People, Programs, Progress

Syngenta Foundation for Sustainable Agriculture

1981 - 2024

syngenta foundation for sustainable agriculture



INTRODUCTION	02
Simon Winter	
TIMELINE	04
Paul Castle	
PREVIOUS FOUNDATIONS & THE CREATION OF SFSA	05
Contributions from Oumar Niangado, Jost Frei and Klaus Leisinger	
THE EARLY YEARS	11
 Andrew Bennett With contributions from Therese StPeter, Andres Binder, Appolinaire Djikeng, Partha DasGupta and Dirk Seidel 	
SMALLHOLDERS, PRODUCTIVITY, MARKETS & VOICE	23
 Marco Ferroni With contributions from Cristianne Close, George Osure, Pamela Mburia, Martin Taylor, Michel Demaré, Margaret Catley-Carlson, Jean Claude Rubyogo, Gabrielle Persley and Anne Jorun Aas 	
OVERARCHING THEMES AND PROGRAMS	43
Contributions from Mike Robinson, Yuan Zhou, Sara Boettiger and Paul Castle	
PERFORMANCE AND IMPACT	53
Graphs and data from Andrea Balmer, Natalia Mezzenga, local staff and partners	
SCALING, CLIMATE ADAPTATION, AND EMPOWERMENT TOWARDS INDEPENDENCE	57
 Simon Winter With contributions from smallholders, rural entrepreneurs, Mark Huisenga, Sunil Hemdev, Rebecca Hubert Scherler, Belayet Hossan, Amos Tabalia, Lucy Kioko, Dominik Klauser, Don White, Ganesh Neelam and Bindu Ananth 	
OUTLOOK	78
Simon Winter	

INTRODUCTION

syngenta foundation for sustainable agriculture 23 years in 30 personal views

Our legacy through the eyes of people who helped shape it

Welcome to what is, very sadly, the last publication by the Syngenta Foundation for Sustainable Agriculture (SFSA). This book is an "autobiography", presented as a series of personal observations and memories of the Foundation. They come from people closely involved in our work over the past 23 years as SFSA. The opening section looks back even further, to predecessor foundations.

First, a word about the immediate background. As noted on our website in April, Syngenta Group continues to strengthen its support for commercial smallholders. In 2022, the Syngenta Group Board decided to phase out its financial support of SFSA. As a result, our headquarters in Switzerland will shut by December 2024.



Closure there, however, does not mean the end of our legacy. In the last section of this publication, I look ahead, and share some great news about prospects for our local country teams. In the middle of the book, I look back over my seven years as Executive Director. Very kindly, my predecessors have also contributed fascinating chapters about the Foundation's evolution under their leadership. They are joined by almost 30 other authors and interview partners. Some worked for SFSA through to 2024, others retired many years ago. Some were on our Board, some supported us as Syngenta employees, others teamed up with us as external partners. Farmers, of course, also have their say. I am deeply grateful to everyone who has contributed texts, quotes, and sometimes favorite photos, to this legacy publication.

Before you dive in, allow me to say what this book does not do. While we include recent aggregated impact data, it does not aim to replace our annual Highlights & Performance Reports. (Here is our <u>2023 Report</u>). The pages below also do not try to catalogue every SFSA activity since 2001, nor claim to mention everybody whom we arguably should. And our publication certainly does not aspire to the cheeky epitaph for the architect of St Paul's Cathedral in London: "If you're looking for a monument, look around".

Some readers may question why we talk about crop A but not tool B, or why country C gets more attention than donor D. But that, I would argue, is the charm of personal reflections rather than academic analysis: Real passion wins over artificial parity, and the advantage of long hindsight refocuses the thoughts of those involved.

My fellow authors and I hope that you enjoy the read, learn something you didn't know, and appreciate with new eyes the Syngenta Foundation's multifaceted work in the service of smallholders. Our thanks go to Syngenta for the years of investment into the Foundation (\$300m since 2001) and the great legacy this made possible.

As ever, I look forward to hearing your comments – for example via LinkedIn. And if you are inspired, I am sure colleagues in our legacy organizations would appreciate you getting in touch.

SIMON WINTER

September 2024



A question of dates?

"History is more or less bunk", Henry Ford declared in 1916. Intriguingly, the Ford Motor Company runs a huge historical archive, the Heritage Vault. History and its study aren't anywhere near being "bunk". They help people understand how the world got to where it is today. And what is true globally, also applies to motor companies or any other organization: Looking at the past can help them see the present more clearly. Sometimes (caution required here), it even gives clues to the future. And history can also be fun!



Unfortunately, many schoolchildren get the idea that history is all about dates. That really is more or less bunk. A *bon mot* among historians is that "dates should either be a candle-light dinner or straight off a palm tree". This publication primarily looks back over 23 years of the Syngenta Foundation for Sustainable Agriculture (SFSA); it also touches on the work of predecessor organizations. But as Simon Winter emphasizes in his introduction, it does not attempt an encyclopedic review. We do not get bogged down in details – or precise dates.

So why the timeline below? After all, SFSA had a rather ambivalent relationship with calendar years. (As do most international development organizations). We received an annual corporate donation but worked on long-term programs. Themes and activities didn't run in discrete blocks under each Executive Director. They overlapped, in place, people, and time. Most changes evolved, rather than suddenly arriving on January 1st. But for ease both of writing and reading, we have made the structure of this publication broadly chronological. This list of selected milestones indicates some topics you can expect on the next 80 pages.

Timeline

1981 -	The Ciba-Geigy Foundation starts work in Mali.
1996 -	The Foundation adopts the name of the newly merged company Novartis.
2001 -	After the company merger to create Syngenta, SFSA takes forward the agricultural projects, with Klaus Leisinger as acting Director.
2002 -	Andrew Bennett becomes Executive Director, followed by Marco Ferroni (2008) and Simon Winter (2017).
2005 -	Work begins in India, followed by Kenya (2009), Indonesia (2010, independent as YASI from 2020), Bangladesh (2011), Senegal (2014), Nigeria and China (both 2018).
2008-9 -	Policy and R&D become integral parts of the SFSA program.
2014 -	SFSA co-creates ACRE Africa Ltd to scale up its Kilimo Salama insurance program
2017 -	SFSA spins out its Farmforce tool.
2019 -	Syngenta Foundation India co-creates AEGF to scale up its agri-entrepreneur program
2022 -	The Syngenta Group Board decides to phase out its financial support of the Foundation.
2024 -	New local organizations are created in Bangladesh, India, Kenya (Sustainable Agriculture Foundation) as well as in Mali, Nigeria and Senegal.

PREVIOUS FOUNDATIONS & THE CREATION OF SFSA

syngenta foundation for sustainable agriculture

Our work began with an orphan

The Ciba-Geigy Foundation set out to boost Malian millet

For a corporate foundation, SFSA has an unusually long history. Key decisions more than 40 years ago have shaped our approach ever since. Improving millet yields in Mali got the ball rolling.



Several key tenets of SFSA's approach go back to the creation of the first predecessor organization, the Ciba-Geigy Foundation. From the beginning, for example, its focus was in an area of company expertise. (That may sound obvious, but many corporate foundations pursue very different activities to their backers). The company Ciba-Geigy worked in agriculture, pharmaceuticals, and several other areas; Foundation activities began in smallholder farming, joined later by medicine. Another early decision was to recruit only local experts, rather than 'parachute in' Europeans. Four decades ago, that was an almost revolutionary approach to international development! In the box below, the first employee in Mali, Oumar Niangado looks back on those early days.

In 2011, SFSA celebrated 30 years of work in Mali. The University of Bern marked the anniversary with a book, **Quand les greniers se remplissent**. Hartmann P. Koechlin, first Director of the Ciba-Geigy Foundation, was among those quoted. As he explained: In, 1975, Ciba-Geigy ran a competition for employees to submit development activity ideas. One suggestion was to improve Mali's very low millet yields. Millet was an important crop there, but an 'orphan' largely ignored by international science. The employee proposal was to double the yields from 500 to 1000 kg per hectare. Work started with an office in the capital, Bamako – to which the Foundation remained loyal through all the ups and downs of Malian history through to 2024. (And as our concluding section notes, our work looks to continue there through a new organization).

From the start, the Foundation pursued a further enduring aspect of its approach: strong collaboration with a wide range of partners. As Koechlin reminded readers, partnerships in Mali began with the government, international and national research institutions, as well as other organizations active in development. His original idea had been a five-year project. But Koechlin quickly realized that tangible and sustainable results would require a long-term commitment. The Foundations of Ciba-Geigy, Novartis and then Syngenta proudly turned five years into more than forty.

The initial partnership with the Malian government focused on establishing modern research facilities for millet. The Agricultural Research Station in Cinzana (SRAC) took shape between 1981 and 1983 on 277 hectares; Cinzana lies at the heart of Mali's main millet-growing area. "With the eight relevant soil types and semi-arid rainfall, the site was ideal for both millet and cowpea", notes Oumar Niangado. The station continues to operate today, long after transfer to the national research organization IER.

As the University of Bern showed in its book, the Foundation's work in Mali bore ample fruit. By 2011, it declared, the Foundation and its partners had "trained a generation of scientists, laid the foundation for certified seed production, produced widely successful locally adapted varieties and developed a range of productivity-enhancing techniques." With time, activities addressed other aspects of agricultural production than research. In 2006, for example SFSA launched the Capacity Building for Sustainable Agriculture Project (PRECAD). "The project built on a wealth of experience, a network of partners, and a drive to improve the lives of Mali's smallholders", comments Oumar. PRECAD started farmer cooperatives, as well as special saving schemes for women, trained thousands of smallholders, and increased and diversified their incomes.

A series of surprises and a happy end in tears



Oumar Niangado was our first employee in Mali. He established the Cinzana research station and led the local Foundation team for many years. "But it all started as a bit of surprise", he says. Oumar had won an EU scholarship for plant genetics and breeding. Focused on France, he was determined to join an institute working on an important crop for his native country. By a roundabout route, he found a millet project in Gif-sur-Yvette, in the countryside south of Paris. Oumar set off to study dwarfism genes and photoperiodism.

"Somehow, the Ciba-Geigy Foundation heard about me", Oumar smiles. "One Thursday, our lab secretary said that a Dr. Koechlin wanted to visit the next day. My boss was away, and Gif-sur-Yvette wasn't easy to get to. I spent the next 24 hours making arrangements!" The unexpected conversation went well. Oumar soon found himself interviewing in Basel and then visiting millet and sorghum experts in the USA. After completing his studies, he returned to Mali. The authorities immediately appointed him to set up the Cinzana research station.



"At the beginning, however, the surprises continued", laughs Oumar. "We thought we were very clever building the station between two rivers. Theoretically, we should always have had plenty of water. But after boring lots of holes for wells, we discovered there wasn't a drop on all the 277 hectares." As if that were not bad enough for a crop breeding institute, Oumar was also unlucky with his timing. "A Basel visitor found he could only take a cold shower." The visitor told the authorities that if the station team couldn't find a reliable well, the Ciba-Geigy Foundation would have to withdraw. Hartmann Koechlin rescued the situation by hiring professional prospectors.

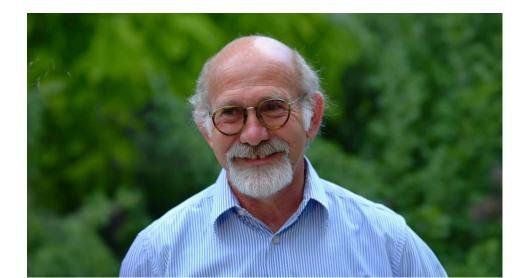
Oumar worked in Cinzana for eleven years; his team of young researchers achieved notable successes. When he left for the Bamako office in 1992, station employees provided yet another surprise. They renamed the site kindergarten as "Jardin d'Enfants Dr. Oumar Niangado". The name-giver admits he was in tears.

" Social Marketing doesn't have to

Tailoring smallholder communication locally is vital

mean Facebook

This publication is mainly about the Foundation. But our corporate backers have also always worked with smallholders. The company learned a lot from the Foundation – and vice versa. As this example shows, good communication plays a big role in improving agriculture.



Helping smallholders farm better was never the exclusive preserve of the Foundation. Our focus has always been on "pre-commercial" farmers those for whom agriculture isn't yet a business but could be. "Commercial" smallholders, on the other hand, continue to buy the products sold by Syngenta and its predecessor companies. For many years, agronomist Jost Frei was among those who advised them. As Head of Region Africa for Ciba-Geigy and Novartis in the 1990's, one of his major interests was the correct use of crop protection products. His work in this area led to publication of a book - with a subsequent connection to the Foundation.

"We set up a seven-year safety and efficiency program in India, Zimbabwe and Mexico", Jost recalls. "People often find it hard to believe, but one of our aims was to reduce the use of chemical crop protection." The Mexican work concentrated on corn, with cotton the focus in the other two countries. To ensure good management, Ciba-Geigy set up a multidisciplinary Steering Committee.

"Big questions that interested us included how best to communicate with farmers. Long before Facebook and Co., it was clear that 'Social Marketing' was a great way to get messages across. We put a lot of effort into maximizing the impact by tailoring the messages for local impact." An example that Jost remembers with particular pleasure is the Amakoshi Play Group in Bulawayo, Zimbabwe. "They used theater to teach the proper use of products. They were so good that we invited them for a performance in Basel." Jost's personal thank you to Amakoshi included a trip up Switzerland's Rigi mountain and the group's first experience of snow.

By 1999, Jost Frei and his colleagues were ready to share their findings. "We started with a presentation to the FAO in Rome, which went down very well", he reports. Soon afterwards, Safe and Effective Use of Crop Protection Products in Developing Countries appeared as a book. Published by CABI, it was edited by Klaus Leisinger and John Atkin. Klaus (see below) later became the first Director of the Syngenta Foundation; John joined our Board after retiring from Syngenta and remained a member through until 2024. As a section below shows, local adaptation of agronomic advice was central to the Foundation's later work on radio extension. "And I'd like to think", adds Jost, "that some of our advice on smallholder messaging also helped SFSA communicate other complicated topics such as insurance and nutrition."

What we said then still counts today

44

SFSA stayed true to the principles of its launch

Some people and projects have changed. But for 23 years, SFSA remained committed to its founding tenets: partnerships of the willing and technological innovation, always in the service of sustainable smallholder agriculture.



Syngenta announced the Foundation's creation on October 11th, 2001. The media release declared that SFSA aimed "to contribute to the improvement of world food security and quality." This was a new creation, but in a fine tradition. The communiqué emphasized that SFSA would continue the agricultural projects run by the Novartis Foundation for Sustainable Development (NFSD). Like its predecessors, the Foundation would be strongly grounded in science, and "network closely with organizations around the world".

Continuity was important and was embodied not least by the transfer of personnel from NFSD. They included Felix Nicolier, a wise pillar of SFSA for the following decade, and Marisa De Faveri, who remained the Foundation's *gute Seele* until its closing year. The choice of SFSA's first Director reinforced the sense of handover: Klaus M. Leisinger assumed this post in parallel to his leadership of NFSD.

Alongside continuity, however, came a firm commitment to the new structure and entirely agricultural focus: Syngenta Chairman Heinz Imhof became first President of the SFSA Board. On the launch day, he said: "Our Foundation aims above all to intervene wherever it can take direct action against poverty and misery." Imhof, an agronomist and experienced agribusiness leader, also explained the new organization's name: "Sustainable agriculture is our raison d'être. Agriculture is sustainable if it makes economic and intelligent use of its resources. That is only possible when people openly discuss their local problems and can develop and implement their own local solutions."

SFSA cited its three projects in Sub-Saharan Africa. As Klaus Leisinger remarked, these shared a basic aim: "contributing to the sustainable security of food supplies grown by smallholders". In Eritrea, SFSA worked with Swiss and international partners on sustainable use of soil and water. In Mali, the focus was on millet and sorghum at the Cinzana Research Station (see section above). Our Kenyan partnership with CIMMYT and the national research institute KARI aimed to develop new maize varieties resistant to stem borers.



