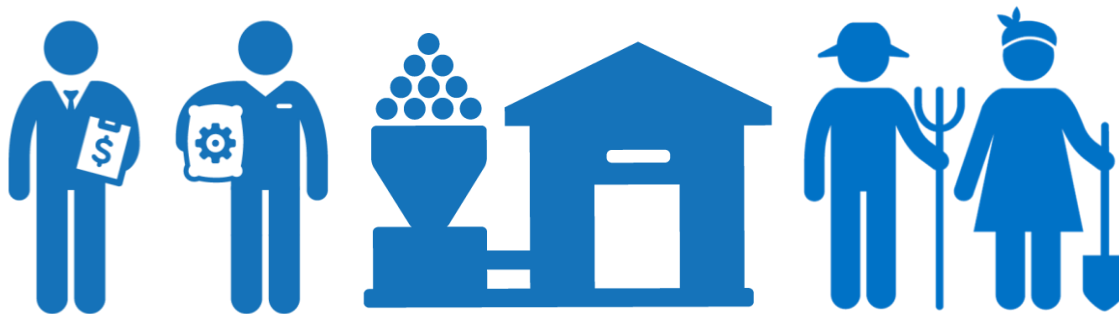# SDM: Case Report Ugacof and Grow More Seeds

Service Delivery Model assessment: Short version

November 2017

Location: Uganda
Commodity: Coffee, beans, and maize
Services: Extension services, capacity building, provision of seeds
                   and inputs, optimization of service delivery, market
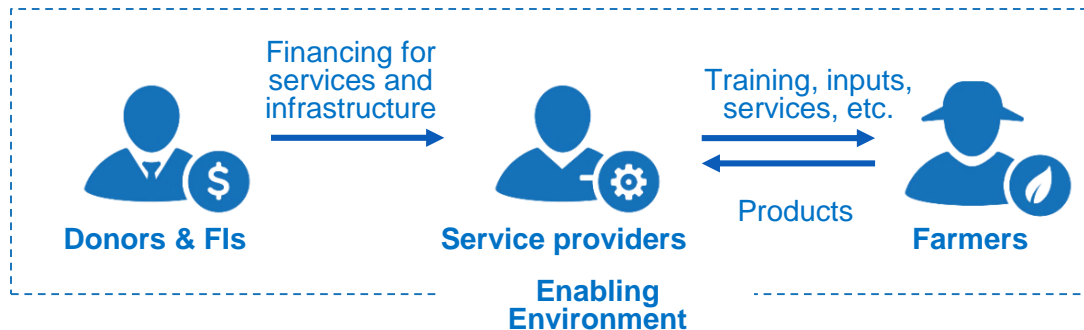   access, rejuvenation*

*outside scope of analysis

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GROW MORE SEEDS AND CHEMICALS LTD

UGACOF

What are SDMs and why are we interested in analyzing them?

Service Delivery Models (SDMs) are supply chain structures which provide services such as training, access to inputs and finance to farmers. The aim is to improve farmers' performance, and ultimately their profitability and livelihoods.

A SDM consists of service providers, often supported by donors and financial institutions (FIs), and farmers receiving the services. All are set within a specific enabling environment.

Financing for services and infrastructure

Donors & FIs

Service providers

Training, inputs, services, etc.

Products

Farmers

Enabling Environment

By analyzing SDMs, we aim to support **efficient, cost-effective and economically sustainable SDMs at scale** through:

Key drivers for success of SDMs benchmarking

Innovation opportunities to support

Cross-sector learning, learning community

Convening at sector and national level

Analyzing SDMs brings a range of benefits

Farmers and farmer organizations

- **Enhanced services**, which lead to improved farmer income and resilience, through higher productivity and product quality
- **Improved SDM outcomes**, which lead to an improved social and environmental environment

SDM operator

- Better understanding of your **business case**
- Insights to **improve service delivery**
- Insights to develop **a cost-effective SDM**
- Identification of opportunities for **innovation** and **access to finance**
- **Comparison** with other public and private SDM operators operating across sectors/geographies
- Ability to communicate **stories of impact and success** at farmer level

