



Developing Agriculture from the Ground Up

SOUTH SUDAN



ACTIVITIES REPORT

2022

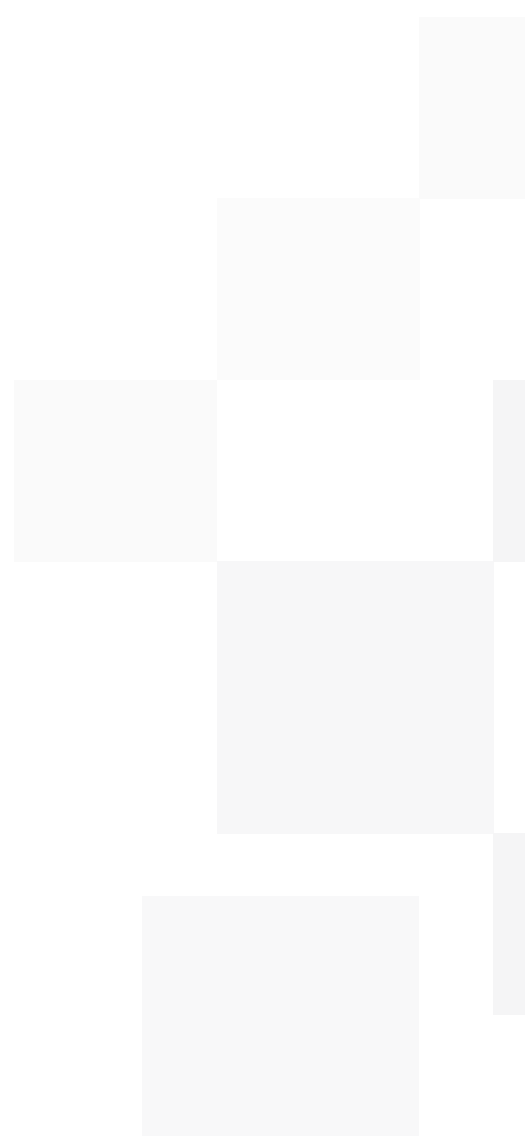
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ACRONYMS AND ABBREVIATIONS

2SCALE	Towards Sustainable Cluster in Agribusiness through Learning in Entrepreneurship
A3-SEED	.....	Accelerating Agriculture & Agribusiness in South Sudan for Enhancing Economic Development
EnGRAIS	.....	Enhancing Growth Through Regional Agricultural Input Systems
GIZ	.....	German Technical Cooperation
IFDC	.....	International Fertilizer Development Center
ISFM	.....	Integrated Soil Fertility Management
RASS	.....	Resilience through Agriculture
TAAT	.....	Technologies for African Agricultural Transformation
WFP	.....	World Food Programme

VISION

VISION OF **HENK, PRESIDENT & CEO OF IFDC**

IFDC has since **January 1, 2023**, the arrival of a new **President, Henk van Duijn**. **Henk's** vision is: **"One mission, one team"** with the ambition to return to the center of the field while building on **IFDC's strategy 2020 - 2030**.

Indeed, to help address the **challenges facing global food systems**, IFDC has developed **Strategy 2020-2030**, which outlines four pillars of its work: **(1) developing better technologies, (2) catalyzing agricultural productivity, (3) strengthening markets, and (4) driving impact**.

"Under my leadership, in the coming years, the four pillars of our strategy will strengthen the core of IFDC's research and interventions. Together, the four pillars of our work will help farmers improve the health of their soils, agricultural productivity, and household incomes, thereby contributing to the food security and economic development of their villages, their nations, and the world." **Henk van Duijn**

With a philosophy of soil health as a holistic approach through a new global management team while dissolving regions to strengthen country offices. The realization of this vision will be achieved through **staff and capacity development, special projects, the establishment of innovation and fertilizer production centers, and consulting services**.

With the leadership of **Henk van Duijn**, IFDC wants to return to the **forefront of soil health and fertilizer worldwide** in the next **3 to 5 years**.

"IFDC will intensify its efforts to find solutions to future challenges through research on soil fertility and nutrient use efficiency. We have the knowledge and expertise to make a significant impact in sub-Saharan Africa, where soil nutrient depletion, both natural and human-induced, is an ongoing challenge." **Henk van Duijn**



WORDS

WORDS FROM IFDC COUNTRY REPRESENTATIVE

Dear partners,

It is a real pleasure for me to present to you, on behalf of the entire **team of IFDC in South Sudan**, the **2022 annual report** of IFDC's activities in **South Sudan**.

Agriculture is the backbone of the economy of **South Sudan**. According to **African Development Bank**, estimates on value addition by agriculture, forestry and fisheries accounted for **36% of non-oil GDP in 2010**. It is evident that about **80%** of the population lives in rural areas, with agriculture, forestry and fisheries providing the primary livelihood for most of the households in each state. Much of the rural sector activity is currently focused on low input low-output subsistence agriculture instead of production for markets. The seed sector directly influences three dimensions of food security and nutrition: food availability, access, and stability. The seed sector contributes to food security and nutrition through productivity growth, improved resilience, and quality improvement, allowing a greater availability of nutritious food at lower prices (**OECD 2019**).



