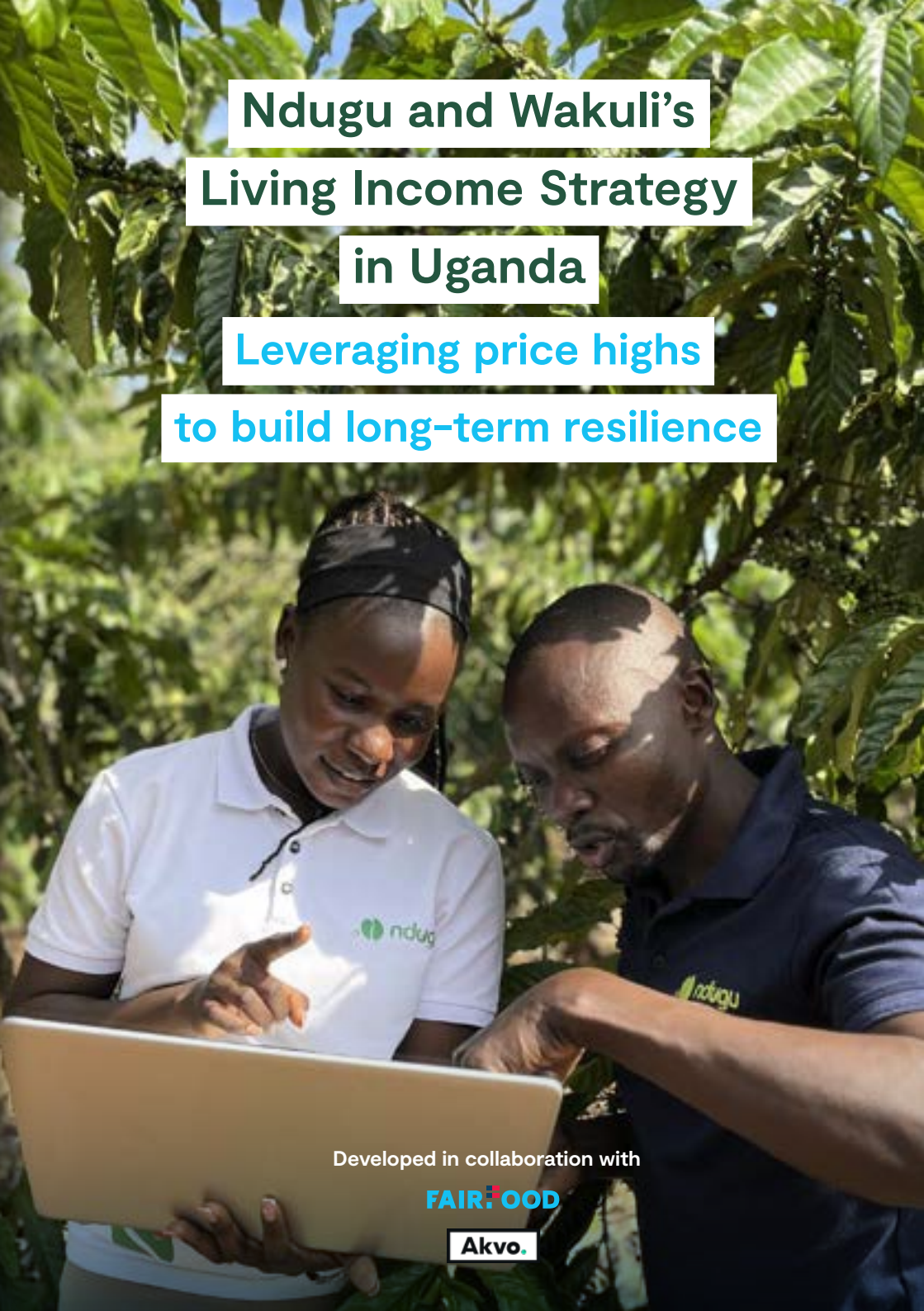
Ndugu and Wakuli's Living Income Strategy in Uganda

Leveraging price highs to build long-term resilience



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Ndugu brings together more than 6,000 coffee farmers across 23 cooperatives in the Masaka region. This is the home of Uganda's finest Robusta — grown here since the 1800s.

Executive summary

Uganda is consolidating its position as Africa's largest coffee exporter and a global Robusta player. This growth raises a central question: can coffee remain a viable livelihood for farming families when current high prices decline? This case study documents the phase that laid the groundwork for a new pilot with Ndugu – a social enterprise that powers 32 coffee farmer cooperatives reaching over 10.000 smallholder farmers in the Masaka region – and Dutch roaster Wakuli, who are using farmer-level data to guide purchasing decisions that keep coffee farming viable over the long term.

The work builds on the Living Income Commodity Strategy co-developed by Fairfood and Heifer International under the RECLAIM Sustainability! programme, funded by the Dutch Ministry of Foreign Affairs. In Uganda, this approach is now being prepared for wider use with support from GIZ through the Sustainable Agricultural Initiative (SASI) and the Due Diligence Fund (DDF). A key shift is that the focus is no longer only on producing analyses, but also on enabling Ndugu to own the process by building an internal data team trained by Akvo.