Investors/FIs

- **Common language** to make better informed investment decisions
- Insights to achieve optimal **impact, efficiency and sustainability** with investments and partnerships in SDMs

The Ugacof SDM and objectives

General SDM information:

Location: Uganda
Timing and analysis scope: 2018-2024
Scale (start of analysis):   2,000 farmers
Scale (end of analysis):   5,000 farmers

Funding: Ugacof and Grow More Seeds

SDM Archetype*:   Local trader / processor

UGACOF

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Ugacof is the leading coffee and cocoa processor and exporter in Uganda with a well established state of the art processing facility committed to adding value to the entire coffee supply chain. Facilities in Kampala include processing and warehousing capacity, while the company maintains collection centers in all major coffee-producing regions of Uganda.

Grow More Seeds and Chemicals Limited (GMS) is a seed company operating in Uganda since 2008. The main objective of the company is to offer professional services in research, production, distribution and sales of quality vegetable and field crop seeds, relief food, agricultural chemicals, fertilizers, agriculture tools and irrigation equipment.

SDM objectives:

1 Increase income and food resilience of smallholder farmers

2 Assess the economic viability of a joint cash/food crop SDM to smallholder farmers

3 Serve as an example model for combining services for cash and food crop
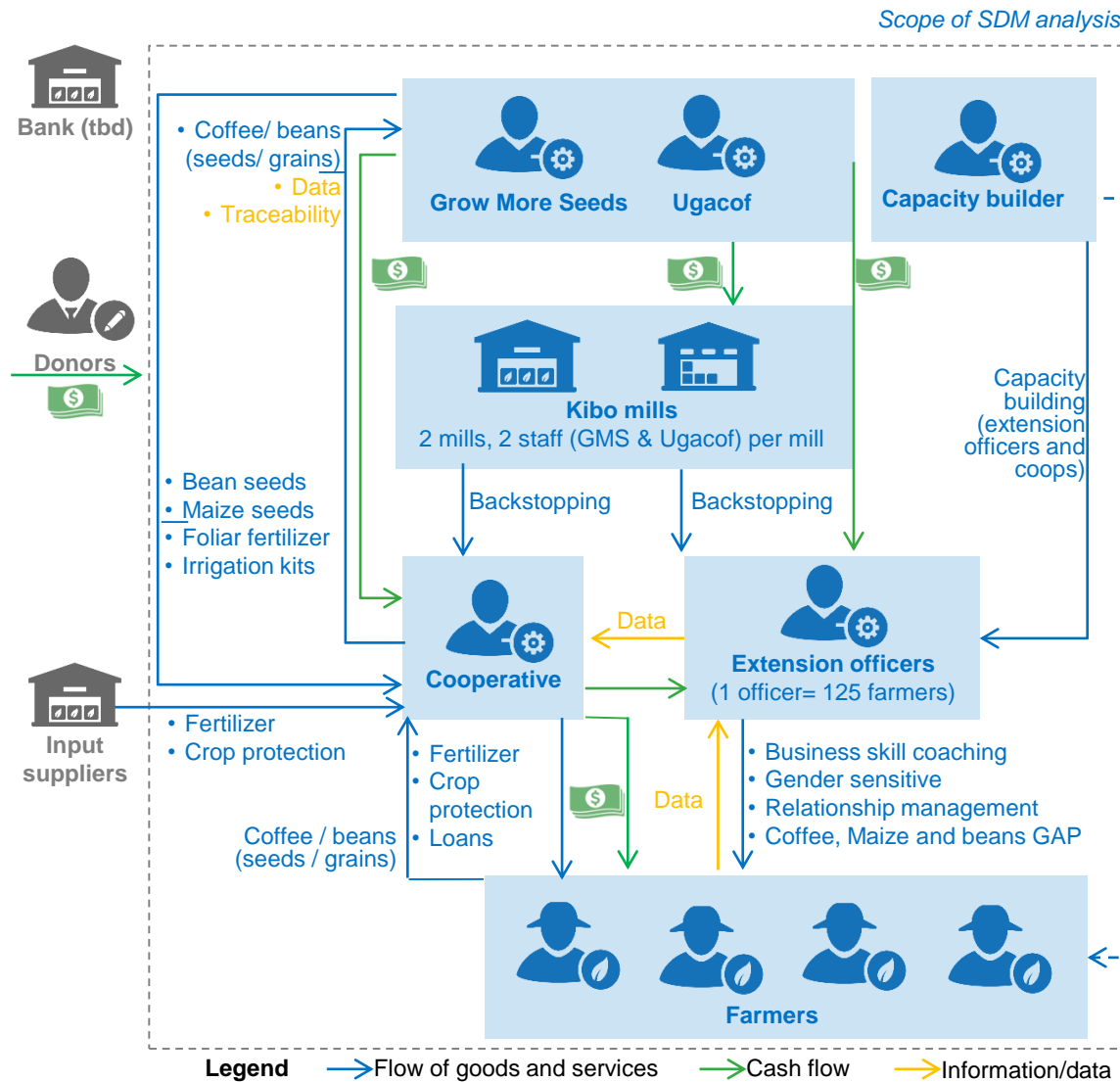
SDM rationale:

if services are provided for both food and cash crops, they strengthen each other

Higher income and food resilience for smallholder farmers

* For more info on SDM archetypes, see the IDH Smallholder Engagement Report

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Overview of services and revenue flow in the SDM

Scope of SDM analysis

Bank (tbd)

- Coffee/ beans (seeds/ grains)
  - Data
  - Traceability

Donors

- Bean seeds
- Maize seeds
- Foliar fertilizer
- Irrigation kits

Input suppliers

- Fertilizer
- Crop protection

Coffee / beans (seeds / grains)

Grow More Seeds   **Ugacof**

Capacity builder

Kibo mills
2 mills, 2 staff (GMS & Ugacof) per mill

Backstopping   Backstopping

Cooperative   Data   **Extension officers**
(1 officer= 125 farmers)

- Fertilizer
- Crop protection
- Loans

Data

Capacity building (extension officers and coops)

- Business skill coaching
- Gender sensitive
- Relationship management
- Coffee, Maize and beans GAP

Farmers

Enabling environment

Farmers and Ugacof are impacted by several factors within their enabling environment. Most important are:

1. Trading system
There is a large risk of side-selling of farmers and not respecting the terms of the contract. Large bulk of coffee is traded by middlemen.

2. Environmental (issues)
Loss of produce due to drought is common and poses a large risk to the farmers. Climate change may exacerbate this effect.

3. Infrastructure
Infrastructure and logistics limits access to market for farmers. The local maize market is well-developed.

4. Inputs & financing
Majority of farmers do not have the financial means to invest in high quality inputs.

5. Pricing & competitiveness
Pricing of coffee is highly volatile, depending heavily on the international market. The market for beans is driven by local trends, and is also highly volatile

Legend → Flow of goods and services → Cash flow → Information/data

Services delivered and farmer segmentation

Extension services

Extension officers provide GAP training to farmers for all crops, business advice, relationship management and gender sensitization activities. Officers are trained and initially paid by Ugacof & GMS, and will receive compensation through cooperatives in time.

Capacity building

Staff from cooperatives and extension officers receive business and organizational training, as well as contracting and negotiation. Cooperatives receive additional (backstopping) support.

Provision of seeds and inputs

GMS sells bean seeds to farmers, along with irrigation kits and foliar fertilizer. Agrochemicals, fertilizers, and loans are delivered to the farmers through the cooperatives.

Optimization of service delivery

An M&E system will be put in place that captures data on farm-level through an app. This data can be used to analyze and improve the impact and efficiency of services. The system can also be used to provide the farmers with information.

Market access

GMS and Ugacof will provide market access for beans (seed and grains) and coffee for the farmers.

