INCREASING THE SUPPLY OF GOOD FOOD IN LOW-INCOME MARKETS

Lessons from investing in small and medium enterprises in the Good Food value chain

The ROCKEFELLER FOUNDATION

intellecap

G:ENESIS
UNLOCKING VALUE

Overview

The Rockefeller Foundation's Good Food Strategy aims to improve the global food system such that it nourishes all people, regenerates the environment, and creates equitable economic opportunity for people at every step of the food supply chain. One component of this strategy is the Good Food Innovation Fund (GFIF), implemented by Intellecap.

This learning brief highlights the experiences of three small and medium enterprises (SMEs) which are being supported by the GFIF and the challenges they faced when entering, or expanding operations, in the Good Food value chain. The brief then discusses the types of support that are most effective for SMEs which are looking to increase the supply and availability of Good Food in low-income markets. In doing so, the brief presents effective approaches for supporting Good Food value chains that are inclusive of SMEs and promote access to Good Food for low-income consumers.

About the Good Food Innovation Fund

The Good Food Innovation Fund (GFIF) supports Small and Medium Enterprises (SMEs) in sub-Saharan Africa with the aim of increasing the supply and availability of affordable and nutritious food in low-income communities.

It is a five-year (2021-2026) initiative implemented by Intellecap, with support from the Rockefeller Foundation. By providing targeted technical and financial assistance, the GIFF supports SMEs to scale their operations and reach vulnerable populations with readily available and affordable Good Food. In addition to supporting the increased supply and consumption of Good Food for vulnerable populations, the GFIF also supports SMEs to attract additional investment, promotes gender and social inclusivity, encourages reduced environmental impact, and enables job creation, especially for youth.

The GFIF's first funding round focused on SMEs from Kenya, Rwanda, and Burundi, where six SMEs were selected. Collectively, these enterprises are working to increase the supply of fortified wholegrain flour, protein-based stews, fish, and composite flours to reach institutions such as schools, hospitals, clinics, relief institutions, and vulnerable populations including women of reproductive age, persons with disabilities, and children. The SMEs also aim to create jobs for youth and support smallholder farmers and distributors from low-income communities.

Overview of the GFIF SMEs' current and projected reach

The infographic below provides an aggregated overview of the GFIF SMEs as well as the intended (December 2026) and current (September 2023) reach.

The Rockefeller Foundation and Intellecap's GFIF has disbursed USD 585 997 to six SMEs in the Good Food value chain

2023 Current Reach

- **8** hospitals
- **16** schools
- **5** social assistance programs
- **11** distributors in low income areas
- **1** aggregation centre
- **4** Villages
- **13** farmer cooperatives
- **600** farmers contracted

Reach numbers are yet to be verified

2026 Estimated Overall Reach

- **107** hospitals
- **165** schools
- **62** clinics
- **26** social assistance programs
- **48** distributors
- **3** aggregation centers
- **45** villages
- **4.2** million school-going children
- **2.1** million university students
- **65** farmer cooperatives
- **756** farmers contracted

Detailed overview of the GFIF SMEs

Raino Tech4Impact (Raino Tech) is a smart distribution platform that uses innovative business models and technologies to link supply and demand within the chicken and fish value chains.

Founded in 2019, the platform aims to reduce post-harvest losses and guarantee market access for small-scale farmers and fishermen. Raino Tech leverages off-grid and on-grid cold storage to support farmers and fishermen by providing them with cost-effective ways of prolonging the shelf life of their products so that they are able to get their products to consumers with minimal loss.

Raino Tech joined the GFIF in October 2022 and is receiving both technical and financial support. **Financial support:** The GFIF financial support was used to set up an aggregation center at Lake Turkana in Lodwar, which provides both fish processing and cooling facilities. Setting up this aggregation center is important for several reasons.

- First, Turkana is not only one of the poorest counties in Kenya but it is also home to Lake Turkana which is Africa's fourth largest lake. It is estimated that up to 1,500 households directly depend on the lake with another 1,100 households indirectly depending on it.[1] However, despite the high level of dependence, Lake Turkana has remained underutilized. To illustrate, while the current annual fish production fluctuates between 7,000 and 10,000 metric tonnes, it is estimated that the lake has the capacity to produce over 30,000 metric tonnes of fish annually.[2] The high operational costs, which will likely be exacerbated by climate change, are a key contributor to the underutilization of the lake. This underutilization has implications for both livelihoods and nutritional benefits for the community.