In agreement to this, **IFDC in South Sudan** has invested in creating sustainable access to high quality planting materials accompanied by knowledge of good agricultural practices. We have invested in two large projects focusing on Seed Systems Development; *Seeds for Development Project, USAID (2011-2013)* and *"Accelerating Agriculture and Agribusiness in South Sudan for Enhanced Economic Development Project" (A3-SEED)*." While the **USAID** Seed Sector Development project has since ended, IFDC is working currently in collaboration with Government and other stakeholders, in implementing *"Accelerating Agriculture and Agribusiness in South Sudan for Enhanced Economic Development Project" (A3-SEED)*." With Financing from the Netherlands Government through the Embassy of the **Kingdom of Netherlands in Juba**, **A3-SEED** is investing in commercially sustainable, and adaptive seed sector in South Sudan that creates reliable seeds for small holder farmers.

The year **2022** was a year of great achievements for **IFDC in South Sudan** despite the contingencies of the **COVID19** and especially security and climatic circumstances. More than **10,000 people** were directly affected by **IFDC's interventions** in **2022** in **South Sudan** in the areas of integrated soil fertility management, development of the seed and fertilizer sector, improvement of agricultural productivity, market access, professionalization of actors, promotion of technologies, etc. More than **3.5 Million United States Dollars** have been invested in **South Sudan in 2022** through the implementation of various **IFDC projects and programs**.

My deepest gratitude goes to the **donors** of our current projects and programs, which are the **Netherlands Embassy in South Sudan, USAID and DGIS**. Thank you for your continued trust. My thanks also go to all **IFDC staff in South Sudan** who have invested skills, professionalism, and commitment in achieving results and improving the living conditions of agricultural economic actors. We would also like to particularly thank the **Government of South Sudan** through the **Ministry of Agriculture** and **other development partners** who have shown unflinching collaboration in our activities in **2022**.

I would like to invite you to read and take note of the contents of this report to present the various **actions and interventions** of IFDC in **South Sudan** during the **year 2022**

Thank you for your attention.

1. INTRODUCTION

IFDC (International Fertilizer Development Center) created in 1974 and based in Alabama in the United States, is an international public institution working for food security, poverty reduction in developing countries through the development and dissemination of technologies Efficient soil fertility management, development of agricultural input and market markets of agricultural products.

IFDC is recognized as a global centre of excellence with its coordination offices for the implementation of activities in several countries in North and West Africa, SouthAfrica and Asia. IFDC uniquely addresses global issues of food security and poverty

by bridging the gap between research and impact, combining science-based innovations, holistic market systems development, an enabling policy environment and strategic partnerships to help farmers and countries identify and scale sustainable agricultural solutions. including better efficiency in nutrient utilization. These approaches are needed to boost soil health and crop productivity while reducing the environmental impact of fertilizer use. IFDC translates research into action using local, environmentally friendly and impact-oriented solutions. Together with our partners, we seek to close the yield gap, eradicate world hunger, safeguard the soils on which our lives depend, and generate

