Roots of Resilience

Acumen

Two case studies of social enterprises building resilience for smallholder farmers

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Kentaste, East Africa

Contents

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Agricultural resilience at Acumen

Summary

Resilience is the ability to anticipate climate-related threats, adapt where possible, absorb them as needed, and recover in a timely manner. These data-rich case studies feature two social enterprises strengthening the resilience of smallholder farmers across sub-Saharan Africa: Kentaste and Uzima Chicken. Kentaste supports coconut farmers through training, credit, and market access. Uzima Chicken improves incomes and nutrition through resilient poultry farming.

The case for resilience

While much of the climate finance world seems set on preparing the world for mitigating agricultural emissions by 2050, an innovative generation of impact-first companies has been busy solving for the here and now. These agribusinesses are responding to the urgent reality of millions of farmers, most of whom live in poverty, and are already experiencing the consequences of the climate crisis, with few to no tools to adapt.

For five years, Acumen has been gathering data from a subset of these companies and the farmers they work with. In 2020, we defined climate resilience as "a state of being in which a person can anticipate climate-related threats, adapt to them where possible, absorb them as needed, and recover in a timely manner."[1]

Based on that definition, we developed a multidimensional resilience measurement tool that has now been used to measure the climate resilience of more than 7,000 smallholder farmers working with 25 companies Acumen has invested in through either our Trellis or Acumen Resilient Agriculture Fund (ARAF) initiatives.[2,3]

Measurement approach

The following framework was developed for ARAF and funded by the Green Climate Fund (GCF) to measure climate resilience. Using a Lean Data approach implemented by 60 Decibels,[4] the tool measures three key dimensions of smallholder agricultural resilience:[5]

- **Ability to adapt:** A farmer's knowledge and application of sustainable farming and natural resource management methods.
- **Access to enablers:** A farmer's access to agricultural products and services that enable them to anticipate, absorb, and adapt to climate shocks.
- **Ability to absorb:** A farmer's experience of coping with shocks and the resources available to them to withstand financial strain.

Table 1 shows examples of indicators under each dimension, the types of solutions companies often deploy to improve access or encourage adoption, and the resulting outcomes.

Table 1:
The three pillars of resilience

Resilience pillar	Sample indicators	Example company solution	Example resilience outcomes
Ability to adapt	• Intercropping • Crop rotation • Water management • Use of organic materials • Reduced or no tillage • Top cover for soil • Soil testing	• Technical training and advisory services	• Improved practices • Improved quantity and/or quality of yield • Reduced production costs
Access to enablers	• Credit • Storage for waste reduction • Market access • Farming advice • Water sources • Improved seed	• Improved inputs • Credit • Storage • Market access	• Increased sales • Increased selling prices
Ability to absorb	• Poverty profile (% below $3.65/day) • Reliance on farm income • Likelihood of receiving early warnings • Crop insurance • Expected coping mechanisms • Access to savings	• Insurance • Weather information systems	• Increased savings • Increased sources of income • Access to emergency funds

The outcomes in Table 1 are interconnected. A combination of increased yields and higher prices over time, for example, can lead to greater savings. These outcomes also operate at multiple levels: When farmers are resilient, companies can rely on a steady, consistent source of raw materials and help boost local economies.

We're excited to share two case studies that demonstrate the data-backed impact these companies have had on smallholder farmers' abilities to build resilience.

Case Study

Kentaste, East Africa

Problem

More than 10 million coconut trees line the coast of East Africa. In Kenya alone, over 100,000 coconut farmers rely on the crop as a source of income. However, several key characteristics make coconut farming particularly vulnerable to climate change and challenging for farmers. Coconut trees are especially sensitive to extreme or prolonged heat and water stress. Between 2021 and 2023, for example, Kenya experienced one of the longest and most severe droughts in its history. As a result, harvests suffered, producing coconuts that were smaller and dried out. Planting costs approximately $250 per acre, but trees only begin producing after six to 10 years and reach full maturity around 20 years — creating a financial barrier to any sustainable replanting effort.[6] This cost of planting represents about 20% of Kenya's annual minimum wage salary.[7] In addition to expenses for harvesting, labor, and transportation, farmers also incur post-harvest losses that can reach as high as 25% of total costs.[8] Smallholder coconut farmers rarely engage in post-harvest processing, limiting their ability to capture profits between five and six times higher than the value of the raw coconuts.[9]

Kentaste's solution and its impact on farmers

Founded in 2014, Acumen investee, Kentaste, was created to provide fair and stable prices to coconut farmers. The results in the table below reflect farmers' experiences working with the company.

