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Role of markets to re-establish a more direct connection between producers and consumers

Linking urban consumers with rural producers through social businesses in Nairobi



▲ Peanut stands in an informal street market in Mathare, Nairobi. © I. Edel

Just about everyone eats peanuts in Kenya. They are used to make sauces and peanut butter, and are also a popular snack. These legumes are rich in protein, essential minerals, fat and are therefore key sources of energy. However, depending on the season, aflatoxins may develop on the outside and inside of the kernels. Aflatoxin prevalence on peanuts is high in the slums, which are home to 60-70% of the total urban population. Aflatoxins are carcinogenic and contribute to stunting in children. In Kenyan slums, stunting levels remain higher than the national average. How would it be possible to offer quality peanuts to low-income consumers on informal markets? Informal markets (i.e. unregulated and unprotected street

food vendors and small shops) are an integral component of the foodscape in slums. We co-create ways to streamline relations between producers and urban consumers in Kenya through an agroecological lens.

As part of a partnership with Greenforest Foods Limited, a Kenyan peanut processor, ICRISAT is developing a business-to-sales model for aflatoxin-tested peanuts. The goal is to supply affordable safe peanuts to Mathare—a Nairobi slum with over 400,000 inhabitants—whilst maintaining distribution systems involving street food vendors, hawkers and small shops. Inspired by the solidarity economy, Greenforest builds value chains linking rural Kenya and

Mathare, while ICRISAT supports Greenforest with expertise in agroecology, aflatoxin testing and quality management. Greenforest supports farmers in Baringo and Elgeyo Marakwet counties transitioning towards agroecology-compliant peanut production, e.g. effective seed selection, organic soil management, crop rotations while reducing external inputs. In 2021, we conducted market studies in Mathare and the results revealed low awareness of aflatoxin among consumers and vendors/retailers. **This highlights the need for increased awareness on food safety to reduce the risk of aflatoxin exposure through informal markets.** We also explore ways for establishing direct connections between consumers and producers via a participatory guarantee system (PGS) while helping co-create sustainable linkages between producers and consumers. **PGS creates trust between all value-chain actors.** Although limited to one slum, the scheme will potentially deliver safe peanuts to 10,000 consumers. This case study should provide stepping stones for scaling the impact pathway to accessible, high quality, nutritious, healthy peanuts to other low-income markets across Kenya.

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Towards hybrid governance of the cocoa sector in Cameroon to enhance economic and environmental sustainability

The cocoa sector is facing a growing demand—mainly from European markets—to demonstrate the legality of its production, its sustainability and the neutrality of its impact on tropical forests. In Cameroon, the certification of cocoa according to private standards could be an effective way to facilitate the production of legal, sustainable and zero-deforestation cocoa. We tested this hypothesis by studying the impact of cocoa certification (UTZ-Rainforest Alliance, sustainable agriculture standard for farm and producer groups, v1.2, 2017) on the livelihoods of smallholder farmers (owning a cocoa plantation of 0.5-5 ha), who contribute to almost 90% of Cameroon's production.

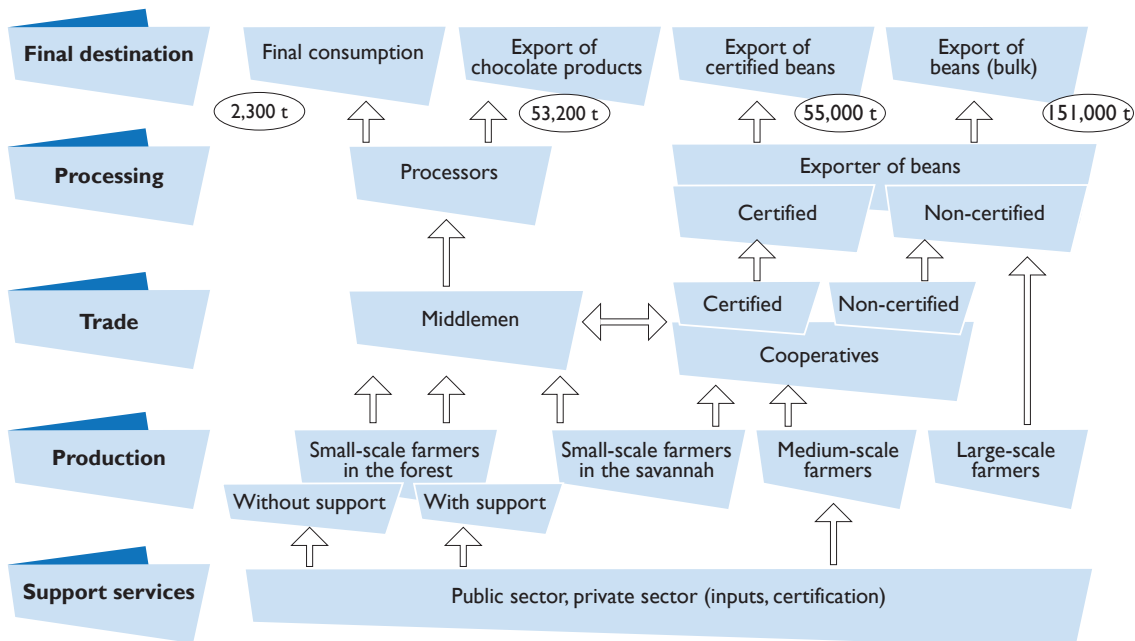
Three production systems for smallholder cocoa farmers were compared:

1. Non-certified small producers have a net profit rate of 4% and an added value of FCFA471,984/t. This mode of cocoa production is a low profit-making activity and weakened by an increase in production costs.
2. Producers in shaded agroforests involved in certification receive support from purchasing companies of around FCFA80,000/year, thereby enhancing their financial performance. Their net profit rate is 24%. The added value is estimated at FCFA486,102/t.
3. Grassland farmers in the Mbam region involved in certification have much higher production costs than cocoa farmers in forest areas.

The monetarization of certain costs lowers the net profit rate, which amounts to 15%, but reinforces the added value, which stands at FCFA660,544/t.

Certification can therefore be highly advantageous for smallholders by offering a higher purchase price for cocoa and above all by improving production through targeted support in terms of training, equipment and inputs. Overall, it has superseded the State in providing actual support to small producers.

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▲ The main flows of the cocoa value chain in Cameroon in 2019. Source: Lescuyer et al. (2020)

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Consumer preference for rice with ecological, social and health certification labels

Agroecological food production seeks to optimize interactions between humans and the environment, with consideration of social aspects that create a sustainable and fair food system. In Vietnam, the rice sector is characterized by a high carbon footprint, pesticide overuse and low farm labor wages⁽¹⁾. Reducing these negative impacts while also ensuring food sovereignty is essential to agroecological rice production. The importance of conveying these, along with health attributes, to rice consumers through food labels has been well documented⁽²⁾. However, these components are often treated as a single sustainability attribute and relatively little research has been conducted to unravel the relative weight consumers place on individual traits driving their purchasing decisions.

We conducted a choice experiment with 410 supermarket patrons to analyze Vietnamese consumers' relative preferences and willingness-to-pay for four rice certification labels: low-emission, eco-friendly, ethically produced, and low glycemic index (Figures A and B). The results showed that **consumers were willing to pay a price premium for all certification labels, with the highest added value being a 66% increase in price for the low glycemic index trait in rice**. The findings for eco-friendly and ethical production labels were similar, with a price premium of just over 50%, while low-emission rice had a comparatively lower, yet still positive, value for consumers, with a 28% price increase. **Garnering a premium for rice produced according to**

agroecological principles helps ensure economic sustainability for producers, in turn prompting them to adopt practices that have widespread collective social and environmental benefits. The results of this study could be used to gain further insight into the consumer value of different certification labels and to guide future policy and market recommendations promoting sustainably produced and healthier food, which is a crucial step in shifting food systems towards an agroecology paradigm.

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Alternative A		Alternative B		Status Quo	
Low-emission		Low-emission	•	Low-emission	
Eco-friendly		Eco-friendly	•	Eco-friendly	
Ethically produced	•	Ethically produced		Ethically produced	
Low glycemic index	•	Low glycemic index		Low glycemic index	
Price (VND/kg)	24,000	Price (VND/kg)	22,000	Price (VND/kg)	20,000

- Ethical production meets safe and fair working conditions
- Low glycemic index ensures a slower release of energy



- Low-emission has a reduced carbon footprint
- Eco-friendly meets strict pesticide regulations



▲ Figure A. Examples of certification labels representing, from left to right: ethical, low-emission, eco-friendly, and low-glycemic index rice.

▲ Figure B. Cards showing alternative choices between rice labeled with different combinations of sustainability and health certifications at different price points and status quo rice with no certification labels.