Vert Ltd.
Grantee Case Study

agrifichallengefund.org
Background

AgriFI Kenya Challenge Fund (AgriFI) seeks to support productive and market-integrated smallholder agriculture through the provision of financial support to agri-enterprises. The aim is to contribute to improvements in the capacity of smallholder farmers/pastoralists to practise environmentally sustainable and climate-smart agriculture as a business in inclusive value chains. AgriFI’s objectives are aligned with the Government of Kenya’s aspirations for the agriculture sector as embodied in its Vision 2030, the Big 4 Agenda, and the Agricultural Sector Transformation and Growth Strategy (ASTGS).

This is one of a series of 6 case studies commissioned to extend key lessons and recommendations from grantee level review and analysis. A previous research phase explored high priority impact areas including gender, youth, nutrition, and climate smart agriculture (CSA) with a view to supporting effective design, targeting and implementation of AgriFI. These case studies test some of the logic and understanding of that research, illustrating effective strategies, issues of concern, and areas with potential for increasing positive impacts.

The suite of case studies include two (of 8) Call 1 grantees, three (of 12) Call 2 grantees, and one non-grantee as a counterfactual. Grantees from the COVID-19 Response and Recovery Call and Call 3 have not been included due to insufficient progress with project implementation at the time of fieldwork. Grantees were selected for inclusion on the basis of VC (i.e. broadly representative of the wider portfolio), geography (i.e. reasonable geographic spread), and relevance to key impact areas (i.e. strong learning potential). Fieldwork was conducted in late June and early July 2021 in compliance with COVID-19 guidance and restrictions.
Introduction

Since 2000, Vert Ltd. ("Vert") has exported fresh, high-quality vegetables – such as French beans, snow peas, baby corn, and others – sourced from across Kenya and packaged at its headquarters in Machakos. In its early years, Vert sourced produce from commercial farms and its own company farm exclusively. In an effort to improve product safety, traceability, and smallholder farmer (SHF) inclusion, Vert transitioned to sourcing 100% of its vegetables for export from small-scale farmers in 2013. This transition was seen as a ‘win-win’ for both SHFs, who gained access to a secure offtaker without losing profits to middlemen, and Vert, which could ensure greater oversight and quality.

Historically, most of Vert’s vegetables have been exported to the European Union (EU), leaving the company particularly reliant on those markets. Vert typically exports its produce either as cargo on passenger flights between Kenya and the EU, or as freight on flights organised by the floriculture industry to transport cut flowers. Thus, when either the tourism or floriculture sectors experience setbacks, the company’s ability to export produce by air is impacted.

With these challenges in mind, Vert sought to develop a revenue stream that could cater to domestic and regional markets, with transportation by land or sea freight, to reduce its dependence on air transport. A common fruit growing in abundance across Kenya offered a promising solution for Vert: mangoes.
Project Overview

Mangoes came to be part of Vert’s product offering in 2018 as the company looked to diversify its revenue streams, in part to reduce its reliance on EU markets. Mangoes were selected due to their potential for value addition, suitability to growing conditions in several of Kenya’s counties, and the fact that Vert farmers were already producing mangoes in addition to the vegetables the company sourced from them.

Due to the Government of Kenya’s self-imposed ban on exporting whole fresh mangoes to the EU – a result of Kenya’s mango supply being impacted by fruit flies – Vert sought to add a level of value addition and processing to the mangoes such that they could be exported to EU markets. The company established a mango pulping factory line to supply mango pulp to juice and jam producers in Kenya, across the Sub-Saharan Africa region, and the EU. The pulping equipment was procured and commissioned in 2018, with operations beginning from January 2019.

While Vert further integrated existing SHFs – and introduced new SHFs – into its supply chain with the pulping line, purchasing mangoes for pulping led to certain challenges. To maintain profitability, Vert needed to buy second-grade mangoes from farmers for pulping, but could not offtake higher value mangoes, and could only buy during the peak season (three months out of the year) when supply was highest and prices lowest. Because the company could not offtake all of producers’ mangoes, its interactions with SHFs were limited throughout the year and farmers began selling their mangoes to other traders. Recognising that this strained the company’s relationships with producers, Vert explored alternative mango value addition which would allow it to purchase first-grade fruit from farmers, and to purchase outside of peak supply time.