The study combines survey data from 231 farmers in Masaka and Kyotera with two tools: the **Living Income Price (LIP)**, which estimates the minimum coffee price per kilogram needed for a typical household to reach a living income; and **Cost–Yield Efficiency (CYE)** segmentation, which groups farmers according to production costs and yields. The analysis is disaggregated by gender, age, certification and cooperative, and includes price-scenario modelling to test how many farmers can keep earning a living income when prices fall.

Key findings include:

- At current prices (median farmgate price USD 3.69/kg vs median LIP USD 2.87/kg), around **64% of farmers earn at least a living income**, but this is highly dependent on the current price peak.
- A moderate price drop reduces this share to around **40%**, and a severe drop to **below 20%**, with high-cost, low-yield farmers affected first.
- Women and youth require higher LIPs than men and older farmers, largely due to smaller land sizes, household structures and reliance on hired labour.
- Costs and yields vary across cooperatives and translate into different LIPs, indicating that organisational performance may be a major factor in income resilience.

For Ndugu, the most important shift was practical. Scenario modelling and segmentation turned abstract concern about "what happens when prices fall" into a concrete view of which farmers are at risk, under which conditions, and what levers exist (price, inputs, services, diversification) to respond. This has already begun to influence contract discussions, identification of priority farmer groups and internal conversations about cooperative support.

The recommendations that follow focus on strengthening and expanding Ndugu's data systems, addressing structural inequalities faced by women and youth, tailoring support to different farmer segments, and anchoring pricing discussions in shared evidence rather than market movements alone. The underlying methodology is available as the open-source **Farmer Income Data Toolkit**, intended for others to adapt and use in their own supply chains. A follow-up study, currently underway with GIZ support, will deepen the analysis on regenerative agriculture, agroforestry and cooperative performance; results will be published in 2026.

1. Introduction

Uganda is making bold moves in coffee. In May 2025, it overtook Ethiopia as Africa's top exporter, shipping 47,606 tonnes. This boom is not only about volumes, it reflects a deliberate shift in public and private sector strategy. The country is investing in quality, data sovereignty, and responsible business conduct, aligning its coffee sector with global trends in sustainability, traceability, and due diligence.

As Uganda rises to become one of the top six exporters worldwide, the question is no longer whether Robusta can compete on volume, but whether it can offer a sustainable and viable livelihood for the farmers who grow it. High prices and expanding markets create opportunity, but they also expose a risk: without clear mechanisms to link farm-level realities to pricing, services and long-term planning, today's boom can quickly become tomorrow's vulnerability.

This case study sits within a multi-year effort to build such mechanisms. Under the **RECLAIM Sustainability! Programme**, funded by the Dutch Ministry of Foreign Affairs, Fairfood and Heifer International co-developed the Living Income Commodity Strategy. Together with programme partners, it was first tested in coffee and cocoa supply chains in Honduras and Sierra Leone, with one central aim: to translate the concept of living income into tools that producers, exporters and buyers can use in everyday decisions.

The work in Uganda marks the next phase in that evolution. With support from GIZ through the **Sustainable Agricultural Initiative** (SASI) and the **Due Diligence Fund** (DDF), the approach is now being prepared for wider use. Ndugu, a social enterprise officially representing over 6,000 farmers in the Masaka region of Uganda, and Dutch roaster Wakuli have chosen to act as front runners. At a moment when Robusta from Uganda is gaining global visibility, they question established sourcing models and test ways of buying coffee that are transparent, ethical and genuinely sustainable – thinking in terms of continuity of farming, not just short-term supply, and asking what it means to be future proof.

At the heart of this work is the idea of a living income. A living income is the net annual income a household needs, in a specific local context, to afford a decent standard of living for all its members (LICOP, 2023). It goes beyond poverty lines: drawing on the Anker and Anker (2017) methodology, it adds up the real cost of a nutritious diet, decent housing, essential services such as education and healthcare, transport, clothing, and a small buffer for unexpected expenses. The resulting benchmark is a practical reference point. It makes it possible to see how far farming

households are from a decent life and to assess which measures are most promising for closing that gap. And it also makes it possible for us to calculate a living income price.

The approach used in this study combines Living Income Price (LIP) calculations with Cost–Yield Efficiency (CYE) profiling. Rather than treating farmers as a single group, it distinguishes between different cost and productivity profiles and links these to income outcomes. In Uganda, the Ndugu–Wakuli collaboration took this a step further by modelling how farmers' incomes would respond to changes in international prices. This makes it possible to explore what happens when today's high prices return to more typical levels, and to consider which combinations of prices, services and farming practices would keep coffee farming viable under those conditions.

A key shift in this new phase is that the work is no longer only about producing one-off analyses. It is also about building lasting capacity. With support from Akvo, Ndugu is establishing its own data team, trained to collect, manage and interpret farmer-level information. The intention is that Ndugu gradually takes full ownership of the process: using income and cost data to guide services to cooperatives, to prepare for discussions with buyers, and to integrate topics such as regenerative agriculture, agroforestry and quality into a single view of farm viability and risk.

The methodology behind this work is now available as the open-source Farmer Income Data Toolkit. It is not intended as a tool used only by Fairfood and Akvo, but as a shared resource that others can adapt, build on and make their own. This report should therefore be read not only as a case study of one exporter and one buyer, but also as an invitation: to companies, civil society organisations and public bodies who want to ground living income discussions in concrete, contextual data and to contribute to the evolving practice around fair value distribution in coffee and other crops.

