SCBF

November 2018

Swiss Capacity Building Facility (SCBF) Outcome Assessment Study on Agricultural Insurance in Tanzania

Projects:

SCBF FSW-07
SCBF FEW-02
SCBF FEW-03
SCBF 2014-01
SCBF 2014-02

Prof. Dr. Meine Pieter van Dijk
Erasmus University of Rotterdam in the Netherlands
mpvandijk@iss.nl

With contributions from Gilles Renouil, Director Micro insurance at Women's World Banking.

Acknowledgements

The research team wishes to thank SCBF for allowing us to do the study and I want to thank Karel van Hoestenberghe, who did the survey in the Mwanza and Arusha regions, and Gilles Renouil with whom I spent four days in Tanzania. I am also grateful to the colleagues who did most of the interviews of the farmers: Justine Mbukwa, Jackson Bulili and Chris Mazali (Acre Tanzania) in the Iringa region and Rebecca Muna and Chris Mazali in the Mwanza and Arusha regions. ACRE Africa prepared the list of villages to allow random sampling.

Abbreviations

AA	ACRE Africa, or Agriculture and Climate Risk Enterprise Africa
AIRTEL	Telephone company
AT	Acre Tanzania (Dar es Salaam)
CHF	Swiss Francs
DAC	Development Assistance Centre of the Organisation for Economic Cooperation and Development (OECD)
GAFCO	Great African Food Company, involved in contract farming with crop insurance
GOT	Government of Tanzania
MNOs	Mobile Network Operators
MPCI	Multiple Peril Crop Insurance
Mviwata	Intermediary founded by farmers to create a farmer-to-farmer exchange forum
NGO	Non-governmental Organization
OAF (or 1AF)	One Acre Fund, an NGO serving as intermediary between AT and the farmers
PFI	Partner Financial Institution
RPG	(Maize) replanting (hybrid seeds) guarantee scheme
SCBF	Swiss Capacity Building Facility, based in Zurich, Switzerland
SeedCo	Seed company active in Tanzania
Swiss Re	Swiss re-insurance company used by UAP
TZS	Tanzanian Shilling
UAP	South African Insurance Company formed in 1994 after the merger of Union Insurance and Provincial Insurance following the merger of their respective parent companies
WII	Weather Index agricultural Insurance products

Exchange Rates as of 06/07/2018

1 CHF/TZS	2287.77
1 Euro/TZS	2658.62

Executive summary

1- Background

Between 2011 and 2014, the Swiss Capacity Building Facility (SCBF) funded four projects in Tanzania aiming to introduce crop insurances for maize. The first two SCBF funded projects were related to Financial Education and had as main objective to educate smallholder farmers on innovative agricultural micro insurance products sold through companies or NGOs.

The following two projects focused on the introduction of Agricultural Insurance to Smallholder Farmers in two different regions in Tanzania. The aim of the insurance product up-scaling initiative is to provide access to weather risk mitigation tools for smallholder farmers who previously did not have access to insurance. The Weather Index Insurance (WII) promoted through these projects uses satellite images to determine whether drought prevailed in the area concerned. If so, the farmer is automatically compensated for the damage on the basis of the data provided for the pixel in which his/her field is located. Depending on the region farmers can access insurance by registering for a replanting guarantee (RPG) or go for a package of inputs with crop insurance for one or more acres of land.

2- Methodology

The study analyses the implementation of SCBF's funded activities in Tanzania at the sector, institutional and at the farmers' levels. Mixed (qualitative and quantitative) methods were used, with the emphasis on a quantitative survey in the Arusha, the Mwanza and Iringa regions in Tanzania.

The first two levels of analysis involved desk research as well as open interviews with stakeholders such as for example 1AF, SeedCo and Airtel. The client level analysis was carried out through a customer survey and in-depth semi-structured qualitative interviews with farmers and key stakeholders. Between January and April 2018, the research team conducted in total 200 interviews with 80 female and 120 male maize farmers. A representative sample of farmers was selected using cluster sampling with villages as sampling unit. Subsequently farmers' households were selected as random as possible in these villages.

For the purpose of this study, the 'before' and 'after' the intervention, or the first and the second year of the crop insurance, were compared. The household survey included client outcome data, performance, income, asset changes as well as non-financial outcomes, and assessed customer satisfaction and value by using agricultural insurance products. Part of the questionnaire is based on the PACE client satisfaction and value assessment (ILO, 2012), which helps to get an impression of behavioural changes and indications of impact, customer satisfaction and reasons for purchasing this product.

3- Sector level

The agricultural insurance sector is nascent in Tanzania: no agri-insurance products at all were reported in the micro insurance landscape in Africa in 2015.[1] However, with strong life, credit life and health, Tanzania sees the largest proportion of its gross written premium coming from micro insurance with 6.4% in the region. This gives the country a promising potential.

[1] The Landscape of Micro insurance in Africa 2015, The World Map of Microinsurance, Micro Insurance Centre.

4- Partner Institutions Level

The most important Partner Financial Institutions (PFIs) for this project are ACRE Africa (Agriculture and Climate Risk Enterprise Africa, or AA), who has developed the insurance product and implemented the project, UAP, a pan-African Financial Services Company, Swiss Re, a leading reinsurance provider, and Airtel Tanzania Limited. There are three main distribution models and partners for the weather-index product:

The *One Acre Fund (1AF) model* is applied in the Iringa region with roughly 17,000 farmers. It is an aggregator model through an existing NGO targeting farmers. In this model, farmers receive the comprehensive weather-index product (germination and vegetation guarantee) as part of a bundled input product provided by 1AF.

The *Mviwata model* is applied in in the Arusha region to approx. 3'000 farmers through farmer associations. In this aggregator model, farmers receive a full crop coverage (including replanting guarantee and vegetation).

The *SeedCo model* is applied in the Mwanza region to roughly 12,000 farmers. SeedCo is the leading producer and marketer of certified crop seeds in Tanzania. In this model, farmers receive the RPG weather-index product (Replanting Guarantee) with a voucher card in the bag of seeds that they buy at a SeedCo retailer. The farmer can activate the insurance through a USSD code on his/her mobile phone. That code links their GPS position to a satellite pixel that will be used as the basis for the weather-index.

5- Client Level

The analysis of interviews reveals large differences between the three modalities. The delivery of an all-inclusive package to farmers with regular interaction within an institutional support structure delivers the best results in terms of productivity, investment and satisfaction.

Extensive data are produced and reported with regards to the demographic, socio-economic and activity profile, as well as insurance coverage and customer satisfaction.

6- Evaluation according to DAC criteria

The four projects are relevant and have achieved the original objective of reaching at least 15'000 farmers. There are a number of clear improvements between year 1 and year 2 that can partially be attributed to the availability of hybrid seeds and crop insurance. Positive effects were found comparing data for the first and the second year. For example, farmers used more land and inputs and produced more maize, despite poorer rains and lower maize prices in the second year.

7- General Conclusions

Overall, the projects have shown a net increase in most variables, including value of assets, weekly consumption, maize production and productivity, education expenditures between year one and two. These improvements can be partially attributed to the availability of hybrid seeds and crop insurance. The modality used to provide crop insurances to the farmers is important and we have identified three different models: (i) the NGO model with 1AF, (ii) the private sector limited insurance cover with SeedCo and (iii) the efforts of AA/AT directly with UAP.

