Strategic Note, April 2017

Diversification of service supply to farmers

Benefits to farmers and business

To date, many service providers have focused their services on improving farm productivity in relation to their primary cash or food crop. However, recent research is showing that focusing solely on one crop may lead to suboptimal outcomes for farmers, service providers, final buyers and investors. As a result, new and innovative approaches to sourcing and providing services are emerging, as organizations go beyond the commodity of their immediate interest (e.g. coffee buyers also offering services for staple crops) and/or their primary area of expertise (e.g. facilitating access to financial services through partnerships with local financial institutions).

But there are practical challenges faced by both farmers and companies when diversifying service supply. Therefore, we'd like to help companies think through how to optimize service supply diversification and mitigate risks, by providing an initial set of examples of how service providers are implementing diversified service supply strategies in practice.

Key factors that influence smallholders' decision-making and their potential implications

These common challenges can negatively impact the sustainability of services provided as well as the profits of service providers/off-takers.

Common challenges	Potential implications
Income dependency on single (cash) crop.	• Increased risk of financial and food insecurity. • Risk adverse behavior, as it is hard to mitigate risks such as weather or price fluctuations. • Compromised willingness to invest, which ultimately affects production levels and quality.
Livelihood dependency on diversified farm systems to spread risks. Crop being "serviced" is only one of the smallholders' crops, and sources of livelihood/income. Food security being higher priority than cash income.	• Possibility of farmers diverting inputs received for the "serviced" crop for usage on another food crop, which in turn leads to suboptimal use of services for the cash crop, negatively affecting production levels and quality and may lead to "side-selling" by farmers.
Inability to earn a living income and to manage cash flow.	• Lack of cash can lead to side-selling by farmers and risk of debt accumulation. For example, the need to pay school fees or other immediate financial pressures (e.g. medical bills or family emergencies) may result into pre-selling to local traders. Living necessities are obtained on credit from local shopkeepers. Reimbursement of loans is often in kind and prices offered for future harvests are low. If converted into cash, interest rates on credits are very high. • If farmers cannot make a living income from farming, there is the risk of farmers moving to cities to undertake off-farm activities.

Mitigating these challenges by diversifying service supply

In IDH's work analyzing service delivery models we have come across some promising solutions to diversifying service supply. We reflect on two of them here: 1) Multi-crop service delivery and 2) Partnership service delivery.

Multi-crop service delivery refers to the expansion of services beyond the key cash or food crop to other crops, to support a farmer in crop diversification. This can reduce smallholder farmers' uncertainties, and lead to increased productivity, reduced risks associated with mono crop planting, and boosted income.[1] Finding crops or other income sources that are complementary and have markets is a crucial service to smallholders. Crop rotation (in the case of annual crops) increases production[2] and decreases disease cycles.[3] Case 1, below, summarizes the activities of **Pratibha Syntex Ltd.**, a textile manufacturer in India, who have started to service and source other marketable crops in addition to cotton. The case explores key issues relevant for service providers considering crop diversification such as:

- Determining other crop(s) for which to provide services
- Recovering the costs for additional service supply
- Ensuring there is sufficient access to markets for the other crop(s)
- Financing the provision of additional services
- Benefits from offering services to other crops

Partnership service delivery refers to partnering with an external market actor for the provision of additional services. A full suite of services (inputs, finance, mechanization, training, data, coordination, access to markets, processing etc.) is vital to farmer income growth and resilience. However, for many service providers the provision of such a range of services falls outside the organization's core expertise and/or mandate. In this case, partnerships can offer a solution. Partnerships can take many forms. For example, Case 2 below summarizes the experiences of **Sangany**, a start-up sourcing coffee and spices from smallholders in Madagascar, who have partnered with a local Microfinance Institution (MFI) to facilitate access to finance. Partnerships can also occur between off-takers, to provide access to markets for additional crops. Working in partnerships can be complex, thus when determining whether partnership is the right approach to pursue there are considerations to be explored, such as:

- Finding / selecting a suitable partner, especially if the additional crop is in a sector of limited experience
- Deciding terms and conditions of partnership
- Clarifying benefits of partnership for both partners as well as farmers
- Monitoring the effect(s) of partnership on farmers

Case 1: Pratibha Syntex Ltd. facilitates crop diversification beyond cotton

"Our approach doesn't look at farmers as cotton producers but as farmers." Avinash Kamarkar, Vice President - Vasudha Farm Initiatives, Pratibha Syntex Ltd.