The follow-up to this study is already underway within the GIZ-supported DDF project. It deepens the analysis with additional data on regenerative agricultural practices, agroforestry systems, quality and cooperative differences, while strengthening Ndugu's internal capacity to maintain and use its data systems. The results of that work will be published in 2026. In the meantime, this case study shares what has been learned so far from the proactive example of Ndugu's farmers and their allies – and offers a basis for others who wish to explore and build on the Living Income methodology in their own supply chains.

Challenging the myth of Robusta

"Uganda is mainly known for high volumes of robusta coffee. When considering Uganda for high quality coffee, the arabica, grown in places like mount Elgon in the north east, springs to mind. And of course our customers will think of our amazing coffee from Zombo in the north west. However, more than 80% of coffee production in Uganda is made up of robusta. Uganda is the fifth largest producer of robusta globally. And in our opinion at least top three when it comes to quality. So no wonder that in our quest for specialty robusta we landed in Masaka. The coffee produced by Kalisizo cooperative near the shores of lake Victoria has never been sold as high quality robusta before and has never been consumed as a single origin coffee in the Netherlands. Together with Ndugu farmers we are changing that. The coffee is spicy and has subtle notes of molasses, dried fruits and dark chocolate. "

robusta

spicy and has subtle notes of molasses, dried fruits and dark chocolate

Learn more about the partnership by visiting WAKULI's website.

Ndugu's vision is to help farmers move beyond being price takers. By unlocking commercial finance, they enable real growth. In 2023 alone, farmers accessed over US$700,000. This capital fuels better practices and higher productivity. More resources, more choices, more bargaining power.

2. Methodology

This case study applies the Living Income Commodity Strategy co-developed by Fairfood and Heifer International. Two tools are central to the analysis: **Living Income Price (LIP)** and **Cost–Yield Efficiency (CYE)**. Together, they connect household income needs with farm-level production realities.

2.1 Living Income Price (LIP)

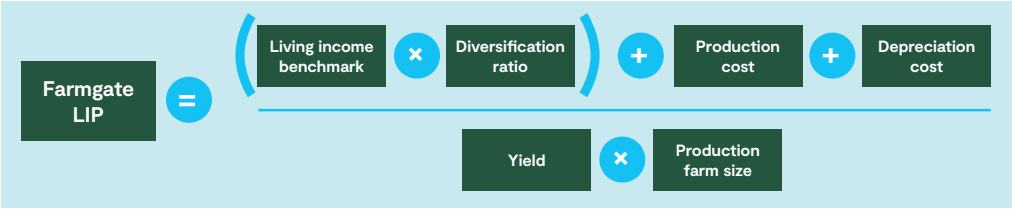
The Living Income Price estimates the minimum price per kilogram of coffee needed for a typical farmer to:

1. cover their production costs, and
2. earn enough net income to reach the living income benchmark for their household.

The benchmark used in this study is drawn from Anker & Anker publication[1] for 2025 and adapted to the local context. The LIP calculation incorporates:

- farm size and yield,
- production costs,
- farm depreciation[2], and
- income diversification (other crops and off-farm income).

This allows us to simulate how changes in price, productivity or costs affect the share of farmers reaching a living income.



1 In 2025 the cost of a basic but decent living for a family of 5 with 1.78 workers was estimated at UGX1,248,713. This value was adapted for inflation using CPI and household composition using OECD equivalence scales and household demographic data. For reference, visit "Living Wage for Rural Uganda Lake Victoria Basin", by Andersen, R., Lykke E. Andersen, L., Delajara, M., Anker, R., Anker, M. Global Living Wage & Income Coalition (2025).

2 **Farm depreciation** is an item we are still refining. In this pilot, it is estimated using figures from the Uganda Coffee Development Agency on the cost of establishing a coffee farm, adjusted to the median land size in our sample (1.1 acres). The same depreciation value is applied across all farmers, which is a limitation – especially when comparing different production systems, including regenerative agriculture. That said, its impact on the LIP is relatively small: for the median farmer in this study (1.1 acres, 1,296 kg/acre), farm depreciation changes the LIP by only USD 0.05/kg.

2.2 Cost–Yield Efficiency (CYE)

Farmers do not all operate under the same conditions. Cost–Yield Efficiency (CYE) analysis groups farmers into four profiles based on:

- **cost per kg** of coffee, and
- **yield per acre**.

These profiles distinguish, for example, between:

- efficient producers with relatively low costs and high productivity,
- farmers who overspend on inputs,
- farmers who underinvest and remain trapped in low-yield systems.

By linking these profiles to income and LIP outcomes, CYE helps identify where different groups would benefit most: from input cost support, improved agronomy, diversification, or other targeted interventions.

For a full explanation of the rationale behind the methodology, see the Living Income Commodity Strategy White Paper or the Frequently Asked Questions document. To apply it in your own supply chain or project, the open-source Farmer Income Data Toolkit provides Excel templates, R scripts and guidance documents to implement the approach in practice.

3. Data analysis and findings

This chapter presents the survey results from 231 coffee farmers across Masaka and Kyotera. As this was a pilot, the goal was not only to assess farmer incomes, but to understand whether a data-driven methodology could support Ndugu and its partners in designing pricing strategies, anticipating price shocks, and identifying efficient, targeted interventions. The findings confirmed that this approach is not only feasible but transformative — and they directly informed the structure and priorities of the follow-up DDF project.