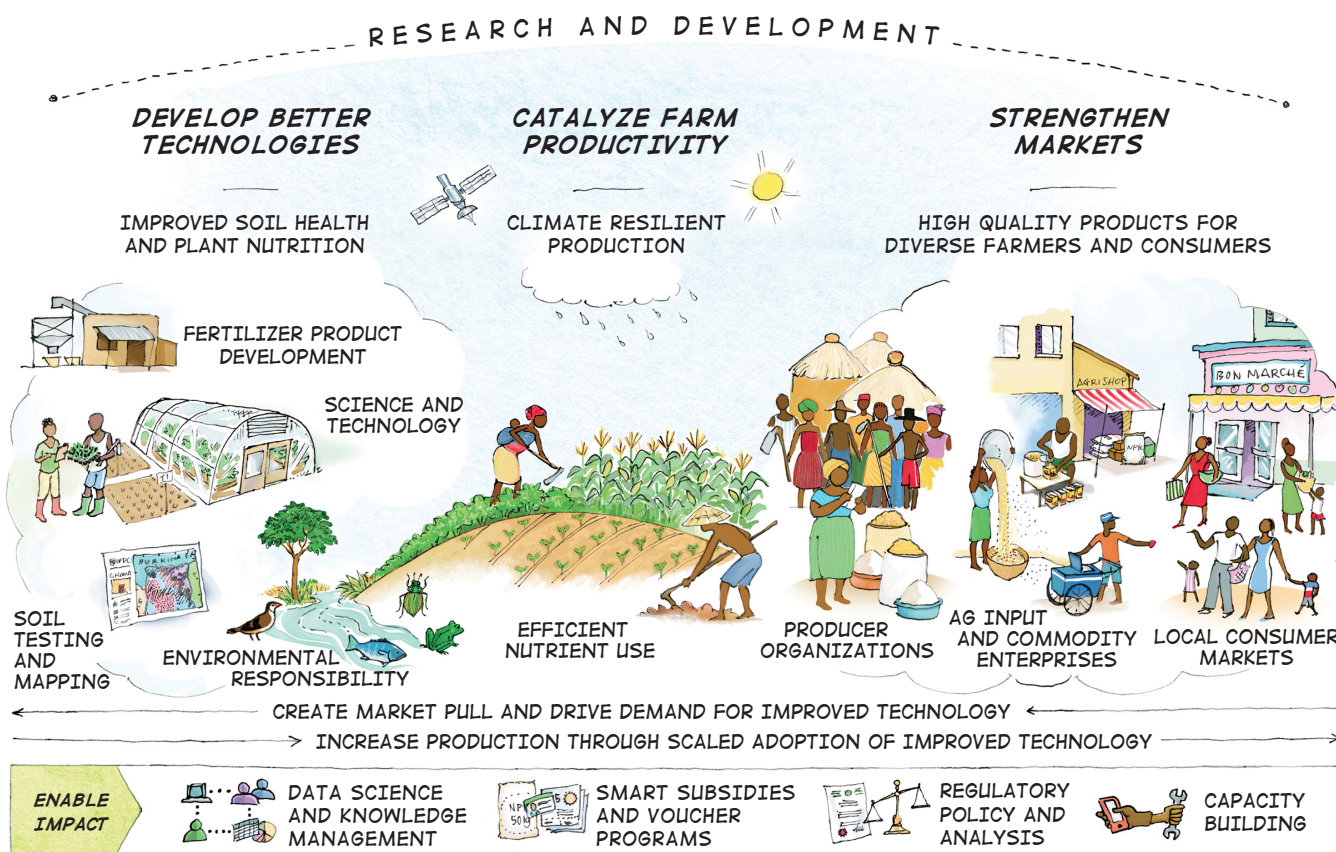


FIGURE 1. IFDC Strategy 2020-2030 to Feed the World

A BRIEF HISTORY OF IFDC'S INTERVENTIONS IN SOUTH SUDAN

IFDC has been active in South Sudan since 2011. Due to interruption by war in 2013 and 2016, it ceased operations in 2016 before coming back in 2020 to date. In South Sudan, IFDC has implemented the following Projects:

Seeds for Development Project, USAID (2011-2013)

- USAID Seeds for Development is helping improve food security and incomes of small-scale farmers by:
- Strengthening the capacity of national plant breeding and seed production programs (this component is led by AGRA)
- Developing local agribusinesses' capacity to supply seeds, fertilizers and other farm inputs (led by IFDC)

- Helping farmers access markets to sell their produce (led by IFDC)

2SCALE, Netherlands (2013-2016 and 2021-2023)

2SCALE Programme is funded by the Dutch Ministry of foreign affairs implemented by 3 consortium partners (IFDC, SNV and BoPinc). The Partnership resource Centre deals with the monitoring of the 2SCALE Program. 2SCALE identifies itself as the largest incubator and accelerator of inclusive agribusiness in Africa.

The main beneficiaries of 2SCALE Programme are the Small-scale farmers and the low-income consumers (BoP)

A3-SEED, Netherlands (2020-2025)

Accelerating Agriculture & Agribusiness in South Sudan for Enhanced Economic Development ("Triple A SEED") Accelerating Agriculture & Agribusiness in South Sudan for Enhanced Economic Development ("Triple A SEED") runs from December 2020 – November 2025, with funding by Netherlands Embassy. The program is implemented by IFDC together with KIT Royal Tropical Institute and follows seed sector development for South Sudan (SSDSS, AGRA). The project target areas are the four Hubs of Stability (Yambio, Torit, Bor, Rumbek) and Juba outskirts.

The program supports existing private sector seed companies and individual commercial seed producers to improve seed production,

marketing, and distribution down to the last mile. Additionally, it strengthens the seed trade association and promotes domestic seed procurement by humanitarian and relief organizations.

RASS, USAID (2021-2024)

Implemented in partnership with DAI and CARE, serves as a vital companion to the many humanitarians' relief and recovery efforts in South Sudan. By layering, sequencing, and integrating development activities with humanitarian efforts, RASS aims to improve food security, community and household recovery, and resilience in South Sudan.

This report provides an overview of IFDC's interventions in 2022,

2. IFDC'S CURRENT INTERVENTIONS IN SOUTH SUDAN

MISSION

In order to contribute to rural development in developing countries, IFDC's mission is to develop, through the combination of **innovative research, agricultural market expertise and strategic public-private partnerships, sustainable technologies for managing soil fertility and increasing agricultural productivity, that improve the incomes and well-being of both producers and entrepreneurs**, while preserving the environment and natural resources.

OBJECTIVES OF PROJECTS AND PROGRAMMES IMPLEMENTED BETWEEN 2011 AND 2023

IFDC is currently implementing in South Sudan three (3) projects and programs relating, among others, to 1-) the establishment of a well-structured seed sector that meets the needs of agricultural actors (A3-SEED), 2-) to the development of agricultural chains and market systems to facilitate access from producers to agricultural and financial services needed to improve their productivity (2SCALE Program), and 3-) to the adoption and extension of climate-smart agriculture technologies and practices to improve the availability of nutritious food and the resilience of farm households (**RASS - USAID**) led by DAI LLC and implemented together with IFDC, Care International, and the Waterfield Design Group under a USAID-funded budget of \$24,000,000.

