for 12% of farmers' cash income

b. equity

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

Gari marketing.

c. sustainability

- financial: highly profitable for smallholders, returns to hyv plus mechanical grating 20 times grater than traditional varieties with hand grating
- ecological: long-term yields sustainable without fertilizer

3. Lessons for Building Future Successes

- resume long-term core funding for cassava research
- processing technology necessary for rapid market development

4. ***Dynamics and Drivers of Change***

	Phase 1 Cassava becomes a staple food	***Phase 2*** Laying the foundation	***Phase 3*** Mealybug invasion	***Phase 4*** The Surge	***Phase 5*** New Challenges
Timing:	1910 – 1960	1960-1977	1978-1983	1984-1992	1993 on
Key actors:	• immigrants • farmers	• rural artisans • IITA • Shell Oil	• IITA	• government • National Root Crop Res. Inst • 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		• cassva farmers • urban consumers	
Prodn gains:	• production doubles from 1948 to 1958	• grater induces 50% increase in production • annual growth 2.5% per year	• prodn falls 20% • -3.7% per year	• prodn increases 150% • annual growth rate of 12% per year	• prodn 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 upwards • industrial demand for cassava starch stalls