1 Keyombe, J.L.; Obuya, J.; Owoko, W.; Namwaya, D.; Katiwa, E. Opportunities and Challenges in the Lake Turkana Fishery: Building a Sustainable Fisheries Sector. Preprints 2022, 2022060350. Available here.

2 Ibid

- Secondly, Post-harvest Losses (PHL) in the fish value chain remain a prevalent challenge in Kenya. To illustrate, studies estimate that fishermen experience anywhere from 31%[3] to 50%[4] loss in fish, post catch. While there are several reasons as to why these values are so high, PHL in fish in areas such as Lake Turkana, are mostly attributed to factors such as high transport costs, poor preservation methods, inadequate storage facilities, and poor handling practices.[5]

- Lastly, the choice to set up an aggregation center in Turkana was also intended to ensure that the community itself was directly benefiting through capacity-building opportunities and job creation.

Today, the aggregation center is operational and Raino Tech is successfully sourcing fish directly from fishermen in Turkana and using its cold storage, transporting it to Nairobi while it remains fresh.

In addition to the financial support, the GFIF also provided **technical training** on quality assurance and food safety measures. This training has enabled fishermen in Turkana and Raino Tech employees to correctly handle the fish throughout all stages of the value chain.

Raino Tech's main customers in Nairobi are small-scale fishmongers, commonly known as Mama Samakis.

Mama Samakis purchase fish from Raino Tech and, in turn, sell the fish to consumers in local open-air markets. Raino Tech also works in partnership with local butcheries to install solar-powered cold storage on their premises so that Mama Samakis can easily access fish produce to sell to their customers who are mostly low-income consumers. Raino Tech is also conducting research to understand how they can better supply institutional partners such as restaurants, schools, and hospitals.

Raino Tech indicated that without the GFIF, the company would not have been able to expand its services in Lodwar and would not have reached Mama Samakis as fast as it did.

The company has already created five jobs in Lodwar and they reported that with increased sourcing from Lake Turkana, the company has also seen increases in their sales and monthly revenue.

3 Assessment of Post-Harvest Losses of Nile Perch (Lates Niloticus) Incurred by Fishermen from Lake Victorla, Kenya. Available here.

4 Mathew Muma, 2015. Available here.

5 MALIT, Jack Odhiambo & MATHENGE, Mary Wairimu Kiiru & MULUVI, Augustus, 2022. "Influence Of Postharvest Losses On Household Welfare Among Aquafarmers In Kenya," Review of Agricultural and Applied Economics (RAAE), Faculty of Economics and Management, Slovak Agricultural University in Nitra, vol. 25(1), March.

SMART LOGISTICS SOLUTION
LIMITED

Smart Logistics Solutions (SLS) Limited produces fortified whole-grain food products.

It was founded in 2010 as an aggregation company that collected produce from groups of smallholder farmers and sold it to larger companies, however, in 2018, the company started shifting to the production of different value-added foods. SLS's focus is on producing pre-cooked beans that have high nutritional value and that allow consumers to cut the cooking time for beans from between 2 to 3 hours to under 15 minutes. Not only do the pre-cooked beans save consumers time, but the product also helps consumers save over 80% of fuel and uses far less water.

SLS joined the GFIF in October of 2022 and, with support from the GFIF, is focusing on promoting bean-based products.

Fundamentally, SLS aims to provide nutritious yet affordable foods to low income consumers who may currently be unable to meet those dietary needs due to financial constraints. Research conducted in two low-income areas of Nairobi found that almost half of the children in households surveyed were stunted and 74% of children, as well as 25% of women, were anemic due to inadequate intakes of essential micronutrients.[6] Similarly, the prevalence of undernutrition among children under the age of five was highest in rural Kenya with some counties like Kitui and Vihiga having stunting rates of up to 45% and 34% respectively.[7]

6 Dominguez-Salas, P., Alarcón, P., Häsler, B., Dohoo, I.R., Colverson, K., Kimani-Murage, E.W., Alonso, S., Ferguson, E., Fèvre, E.M., Rushton, J. and Grace, D., 2016. Nutritional characterisation of low-income households of Nairobi: socioeconomic, livestock and gender considerations and predictors of malnutrition from a cross-sectional survey. *BMC nutrition*, 2, pp.1-20.

