



2019 Highlights and Performance / Selected goals 2020

Introduction

Welcome to our review of highlights and performance in 2019.

In 2019, one major highlight *was* performance – or more precisely, its measurement. 2019 was our first full year using a new Performance Measurement (PM) system to record the results of our activities consistently. After piloting this in 2018, our primary aim was to strengthen the rigor, regularity and quality of data-gathering. We now run a systematic collection process across our portfolio. A new validation method has improved data quality.

The Syngenta Foundation (SFSA) works across three main streams: Agriservices, Agricultural Insurance Solutions and Seeds2B. During 2019, we tracked five Key Performance Indicators across these streams in a dozen countries. These KPIs are 1) the number of smallholders accessing SFSA-supported products, 2) the number of businesses selling these, 3) their total sales, 4) the number of products developed and 5) their status in the pipeline. The following pages include definitions of these terms. As part of our PM, we also charted 2019 developments in our Policy work, and assessed the reach of our Strategic Grant partnerships. Together, these figures provide a baseline from which we can compare our future performance.

PM makes our work increasingly transparent. However, the system does not yet cover all SFSA activities. The present review thus also reports on highlights from further areas of work. Examples include recently initiated country programs, our Research & Development collaborations (which in the early phases do not generate results for farmers or enterprises) and selected Seeds2B initiatives. With time, these are intended to join the main tracking set.

In 2020, so far, despite all the challenges of the COVID-19 crisis, we are optimistic that our results will improve. We have been improving how we feed data into the PM system. We also plan to add indicators matching our new Strategic Outcomes, notably in climate-resilient agriculture. New farmer impact studies will enrich our next review. Once fully implemented, the PM system should enable us to monitor progress across our entire portfolio, helping us to learn more and to prioritize investments faster.

I hope you enjoy reading this review, and look forward to hearing from you how we could make the next one even more interesting, relevant and helpful.

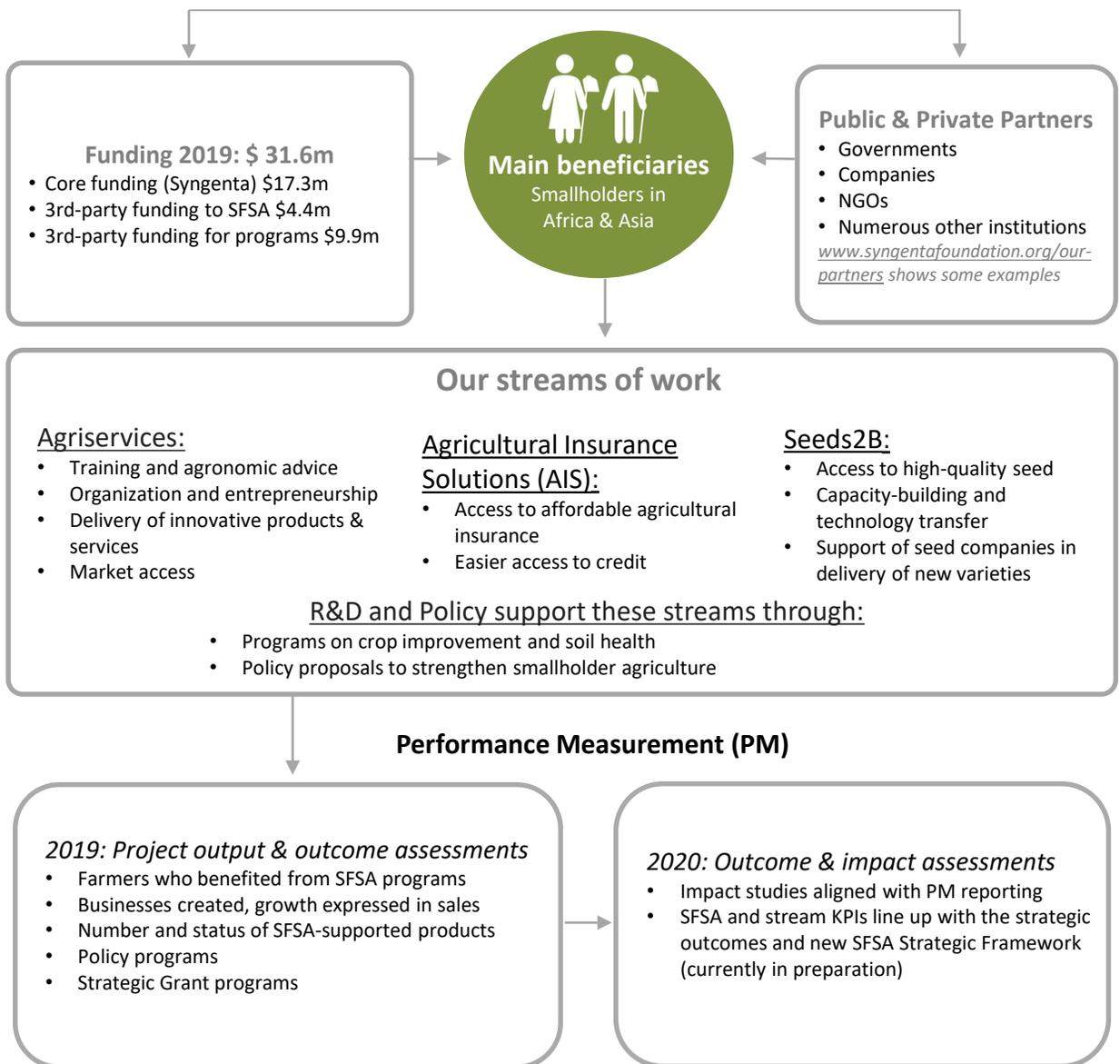
Simon Winter
Executive Director
August 2020