We conclude that the distribution model and the intermediary used to introduce the insurance is crucial as it steers the information received by clients. The delivery of an all-inclusive package to farmers with regular interaction within an institutional support structure delivers the best result in terms of productivity, investment and satisfaction. The challenge remains how to come to scale and break-even.

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1. Background

Between 2011 and 2014, the Swiss Capacity Building Facility (SCBF) funded four projects helping to introduce crop insurance for maize in Tanzania as shown in table 1. The financial education and product upscaling were carried out by ACRE Africa (AA) with local partners like the One Acre Fund (1AF), a non-profit organization that supplies smallholder farmers in East Africa with asset-based financing and agriculture training services to reduce hunger and poverty and the seed company of Tanzania, SeedCo. ACRE Africa is not an insurance company, but rather a service provider working with local insurers and other stakeholders in the agricultural insurance value chain.

Table 2 Projects supported by the SCBF in Tanzania

Project	Partner Financial Institution	Focus	Completion Date	Competence Centre	SCBF Contribution
SCBF FSW-07	ACRE Africa	Tanzania agricultural insurance feasibility study	03-14	Syngenta Foundation for Sustainable agriculture	86,014 CHF
SCBF FEW-02	ACRE Africa	Introducing agricultural insurance to small holders in the Arusha region (financial education)	09-17	Syngenta Foundation for Sustainable agriculture	149,000 CHF
SCBF 2014-01	ACRE Africa	Introducing agricultural insurance to small holders in the Iringa region (financial education)	09-17	Syngenta Foundation for Sustainable agriculture	149,000 CHF
SCBF 2014-02	ACRE Africa	Introducing agricultural insurance to small holders in the Iringa region (financial education)	Ongoing Final report not yet delivered	Syngenta Foundation for Sustainable agriculture	149,000 CHF
SCBF FEW-03	ACRE Africa	Introducing agricultural insurance to small holders in the Arusha region (financial education)	10-17	Syngenta Foundation for Sustainable agriculture	149,000 CHF

Source: SCBF

The first two SCBF funded projects in Tanzania were related to Financial Education (SCBF FEW-02 and SCBF FEW-03) and had as main objective to educate smallholder farmers on innovative agricultural micro insurance products sold through companies or NGOs.

The following two projects focused on the introduction of Agricultural Insurance to Smallholder Farmers in two different regions in Tanzania (SCBF 2014-01 and SCBF 2014-02). The aim of the insurance product up-scaling initiative is to provide access to weather risk mitigation tools for smallholder farmers who previously did not have access to insurance. The Weather Index Insurance (WII) promoted through these projects uses satellite images to determine whether

drought prevailed in the area concerned. If so, the farmer is automatically compensated for the damage on the basis of the data provided for the pixel in which his/her field is located. Depending on the region farmers can access insurance by registering for a replanting guarantee or go for a package of inputs with crop insurance for one or more acres of land.

To assess the outcomes of a WII for Tanzanian maize farmers a survey was undertaken in the Arusha, Mwanza and Iringa regions. In each region a random sample of farmers was interviewed, to measure and analyse the impact of the introduced crop insurance on household's income, assets and agricultural productivity.

2. Research Methodology

The study analyses the implementation of SCBF's funded activities in Tanzania at the sector, institutional and at the farmers' levels. Mixed (qualitative and quantitative) methods were used, with the emphasis on a quantitative survey in three regions in Tanzania. The given research question was: *What is the impact of weather-based agricultural insurance on maize farmers in Tanzania? Are these farmers satisfied with the crop insurance product that is currently available to them?*

The first two levels of analysis involved desk research as well as open interviews with stakeholders such as for example 1AF, SeedCo and Airtel. The client level analysis was carried out through a customer survey and in-depth semi-structured qualitative interviews with farmers and key stakeholders. Between January and April 2018, the research team conducted in total 200 interviews with 80 female and 120 male maize farmers.

Geographic Area Selection Criteria and Data Collection

A representative sample of farmers was selected using cluster sampling with villages as sampling unit. Subsequently farmers' households were selected as random as possible in these villages. The research had a geographical focus; originally on the Arusha and Iringa regions where most farmers benefiting from the crop insurance are located, later the Mwanza region was added for practical reasons. During the fieldwork it turned out to be difficult to find enough cases in the Arusha region, where Acre Tanzania (AT) and UAP had started only a year ago, and hence the team moved to the Mwanza region, where SeedCo is active in providing hybrid seed with a germination cover.

For the purpose of this study, the 'before' and 'after' the intervention, or the first and the second year of the crop insurance, were compared. As there is no baseline survey the interviews use clients' recall, as they were asked to recall their score on selected variables before the project and their status now or concerning the present and the past season. Key variables are agricultural inputs and output variables and the resulting productivity and income of the farmers.

The household survey included a combination of both structured and open questions. The household survey included client outcome data, performance, income, asset changes as well as non-financial outcomes, and assessed customer satisfaction and value by using agricultural insurance products. Part of the questionnaire is based on the PACE client satisfaction and value assessment (ILO, 2012), which helps to get an impression of behavioural changes and indications of impact, customer satisfaction and reasons for purchasing this product. Questions about the perceived value for money for crop insurance were also asked to identify factors that drive the up-take of the product.

Limits

For statistical reasons it would have been preferable to interview an equal size sample in each of the three locations. Although biases in the sampling process were eliminated as much as possible (by sending the interviewers to different parts of the village), ultimately the research team was only allowed to interview the farmers who came to the village level meeting convened by the intermediary organizations. For this study it was not the intention to do a randomized control trial, nor an impact evaluation with control groups.

3. Sector level

The agricultural insurance sector is nascent in Tanzania: no agri-insurance products at all were reported in the micro insurance landscape in Africa in 2015.[2] However, with strong life, credit life and health, Tanzania sees the largest proportion of its gross written premium coming from micro insurance with 6.4% in the region. This gives the country a promising potential. In 2013 the supervisor for the insurance sector (Tanzania Insurance Regulatory Authority) issued a micro insurance regulation to boost the sector. The results still have to be seen and ACRE is clearly a first mover in this market with some competition out of Kenya with PULA, an agricultural insurance company that uses technology to increase and protect the incomes and yields of smallholder farmers.

As in many Sub-Saharan countries the regulator faces resources constraints that translate in time consuming license processes. Recent market intelligence also revealed that the insurance industry is in the process of setting up an agriculture pool that would allow a central underwriting and spreading of risk. The main shortage clearly remains know-how and the ability to develop scalable products that will be sustainable when subsidies dry out. In the meantime, the regulator is looking for public-private partnerships on the grounds as insurance premium are otherwise hardly affordable to low-income households. In this context WII provides an innovative approach using satellites and mobile telephones to reduce transaction costs, however the mass distribution challenge has not yet been fully solved.

Table 2 Country total lives covered, 2014

Country	Total (total lives covered)	Life (non-credit)	Credit Life	PA	Health	Property	Agri
Tanzania	1,989,914	1,528,580	460,534	461,334	236,000	-	-

[2] The Landscape of Micro insurance in Africa 2015, The World Map of Microinsurance, Micro Insurance Centre.