Dried mango production presented solutions to these challenges. By drying mangoes for bulk export, Vert can purchase high-grade mangoes from farmers already supplying fruits for its pulping product line, paying premium prices and incentivising farmers to sell to Vert exclusively – avoiding side selling and strengthening the company’s relationships with growers. Once processed and packaged, dried mango can be marketed to international purchasers – including in the EU – without facing export bans. Vert purchased four mango driers to produce dried mango for sale into the high-value snack and health foods markets.

With support from AgriFi, Vert has complemented the mango drying product line by establishing an outgrower scheme to streamline its 3,000+ SHF mango supply chain. With CSA in mind, the company plans to gradually train 60% of its mango SHFs in Global Good Agricultural Practices (Global GAP) and support 40% of its farmers to become organic certified, thus facilitating SHF entry into higher-value markets which result in increased incomes. With AgriFi funds, these certifications will be available to SHFs at no cost. Vert has also committed funds for SHFs to establish structures – including aggregation sheds and crates – for post-harvest management, storage, and transportation of the fruits, which will improve food safety and traceability.
Engaging Mango Smallholders

Much of Vert’s AgriFI funding has been allocated towards developing and strengthening its SHF outgrower scheme, offering three key services: extension support, SHF certifications, and guaranteed offtake. To date, Vert has registered over 3,000 mango growers across Kenya, sourcing from over 2,800 of these SHFs in the most recent (2019-2020) growing season. Vert employs a network of Extension Officers (EOs) in six counties – Embu, Kwale, Machakos, Makueni, Meru, and Tana River – to provide agricultural support services to SHFs. Vert is currently recruiting for these positions, with 12 EOs currently working with SHFs.

Vert maximises profitability (and subsequent prices the company can pay to SHFs) and consolidates support services by aiding the formation of farmer groups. To date 2,800 SHFs have been organised into groups in five counties – Embu, Kwale, Machakos, Makueni, and Tana River – and Vert plans to continue facilitating group formation to unlock benefits such as:

- Promoting farmers’ abilities to aggregate mangoes, avoiding middlemen and retaining higher shares of profits;
- Accessing training and extension services more efficiently due to group membership;
- Promoting market access for women and youth producers who may have challenges in finding and supplying to markets individually.

Vert establishes formal written agreements with its mango-growing SHF groups. Based on the stability of the market for mango, and its value addition, Vert is able to lock-in mango quantities and prices for up to two-year increments, whereas contracts for the other produce it sources are signed in one-year increments. Longer-term contracts provide more predictable income for groups, which are typically comprised of 30-40% women and around 20% youth – passing on these income-stability benefits to SHFs who may otherwise experience restricted access to markets.

Illustrating the Business Case for Organic and Global GAP Certifications

Certifications in Organic and Global GAP are two of the key benefits SHFs gain by engaging with Vert. The start-up period for SHFs producing mango is lengthy and requires significant investment of resources before fruits can be harvested and profits realised. For this reason it is a more difficult value chain in which to engage new SHFs, who usually seek more immediate returns in order to meet a range of household needs. As such, Vert is generating impact and increasing incomes by focusing on converting its conventional mango SHFs into organic farmers.

Vert’s strategic decision to increase its Organic and Global GAP-certified producer base illustrates the business case for certifying SHFs in climate smart agriculture (CSA) practices. Growing organic-certified produce is environmentally beneficial, and also financially advantageous: as the international demand for organic produce increases, particularly in the EU markets which Vert caters to, the company is able to unlock price premiums and subsequently offer higher prices to growers – in turn increasing farmer loyalty and reducing side selling. Whilst AgriFI funds are being operationalised for the initial training and certification costs, Vert will re-invest the surplus profits gained from exporting produce and mango products to pay rectification and refresher course fees for farmers, ensuring sustainability of the gains realised through the project.
### Implementation Challenges

Despite the benefit of SHF engagement in Vert’s newly established mango product line, and the demonstrated business case for CSA, the company has faced challenges organising farmers and ensuring that it can source the quantity and quality of mangoes required.