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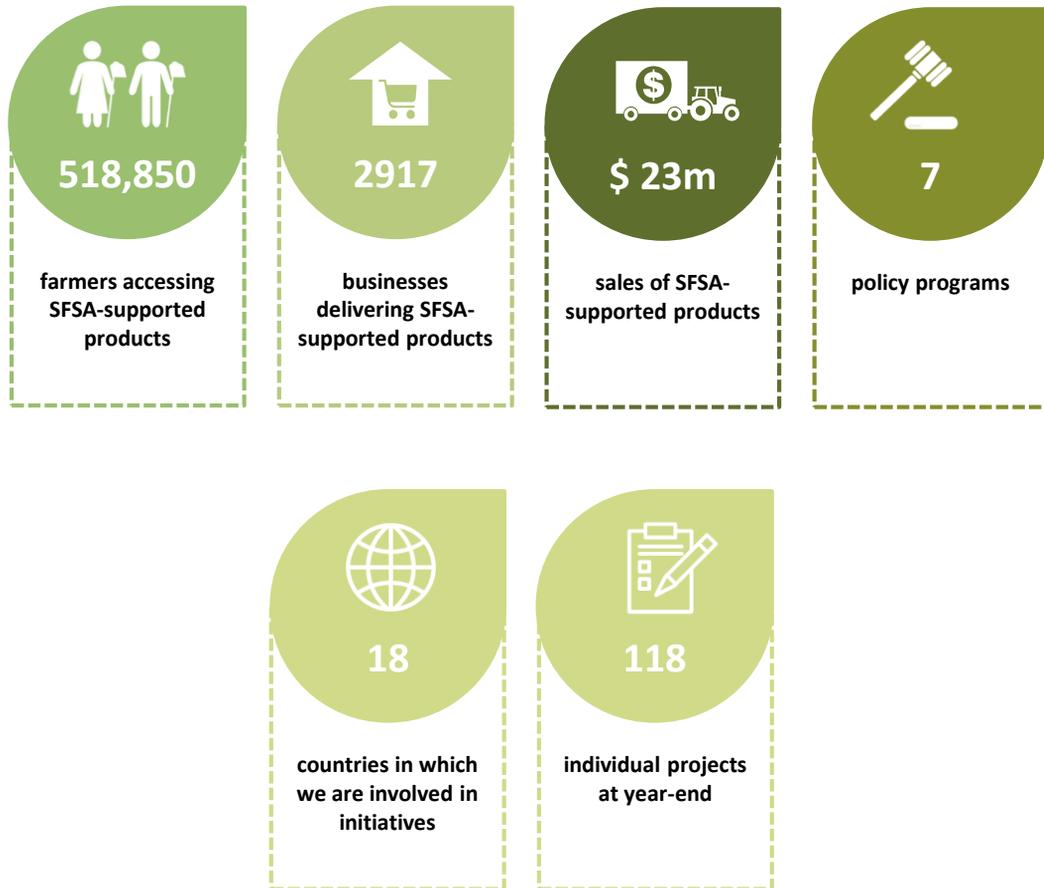
SFSA at a glance

Our vision is a bright future for smallholder farming. Our mission: To strengthen smallholder farming and food systems, we catalyze market development and delivery of innovations, while building capacity across the public and private sectors. To achieve this, we work in three streams, as described below.