4. Partner Institutions Level

4.1. Partner Financial institutions (PFIs)

The most important PFIs for the SCBF funded project are:

- **Agriculture and Climate Risk Enterprise Africa** (ACRE Africa, or AA), who has implemented the project. The organization is based in Nairobi and entered Tanzania in 2014. It is formerly known as Kilimo Salama (meaning “safe farming” in Swahili). Its local branch is called ACRE Tanzania (AT).
- **UAP**, a pan-African Financial Services Company with a primary purpose of acting as a holding company for the various UAP businesses in different African countries. It provides general insurance services. In the partnership, UAP Insurance Tanzania is the underwriter responsible for receiving premiums and processing insurance claims. However, their knowledge of agricultural insurance is limited.
- **Swiss Re**, a leading wholesale provider of reinsurance, insurance and other insurance-based forms of risk transfer. Swiss Re helped structure the weather-index product and was the reinsurer in this partnership.
- **Airtel Tanzania Limited**, the second-largest telecommunications company after Vodacom in Tanzania and partner in the project. The idea was that the mobile money transfer payments would be made by Airtel Tanzania. The location-based service infrastructure to locate farmers, and the mobile registration platform for insurance had to be developed. In practice its role and engagement were limited in the project period.

4.2. Distribution partners and modalities

There are three main distribution models for the weather-index product developed by ACRE:

- **One Acre Fund** is an NGO active in several regions in Tanzania and across multiple sectors including agriculture. It receives support from international donors and has its headquarter for Tanzania in Dar es Salaam.

  The One Acre Fund (1AF) model is applied in the Iringa region with roughly 17,000 farmers. 1AF has also farmers receiving support and insurance in the Mbeya region but those were not interviewed in this study.

  It is an aggregator model through an existing NGO targeting farmers. In this model, farmers receive the comprehensive weather-index product (germination and vegetation guarantee) as part of a bundled input product provided by 1AF. The product is a loan that farmers receive in kind and that includes hybrid seeds, fertilizer, training, transport and insurance, combined with agricultural technical assistance. Repayments are in cash made over a period of one year in free instalment (the farmer can repay the amount of his/her choice at any moment, also via M-Pesa).

  The price of the insurance is lumped with transport costs and represents 12,000 TZS for a total loan amount of 245,000 TZS – for a land size of one acre. The cost for seeds is 45,000 TZS – which represents the equivalent of four 2kg-bags of each 11,250 TZS.

  The local management of 1AF maps farmer villages to a satellite pixel and provides the corresponding list of enrolments to ACRE who then uploads them into their database. When payments are triggered, the amount is received in a bulk and 1AF allocates

payments manually to farmers according to the mapping. The claim amount is deducted from their loan balance.

Most of the farmers in this study (108/200) were interviewed in this region.

- **Mviwata**, is a national farmer organization acting as the intermediary in the direct model. It has been founded by 22 innovative farmers for the purpose of creating a farmer-to-farmer exchange forum to enhance communication among smallholder farmers.

  This contract farming model was included in the study because the geographical position of the farmers in this scheme allowed to include 39 interviews in the survey. However, this model was not applied to a large number of farmers in total (estimated 3,000). The regions included Kiteto, Manyara and Arusha (where farmers were surveyed). The methodology could not be applied completely for this modality due to time constraint and its relatively small size.

  It is an aggregator model through farmer associations. In this model, farmers receive a full crop coverage (including replanting guarantee and vegetation). Premium is collected through a group leader from Tanzania Farmer Network Association with one shared account to pay premium and receive the claim payment. Premium is paid directly to the insurance company via the leader's account. This scheme was not the focus of the outcome study.

  39 maize farmers were interviewed in this region.

- **SeedCo** Tanzania develops and markets certified crop seeds in bags, mainly hybrid maize seed, but also cotton seed, wheat, soya bean, barley, sorghum and ground nut seed. SeedCo is the leading producer and marketer of certified crop seeds in Southern Africa with operations in 13 African countries.

  The SeedCo model is applied in the Mwanza region to roughly 12,000 farmers.

  In this model, farmers receive the RPG weather-index product (Replanting Guarantee) with a voucher card in the bag of seeds that they buy at a SeedCo retailer. The farmer can activate the insurance through a USSD code on his/her mobile phone. That code links their GPS position to a satellite pixel that will be used as the basis for the weather-index.

  The price of the insurance is included in the cost of seed but is paid for by SeedCo, that regards the insurance as a way of differentiating from competitors in the market and collecting data on client behaviours. The product is marketed through existing radio programs, advertisements and sales teams.

  The claim payment process is designed in such a way that farmers do not receive the money on their e-wallet but rather receive an SMS informing them that cover has been triggered and they can collect a new bag of seeds.

  The second largest group of farmers (53) were interviewed in this region.

Note: GAFCO – Great African Food Company is a contract farming model but was not studied here.

Table 3 Differences between modalities in providing insurances

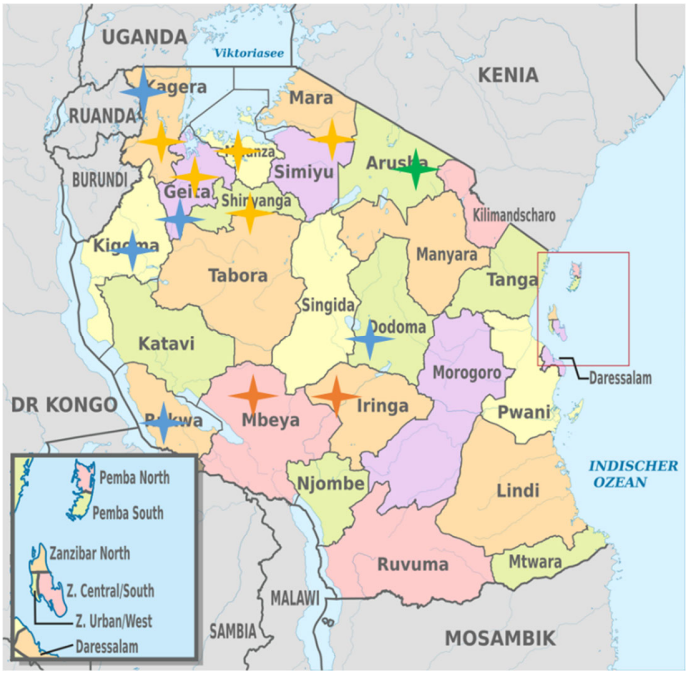
	One Acre Fund	Mviwata	SeedCo with UAP
Region	Iringa	Arusha	Mwanza
Coverage	1. Replanting and full vegetation coverage through ACRE 2. Credit-Life 3. Funeral insurance (CL and FI not provided through ACRE).	Top up cover or Full Season WII Cover, where farmers can top up the premium while the 21-day cover is paid by the insurance company.	This is a replanting guarantee scheme (RPG) within 21 days germination.
Premium	Usually not known by farmer but about 5% of input package (100 US$ for 1-acre land). The premium was partially subsidized by IFC.	Known by farmer who has tendency to limit premium to cover the more expensive hybrid seeds (RPG only).	Is included in the price of the hybrid seed bought from SeedCo dealers and paid for by SeedCo to UAP
Role of mobile telephones	None, Acre provides pay-out information through 1AF, which deducts pay-out from loan.	Confirmation of insurance and reimbursement through e-money function of phone.	Need to register for insurance first and get pay-out information by mobile phone.
Compensation paid	Few and small amounts, procedure is unclear according to the farmers.	Not transparent according to the farmers. They cannot discuss weather data and complain about delays and red tape.	Once the information is received, farmers go to the dealer to get new seed, which is too late to replant. They usually use other seeds.