Rejuvenation

Rejuvenation services for coffee trees are delivered to the farmers outside the scope of this analysis (see "Service Entities" chapter)

Farmers are segmented in this SDM:

Minimum criteria for entry into SDM
- The SDM is targeted at farmers who grow coffee and food crops, and own at least 2 acre of land. Food crops are grown on at least 1 acre.
- Farmers need to be willing to learn and adopt a business-minded approach to their farming activities.
- The farmer should have an attitude committed to transform their farm system

Segment 1 (Average farmer)
Farmer become segment 1 if they:
- Meet the minimum criteria
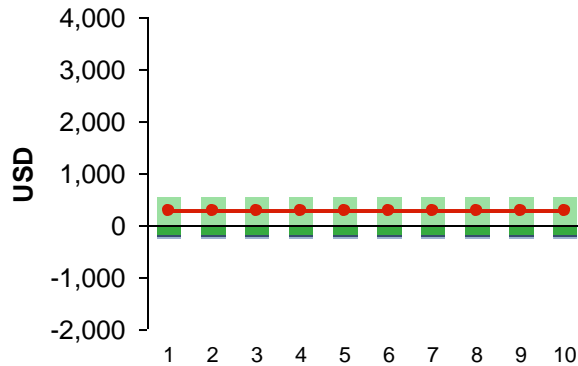- Adopt GAP and have access to land, inputs, and finance

Segment 2 (Model farmer)
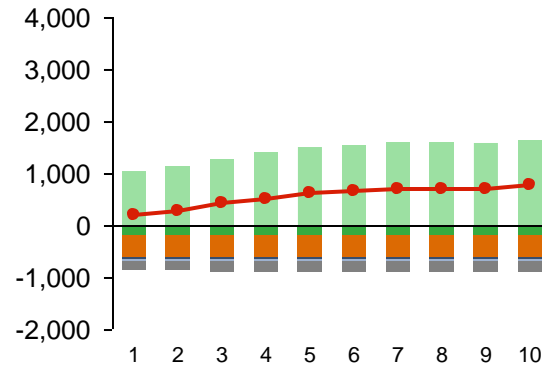Farmer become segment 2 if they:
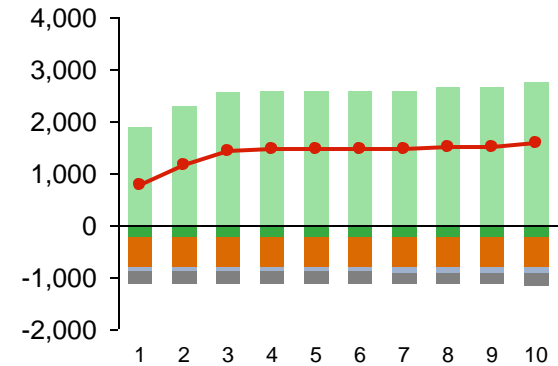- Adopt better GAP and apply inputs

Farm P&Ls: overall impact*

Baseline

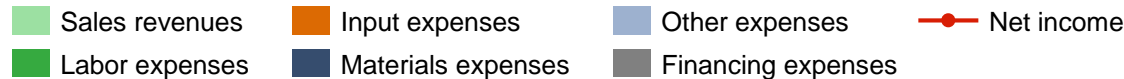**Segment 1**
"Average farmer"

Segment 2
"Model farmer"

Years after farmer joins the SDM

Legend:
- Sales revenues
- Labor expenses
- Input expenses
- Materials expenses
- Other expenses
- Financing expenses
- Net income

Economic sustainability at farm level

This program seeks to impact farmer income through extending (existing) services from only coffee, to coffee, beans (seed and grains), and maize. Farmers are aided to look at their farm "as a business" and make decisions based on expected returns for the different crops. If successful, this program can help increase farmer income, as well as enhance their food security through the growth of food crops. A distinction is made between "Average farmers" and "Model farmers" to show the effect of adoption of GAP on farmer income. This distinction is used in commercial analyses as well, to develop more realistic sourcing scenarios for Ugacof and Grow More Seeds.