The analysis goes beyond averages. It disaggregates results by gender, age, certification, and cooperative membership, while linking production costs and yields with the Living Income Price (LIP). Besides the interventions modelling, it also introduces a **price scenario modelling**, which became one of the most strategic outputs for Ndugu. As Ndugu Director of Operations, Bless Augume, noted, the modelling work "allows us to negotiate contracts based on what farmers actually need — not what the global price happens to be that day."

Finally, the pilot revealed data gaps around agroforestry, quality, cooperative capacity, and regenerative practices. These gaps are now at the centre of the strengthened data strategy that Akvo is helping Ndugu build, including processes to ensure quality, refine collection protocols, and supporting staff in analysing and interpreting their own data to generate actionable insights.

3.1 Sample and general income patterns

A total of **231 coffee farmers** were surveyed across **Masaka and Kyotera**, two regions central to Ndugu's supply base and sufficiently diverse in cooperative structure, certification profiles, and production systems. The sample size is statistically adequate to identify patterns across farmer segments while remaining operationally manageable for a pilot. The survey included:

- 26% women
- 7.9% youth
- 58.3% organic-certified farmers

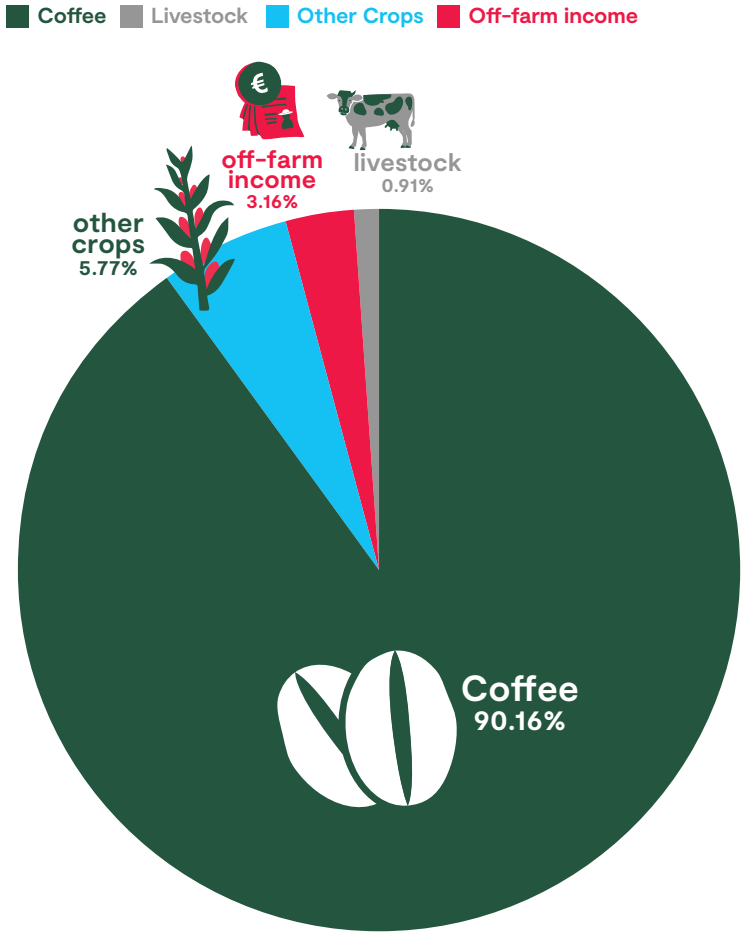
The coffee produced by Kalisizo cooperative near the shores of lake Victoria has never been sold as high quality robusta before and has never been consumed as a single origin coffee in the Netherlands. Wakuli and Ndugu are changing that: the coffee is spicy and has subtle notes of molasses, dried fruits and dark chocolate.

Coffee overwhelmingly dominates income sources, accounting for over **90% of household revenue**. The residual income comes mainly from banana, maize, and beans; off-farm income and livestock represent less than 4% of total earnings.

This heavy dependence on coffee reinforces the importance of price stability and income diversification — both of which became central topics in conversations with Ndugu during analysis.

From what sourses do farmers earn money?

This graph presents the main categories, from which farmers earn an income.



3.2 Productivity and cost dynamics

Productivity

Organic farmers reported the highest median yield (**1,299 kg/acre**). At first glance, this suggests a performance advantage; however, further investigation indicated that this boost may be linked not only to certification but also to cooperative-specific dynamics such as:

- → stronger management support
- → better access to inputs
- → more consistent farmer engagement

A deeper cooperative-level analysis — which the DDF project will pursue — is needed to confirm whether yield differences are certification-driven or organisationally driven.

Youth farmers showed the lowest yields and held the smallest land areas, confirming structural disadvantages that make them more vulnerable to price shocks.

Agroforestry practices, a priority topic for Ndugu and Wakuli, did not show a clear yield difference compared to full-sun coffee. This likely reflects **insufficient granularity in how agroforestry systems were captured**, rather than the absence of impact. This is exactly the kind of area where improved data can unlock more meaningful insights.

Costs

Median production cost per acre was **UGX 1,188,261** (~USD 324). Fertiliser was the largest cost component, representing **almost half of total production expenses**, with farmers spending twice as much on fertiliser as on labour or seeds.

Organic farmers spent substantially more (USD 353 vs USD 229 for conventional), yet did not earn more per kg — raising concerns about the return on organic investments without assured premiums.