Table 4 Number of clients per scheme and region

Region	Location	Partner	2015	2016	2017
North	Manyara	Kiteto Farmers Group	-	42	-
North	Arusha	VFT/GAFCO	-	1,252	1,325
North	Geita	VFT/GAFCO Geita	-	-	91
North	Dodoma	VFT/GAFCO - Dodoma and Kibaigwa Farmers group	-	39	82
North	Kagera	VFT/GAFCO - Kagera Farmers Group	-	-	896
North	Lake Zone	SeedCo	-	10,000	12,500
South	Iringa	One Acre Fund	9,164	17,000	17,500
South	Mbeya	One Acre Fund	-	1,066	6,646
South	Mtwara	Mkalamani Amcos	-	39	-
South West	Rukwa	VFT/GAFCO	-	-	218
West	Kigoma	VFT/GAFCO - Kakonko and Kasulu Farmer Groups	-	590	445
			9,164	***30,028***	***39,703***

Source: ACRE Africa. The colours represent the various modalities where Arusha (headquarters of SeedCo) is marked in green; blue is contract farming; yellow is SeedCo; orange is 1AF

Map 1: Geographical location of clients per region



5. Client level

The analysis of interviews reveals large differences between the three modalities:

Table 5 Differences between the three modalities in the three regions studied

	1AF in Iringa region	Mviwata in Arusha	SeedCo in Mwanza
Household size (number of persons)	5.3	11.0	6.3
Own land used (acres)	2.54	6.46	8.87
Inputs used year 2** (TZS)	376,870	179,850	337,940
Maize produced (kg)	2023	2996	2183
Average yields* (kg/acre)	1592	873	492
Farmers interviewed (number of persons)	108	39	53
% of women interviewed	55%	10%	32%
Average insurance pay-out (TZS)	20,000	32,000	n/a

* Assuming 50% of the land is used for maize. ** Mainly seeds and fertilizers.

The results show that farmers in the Arusha and Mwanza region have more land, bigger families and lower average yields than farmers in the Iringa region. In the Mwanza region the farmers have comparatively the lowest production per acre. In the Arusha region farmers comparatively spend the lowest amount on inputs used. In contrast, farmers in the Iringa region spend more on inputs and, with the support received from 1AF, they comparatively get the highest average yields per acre while they cultivate less land than in other regions. As shown in this report, the delivery of an all-inclusive package to farmers with regular interaction within an institutional support structure delivers the best result in terms of productivity, investment and satisfaction.

5.1 Demographic Profiles

- With regards to **gender** in the sample, 40% of the interviewees are women and 60% are men.
- Farmers have an average **age** of 47.6 years and **household size** totals 6.6 people.
- When it comes to the **education level**, 84% of farmers went to primary school, while 9% had a secondary education, 1% a tertiary education and 6% have not been at school at all.
- 82% of farmers have a simple **mobile phone**, about 7% have a smartphone and 9% have no mobile phone in use (because it had been stolen, was broken, or without airtime). About 10% of the farmers have internet access on their phone.

5.2 Socio-economic Profiles

- **House ownership**: A total of 172 farmers (86%) own their own house, with an average value of 1,455,556 TZS. The prices of houses range from a few hundred thousand to 15 million TZS. 28 farmers (14%) do not declare that they own a house in the first year. In the second year only 17 farmers do not declare that they own a house and for one farmer we do not have the

answer. We came across examples where a good harvest in the first or the second year helped to build a house. The prices of the houses in the second year range from a few hundred thousand shillings to 40 million TZS. However, the average value of the house is substantially higher in the second year with 1,721,579 TZS.

- **Vehicles**: 97 farmers own bikes or motorbikes (valuing 243.443 TZS. in year 1) and 103 in year two (valuing 275,786 TZS.).
- **Education expenditures**: 110 farmers declared no expenditure for education in 2015/16 and 2016/17, but the other 90 farmers have spent on average 132,186 TZS. in the first year and 149,411 TZS. in the second year, showing an increase of 17,225 TZS.
- **Health expenditures**: 156 farmers do not declare these expenditures, but the other 44 spend on average 65,714 TZS in year one and 39 farmers 62,150 TZS in the second year. However, this seems unrelated to the introduction of insurances.
- **Other assets**: 71 farmers have other assets worth 647,521 TZS in year 1 and worth 804,950 TZS in year 2.

5.3 Activity Profiles

On average the 200 farmers interviewed were involved in 2.8 different agricultural activities. Most farmers are not just maize farmers but engaged in a number of activities, ranging from growing other cash crops (cotton or groundnuts), to keeping animals (cows, pigs or chicken), or running a business. Diversification is a strategy to mitigate risks related to agriculture. If maize is not doing well, or prices are very low, the other agricultural activities help the farmers to survive and feed their family. When maize is doing well, like in the first year of reference, people can earn more money allowing them 'to prepare for the next season' (buying the necessary inputs), pay school fees and build a house (or parts of it). A total of 107 out of 200 farmers declared income from a secondary activity. On average farmers earn as much from these secondary activities as from growing maize.

5.3.1 Farm Profile

Most farmers hire additional **workers** to prepare their land, or for sowing, weeding or harvesting. On average they employ 3.2 men and 1.9 women, paying about 3000 TZS per day. Poor farmers depend on their family labour, on 'ujamaa' (traditional solidarity groups) or new groups set up for example by 1AF. These groups help each other without payment.

- The main **cost of input** for farmers are hybrid seeds in the case of SeedCo (11,000 TZS for an acre) or in the other modalities the farmers pay for the package of fertilizer, hybrid seeds, technical advice and insurance. The 1AF charges 235,000 TZS (100 Euros) for a package for 1 acre in the form of a loan to be repaid in a period of ten months.
- With regards to **turnover**, 186 farmers reported an average turnover of 1,060,000 TZS in year one. 9 farmers were not able or willing to respond while 5 farmers did not grow maize in that year. The turnover of maize farming in the second year was – on average for 197 farmers - 1,079,000 TZS, which is slightly more than in the first year, despite the poor weather conditions and the lower average price paid in the second year.
- **Irrigation** infrastructure is limited, and 177 farmers depend completely on rain for farming. The others are able to collect water from a river or lake, but usually depend on a furrow or bring the water in buckets. 140 farmers claim there is often not enough rain. Water supply is about three quarters of what they need for their maize.

5.3.2 Land ownership

Interviewed farmers owned at the average 4.98 acres during the first year and 5.22 acres during the second year. In 1999 Tanzania passed a series of land laws and regulations that granted customary rights of occupancy equal status to other property rights, or de facto ownership. In a number of cases farmers had bought additional land. 28 farmers had no land during the first year and the others would then have 5.79 acres at the average. In the second year the average of these farmers would increase to 6.03 acre. There are around 30 landowners owning more than 10 acres. 45 farmers have leased land, of which 28 do not own land and 17 add leased land to the land they own. In the first year the average size of leased land was 8.3 acres and in the second year 6.2 acres (possibly because they bought land or found out that you need less land when using hybrid seeds).