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Overall achievements



Together with partners, we focus on helping low-income smallholders get better access to agricultural services, insurance, quality seeds and a broad range of other technologies, practices and inputs.

Our Theory of Change includes the creation of a competitive market of businesses engaging farmers, providing them with access to a choice of affordable solutions for their needs. These businesses include large insurance firms, medium-sized seed companies, small off-takers and distributors as well as individual retailers. SFSA plays a key role in supporting the creation of rural enterprises and boosting existing ones. In 2019, we supported almost 60 innovative products to be used by smallholders, with a total sales value of some \$23 million.

SFSA also strives for an enabling environment that supports and creates incentives for smallholders and business growth. Our Policy team drove seven programs in 2019, and contributed to numerous events and a range of books and papers. Those that appeared in 2019 are listed on www.syngentafoundation.org/books-papers or www.syngentafoundation.org/home/policy.

Country overview & farmers reached

Africa



Senegal
Agriservices: 4104
Seeds2B: 2832

Mali
Agriservices: 2353
Seeds2B: 4505

Sudan
AIS: new program



Kenya
AIS: 87,321
Agriservices: 2216
Seeds2B: 18,775

Ghana
Seeds2B: technical assistance to seed companies

Rwanda
AIS: 7542



Nigeria
Agriservices: new program

Other countries: Ethiopia, Uganda, Tanzania, Mozambique & Malawi
Seeds2B: technical assistance to seed companies and product development

Asia



Bangladesh
AIS: 9496
Agriservices: 58,976

India
Agriservices: 156,787
Seeds2B: 2161



China
Agriservices: 3000
Seeds2B: products development

Mekong region (Myanmar, Cambodia)
AIS & Agriservices: new programs
Seeds2B: technical assistance to seed companies and product development



Indonesia
AIS: 146
Agriservices: 113,372
Seeds2B: 3009

Agriservices

Focus: Farmer support, organization and entrepreneurship.

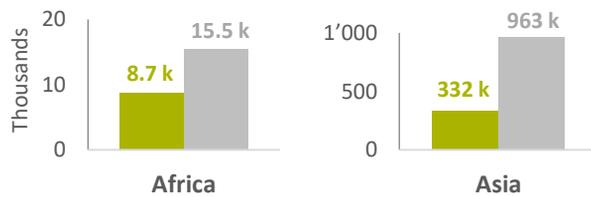
The Agriservices team has developed business models – Agriservice Centers – to help smallholders access a range of products, services and market opportunities for better harvests and higher income. The business models are based on empowering rural entrepreneurs to meet the needs of their farming neighbors. <https://www.syngentaoundation.org/agriservices>



Agriservices – 2019 overview & 2020 targets

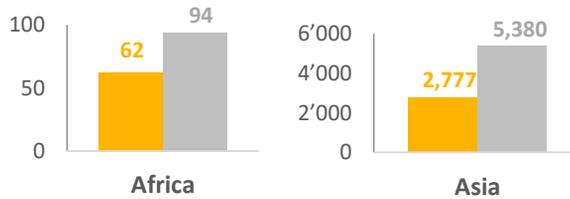
The figures below present programs at different stages of development. Our teams in India and Bangladesh are scaling up. Colleagues in Indonesia, Mali, Senegal and Kenya are piloting Agriservice Centers. For data-collection reasons, these figures do not fully include our new programs in China and Nigeria. For further information on activities there, please see page 8.

Comments:



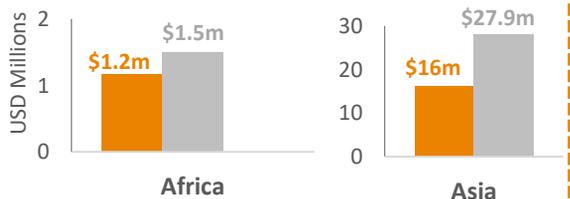
2019 2020 target

Farmers served =
New farmers using SFSA-supported services during 2019.



2019 2020 target

Businesses = Agriservice Centers (Agri-Entrepreneurs, CEMA mechanization centers, Farmers' Hubs, see footnotes)
SPs = Supported products or services



2019 2020 target



Innovations in digital tools, farming practices, mechanization, post-harvest handling, nursery and livestock services.