Bless Augume, Ndugu's Director of Production, highlighted:

"Synthetic fertilisers are extremely expensive for our farmers. The data is helping us understand whether switching to more organic systems would actually reduce costs — and how much support is needed to make that possible."

A detailed cost comparison shows that organic farmers require **23% more upfront capital** to begin their season, a major cash flow burden. This is something Ndugu is acting on through access to inputs on credit service in partnership with financial institution Emata, using data to score farmers for credit.

Cost ranges and cooperative influence

To better understand cost patterns, farmers were categorised by **production cost per kilogram**. Most farmers — across both organic and conventional systems — produce coffee for under **USD 0.30/kg**, indicating generally high cost-efficiency.

- **Made Coffee Farmers and Kabonera B** cooperatives showed the highest cost-efficiency, with roughly 75% of farmers producing for under USD 0.30/kg.
- **Kyengeza Cooperative**, in contrast, had the highest concentration of farmers in middle and high cost ranges, raising questions about input access, geography, or cooperative management.

These differences are central to explaining why LIPs vary across cooperatives.

3.3 The Living Income Price

The median Living Income Price (LIP) for the sample is **USD 2.87/kg**, below the current median farmgate price of **USD 3.69/kg**, a possibly temporary situation driven by historically high global prices.

As a result, **64.25% of farmers currently earn a living income**. However, modelling shows this might change drastically when prices fall.

Disaggregated LIP Results

As is common across these studies, not all farmers in the sample have the sample Living Income Price. This specific study worked with 6 key indicators playing a role in the calculation of the Living Income Price, being: Family Size, Contextualized Benchmark, Diversification Ratio, Production cost, land size and yield.

Gender

Women require a **60% higher** LIP than men ($3.19 vs $2.59), driven mostly by land size, household structures, and reliance on hired labour — not by lower performance.

This points to structural inequality in land access, not farm performance, as the key barrier to women's income parity.

Certification

Organic farmers require a **lower** LIP ($2.53) than conventional farmers ($2.87), a counterintuitive result as organic producers produce at a higher cost. This is explained by higher income diversification (lower dependency on coffee, 96% vs 85% of income coming from coffee)), not better farm performance.

Organic certification helps reduce LIP through income diversity, not cost savings or higher yields. Without a price premium, these farmers may be at a disadvantage despite their higher investment.

Age

Youth farmers require **$3.38/kg** — the highest of all groups — due to limited access to land to cultivation and lower yields. Youth farmers need to earn more in order to reach the LIP by 51 cents.

Supporting young farmers means more than agronomy training, it requires targeted investment in land access, income diversification and access to business tools.

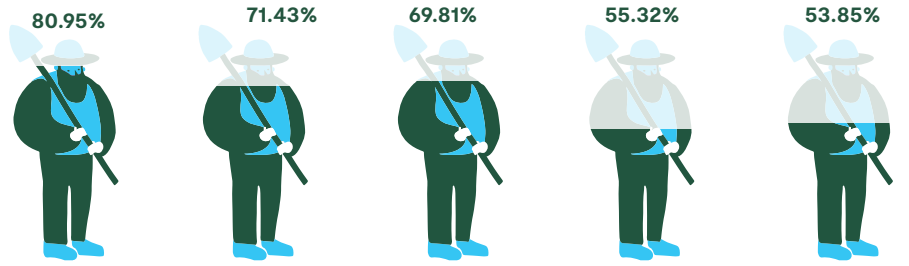
Cooperative Differences

Membership has an effect on farmer cost and on yield, leading the LIP also varies by cooperative:

- **Kabonera** farmers require only **$2.12/kg**
- **Kalisizo** farmers require **$3.36/kg**

How many % of farmers per cooperative earn at least the LIP?

Total share of farmers earning the LIP is 64.25%



3.4 Cost-Yield Efficiency (CYE) segmentation

CYE segmentation provides a practical lens for identifying where interventions will have the highest impact. The four segments are:

1. **Low cost, low productivity:**
   48 farmers (Barely investing; subsistence-level yields)
2. **High cost, low productivity:**
   42 farmers (Most vulnerable group; costly and unproductive)
3. **High cost, high productivity:**
   54 farmers (Invests heavily, but high risk if prices drop)
4. **Low cost, high productivity:**
   35 farmers (Efficient and resilient)

Martijn Harlaar, Director of Partnerships at Ndugu, observed:

"The biggest win is seeing how the data moves from collection to visualisation, to insights, and finally to action. That's a huge win in itself, and one we didn't fully expect at the start."

Segment Insights

- **High-cost, low-productivity farmers** are the most vulnerable and require urgent support.
- **Low-cost, high-productivity farmers** are the most resilient to price shocks.
- Women and youth are overrepresented in the **high cost, low productivity** segment, reinforcing structural inequality concerns.
- Cooperative membership plays a major role in determining where farmers fall in the segmentation.

3.5 Modelling the living income price gap

The modelling exercise became one of the most important outputs for Ndugu, and a turning point for how they approach pricing discussions with buyers.

Bless Augume emphasised:

"Prices are high today, but they will drop. With the modelling, we already know which farmers will struggle first, and we can plan interventions or negotiate prices before the crisis hits."