5.3.3 Investments of the farmers

Many farmers do not invest and those who invest rarely do it in agriculture. In the first year three farmers invested in a deep well, nine in a pump, and three in a tractor, or using tractor services. Some were buying a plough (16, often oxen drawn ploughs), other equipment (6) or tools (32). Most of the investments went in buildings (31, in particular building, or improving their houses), or making 'other' investments (21, mainly buying cattle or chicken or spending money on education of their children or for health purposes). In the second year another three farmers invested in a deep well, six in a pump, and four in a tractor, or using tractor services. Agricultural related investments were again minimal: buying a plough (3), other equipment (4) or tools (23). Most investments went again into building (36, in particular houses) or others (33, buying cattle or chicken and family related expenses such as health and education of the children).

5.4 Insurance coverage

5.4.1. Awareness and insured amounts

To measure customer satisfaction, or the client value of the insurance product farmers were asked, among others, whether they are insured and for what purpose. Farmers could choose between alternatives, but none of them reported having livestock insurance, or having insured his/her equipment. About seven farmers had a health insurance from another job.

Table 6 Type of insurance coverage

Category	Full maize insurance	Germination coverage	No insurance or not aware
Self-reported / correct number	140/108	25/53	7/0

- A total of 140 farmers instead of 108 think they have full maize insurance, versus 25 with a germination cover only. The latter should be at least 53, but not all farmers are aware of what SeedCo is exactly offering and some did not send back the card because not aware of the usage.
- 25 farmers were not insured in the first year or were not aware of the insurance (4 farmers) as they were not told.
- A total of 25 farmers did not want insurance in the second year. The non-insured farmers in the second year had either given up on the program, were never interested, or not able to register for different reasons. Some of them may have left because they had problems repaying the loan taken in the first year.

- Farmers have insured between one and five acres. The average in the first year was 1.71 acres and in the second year 2.66 acres. This increase seems to show that farmers see a benefit in receiving hybrid seeds and being insured.
- Most farmers interviewed do not know how much they pay for the insurance and this does not seem to be explained to them. The 45 farmers that gave an answer to this question estimated they paid about 29,555 TZS (or some 15 dollar) out of the 100 dollar loan package (in case of 1 acre), which is three times higher than in reality.

Table 7 Insurance coverage by year

Variable	First year	Second year
Number of farmers insured in the sample (not necessarily the same 175)	175	175
Area insured	Average of 1.71 acres	Average of 2.66 acres

With regards to the reasons of taking an insurance:

- 1AF offered it as part of the loan (17 farmers),
- SeedCo offered the card in the bag to us (5 farmers)
- These organizations (1AF and AT) provided training and we wanted to enjoy the benefits, to get support in farming (8 farmers)
- Farmers were very positive about the funeral insurance (13 farmers)
- Farmers emphasized it is positive because the inputs provided lead to higher yields (12 farmers)
- The insurance covers risks, like droughts and climate change (42 farmers).

5.4.2. Insurance pay-out

Only 11[3] farmers received a pay-out of the insurance in the first year, ranging from 10,000 to 44,000 TZS, another four said they had received a payment but did not remember the amount. The average amount received is around 18,000 TZS. 158 farmers with insurance did not report getting a payment.

In 2016/17 59[4] farmers received a payment, another three reported a payment but did not recall the amount. The amounts ranged from 1,000 to 150,000 TZS. The average amount they received (excluding the three outliers) is around 27,643 TZS which is 1.5 the average pay-out the year before and aligns with the farmers' complaints that 2016/17 was a bad year in terms of rain. 116 farmers with insurance did not get a payment in the second year. Some of the farmers complained about this. They ask for broadening of the coverage, more training, making the insurance more transparent and an increase of the pay-outs.

Table 8 Insurance Pay-outs

[3] One farmer reported a payment of TSh 235,000, which represents exactly the full loan amount and was therefore not considered.
[4] Likewise, a few farmers reported payments equals to the full loan for 1.5, 2 or 4 acres, and those numbers were not considered.

Variable	First year	Second year	Increase relative to first year
Number of farmers with pay-outs	16	59	+43
Number of pay-outs (TZS)	18,000	27,643	+9,643

5.5 Customer satisfaction

The farmers were generally positive about the insurance, since the insurance offers a feeling of security and the intermediary organizations such as 1AF, Mviwata, or AA-UAP reduce the pending liability in case of a drought. Farmers also noted that 'We get some money for investments' (9) or we are 'now producing more food' (12) or 'yields were higher (37 farmers)'. However, some farmers were critical because no payments were made, although they had losses in the second year.

Overall farmers are positive in their appreciation of the insurance but are also aware about some of the limitations of the insurance system.

With regards to possible product improvements, farmers said:

- 'We want higher pay-outs' (18 farmers);
- 'We need more information, training and education' (28 farmers);
- 1AF leaders should visit individual farmers to figure out the actual pay-out and the assistance should come in time (9 farmers);
- 'Get us pesticides (and insecticides) and enlarge the insurance cover to also include caterpillars (20 farmers)';
- 'Help us to find markets, improve the market price and open the borders (17 farmers)';
- 'We need more transparency concerning the weather-related data and need loans' (21 farmers).

6. PACE

6.1 Description of PACE methodology

The methodology that was applied to *assess the client value of the product* is based on the original PACE methodology developed by ILO in 2012[5] with a few simplifications and adaptations in the rating from the author. This simplified PACE tool allows to assess the value provided to clients by systematically analysing the product along the four main dimensions: **Product, Access, Cost and Experience**. Each dimension contains 4 or 5 factors that are scored from 0 (worst) to 2 (best), whereby each of these factors contributes to an overall unweighted score.

[5] This methodology was made available through the PACE technical guide v1.0 dated January 2012, and a number of more recent documents dated October 2017 that were used in the course of a GAN workshop: Handout 1 - GAN PVAT indicators, Handout 3 - GAN PVAT scoring sheet, Handout 5 - Example of an evaluation plan, Handout 7 - Farmer survey sample, Handout 8 - Management interview sample, Handout 9 - Staff interview sample, Key Messages, Product Value Assessment Tool, PVAT Assessment Input Worksheet

The four main dimensions and their main factors are described in the table below.

Table 9 Main dimensions PACE

	Product
P1	Does the product cover right farmer activities?
P2	Does the product cover the right perils?
P3	Does the weather-index predict real farmer's experience?
P4	Is the pay-out a substantial part of the loss?
	Access
A1	Is the payment method appropriate?
A2	Does the client take a conscious decision?
A3	Do the agents know about the product? How are they trained?
A4	What type of marketing material is availed to the clients?
	Costs
C1	Is the price known affordable?
C2	Is the price perceived as affordable?
C3	What is the part of operational costs?
C4	Was the underwriting value maximized?
	Experience
E1	What is the evidence of coverage?
E2	Is the claim payment easy and timely?
E3	What is the customer service in place?
E4	How is the customer engaged across the life of the product?

The final scoring per factor was performed based on first-hand information received during the interviews, visits and farmer questionnaire and not ex-ante from literature and report review. The main variables that were used for the PACE analysis are listed in the appendix.