7 Ferguson, E., Chege, P., Kimiywe, J., Wiesmann, D. and Hotz, C., 2015. Zinc, iron and calcium are major limiting nutrients in the complementary diets of rural Kenyan children. *Maternal & child nutrition*, 11, pp.6-20.

With the above in mind, SLS's Beansy brand, which is the pre-cooked beans, and the Frejols brand which is bean flour that can be blended into familiar foods such as porridge, are essential as they allow low-income consumers, with a focus on children and women of reproductive age, to meet their dietary needs at affordable prices. SLS's fortified bean-based products are higher in micronutrients such as protein, iron, zinc, potassium, folate and magnesium, than traditional beans on the market

The financial support from the GFIF has been used to procure machinery and equipment that will enable SLS to produce its Nutriplus porridge[8] at scale.

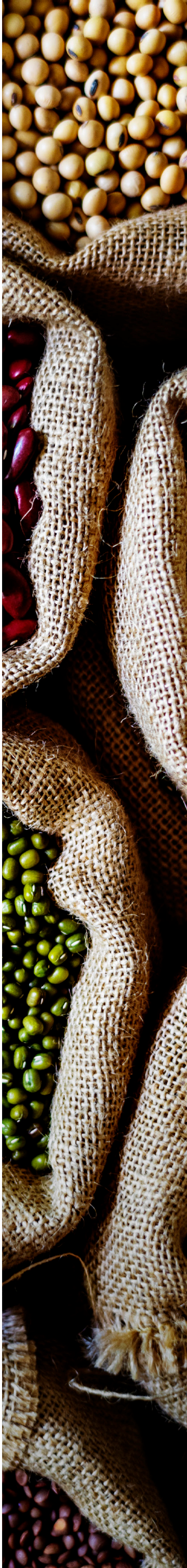
Some of the financial support has also been used to select and train a large cohort of farmers who signed agreements to supply the necessary millet and beans to SLS. The GFIF also provided **technical support**, including capacity building to SLS's staff around food safety and standards, and market research, especially in piloting and testing the palatability of the Nutriplus porridge under development. Currently, SLS has sold 80 462 kgs of its Frejols products and 8 248 kgs of its Beansy products. SLS has also contracted 400 farmers to supply them with high iron beans.

SLS' main customers are institutional partners which work directly with vulnerable populations.

SLS currently targets schools and clinics that work with young children and women of reproductive age. SLS's aim is to reach 18 hospitals, 32 schools and 62 clinics with an overall aim to reach 2 700 low income customers. While the product has yet to be produced at scale, there are plans in place to sell the product to supermarkets where other consumer groups will also have access to them.

The GFIF has enabled SLS to increase its production capacity to 8 metric tonnes of the Beansy brand and 80 metric tonnes of the Frejols brand products.[9]

GFIF has also helped SLS adhere to the requisite food safety standards. The marketing research has also increased their confidence that the products being developed are aligned with market demand.



8 Nutriplus is a multigrain based porridge flour made from a blend of beans, cereals, tubers and vegetables to deliver a composite flour that is more nutritious than singlegrain-based porridge flour.

9 It is important to note that these numbers are as of March 2023.

Founded in 2007, Shalem Investments started procuring grain from smallholder farmers and selling it to institutional partners and large-scale processors.

Over time, Shalem evolved such that it now identifies markets, processes the grain it sources directly from smallholder farmers, and sells milled flour and wholegrain cereals to large-scale markets. Shalem has also developed innovative products like pre-cooked Ugali flour and fortified porridge flour. The pre-cooked Ugali flour shortens the cooking time for Ugali allowing consumers to cut fuel costs. The fortified porridge flour provides consumers with essential nutrients and is targeted at children in schools as well as patients in hospitals to help improve their health outcomes. To ensure that quality food is produced, Shalem also provides extension services to farmers where they are trained on how to produce, harvest, and handle the grains (millet and maize) without compromising their quality through contamination. Shalem also partners with smallholder farmers to increase their yields and help them create sustainable livelihoods.