23 in Innovate & Develop phases
4 in Scale-up phase

Phase definitions:
Innovate: Products in validation
Develop: Products in development, licensing, piloting and/or trialing
Scale-up: Products available for farmers to buy

* Farmers' Hub (FH): <https://www.syngentafoundation.org/agriservices/whatwedo/farmershub>

** CEMA- Centre d'exploitation des machines agricoles: <https://www.syngentafoundation.org/agriservices/whatwedo/mechanization/cemasenegal>

Agriservices - further 2019 highlights

China

The main focus of our newly established initiatives in China is to improve low-income smallholders' productivity and profit, while also promoting quality and sustainable practices.

In Gansu Province, we introduced 26 new vegetable varieties for field trials. Over 1300 smallholders received training on vegetable production. We collaborated with the Dingxi Academy of Agricultural Science on virus management and new potato germplasm. Our team also supported the establishment of a cooperative goji berry demonstration farm. We conducted trials on root rot disease, supported the installation of a modern drip irrigation system and helped farmers to gain 'Green Food' certification.

In Sichuan Province, we helped establish a kiwifruit orchard soil-improvement demonstration with an innovative drainage system. Joint research with New Zealand is under discussion. Experts trained 800 farmers on growing kiwifruit more sustainably and efficiently. We set up a group of 'pioneer farmers' willing to try new approaches, and we are prototyping an entrepreneurship program for agricultural students and returning migrant workers.

We also participated in a Beijing Agriculture Bureau poverty alleviation project. 20 specially trained farmers trialed three new sunflower varieties, with promising first results.

Nigeria

Our new team in Nigeria works on both Agriservices and Seeds2B (see later section).

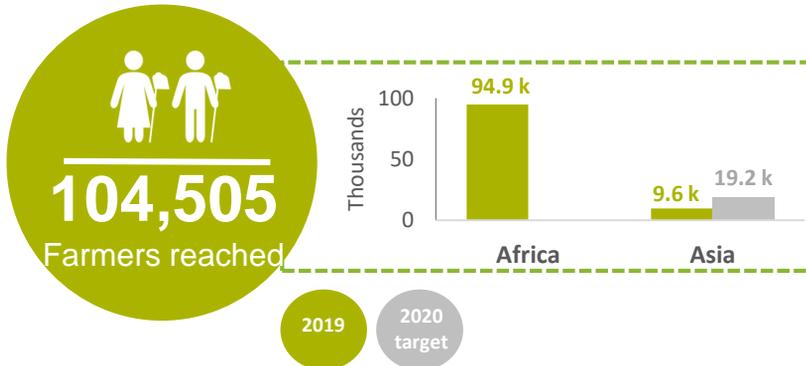
In Agriservices, staff concentrated on establishing a locally adapted version of Agriservice Centers. These Farmers' Hubs are designed as «one-stop-shops» giving smallholders access to, for example, information, training, inputs, finance and buyers. In 2019, the Foundation set up three demonstration Hubs in two states. These each have a greenhouse for vegetable seedlings, an office/shop and a learning center. The Hubs have already created some 15 jobs. They currently serve about 300 smallholders each, with plans to triple this reach. In 2019, our Nigerian team also started a machinery rental service in partnership with [Hello Tractor](#).

Agricultural Insurance Solutions (AIS)

Focus: Creating and scaling up affordable agricultural insurance. Our AIS team works with local insurance companies, regulators and other stakeholders. Together, we monitor and assess risk, and develop insurance products specifically for smallholders. These products typically cover a variety of crops against weather risks. <https://www.syngentafoundation.org/agricultural-insurance-solutions>



AIS - 2019 overview & 2020 targets

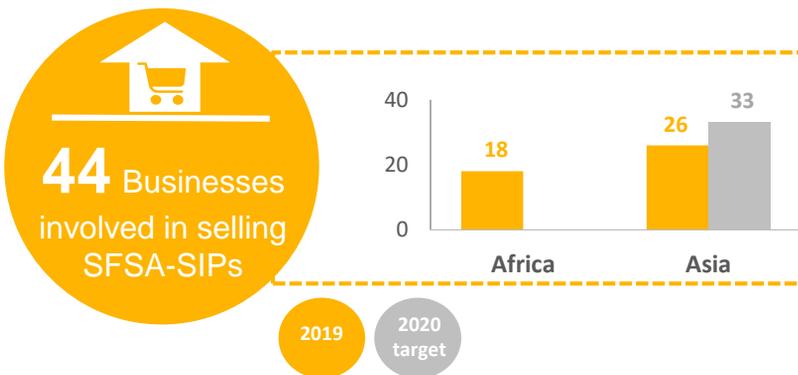


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Farmers reached = Number of farmers purchasing SFSA-supported insurance products during 2019.