Activities

S4D introduced the input market information system Agricultural Input Market Information and Transparency System for Africa (AMITSA) into South Sudan, in partnership with the emerging network of 6 agro-dealers (as it evolves) to improve information on input prices and availability. IFDC was asked to assist the East African Community (EAC) and the Common Market for Eastern and Southern Africa (COMESA)

to address the problem of lack of information about agro-inputs by developing an input market information system.

The system that was developed is AMITSA, and its objectives were to:

- Improve access to timely data and information describing agricultural input markets for the benefit of all stakeholders, farmers, traders, manufacturers, etc.
- Establish business linkages developed among agricultural input importers from different countries and regions and international input manufacturers and traders.
- Reduce input procurement costs.
- Increase the use of inputs, thereby increasing agricultural productivity.
- Improve food security and accelerate economic growth.

Results

Building Agro-Dealer Networks: Existing and potential agro-entrepreneurs (agro-dealers, grain traders and others) have been identified. Training programs have enabled nearly 40 agro-dealers to provide better advice to their customers on seed and fertilizer use.

Creating Farmer Awareness: In collaboration with the USAID FARM project, nearly 6,000 demonstration trials of maize, sorghum, groundnuts, and cassava have been established, planted and managed by farmers themselves. A preliminary assessment showed that with hybrid varieties and fertilizers, yields increased by 270 percent on average, compared to open-pollinated varieties. In addition, demonstration plots or farmer classrooms were established for a training program that reached more than 500 farmers; in June-July 2012.

Vouchers: Linking Farmers to Agro-Dealers: South Sudan's first-ever distribution of fertilizer: a pilot program in July-August 2012 distributed vouchers to over 3,800 farmers in the three Equatoria states. Each farmer received subsidized vouchers to purchase inputs sufficient for 1 fedden (roughly one acre). Through the voucher redemption process, a total of 289 tons of fertilizer and 29 tons of hybrid maize seed were distributed and 2,896 farmers have been linked with an agro-dealer in their payom (district) to date.

Scaling Up: The pilot program will be scaled up in 2013, targeting more than 8,000 farmers. One hundred new demonstration plots will be established at the bome (village) level, bringing the 'classroom' closer to the farmer. IFDC will provide technical support and training to ensure that farmers in South Sudan have the knowledge to use the



newly accessible agro-inputs effectively.

2SCALE, 2013-2016 AND 2021-2023

The objective of 2SCALE is to contribute to food and nutrition security, sustainable and inclusive economic growth, and stability in Africa, through public-private partnerships, which incubate and accelerate inclusive business models in the agricultural sector. In South Sudan, 2SCALE works with 2 public-private partnerships (PPPs): Kanybek Trading and Investment Company Limited (KGTIC) and Syndicate Partnership, which includes Eden Multi-Purpose Marketing



Cooperative Society (EMMCS) and Nzara General Farmers Union (NGFU).

SS21_Maize_Kanybek

Originally this partnership was initiated by a private company called Kanybek General Trading and Investment Limited which focused on cultivating maize, sorghum, and cassava in a farm of approximately 28 hectares. In 2007 Kanybek expanded its operations to Malakal and introduced the bakery business as a new business portfolio in Malakal and Bor (Jonglei State).

Following the success of the bakery business, Kanybek decided to open another branch in Juba (Central Equatoria State). The company as of now employ 25 permanent staff and 30 temporary employees as distributors of bread across different markets within Juba city. Kanybek is working with a total of 18 Primary Cooperatives (4 in Magwi and 14 in Yei Counties) which are part of the SHFs that will supply Kanybek with Maize, the farmers are the sole producers/out growers of maize which is the raw materials for making maize flour that Kanybek shall use to feed the bakery unit to produce bread. Currently, KGTIC is managing the installation of the Bread making oven and the maize milling machine which are procured in a cost sharing basis (50% for bread oven and 45% for Maize Milling Machine by 2SCALE and 50% for bread Oven and 55% for maize milling machine by the champion as a PSC contribution) towards improving the processing line for Bread. The installation process is expected to be finalized in February 2023 and the product development and launching are planned to be managed in March and May 2023, respectively.

The business aspiration of Kanybek partnership has been adapted with a central pitch to expand maize production to maximize opportunities based on the huge demand in the market while reducing dependency on imported maize products from neighbouring countries. Kanybek Company Limited has an ambition of developing new ways of baking bread. The company is looking at the possibility of mixing wheat and maize flour to produce bread which is a unique proposition in the South Sudan market. Kanybek's ambition is to engage the smallholder farmers (SHFs) and develop products that target BoP consumers in South Sudan.

SS22_Maize_Syndicate

The Syndicated PPP in Yambio and Nzara involves two farmer cooperatives namely: Eden Multipurpose Marketing Co-operative Society (EMMCS) and Nzara General Farmers Union (NGFU). Both producer organizations (POs) on average produce and market maize about 100MT per annum. NGFU and EMMCS are self-help cooperative societies, formed to undertake agribusiness activities to improve livelihoods of their members and communities at large as opposed to subsistence farming as has been the practice among the communities for years.