The day after announcing its launch, Klaus Leisinger presented SFSA at a symposium in Basel. In a wide-ranging speech, he pointed to the gulf between proponents and opponents of innovative technologies in farming. Leisinger added that "people of good intent are usually willing to learn". Partnerships, he emphasized, would open new ways to tackle hunger and malnutrition in the Global South. "Anybody who means well for developing countries must push towards partnerships that unite positive thinkers in mutual respect and use their different talents and resources." Corporate foundations, the audience heard, are natural candidates to "build bridges and cross ditches". Leisinger also reminded governments of their responsibilities: "International development can only be as good as the national policies that support it." There is no substitute for good governance and economic empowerment, the Director underlined.

Looking back 23 years later, Klaus Leisinger repeats these tenets. "In the environment for good agricultural development, nothing of substance has changed since that opening speech", he says. "Which is why it is such a pity that SFSA is closing."

THE EARLY YEARS

syngenta foundation for sustainable agriculture

The early years: inheritance, transition and insights

By Andrew Bennett,

Executive Director 2002-2007

The Inheritance

SFSA inherited excellent staff, programs, and contacts from the Novartis Foundation. We also created an enthusiastic and well-connected Board.



On the staff, Oumar Niangado continued his long association with Swiss initiatives by guiding our thinking, programs, and relationships in his native Mali and beyond. In Switzerland, our "Malien du Nord" Felix Nicolier brought his considerable experience and wide international network, together with a practical approach and dry sense of humor. The ever-helpful Marisa De Faveri ensured that our office ran smoothly as she switched effortlessly between High and Swiss German, French, English, Italian and soon also Portuguese. Theresa St Peter took charge of communications, added a North American perspective, designed our logo, and helped with teambuilding activities. Jost Frei, in semi-retirement from the company, played a key role in keeping our activities in Kenya on track. Other sections in this publication provide personal perspectives from many of the staff and Board members named here.

Our first Board Chair was Heinz Imhof, a former plant breeder and agronomist with predecessor companies, appointed Chairman of Syngenta AG. After his untimely death, he was succeeded in both roles by Martin Taylor, a former banker and journalist with a passion for using technology to improve livelihoods. Klaus Leisinger, whose energy and foresight had led to the Foundation's launch, provided invaluable guidance and a vast network on which to build. Christian Bonte-Friedheim, formerly in leading positions at FAO and the International Service of National Agricultural Research, broadened our contacts and international experience. Pierre Landolt, head of the Landolt Family Trust and a major shareholder in Syngenta AG, was passionate about organic farming and smallholder agriculture. On our Board, he drew on his personal experience of organic mango and dairy farming in northeastern Brazil. Early Board meetings focussed on the Foundation's existing programs and possible Unique Selling Point. Like many foundations, we could react quickly with minimum bureaucracy. But as well as our people, portfolio, and contacts, we had unique access to a vast range of expertise and experience in science, business, legal and regulatory affairs, at Syngenta and outside. Access to corporate Legal, Finance and IT services kept our overheads low. This apparent closeness caused criticism and suspicion at some NGO's. Others saw it as enabling easy access to top-quality advice on many aspects of agriculture.

We aimed to be a leading partner in fields where we had access to expertise and experience, while focusing on partner empowerment and Proof of Concept. We deliberately avoided becoming just a donor or a management agency for other people's funding. Heinz Imhof was responsible for securing our annual donation from Syngenta. He counselled that we should keep our overheads down, live within our budget, and engage with staff across the company. He advised strongly against third-party funding, believing that it could dilute company support, erode our identity, and cause 'mission creep'. The Syngenta CEO agreed.

The Transition

We continued Novartis Foundation programs in Mali, Kenya and Eritrea. In addition, we soon began our own initiatives.

The Mali program derived from a 20-year corporate response to food insecurity in the Sahel. Oumar Niangado describes its beginnings above. One of his challenges as our local manager was the heavy cost of fuel, transport, maintenance, schooling, and health services at the Cinzana Research Station. These costs were necessary to retain good staff in a rural environment but should have been met by the government. A further challenge was that Malian smallholders lacked seasonally appropriate credit and marketing opportunities. Oumar Niangado and Felix Nicolier skilfully developed local banking and marketing services while gradually transferring responsibility for running-costs to the government.

In Kenya, we worked with the country's Agricultural Research Institute (KARI) and CIMMYT to develop <u>insect-resistant maize (corn) for Africa</u> (IRMA). Breeding here used both traditional and 'Bt' transgenic approaches. The program attracted criticism from opponents of genetically modified organisms (GMO's). Wisely, Klaus Leisinger commissioned an independent journalist to document the research. His excellent book is <u>still available</u>.

The IRMA program was highly complex. It included training staff how to manage GMO's, testing for efficacy against maize stem borers, constructing a containment greenhouse and field isolation facilities, as well as drafting legislation and regulations. Syngenta employees were generous with their time and advice. Sadly, after testing many maize varieties, KARI and CIMMYT found that the most effective one was already in commercial use by another company. We therefore decided not to pursue the development of Bt maize in Kenya. However, the traditional breeding program led by Stephen Mugo produced varieties with good resistance to various pests that damage maize cobs.

The program in Eritrea was led by Hans Hurni and Thomas Kohler from the Centre for Development and Environment (CDE) at Bern University, Switzerland. Their aim was to improve highland food security through better soil conservation and construction of check dams. CDE helped establish facilities for aerial photo interpretation and map-making at the University of Asmara. Staff and students received training in the siting of dams. The Foundation was also asked to support local millet and sorghum breeding programs. These progressed well, but we reluctantly withdrew support when the authoritarian government moved the university into the countryside and restricted travel.

Many of our new initiatives derived from suggestions by external partners or company experts.

The late Dilip Gokhali, then Head of Syngenta Seeds in India, was keen for us to develop a program there. With the help of Prakash Apte and others at Syngenta India, and the wise leadership of Partha DasGupta, we established Syngenta Foundation India. Partha shares his memories of this period below. Similarly, Andres Binder describes how we helped create the Biosciences for East and Central Africa (BecA) facilities in Kenya.

Mike Robinson from Syngenta R&D became our Chief Scientist. One of his first tasks at the Foundation was to explore the possible role of 'conservation agriculture' in sequestering soil carbon, a measure to mitigate climate change. Mike describes SFSA's approach to research and development partnerships in a later section. Viv Anthony, also from Syngenta R&D, initiated several programs at the Foundation; a partner describes one of these below.

Therese St Peter, also a former Syngenta R&D employee, launched a pilot program in Uganda. It focused on the use of mobile phones by smallholders, many of them women, for better market information. Therese also led a school gardens program in India in partnership with Gardens for Life, based at the UK's <u>Eden Project</u>. Both these initiatives found echoes in several later Foundation programs, some of them outlined in this publication.

When Nikolaus Schultze (not from Syngenta!) joined our team, we began work on risk management. Using Kenyan yield and weather data collected by the CDE, he investigated seasonal risk management and insurance. SFSA subsequently developed this initiative into a social enterprise. In later sections of this publication, two authors discuss aspects of recent insurance work in Kenya and Bangladesh.



Zerihun Tadele at Bern University sought support for improvement of tef, a vital crop for his native Ethiopia. He aimed to develop shorter-stemmed varieties that would stand firmer, thus increasing the harvest. With guidance from Andres Binder and help from Syngenta R&D, Zerihun began a program that has now released several promising varieties for Ethiopian smallholders.

The Foundation was a member of the advisory group that established the Global Crop Trust. We provided legal and technical expertise and a small initial grant. The Trust defined conservation strategies for selected key crops, funded national and international seed banks and established the Millenium Seed Vault in Svalbard.

Through our Board member Pierre Landolt, we put our experience with water management and improved seed to use in Brazil's dry northeast. We built an excellent working relationship with the local authorities and communities but did not have the resources necessary to sustain the program.

After more than 35 years in the public sector, it was a very enjoyable and refreshing privilege to lead the early years of the Foundation, and engage with new friends, cultures, and opportunities. My wife and I will forever be grateful for the friendship and support we received in Basel. We can only express our sadness at the decision by the company to withdraw its support. We hope that the story of the Foundation's successes, impacts and lessons will be told many times.

On retiring as Executive Director and joining the Board, I was delighted to hand over to Marco Ferroni. Exactly as we had hoped, he brought new energy, ideas, and perspectives to take the Foundation forward.



Lessons and conclusions

Andrew Bennett highlights six main insights from the Foundation's early years:

- We needed to work with others but maintain our identity, avoid mission creep, increasing overheads or becoming an implementation agency for other organizations.
- We were well placed to deploy high-quality scientific and commercial expertise for public good and international development, but only within specific fields.
- We had a comparative advantage in being able to react quickly with the minimum of bureaucracy and to add value by engaged in activities at multiple levels.
- Syngenta's infrastructure and expertise were special assets on which to build.
- We needed to work with partners who shared our interests and concerns and saw the value of private sector and commercial expertise.
- We were best equipped to carry out Proof of Concept activities. We were not well placed, financially or administratively, to engage in long-term development projects. This raised issues for the next Executive Director and his Board.

"

From safe territory to heady stuff The Foundation's creation was a demanding experiment

Therese St. Peter was our first Communications Manager. 15 years after retirement, she still treasures SFSA's early days.



"SFSA started as an experiment. It explored sustainable links with the kind of smallholder farmers usually overlooked by the private sector. The Foundation's initial purpose was to find ways of beneficial cooperation between smallholders and larger, technology-based agricultural interests, ultimately to improve farmer livelihoods.

For the experiment to be successful, it required understanding of development. Our first dedicated Executive Director had been a senior manager at one of the world's largest aid agencies. The experiment also needed a private sector perspective and a solid understanding of both the public sector and the needs of resource-poor farmers. SFSA created a Board with a balance of public and private sector backgrounds. It built partnerships with people and organizations successful in fields, greenhouses, and with agriculture-oriented philanthropy with similar aims. We joined the CGIAR and Collaborated with national plant research centers in Africa's Sahel and Great Lakes regions. We also teamed up with local farm groups, large foundations, and multi-lateral development institutions. Heady stuff for a small staff with a modest budget! We were encouraged to explore how we could most considerately accomplish SFSA's unique mission.

At its outset, SFSA worked on millet and sorghum with two African research institutions. That was relatively "safe territory". But within a few years the work expanded in three continents to supporting factors critical to smallholder livelihood improvement. These ranged from better access to markets, via financial protection from crop failure, and responsible technology transfers, to promotion of female scientists and sustainable land management practices. Always in partnership with respected public sector players, always firmly footed in smallholders' needs. Heady stuff, indeed."

The advisor who didn't do greenhouses

"

A pensioner helps tackle African braindrain

The call was a surprise and the early ride bumpy. But 20 years on, Andres Binder talks enthusiastically about the opportunity. He helped establish a major plant science center in Africa.



There are probably not many Syngenta pensioners whose postretirement project was stimulated by the G20. But as a keen oarsman, Andres Binder is used to rapidly changing conditions and to rivers taking unexpected turns. Tackling this surprise task, however, felt "a bit like a virgin birth", he admits. "I was suddenly starting from zero, with no experience to build on."

Andres retired from Syngenta's Swiss R&D unit in 2003. At about the same time, G20 ministers offered developing countries support for special projects that met its requirements. Funding came from the World Bank. One of the successful applications was to create a center called BecA: Biosciences eastern and central Africa. "The idea was spot on", Andres comments: "Africa wanted to tackle its brain-drain." The choice of crop science as the discipline also made sense but was "more or less a bit of good luck."

Perhaps strangely for a center dedicated to plants, the offer to host BecA came from ILRI, a major livestock research organization. "ILRI was based in Nairobi, which was a good start", Andres Binder. "But it's a global hub, and BecA set out to be African." The aim was to find an African leader, work on local crops and train African scientists who would have great facilities attracting them to stay.

The Syngenta Foundation was among many organizations that realized the huge untapped potential of African smallholders' crops. These include cassava and numerous varieties of millet. "International research had largely ignored them for years", Andres points out. "But SFSA already had a long tradition of commitment to such crops." As other parts of this publication show, the Ciba-Geigy Foundation started with sorghum R&D in Mali, and improvement of other orphan crops remained a focus to the end. A series of conversations and connections brought the Syngenta Foundation and BecA together. "And further conversations led to me", Andres smiles. "I was used to R&D planning and was happy to help. I was also a professor at Basel University. But somehow, BecA assumed I was a greenhouse architect!" Andres quickly made three things clear: that his skills lay elsewhere, that he couldn't move house to Nairobi, and that Africans had to own and lead the work. "I was just an adviser, definitely not the boss."

Andres Binder helped guide BecA from 2004-11. The early days were about focus and planning. "But once we'd got going – and somebody else had built the greenhouses – one of my key tasks was linking up this new hub internationally." Andres found that many African scientists lack peer contacts elsewhere. Access to cutting-edge research literature was another issue. Andres worked hard to connect BecA with African universities as well as to experts in Switzerland and elsewhere.

Encouraging scientific connections across Africa also remained a feature of SFSA work, for example in Demand-Led Breeding (see below). "A key mentor for me, and later in DLB, was the CGIAR's Gabrielle Persley", Andres acknowledges. "Without her, I'd have been lost. In my sixties, I was essentially starting all over again. That was tough at times." Asked for his overall verdict of seven years supporting BecA, though, Andres uses a very Swiss expression: "Uh-spannend" – about as exciting as it gets.





"

The enduring legacy of the Syngenta Foundation: A view from the BecA-ILRI Hub

Appolinaire Djikeng,

ILRI Director General (BecA-ILRI Hub Deputy Director and Director from 2009 to 2017)



As described here by Andres Binder, SFSA invested in the BecA-ILRI Hub to support capacity-building in eastern and central Africa. That investment involved both people like Andres and a financial commitment. We used the latter to give young African scientists access to state-of-the-art facilities on the ILRI campus in Nairobi. This engagement established the BecA-ILRI Hub as a regional centre of bioscience excellence.

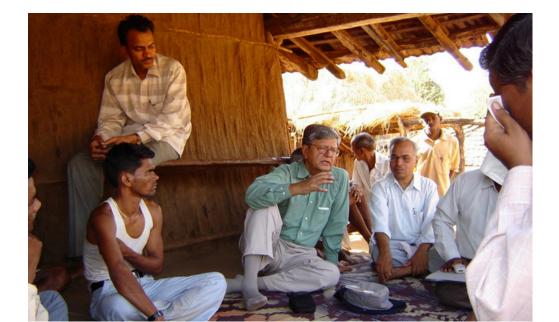
The Foundation carefully tapered its financial contributions as percentages of our annual budget. This solution both ensured program stability and set us up to mobilize other resources to meet the increasing overall needs. With time, the BecA funders group grew to include organizations from the USA, Australia, UK, Sweden and elsewhere. A hugely important aspect of the SFSA investment was earmarking of an annual amount to ensure acquisition of the latest technologies. This fund has helped keep the BecA-ILRI Hub competitive and highly responsive to our stakeholders' needs.

SFSA's involvement paved the way for our Hub to develop a world class program. We have what I believe is a unique ability in Africa to connect relevant research, top facilities, and capacity-development opportunities for scientists at all levels. Over the years, our researchers have made unprecedented contributions to the transformation of agricultural development. The BecA-ILRI Hub continues to build a strong cohort of African science leaders. Many have already gone on to lead major programs outside BecA, as well as institutions and ministerial departments. The impact of the SFSA investment will last for decades to come.

How smallholders turned my five into seven

Partha R DasGupta,

first Director of Syngenta Foundation India Before I engaged with SFSA, I had already been a professional agriculturalist for more than 50 years. Farm success, I thought, rested on five pillars: land, labor, capital, markets, and enterprise. Thanks to the Foundation, I realized that there is more to it than that...



In 2004, I helped SFSA explore possible work in India – a country with well over 100 million smallholders! The Foundation wisely decided to "feel the water" before diving in. The first test was at Anandwan, together with Maharogi Sewa Samiti (MSS). The aim was to raise vegetable productivity through new technology, but the project also had a special social aspect. Volunteers from Syngenta India Ltd. worked closely with cured leprosy patients reintegrated into agriculture. The company liked this so much that "The Rehabilitation Story" was a finalist in the Syngenta Awards scheme of 2005.