6.2 Results

6.2.1. Caveat and learning

Although the PACE methodology gives good overall results, the main caveat lays in our ability to map every factor to one or more data point with a specific question in the farmer questionnaire. Especially for question P4 (Is the pay-out a substantial part of the loss?) it would be preferable to use exact numbers. However, the process would have to be changed to ensure this as the exact real payment per farmer was not available:

- In the 1AF model farmers are linked to a village (so we did not have the true exact payment split per farmer). Instead we used the information provided from the farmer (which is influenced by memory and understanding);
- Some farmers under SeedCo have not received payment because their registration did not allow to track them back[6]. We don't have certainty / evidence that the amount under SeedCo was paid to the farmer.

While some elements could be mitigated by other information in the questionnaire or from the interviews, it is important to note that there are learnings to strengthen the process. Detailed results are available in the Appendix.

6.2.2. Score results

One Acre Fund has 1.378 points and ranks strong. SeedCo has 1.242666667 points and ranks average. The detailed scores are illustrated in the Appendix.

6.3 Learnings

This chapter provide contextual information and learnings from the rating.

6.3.1. Product

(P3) and (P4) Does the Index predict real risk / farmer's experience / Pays out substantial part of loss?

As exact mapping of claims was not available for the farmers that were interviewed, the author used the amounts of payment provided by farmers to compare to the input price (price of bag). While score P4 does not show strong values, it needs to be noted that the information is based on the clients' memory which may be different from the real pay-out. Despite the score, clients do value the product.

Learning: The village mapping approach in 1AF and phone distribution in SeedCo need to be strengthened if ACRE wants to collect ex-post real losses. To this end, it will be important to capture a unique identifier for each farmer when any outcome study is run, and this must be integrated into the new process. The unique identifier will allow to map system information with the farmer's real loss so as to identify basis risk and mistakes properly. Besides, it will provide good cases for marketing and story-telling.

6.3.2. Access

(A3) and (A4) Do agents know about product / Is training in place?

While both models are solid, ACRE has a limited influence on training material and farmers due to the intermediary. This bears the risk of becoming a provider of a commodity (as has been seen with 1AF placing the scheme somewhere else) and it also limits ACRE ability to provide proper

[6] See details on report dated July 21st 2018.

financial education, create a unique positive experience on insurance, improve mapping and reduce basis risk overtime, through collection of exact locations.

Learning: ACRE Tanzania needs to think about an approach whereby contact to the client can be maintained and awareness levels tested. Marketing material is in place (SMS, radio spots, group discussions, voucher card) and explanations are given to farmers. However, given the observed fragmented understanding of farmers (some farmers in SeedCo were not aware of the card, contradicting information from 1AF on coverage and payments) there is a need to systematize the monitoring of the farmers' awareness to make sure this awareness is steered. The aggregator model creates an additional intermediary to clients so that ACRE Africa should work to integrate minimum quality standards that can be pushed through farmers centrally e.g. co-branded roll-play scripts, training material, videos, SMS. Likewise, a centralized hotline with logbook of issues will help identify gaps.

6.3.3. Cost

(C2) and (C3) Is price perceived as affordable / what are the operational costs?

From a pure methodology perspective, farmers are not aware of the price of the cover and as a consequence the score is 0 for the schemes. However, let us note that in the SeedCo scheme, premium is paid by SeedCo so that this score is mitigated.

The score for operational costs has been put to 2 on the grounds that ACRE operational costs are not per se included in the premium and partly funded through donor money. However, at the time of visit and report ACRE did not have a systematic approach to track operational costs per product. In a for-profit model, it will be key to complete this work and use it as a decision management tool to set priorities.

6.3.4. Experience

(E3) How timely are claim payments?

The claim turn-around is an area of improvement with score 0. The claim payment process is longer than regulatory requirement of 3 days and contains a lot of manual process that delays payments. All turn-around times were also massively delayed due to issues related to unexpected combination of regulatory requirements (claims cannot be paid until premium is received) and premium subsidy that was received from IFC late in the year.

7. Evaluation according to DAC criteria

7.1 Meeting original targets

The main objectives of the SCBF funded projects were to provide financial education and scale up crop insurance for maize farmers. The project has been implemented by ACRE Africa and the number of farmers trained and ending up with insurance is over 24,000 in Iringa and more than 10,000 in Arusha. This means the original objective of reaching at least 15'000 farmers has been achieved. Smallholder farmers have been educated about modern agriculture and insurance products available to them. However, based on the survey farmers do not fully understand the insurance, know the premium they pay, or the risks covered by the insurance and ask for more education.

7.2 Relevance for both PFI and clients

The projects contributed to the training of thousands of farmers in the Arusha, Iringa and Mwanza regions, combined with the upscaling of crop insurance. Without SCBF maize weather insurance would have taken more time to reach these farmers, although crop insurance has been introduced on a limited scale (and not WII) for other cash crops. In collaboration with AT it is currently also introduced as part of a contract farming arrangement where the contracting party provides a package of inputs, including insurance (GAFCO). This may be considered a spinoff of the project. SCBF has been a catalyst in this process.

7.3 Effectiveness and efficiency of the intervention

The collaboration with AIRTEL did not work out as envisaged as the firm went through a reorganization and did not have coverage in all the relevant regions. Only SeedCo's replanting guarantee mainly works through mobile phone, although farmers are not paid through topping up credit on their phones. However, there are still a few teething problems to be solved.

The real challenge seems to be rolling out the intervention on a larger scale. 1AF has achieved the best results so far. SeedCo could potentially reach a larger number of farmers because of their model and could do that even faster with their germination cover. However, this does not seem to be a priority for the company (e.g. staff in the field does not know about the insurance and reported not to provide the cards anymore once a regional market is conquered).

Management and staff of AA, AT and 1AF were all satisfied with the support of SCBF, which allowed them to roll out a support package (1AF and AT in the direct mode). 1AF has been using another insurance company in 2018, which shows that market competition is working. For SeedCo the collaboration with other stakeholders is less important because they consider the insurance more a marketing and client retention tool and do not provide advice, supplementary inputs or broader coverage.

The question whether the objectives have been achieved in an economically efficient way is hard to answer, but given the limited amounts involved SCBF certainly had impact. With regards to the technical assistance provided, it is difficult to find back the traces of the original support given at the village level. On the ground three different modalities have developed, one more successful than the others. In efficiency terms continuing to support 1AF seems probably the most cost-effective model.

7.4 The impact of the intervention

Does the intervention address key clients' need, and does it contribute to reaching development objectives? The impact of the introduced crop insurance is analysed by looking at a number of variables, such as household's income, assets and agricultural productivity in the first and in the second year, as shown in the table below. In addition, a number of non-financial assets has been quantified, such as houses built or improved, purchase of means of transportation, expenditures on education, expenditures on health and other assets.

Overall, we see a net increase in most variables, including:

- Value of the assets between 2015/16 and 2016/17, including value of house and motorbike or bicycle;
- Weekly consumption as well as monthly farm income;

- Maize production and productivity;
- Education expenditures and other assets.

According to the interviews the order of priority after a good harvest is usually 1. improve the house, 2. more money for education and health expenditures and 3. investments in agriculture.