<table>
<thead>
<tr>
<th>Price fluctuations</th>
<th>Although the market for mangoes is relatively stable, and Vert’s value addition unlocks additional price and market stability, there are instances where prices fluctuate. Vert is committed to preserving its relationships with SHF growers and honours its contracts – sometimes absorbing revenue losses to ensure farmers receive the prices at which they were contracted.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sourcing limitations</td>
<td>At present, Vert is not yet able to source 100% of its mango from SHFs directly as it does for vegetables. As of the 2019-2020 growing season, about 55% of mango was purchased directly from SHFs/SHF groups, whilst the remaining 45% was sourced from traders. The challenge of sourcing exclusively from SHFs stems from Vert having only been able to purchase second-grade mangoes in the past. The company expects that as it continues to expand its first-grade purchasing for mango drying, and enters into growing contracts with more SHFs, the proportion of mangoes it purchases from SHFs will continue to increase. In the meantime, to mitigate the potential risks this presents to SHFs – who stand to lose out when middlemen traders are involved in mango marketing – Vert works with the Association of Kenya Mango Traders (AKMT) to source from registered and vetted traders, many of whom are women.</td>
</tr>
<tr>
<td>Transportation</td>
<td>Mangoes are bulky and challenging to consolidate in large quantities. Transportation is expensive and Vert’s current system – whereby mangoes are transported to its Machakos factory and then inspected and sorted, with any unacceptable produce being returned to the producer or disposed of – is costly. Vert works with SHFs to clearly communicate its requirements for the produce, including in contracts, in an effort to reduce the quantity of fruits turned away, but some waste is inevitable in this system. Vert plans to construct smaller, regional consolidation centres.</td>
</tr>
</tbody>
</table>

### Opportunities Moving Forward

Vert has seen initial success with its two mango product lines and predicts that mango will continue to represent an increasing share of the company’s annual revenues.

With this growth and demand in mind, Vert has opportunities to expand product offerings and markets in the future by either 1) packaging and marketing dried mango through supermarkets and retailers within Kenya, or 2) exploring mango pulp concentrate, which has a lower water content and therefore lower shipping weight and cost, making it feasible to transport by sea or air freight to geographically distant markets.

Either of these new products have the potential to increase Vert’s demand for mangoes – of various grades – and eventually register, certify, and provide incomes to more SHF mango producers.
Impacts Summary

Although still in the early stages of project implementation, Vert has begun to measure its impact in the four key areas – CSA, gender, youth, and nutrition. The following impacts are notable:

**Climate Smart Agriculture:** Vert sources mangoes from farmers employing CSA practices and supports conventional farmers to transition towards CSA with additional extension support and certifications. Through trainings provided by Vert, SHFs have acquired CSA skills such as soil nutrient management and conservation; intercropping and other agroforestry techniques which are soil-protective and pest-preventative; fertiliser management with emphasis on organic fertiliser; water management and conservation with focus on efficient water consumption; integrated pest management; and other CSA best practices which minimise negative impacts on the environment whilst maximising the yields farmers achieve.

At agri-business level, Vert has taken intentional measures to ensure that its factory is operated in a climate-smart manner. Its mango processing equipment is ISO 22,000 certified, confirming the prevention of biological, chemical, and physical hazards in the production process and promoting the efficient allocation of resources for optimal environmental health.

The factory also recycles 99% of mango waste into biomass; mango pits and peels are dried and then used to fuel the factory’s boiler. This practice is both environmentally friendly and economical for the company, reducing the cost of energy whilst also reducing waste.

**Youth:** As many as 80% of Vert’s factory employees are under 30 years of age. Vert’s factory expansion was particularly beneficial to youths seeking employment, as the company recruited new employees during the Covid-19 pandemic and were able to absorb unemployed and underemployed youths in Machakos who were struggling to find stable work during the economic downturn.