We successfully showed the farmers that well-chosen technology, when properly applied, really does increase productivity. However, many other challenges remained. One of the largest was water. In response, we focused on harvesting rainwater and using it so sparingly that farmers could irrigate a second crop in the dry season. This provided an important boost to farm income.

Alongside the value of technology and water conservation, our third realization was the crucial role of practical demonstrations. That may sound obvious, but conventionally, Indian extension workers just described techniques to their farmers. Establishing relatively demanding approaches, such as the System of Rice Intensification, requires close guidance in the field. Our fourth key insight was the importance of functioning markets. MSS had some outlets for its surplus produce, but crops, volumes, and timing naturally varied. Establishing strong buyer-seller relationships and capturing value for smallholders require much greater predictability. With these thoughts in mind, we established Syngenta Foundation India at the end of 2005. An independent legal entity, SFI was designed from the start to bring in additional support from outside the company. Work began in three "backward" regions: Jawhar, Kalahandi and Bankura. They differed in climate, demography, and market access, but all had rice as their staple crop. Our work there quickly convinced smallholders that additionally growing vegetables offers much better income than relying only on field crops. But we again found that handling markets is harder than agronomy!

As we discovered the strengths and weaknesses of our interventions, we adapted accordingly. For example, we helped Bankura farmers to switch to producing hybrid vegetable seeds, because under local conditions these are far more remunerative than fresh produce. In Jawhar, we worked with vegetable growers to form groups that could adapt supplies to market demand. In Kesla, an additional operation area, our partner PRADAN formalized such groups into Farmer Producer Organizations.



Thanks to all this, and more, I added two components to my original list of five elements for successful agriculture: knowledge of specialized practices and aggregation of farmers. And with all my team, I also learned that pre-commercial smallholders have different yardsticks to larger growers. For "our" farmers, the total value of household output is more important than rather abstract numbers such as yield per hectare. Farmers with much less than a hectare can add good income from a little fishery, some backyard animals, and fruit trees. Income from such sources forms a significant part of India's agricultural GDP. The country's typically very small land parcels also demand the development of adequate off-farm vocations – but these need to be in the countryside, with no compulsion to migrate.

Being associated with the Foundation during its first ten years in India was highly gratifying. I continue to share the valuable knowledge gained there with professional fora across the country.

From "Why me?" to "What a privilege!"

SFSA gave new meaning to a company lawyer's career

Dirk Seidel, then a lawyer at Syngenta, was also our legal advisor and Board Secretary from 2007 to 2014. This additional role helped change his view of the world.



Just after starting at the company in Basel, I received an unexpected question: Could I take on the additional task of legal support and Board secretariat for the Foundation? "Not the most obvious person to ask", I thought to myself. At that time, I had no connection to the philanthropic world. I didn't even have a proper passport because I had never left Europe before. I did not really know what to expect, but curiosity told me that there must be something else out there. And there was!

First, I would like to mention all the wonderful people I met in the following years. They were so energized and motivated by their work, and they shared such a contagiously positive attitude. And there were the Foundation's programs, full of innovative ideas and making a significant difference.

Lawyers don't often feel that their work is deeply meaningful, but helping SFSA I certainly did. This became even more the case when I had the opportunity to accompany the Board to Rwanda, Kenya, and India. Local communities told us about the programs, and I saw how much they genuinely appreciated SFSA's work and its positive effects. Suddenly my sometimes very theoretical desk work merged with on-the-ground reality. I find moments like that incredibly motivating.

I have always considered it a huge privilege to be part of the Foundation's journey. As my career at the company progressed, my condition for every role-change was that I could maintain my legal support for SFSA. I now work elsewhere but remain very grateful for everything I learned and the people I met. Above all, I'm thankful for the significant widening of my understanding of the variety and diversity in the world and its cultures. That experience has helped shaped my personality. I will always hold it dear to my heart.

SMALLHOLDERS, PRODUCTIVITY, MARKETS & VOICE

A DESCRIPTION OF

syngenta foundation for sustainable agriculture Smallholders, Productivity, Markets, Voice

By Marco Ferroni, Executive Director 2008-17 I was privileged to join SFSA when I did; the atmosphere in 2008 was electric. Syngenta looked forward optimistically as an innovative, systemically important global crop science business. The company was firmly committed to improving world food security at a time of rapidly rising crop prices. From conversations with Andrew Bennett (my predecessor), our Board, and Syngenta leadership, it was clear that we had an opportunity to expand the size and footprint of the Foundation.

We got to work studying SFSA's successful past, examining agricultural and rural development experience across the globe, and consulting thought leaders. We cast the net wide, listening to experts from research establishments, foundations, international organizations, and governments in Africa and Asia. We sought their views on technological change in agriculture, crop yields, food security, and how innovation could support progress in these essential areas. We also took the pulse of the company. My team and I asked Syngenta country directors, scientists, business managers, and the Executive Committee what they thought and expected of the Foundation.

This research led to proposals to our Board. Within six months, we established a strategy that some people thought ambitious, but that we considered workable in our special setting as a separate legal entity funded by Syngenta but not tied to the business.

In creating this strategy, we laid out several key principles. We confirmed that we would work exclusively in agriculture, and not develop further activities in adjacent fields such as microfinance. We also made it clear that we would work at "the lower end of the market": the company was barely active there and SFSA could therefore establish a distinct presence and authority.



To characterize farmers at this end of the market, many of them women, we coined the term "pre-commercial". These smallholders grew food and cash crops at close to subsistence level, but they had the acumen and resource to respond to catalytic support from SFSA and its local partners. In doing so, they would improve their standing as farmers and become agents of change in their communities.

Turning to geography, we aimed for programs that would empower smallholders in selected low-income countries and emerging markets in Africa, South and South-East Asia. In Latin America, we inherited a program in Brazil and later also worked in Peru and Honduras. Cristianne Close picks up on Peru in her account below; George Osure describes his team's work in Kenya.

Technology, services, farm income



"Empowering smallholders" sounds good, and numerous organizations claim to do so. We took a different route from many of them: SFSA sought to combine technological change with support services and links to markets. Opening the door to better incomes is what makes the adoption of productivity-enhancing technology worthwhile. To support this change, we championed a wide range of endeavors. For example, we tackled low yields through access to better seed, reduced the burden of smallholders' risk by introducing weather insurance, and built their capacity through agricultural extension by partner organizations and agri-entrepreneurs. The latter also helped smallholders buy and sell products more efficiently, again resulting in higher incomes. Other sections of this publication address various aspects of this work in more detail.

However, adoption of improved seed and agronomic practices by resource-poor small farmers doesn't just "happen". We thought long and hard about the constraints. Product relevance and riskiness emerged as key considerations in farmers' minds. Further limitations included rights to farmland and water use, and lack of access to knowledge, finance, machinery, and lucrative markets.

Together with our local partners we saw how important it is to listen to farmers' voices. It is essential to build smallholders' views and advice into the design of intended solutions. On one hand, this is a question of respect. But it is also an investment in market intelligence, making the solutions relevant for users. Ensuring relevance is a crucial step on the route to scale-up. It determines adoptability; actual adoption then depends on creating an appropriate environment – for example, by reducing the risk of paying for better seed.

Smallholder agriculture in the "Global South" is littered with projects of all shapes and sizes that vie for farmers' attention, raise expectations, but then never scale. We preferred to pursue selected long-term programs that our partners and farming communities could trust as steady (but demanding!) sources of support. We transformed the Foundation from a primarily grantmaking organization to one that was much more about staff and partners working together to design plans and implement them via "arms-length" enterprises or directly under the leadership of the Foundation. This may have led to some disappointment on the part of entities approaching us for money, but it was the right thing to do. The change enabled us to build our visibility and brand, solidify support from Syngenta, and (most importantly) set the stage for the kinds of influence, results, and impact that we were able to achieve.

We sought to differentiate ourselves by encouraging innovation, with an eye on taking products to market in partnerships, possibly as spinouts. The Foundation's "private sector DNA" helped us think and work as an incubator of scalable solutions to be taken forward under effective business arrangements. This publication features examples of spinouts such as ACRE and Farmforce, as well as programs implemented by the Foundation. The latter include Seeds2B, Agricultural Insurance Solutions in Asia and our Farmers' Hub / CEMA programs in many countries. Seeds2B's pragmatic focus on seed systems that deliver value in markets catering to small-scale farmers influenced thinking and practice in major international programs in this field. We contributed ideas and standards that influenced how "big donor" money was deployed and policy was shaped.

Multiple challenges and responses



Across the world, low crop yields keep smallholders poor and their families, communities and nations food-insecure. One major cause is suboptimal crop management, which we addressed in part through the extension mentioned above. Another is the lack of access to modern varieties with better genetics. To help ease this problem, we established a crop science and agronomy research team. As discussed by several authors elsewhere in this publication, we expanded our involvement in plant breeding with public sector partners, primarily universities and international research centers. But we made sure the work would not only focus on research and the identification of traits that research-minded breeders thought interesting, but rather would be demand-led – in other words, respond to what markets appeared to want and were likely to take up. The Foundation's Vivienne Anthony was instrumental in turning this intention into the influential program for market-led approaches to plant variety design in Africa. The international <u>DLB</u> initiative ("demand-led breeding"), featured elsewhere in this publication, has received praise from policymakers and funders for introducing innovation-focused private sector thinking and action into public sector plant breeding.

Improvements in breeding are vital, but not enough on their own. In Africa, we quickly understood the need to invest in better seed systems as a whole. Promising varieties must get off breeders' shelves and – via seed multipliers and distributors – into farmers' fields. There are, however, several hurdles. One is corporations' understandable reluctance to invest in crops that may be locally vital, but relatively uninteresting from a commercial perspective. In a later chapter, Mike Robinson explains the power of public-private partnerships to overcome this issue – if participants' interests, incentives, timeframes and contributions can be aligned. Sara Boettiger, another of our authors, played a pivotal role in shaping our thinking and work on PPPs. Further recurring seed system challenges include policy and regulatory hurdles affecting the release of varieties; Yuan Zhou describes some of these below and outlines our responses. Sunil Hemdev shows how SFSA has helped build up the capacity of small and medium-sized seed producers and traders.

Work along the lines sketched out above is essential to improve the microeconomics of farming, but we knew that much else is also required. The outlook for agriculture depends on farm policy, factors affecting the business and investment climate, prices and the trade and exchange rate regime, the agricultural research system, infrastructure, and the quality and effectiveness of a wide range of institutions. We invested in research partnerships to study many of these topics. We published papers, organized seminars, brought renowned speakers to conferences we organized and spoke at countless other events. We earned our place at the table as acknowledged thought leaders on agriculture, food security, technological change processes and the economics of small-scale farming in the developing world. Paul Castle touches on this aspect of SFSA work in a separate section.

Recognition and a continuing need

SFSA's leadership, contacts, activities and results on the ground resonated with Syngenta for many years. The company was proud of its Foundation and valued the easy access to expertise on hundreds of millions of smallholder farmers in the countries where we were active. Syngenta learned from the Foundation's data, analysis and points of view, while we benefited, for example, from company R&D expertise. At venues such as the World Economic Forum, Syngenta executives enjoyed the reputational gain and profile differentiation made possible by a foundation unlike any other in the sector. The company also harvested countless instances of motivational gain and staff satisfaction. Employees repeatedly confirmed they were inspired by our vision, mission, network, approach, and yes: freshness.

The crop science industry has traditionally pursued many charitable endeavors. Syngenta also spread its donations widely. But a corporate foundation working in agriculture was unique – no other company supported a comparable program or institution. This became a source of respect and support for the Foundation in the company and industry, and for the company in the industry. Together, we all grappled with farming challenges in different settings, and with public opinion frequently skeptical of agricultural technology. These problems continue. Closing SFSA therefore seems to me shortsighted; the crop science industry still needs an institution that can tackle challenges and create opportunities not driven by short-term commercial considerations. I hope that a competitor will seize this major opportunity.



An MBA with a heart – and muddy boots

Cristianne Close was instrumental in SFSA's market links

"You don't know how much I owe to the Foundation". Cristianne Close opens the conversation with a former colleague on a surprising note. 10,000 kilometers away in Europe, the colleague asks her to say more.





Cristianne really hadn't expected to work for SFSA. In 2008, her senior Finance role was neither in agriculture nor philanthropy: "Watches and jewelry", she admits with a smile. "But they weren't really my thing." Over for a while from Latin America, she was just completing her Master of Business Administration in Switzerland when she received an unusual inquiry. "One of my professors said there was somebody looking for 'an MBA with a heart'.

That 'somebody' proved to be Marco Ferroni, the then SFSA Director. "And the heart turned out to be mine." The Foundation was ramping up its efforts to integrate smallholders into lucrative value chains. "It was an exciting time", Cristianne remembers. "First, I needed to find my way. It was like hacking through weeds to create a path."

The path initially led to Kenya. Together with George Osure (see below), Cristianne began building a wide range of partnerships there. "It's very gratifying to see that most of the Kenyan work I helped to launch is still going strong today."

From Africa, she turned her attention to India, Brazil and then Peru. "Always with the aim of improving smallholders' livelihoods through better market links", Cristianne explains. One of the first things she learned at SFSA was that field visits are for listening and learning. "A senior member of staff told me never to come with 'solutions', but with questions and an open mind. In those days, that was apparently quite unusual behavior for foreign NGOs!" Cristianne loved the SFSA combination of "muddy boots, business thinking and respect for smallholders". Meeting farmers and other partners in many different settings was "a full education in itself", she says. "The Foundation gave me both roots and wings."

When the wings won, Cristianne left SFSA for her native Latin America. Her subsequent career included a stint with McDonalds, who had been a project partner in Peru. "With the Foundation and a national NGO, they achieved a revolution in local sourcing". After that, Cristianne took her "professional journey deeper into the conservation space", bringing business acumen and strategic thinking to bear on some of the world's biggest challenges.

"I loved my time at SFSA. It was my introduction to the power that a corporate foundation can have in improving smallholders' livelihoods", she sums up happily, but without rose-tinted glasses. "It wasn't all perfect. The Basel team felt rather siloed, we were always very busy traveling to the field", she says. "With so many absences, I wasn't even sure what my office neighbor was working on!" Furthermore, Cristianne senses that the agriculture & food sector has rather "run out of steam on sustainability" since her first introduction 16 years ago. "Halting and reversing the losses to nature, to create a 'Nature Positive' future, will take a lot of bold actions. I hope that the leaders of my children's generation have the courage that ours often lacks."





A tortoise, a miniature Svalbard, and some unexpected IT

Our first Kenyan Director weighs up performance

George Osure established the Foundation team in his native Kenya. His responsibilities soon extended to neighboring countries. He retired in 2021 but continues to draw on his experiences here. Overall, he's happy with how things went.





George came to SFSA in 2009, via our partnership with his previous employer. "I was very interested in knowledge-sharing, which was one of the Foundation's great strengths." His account of the next few years sounds like the fable of the Hare and Tortoise. "We started working in East Africa earlier than some organizations", he points out, "but in less of a hurry. Others therefore looked more agile at first, but we wanted to create a solid base for future programs."

Much of that creation process focused on George's favorite topic. Ask any SFSA employee what they associate with him – apart from his great height, infectious good humor, and unwavering support of Arsenal FC – and you'll hear the word "People". From the outset, George brought young talents on board and helped them develop into much sought-after professionals. Since retirement, he has retained this approach as a consultant to a much larger foundation.

"Crop scientists often talk about the vault in Svalbard that helps to preserve seed diversity for future generations", George comments. "I see workplace teams as a miniature equivalent – they're a reservoir for nurturing the diversity of human expertise." SFSA also helped him personally: "International insights, and the examples of leaders like our Chairman Martin Taylor were a unique learning experience." Naturally modest about his own achievements, George is very proud about those of the Foundation. They include Farmforce, an IT tool featured in another section of this publication. "Few people outside SFSA thought it was feasible", George smiles. "But Farmforce has become so successful that rivals have tried to copy it!" SFSA also proved better than many at "distilling the big concepts of international development into words and actions that smallholders value." This process included paying close attention to local – sometimes very local – knowledge. "SFSA also thinks about aspects of smallholders' lives that other organizations overlook. Farming families' nutrition is a case in point."