Current prices

- Farmgate price: **$3.69/kg**
- LIP: **$2.87/kg**
- **64%** of farmers earn at least a living income

If prices drop moderately ($2.45–$2.75/kg)

- Only **~40%** of farmers earn a living income

If prices drop moderately ($2.45–$2.75/kg)

- Fewer than **20%** of farmers earn a living income
- High-cost, low-productivity farmers collapse first
- Even efficient farmers fall below the benchmark

ICO: Robusta daily prices

The daily Robusta prices indicator from the International Coffee Organization shows that coffee prices are highly volatile and difficult to predict, leaving farmers vulnerable to market swings regardless of their efforts or cost-yield efficiency. This is evident in our analysis: although a relatively high share of farmers currently earn a living income, today's elevated prices are a temporary anomaly compared to the historically low Robusta prices of the past decade. Next to that, USDA projections point to a short-term increase in 2025 followed by a price correction in 2026. Our modelling shows that once prices return to typical levels, most farmers will again fall below the Living Income Price. This underscores the need for proactive and fair pricing agreements to safeguard farmer livelihoods.

Bless Augume summed up the transformation:
"We now know what to do, not because support is available, but because the data says so."

Key insight
Temporary price spikes are masking structural risks → **long-term resilience requires targeted intervention and data-driven pricing agreements**, not reliance on favourable markets.

3.6 Why this pilot shifted Ndugu's strategy

The pilot not only delivered insights; it reshaped Ndugu's approach to:

- → contract negotiation
- → identifying priority farmer groups
- → understanding cost drivers
- → presenting evidence to buyers
- → designing interventions
- → strengthening cooperative capacity

It also highlighted gaps in **agroforestry data, regenerative practices, quality indicators, cooperative metadata, and youth participation**, all of which are now central pillars of the DDF project.

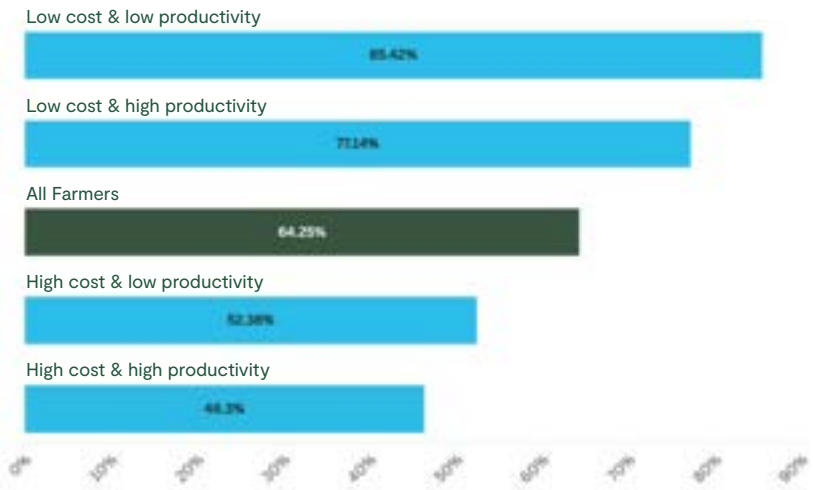
What happens if prices fall?

Segment impacts allowed us to go beyond confirming that high-cost/low-productivity farmers collapse first, while low-cost groups withstand longer:

- → Current: 64% of farmers earn LIP.
- → Moderate drop ($2.45–$2.75): ~40%.
- → Severe drop ($1.35–$1.65): <20%.

How many farmers will still earn a LIP if coffee prices change?

current prices



Scenario	Price ($/kg)	% farmers earning LIP
Current (2025)	$3.69	64%
Moderate drop	$2.45–$2.75	~40%
Severe drop	$1.35–$1.65	<20%

This modelling reveals the fragility of the current system. Temporary price peaks aren't a solution. Long-term interventions are needed to secure farmer income under normal or adverse conditions.

Digitisation is a priority of Ndugu. By moving payments and records online, errors are reduced together with the risk of fraud. Farmers can more easily track what they sell and earn. A simple shift that strengthens confidence across the chain.

4. Recommendations

The pilot confirmed that farmer-level income data is a powerful tool for shaping sourcing strategies, designing targeted interventions, and preparing for price volatility. It also revealed clear data gaps—particularly around regenerative practices, quality, agroforestry systems, and cooperative differences—that now guide the next phase of the partnership between **Ndugu**, **Wakuli** and **Fairfood** with support from the Sustainable Supply Chains Initiative, via the GIZ Due Diligence Fund (DDF), funded by GIZ.

The next steps therefore focus on two priorities:

- strengthening and expanding the data foundation, and
- turning insights into practical, segment-specific and cooperative-level action.

This chapter outlines how the consortium will refine tools, build capacity within Ndugu, and operationalise evidence-based discussions with buyers.

4.1 Strengthen and expand farmer-level data

Building on the pilot survey, the DDF-supported project will refine data collection to better capture the factors most relevant for income resilience, cost-efficiency, and sustainable production. Key improvements include:

Agroforestry and regenerative practices

- Capture types of agroforestry systems and years under implementation.
- Differentiate between partial-shade and full-shade systems.
- Measure ecological indicators linked to yield, soil health, and potential cost savings.

This will allow the consortium to connect living income outcomes with regenerative agriculture interventions and model their impact on income, risk, and resilience, looking simultaneously at quality, soil health, and resilience.