Main revenue drivers

- **Production:** Coffee is the main revenue driver for the farmers, followed by maize, then beans (seeds), and lastly beans (grains). Productivity increases in time for the average farmer and the model farmer, through trainings and experience.

Main cost drivers

- **Inputs:** Inputs are the main cost item for both the average and model farmer. Model farmers spent most on inputs, including the use of Folier fertilizer (beans) and urea (maize).
- **Labor:** For coffee, the main labor expenses relate to maintenance and harvesting. For maize and beans, the main costs are land preparation and planting.

* Based on a combination of measured data, assumptions and projections.

Sensitivity analysis for different pricing and production scenarios

In reality production and price of coffee, beans, and maize fluctuate. For example, extreme events such as droughts can have a detrimental effect on yields, and thus net income of the farmers. The same holds for fluctuations in commodity prices. Below, the effect of changes in productivity and price are modelled.

Net income of a segment 1 "average farmer" for different pricing and productivity scenarios*

Change in price received (%)

Change in production (%)	-50%	-25%	0%	25%	50%
-75%	-668	-566	-464	-362	-260
-50%	-464	-260	-56	148	352
-25%	-260	46	352	658	964
0%	-56	352	760	1,168	1,576
25%	148	658	1,168	1,678	2,188

* Assuming constant cost structure. The change in price received and production applies to all crops.

Net income of a segment 2 "model farmer" for different pricing and productivity scenarios**

Change in price received (%)

Change in production (%)	-50%	-25%	0%	25%	50%
-75%	-796	-626	-456	-286	-116
-50%	-456	-116	225	565	905
-25%	-116	395	905	1,415	1,925
0%	225	905	1,585	2,265	2,946
25%	565	1,415	2,265	3,116	3,966

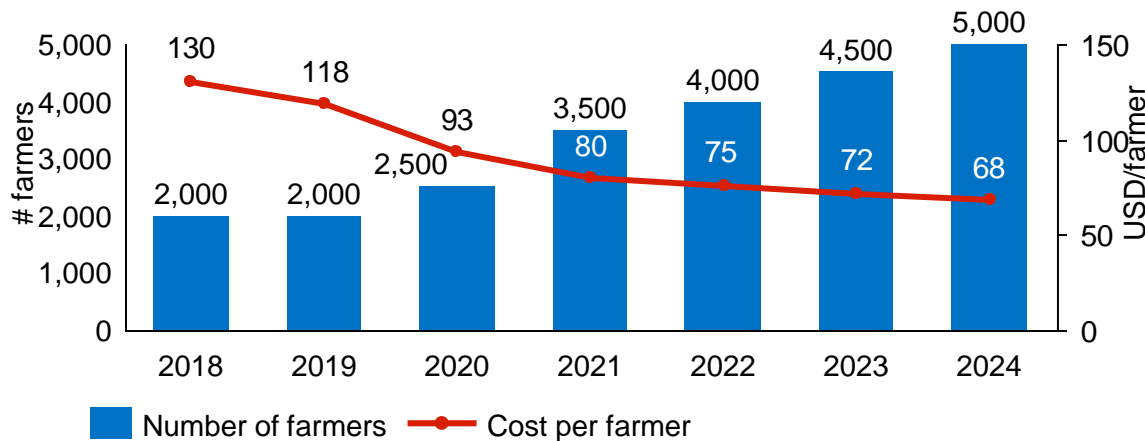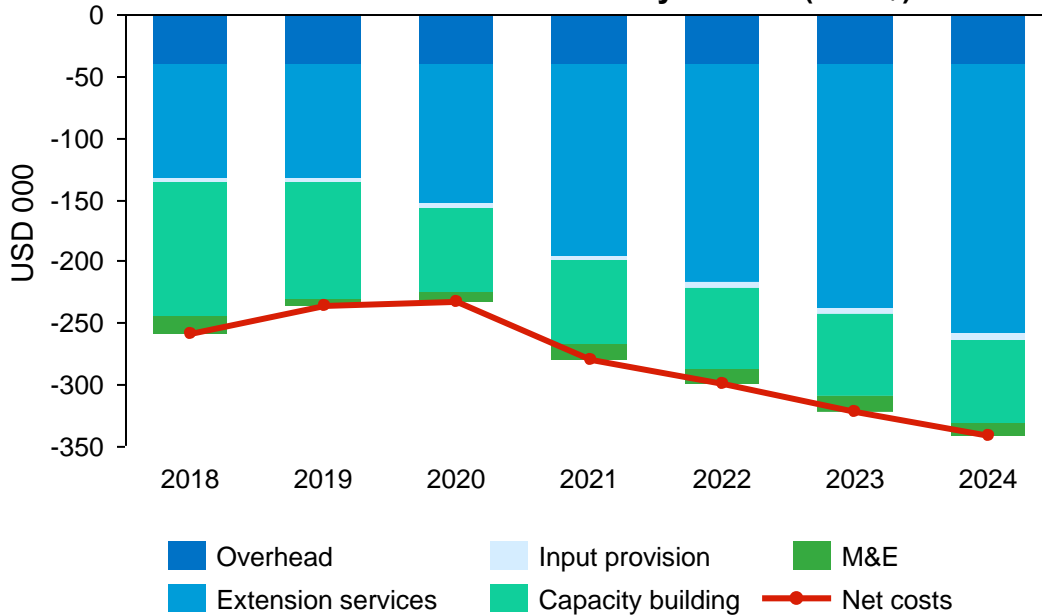*** Assuming constant cost structure. The change in price received and production applies to all crops.*

