Sector Brief: Cassava

Transforming the cassava value chain in the Congo Basin

The Challenge: Cassava production is driving deforestation

Cassava is among Africa's most important staple crops with an estimated 500 million people who consume it daily, and for half of them it is a primary food source. Its resilience to poor soils, irregular rainfall, and challenging growing conditions makes it an important food-security crop.

In much of the Congo Basin, cassava is produced through low-input smallholder systems that rely on shifting cultivation, including slash-and-burn practices*. Where yields remain low and market demand rises, farmers often expand production by clearing new land rather than increasing productivity on existing plots.

This can shorten fallow periods, reduce soil fertility, drive further agricultural expansion, and thereby increase deforestation pressures.

Cassava is therefore both a deforestation risk and a transformation opportunity. It is a dominant staple crop, but its current production model often keeps farmers in low-productivity systems that depend on land expansion.

Cassava peeling after harvest. Photo by Dappasolomon001 / Wikimedia Commons, licensed under CC BY-SA 4.0.

Cassava sector dynamics:

- Essential food-security crop across Africa
- Dominated by smallholder and informal production systems with low yields
- Often produced through shifting cultivation/ slash-and-burn systems in forest-frontier areas
- Highly perishable roots requiring rapid processing after harvest
- Expansion risk where rising demand is met through new land clearing rather than productivity gains

In the Democratic Republic of the Congo (DRC), cassava accounts for 72% of the country's primary agricultural output and is grown almost entirely through slash-and-burn practices, heavily contributing to deforestation and greenhouse gas emissions.

* Slash-and-burn farming is a form of shifting agriculture where the natural vegetation is cut down and burned as a method of clearing the land for cultivation.

The Opportunity: Building sustainable cassava value chains

The cassava market in Africa is expected to continue growing over the next decade, with market volume projected to reach 233M tons and market value to reach $158B by the end of 2035.

The issue isn't a lack of land, but that low yields make clearing new land easier than improving existing plots. The yield gap is significant: potential yields are roughly six times current yields.

Improving cassava yields, access to agricultural inputs, soil fertility management, aggregation, processing, and market access can help meet food demand without continued expansion into forest areas. This is achievable in practice: in Ghana, cassava yields nearly doubled between 2008 and 2018, with improved varieties yielding around 40% more than traditional ones.

The opportunity is not simply to increase cassava production, but to transform it into a higher-value, commercially viable value chain that prevents deforestation.

Cassava has strong demand fundamentals because it is already deeply embedded in household consumption. It can also be processed into a wide range of products, including flour, starch, gari, chikwangue, feed, industrial inputs, and other food products. This creates opportunities for local value addition, import substitution, SME growth, and rural job creation.

Given the growing impacts of climate change, cassava is also highly relevant for climate adaptation. Its resilience to climate stressors could make it an important adaptation option for Africa as other staple crops become increasingly vulnerable to changing climatic conditions.

Processing is central to unlocking the opportunity. Because fresh cassava deteriorates quickly, investment in drying, milling, fermentation, storage, quality control, and logistics can reduce losses and expand market access.

Sustainable cassava's untapped opportunity:

- Market creation opportunity in an undercapitalised but high-demand food system
- Strong demand fundamentals driven by daily food consumption
- Large productivity upside from a wide yield gap that can be captured through improved varieties, inputs, and soil management
- Processing and post-harvest gains from drying, milling, fermentation, storage, and logistics
- Aggregation and market access linking dispersed smallholders to higher-value buyers
- Value-addition potential through flour, starch, gari, chikwangue, feed, and industrial uses
- Significant livelihood impact for smallholder farmers, processors, traders, and women-led businesses
- Climate adaptation potential due to cassava's resilience under difficult growing conditions
- Import-substitution potential through local cassava flour and starch production

Key barriers to scale

Despite strong fundamentals, investment in cassava value chains remains limited due to structural, technical, and commercial barriers.

Cassava value chains remain highly fragmented, inefficient, and under-commercialised. Production is dominated by smallholders, yields are low, processing is informal, and access to finance, improved agricultural inputs, mechanisation, and reliable markets remains limited.

At the farm level, smallholders often lack access to improved and disease-resistant planting material, extension services, mechanisation, aggregation systems, and working capital. At the processing level, many SMEs face weak infrastructure, unreliable energy, inadequate drying and storage capacity, obsolete machinery, inconsistent product quality, and limited quality-control systems.