Table 2:
The impact of Kentaste's services on farmer resilience

Resilience pillar	Company solution	Results
Ability to adapt	• Kentaste offers technical training on improved farming practices to 3,000 farmers in Kenya.	**70%** have reported increased yields. **63%** of farmers reported using composting and organic fertilizers after working with Kentaste.
Access to enablers	• The company provides advances to farmers with limited access to credit, with repayments made through coconut sales. • Kentaste guarantees purchase of coconut harvests from farmers.	**99%** of farmers reported having reliable market access through Kentaste. **65%** of customers reported improved access to emergency funds because of Kentaste. **28%** of farmers reported accessing credit.
Ability to absorb	• Kentaste aggregates and transports coconuts to its coastal processing facilities in Kenya, incurring the costs of harvesting, transport, de-husking, and post-harvest loss, thereby mitigating financial risks for farmers. • Through its locally-hired staff, the company produces and distributes premium products such as coconut oil, milk, cream, and flakes that are sold in more than 600 retail outlets across the region.	**77%** of farmers said they feel more prepared for a climate shock because of Kentaste. **74%** of farmers reported increased earnings.

> “We’re providing access to things farmers haven’t had before."
>
> **Cecilia Oliveira, Chief of Staff, Kentaste**

Resilient companies need resilient suppliers

The severe drought from 2021 to 2023 significantly impacted coconut harvests. Coconut sizes shrank, and many dried out, making it increasingly difficult for Kentaste’s farmers to meet growing demand as supply fell by 38%. This, combined with reduced quality, led to a drastic shift in Kentaste’s unit economics. The company faced escalating challenges, particularly in servicing its debt obligations, as its overleveraged position worsened. It became clear to both Kentaste and Acumen that immediate intervention was needed to stabilize the business and continue to support farmers. Kentaste knew the company could not survive unless its farmers were thriving.

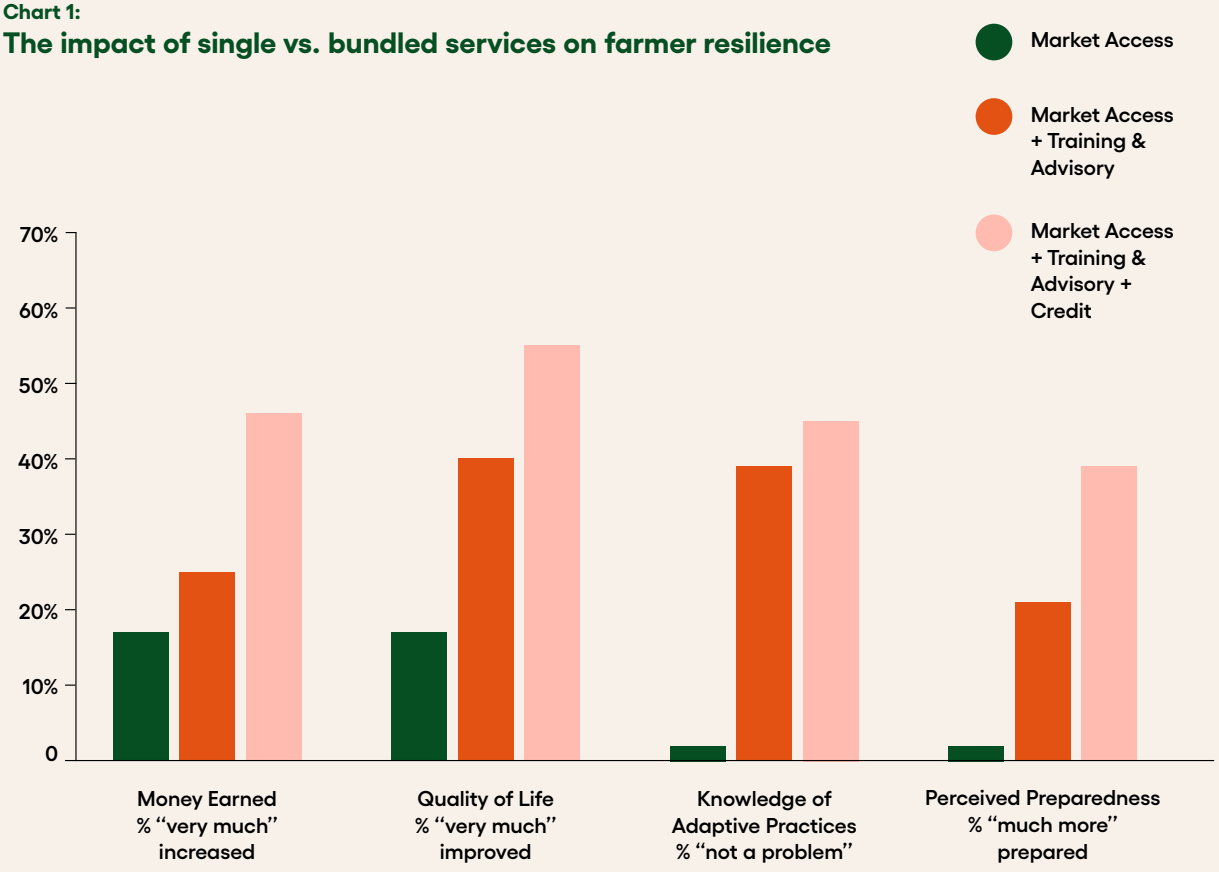
In response, Acumen spearheaded a crucial bridge financing round, securing backing from other shareholders. This was complemented by a restructuring of the company’s debt through a catalytic follow-on equity transaction, which provided Kentaste with much-needed liquidity. With this additional capital, Kentaste expanded its sourcing network from approximately 3,500 to over 4,500 farmers, including those in Tanzania. The funding also enabled Kentaste to continue offering its comprehensive support package — training, credit, and market access — helping ensure the long-term sustainability of both the company and its farmers. Finally, the funding supported the development of a demonstration farm showcasing a new, faster-growing and more resilient coconut tree variety.