Observations

As the segment 2 "Model farmer" realizes higher yields, a % change in price received or yield has higher net impact. Further, as the cost structure is (slightly) higher for the segment 2 "Model farmer" (more inputs), there is a break-even point where the additional costs are not worth the investment (e.g. -75% production, -50% price), even when applying the best GAP. However, net income for the segment 2 "Model farmer" remains higher in (almost) all scenarios. In practice, some of these effects might be mitigated, as the cost structure will likely fluctuate with changing yield (expectations).

Assumptions used in this SDM study

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SDM P&L

Overall SDM costs by service ('000 $)*

Legend: Overhead, Input provision, M&E, Extension services, Capacity building, Net costs

Legend: Number of farmers, Cost per farmer

*Exchange rate used in this study: 3,600 UGX / USD

Economic sustainability of the program
- One of the main focus areas of the program is to help farmers to approach farming as a business.
- GMS and Ugacof are willing to pay a mark-up to the cooperatives. This could lead to financially stronger cooperatives and thereby improving the sustainability of the SDM.
- The vision of Grow More Seeds and Ugacof is that the SDM becomes a self-sustaining (and growing) model, centered around professional cooperatives.

Main revenue drivers
- The farmers do not pay for the coaching and training.
- The main (commercial) revenue drivers are increased bulk and quality of produce.

Main cost drivers
- The main cost driver are the extension services. These consist primarily of salaries and HR, and transportation costs.
- In the first two years, capacity building is a main cost item. In these two years, a capacity building organization will organize capacity building support and training at mill level, to the cooperatives, and to the extension officers.
- Overhead is a large cost item for this program. This is relates to the overhead costs that are made for the two separate companies (e.g. GMS and Ugacof).

SDM projected outcomes

SDM objectives	Projected outcomes
1 **Increase income and food resilience of smallholder farmers**	The actual increase in income and food security depends on the practical implementation of the program and overcoming potential hurdles. However, the analyses in this report indicate that the program could have a significant positive impact.
2 **Assess the economic viability of a joint cash/food crop SDM to smallholder farmers**	Service delivery for multiple crops could be more cost-efficient as compared to service delivery for a single crop (e.g. shared costs and other synergies in service delivery).
3 **Serve as an example model for combining services for cash and food crop**	The documentation of learnings and impacts is essential for improving the program and implementing its lessons in other regions.