Fertiliser and input use

- Distinguish clearly between organic, synthetic, and blended practices.
- Capture input quantities, application timing, and associated costs.
- Identify opportunities for a gradual reduction of costly synthetic inputs, a priority highlighted by Ndugu.

Diversification and income sources

- Improve the accuracy of income shares from crops, livestock, and off-farm activities.
- Pay special attention to farmers with smaller land sizes, ensuring questions remain realistic and recall-friendly.
- Use the improved data to quantify how diversification and regenerative practices affect both income levels and income stability.

Quality as a driver of income resilience

Quality is also an indicator that will be surveyed in this new project. Wakuli is particularly interested in understanding whether investments in quality contribute to higher and more stable incomes over time

Cooperative-level metadata

Because cooperative performance strongly shapes yield, cost, and Living Income Price (LIP) outcomes, the next round of data collection will include:

- management structures and decision-making processes,
- input procurement and distribution models,
- service delivery and extension arrangements, and
- availability of agronomic and financial support.

This will make it possible to translate cooperative differences into targeted recommendations and support plans.

Improving data quality and ownership

This phase will also build Ndugu's capacity—supported by Akvo—to:

- manage and coordinate data collection,
- monitor and improve data quality,
- operate cooperative-level dashboards, and
- conduct internal analysis for decision-making and reporting.

As Bless Augume emphasised:

"We already use data at Ndugu level, but at cooperative level we were lacking. This project is helping us show cooperatives how data guides their decisions."

4.2 Segment-specific support (CYE-based interventions)

The pilot showed that a one-size-fits-all intervention approach is ineffective. Cost-Yield Efficiency (CYE) segmentation identifies different needs across farmer groups:

Low cost & low productivity

- **Main lever:** Low-cost productivity improvements and input access.
- **Actions:**
  - Basic agronomy training and coaching.
  - Affordable input packages and small-scale input subsidies.
  - Support for crop diversification and regenerative practices that improve soil health and yield over time.

Low cost & high productivity

- **Main lever:** Scaling what already works.
- **Actions:**
  - Peer-to-peer learning and farmer-led knowledge transfer.
  - Farmer field schools and demonstration plots led by this group.
  - Piloting regenerative practices with high-performing farmers to test impact at relatively low risk.

High cost & high productivity

- **Main lever:** Cost optimisation and risk management.
- **Actions:**
  - Input efficiency programmes and collective purchasing.
  - Support for switching from expensive synthetics to more affordable, regenerative alternatives.
  - Risk-sharing mechanisms (e.g. medium-term contracts, pre-finance for inputs).

High cost & low productivity

- **Main lever:** Deep cost restructuring plus targeted agronomy.
- **Actions:**
  - Cost audits at cooperative and farmer level.
  - Access to affordable credit and improved input distribution models.
  - Tailored Good Agricultural Practices (GAP) support with frequent follow-up.

This group is the most vulnerable and should be treated as an urgent priority in both pricing and intervention design.

Implications for pricing dialogue

CYE segmentation and scenario modelling should directly inform price negotiations with buyers. One approach under discussion is to:

- set minimum prices that enable the majority of farmers to reach a living income under realistic price scenarios; and
- pair this with targeted interventions for those who cannot reach the benchmark through price alone.

Wakuli's Impact Manager, Meine van der Graaf remains alert to potential adverse uses of the data.

"Buyers selecting only large-scale or highly efficient farmers could claim that they are paying a Living Income Price while excluding smaller, more vulnerable producers. The intent of this work is the opposite: to support inclusion and ensure that farmers in all segments, especially the most vulnerable, remain viable participants in the supply chain".

4.3 Address structural inequalities

The pilot highlighted structural barriers that keep certain groups concentrated in vulnerable CYE segments. The next phase will address these inequalities explicitly.

Women

- Improve land access through targeted schemes, joint titling, and support for secure tenancy where relevant.
- Provide gender-responsive extension services that recognise time constraints and care responsibilities.
- Introduce time-saving technologies and practices that reduce unpaid care burdens.
- Expand access to credit through Village Savings and Loan Associations (VSLAs), savings and credit cooperatives (SACCOs), and other locally appropriate finance mechanisms.

Youth

- Support land rental and lease schemes that allow young farmers to scale beyond micro-plots.
- Provide affordable finance for input purchases and small on-farm investments.
- Offer entrepreneurship training and digital tools for farm and business management.
- Build on Ndugu's youth service model, where trained young people provide services such as pruning, stumping, data collection,certification, traceability and agroforestry implementation to other farmers, creating both employment and productivity gains.

Cooperatives

- Strengthen organisational capacity for planning, service delivery, and financial management.
- Support bulk input procurement and transparent distribution systems.
- Facilitate access to credit and dedicated agronomy staff.
- Equip cooperatives with data insights and dashboards so they can use evidence in negotiations with buyers, banks, and service providers.

For the DDF project, strengthening cooperative data capabilities will be central to improving their bargaining power and ensuring that interventions reach the groups who need them most.

4.4 Pricing dialogue and risk management

Living income data and price-scenario modelling create a basis for more transparent and informed pricing agreements between Ndugu and buyers.

Key elements of this dialogue include:

- minimum price structures that remain resilient under likely global price swings;
- shared investment in interventions for farmers who remain below the LIP even at improved prices; and
- joint use of dashboards and farmer data to monitor progress and adjust strategies.