Bundled services deliver greater impact than a single service

Kentaste provides a bundle of services to farmers, including training, credit, and market access. According to Kentaste’s resilience study, farmers who received the full bundled service were up to three times more likely to report significant improvements in their quality of life and money earned than those who received only one or two services. These farmers were also 20 times more likely to feel much more prepared for the next climate shock (40% vs 2%).

In the words of one Kentaste supplier, “[Kentaste] offers helpful training on different topics. This equips us farmers with the knowledge we need to better our farms and reap good profits. Kentaste is transparent and pays farmers; they have never conned farmers like the brokers used to. They offer loans to farmers, which has helped to manage many family aspects, be it farming or other family obligations.”

Chart 1:
The impact of single vs. bundled services on farmer resilience



Kentaste's combination of products and services helped farmers prepare for a climate shock, and 87% of surveyed farmers said they had never had access to an offering like the one Kentaste provides. As Cecilia Oliveira, Kentaste's chief of staff stated, "We're providing access to things farmers haven't had before. Credit and cash advances allow them to survive. Kentaste doesn't charge any interest on the money we provide, so farmers can handle any emergency. And with old, aging trees, farmers need training, advisory, and resources to prepare the land."

With guaranteed market access and stable prices, farmers could pay for an emergency or save for the future. According to Daniel Mutua, Kentaste's chief financial officer, "No one is buying as many coconuts as we can buy, because no producer is doing it at the same scale as us. We are also transparent in training [farmers] on profitability. How much would it cost them to produce coconuts and sell profitably? Our floor price is regulated to ensure that farmers are selling from a profitable position, and we as buyers are not just taking advantage of supply and demand dynamics."

Investing in adaptation and building climate resilience is about more than just improving farming practices. It's also about how companies like Kentaste can offer the right suite of services to help farmers and their families withstand and bounce back stronger from the next climate shock.