Table 10 Impact measured by the difference between variables in year 1 and 2

Variable/average	First year	Second year	Increase in 2 years
Land used (in acres)	4.98	5.22	+0.24
Inputs (TZS)	283,825	327,450	+43,625
Weekly consumption (TZS)	20,911	23,576	+2,665
Monthly farm income (TZS)	77,665	92,161	+14,496
Production maize (Kg)	1922.76	2252.9	+330.14
Productivity* (Kg/Acre)	772.2	863.2	+91.0
Production turnover (TZS)	1,060,000	1,079,000	+19,000
Investments outside agriculture (nr of farmers)	52 out of 121 farmers	69 of 113 farmers	a small increase in number of farmers investing outside agriculture
Value house (TZS)	1,455,556 (sample: 172 farmers)	1,721,579 (sample: 182 farmers)	+266,013
Value motorbike or bicycle (TZS)	243,443 (sample: 97 farmers)	275,786 (sample: 103 farmers)	+32,343
Education expenditures (TZS)	132,186 (sample: 90 farmers)	149,411 (sample: 90 farmers)	+17,225
Health expenditures (TZS)	65,714 (sample. 44 farmers)	62,150 (sample: 39 farmers)	-3,564
Other assets (TZS)	647,521 (sample: 71 farmers)	804,980 (sample: 100 farmers)	+156,970

* Assuming 50% of the land is used for maize.

8. General conclusions

The main underlying problem in Tanzania is is the lack of productivity of many farms which impacts both food security and their long-term planning ability. As such it is key to support the transition from traditional maize to hybrid seeds to modernize agriculture, increase rural incomes

and food supply. Weather-index base crop insurance is a crucial piece to strengthen livelihoods of farmers but requires more support than financing local training activities and works best when linked to agricultural finance. Besides hybrid seeds and insurance, basic inputs such as water (irrigation opportunities), improved land management, knowledge of and access to modern agricultural techniques are key to increase productivity.

Overall, the program has shown a net increase in most variables, including value of assets, weekly consumption, maize production and productivity, education expenditures between year one and two. These improvements can be partially attributed to the availability of hybrid seeds and crop insurance. However, an impact evaluation is usually made on the assumption of all things being equal, which is not the case here: Real problems for the farmers during the 2017/2018 season were caterpillars and the low market price (fluctuation from over 100,000 TZS in 2015/16 to as low as 30,000 TZS in 2016/17), among others due to the government closing the border for exports.

The modality used to provide crop insurances to the farmers is important and we have identified three different models: (i) the NGO model with 1AF, (ii) the private sector limited insurance cover with SeedCo and (iii) the efforts of AA/AT directly with UAP. The farmers interviewed appreciate the insurance very much and the consideration to their problems. Farmers have enjoyed the best practice training and the package of inputs under the direct and 1AF mode. The same farmers are also critical about the limited information and training provided, the lack of transparency concerning the system of satellite weather information and the calculation of the pay-outs amounts in case of drought, which they consider often as too small, compared to the damage incurred.

The **Once Acre Fund** approach is the most successful of the three, due to its large presence in the Iringa region, with a village coordinator in every major village. It benefits from their client orientation and long-term support in the form of a loan for a package made attractive by adding different insurances (crop, credit life and funeral). The lesson learned is that insurance is important, but most useful in combination with other inputs and technical advice.

SeedCo only provides germination cover and has not always explained the purpose of the card in the bags of hybrid seeds that they are marketing. While their approach has not been very effective it does have the advantage of rolling out the germination insurance more quickly (if done properly). They have discontinued the distribution of cards in certain regions and do not use it as a marketing tool in all regions. They consider it a client retention and marketing tool, which is no longer necessary in a region where sales are good. Farmers buying SeedCo's hybrid seeds were sometimes frustrated that they did know that they could have registered for insurance.

Acre Africa/Acre Tanzania providing the insurance directly together with UAP is the most recent modality and farmers complained quite often about the lack of information, transparency and training and very few farmers have received pay-outs. Payments were so low that it was perceived as just getting the premium back, although almost nobody knows the premium paid for the insurance.

Airtel developed the location-based system but played a very limited role in the second stage of the project, although the high penetration rate of mobile telephones suggests they could be involved more. Even in the SeedCo mode, where farmers confirm the insurance by phone and get a notification about the pay-out by phone, they have to go to the trader to get new hybrid seeds if the seeds fail to germinate during the first 21 days.

We conclude that the distribution model and the intermediary used to introduce the insurance is crucial as it steers the information received by clients. The delivery of an all-inclusive package to farmers with regular interaction within an institutional support structure delivers the best result in terms of productivity, investment and satisfaction.

The challenge remains how to come to scale and break-even. A positive policy environment is a pre-condition for this. However, the current agricultural insurance practice is not really mobile telephone based. Transaction costs may be lowered further if information about the insurance, the drought, the expected pay-outs and the actual payment could be provided through mobile telephones, given the high penetration rates of mobile phones in rural areas. In addition, there are a number of teething problems and improvements in the product that are necessary, including standardized processes, more transparency, more training to the farmers, extending the cover (in particular covering the effects of pests), and higher pay-outs.

9. Annexes

9a The report on the quantitative results of the survey

9b The report on the qualitative results of the survey

9c The questionnaire

9d Project documents and references

ACRE Africa (2014a) Introducing Agricultural Insurance to Smallholder Farmers in the Arusha Region (Financial Education).

ACRE Africa (2014b) Introducing Agricultural Insurance to Smallholder Farmers in the Iringa Region (Financial Education).

ACRE Africa (2014c) Introducing Agricultural Insurance to Smallholder Farmers in the Arusha Region (Product Up scaling).

ACRE Africa (2014d) Introducing Agricultural Insurance to Smallholder Farmers in the Iringa Region (Product Up scaling).

ILO (2012) Pace client satisfaction and value assessment. Geneva: BIT.

Renouil, G. (2018) Tanzania visit report. Zurich: SCBF.

Wilfred Lamek (2016) Agricultural extension in Tanzania, Amsterdam, PhD VUA, 4-5.

10. PACE

10.1 Survey data

The scores from the PACE study are derived from following main variables from the customer survey:

Score P1 - Activities: v4 Maize, v5 Vegetables, v6 Fruits, v7 Cows, v8 Pigs, v9 fish, v10 Poultry, v11 Others, v12 total activities

Score P2: v32 recommended

Score P3: not considered in final score - no mapping between farmer and payment

Score P4: v24 acres ins.15/16, v25 acres insured 16/17, v26 Payout15/16, v27 Payout16/17. The score was worked out for 16/17.

Score A1: qualitative based on discreet values and process description.