Shalem received financial support from the GFIF to procure silos to support the bulk purchase and storage of grains without compromising their quality.

Procuring in bulk directly from smallholder farmers is important for Shalem to ensure that grains can be procured at favorable prices and that Shalem can supply its products consistently at prices that consumers can afford even when grain production is low.

It is important to note that purchasing in bulk to guarantee stable prices for consumers is crucial because factors such as climate change and prices of inputs not only affect production capacities but also affect the price of grain. To illustrate, while maize production accounts for 85% of total cereal production in Kenya, the production capacity fell by 550,000 metric tonnes due to failed rains and high fertilizer prices between 2020 and 2021. As a result of reduced production, the price of maize increased by 30-65%.[10] Likewise, the agricultural sector survey found that among the factors affecting retail prices for food, climate change had the biggest impact as it impacts yields, in turn impacting prices.[11] By procuring in bulk, Shalem provides an opportunity to ensure that consumers have access to favorable prices at all times.

In addition to procuring silos, additional GFIF financial support has been used to run consumer campaigns, educating consumers on key products like the pre-cooked Ugali and porridge flour. The GFIF provided Shalem with technical support that included linked marketing training and training on food safety standards.

Shalem's target customers are institutional partners, in particular, schools.

Shalem has supplied its products to 7 schools as well as 9 distributors and wholesalers. Shalem aims to reach 13 hospitals, 62 schools, 26 social assistance programs and 65 farmer's cooperatives. Shalem, has plans in place to pursue consumer markets as well if their consumer campaigns are successful.

10 Impact of increasing fertilizer prices on maize production in Kenya, September 2022, Relief Web. Available here.

11 Agricultural Sector Survey,2023. The Central Bank of Kenya. Available here.

Raino Tech4Impact

Smart Logistics Solution

Shalem Investments

Experiences and challenges with producing Good Food

SMEs face a number of challenges when producing and supplying Good Food, including navigating stringent regulatory requirements, limited funds for capital expenditures, and having to incur extra costs to support smallholder farmers to ensure that the raw materials are of a high quality.

Meeting regulatory requirements and getting certification from the relevant authorities was more challenging than most SMEs expected.

A common challenge among the SMEs producing fortified whole grain products was ascertaining certification from the Kenya National Bureau of Standards. The process is often lengthy and expensive, especially when the product is new to the market. Given that certification is key to scaling, these lengthy processes have the potential to delay SMEs' reach in the broader market.

Large capital expenditures are necessary for expansion and scale into new markets, however, SMEs typically lack the requisite funds to purchase the equipment.

Machinery, equipment and storage units are key enablers for SMEs to scale operations, however, these require significant investments of capital, which SMEs typically do not have. SMEs thus have to rely on unfavorable funding instruments, such as high-interest loans, or keep their operations small until they can access alternative, more favorable finance options. This limits the extent and rate at which they can expand the reach of Good Food.

Available funding instruments are typically not favorable to SMEs.

Access to finance is often cited as a key barrier to the growth and scale of businesses. As mentioned above, SMEs require financial support for capital expenditures or for essential business aspects such as testing their products with consumers. However, the available funding instruments either have high-interest rates or are unable to cover the full amount that SMEs apply for. Lastly, investors often regard SMEs as high risk, and as such investments are small.

Consumer education and market research plays a large role in creating demand for Good Food, however, SMEs find it challenging to put aside the resources needed for this.

In addition, many SMEs lack the necessary expertise to effectively carry out these types of consumer awareness campaigns and/or market research. While SMEs are aware of the value that consumer research plays, especially in cases where they are introducing new products to the market, their limited resources remain a barrier; thus limiting their efforts and limiting reach when introducing new products to the market.

Procuring quality raw materials requires groundwork and offering support to producers.

For example, contracting smallholder farmers at the start of the season, supporting them to access good quality seeds and working with them between planting and harvesting to avoid contamination, helps to ensure that SMEs receive quality grains at the end of the harvest. Similarly, once the food is harvested, working closely with the farmers to avoid poor handling as the grain is harvested and safely transported to the SMEs' premises, supports the final quality of the produce received. Managing these processes requires resources, time commitments, and innovation and adaptation from the SMEs. While getting the sourcing right and investing the time and resources at the start improves the quantity and quality of raw materials needed by the SMEs, this upfront investment is costly.