Kentaste, East Africa

Case Study

Uzima Chicken, East Africa

Problem

Three interlinked challenges threaten food security across sub-Saharan Africa: climate change, economically marginalized farmers, and malnutrition. In Kenya, Uganda, and Rwanda, severe floods and intensifying droughts have destroyed hundreds of acres of farmland, causing significant physical and economic losses. The 2023 floods in Rwanda, for example, resulted in approximately $11 million in damages.[10] In Kenya, about 98% of agriculture is rainfed, making it extremely vulnerable to climate change.[11] Meanwhile, stunting rates for children in rural areas remain high — 34% in Uganda and up to 59% in Rwanda.[12,13] In Uganda and Rwanda, 62% and 41% of the population, respectively, rely on agriculture for their livelihoods.[14,15] But as climate change brings more unpredictable rains and droughts, agriculture becomes a far less reliable source of food and income.

A key resilience strategy for farmers is small-scale animal husbandry, with chickens as the second most prevalent livestock contributor.[16] However, indigenous chickens in East Africa suffer from high mortality rates — ranging from 33% to 50% — and low productivity, with slow growth and limited egg output.[17] Most importantly, distributing chickens in rural Africa is challenging due to poor transportation infrastructure, lack of cold chain systems, and long travel times, which expose the chicks to stress and harsh conditions, and significantly increase early mortality rates before they even reach farmers.

Uzima Chicken's solution and its impact on farmers

Founded in 2017, ARAF investee, Uzima Chicken, delivers high-quality poultry products to rural smallholder farmers in East Africa. The results in the table below reflect farmers' experiences working with the company.

Table 3:
The impact of Uzima Chicken's product and services on farmer resilience

Resilience pillar	Company solution	Results
Ability to adapt	• Uzima Chicken introduced a highly productive, disease-resistant SASSO chicken breed to the East African market. These chickens grow up to three times faster, lay three to four times more eggs annually than local breeds, and are bred for disease resistance — reducing the risk of devastating losses. They reach maturity within three months (which is three times faster than local breeds) and reach weights of 2.2-2.5 kilograms, compared to 1.5-2 kilograms.	**98%** of smallholder farmers said they had no good alternative to the company's product. **81%** of farmers reported increased yields and production.
Access to enablers	• Uzima Chicken sells and distributes day-old chicks (DOCs) through a decentralized network of over 8,000 agents, along with feed, vaccines, and training. Agents grow the chicks for four to six weeks to produce healthy, vaccinated chicks, which are then sold to rural smallholder farmers.	**$1,600** profit earned on average annually by an agent.[18] **100%** of farmers reported access to improved breed. **86%** of farmers attributed increased earnings to selling more eggs and chicken.
Ability to absorb	• Once agents sell the chicks, smallholder farmers can raise them to maturity, harvesting eggs to eat or sell. They can also sell the mature chickens for meat, generating income.	**92%** of farmers reported increased income. **53%** said they would have easy access to financial resources in an emergency. **4x** Farmers and their families eat four times as many eggs per person per year compared to FAO-reported averages in sub-Saharan Africa.