If George could turn back the clock, what would he do differently? Despite all the international insights, there could have been more knowledge exchange – in both directions – with SFSA teams in Asia. And while the Foundation enjoyed enviably good governance, George feels that decision-making could have been more efficient. "There is always a fine line between financial prudence and over-complication", he admits. "We sometimes leaned to the wrong side."

Overall, however, and with the benefit of three years' hindsight, George sums up SFSA in four words: "ahead of its time".



"

Reaching far-flung farmers' hearts and hands

Kilimo Media's Pamela Mburia looks back on our radio extension work



When Margret Syombua heard tips on Wikwatyo Radio about successful chickenrearing, she immediately put them to use in improving her newly founded enterprise. Wikwatyo is a small radio station in Kitui County, Kenya. It is popular with farmers because it speaks their local language and now broadcasts agricultural information that matches their specific needs. Thanks to the contact details provided on the weekly farming program, Margaret was able to reach her local agricultural extension officer. He visited her with further instructions on chicken-rearing.

Margaret is one of the many farmers who continue to make use of the information broadcast regularly by stations participating in Kilimo Media's project on «Radio for Agricultural Extension». Started in 2012, the project got a major boost in 2015 through partnership with the Syngenta Foundation. The project manager there had a special interest in the role of local languages and of radio in disseminating much-needed information to farmers.

The Foundation provided a grant for us to train young radio station staff and extension officers. It It was also keenly involved in other project activities. These included visits to farmers and the participating radio stations and meetings with officials from County Departments of Agriculture, Livestock and Fisheries. The Foundation's project manager accompanied our team to far-flung radio stations across Kenya – and was even heard rapping jingles in languages such as Kimeru, Kikamba or Kimaasai !

Our partnership helped eight radio stations to provide thousands of farmers with regular information for increased productivity, together with local extension services. We invested in hands-on training and in on-site monitoring and support to ensure the quality of content delivery. Kilimo Media is grateful to the Foundation for its backing. Together, we greatly increased the reach of extension services in remote areas, with farmers provenly adopting practices discussed in the programmes. We were sad when the partnership ended after five years, but look forward to opportunities for collaboration with legacy organizations.

Cabbages, surprising omelettes and new seeds in Rwanda

Former Board Chairs reminisce and reflect

The first three Chairmen of Syngenta's Board also chaired the Foundation's Board. Heinz Imhof died in 2008; his successors have happy memories of their dual roles.

Martin Taylor, Chairman 2005-2013

"I had the good fortune to be involved with SFSA for eight years. Many memories and moments stay with me. They include the bewildered African farmer whose cabbage yield we had multiplied fivefold (he gave a cabbage to every neighbor). A trip to the bedside of the nonagenarian Baba Amte, who had devoted his life and fortune to leprosy patients ("The minister is a very stupid man. He wants India to have rockets. India does not need rockets. India needs a hundred million toilets"). Going to Bamako when I suspected that after a dozen years our programs in Mali were running out of steam, then finding myself at a conference to celebrate 30 years of our presence (I have a little zebu-hide attaché case to prove it) before visiting places up-country that were soon to be overrun by Islamists. Two security men, a burly one from the President's office, a lithe one from the Légion étrangère ("Ne jamais descendre du véhicule sans ma permission"). Remembering a Swiss employee in Brazil ordering "an omelette with three eggs"; having repeated the order several times, he received an omelette with three fried eggs on the side. The way the SFSA Board freaked out when our Kenyan crop insurance pilot threatened – much to my delight – to turn into a real business. And perhaps most of all the way the Indian team, led by the peerless Partha DasGupta, grabbed hold of its own destiny.

Several colleagues from the Syngenta businesses gave time and energy to help the Foundation. Young people on secondment, researchers working to improve strains of millet and sorghum, senior executives who opened doors for us – just as sometimes we could open doors for them. We learned about agriculture in many countries just as the local markets, formerly uninteresting, impenetrable or both, were beginning to open up to the company's products.

I always felt the Foundation made Syngenta a better company, and not just because of the philanthropic angle. It made us a more knowledgeable organization, more sensitive and more open to places very different from the company's traditional markets. Maybe the Foundation lived, and then outlived, its necessary moment. You'll miss it when it's gone."

Michel Demaré, Chairman 2013-2017

"I tremendously enjoyed my time as Chairman of Syngenta. One of the most exciting aspects of my job was simultaneously chairing the Syngenta Foundation Board. The passion of our team and the expertise and dedication of the Board members were a great learning experience for me. My visits to several countries were a real eye-opener. I have fond memories especially of Rwanda. We were in the field with smallholders learning how to use their seeds better to increase productivity and start earning a living from their farming activities.

I always looked at the Foundation as a central pillar of the company's branding, taking care of our ecosystem and helping to unlock the huge potential which developing countries can offer to feed the world on a more equitable basis. Thank you and congratulations to the entire team for everything you accomplished over the years. I wish you all the best for the next chapter of your lives."

Puzzled, frustrated, and then delighted

Former Board member highlights keys to development success

Margaret Catley-Carlson is a farmers' granddaughter. From 2009 to 2020, she was on our Board. She also loves weather insurance. The three facts are closely connected.



"Coming from a farming family gives one special insights", says Catley-Carlson, known to many as 'Maggie'. Growing up in Canada, she realized early how much agricultural success depends on good information. "My grandparents were farmers; the local extension officer brought science to their door", she recollects. "They could ask him anything, and he had advice."

When she started her distinguished career in government and the development sector, Catley-Carlson was puzzled. "In those days, smallholders seemed to have almost no access to extension". National research services seemed more interested in their field stations than in getting new technology and guidance out to farmers. "A few international centers did a bit, but it simply wasn't enough."

With time, the farmers' granddaughter realized that some organizations, in fact, put great emphasis on capacity-building. But she was still puzzled – and increasingly frustrated. "I couldn't understand why so many state and NGO development professionals were against the involvement of private companies." To her, public-private cooperation is a key to success.

Against this background, Margaret Catley-Carlson was "instantly intrigued" when she heard the then Director talk about SFSA. "It was clear that the Foundation believed wholeheartedly in smallholder extension and public-private partnerships." 18 months later, an opportunity arose to join our Board. Despite many other calls on her time, the reply was an instant "Yes!" A further reason for accepting the invitation was what Catley-Carlson calls "an amazing consistency of interest". The Foundation and Syngenta were both focused on helping farmers succeed – two very different types of farmers but facing many of the same challenges. Alongside her role on our Board, 'Maggie' kept a keen eye on the company's innovations. "Both organizations were determined to improve agriculture. That came home to me more than ever on a visit to India", she adds. "Whether it was our pre-commercial smallholders, or Syngenta's commercial customers, farmers recognized at once when new approaches would earn them money." Similar experiences in other countries confirmed Catley-Carlson's belief in the mutual benefits of philanthropy and commerce. The transformative power of aligning those two approaches, however, went well beyond Syngenta. "Take insurance, for example", says our former Board member. "For big commercial growers, that protection is a standard part of their resilience management. But smallholders and insurance companies used to move in parallel worlds." Our Foundation was among the pioneers who helped bring them together. "Weather insurance for smallholders swept me away", she enthuses. Explaining the concept to people who have never had insurance, for anything, requires a lot of work. "But if you get the extension right, smallholders understand payments related to rainfall because that is part of the yearly circle of their lives. It's a perfect fit – made possible by cooperation across sectors."



Success we've both 'bean' preparing for years

Global Bean Program Leader and PABRA Director praises our partnership

What does it take to cook beans faster in Rwanda? Or improve lentils in the Himalayas? A conscious decision to meet local demand through better crop breeding. Our partner Jean Claude Rubyogo is one of Africa's leading experts in this field.



"Smallholder agriculture in Africa is gradually seeing the emergence of market choices and surplus production", says Jean Claude Rubyogo. Based in Kenya, he is Global Bean Program Leader and Director of the Pan Africa Bean Research Alliance (PABRA) at the Alliance of Bioversity International and CIAT. "Markets are increasingly gaining influence in agricultural value chains", he adds.

Jean Claude believes that stakeholders all along the bean value chain are now "engaging with each another with greater synergy and purpose. They're exerting their influence and making food crop choices that offer more than 'only' food security or diseaseresistance." But as he quickly points out: "This is all a fairly recent development for food crops like beans."

Some of the changes that Jean Claude describes come at the very beginning of the value chain: seeds. "Scientists are implementing new practices in demand-led breeding and seed systems to meet the needs of farmers and consumers", he explains. This was the shared objective that drove PABRA's collaboration with SFSA.

The two organizations first teamed up more than a decade ago. "Our initial partnership was about strengthening bean seed systems with a focus on biofortified varieties", Jean Claude recalls. "We wanted to respond to the market and farmers' demands in Burundi, Kenya, and Rwanda." More recently, PABRA and numerous other organizations have been heavily involved in the Demand-Led Breeding (DLB) project mentioned elsewhere in this publication. "When DLB started, PABRA already had a lot of experience with market-oriented bean breeding and value chain development", Jean Claude comments. "But the project brought fresh impetus. It helped us deepen and consolidate our previous initiatives, as well as creating a whole new approach in many African universities." The partnership between SFSA and PABRA grew through knowledge exchange, joint field visits, regulatory consultations, and mutual engagement. "For instance, a visit by SFSA's Viv Anthony and me to Rwanda sparked off a project focused on breeding beans that would cook faster." For women, typically responsible for preparing household meals, fastercooking varieties free up time for more rewarding activities than watching a pot or collecting firewood. Exchanges between PABRA and SFSA have also brought breeding improvements outside the Foundation's usual geographical sphere. "For example," notes Jean Claude, "consulting with SFSA gave my team the confidence to expand the PABRA demand-led research model to other pulses including lentils in Nepal."



"

Two strong pillars of SFSA's impact in Africa

By Professor Gabrielle Persley AM,

School of Agriculture and Food Sustainability, University of Queensland, Australia The Syngenta Foundation holds a unique position among organizations supporting food and agriculture in the developing world.



Two key features make SFSA one of the outstanding partners with whom I have worked in Africa over the past 20 years. The first is the ability to mobilize private sector perspectives and expertise in the service of smallholder agriculture; the second is the willingness to take risks and invest in research to which we do not know the answers.

Mobilizing private sector perspectives and expertise

SFSA played a key role in the design and establishment of Biosciences eastern and central Africa (BecA) at the International Livestock Research Institute (ILRI) in Nairobi, as a center for excellence, shared by African and international scientists. The Foundation's first Executive Director Andrew Bennett initiated support for the design phase in cooperation with the Gatsby Trust, Doyle and Rockefeller Foundations, and seconded Andres Binder to the design team in Africa. Andres' experience and knowledge of laboratory design and management from Syngenta were a critical design input for the BecA-ILRI team. Intelligent design ensured wise investment of a large capital grant by the Government of Canada. This came to BecA as a joint initiative of the African Union and ILRI. The grant paid for building research infrastructure for animal and plant sciences. The Foundation's financial support continued under Marco Ferroni, as did Andres Binder's scientific advice to the BecA Directors Segenet Kelemu and Appolinaire Djikeng, and ILRI, led by Carlos Sere and John McDermott.

SFSA's early investment in the BecA initiative helped leverage additional support by the governments of Australia, Canada, Sweden, UK and USA, and from several philanthropic organizations. Valuable contributions also came from the Government of Kenya, as ILRI's Host Country. BecA was thus able to realize its declared Mission to "mobilize biosciences for Africa's development". These investments resulted in BecA alumni of more than 400 African Biosciences Fellows who are now pursuing careers as research scientists in Africa.

Willingness to take risks and invest where we do not know the answers

The second of SFSA's success features is exemplified by its support for the DLB program, Demand-Led Breeding in Africa.

DLB receives support from a Food Security Alliance formed in 2014. SFSA partnered here with the Australian Centre for International Agricultural Research and the Crawford Fund in Australia and a wide range of partners in Africa. The program was a response to African smallholders' low adoption of new varieties. The DLB team believed that their reluctance showed that the varieties did not meet farmer needs or consumer preferences, nor were they suitable for rapidly changing climatic conditions

Marco Ferroni and his successor Simon Winter were both steadfast in their commitment to DLB. The Foundation's Senior Scientific Advisor Viv Anthony brought to the program a private sector emphasis on understanding market needs and preferences early in the design phase of breeding. This is combined with a stage-gate process for selecting the truly promising varieties to take forward. African educators developed a syllabus based on such elements of demand-led breeding. Many African universities now use this for breeders' post-graduate education. In 2017, CABI published the syllabus as a <u>textbook</u> on *"The Business of Plant Breeding."* The DLB program also created a Community of Practice of some 500 plant breeders. They are now developing new varieties important for food, nutrition, and climate resilience. The resulting seeds are increasingly reaching farmers through system-building programs such as SFSA's S2B.



Looking to the future

As SFSA programs in Africa and Asia evolve into local non-profits, they can draw on more than 20 years of knowledge and experience. I hope that the new entities will be able to foster new public-private partnerships, including with the increasing number of small and medium-sized enterprises in emerging economies. I also hope that they will follow the SFSA example and take some risks in supporting entrepreneurs and innovations. Finding even modest investments early on can be difficult for such people and their products. However, it is arguably the single most important factor on the road to benefiting millions of smallholders. All it requires for this first step is that somebody takes a risk. SFSA leaders were ready to do that. May their successors follow a similar path. In conclusion, I would like to thank the three SFSA Executive Directors and their scientific advisors. I learned from each and am grateful for their patience and encouragement, and for the long-term support that SFSA provided for our mutual endeavors in Africa. I look forward to continuing partnerships with colleagues in Africa such as Tony Gathungu and Ian Oduk as they transition to a new entity focussed on small-scale farmers in eastern Africa. I wish you speed and strength!



Cause for a smile on food's first mile

Scaling up SFSA innovations: the example of Farmforce

The Syngenta Foundation has been an innovator, incubator, and inspirer. For major scale-up, however, we handed innovations over to specialists in particular fields. Farmforce made that transition in 2017.



In many countries, consumers are more and more interested in how their food is produced. Many people want to know that it is grown, processed, and transported sustainably. "Traceability" is a popular goal. But tracing farm produce with certainty is a challenge. That is especially true of the food, beverages, and spices from smallholder agriculture. Establishing transparency in these value chains is hard – not least because of the huge number of farmers and multiple 'middlemen'.

To tackle this issue, SFSA and partners started Farmforce in 2012. By increasing value chain transparency, our aim with this software tool was to make it easier for companies to buy from smallholders. That makes it easier for these farmers to earn good incomes. By 2017, we had proved the concept. As always, we looked for the best way to transfer an innovation out for <u>scale-up</u>. Farmforce passed into Norwegian hands.

So far, so good. But handover doesn't automatically mean success. What happened with Farmforce? We asked **CEO Anne Jorun Aas** to bring us up to date.

How would you characterize the seven years since <u>Farmforce</u> moved on?

In three words, I'd call them "challenging, rewarding and insightful". What we do isn't easy, and we constantly need to find new solutions to challenges that appear in new markets or crops. But that's exactly what makes it rewarding and insightful!

What were the highlights?

The main highlight is that we continue to build and improve our solution to tough challenges in what we call "food's first mile". Today, around 70 customers use it in more than 30 countries around the world. 1.3 million farmers are registered on the platform and 820,000 fields are mapped for deforestation. And the tool is still growing: By 2030 we hope there'll be 50 million farmers on the platform.

You describe your platform as "bush-proof". What does that mean in practice? How far does it differentiate you from other companies?