Producing quality Good Food currently costs more, which translates into higher costs of Good Food for consumers.

Despite the intention to produce and supply Good Food at cheaper price points, the price of products is dictated by the cost of production. The high standards and requirements needed to produce quality and safe Good Food mean that some Good Food products are slightly more expensive than comparable foods on the market. For low-income consumers who are typically very price sensitive, this is a key challenge to expanding access to Good Food.

The section below provides key learnings and recommendations on how to effectively reach institutional and consumer markets. It also highlights the combination of support (technical vs financial) SMEs find most useful. The section concludes by highlighting sustainability risks and mitigation measures.

Key learnings and recommendations on how to reach new institutional markets

INSTITUTIONAL MARKETS

Working through institutional partners provides readily available markets and an avenue for SMEs to reach vulnerable groups more effectively.

Institutional partners provide a readily available market with an associated guaranteed offtake. This eases some of the logistical challenges SMEs face as they have clear sight on how much quantity is needed by whom and when. Institutional partners can also effectively reach customer segments that SMEs might not be able to reach as effectively or at the same scale.

For example, institutions, such as health facilities and schools, can reach young children and women of reproductive age at a scale that SMEs typically cannot reach.

Cultivating meaningful relationships with institutional partners is important to ensure institutions not only understand the value and quality of the Good Food offered by the SMEs but also ensure there is buy-in from the right stakeholders within the institutions.

Relationship building is especially important when SMEs are targeting institutions with already existing supplier relationships. In some cases, choosing to partner with the existing institutional suppliers provides an equally viable path to reaching the institutional market.

It is important for SMEs to fully understand existing institutional procurement practices, processes, and structures as well as any institutional niche requirements.

Institutions often have existing ways of working, including the frequency of procurement, quantities procured, and procurement decisions, among others. Likewise, some institutions have niche requirements based on culture or beliefs.

To effectively reach institutional partners, SMEs need to spend time understanding these existing requirements and finding ways to ensure that their products can be offered within these parameters.

Key learnings and recommendations on how to reach low-income consumers

CONSUMER MARKETS

The taste and color of food remain important determinants of demand, especially in consumer markets.

This is an important consideration as it requires adjustments either in the Good Food produced by SMEs, or concerted consumer education campaigns to shift consumers' perspectives and expectations. Consumer education thus remains an important factor in supplying low-income markets.

Likewise, price remains a core determinant of demand in low-income markets.

Good Food needs to be similarly priced to others in the market to ensure uptake. Low-income consumers are generally unable to shift to more expensive products, despite their nutritional benefits. To mitigate this challenge, SMEs can innovate and diversify their product offerings to reach low-income customers at the appropriate price point. For example, when supplying fish, sourcing smaller fish which can be sold at a lower price in comparison to larger fish, enables SMEs to reach low-income consumers at the requisite price point.

Supplying micro-vendors, such as Mama Samakis, requires support and innovation from the SMEs, for example, providing smaller packaging options, partnering with local butcheries to provide storage space, or partnering with SACCOs to extend loans to them.

Many micro-vendors do not have enough capital or storage space to purchase goods in bulk. As such, to continue reaching this market segment, SMEs need to innovate to find ways in which reaching them is convenient and profitable for both parties. For example, SMEs can package Good Food in quantities that are appropriate for low-income vendors or they can partner with other local SMEs, such as butcheries, to provide storage solutions.

Finding such solutions not only provides more access to this market segment but will increase the supply of Good Food to low-income customers who tend to purchase from micro-vendors.

Combinations of support that are most effective for supporting SMEs

While SMEs value both financial and technical support, a combination of both as opposed to providing one solely, is considered to be most effective.

Non-repayable grants are most useful for underwriting operational aspects of the business that do not generate revenue, for example, consumer campaigns or market research; while milestone-based, interest-free repayable grants are most useful for scaling operations. Tailored technical support is critical for capacity building, and an area that remains underdeveloped albeit key for SMEs, is fostering support networks where SMEs can share learnings and build off one another.

FINANCIAL SUPPORT

Non-repayable grants are key for operational expenses that, while not direct revenue generators, are pivotal to the business's functionality and success.