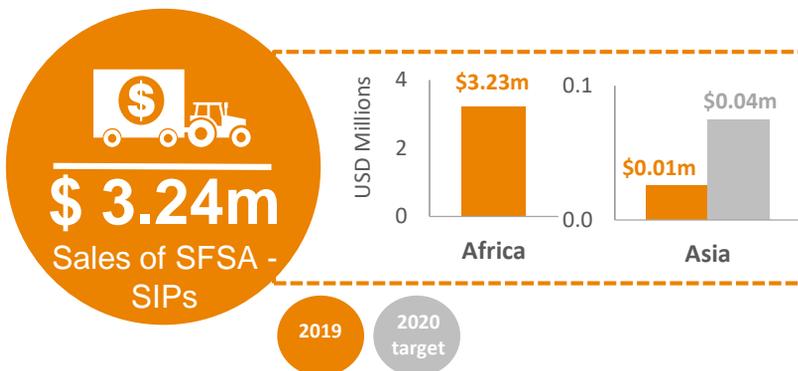
Africa = Kenyan and Rwandan data from [ACRE](#) (Agriculture & Climate Risk Enterprise Ltd., set up by SFSA in 2014).

Asia = Bangladesh and Indonesia data from piloting programs.

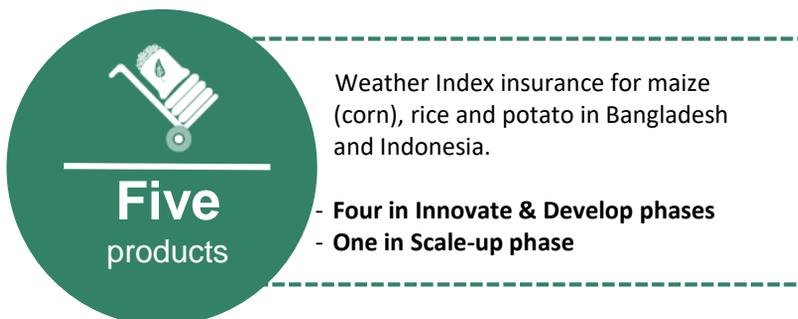


Businesses = Commercial financial institutions, farmer aggregators, insurance, reinsurance or telecom companies, microfinance institutions.

SIPs = Supported insurance products.



Sales = Total premiums paid by farmers during 2019.



Innovate: Products at validation / proof-of-concept stage

Develop: Products undergoing development, licensing, piloting and/or trialing

Scale-up: Products available for farmers to buy in the market

Seeds2B

Focus: Enabling smallholders to access affordable high-quality seeds. Our initiatives include investments in plant breeding and technology transfer, as well as supporting seed companies in delivery of new varieties. <https://www.syngentafoundation.org/seeds2b>



Seeds2B - 2019 overview & 2020 targets

We are currently shifting our focus from local seed companies' production to their sales. This should provide a better picture of performance. The figures below present a partial picture of Seeds2B achievements. For data-collection reasons, they do not yet include outcomes from programs such as AVISA or SIP. For information on these and our seeds-related R&D work, see pages 13-14.

Comments:

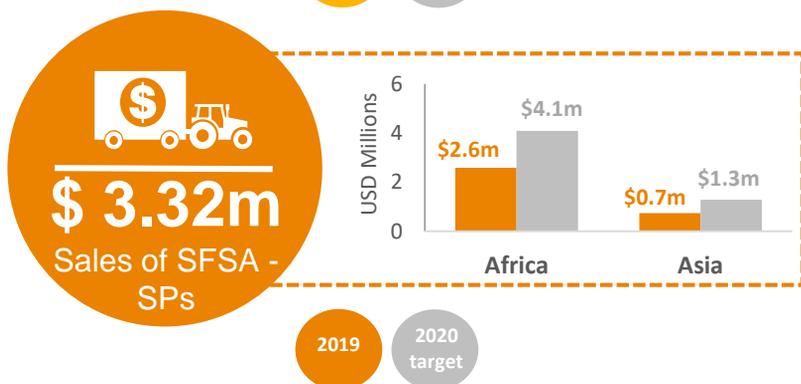
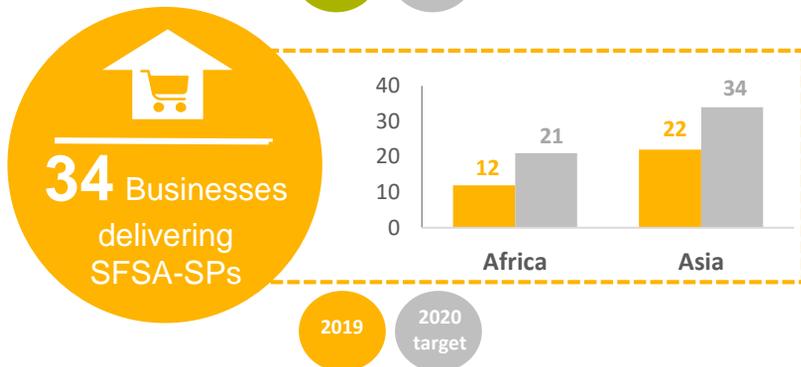
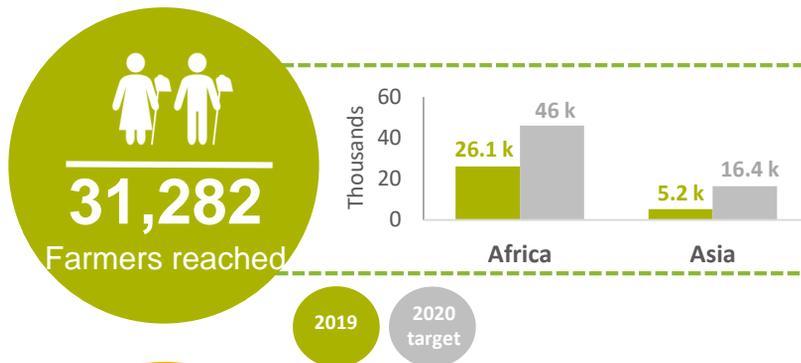
Farmers reached = Farmers accessing SFSA-supported varieties during 2019. Assumptions based on seed volume sold (tons), planting density (tons/ha) and average plot size (ha).

Businesses = Public or private seed companies and breeders.
SPs = Supported products (varieties) sold through seed companies.

Data reflect seed tonnage and prices charged to farmers.

Innovate: TPP with varieties at stages 1-5
Develop: TPP with varieties at stage 6
Scale-up: TPP with at least one variety at stage 7

* The Seeds2B team measures candidate varieties against the needs of a specific market, and documents these in a TPP.



Seeds2B – additional 2019 progress

AVISA (Accelerated Varietal Improvement and Seed Delivery of Legumes and Cereals in Africa)

2019 was our first AVISA year helping smallholders in Nigeria and Tanzania. We concentrated on building relationships with stakeholders and learning about their challenges in order to focus on key opportunities. In Nigeria, we ran workshops on sorghum and cowpea to build the team and review the process of commercialization, supporting demonstration trials with seed companies, profiling the companies, leading value chain analysis and creating an annotated guide for registration and licensing. In Tanzania, 2019 highlights included a workshop on groundnut and common beans, the start of collaboration with One Acre Fund (see page 18) and creation of a guide on registration and licensing.

This first year underlined the importance of establishing good transparent communication when working with multiple external partners, the need for an agile mindset to adapt to changes, the importance of a genuine desire to make a positive impact and the courage to act and learn. The program is planned to run until 2022. AVISA is led by [ICRISAT](#) and supported by the Bill & Melinda Gates Foundation. Further partners are IITA, CIAT and the National Agricultural Research Systems of Nigeria and Tanzania.

Seeds for Impact

Seeds for Impact (SIP) is a partnership with [AGRA](#) and [AECE](#). It is designed to help African seed companies grow sustainably and serve smallholders better. The program provides capital and technical assistance to support innovation and improvement. We are primarily responsible for the technical assistance, for which we are now also engaging volunteers among the employees of Syngenta.

The partners launched SIP in 2019, inviting seed companies to enter a competition. Seven were finally selected for support, and all contracts signed. The program hired consultants on business strategy from [Lion's Head](#), an investment bank with branches and extensive experience in Africa. They began the first phase of technical assistance in early 2020, now being extended to ten companies.