Pratibha Syntex Ltd. is a vertically-integrated, sustainability-oriented, knitted textiles manufacturing company based in central India. Working with a total of 33,000 farmers, operations range from farm to finished product stages. The cotton farmers have diversified farming systems with cotton, representing 30-35% of their income. Based on the findings from an economic survey indicating that with average annual net earnings of around USD 770 (50,000 Indian Rupees) for a farmer with an average land holding

[1] Diversified cropping systems tend to be more agronomically stable and resilient because of reduced weed and insect pressures, reduced need for nitrogen fertilizers, reduced erosion (due to cover crops), increased soil fertility, and increased yield per unit area. See Lin (2011) as quoted in Makate et al. 2016.

[2] Crop rotations of cover crops and nitrogen-fixing crops increase primary crop yield. See Smith et al. 2008.

[3] See Krupinsky et al. 2002

of four acres, farmers do not earn sufficient income to fulfill the basic needs of their families, Pratibha decided to a) work with farmers to increase economic yield per acre and b) diversify their service supply to farmers beyond cotton. In 2016, the company piloted ten different crop combinations based on farmers' existing farming practices and interests. For example, many of the 2,000 pilot farmers were already growing some of the additional crops targeted but were encouraged to test out new approaches, such as multi-cropping and intercropping cotton with other crops, on one acre (approximately 25%) of their land. Pratibha did not finance crop inputs but provided “packages of practice” for the production of sustainable/organic produce to farmers and has also supported the establishment of farmer-owned input production centers, where farmers produce required seeds for other farmers sold at minimum cost.

Early results are promising. In year 1, about 10% of farmers followed the suggested farm practices entirely, and in some cases, positive income increases of 2.5 times were achieved from intercropping. Based on pilot results, Pratibha has decided to focus on four crops (cucumbers, spices, pulses, oil seeds) and is confident that - based on positive existing farmer experiences - the number of fully-committed farmers will grow to at least 1,000 in year 2. From the beginning, it was clear for Pratibha that the crop diversification model would only work if a market could be guaranteed. In year 1, the company was not able to secure a market for all additional crops produced, but managed to recover working capital investments and achieved a small additional return. Going forward, Pratibha is pursuing different approaches to manage aggregation and sales of the additional crops, such as:

- **Sales to bulk buyers:** recognizing the limitations of the retail market, Pratibha is in the process of identifying suitable wholesalers interested in sustainable and/or organic produce, and that are willing to pay a premium.
- **Farmer profit share model:** for year 2,500 farmers have agreed to supply their produce to Pratibha based on a 50% cash payment with the remainder being paid once Pratibha has sold produce to buyers. This model enables Pratibha to reduce their working capital requirements and allows Pratibha to sell against a higher price and forward the higher price to the farmers.
- **Farmer producer companies:** the Indian Government provides financial support to farmer-owned producer companies. Pratibha has supported the establishment of two companies so far and is prepared to help connect these and others to the market.
- **Support from development agencies:** Pratibha has received previous support from external agencies including the Better Cotton Initiative (BCI), Cotton Connect and the Sustainable Trade Initiative (IDH) to set up the input production centers. Additional development support would help the company to scale up more quickly.

The crop diversification model is led by Vasudha Organic. Securing internal company buy-in and support was not without its challenges. One of the main concerns was whether the additional business practices would overtake cotton, which is famers’ and companies’ main cash crop. Different business divisions initially only agreed to invest small amounts as contributions to pilot working capital requirements, but, following positive initial results, have agreed to further increase their investments for year 2. If the model can successfully be scaled, setting up a separate business department is likely. Pratibha's ongoing commitment is based on the following benefits associated with the new model:

- **Greater farmer integrity:** engagement with farmers over longer periods of time (not just during the cotton season) and including a more comprehensive set of crops enables greater integrity at farm level regarding cotton farming practices, and a better overall relationship with farmers. This in turn enhances long-term security of supply.
- **Improved cotton production:** new farming practices present an opportunity to address issues arising from unsustainable cotton monoculture practices, leading to enhanced and sustained yields in the longer term.
- **Business growth:** the additional crops present the opportunity to diversify and scale up the company's business activities to other commodity markets, offering tangible commercial

benefits.