Key insights

Key drivers of success

- Delivering services for food crops will positively influence the **food security** of the farmers.
- There is a **strong demand** from both farmers and cooperatives for services on food crops and financial services.
- The focus of farmer training and capacity building is to approach **farming as a business**.
- The mark-up GMS and Ugacof are willing to pay to the cooperatives could lead to financially **stronger cooperatives.**
- Providing services to farmers year-round, could lead to **increasing loyalty.**
- Service delivery for multiple crops will be more **cost-efficient**
- Ugacof and GMS both have extensive experience working with farmers and service delivery

Key risks

- The program relies heavily on **improving professionalism of farmer cooperatives**.
- Reducing interaction with the farmer will impact the connection the companies have with the farmer, potentially impacting **loyalty rates/side selling**.
- The farmers need **access to finance** to be able to afford quality inputs and it is key to find a partner to assist in providing this access.
- Currently, women are mostly responsible for subsistence (beans/maize) farming. There is a **risk that women lose this position** once food crops become more financially viable
- For this program to be successful, the **market access** for the produce of the farmers needs to be guaranteed.

Key factors in replication

- To ensure that the multi crop model can be implemented in different settings and regions and be scaled up, **the documentation of learnings and impacts is essential.**

Opportunities for improvement

- By implementing a **structured and standardized use of an M&E system**, farmer data could be used to track adoption and impact in a sophisticated way. This data could then be used to trial innovations and improve existing service delivery. Such M&E systems become valuable especially when service delivery is scaled up to a large number of farmers.
- GMS and Ugacof can benefit most from this partnership if they **present themselves as partners** that together provide services to the farmers.

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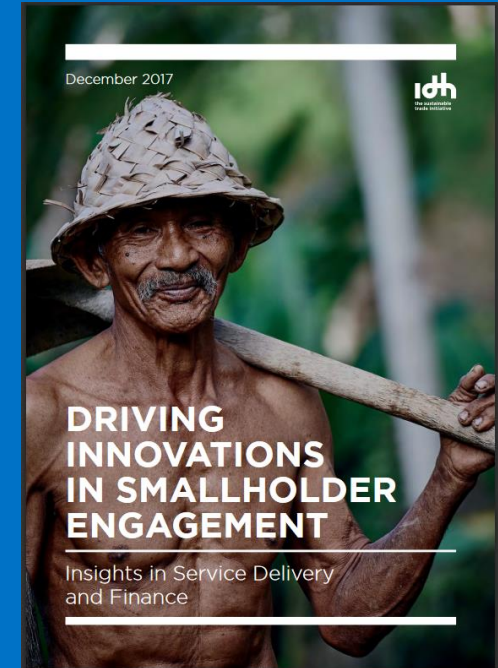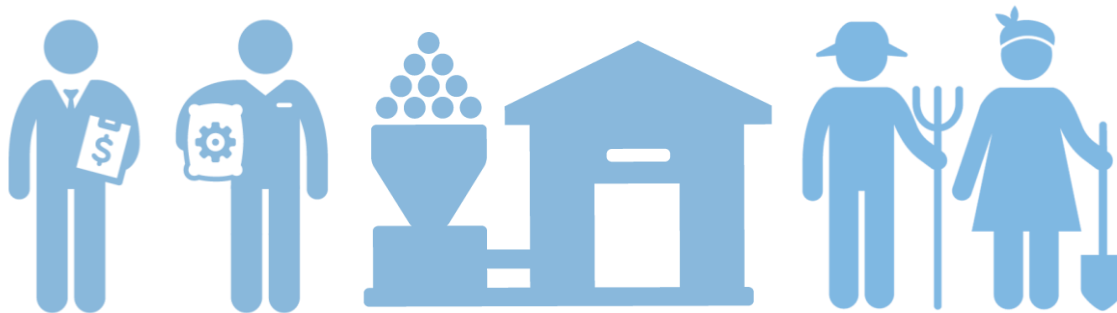
For more information, see the IDH Smallholder Engagement Report. This report, gathered by analyzing over 30 individual SDMs in 16 countries, provides insights into IDH's data-driven business analytics. The findings identify drivers of farmer resilience, cost reduction and financial sustainability in service models and the conditions needed for a supporting enabling environment.