Modelling demonstrated that:

- a **$1 price drop** (from approximately USD 3.69/kg to USD 2.45–2.75/kg) reduces the share of farmers earning a living income from 64% to around 40%; and
- severe price drops (USD 1.35–1.65/kg) bring this below 20%.

This makes pricing dialogue not only a sustainability issue but a risk management strategy for Ndugu's long-term viability, as well as for buyers who depend on a stable supply of quality, ethically sourced organic Robusta.

4.5 Preparing for price volatility

Price highs are temporary. To secure farmer resilience under normal or adverse conditions, Ndugu and its partners will prioritise:

- quality investments, fertiliser cost reduction and input efficiency;
- diversified and regenerative farming systems that reduce both income and agronomic risk;
- strengthened cooperative performance and services;
- tailored interventions per CYE segment; and
- data-driven price negotiations with buyers such as Wakuli.

As Bless Augume explains:

"If prices drop, we already know the struggles of the farmer. The modelling helps us decide whether we negotiate higher prices or reduce costs through interventions."

4.6 Translating data into action

This pilot raised new questions regarding fertiliser efficiency, agroforestry performance, cooperative capacity, and the role of youth and women. These questions will be addressed in the next phase of the DDF project, which aims to:

- refine Ndugu's data systems and embed them in day-to-day operations;
- train cooperative leaders to use data in planning, service delivery, and negotiation;
- integrate living income considerations into quality and regenerative agriculture strategies; and
- create a replicable pricing and intervention model that other buyers sourcing from Ndugu and beyond can adopt.

The opportunity is to move from one-off studies to a standing, data-informed way of working: a model in which exporters, buyers, and cooperatives jointly invest in closing the Living Income Gap, guided by robust farmer data and aligned with long-term resilience.

Following this pilot survey, Ndugu and Wakuli collected household- and farm-level data across the network of 1,250 Robusta farmers. This will inform the next steps of their partnerhsip: helping identify actual production costs, income gaps, and the opportunities for improvement.

5. Conclusion

This pilot has taken Fairford and Heifer's Living Income Commodity Strategy a decisive step further. What began as a relatively contained exercise in calculating gaps and modelling price scenarios has evolved into a richer picture of how farmers in Ndugu's supply chains actually live, produce, and make decisions. By combining income and cost data with profiles of different farmer segments, the case study moves the discussion away from averages and into the realities of specific groups of farmers who experience risk and opportunity very differently.

One of the most important outcomes is the way the approach itself is changing. The methodology is becoming more modular and layered. In addition to income and cost-efficiency, it now points towards new dimensions that can be added over time: agroforestry and regenerative practices, fertiliser and input use, diversification, quality improvement, cooperative capacity, gender and youth dynamics. Each new layer makes the analysis more useful. It allows partners to ask not only "What is the Living Income price?" but also "Which changes in practice, services and support will make it possible for farmers to reach it and stay there?" The Uganda experience joins earlier work in Honduras and Sierra Leone in building a growing library of applications that can be adapted, re-used, and combined.

This has also made living income much more tangible for supply chain partners. Rather than an abstract benchmark, living income appears here as a set of concrete choices. The modelling shows how quickly farmers can fall back below a decent income when world prices drop. The segmentation shows which farmers are already doing relatively well and which are caught in a difficult combination of high costs and low yields. Together, these insights help partners see that living income is not a separate social concern but is closely tied to quality, regenerative production, and the continuity of supply. If farmers cannot afford to invest in their fields or to remain in coffee at all, the entire chain becomes more fragile.

For Ndugu and Wakuli, the pilot has created a shared evidence base that reshapes how they work together. They now have a clearer view of where farmers are struggling, what cooperatives can and cannot currently offer, and which combinations of price and intervention might make a real difference. This is already changing the nature of their conversations: pricing dialogue can draw on specific scenarios rather than general impressions; discussions about support can focus on identifiable farmer segments instead of a generic "smallholder"; and cooperative leaders can be brought into the conversation with data that relates directly to their members.

Looking ahead, the next phase of work will build on these foundations. The immediate priority is to turn one-off analysis into a regular way of working: embedding data collection and interpretation within Ndugu, strengthening cooperative capacity to use dashboards and insights, and refining the tools so that they are practical for day-to-day decisions. At the same time, the partners will deepen the link with regenerative agriculture by adding indicators on agroforestry systems, fertiliser practices and soil health, and by using these to understand how climate-resilient farming can support income resilience as well. The modular nature of the approach means that new questions can be explored without redesigning everything from scratch; instead, new layers can be added where they are most relevant.

In parallel, the Uganda experience will inform work with other buyers and origins. The combination of Living Income Price calculations, CYE segmentation and price-scenario modelling can be adapted to different crops and contexts, while keeping the same core principle: that decisions about price, support and sourcing should start from farmer realities, not from assumptions. As more cases are added to the emerging library, it will become easier for partners elsewhere to use this approach to examine their own supply chains and to compare options in a grounded way.

The central message that emerges from this pilot is simple but far-reaching: **living income is not only a question of fairness, it is a condition for the long-term viability of farming** and, with it, the stability of the supply chains that depend on farmers' work. This case study shows that it is possible to move from broad concern to concrete, evidence-based choices. It offers a starting point for continued collaboration in Uganda and an invitation to others to build on the same approach—linking farmer income, regenerative practices and cooperative strength in a way that keeps coffee farming a viable option for the next generation.