R&D – 2019 progress in seeds-related initiatives

Raising staple crop yields in developing countries

Smallholders' yields are typically far lower than they could be. Improving this situation requires both the development of better crop varieties and other innovations, and their widespread use in the field. Close integration of our R&D and Seeds2B activities should optimize the availability of innovations to smallholders. In 2019, we made significant progress with programs in corn, tef and cassava. <https://www.syngentafoundation.org/research-development>

One important aim for crop breeders is to develop varieties that cope well with weather extremes. Climate change and increasing weather volatility make this task more crucial than ever. Modern drought-tolerant crop varieties help farmers achieve good yields even in dry years. However, they are often out of the financial reach of smallholders. Our partnership on **AAA Maize** aims to solve this problem. It brings us together with Syngenta and the international R&D organization [CIMMYT](#). Together, they developed drought-tolerant corn that local seed suppliers have made available to Indian smallholders since 2017. Several such companies began producing and selling AAA Maize in 2019, greatly increasing its availability. We therefore moved AAA Maize from our R&D portfolio to Seeds2B. Some 2100 smallholders bought almost 47 tonnes for 2300 hectares.

Tef, the national cereal of Ethiopia, is an orphan crop. Unlike corn, it has received very little attention from the international scientific community. As a result, productivity of this vital food for the Horn of Africa lags far behind that of many other cereals. Our partnership with researchers in Ethiopia and Switzerland has led to the development of new tef varieties. The first of these reached 12'000 Ethiopian farmers in 2019. They planted 183 tons on 6100 hectares. Further varieties received registration. We are now working to accelerate the adoption of improved tef across the country.

Cassava is a key staple in several African countries. The usual planting material is bulky, however, and vulnerable to disease and pests. Lack of a formal market deters local companies from supplying smallholders with better material. We are partnering with researchers in Uganda and Brazil to tackle this challenge. In 2019, our MandiPlus initiative proved the benefits of planting much shorter pieces of cassava than in conventional practice, and of protecting them against soil-borne pests and diseases. The new technology's good performance has also attracted interest from other countries, notably Thailand. SFSA is now focusing on turning the concept into an attractive commercial proposition for local companies and their smallholder customers.

SFSA is a member of the International **Wheat** Yield Partnership ([IWYP](#)). The program aims for a 50% increase in wheat yield potential by 2030. Improved varieties will be developed by both private and public private partners, the latter more focused on smallholders. Seeds2B will help develop market links in SFSA focus countries.

R&D – 2019 progress in breeder education & soil health

Demand-Led Breeding puts customers first

To maximize the benefits of R&D for smallholders, breeders need to develop varieties that match market requirements. We work with leading African universities and breeding professionals who train future plant scientists in ‘demand-led’ breeding (DLB). www.demandledbreeding.org.

Our Alliance program* entered a new phase in 2019. Some 400 African breeders formed a DLB Community of Practice. They come from national agricultural systems, African universities and a CGIAR center. Their common aim is to develop better varieties that smallholders will adopt because they meet market demands. Some 28 countries and 30 crops are represented in the practitioner community.

Enthusiasm for DLB has spread from individual breeders to research institutions and entire national programs. In May 2019, the Ethiopian Institute of Agriculture Research (EIAR) held its first staff training expressly designed to build DLB into all its breeding initiatives. Program leaders and senior breeders working on over 20 crops met with DLB education experts from across Africa.

In October in Accra, Ghana, DLB partner Professor Eric Danquah launched the Pan-Africa Plant Breeders Association. Danquah is Executive Director of the West Africa Centre for Crop Improvement (WACCI) there.

In November, three of our African partners addressed the largest conference on tropical agriculture, Tropag19 in Australia. They spoke at the symposium on “Market-led breeding for value-chains: Africa-Australia nexus for Innovation”. Viv Anthony, our DLB program manager, chaired the event. The presentations focused on integrating market-led approaches into postgraduate plant breeding education, the importance of product profiles for bean value chains in East Africa and Africa’s portfolio of public varieties in development.

In 2020, our Australian partners and we are focusing on supporting the Community of Practice. This is led by DLB Pan-African Coordinator Nasser Yao, based in Nairobi. Due to the COVID-19 pandemic, professional development support and training have shifted online. The aim is to share and implement best practices in breeding programs and sharpen members’ variety design skills. New education materials will feature product profile development and the communication of variety designs and technical datasheets. Good communication should increase interest and investment in scaling up new varieties.

**The DLB project is co-financed by SFSA, the Australian Centre for International Agricultural Research and the Crawford Fund, through an Alliance partnership for Food Security. It is administered by the University of Queensland.*

Healthier soil brings numerous benefits

As well as good seeds, increasing smallholders’ harvests and profits also requires progress in other areas.