The ambition of the business champions is to enhance local maize production by engaging smallholder farmers at the grassroots level and adding value to the maize produced. The POs will further expand their support to reach more farmers by ensuring their access to the inputs and services required to increase productivity. Value addition will entail processing the maize into flour, first to meet the nutritional needs of its members and subsequently to other BoP consumers within and outside the state.

A3-SEED, 2020-2025

Accelerating Agriculture & Agribusiness in South Sudan for Enhanced Economic Development (A3-SEED) is a 5-year project that started in December 2020 with funding by the Embassy of the Kingdom of the Netherlands in South Sudan (EKN). The project is implemented by IFDC together with the Royal Tropical Institute (KIT). It follows the Seed Sector Development for South Sudan (SSDSS) project that was implemented by AGRA up to June 2020.

The main premise of A3-SEED is that agricultural livelihoods are the people's best defence against hunger and malnutrition: people with resilient livelihoods are better prepared and can better cope with shocks and crises. In this situation, the distribution of food and farm inputs not only distort local markets but represent a missed opportunity.



Tableau 1: A3SEED Quick Facts

PERIOD	DECEMBER 2020 - 2025
Budget:	€ 8.5 million
Goals & milestones:	<ul style="list-style-type: none"> • 100,000 farmers double production • 20,000 farmers improve nutrition. • 42,000 hectares under sustainable agriculture • 5,300 farmers trained. • 2,400 outgrower • 40 agro dealer businesses and • 10 seed companies • 4,500 MT (estimated) of seeds. • produced in season 2022 And B

RESILIENCE THROUGH AGRICULTURE (RASS)

The overall purpose of the RASS Activity is to reduce long-term reliance on humanitarian assistance (HA) by significantly improving food security, community resilience, and household recovery in up to 17 priority counties. RASS employs a resilience pathway approach to improve the effectiveness of local systems and strengthen capacities to sustain gender-responsive, diversified, and market-sensitive agricultural production; increase the availability of, access to, and utilization of diverse, safe, and affordable diets; and expand opportunities for sustainable, locally driven livelihoods, thereby graduating communities from high Integrated Phase Classification (IPC) to lower phases, reducing long term dependence on humanitarian assistance. The work aims at improving food security and community household recovery and resilience in the 17 counties, targeting approximately 22,500 beneficiaries. This work aims at transitioning communities from humanitarian assistance to inclusive development assistance and economic growth.

To achieve this, the Activity focuses on three main objectives and four anticipated outcomes:

Objective 1 - Strengthen local systems and community groups' capacities to sustain gender-responsive, diversified, and market-sensitive agriculture production.

Objective 2 - Increase availability of, access to, and utilization of diverse, safe, and affordable diets.

Objective 3 - Expand opportunities for sustainable, locally driven livelihoods.



ALIGNMENT WITH THE COUNTRY'S AGRICULTURAL POLICY

IFDC projects/programmes, mentioned above, and implemented.

Leveraging Government Capacity

The A3-SEED project has strong linkages and collaboration with the government at national, state, and county levels. These levels of government have varying depths of involvement, as articulated in Table 6.

Tableau 2: Government Relationship with the Project by Level

LEVEL OF GOVERNMENT	ACTIVITIES TO COORDINATE WITH GOVERNMENT	RELATIONSHIP
National Ministry of Agriculture and Food Security	Extension, marketing, inspection, and quality control and policy issues	<ul style="list-style-type: none"> A3-SEED collaborated with MAFS to conduct training on seed inspection and laboratory technician training. The projects have liaised with Polataka Basic Seed Centre to enable seed companies, such as MASCO and Afrognanics, to access about 8 mt of foundation seed. <p>MAFS is working with STASS to develop a basic seed certification protocol at national level.</p>
State Ministry of Agriculture	Supervision and technical guidance through the relevant technical departments	<ul style="list-style-type: none"> A3-SEED has signed a Memorandum of Understanding (MoU) with the state Ministry of Agriculture. The project benefits from the established seed laboratories at state level (Torit and Yambio) for seed companies to test their seeds. State-level government performs regular visits to seed company sites for inspection. The Seed Quality Control board at state level helps ensure that seeds produced by seed companies and those that are imported meet certain quality standards.
County-level government	Support from the village-level extension system, capacity support to field agents, and quality control through field inspectors	<ul style="list-style-type: none"> At the county level, seed inspectors are deployed to inspect seed company fields. The project collaborates on extension message development and dissemination. The county agriculture director is always available for consultations and field visits.

National-level efforts

Seed Testing Laboratory: In 2022, A3-SEED made use of the national seed laboratory located at MAFS for training laboratory technicians. The laboratory is managed and operated by the Department of Research at MAFS. With support from the project, STASS and MAFS have facilitated training of seed inspectors and laboratory inspectors who are now working at basic laboratories established by the FNS-REPRO project. These laboratories play a pivotal role in last-mile quality assurance by testing the quality of seeds. This is expected to lead to certification of seeds produced by the seed companies, which can then compete with imports in the market.