Score A2: v13 Maize full weather insurance, v14 Replanting guarantee RPG, v15 Life insurance, v16 Funeral, v17 Livestock, v18 Equipment/tractor, v19 Other, v20 Type other insurance

Score A3: Interviews and process documents

Score A4: Qualitative based on material and evidence

Score C1: Based on insurance package data

Score C2: v176, knows price, v177 how much

Score C3: Data from ACRE

Score C4: not considered

Score E1: qualitative based on evidence collected

Score E2: qualitative from interviews

Score E3: result of interviews and timelines provided by ACRE and insurance company

Score E4 / E5: Qualitative based on interview and process

10.2 PACE scores

One Acre Fund

		1AF
		1.378
	Assessment Result:	Strong

	Indicators receiving a "Poor" score	Indicators receiving an "Average" score	Indicators receiving a "Strong" score
P1			Covers right activities
P2			Covers right risks
P3			Index predicts real risk / farmer's experience
P4		Pays out substantial part of loss	
A1			Appropriate payment method
A2			Decision making is conscious / Client are aware
A3		Agents know about product, training in place	
A4		Marketing material	
C1			Price is affordable
C2	Price is known and perceived as affordable		
C3			Operation costs
C4			Underwriting value maximised
E1		Evidence of coverage	
E2			Collecting claim easy
E3	Claims payment timely		
E4		Customer service in place	
E5			Customer engagement

SeedCo

	SeedCo
	1.242666667
Assessment Result:	Average

	Indicators receiving a "Poor" score	Indicators receiving an "Average" score	Indicators receiving
P1			Covers right activities
P2		Covers right risks	
P3			Index predicts real risk /
P4		Pays out substantial part of loss	
A1			Appropriate payment me
A2		Decision making is conscious / Client are aware	
A3		Agents know about product, training in place	
A4			Marketing material
C1			Price is affordable
C2	Price is known and perceived as affordable		
C3			Operation costs
C4			Underwriting value maxi
E1		Evidence of coverage	
E2			Collecting claim easy
E3	Claims payment timely		
E4		Customer service in place	
E5		Customer engagement	

10.3 Results 1AF

	Dimension / Factors	measurement (1 is regular)	1AF
Product	Product		
P1	Covers right activities	0 - Farmer has more than 3 other activities 1 - Farmer has max 3 other activities 2 - Farmer has max 2 other activities	1.67
P2	Covers right risks	0 - 50% farmers or more did not recommend to anybody 1 - 30-60% of farmers recommended to more than 3 friends 2 - >= 60% of farmers recommended to more than 3 friends	2
P3	Index predicts real risk / farmer's experience	0 - less than 25% farmers experience aligns with pay-out 1 - between 25 and 50% of farmers experience align with pay-out 2 - more than 50% of farmers experience align with pay-out	-

P4	Pays out substantial part of loss	0 - pay-out in average less than 25% of input costs 1 - pay-out in average between 25 and 50% of input costs 2 - pay-out more than 50% of input costs	1
Access	Access		
A1	Appropriate payment method	0 - none of the above 1 - premium instalment with loan, premium is less than 5% of loan repayment 2 - same plus no interest charge on premium, repayment aligned with income patterns, cost transparent to farmer	2
A2	Decision making is conscious / Client are aware	0 - > 60% not aware of product and what it does 1 - > 50% aware of product 2 - > 75% aware of product = knows how to register or someone who received a payment.	2
A3	Agents know about product, training in place	0 - agents don't recall product or make mistakes in explanation 1 - agent can answer any question related to product 2 - agent can explain main features (premium, benefit, claim) unprompted	1
A4	Marketing material	0 - There is no marketing material or explanation 1 - there is marketing material and explanation 2 - there is multiple interaction with the farmer with multiple BTL and ATL	1
Costs	Costs		
C1	Price is affordable	0- more than 5% of revenue 1- around 5% of revenue 2 - less than 5% of household revenue	2
C2	Price is known and perceived as affordable	0 - unaware or high 1 - fair 2 - good value for money	0
C3	Operation costs	0 - 40% or more 1 - 25-40% 2 - operational costs are <25%	2
C4	Underwriting value maximised	0 - no tender 1 - selection according to preset criteria 2 - tender and best company selected	-
Experience	Experience		
E1	Evidence of coverage	0- Farmer has no evidence 1- Farmer has evidence as part of package 2 - Farmer get separate evidence (SMS, paper etc…)	1
E2	Collecting claim easy	0 - no specific process or high complexity 1 - farmer must initiate interaction 2 - automated from index into mobile or to farmer	2
E3	Claims payment timely	0 - Payment delayed 1 - Claim payment triggered before new costs 2 - claim paid within 10 days	0

E4	Customer service in place	0 - no mechanism in place 1 - mechanism or hotline and farmers are aware 2 - in place incl. script for call centre and log around process	1
E5	Customer engagement	0 - no engagement with farmers after sales 1 - customer are engaged at least once after the sale 2 - several engagement with farmers	2

10.4 Results SeedCo

	Dimension / Factors	measurement (1 is regular)	SeedCo
Product	Product		
P1	Covers right activities	0 - Farmer has more than 3 other activities 1 - Farmer has max 3 other activities 2 - Farmer has max 2 other activities	1.64
P2	Covers right risks	0 - 50% farmers or more did not recommend to anybody 1 - 30-60% of farmers recommended to more than 3 friends 2 - >= 60% of farmers recommended to more than 3 friends	1
P3	Index predicts real risk / farmer's experience	0 - less than 25% farmers experience aligns with pay-out 1 - between 25 and 50% of farmers experience align with pay-out 2 - more than 50% of farmers experience align with pay-out	-
P4	Pays out substantial part of loss	0 - pay-out in average less than 25% of input costs 1 - pay-out in average between 25 and 50% of input costs 2 - pay-out more than 50% of input costs	1
Access	Access		
A1	Appropriate payment method	0 - none of the above 1 - premium instalment with loan, premium is less than 5% of loan repayment 2 - same plus no interest charge on premium, repayment aligned with income patterns, cost transparent to farmer	2
A2	Decision making is conscious / Client are aware	0 - > 60% not aware of product and what it does 1 - > 50% aware of product 2 - > 75% aware of product = knows how to register or someone who received a payment.	1
A3	Agents know about product, training in place	0 - agents don't recall product or make mistakes in explanation 1 - agent can answer any question related to product	1

		2 - agent can explain main features (premium, benefit, claim) unprompted	
A4	Marketing material	0 - There is no marketing material or explanation 1 - there is marketing material and explanation 2 - there is multiple interaction with the farmer with multiple BTL and ATL	2
Costs	Costs		
C1	Price is affordable	0- more than 5% of revenue 1- around 5% of revenue 2 - less than 5% of household revenue	2
C2	Price is known and perceived as affordable	0 - unaware or high 1 - fair 2 - good value for money	0
C3	Operation costs	0 - 40% or more 1 - 25-40% 2 - operational costs are <25%	2
C4	Underwriting value maximised	0 - no tender 1 - selection according to preset criteria 2 - tender and best company selected	-
Experience	Experience		
E1	Evidence of coverage	0- Farmer has no evidence 1- Farmer has evidence as part of package 2 - Farmer get separate evidence (SMS, paper etc…)	1
E2	Collecting claim easy	0 - no specific process or high complexity 1 - farmer must initiate interaction 2 - automated from index into mobile or to farmer	2
E3	Claims payment timely	0 - Payment delayed 1 - Claim payment triggered before new costs 2 - claim paid within 10 days	0
E4	Customer service in place	0 - no mechanism in place 1 - mechanism or hotline and farmers are aware 2 - in place incl. script for call centre and log around process	1
E5	Customer engagement	0 - no engagement with farmers after sales 1 - customer are engaged at least once after the sale 2 - several engagement with farmers	1