Uzima Chicken, East Africa

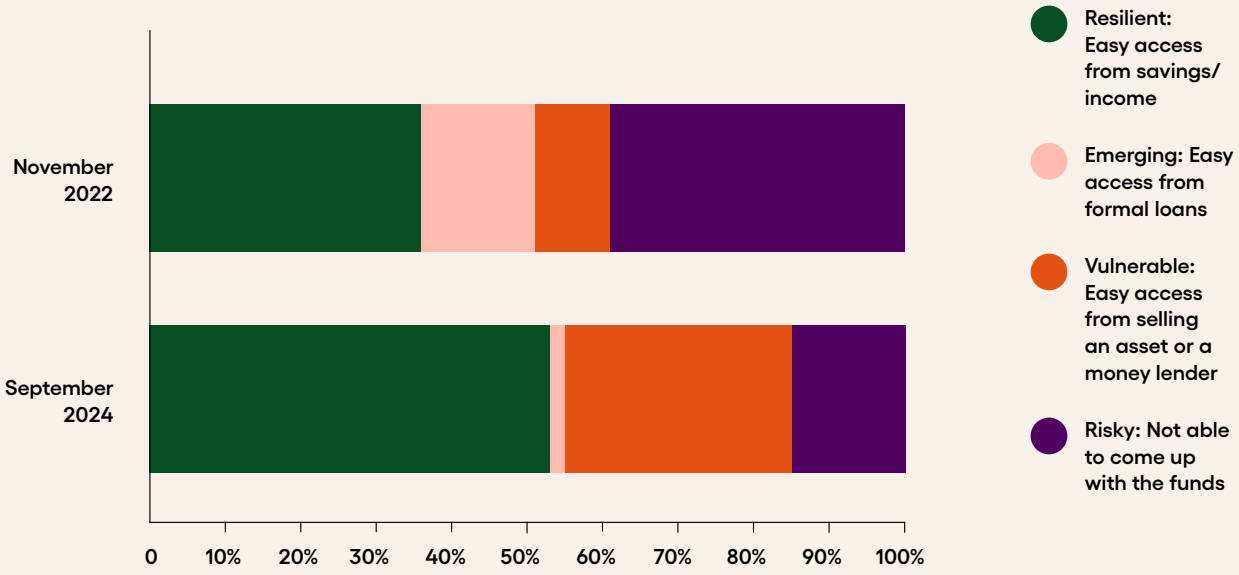
Resilience at scale and over time

Uzima Chicken demonstrates the potential of agricultural solutions at scale. As a subsidiary of Hatch Africa, Uzima Chicken has created jobs for over 8,000 agents and reached 600,000 farmers. Across Hatch Africa's operations, the company has scaled to six countries and sold 236 million chicks since 2010, with over 3.2 billion eggs produced by farmers in 2024 alone.

Uzima Chicken's success has played a significant role in developing thriving poultry markets across the countries where they operate. The company's model contrasts sharply with the global poultry supply chain, which is dominated by industrial, large-scale production.

By putting chickens into the hands of every family, every household becomes a producer. A 2024 study across Hatch Africa's operations found that its smallholder farmers and their families eat four times as many eggs per person per year compared to FAO-reported averages in sub-Saharan Africa.
As David Ellis, founder and co-CEO of Uzima Chicken, stated, "When there's the instability of climate change or social conflicts, this is what food security really looks like. Rather than looking at a few industrial production units, we are putting the tools of production in the household, making them more resilient to climate and other macro shocks."
So when birds contract diseases, or roads are flooded, large-scale industrial producers may face a food crisis, while Uzima Chicken households have their own safety net.

Chart 2:
Uzima Chicken farmers' ability to access financial resources for an emergency



While a single survey on customer resilience offers a snapshot of insights, multiple studies over time provide greater value for companies, investors, and climate funders. Most recently, in an updated 2024 climate resilience study, Uzima Chicken's farmers reported an increased ability to absorb climate shocks. In 2022, 36% of farmers said they had easy access to financial resources for an emergency, and 20% said they could fully recover from a climate shock. Two years later, those numbers rose to 53% and 38% respectively, largely due to increased farmer income.

While farmers previously relied on formal loans, more now say those financial resources would come from their own savings and income. Economic resilience enables vulnerable communities to thrive in the face of climate crises. Farmers used income earned through Uzima Chicken to buy food (57%), pay school fees (37%), and reinvest back into their business (29%), with the average smallholder farmer earning a net profit of $9.38 per chicken over the bird's lifetime.[19] When farmers can increase their incomes and build savings, they are better able to withstand and recover from climate shocks.

Ultimately, the mission of Uzima Chicken is "to make farmers healthier and wealthier." Their vision is to achieve one chicken per household per year within five years, and one chicken per person per year within 10 years in the countries where they operate. They will continue striving towards this values-aligned goal, guided by the principle that, "the customer always comes first." At Uzima Chicken, smallholder farmers are at the center of every decision and action. This combination of innovative product and model makes Uzima Chicken uniquely suited to improving both food security and incomes for rural households in the region.

Uzima Chicken, East Africa

Conclusion

Recent estimates show that catastrophic climate events could push as many as 130 million more people into poverty by 2050.[20] Smallholder farmers are an acutely vulnerable population, lacking the income and economic security to meaningfully adapt their farming practices to meet the realities of extended heat, torrential rains, and increased disease.

The data collected from farmers working with Kentaste and Uzima Chicken demonstrates what's possible when we invest in companies working at the cross section of climate change, poverty, and smallholder agriculture. Resilient value chains and food systems begin with individual farmers. When farmers can invest in their farms and families, companies and communities benefit from stable, reliable sources of produce and livestock. These are the foundations for a resilient supply chain.

Don't miss our longer-form report in the agricultural resilience space, coming this Fall.

Endnotes

[1] Acumen. Resilient. Farmers. 2020.

[2] Acumen. Trellis. 2023.

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