Cassava's perishability is another structural bottleneck. Fresh roots can begin deteriorating as quickly as 24 hours after harvest, and most varieties deteriorate within three to four days, meaning that rapid processing is essential.

This limits farmers' ability to sell into higher-value markets, increases post-harvest losses, and constrains processors that need consistent volumes and quality. Investment in local processing, drying, storage, logistics, and aggregation can therefore increase farmer incomes while reducing the incentive to expand production through forest clearing.

Women are central to the sector as they play a major role in cassava and other food crop production, processing, and marketing. However, women-led processors and traders often face particular constraints around finance, equipment, formalisation, and market access.

Constraints to sustainable cassava value chains:

- Limited access to finance for smallholders, processors, and SMEs
- Low yields and limited access to improved planting material and agricultural inputs
- High post-harvest losses due to rapid root deterioration
- Weak processing infrastructure, including drying, milling, storage, and packaging
- Limited quality-control and food-safety systems
- Weak aggregation, logistics, and market linkages
- Limited working capital for processors and traders
- Limited scale and bankability of early-stage enterprises



The role of blended finance and Canopy Trust

These constraints can be addressed by a blended approach that tackles both financial and structural barriers. Cassava businesses often operate in markets with strong underlying demand, but many are not yet bankable because of fragmented supply chains, high upfront equipment costs, limited working capital, quality-control gaps, and weak management systems.

Canopy Trust can help bridge this gap by combining technical assistance with catalytic capital. Technical assistance can support feasibility studies, processor diagnostics, investment modelling, farmer-supplier models, quality-control systems, deforestation and livelihood impact assessments, and market-linkage strategies. Catalytic capital can help enterprises invest in processing equipment, drying technologies, storage, aggregation infrastructure, and working capital.

The cassava sector offers multiple scalable entry points for investment:

- Agroforestry and climate-smart cassava production, integrating cassava with tree crops, soil restoration, and sustainable land management to reduce forest-expansion pressures.
- Cassava processing and product commercialisation, including drying, milling, fermentation, packaging, and storage, with a focus on higher-value products such as cassava flour.
- Improved planting material and on-farm productivity, deploying high-yielding, disease-resistant varieties and better agronomy to raise output on land already farmed.
- Farmer aggregation and outgrower models linked to reliable processors, offtakers, and input providers.
- Digital procurement, traceability, and market-linkage platforms connecting farmers, processors, traders, and buyers.
- Storage, logistics, and rural collection infrastructure to improve supply reliability and reduce spoilage.

Impact

Transforming cassava value chains can deliver significant outcomes across food security, climate resilience, livelihoods, and inclusive economic development:

- Reduced pressure for agricultural expansion, helping to limit deforestation and associated emissions
- Improved food security through more reliable supply of a key staple crop
- Higher farmer incomes through better yields, aggregation, and market access
- Reduced post-harvest losses through processing, storage, and drying investments
- Job creation in farming, processing, logistics, trading, and distribution
- Improved inclusion, particularly for women active in cassava processing and local food markets
- Climate adaptation benefits through investment in a resilient staple crop
- Stronger local food systems and reduced dependence on imported substitutes

Example: Sustainable cassava processing supported by Canopy Trust

Project	Faja Lobi (www.fajalobi.org)
Location	Idiofa, Kwilu Province, DRC
Sector	Agroforestry, sustainable agriculture and sustainable energy
Overview	Integrated agroforestry, reforestation and agro-industrial hub restoring degraded land with cassava for food and plantation-grown acacia for clean, efficient charcoal production. A heat recovery unit for cassava processing that dries and grinds it into a higher-value good such as flour.
Challenge addressed	• Cassava production relies on slash-and-burn agriculture • Inefficiencies and yield gap across the cassava value chain • Limited access to financing
Canopy Trust role	Technical Assistance to de-risk investment and enable industrial-scale deployment: • Project and financial structuring • Stakeholder and market analysis • Environmental and social impact assessment and MRV development
Expected Impact	• Forests (SDG 15): Reduced deforestation from sustainably grown cassava • Climate (SDG 13): Reduced land-use emissions and enhanced carbon sequestration • Gender (SDG 5): Job opportunities and higher incomes for smallholders, particularly women

Transforming cassava value chains is one of the most practical opportunities to align food security, climate adaptation, rural livelihoods, and sustainable market development in the Congo Basin.

Canopy Trust is building a pipeline of high-impact investment opportunities in the cassava value chains across the Congo Basin to reduce deforestation. Learn more about Canopy Trust: www.canopytrust.org

Faja Lobi