Bush-proof means that our solution works offline in the most remote areas. The valuable data from food's first mile are always protected, and never lost. Other companies also have bush-proof solutions, but I believe our experience is a differentiator. We were fortunate to have SFSA support to build a strong basis on the farms of Africa. I am confident that no one in the industry has our level of first-hand experience of that crucial first mile.

For what are you most grateful to the Syngenta Foundation?

That it gave birth to Farmforce – otherwise we wouldn't be speaking about all these exciting topics right now! SFSA did a great and thorough job in defining key properties of the product that we've been able to scale. You also gave us considerable independence in how we operate, allowing us to foster a pragmatic and tenacious approach to solving first-mile problems.

What could we have done better?

Nothing, as far as I can see. The Syngenta Foundation got us started, but also let us grow independently.



OVERARCHING THEMES AND PROGRAMS

syngenta foundation for sustainable agriculture

Helping one plus one to make three

Partnerships combine the best of public and private sector R&D

Corporate foundations are natural bridge-builders. Public-Private Partnerships have been a key feature of SFSA's approach. Our work in research and development (R&D) provides notable examples.



There are many barriers to improving farming. In countries rich and poor, they often include inadequate public investment in agricultural R&D. In developing countries, this shortcoming is compounded by a lack of incentives for the private sector to operate. Together, such barriers mean that far too few innovations from either sector reach smallholders.

One way to tackle this situation is through Public-Private Partnerships. "PPPs can improve agricultural sustainability", says SFSA's Chief Science Advisor Mike Robinson. "They combine the public sector's favorable institutional environment with the private sector's expertise in product development and deployment." PPPs take various forms. They include bilateral collaboration between a government agency and a private company, as well as multi-partner structures that also involve NGOs, research institutes, foundations, and other entities.

The aim of PPPs sounds simple and logical: organizations can achieve more together than they could alone. Such partnerships are, however, surprisingly rare. In the early 2010's, SFSA established a database of PPPs in agricultural development. "Despite using a broad definition", Mike notes, "we found fewer than 40 examples in the previous decade." There were clearly more opportunities ahead.

Establishing PPPs requires management of numerous hurdles. These can include a lack of trust between the private and public sectors, different ways of working, and the need for well-constructed legal frameworks. As SFSA showed over many years, corporate foundations are ideally placed to catalyze and broker PPPs. We understand the mindsets both of commercial and non-profit organizations, but are free from the influence of shareholders, politicians, and other such constituencies. As a neutral intermediary, SFSA played multiple roles. To appropriate degrees, we facilitated the creation of PPPs, helped build trust among partners, aligned strategic goals, addressed intellectual property challenges, and provided funding and guidance. PPPs run all the way through to product development. Below, we describe PPPs for maize, potatoes and wheat. Product outputs are important. As Mike makes clear, however, PPPs also increase capacity and knowledge across sectors. For example, the wheat partnership developed 'wiring diagrams' for yield-relevant genetics. Mike Robinson describes this as "really cool and a significant contribution to science".

The success of such PPPs stems from "a rigorous, commercially oriented approach", Mike emphasizes. "But they also consider broader developmental, environmental, and social implications." Key factors for success in our PPPs included careful selection of suitable partners, clear priority-setting, detailed contracts, and transparent communication and decision-making processes. "The SFSA approach of developing pipelines, rather than just one product, maximizes return on investment and creates diversified portfolios", Mike adds. The human component, however, is also crucial. "Everybody involved needs to be patient, adaptable and innovative."

Pulling together for three key crops

Many Asian smallholders need maize (corn) that can deal better with dry conditions. The AAA project ('Affordable, Accessible, drought-tolerant maize for Asia') set out to develop appropriate hybrids. It aimed to create low-cost seeds easily produced by local organizations, starting in drought-prone areas of India. To achieve this, the partners first listened carefully to the intended users: Farmers' preferences determined much of the subsequent work. Scientists crossed public germplasm from <u>CIMMYT</u> with that of Syngenta. The company also contributed expertise in product development, while CIMMYT provided facilities for drought screening. The resulting AAA hybrids are International Public Goods. CIMMYT makes them available through small Indian seed companies and farmer cooperatives. Work progressed fast: Breeding began in 2011 and the first variety came on the market in 2018. Estimated peak sales will be between \$2m and \$3.6m.

Maintaining the focus on important smallholder crops, SFSA also catalyzed a PPP for potatoes. Conventionally, potatoes are bred for cooler conditions than in the tropics. The TAP-5 project crossed varieties from a <u>Dutch seed company</u> with heat-tolerant varieties from <u>CIP</u>. The aim was to produce potatoes adapted to tropical Asia and Africa. Again, progress was rapid. Work began in 2016; Vietnamese authorities registered the first variety in 2023. Yields are up to double those of the potatoes that farmers previously planted. Further varieties should become available soon. The partners aim to serve as many farmers as possible: the seed company and CIP have therefore agreed each to develop the varieties in different countries.

In recent years, increases in wheat yield have not kept pace with demand. In the International Wheat Yield Partnership (<u>IWYP</u>), a large and diverse group of organizations aims to increase yield potential by 50%. SFSA played a key role in establishing this collaboration. IWYP focuses on translating knowledge from numerous sources into improved traits in elite germplasm. A Translational Hub Network validates the traits and distributes them to public and commercial breeders worldwide. A public-private committee manages strategy, science, and governance. It also collaborates with national and international organizations to support further R&D. Between 2014 and 2023, IWYP achieved yield gains of more than 2% per year. It also published widely, developed diagnostic markers and breeding tools, and released early varieties.



Showing the evidence to improve farmers' lives

Many topics, one aim: SFSA and policy

SFSA's policy work aimed to improve the 'enabling environment' for smallholders. It also underpinned our international thought leadership. This work started in the aftermath of a global food price crisis. SFSA saw an urgent need for policy progress.



"The Foundation started policy analysis in early 2009, shortly after I joined the organization", says Yuan Zhou, our Head of Agricultural Policy. The first project was 'Strengthening Regional Agricultural Integration in West Africa', conceived and developed with Michigan State University. Lack of such integration had contributed to the food price crisis of 2007-8. "Our findings helped the region's policymakers to raise the productivity of staple crops, improve agricultural marketing, and expand market access. The aim was to alleviate smallholder poverty."

SFSA subsequently worked on a wide range of topics. They include payment for agrobiodiversity conservation, multi-actor agricultural extension systems, food safety and traceability, seed policy and regulations, agricultural innovation systems, subsidy reforms, and rural youth entrepreneurship. "More recently, we have ventured into reprioritization of public agricultural and food R&D systems", Yuan adds. "We have also worked on policies and incentives for climate-smart agriculture, green development, and low-carbon farming."

The spectrum of topics widened over the years, but the overarching aim remained: policies that improve smallholders' livelihoods and working environments. "We identified these 'pro-smallholder' policies as SFSA immersed itself in agricultural projects across more than twenty countries", explains Yuan. "That breadth and depth of activity made us acutely aware of major policy issues, their magnitude, and severity."

Reflecting on 15 years' work, Yuan notes several approaches that functioned particularly well. "One of these emerged from our work on 'pluralistic' extension systems, including the expansion of <u>private-</u> <u>sector offerings</u>. This research showed how to integrate more farmers into remunerative value chains. Contract-farming provides them with reliable markets and access to inputs, credit, and technical assistance." SFSA and partners also took a close look at <u>agricultural innovation</u> systems and commercial R&D. These studies showed how India, China and Israel have benefited significantly from innovations in technologies, institutional reforms, and incentive policies. "Another productive area of our research addressed regional harmonization of African seed markets", Yuan continues. Further progress here could significantly accelerate farmers' access to better seeds. "Together with NML*, we ran numerous case studies to better understand current rules and advocate for policy changes. Several countries have since passed new seed regulations. I still vividly remember our work in Zimbabwe, Zambia, Nigeria, Senegal, Kenya, and Rwanda, including discussions with regulators, producers, importers, traders, and local NGOs."

Despite such impressive progress, Yuan also sees need for further work. "I strongly believe that the best approach is to continuously provide evidence-based insights on successful and unsuccessful policies, advocating for positive change by engaging with policymakers." Examples of areas for improvement include climate-smart agriculture. Poor coherence among government agencies means that smallholders suffer from conflicting directives and fragmented support. SFSA policy studies also highlight inadequate investment in R&D, limiting farmers' access to appropriate innovations. In addition, Yuan points to "mixed outcomes" from farm subsidies. Other organizations now need to address these gaps.



Policy progress requires prominent partners

SFSA's Head of Agricultural Policy Yuan Zhou is proud to have provided wide-ranging, evidence-based research and key inputs on policy solutions and reforms. "But this was only possible thanks to our many partners", she emphasizes.

Between 2009 and 2024, the Foundation's policy partners included the International Food Policy Research Institute (IFPRI), New Markets Lab (NML), Bioversity International, the Indian Council for Research on International Economic Relations, the Massachusetts Institute of Technology, The Nature Conservancy, the Foundation for Food and Agriculture Research, Sahel Consulting, the Chinese Academy of Agricultural Sciences, and China Agricultural University. Collaboration covered research, analysis, publication and advocating changes to policymakers.

Suresh Babu from <u>IFPRI</u> comments: "Collaborating with SFSA helped us take our research to the 'last mile' beneficiaries, translating policy frameworks into action on the ground." He provides two examples. "IFPRI's work on extension policies was influenced by SFSA's leadership in this area. Together we encouraged 'south-south' learning, showcasing successes in China and India to other countries. Secondly, SFSA's work on youth agribusiness development paved the way for IFPRI policy and institutional analysis in this area."

<u>NML's</u> Katrin Kuhlmann says that partnership with SFSA "played a pivotal role in deepening understanding of the policy environment for seed regulatory harmonization in Africa". This work, she believes, "left a legacy of linking the economic and legal dimensions of policy change". The partners assessed how small seed companies cope with regulations in real life; they also drew important comparisons between countries and regions. "We valued the partnership tremendously, both organizationally and as researchers focused on the impact of policy on vulnerable stakeholders."

"

A well-earned reputation for integrity and impact

Sara Boettiger* believes our legacy will endure and inspire

For Sara Boettiger, our Foundation stood out among international development organizations "due to its strong culture of practical problem-solving". SFSA and its partners, she underlines, "shared a deep commitment towards understanding on-the-ground challenges and providing innovative solutions" to increase smallholder farmers' food security and resilience to climate change.



Among many examples that illustrate this practical on-the-ground problem-solving, Sara highlights our Agri-Entrepreneur program. The Agri-Entrepreneur model (AE) is a flagship initiative across India. As described elsewhere in this publication, it enables enterprising young rural people to increase both smallholders' incomes and their own. Specifically, the program aims to empower marginalized farmers by encouraging the adoption of productivityenhancing technologies. The AE approach is 'bottom-up', Sara emphasizes, "providing the Foundation with the knowledge and tools to understand communities' needs and run the model on a regional scale".

Donors and practitioners in international development have continued to adapt their view of the private sector, and in particular of multinationals. "Throughout this evolution, SFSA distinguished itself among corporate foundations as a partner with a proven track record", Sara notes. "Two key innovative choices set the Syngenta Foundation apart: Being an implementing partner, with local staff and partners, and adding leverage to its own budget through collaborations with other funders."

"At its core", comments Sara, "SFSA's success was built on a wellearned reputation for integrity and impact." She is convinced that "this innovative hybrid non-profit will be greatly missed". It will be difficult, Sara suspects, to replicate our organization and methods, anchoring smallholders' interests firmly in their living and working environment. "But we can all draw valuable lessons from the Foundation's contributions to agricultural development", she adds. Echoing authors on other pages, she declares: "The impact that SFSA created will endure. Its legacy will remain an inspiration for all nonprofits promoting sustainable agricultural development."

*With over 25 years' experience in agricultural development, Sara Boettiger has dedicated her research to the advancement and deployment of technologies for poverty alleviation in developing countries. She witnessed and was a key contributor to the Syngenta Foundation's growth and impact over the years, as both a consultant and a partner to Foundation initiatives.

Black and white and very vocal

SFSA spoke and wrote worldwide

"Thought leadership" is a big claim, and one that many organizations make. In smallholder agriculture, SFSA's claim to be a thought leader was fully justified. Evidence includes the countless invitations to speak at conferences and other events. Arguably a greater contribution to our legacy, however, are the expert publications to which we contributed.



SFSA employees in many countries were sought-after speakers and panelists at national and international events. Foremost among them were our successive Directors Andrew Bennett, Marco Ferroni and Simon Winter. Invitations came from almost every continent (Antarctica evaded us) and a huge range of organizers. At one end of the scale, for example, was COP28 in 2023: Simon Winter posted about his Dubai experiences on <u>LinkedIn</u>. Arguably at the other extreme was a team member's lunch talk to ten representatives of small Basel businesses. Our former India head Partha DasGupta (see above) continued addressing conventions across the country for years after his official retirement. But wherever the speech and whatever the precise topic, one aim remained the same: to open audiences' eyes to the needs and opportunities of smallholder farmers. Wherever appropriate, we accompanied this with a call to action.

With time, Syngenta came to value the voice of the Foundation. Eurocrats in Brussels pricked up their ears when it became clear that this particular agribusiness had a side to it that competitors couldn't offer. German sales reps repeatedly asked SFSA to add a different, non-commercial, note to their regional meetings with stockists and extension officers. And when the company boldly opened its Basel gates to demonstrators, a Foundation representative was in the thick of discussions. (He soon discovered a NGO placard-holder with strong views on African agriculture – but who had never actually been to the continent, let alone on a farm there).

Just as varied as our presentations and debating engagements – but more accessible and enduring – are our publications. In 2020-23 alone, the topics included cassava yields, innovation, scaling, climatesmart agriculture, nutrition & agro-ecology, tef, insect warning systems, cowpea & Covid, performance measurement & impact, smallholders & tomato seedlings, soil management & business, NPO growth & change, soil health, and digital ag. The texts appeared in international peer-review journals, national periodicals, and our own Working Papers. Over the years, SFSA also contributed to many larger publications. In 2020, for example, two employees edited a – possibly THE – definitive <u>book</u> on smallholder farming.

Building bridges and opening windows

Observations on our work in Switzerland

SFSA and its predecessor organizations focused on developing countries. The headquarters, however, were always in Basel. What have the various Foundations done for Switzerland?



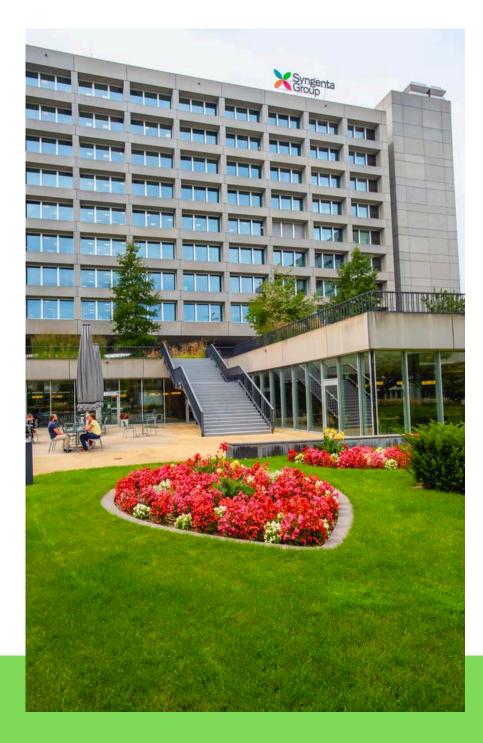
Our last Highlights & Performance Report gave an overview of SFSA's recent "Swiss" activities. They give a feel for the breadth of our engagement. In 2023, Basel University and we hosted a public forum on the multi-year, Swiss-led NICE project. SFSA moderated the annual panel discussion run by the Swiss Forum for International Agricultural Research. As a long-standing member, we supported young Swiss-based researchers active in developing countries. As part of our own international R&D commitment, we worked for almost two decades with the University of Bern to improve tef, the national cereal of Ethiopia. A single year's report is never just about a single year's commitment!