AgriFI’s youth research paper highlights how macro-level trends – including land and inheritance rights, increasing life expectancies, and youths’ perceptions of agriculture as compared to other business opportunities – are likely to reduce the number of young people involved in agriculture. Vert’s integration of youth employees into food processing/agri-business factory work is particularly relevant in light of these trends, absorbing unemployed youth seeking non-farm opportunities.
**Gender:** The mango drying line has had measurable impact on women’s employment. The company’s seasonal factory employment increased 10x (from 30 to 300) when the new mango drying line was established, and 70% of newly hired employees have been women.

There is important nuance to consider relating to this increase in employment opportunities for women. AgriFi’s gender research paper notes that when particular occupations or activities are labelled, overtly or implicitly, as female positions, the perception that women are less skilled than their male counterparts can become entrenched. This risk is particularly high in agro-processing, including at Vert, where factory line positions are often held by women and overseen by men in more technical/mechanical roles. Continuing to offer these employment opportunities to women is critical, as per the previous research on gender impact. However, this must be complemented by a clear strategy to ensure that women also have access to training and professional development opportunities and are able to assume supervisory/managerial positions. Formal recognition of women’s skills is essential to increase economic upgrading and promotion opportunities, and to ensure that women aren’t confined to roles that are labelled as “women’s work”.

At programme level and for facilities similar to the AgriFi Challenge Fund, these dynamics underscore the need to develop robust monitoring and evaluation metrics which measure not only female employment, but also upwards mobility and opportunity for progression; it’s crucial that companies employ women, and that those recruited women have access – either at the time of hiring or upon training and capacitation – to positions at varying levels of technical skill, managerial responsibility, and paygrade.

Vert is currently considering investing in additional mango drying equipment to increase its production capacity. This expansion, if realised, would allow for additional staffing, and potentially offer an opportunity for current female employees to transition into new, upskilled roles.

**Nutrition:** Vert’s impacts on nutrition are less explicit than its impacts in other areas, given that its healthy produce is exported to external markets. However, the company has explored opportunities to expand its product offering and market mango products within Kenya, with potential impacts on nutritional outcomes for Kenyan consumers if highly processed packaged snacks (biscuits, sweets, etc) are substituted with healthier mango-based options.
Key Learnings

Vert offers a useful framework for thinking about how agri-SMEs can shift and adapt to integrate SHFs in a financially viable – and profitable – way. Whilst the company began as a heavily dependent commercial farming based exporter, it has, over time, recognised the social and economic value in smallholder integration. Vert has managed this transition carefully, making incremental changes to its sourcing methods – rather than overhauling its entire process or all of its revenue streams at once – to become more inclusive.

This case study serves to demonstrate both the business case for smallholder sourcing models – including long term sustainability of supply – and some of the issues and challenges agri-SMEs are likely to encounter when embarking on a similar venture. Vert’s adaptive management style has enabled the company to adjust and refine its strategy for SHF inclusion so that this complements it commercial strategy and makes good business sense. Ultimately, agri-SMEs looking to make a similar transition must understand that their smallholder suppliers are business agents – albeit operating on a smaller scale – and must listen and respond to their needs in order to collaborate effectively for inclusive and mutually profitable value chain development. As part of this journey their ability to give a degree of certainty to the farmer allows the farmers themselves to plan along further horizons.

At programme level, Vert’s case provides evidence to support the rationale for a private sector development approach to agricultural value chain development in Kenya, where the agri-food sector employs approximately 60% of the total employed labour force (FAO). Agri-SMEs are important engines of growth in this context, playing a key role in delivering safe and effective food systems. Whilst many agree that there is a strong business case for developing SHF supply models, smallholder engagement and associated costs require significant investment, which is often beyond the financial capacity or risk appetite for them to front alone. Match funding through AgriFI and similar programmes can sufficiently de-risk such investments to enable agri-SMEs to move forward, in addition to providing technical assistance and delivery support. In this way, agri-SMEs can be harnessed as agents of change, generating social impact through inclusive hiring and sourcing models, supplier development, and ultimately increased incomes.