So far, Pratibha has identified the following key success factors for its initiative:

- **Famer trust**: existing relationships with farmers have helped to build trust for newly proposed activities.
- **Farmer engagement and empowerment:** close engagement with farmers, including early discussions about possible crop combinations and selection of crops already grown, has helped to create farmer buy-in. Pratibha puts the farmer at the center of decision-making and sees them as “scientists.”
- **Risk management:** limited pilot areas were proposed to manage risk.
- **Market linkages:** Pratibha's support to create market linkages and market the products is considered crucial. Pratibha put in dedicated staff resources to explore the different market linkages.
- **Long-term perspective:** Pratibha is aware that it will take time to fully set up the new model, and that learning about what works and what doesn't is key.

Other practical crop diversification examples:

- **Ecom Agroindustrial Corp Ltd.** is piloting a project on diversification with approximately 700 farmers in Tanzania, offering support on sesame cultivation, an annual crop that provides the farmer with an income during a period in which the income generated from coffee is low.[4]
- **Barry Callebaut**, a producer of chocolate and cocoa, and **Prova**, a manufacturer of vanilla extracts and flavors, are working together to diversify crops and stabilize revenues of vanilla farmers by introducing cocoa farming in Madagascar.[5]
- **Transu Ltd.**, a Kenyan aggregator, has started trading in white sorghum and is now involved in soybean and pulses as a rotation crop for sorghum, alongside rice, cassava and dried beans.
- The German textile producer **Gebr. Elmer & Zweifel (GEZ)** wanted to widen the range of its products and recognized market potential for organic sesame on EU markets. Sesame has synergies with GEZ's main crop, organic cotton, as it provides crop rotation with cotton and boosts soil fertility.[6]
- **Sangany**, a company sourcing coffee and spices, is piloting a project on cultivation and sourcing of artemisia annua, an annual crop with medicinal uses that can be grown throughout the year during periods with less other farming activities.

Case 2: Sangany facilitates access to finance through partnership

"In addition to providing benefits to farmers, our partnership with CECAM helps us to secure our company cash flow", Peter Egging, CEO, Sangany

Sangany is a Madagascan company founded in July 2015 that purchases coffee and spices directly from smallholders and farmers' organizations. Since starting its operations, Sangany has been working towards establishing close relationships and levels of trust with its suppliers. However, one of the issues that prevents larger volumes of produce being sold to Sangany is the regular provision of short-terms loans to smallholder farmers by local collectors. Many farmers are cash-constrained and unable to make agricultural investments or save for school fees or medical bills. The informal loans address these issues,

[4] IDH, Sustainable Trade Initiative (Iris van der Velden, Gerben de Witte, and Lucian Peppelenbos), with assistance of NewForesight Consultancy (Joost Gorter and William Saab): Service Delivery Models (SDMs), Insights for continuous improvement and farm impact - September 2016

[5] IDH, Sustainable Trade Initiative (Iris van der Velden, Gerben de Witte, and Lucian Peppelenbos), with assistance of NewForesight Consultancy (Joost Gorter and William Saab): Service Delivery Models (SDMs), Insights for continuous improvement and farm impact - September 2016

[6] Grow Africa, AGRA - Smallholder Working Group: The role of companies in supporting income resilience for smallholders, Briefing Paper, March 2017

but come with very high interest rates.