As well as from SFSA itself, Swiss-based organizations also benefited from individual employees' expertise and energy. In 2023, one of them continued this long tradition by again chairing the <u>Swiss</u> <u>Capacity-Building Facility</u>. Colleagues helped, for example, to lead two working groups at our professional association <u>SwissFoundations</u>. We had already been among the contributors to the association's multi-lingual guidelines for the country's almost 14,000 foundations.

These partnerships, events, and roles were widely visible. Some of our commitment to Switzerland was quieter. For many years, SFSA and predecessor organizations donated to numerous Swiss-based charities and NGOs active in agricultural development. (Part of our evolution as a foundation was the shift from donations to more direct implementation). For our 10th anniversary as the Syngenta Foundation, we enabled a Namibian PhD student to benefit from exchange opportunities with Basel University. We also collaborated with organizations that some observers might consider less likely partners. With <u>FiBL</u>, for example, we worked on smallholder training material about organic farming. However, our arguably most enduring "home country" legacy – only time will tell! – may be in having given young people new insights. Among them were students at Swiss universities who found our work so interesting that they chose to study it in their theses. Basel, Lucerne, and St. Gallen were the main sources of inquiry. We were always happy to offer advice and encouragement.

In a rich, well-fed country with heavy farm subsidies, a combination of romanticism and ideology can easily blur public views on agricultural development. Discussing with Swiss activists at a demonstration revealed that all had lots to say about Africa, but many had never been there. Our workshops with students in Zürich, Wädenswil and St. Gallen, for example, opened windows onto practical realities of smallholder farming. Other presentations explained the need for our activities to a wide range of audiences across Switzerland.

New insights also included professional opportunities. Interns, R&D trainees, and commercial apprentices joined us and went their various ways. In the <u>BNF</u> scheme, unemployed academics leaving junior university positions came to us for broader workplace experience. All either found jobs elsewhere or continued with us or Syngenta after their BNF period. A further example of our commitment to the next generation in Switzerland's job market was our role in the country's civilian National Service. From 2010 to 2023, our reputation repeatedly attracted excellent volunteers for varying periods of service. All have gone on to a fascinating range of demanding jobs – including one who worked with us until closure.



On a firm foundation?

Some people are for them, some people against, some people know they make very good sense. They're popular in Switzerland and various nations: The talk here, of course, is of corporate foundations. As has been noted in some good publications, they form a wide range of organizations: Some keep their Boards full of company staff, others put independence at the top of the graph. Some just give money, others run their own work, Some make volunteering much more than a perk. There are also some notable company foundations that pay for great programs through employee donations. Others' endowment lets them live off it. while some get a share of the company profit. Another approach is an annual budget, which has Contras and Pros (like every good subject). There are some that are happy with the company name, while others want a title that isn't the same. Geography also varies from one to the other: Some focus on home, while others look further.

Many decide to join national associations, for example, like us: SwissFoundations! Some run the corporate's staff volunteers, others offer experience to them and their peers. Some work on topics their companies know well, some head in directions you never could tell. Academics come study them, with a range of conclusions: Some flattering, others less, and some total delusions! But corporate foundations, it's doubtlessly true, Are neither exotic, nor terribly new, Ours, for example, went back to the eighties. (We're neither pioneers nor one of the late-ies). The discussions continue what's wisest and best, And the answer may vary from the East to the West, But overall, we'd say in this, our fifth decade: Always check carefully how you are made! Life's never boring as a corporate foundation, and closing takes longer than initial creation. But "caveat emptor", as wise people say: Be ready for things not to go quite your way...

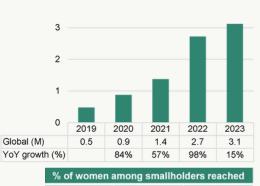


PERFORMANCE AND IMPACT

syngenta foundation for sustainable agriculture

Another view of our impact

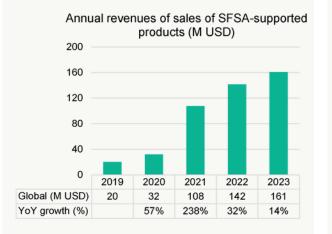
This publication primarily charts personal views and memories of the Foundation. Some data, however, seem a helpful addition. The graphs and figures on these pages come largely from our recent Highlights & Performance Reports. Our thanks for the compilation go to former team member Andrea Balmer. The funding figures on page 56 come from our CFO Natalia Mezzenga.

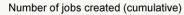


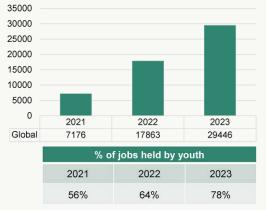
Annual number of smallholders reached (M)

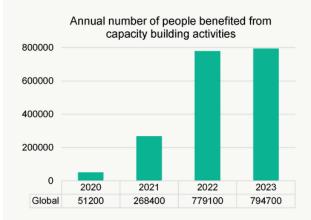
% of women among smallholders reached		
2021	2022	2023
21%	29%	45%











Pink: SFSA Country & Regional teams. **Grey:** Involvement through partners.

HQ: Switzerland-managed projects

- **Farmers:** number of smallholders reached (M) in 2023 and % of women beneficiaries
- **Enterprises:** number of SFSA-supported operational enterprises in 2023
- **Sales:** annual revenues of sales of SFSA-supported products (M USD) in 2023

Farmers: 0.083M – 25% Enterprises: 24 Sales: \$3.36M

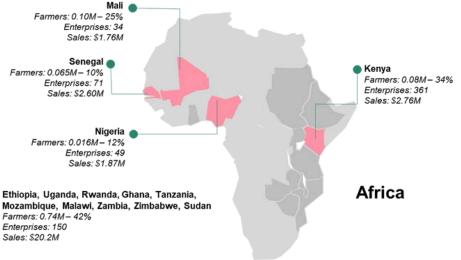
Pink: SFSA Country & Regional teams. **Grey:** Involvement through partners.

- **Farmers:** number of smallholders reached (M) in 2023 and % of women beneficiaries
- **Enterprises:** number of SFSA-supported operational enterprises in 2023
- **Sales:** annual revenues of sales of SFSA-supported products (M USD) in 2023

Ethiopia, Uganda, Rwanda, Ghana, Tanzania, Mozambique, Malawi, Zambia, Zimbabwe, Sudan

Farmers: 0.74M – 42% **Enterprises:** 150 **Sales:** \$20.2M





How has the Foundation financed its work?

Here are some funding examples. They highlight the key long-term role of Syngenta.

Syngenta funds to Foundation group 2001-2024

(2024 BEST ESTIMATE)

over \$300m Funds from Second-Party Donors

SINCE 2017

\$43m

Funds from Third-Party Donors to our programs

SINCE 2017

circa **\$80m**

SCALING, CLIMATE ADAPTATION, AND EMPOWERMENT TOWARDS INDEPENDENCE

syngenta foundation for sustainable agriculture

"

Scaling, Climate Adaptation, and Empowerment towards Independence

New beginnings and getting fit to scale.

By Simon Winter,

Executive Director 2017-2024



On July 1, 2017, I walked into Syngenta's offices in Basel to meet my new team. A diverse and slightly nervous group welcomed me. I was slightly nervous, too! Fortunately, Marco Ferroni was with me. I had the incredible and unusual opportunity to accompany him for a month of handover. I learned what he felt was working and where he saw opportunities for improvement. That first day, SFSA also hosted a conference on Scaling. We were joined by about 100 international visitors interested in advancing knowledge and practice.

I had just spent 14 great years at TechnoServe. We had refined our models of agricultural value chain and entrepreneurship development and significantly increased our impact. What encouraged me to leave? As I looked at the challenges facing smallholders in emerging markets – especially climate risks – I saw a lack of relevant innovations and of interested and committed funders. TechnoServe was entirely dependent on donor and corporate fundraising, and therefore limited in its truly innovative work.

SFSA had a track record of proving that innovations could work for smallholders and getting them ready for adoption and scaling. This was a rare organization working at the intersection of science, late-stage research and strengthening market systems. It was an honor to be considered as Marco Ferroni's successor. After deep family discussions about moving from the USA with a 14-year-old son, while leaving a 19-year-old daughter at university there, I accepted the offer. (With heartfelt gratitude to my wife and children!)

At the Foundation, I discovered a wonderful group of researchers, innovators and practitioners. Three 'Streams' were working on innovations in seed systems, index-based agri-insurance and firstmile business models to get innovations to smallholders. In the first few weeks I travelled to meet many of our country teams. I was highly motivated by their dedication, expertise and commitment, as well as by the feedback from their local partners. The SFSA I found was a bit like a university department. Each Basel-based 'professor' led his or her Stream, working with local teams as the delivery engine. The Foundation's recent shift from traditional grant-making to implementation was clearly visible here. In parallel, the R&D and Policy 'professors' ran their own activities, still mainly based on thoughtful grant-making co-designed with recipients. My country visits alerted me to looking at SFSA from the perspective of farmers, communities, local market players and governments. These critical stakeholders were not interested in whether our staff came from one Stream or another. They wanted to know how the Foundation could help them meet their needs.

I had learned a great lesson from Will Warshauer, TechnoServe's President, from the time he arrived as my new boss: You don't need to fix things that are working fine, and it is worth taking some time to figure out which things those are, and what needs adjusting. Over the next two years, the SFSA team and I made some of the needed tweaks. We established a Foundation-wide performance measurement system, so we could understand what was working well and what our collective impact meant. We flipped the culture, from being Basel-led to having country teams developing local integrated pathways to impact, supported by Headquarters colleagues. We pushed ahead with research into soil health as a major under-developed pillar of climate smart and resilient agriculture for pre-commercial smallholders. We adjusted our R&D and policy agenda so that we helped our country teams see how to tackle key challenges in their local food and agri-systems. And we initiated an employee engagement scheme to tap into the energies and capabilities of company staff who wanted to support Foundation programs and partners (such as African seed companies), with great satisfaction delivered to both staff and partners.

The Foundation had a history of supporting and contributing to public-private partnerships, especially in seed development. Yet, external funding for our supported innovations and programs was still relatively modest in 2017 (around \$5m versus our Syngenta funding of around \$17m). We therefore also started to develop a cross-organizational Partnerships and Resource Mobilization function.

Strategy refresh, 2019-2021

By 2019, I felt we were organizationally fit to scale more effectively. Time to refresh our strategy! Scaling was already on the SFSA agenda when I arrived but had mainly focused on demonstrating that innovations worked and showcasing them to potential replicators, investors and funders. I knew from TechnoServe that scaling required a sophisticated, adaptive and systemic view. To refresh the SFSA approach, I enlisted a scaling specialist. He reviewed our work and advised on strategic pathways as we looked towards redoing our strategy.

Workshops with country teams, partners, and our wonderful Board helped us to appreciate the complexity of moving forward with scaling. This led eventually to the paper that became a core pillar of our strategy refresh in 2021. More importantly, it enabled to us get better at achieving scaling outcomes. External authors helped capture some of our lessons learned in a 2023 <u>case study</u>. Partners at USAID, BRAC and Tata Trusts pick up on this theme below.



SFSA's initial steps into climate smart and resilient agriculture (CSA) were through a series of projects with funded partners. These included One Acre Fund, The Nature Conservancy and Agventure in Kenya – the latter's Managing Director provides insights in an interview elsewhere in this publication. Work initially built on our experience developing the <u>CONSUS</u> tool with the Zürich University of Applied Sciences, and on earlier partnership with the World Bank-led BioCarbon Fund. However, a handful of projects were not a strategy. Reflections led by Dominik Klauser helped us realize that innovations to improve soil health and the efficiency of input use, including water, would be at the core of our new strategy. SFSA's role would be at the intersection of innovation and use.

During my early country visits, I also realized that we were not doing well on empowering women or youth – whether on our staff or in the communities and partner organizations with which we worked. This had to change. We created a policy on Diversity and Inclusion (D&I). Our legal expert Rebecca Hubert Scherler played a key role here but was fortunately not alone. We developed a non-hierarchical Community of Practice, composed of committed individuals across SFSA. Together, we developed the strategic pillar around D&I for the refreshed strategy.

It also became apparent that we needed to get better at deciding where to invest and what to stop supporting. (Corporate foundations often find the latter more challenging). The measurement system mentioned above was increasingly helping us to judge our performance. But we also wanted to improve other aspects of managing our extensive portfolio. Here, as so often over the years, we benefited from a Syngenta expert. Elvira Molitor had developed portfolio management approaches and tools during her long career at the company. She did great work with us to set up a portfolio management office and the Portfolio Board as the governance and decisionmaking body. This may all sound very simple and straightforward. But from March 2020 every SFSA country went into lockdown. The COVID-19 pandemic made us stumble and think about our role in keeping not only our staff safe and healthy, but also our stakeholders on the ground. In many cases, our teams repurposed their work to help with crisis response. For example, agri-entrepreneurs also delivered protective equipment and other emergency services. SFSA employees helped with hygiene measures, or transported farm produce to urban markets and cash back to the growers. We also converted our entrepreneurship training from live to digital. I was very proud of how our teams adapted and responded to the crisis. We sadly lost some present and former colleagues to the virus. Yet most of us were able to carry on, committed to our mission and vision, and continuing to deepen our impact.

Among other activities, the pandemic also slowed our refresh. After much internal and external consultation, we were delighted to launch our strategy in August 2021. It looked ahead to 2025.



Exploring new futures, 2022-2024

This was a period of strategy implementation. For example, in CSA: with the University of Greenwich we co-created a <u>CSA Design and Implementation</u> <u>Tool</u>. We partnered with the Foundation for Food and Agriculture Research to undertake CSA policy studies in Bangladesh, Indonesia and Kenya with World Vision and the IDS and ODI. We also collaborated on a white paper with IITA and Agventure on our soil health insights and perspectives. Our former colleague Dominik adds a personal perspective below.

On scaling impact, our 2023 performance report shows the considerable progress we made towards our 2025 targets. On D&I in particular, I was thrilled to see that we achieved our 2025 target of 50% women among the entrepreneurs supported in 2023!

In 2022, the Syngenta Group Board decided to phase out its financial support to the Foundation and that, to ensure its future, the Foundation would need to transition to a new organization with additional core funders. Syngenta Group had already been strengthening its strategic efforts to support commercial smallholders with innovative and transformative solutions, providing improved access to products, training and markets. From then through to the end of 2023, we looked for ways forward. In parallel, our country teams continued to advance partnerships and programs that were increasingly co-funded by third parties. With support from our Board and Syngenta, we searched for new core partners for the Foundation. By late 2023, we had found two companies and two non-profits as potential participants alongside Syngenta. (We had also elaborated a new Theory of Change, governance and business model, and partnership approach). In November, the first company team sought approval from its Board, only to find that business conditions in the sector were against them – and therefore against us.

In the first quarter of 2024, we started the simultaneous process of closing our Swiss Foundation and helping those country teams with the strongest leadership and external funding to create new local entities. In late June, as you will read at the end of this publication, we were successful. Our teams in Bangladesh, Kenya, and India received formal approval to continue the SFSA legacy.

As I look back on the past seven years, I am deeply grateful to our people, partners, co-funders such AGRA, SDC, USAID, the Bill & Melinda Gates Foundation, and many others, as well as to our deeply-committed Board members who coached and advised us. Most of all, I am grateful to the hard-working women and men whom we were honored to support as they seek to improve their livelihoods in some of the world's most challenging farming contexts.



The most important voices of all

Smallholders told us what to do and how we did

As SFSA employees now move to other organizations or retire, many take with them personal memories of smallholder farmers. Those memories can endure long after one leaves, as Martin Taylor, Dirk Seidel and other contributors to this publication show. Over the years, as Marco Ferroni reminds us, smallholders' voices have been a crucial part of our daily lives. Partha DasGupta and our partner Jean Claude Rubyogo are among the many who listened and learned.





The Foundation continually shared those voices with a much broader audience. Our social media channels featured numerous stories in film, photos and text. Countless articles on our website quoted smallholders directly or indirectly, albeit it through the filter of translation. The quotes below come from two main sources: Our recent Performance & Highlights Reports and a series of impact studies by researchers at <u>60 Decibels</u>. These, too, appeared on our website.