Seed Quality and Regulation Strategy: The policy issues uncovered during inception are still unresolved. However, the project has made a little progress with MAFS regarding developing guiding principles for seed certification and regulations. Such guidelines will then be passed by the Minister in the form of a Ministerial Order. During the reporting period, the Draft Seed Policy was being developed by two different institutions, FAO, and the European Union, through the Japan

International Cooperative Agency (JICA). This is a poorly coordinated activity that will need attention in 2023. It is recommended that this activity is entrusted to one agency that will receive support from all others that are interested in developing this policy. IFDC will be happy to lead this process.

National Policies and Frameworks: Various seed policies and frameworks currently exist in the country. In 2011, MAFS released their Agriculture Sector Policy Framework for 2012-2017, which outlined an ambitious agenda for policy and program development. This included collaboration with the Ministry of Environment and Forestry on a climate change strategy and green agriculture policy. These policies are at varying stages of execution, though most are in the early stage. The Comprehensive Agriculture Master Plan (CAMP) and Irrigation Development Master Plan (IDMP) now inform most developments in the agriculture sector and are used by MAFS to guide development partners. A3-SEED has benefited from these documents by making relevant reference to them to inform its project implementation.

3. MAIN ACTIVITIES IN 2022 AND RESULTS

IFDC is currently implementing in South Sudan three (3) projects and programs relating, among others, to: 1) the establishment of a well-structured seed sector that meets the needs of agricultural actors (A3-SEED); 2) the development of agricultural chains and market systems to facilitate access from producers to agricultural and financial services needed to improve their productivity (2SCALE Program); and 3) the adoption and extension of climate-smart agriculture technologies and practices to improve the availability of nutritious food and the resilience of farm households (RASS - USAID) led by DAI LLC and implemented together with IFDC, Care International, and the Waterfield Design Group.

2SCALE ACTIVITIES AND RESULTS

One of the core impact domains of 2SCALE's public private partnerships is empowering smallholder farmers through improving agricultural productivity and income. To this end, the two pilot partnerships in South Sudan have facilitated several activities and interventions targeting SHFs and their cooperatives in the year 2022. The activity and intervention ranges from various agronomic practices to post-harvest management and value additions at cooperative and union levels. More specifically, the lead champion, Kanybek company limited and the two grassroot champions of the syndicate partnership have played significant roles as business support service provider by embedding qualified young agricultural extension workers in their organizational cost structures. Farmers linked to the inclusive business practices of the two pilot partnerships argued that the extension workers are closely interacting with farmers towards ensuring good agricultural practices like early land preparation, proper application of inputs, pest and disease control and soil and water conservations. Moreover, in collaboration with private input dealers and seed companies both partnerships have facilitated access to improved maize seed to farmers that engaged in the production and marketing of the partnerships' commodity of interest (maize).

As shown in the figure below, through these activities and interventions, the pilot public private partnerships with Kanybek company limited and the syndicates (Eden and Nzara) ensured improvement in agricultural productivity and better terms of inclusion for a total of 4,824 small holder farmers by the end of 2022 implementation year.

the support of the two partnerships a total of 47.06 MT of improved maize seed (validated as climate smart input) is supplied to maize producer farmers linked to the inclusive businesses. Moreover, 1,522 smallholder farmers are reached with climate smart services or good agricultural practices in the same year to make them more resilient for effects of climate change.

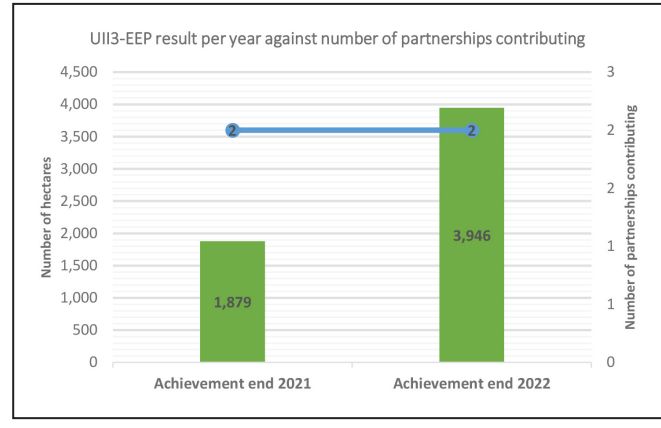


FIGURE 3. Hectares under Eco-Efficient Agricultural Practices.

Financial inclusion is one of the primary thematic areas of 2SCALE whereby it facilitates access to various financial services for SHFs, microentrepreneurs (MSMEs) and small and medium enterprises (SMEs) through public private partnership with grassroot and lead champions. As indicated in figure 3, by the end of 2022 a total of 4,821 smallholder farmers access additional financial services with the support of the two pilot partnerships. More specifically, these farmers are reached with saving and credit services through formation of village saving and lending associations (VSLAs) in different Puyams¹ of Yambio and Nzara counties of Western Equatoria State of South Sudan.