Sangany recognizes the need for cash amongst farmers, but doesn't consider themselves in the position to provide advances due to working capital constraints and the risk of side-selling. To break the cycle of indebtedness and enable farm investments, Sangany has entered a partnership with CECAM, a cooperative financial institution providing financial services to farmers in Madagascar, to provide loans (on average USD 186 per farmer in year 1) and savings accounts to coffee and spice producers with 3,5% monthly interest rates. For each loan, Sangany, CECAM and the farmer or farmer organization respectively enter a tripartite agreement, clarifying the terms and conditions for each party as summarized in the table below.

Party	Responsibility
Sangany	• Guarantees to buy farmer produce (if agreed quality standards are met), set up local collection centers close to farmers and provides agricultural information to farmers. • When farmers deliver their produce to Sangany, Sangany pays the farmers in their CECAM account which allows CECAM to deduct the principal and interest that were due on the loan.
CECAM	• Conducts due diligence on farmers' credit feasibility. • Provides loans to eligible farmers and offers savings accounts. • Manages cash collection for produce and physical transport of money from the bank to Sangany's collection centers (in return for a 1% commission of transported funds).
Farmers	• Guarantee to deliver the product to Sangany. • Guarantee to repay loan upon sale of produce to Sangany into CECAM account.

Given the fairly limited number of financial institutions providing financial services to rural farmers in Madagascar, the choice of whom to partner with was straightforward. Existing experience in financial services has helped Sangany management evaluate the terms and conditions offered before entering the partnership agreement.

Sangany sees clear benefits from the cashless transactions, guaranteeing security of their own personnel and enabling greater control of company cash flow. In addition, the company considers the partnership as an opportunity to increase trust and improve relationships with its farmers. For CECAM, the partnership not only offers the opportunity to grow its business but also to diversify its business activities from the previous main focus on food crops to cash crops. CECAM has evaluated pilot results and is committed to further scale up the number of farmers receiving credit. Going forward, for CECAM finding opportunities to reduce the risk of loan provision, e.g. by partnering with development partners able to offer guarantees, will be critical to engage with larger numbers of farmers. For Sangany, it is important that CECAM will increase the amount their rural branches are allowed to keep in their safe to enable smooth operation of its collection centers.

Based on the fairly limited number of farmers receiving credit to date (25 farmers), and the long-term nature of possible productivity improvements, effects on farmers' livelihoods cannot yet widely assessed. However, all loans have been paid back 100% and some immediate results such as quality improvements due to better post-harvest techniques have been seen for coffee. Sangany assumes that access to financial services and improved quality and increased production of coffee and spices will ultimately contribute to livelihood improvements of farming families. The company is collecting data on immediate results related to quality and productivity and has an interest in understanding the long-term effects on farmers' livelihoods, but given the high costs and complexity of such assessments does not currently consider themselves equipped to undertake impact research.

Other practical partnership examples:

- **Barry Callebaut,** a producer of chocolate and cocoa, is providing in-kind credit to farmers in Cote d'Ivoire in the form of inputs and farm services. To receive the productivity package on credit, farmers are assisted in opening a bank account with Advans, an MFI, in which they are required to save 20% of the package value up-front. In this way, farmers can generate a positive operational and financial track record and thus become bankable.
- **Goldtree**, a palm oil company based in Sierra Leone, is developing a school fee loan product in collaboration with a local community bank with the objective of providing an alternative to loans from local oil traders.[7]
- **The Farm to Market Alliance** is a public-private consortium of eight organizations[8] to build long-term linkages between suppliers (farmers), buyers and other key market players such as suppliers of finance, inputs and technical expertise currently operating in three African markets.[9]

[7] Smith, K., Schramm C.: Five Years of the AAF's Technical Assistance Facility: Enhancing Food Security impact of agir-business investments in Africa. (2017), TAF & Ashley Insight, Johannesburg & London.
[8] Alliance for a Green Revolution in Africa (AGRA); Bayer Crop Science AG; Grow Africa, International Finance Corporation; Syngenta Crop Protection AG; Rabobank; WFP; and Yara International ASA
[9] World Food Programme, News: WFP Boosts Food Security by Connecting Smallholder Farmers to Global Markets, Published on 20 January 2016, https://www.wfp.org/news/news-release/wfp-boosts-food-security-connecting-smallholder-farmers-global-markets