And yes, we also quoted the less flattering voices! (In case you were wondering, we did the same thing in Switzerland: the student theses Paul Castle mentions above did not automatically say we'd done well). Impact studies are not there to collect praise. They're meant to show what's working and what needs improvement. As the quotes show, farmers are happy to tell you!

Some speakers on this page refer to a "Farmers' Hub", "FH", "Hub" or "Pancer Tani". These are the rural businesses that SFSA and partners established to help entrepreneurial young villagers earn good money serving their farming neighbors. Many of 'our' FH owners and agrientrepreneurs are women. Like farmers, they typically invest any extra income in children's education or household needs. A reserve for medical and other emergencies is also important. As several of the women quoted here make clear, however, success is about more than just money. It also brings them greater respect in local society.

Voices from the villages

"My Farmers' Hub has made a big impact on my life. It gives me economic freedom and I'm now digitally skilled. I want to expand the business further and create more employment for women."

An ethnic Santal female agri-entrepreneur in Bangladesh

"My community and I focus on tomato farming. We used to face challenges during the dry season, due to lack of training, varieties, and market links. When the Syngenta Foundation introduced us to high-quality tomato varieties, we saw remarkable yields. Ever since, we've been consistently purchasing these seeds and benefiting from training and connections to companies."

Female farmer in Nigeria

"For mung beans, I used to rely on traditional seed exchange with other farmers. I had low yields. The Syngenta Foundation and partners' program has given me access to high-quality seeds and technical support. I hope for continued higher yields and better price for my produce."

Male farmer from Myanmar

"The [new variety of] corn matures quickly, and it has a higher yield than the varieties I used to grow. I even bought cattle and furniture this season because of the good yield."

Female farmer, Senegal

"I am grateful to the Nutrition in Cities Ecosystems (<u>NICE</u>) project for helping me to learn, try new things and increase my productivity. I can now feed my large family, help those who are less fortunate, and still have extra produce to sell."

Female Farmers' Hub owner, Kenya

"The Farmers' Hub model has helped me increase my knowledge of modern seedling production. The benefits have extended to several other women in my community through capacity-building in horticulture and arable crops. I am a widow; the profit from my Hub helps me to pay my children's school fees and buy their books. My prestige and social status in the community have also increased."

Female farmer and Farmers' Hub owner, Nigeria



"Heavy rainfall ruined some of my rice crop. But I was able to minimize my loss thanks to crop insurance. The Insurance payout provided a bridge to the next season. I am grateful to the Syngenta Foundation and Green Delta Insurance for introducing weather index-based crop insurance. The combination of weather forecasting, cultivation guidance, and insurance boosted my confidence. I encourage my fellow farmers to buy crop insurance to be more resilient."

Male farmer, Bangladesh

"I grow paddy rice with micro solar-powered irrigation installed with the help of <u>AEGF</u>. The solar pump lets me cultivate five acres during both seasons. That earns me almost 200,000 rupees more per year. Supporting a family of four, that is a very valuable boost."

Male farmer, India

"I'm 38 and have a physical disability. My wife and I have two children. Before starting my Pancer Tani in 2021, I worked as a farmer. I live in a highland area, where we need irrigation for the dry season. In my case, water must be pumped up from 50 meters below my house. The Pancer Tani program supported my family to install irrigation and build greenhouses for nurseries."

Male Pancer Tani owner, Indonesia.

"I enable my fellow farmers to get hold of good agri-inputs. The products should enable them to escape from a vicious circle of low yields and debt. I set up a nursery, grew high-value saplings, and helped my neighbors to start growing vegetables to improve their income. I also set up a digital banking kiosk to help them make and receive payments. These ventures earn me about 15,000 rupees per month."

Female farmer, India

Quotes from farmers in Bangladesh

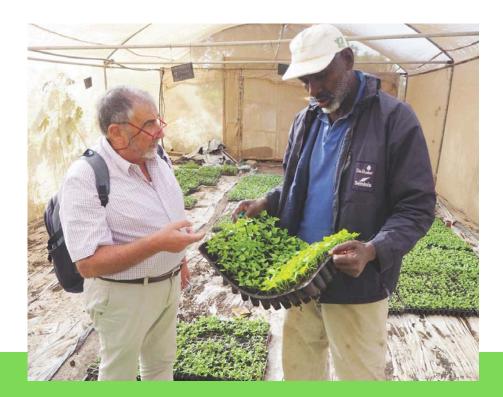
- "My income has grown. I have been able to increase the amount of cultivation of other crops."
- "I had never cultivated vegetables before. Now I am earning more money from this business."
- "I can now farm with less hassle as I do not have to worry about my crops dying before harvest."
- "My main source of income is from cultivating and selling bottle gourd. Before I was not financially solvent due to insufficient production, but now I always have money in hand for my daily expenses."
- "Using the profit, I repaired my house and started other vegetable cultivation."
- "I am earning a good income and can spend more on the family. I am spending it on my children's education."

Quotes from agri-entrepreneurs in India

- "I learned how to interact with farmers. Before, it was very difficult, as they would not listen to me. I also gained respect at home as a woman."
- "My confidence has increased after working as an Agri-Entrepreneur. Many people now recognize me in my village. I rarely used to go outside, but now I advise people on farming. This makes me proud."
- "Being an agri-entrepreneur provides me with not only a job, but a sense of dignity."
- "I am now financially independent. In the past, I used to depend on my brother's income. Now I can fulfil my basic needs on my own."
- "The Syngenta Foundation India people are very responsive and prompt. They come to the meetings regularly and guide me. This keeps me motivated. It is enjoyable to work with them."
- "I have encouraged many sisters to become agri-entrepreneurs. It is an opportunity for women to earn money and be financially independent."

Room for improvement

- "Training was online and difficult to understand. There is also a lot of difference between understanding something online and practically applying it."
- "The training should include demonstrations for the farmers. This will motivate them."
- "It is hard to identify which seedlings are original and which are not. Farmers' Hubs should come up with a way through which farmers can be sure that the seedlings are of top quality."
- "I need to buy fertilizers separately. Then the cost goes a little higher later. It would have been better to give seedlings at a lower price."
- "A lot of my plants died. I don't have money for daily requirements because of the loss."
- "All agri-entrepreneurs get good training, but there is a very small window of opportunity to earn."



How better seeds reach farmers faster

PASTTA proved new varieties' market potential



"The Syngenta Foundation has been an important strategic partner in the seed sector and in scaling up innovations to improve the lives of smallholder farmers", says Mark Huisenga, Senior Program Manager at the USAID Bureau for Resilience, Environment & Food Security.



"We began working together after discussing the prospects of commercializing new crop varieties from the Feed the Future Innovation Labs", Mark explains. "Many people thought the prospects were limited. But SFSA, through Seeds2B, took up the challenge." USAID soon started co-funding the Partnership for Seed Technology Transfer in Africa (PASTTA).

Bridging the gap between technology innovation and deployment is often challenging. That is particularly true for new varieties. "SFSA employees were thought leaders, innovators, and drivers of new private sector approaches to agricultural development", Mark continues. "For example, they took a Product Life Cycle approach to research management." Collaborating with other donors, SFSA helped map out a White Paper on Accelerating the Delivery of Quality Seed from Breeding Investments Made by the <u>Crops to End Hunger Initiative</u> through Economically Sustainable Seed Systems". The paper set out donors' expectations for the Initiative.

A Global Development Alliance enabled SFSA and USAID to combine resources via Seeds2B and create more accessible markets. Smallholders were therefore able to use better seeds, including nutrient-dense and stress-tolerant varieties developed by Feed the Future research partners. "The work of Seeds2B is pivotal in achieving food security", Mark emphasizes. "New varieties help smallholders to become more climate-resilient and increase the productivity and nutritional value of their crops."

Seeds2B adopted a sustainable approach, demonstrating a strong return on investment since the program's inception in 2017. By 2023, an estimated 481,000 farmers had planted improved varieties supported by Seeds2B. USAID calculates that these plantings represented a seed value of \$19 million sold by local partners. Between 2017 and 2023, Seeds2B enabled the registration and licensing of 67 varieties. Mark was particularly impressed by the acceleration: "Seeds2B support took the varieties from trialing to marketing at nearly twice the usual speed!"

Achievements like this are only possible in good partnerships. When all works well, Mark says, "such collaborations have significant implications for rural livelihoods, agricultural transformation, and the broader agricultural development community."

Sowing success and nurturing growth

When employee volunteering helps companies help farmers

Seeking to create value and impact for smallholders, SFSA believed firmly in the vital role of private enterprise. The Seeds for Impact program illustrates this in more than one way.



The African seed sector has a capacity gap. Many smaller companies struggle to increase their product range and provide good varieties to more farmers. To address this 'missing middle', we developed the Seeds for Impact (S4I) program with <u>AGRA</u> and <u>AECF</u>. S4I provided the companies with blended finance (part loan, part grant) and technical assistance.

Blended finance helps small and medium-sized companies to build infrastructure and improve their distribution networks. "Together with technical assistance, this funding acts as a catalyst", says Sunil Hemdev, our team member responsible for the program. "The combination empowers private enterprises to overcome barriers and drive sustainable growth."

Another important aspect of the program was technology transfer. This means getting new varieties from public research into smallholders' hands faster. "Small seed companies can act as a vector here", comments Sunil. "They know what local customers want, and they work hard to meet that need." Many public breeding programs in Africa address 'orphan' crops. These are locally popular varieties, often vital for food security and nutrition. But they receive little attention from commercial breeders internationally. "It is thus all the more important that programs like S4I give them a boost", Sunil adds.

SFSA's main contribution to the S4I program was technical assistance (TA). To provide know-how and guidance to companies across the continent, we piloted an Employee Engagement scheme at Syngenta. Company volunteers were able to use their skills in a different setting from their usual work, helping to resolve specific challenges faced by each S4I enterprise. "Both the volunteers and the beneficiaries at S4I enterprises greatly appreciated the opportunity to share and learn from each other", comments the Foundation's Rebecca Hubert Scherler. Rebecca, Sunil and other colleagues at SFSA and Syngenta were part of the steering committee that helped turn the TA volunteering idea into reality. "Corporate foundations are very well placed to facilitate the inclusion of corporate employees in pro bono activities", Rebecca notes. At many organizations, such volunteering is about general charitable help, with no direct link to employees' professional development. "But when a foundation and company both focus on the same thematic area – agriculture, in our case – the combination is ideal for skills-based volunteering. Employees can then develop professional skills outside their usual duties." One of the many beneficiaries was Value Seeds in Nigeria. "This company is a notable success story from the program" declares Sunil. In 2020, Value's Head of Finance George Kabutha said that S4I had "opened lots of doors, including at financial institutions". The program, he predicted, would enable the company to "benefit more than 1,500,000 smallholders in the next five years". Growth continues to be rapid: In 2023, Value seeds produced 858 metric tons of certified maize seed and 657 for rice. By mid-year, 2024 sales had already passed 900 tons of maize and 580 tons of rice, respectively. The company has also started a partnership with the International Rice Research Institute in the Philippines.



Agriculture is a career of the future

East African Director describes challenges and opportunities

Lucy Kioko became our Regional Director for East Africa in 2022. In an early website interview, we asked about reasons for joining, and the challenges to farming in her native Kenya. Lucy also talked about women in agriculture. We recently brought the conversation up to date.



What inspired you to choose agriculture as your subject for study and work?

Agriculture chose me! I originally wanted to be a Quantity Surveyor. My mother worked with Quantity Surveyors, and I thought it sounded good. But things do not always turn out as expected. I have had a fulfilling career in agriculture. And at ag school, I met the most important person in my life: my husband.

Of all the many organizations you could have joined, what encouraged you to come to us?

I was attracted by the culture of achievement and impact. And notably, SFSA has pioneered products that have gone on to become businesses: ACRE Africa in insurance and the sourcing tool Farmforce. (Both are described elsewhere in this publication).

What surprises were there in your first few months?

The main one was discovering the full extent of the Foundation's breadth and diversity.

How would you summarize the potential and main challenges in the Kenya's agriculture?

The potential is huge. Entrepreneurial "bright sparks" are already demonstrating that. In addition, businesses owned or powered by smallholders have put the country on the world commodity map. One example is the Kenya Tea Development Agency. It's owned by more than 600,000 smallholders and is the world's largest black tea exporter. Kenya also exports more avocados than any other African country – again thanks to small growers.

That's the positive side. What about the problems?

Kenyan agriculture faces a myriad of challenges. They include aging farmers, low investment, the impact of climate change and erratic weather, low use of technology, broken market systems, low productivity, and poor return on investment. There are plenty more. But the cliché is true: Every gap or challenge presents an opportunity!

Why should potential partners consider working with your team?

I think the culture of innovation, sustainability, entrepreneurship, achievement, diversity and inclusion, and impact is an attractive proposition for our partners. In addition, we are willing to share and collaborate to create synergies. That'll be more and more important as resources become increasingly scarce globally.

In our Foundation's long history, you became the first female Director worldwide. What is your advice to young women contemplating a career related to agriculture?

There are lots of young women in agriculture, but mainly at the grassroots level. We need to move up! I am honored to be the first female Director and hope to do African women proud. Agriculture remains a career of the future, like digital technology and financial services. After all, everybody needs to eat nutritious food. In my experience, ag presents a very dynamic and versatile professional environment. There are so many different jobs and subjects!





If you personally had a million dollars to invest, how would you use them to the greatest advantage of East African smallholders?

My money would be on women farmers, upon whose shoulders smallholder agriculture stands, and the youth who are its future. Additionally, I would continue to lobby the region's governments. They need to prioritize investment in agriculture and create an enabling environment in which farmers can thrive.

What will be your favorite memory of SFSA?

Meeting the Executive Director, Simon Winter, even before meeting my line manager! Simon flew to Kenya to introduce me to SFSA's local stakeholders. I was surprised and honored at the same time. He gifted me a Foundation notebook, which is still in pristine condition. I met Robert Berlin, my line manager, three months later, and we have had a wonderful working relationship. Another cherished memory is meeting the Kenyan team for the first time. At that moment, everyone, including me, must have been wondering how we would all relate. We have since had some amazing times together while serving smallholder farmers.

How do you see your local organization developing over the coming years?

My aspiration, hope, and dream for the future is that we will excel and grow beyond our wildest expectations while making a positive impact on at least two million smallholders and contributing to resilient African food systems. I hope to make Africa and SFSA proud by carrying on the legacy of innovative work and impact.

From 100 farmers to a million in four years?

Smallholder insurance with Bangladesh's leading NGO

Weather Index Insurance has been a cornerstone of SFSA's work for 15 years. In Africa, we helped pioneer this protection for smallholders, which later expanded to programs in Asia. A key partner reviews some recent developments.



"Our main aim in working with the Syngenta Foundation was to build farmers' resilience to climate change," declares Belayet Hossan, Associate Director of Microfinance at BRAC, a major international NGO based in Bangladesh. BRAC Microfinance and SFSA began partnering in 2021 as part of a two-year program by the InsuResilience Solutions Fund (ISF).

"The Foundation was the lead facilitator and worked closely with us and other partners," Belayet explains. "Our joint objective was to establish affordable weather index insurance for smallholder farmers, helping them reduce the financial risk of investing in their crops." Key activities included designing suitable insurance products for smallholders and setting up distribution and payout channels. "Another crucial aspect was creating awareness and providing insurance education," Belayet adds. BRAC deployed dedicated staff with agricultural backgrounds in both field offices and its Head Office to promote and execute crop insurance activities. It also provided training to its Microfinance staff on various aspects of weather index insurance.

After thorough preparation, the initiative began with a test group of about 100 farmers in one district. "Within two years, the program had enrolled well over 41,000 smallholders," Belayet proudly reports. The insurance covered a range of crops, focusing on beans, potatoes, Boro and Aman rice, as well as maize (corn). More than 5400 farmers received payouts, enabling them to continue farming with confidence despite crop losses due to adverse weather.

Service was another important feature of the partnership. The insured farmers received weekly voice messages with agricultural advice throughout the crop cycles, along with hands-on guidance in the field.