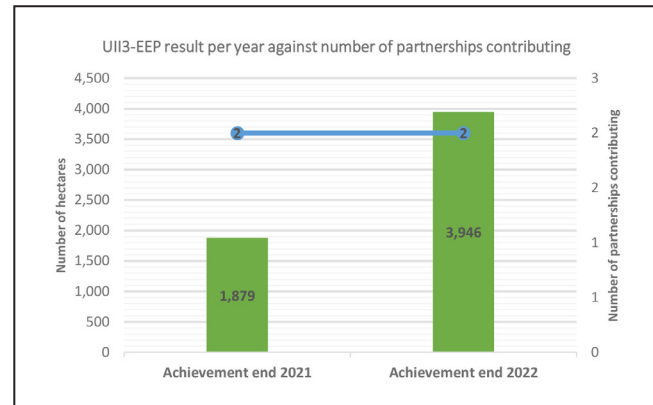


FIGURE 2. Smallholder farmers have improved agricultural productivity levels and have better terms of inclusion.

Ensuring eco-efficient agricultural practices through facilitating access to climate smart inputs and services to smallholder farmers is the other key intervention area of 2SCALE in collaboration and coordination with private partners. To this end, in the 2022 cropping season through

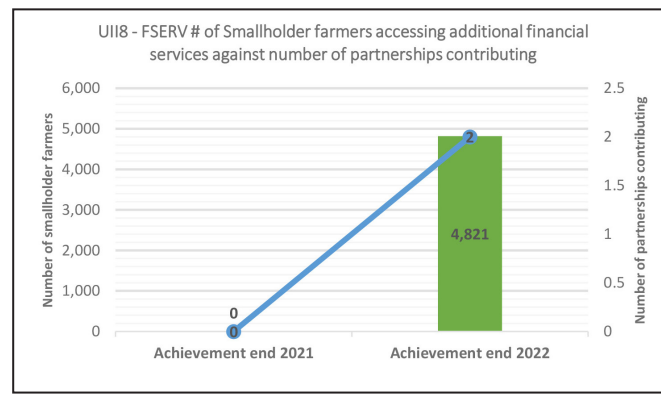


FIGURE 4. Number of smallholder farmers accessing additional financial services.

¹ Puyam is the lowest administrative unit in South Sudan regional states.

Similarly, the figure below illustrates the number of microenterprises (MSMEs) accessing additional financial services through the pilot partnerships supported by 2SCALE. As shown in the figure there is a sharp increase in the number of MSMEs accessing additional financial services from zero (0) in 2021 to 109 by the end of 2022. This reported number of MSMEs comprises farmers cooperatives or producer organizations linked to the inclusive business practices of the pilot partnerships. The financial services facilitated for these target groups include internal capitalization through selling of additional shares to smallholder farmers and saving at VSLAs.

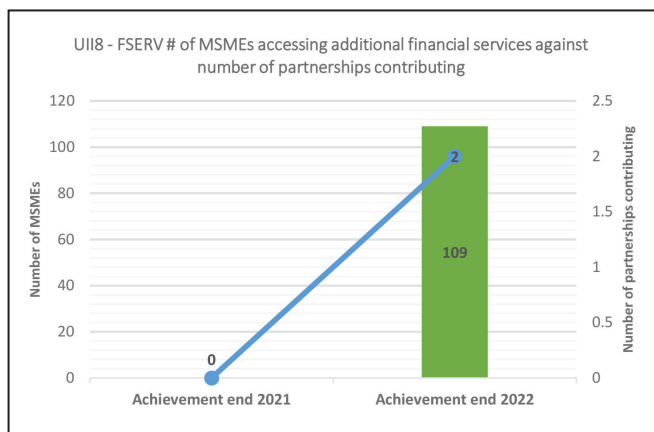


FIGURE 5. Number of MSMEs accessing additional financial services.

Finally, figure 6 below illustrates the total value of financial services (measured in Euro) accessed by smallholder farmers and microenterprises (MSMEs) in this case primary cooperatives. As indicated in the figure, in the year 2022, a total value of 682,088 Euro financial services have been facilitated for smallholder farmers and primary cooperatives with the support of the two-pilot public private partnership with Kanybek company limited and the syndicate grassroots champions (Eden and Nzara).

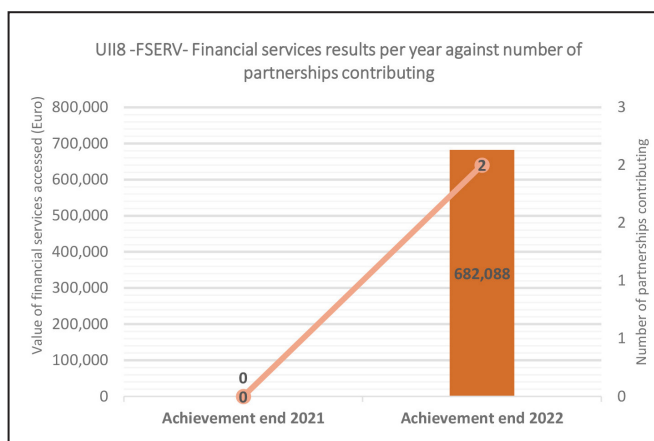


FIGURE 6. Value of financial services facilitated (measured in Euro).