Examples include consumer education campaigns and market research initiatives. These activities do not directly contribute to revenue generation but are key for building the market. As such, SMEs accessing low-income markets consider these activities to be best supported by non-repayable grants rather than repayable grants or loans.

Providing non-repayable grants to support these business functions allows SMEs to carry out these activities without incurring expenses that do not yield direct or immediate revenue for the businesses. This is especially helpful for SMEs which are in early stages of operation.

To support the scale and growth of their businesses, milestone-based, repayable interest-free grants are better than non-repayable grants.

Coupling repayable interest-free grants with milestone-based payment structures embeds accountability that forces SMEs to work towards achieving set targets that, in turn, help them grow. Milestone-based grants also nurture a growth-oriented mentality as businesses strive to meet their key performance indicators.

Working with well-known innovation hubs or funds helps SMEs access additional financing and support.

Working with known agencies, such as the Rockefeller Foundation, helps SMEs increase their perceived credibility and visibility, enabling them to access other sources of support as needed. Similarly, through such mechanisms, SMEs increase their social capital.

TECHNICAL SUPPORT

Tailored technical support is necessary to enhance SMEs' internal capacities and embed critical structures and systems that are often otherwise neglected due to resource constraints.

Providing tailored technical support is an important step in building crucial SME internal capacities that are often otherwise neglected due to resource constraints. Once upskilled, SMEs typically implement and strengthen existing structures, systems, and processes that are favorable to their operations in the long run. However, technical support must remain tailored to meet existing needs and gaps for SMEs.

Fostering support networks that bring together SMEs with peers and key industry players is an important aspect of technical assistance.

The benefits of shared experiences and insights among similar businesses can be instrumental in overcoming common obstacles and fostering innovation among SMEs. Likewise, introductions to the ecosystem players can be instrumental in the growth and scale of SMEs. Such networks, while important for SMEs, remain underdeveloped and should continue to be developed.

Innovation funds and SME-supporting partners, such as the GFIF and the Rockefeller Foundation, have a key role to play in policy change and ecosystem development.

Such partners can play a crucial role in advocating for favorable policies and in communicating the unique SME needs and challenges to the relevant ecosystem players. This is especially important as a major challenge for many SMEs is often navigating policies and regulations.

Key sustainability risks and corresponding mitigation measures

Risks to sustainability include a lack of access to capital for further expansion, limited future access to markets, high inflation rates, climate change, and changes in government regulation.

Key mitigation measures include continuing to seek favorable financial instruments, working directly with farmers to secure bulk-quality yields, and staying abreast of government regulations.

A major risk to SMEs sustainability is a lack of favorable financial instruments needed for further scaling and expansion of operations.

Seeking strategic and favorable financial investments, such as interest-free milestone-based repayable loans, is key to supporting the expansion and consequent sustainability of SMEs. Several players, for example, government, private sector, investors, and SME-supporting organizations, have a role to play in supporting the emergence of a conducive financial landscape for SMEs along the Good Food value chain.

A lack of continued access to reliable markets is a key risk to the continued growth and scale of SMEs.

This is particularly relevant where Good Food products are more expensive than similar products on the market or in cases where SMEs are unable to penetrate institutional markets. Targeted investments in consumer awareness campaigns and market research, are considered crucial in enabling SMEs to produce market-fit products. Likewise, continued investments, like grants or technical support, that offset production costs will likely have ripple effects in ensuring Good Food is affordable to the target audiences.

Increasing inflation will impact product prices, potentially making them less affordable for consumers and reducing their market competitiveness.

Supporting SMEs to innovate and find relevant modes of working, for example, contracting farmers at the start or purchasing raw materials in bulk in seasons where they are affordable, is key to ensuring that Good Food prices remain relatively stable and affordable.

Climate change disrupts production capacities, affects product volumes, and compromises quality.

To avoid major distractions, SMEs should work closely with smallholder farmers to support production processes and to ensure that smallholder farmers receive quality, climate-smart seeds and address emerging risks as they arise.

Changes in government regulations can impact various aspects of the product's life cycle, from production to distribution.

SMEs need to remain abreast of all government regulations and changes therein to ensure their continued compliance and adherence.