In late 2018, SFSA extended its activities into the area of soil health, initially in Kenya. Here we are collaborating with The Nature Conservancy (TNC) in a densely populated region near Nairobi. (See also *Strategic Grants*, page 18). An important goal is to help smallholders combine rainwater storage for irrigation with appropriate agronomic advice so they can earn money with off-season vegetable growing. The work here also reduces erosion, which benefits yields and water quality. The initiative further includes improvements in soil testing, plant nutrition and Integrated Pest Management. We are now investigating additional soil health work in India, as part of the global Syngenta partnership with TNC.

Policy Research and Advocacy

Focus: Improving the enabling environment for smallholder farming and related businesses. Our Policy team supports Agriservices, AIS and Seeds2B. We are increasingly also examining topics relevant to SFSA as a whole. Examples include youth employment, climate change, nutrition, market systems and digital innovation in sustainable agriculture.

<https://www.syngentafoundation.org/home/policy>



Policy Research and Advocacy – 2019 overview & 2020 targets



Our **Policy Programs** aim to improve the policy and regulatory environment for smallholder agriculture. We and our partners provide evidence-based options and recommendations to policy-makers and key stakeholders. In 2019, we began increasing our related advocacy work and continued to work on a range of publications. <https://www.syngentafoundation.org/home/policy>.

In 2020, we additionally launched our **Policy Watch**, initially focusing on the Covid-19 pandemic in relation to smallholder agriculture. The bulletins are available via free [subscription](#).

4

Agriservices

- ✓ “Innovations in Chinese, Indian and Israeli Agriculture”
- ✓ “Agricultural Mechanization Policy”. *Six countries in Africa and Asia*
- ✓ “Rural Entrepreneurship and Youth Empowerment”. *Five countries in Africa and Asia*
- ✓ “China Food Quality and Safety Research Program”

1

Seeds

- ✓ “Seed Policy Development”. *Five countries in Africa and Myanmar*

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Agricultural Insurance Solutions

- ✓ “Global Insurance Program”. *Four countries in Asia*

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Soil health and Sustainability

- ✓ “Policy Study on Soil Health and Resource Use Efficiency in China’s Agriculture”.

2020

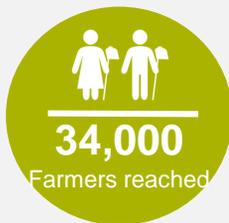
- ✓ In addition to those listed above, we are initiating a policy program on “Reorienting public agriculture R&D to achieve sustainable, nutritious and climate-resilient food systems in developing countries”.

Strategic Grants – 2019 Report

SFSA is primarily an operational foundation, working directly with partners through our local teams. However, we currently also support selected organizations with strategic grants. Our goal is to co-create, jointly invest and/or co-finance, innovate, develop and scale smallholder-appropriate agriculture and climate-resilience solutions. With a common strategic focus, SFSA and these organizations collaborate to mobilize expertise, technology and financial resources to maximize impact for the benefit of smallholders.

ONE ACRE FUND

One Acre Fund (1AF) is a non-profit social enterprise that supplies finance and training to help smallholders grow their way out of hunger and build lasting pathways to prosperity. 1AF and SFSA partner in several areas: **seeds** - improving supply and agronomy, **soils** - ensuring long-term fertility, **insurance** - piloting smallholder insurance products, and **protecting harvests** - improving pest/disease control and biotic stress management.



Focus countries: *Rwanda, Kenya, Burundi, Tanzania, Zambia*

*Based on projected \$115 gain in annual farmer income, see oneacrefund.org/impact/

The Nature Conservancy

Protecting nature. Preserving life.

The Nature Conservancy (TNC) is a global environmental non-profit working to create a world where people and nature can thrive. TNC and SFSA have developed a model now being rolled out in central Kenya (see page 15). This program supports smallholders who have limited access to extension, high-quality inputs, soil diagnosis, marketing services or water to grow off-season vegetables. Our joint aim is to link soil-testing with extension, nutrient recommendations and supply channels. Together, we want to benefit both the environment and farmers' incomes, and to establish replicable models.

**Products delivered to farmers: avocado seedlings, water pans, tree seedlings, napier grass*

Change in farmers' income is planned to be reported in 2020.



TechnoServe (TNS) takes a business approach to reducing poverty. TechnoServe, SFSA and further partners are implementing the YieldWise project in Nigeria. Its goal is to improve smallholders' livelihoods by reducing tomato losses after harvest.

TECHNO SERVE

BUSINESS SOLUTIONS TO POVERTY

**Farmers trained on post-harvest loss reduction during 2019 (16% women). 53% reduction in losses thanks e.g. to improved packaging, storage and logistics*