BRAC Microfinance plans to establish a 24/7 call center to provide smallholders with continuously updated weather forecasts and agricultural advice. "A great addition would be better market links to help farmers sell their crops more profitably," Belayet comments.

"Overall, we're happy with how the ISF program went. That's why BRAC continues to implement crop insurance," Belayet sums up. By March 2024, about 153,000 farmers had enrolled; by the end of 2025, BRAC Microfinance has set a target of one million insured farmers.

A legacy that will continue to shape African agriculture



AFRICA

SFSA has had numerous good ideas – and proved they work. Scaling these innovations up, however, has mainly been the task of other organizations. Weather insurance is one example. An expert in the field says we've left "an indelible mark".



What's the Syngenta Foundation's legacy in Africa? "Profound impact on our smallholders", says Amos Tabalia of the Global Innovation Fund. He was previously with ACRE Africa in Nairobi. "Through innovation, for example in seeds and digital tools, SFSA consistently sought ways to boost agricultural productivity and improve livelihoods." That is generous praise. But turning good ideas into large-scale benefits for farmers has required organizations such as ACRE to take SFSA work forward and expand it. (Our page on Farmforce provides another example).

Speaking for his employer, Amos goes into more detail. "ACRE has had the privilege of scaling up the Foundation's groundbreaking climate risk insurance for smallholders. The original Kilimo Salama project combined the use of automated weather stations and mobile phones to keep costs low and transactions easy. That pioneering work laid the basis for ACRE Africa to become a leading force in agricultural insurance. We now boast the largest network of such weather stations in sub-Saharan Africa, with 78 in Kenya and 40 in Rwanda."

ACRE inherited a strong base for success. Crucially, though, Amos and colleagues didn't leave it at that. "We added new technology, such as satellitebased remote sensing data and process automation", he explains. "This approach has been instrumental in scaling up cost-effective crop and livestock insurance for farmers across the continent." Further key initiatives include the Replanting Guarantee, the Resilience Engine digital platform, and the Climate Data Library.

However, Amos is keen to point out that technological innovation is only part of the story. "SFSA's dedication to nurturing thought leaders and insurance professionals has also left an indelible mark", he emphasizes. Capacity-building beneficiaries have come from numerous organizations. They include the United Nations Development Programme, the World Food Programme (WFP) and the International Labour Organization, as well as more local institutions. "You'll also find alumni of SFSA's courses in most of the companies handling agricultural insurance in Africa", Amos adds. They include many of ACRE's own employees.

"The Foundation's legacy stands as a testament to the transformative power of innovation, collaboration, and unwavering commitment to smallholders", Amos Tabalia sums up. "Although SFSA is closing, it's good to know that this legacy will continue to shape the future of African agriculture."

Farming sustainably also requires business success

A former employee continues to tackle smallholder challenges

What makes smallholder farming sustainable? Views differ widely. We asked Dominik Klauser for his. Our former R&D Lead now heads the Sustainable Agriculture Initiative Platform's (<u>SAI</u> Platform) Regenerating Together program, working with the food sector to scale the adoption of sustainable farming.



What should we all bear in mind when thinking about 'sustainable agriculture' in the smallholder context?

I suspect that many people underestimate the pace of environmental degradation today – not just related to climate change, but also to biodiversity, water, and soil. Agriculture is a major contributor to degradation of our environmental resource base but is also heavily affected by it. This is particularly the case for smallholders. They are disproportionately affected by the degradation although they cause relatively little of it!

When looking at sustainability for smallholders, which key indicators do you recommend?

People often first consider climate change and greenhouse gas emissions. Smallholders' contribution to global warming is limited. However, their impact on local biodiversity, water use, or topsoil loss can conversely be substantially bigger. Depending on context, it may be wise to prioritize these indicators. One must also remember the economic component of sustainability. Smallholder agriculture is often predominantly about producing food; this is many families' main source of farm income. Implementing new environmental practices must make farmers financially better off. Indicators for productivity, market access, and labor-use efficiency therefore also need to be a focus. Supporting the business of farming is essential for any transition to regenerative agriculture.

One often hears that farming must be organic to be sustainable. What about other approaches?

SAI Platform's Regenerating Together program focuses on outcomes, such as improved resource-use efficiency, soil health, or habitat protection. We prioritize outcomes based on the context of individual farming systems. Farmers must be free to make well-informed choices about how to improve their own outcomes. Modern breeding approaches and access to new varieties, for example, can often play a positive role. So can organic agriculture. But its proponents need to beware of becoming too rigid about specific practices In your experience, what are the key challenges to promoting and implementing sustainable agricultural practices among smallholders?

There are lots of challenges, depending on the local situation. One major recurring issue is lack of access to knowledge and extension. Another is fragmentation – many farmers cultivate two or three small fields with different characteristics. Many smallholders also do not have access to the subsidies, other state incentives or premium markets that drive adoption of sustainable practices elsewhere. Maintaining or improving productivity – or reducing production costs – is therefore often still the main objective when working with smallholders.

Worldwide, across all types of agriculture, another challenge is that young people don't want to farm. How can we tackle this threat to sustainable agriculture?

You're right that wherever one looks, the world is losing farmers by the day. But this is nothing new: Most people in industrial and service jobs are descended from farmers. 'Western' farming has become much more efficient and now feeds far more people than when it was a major source of employment. Smallholders will find it increasingly difficult to make a living – or even achieve self-sufficiency – on less than two hectares. There is no point trying to keep people in farming artificially if they see better opportunities elsewhere. There will be further consolidation, I'm sure. My vision is that by 2050 the world's smaller farms will no longer depend on donor funding. Instead, they will be successful businesses.

What insights from your time at SFSA do you find particularly valuable when promoting sustainable agriculture globally?

The Foundation has an excellent reputation in many countries. It has always been an innovation-driven, scienceand evidence-based organization. It identified market failures and set out to tackle them. This mindset, as well as the science, business, and farmer network that I built at SFSA, helps my work every day!



Diversification, an escalator and the end of rainfall myths

Good cereal yields are possible even in dry conditions. But there is much more to the equation than just grain and rain. Our Foundation and partners take a multi-pronged approach.

Farmers in the semi-arid area north of Mount Kenya face numerous challenges. They include erratic water availability, and conflicting demands on natural resources. Climate change is accentuating many of the problems. Local farming company Agventure tackled the challenges head-on. Managing Director Don White and his team developed and implemented climate-smart agriculture and ensured the sustainability and profitability of their operations. These efforts focus on soil health.

Working to raise stubbornly low cereal yields on semi-arid land, Don emphasizes, the temptation is naturally to concentrate on water. Don makes very clear, however, that "rainfall was not the limiting factor". To him, the major problem was continuous monocropping. The consequences were deteriorating soil health and increasing pest and disease pressure. A major problem was that Agventure's cereal crops were not able to root well. Soil diseases were one major reason. In addition, frequent machinery use had compacted the soil. As Don explains, this layer prevents root penetration and thus limits crops' access to moisture and nutrients.

Looking at similar challenges in Australia, Don sensed that the answer would be crop rotations. The selected crops need to meet several criteria. They must be suited to the local environment and Agventure's capacity. They also need to be scalable in production and find customers. What Don calls "joining the escalator to success" is when farms start rotating crops and engaging in related soil improvement practices. However, not all crops are suitable for a particular region's growing conditions or market. Careful analysis is essential. "And it's not enough just to have a good agronomic idea", Don knows. "One must also take local infrastructure and expertise into account."

In 2019, Agventure began working with SFSA on market-led diversification. They built a canola processing plant, developed market linkages that improve supplier relationships, and created trading and value chain opportunities. "We are very grateful to the Foundation", says Don. "Employees helped us with our Center of Excellence, as well as in testing, promoting and introducing rotation crops, and above all in engaging smallholders in market-oriented production."

Agventure's Ol Donyo farm achieved impressive results. Average annual rainfall there varies between 400-600 mm. In 2009, the overall harvest was close to zero when the wheat monoculture failed. In 2011, staff introduced peas in the rotation, with barley joining in 2014. This diversification dramatically increased wheat yield – despite a hard season with low rainfall. It rose from 0 in 2009 to about 3.4 tons/ha five years later. By 2019, the overall average yield had gone up to 5.2 tons/ha, even though rainfall remained roughly the same.

Don points to success factors such as reducing crop losses, giving farmers income alternatives via diversification, reducing crop risks, and increasing resilience. Importantly, he says, "Agventure has also created an entire 'ecosystem' to match". This includes training, processing, and marketing services, as well as a registered seed company. Soil health, however, has remained firmly in the company's focus all the way.

"Our objectives were to increase the resilience of rainfed farming systems, engage with local communities and add local value", Don comments. "We wanted our activities to benefit farmers and local consumers. And they do."

(Adapted from an article on the SFSA website)



Agri-entrepreneurship puts young rural people in the driving seat

Ganesh Neelam,

Executive Director of The Collectives for Integrated Livelihoods Initiatives, an associate organization of Tata Trusts

TATA TRUSTS





Tata Trusts and the Syngenta Foundation had an audacious goal. In December 2019, we together set up the Agri-Entrepreneur Growth Foundation (<u>AEGF</u>). Our joint aim was to launch 100,000 agrientrepreneurs (AEs) and engage 20 million Indian smallholders. AEs are young rural people keen to establish a business serving agriculture. They enable nearby farmers to get the good services and innovations that they need and deserve. And I am delighted to say that at the time of writing in 2024, we have already reached the mark of 20,000 AEs.

Since its creation. AEGF has focused on strengthening the overall ecosystem for the AE program. Growth has been rapid. AEGF has also established strong partnerships with a range of stakeholders. They include donors, technology partners, financing institutions, government agencies, and private companies. This ecosystem helps AEs to get support and guidance. They can then provide the relevant services to small and marginal farmers.

AEGF takes a broad approach to improving farm livelihoods. It is now expanding the AE program from crop-based agriculture to support other rural activities. Strengthening smallholders' resilience to climate change plays an important role. It has been a pleasure working with Syngenta Foundation India. Tata Trusts look forward to taking this program forward in the coming years, ideally with the local successor organization.

"

I was drawn here by smallholder impact

Board member sees much work still to do

Bindu Ananth was the last independent member to join our Board. In early 2023, we asked Bindu about her impression of us, some ins and outs of micro-finance, and recipes for her country's agriculture. 18 months later, we renewed the conversation.



What brought you from a background in Economics and work in health into the world of agriculture?

In my work in financial services, I always focused on under-served markets and customer segments. Agricultural finance and financing smallholders have been a big part of my work over the last two decades. I had the honor of being in the ICICI Bank team that launched India's first rainfall index insurance contract. My Indian university, the Institute of Rural Management Anand, played a pivotal role in making the country self-sufficient in milk. The Institute's solution was a smallholders' cooperative model, as early as the 1970s.

You hold several Board and other posts. What encouraged you to join the Syngenta Foundation in particular?

I was drawn to its strong focus on smallholder impact. Compared to many foundations, SFSA's close association with Syngenta also gave it a special ability to access talent and technology. All my interactions with the other Board members and SFSA employees gave me a clear sense of a mission-driven and ambitious team. I was also eager to learn more about climate-resilient agriculture and what it means for farming systems and lenders.

What were your first impressions of the Board?

All positive! The meetings were very productive, and the prep material was excellent. I quickly learned a lot from my Board colleagues and the leadership team.

How would you briefly describe the work of your company, Dvara Trust?

Dvara catalyzes new business models in financial services. To date, we've incubated nine innovative companies. We believe that when finance is designed and delivered well, it can be transformational.

Why is this work so important?

Access to finance underpins a lot of other developmental goals. It is also essential to give people better tools to manage risk. They can then lead their best lives without worrying about rainfall failure or the hospitalization of a loved one. Micro-finance acts as a 'forced savings' device. It helps families access lump sums that would otherwise be challenging for them.

Indian politicians and officials listen to you. Which top priorities would you advise them to pursue in strengthening the country's agriculture?

This is a complex issue and has many threads. We continue to grapple with very fragmented farm holdings and consequently low levels of automation and productivity. Too many people depend on subsistence farming, propped up by subsidies and price guarantees. In my view, the absence of social safety nets further contributes to the persistence of subsistence farming. Over time, we will need to enable the large base of farming households to either graduate to commercial agriculture or exit to profitable non-farm opportunities.

Since joining the SFSA Board, you have been closely involved in a major change process. You and your colleagues have put in a huge amount of extra work. What motivated you all to stay the course?

As Board members, we have a fiduciary responsibility to all our stakeholders, particularly the smallholders whom the Foundation serves around the world. This required us to work closely with the SFSA management team and Syngenta, identify all sources of risk and make sure that all reasonable efforts were made to secure the legacy of the Foundation's work. I have been so inspired by the unwavering commitment of the leadership team, in Basel and globally, and of my Board colleagues, to find ways to sustain the Foundation's impact across all our focus areas.

What special wishes or advice do you have for the local teams that are continuing their work?

I have no doubt that the teams will thrive in the new structure. Their leaders have all the knowledge and experience needed to carry forward the work. I encourage them to use this opportunity to build new partnerships that accelerate their progress while retaining the strong focus on improving smallholder incomes.



A day like no other



Simon Winter looks ahead

I shall long remember June 27th, 2024. It was "a day of two halves". In the afternoon and evening, I saw both laughs and tears. We had a kind of 'Wake' for our Foundation. Emotions were heightened as our team in Basel celebrated achievements, recalled favorite memories and said goodbye to our organization. For many employees the next day was their last, with most others following by September. I owe each of them a huge debt of gratitude for my seven fascinating years as Director. Their future employers will inherit a wonderful range of talents, capabilities, and delightful personalities. This publication pays tribute to them and, as importantly, to their skilled, charming, and dedicated colleagues around the world.

For many of our colleagues outside Basel, June 27th brought not a farewell, but a welcome. In the first half of the day, our teams in Kenya and Bangladesh received resounding support from our Board, Syngenta and SFSA's official Liquidator to create new local organizations. India had passed the same test a few days before. The prospective 'Sustainable Agriculture Foundation' was formally on its way to becoming the legacy of SFSA – in those three countries at least!

That brief description makes this new beginning sound easy. It wasn't and it won't be. Getting the 'green light' was the result of a huge amount of work over the previous months – and of having created an excellent base over many years. That base includes great in-country impact trajectories and reputations, strong cofunding partnerships, and highly committed local leadership teams tenaciously pursuing the mission and vision SFSA helped them develop. SAF Sustainable Agriculture Foundation

Taking these organizations forward to greater future impact will require significant work. Promises of additional future partnerships and support are helping. More is needed. The local teams will be writing history. To my knowledge, no agricultural development corporate foundation has ever spun out local independent non-profits. Yet, this is the right thing to do. One lesson: Global corporate foundations should embrace the innovations, capabilities, and track records of their 'emerging market' teams (where they have them) and when mature, consider supporting them to launch independent organizations.

The Bangladesh, Indian and Kenyan teams are intending to establish the Sustainable Agriculture Foundation International (SAFI). This would be a network organization to co-create programs, share innovations and knowledge across countries and continents, and build strong partnerships.

Alongside the launch of "The Big Three", June also brought good news from West Africa. Our much smaller teams there have each boldly decided to create new national entities committed to improving smallholder farming. In Senegal, there is now <u>SENAD</u>, in Mali <u>ACAD</u> and in Nigeria <u>FSSS</u>. Some of their work, notably on seeds, will likely be in partnership with the Sustainable Agriculture Foundation-Africa; other programs will evolve with new partners. I am deeply moved by these teams' drive and passion. Maybe they will become part of SAFI too.

On June 27th, our Bangladesh Country Director was the first to present his team's plans. He opened this crucial session with the words "We always see the beautiful future for farmers". I can think of no better way to describe our attitude yesterday, today, and tomorrow. That positive vision and enduring focus stand at the core of our legacy. Former Basel colleagues and I wish the legacy organizations all the best.

syngenta foundation for sustainable agriculture

Copyright 2024, Syngenta Foundation for Sustainable Agriculture, Basel, Switzerland.