Contributions of the themes in relation to the Performance of PPPs in relation to the UIIs

The public private partnership with Kanybek Company Limited has an ambition of developing new ways of baking bread, the business champion has acquired two processing lines, the complete set of Maize milling machine and a complete set of bread oven that shall be used to develop the new brand of bread that will be made from the blending of maize flour with a small unit of wheat flour. Both processing lines are undergoing installation within Kanybek premises.

The syndicate PPP held the product launching on 6th & 7th December 2020, to avail affordable maize flour product to BoP Consumer. So far,

the two grassroots champions have milled and sold **521.53MT** of Maize flour to BoP markets within Nzara and Yambio Markets since **September 2022**.



Image 7: the syndicate maize flour products being sold in Nzara and Yambio markets

Private sector development and entrepreneurial skills

In SS21_Maize_Kanybek, there is a total commitment that has been shown by the business champion, this has been seen in the co-investment and the private sector contribution in cash. The BC has co-invested in this financial year made a cash contribution of \$ **100,765** in the acquisition of the complete set of bread processing lines, Maize flour processing lines, acquisition of land and the construction of processing units for both bread and maize flour in Juba.



Image 8: the maize Milling unit for SS21_Maize_Kanybek newly constructed.

Under SS22_Maize_Syndicate, the syndicate partners (EMMCS & NGFU) are committed to their roles and business ideas to increase maize productivity within the Unions and engage into Maize value addition by milling the maize into maize flour that shall be supplied to BoP markets across the state. The syndicate partners have acquired the prototype of maize milling machines through a co-investment

that amounting **\$ 78,670** in acquisition of the value addition equipment for improving the maize flour processing line, Storage facility, unit buildings and storage structures. While the syndicate PPP have also trained and recruited 12 Youths to work in the maize flour processing units ranging from cleaners for the grains before they are milled, machine operators, Mechanics, and security guards. This has provided employment opportunity to the youths.



Image 9: EMMCS Maize flour milling unit in Yambio town.

In SS21_Maize_Kanybek, SHFs underwent different training on Climate Smart Agriculture practices training in Magwi on early land preparation and early planting and their advantages, timely weeding, soil, and water conservation practices and intercropping of Maize with legumes to improved soil fertility. 879Ha of land has been planted under these practices. The biggest challenge encountered by SHFs under this PPP is inadequate rainfall that has affected some other areas where several fields dried up. A total of **972 SHFs (SM 170, SW 315, JM 257 and JW 230)** underwent different set of Climate Smart Agriculture Practices training in the first planting season.



Image 10: farmers field assessed after the Climate Smart Agriculture training in Yei under SS21_kanybek.

A total of 3,043 SHFs (SM 690, SW 720 JM 823, and JW 810) attended different climate Smart Agriculture Practices training through extension workers embedded in the Union.



Image 11: land plated with improved maize seed in Yambio under EMMCS Loyalty and supply chain coordination.

In SS21_Maize_Kanybek, the supply chain is still weak between the business champion and the SHFs and the Cooperatives (Pos), the business champion is in the process of installing the two designated prototypes (Maize milling machine and Bread making oven) that shall process maize into maize flour and bread respectively. The delay in the procurement is because of change of vendor after a wrong supply of the oven that prompted the BC to re-order from another vendor who is yet to do the shipment of the complete set of bread making oven to Juba. There is hope that the flow of raw materials shall be effective once the installation process is completed by end of February 2023.

Under SS22_Maize_Syndicate, the supply chain coordination is effective, the sub-union does the aggregation of Maize grain from the SHFs at sub-union at the aggregation centers, the sub-unions then supply the grains to the Unions who does the processing and marketing of maize flour. The syndicate PPP held the product launching on 6th & 7th December 2020, to avail affordable maize flour product to BoP Consumer. So far, the two champions have milled and sold **521.53MT** of Maize flour to BoP markets within Nzara and Yambio Markets since September 2022. Both EMMCS and NGFU have been certified by the Ministry of Trade, Commerce, and Investment to run the maize milling processing plan in Western Equatoria and supply the maize flour to the markets within the state.



Image 12: Aggregation and transportation of Maize by the Syndicate PPP from the collection points.



Image 12: VSLA groups under NGFU for their weekly saving meeting.



Image 12: youths employed at the EMMCS milling unit and aggregation process.



A3-SEED ACTIVITIES AND RESULTS

IMPLEMENTATION ACTIVITY	STATUS	PROGRESS TOWARD ACHIEVEMENT OF OBJECTIVES
1.5 Decentralize seed quality assurance		<ul style="list-style-type: none"> • IFDC, the Ministry of Agriculture and Food Security (MAFS), and STASS collaborated in 2022 to operationalize the seed certification system. • 21 seed inspectors and 7 lab technicians were trained on seed inspection and seed testing, respectively. • A consultant from the University of Juba was engaged in 2022 to develop seed certification protocols for the trained inspectors to use in seed crop inspection in 2023.
1.6 Promote domestic seed procurement by relief and development efforts		<ul style="list-style-type: none"> • 10 institutional buyers accepted and purchased a total of 161.9 mt of local quality assured seed in 2022.
Result Area 2: Quality Seed Use and Good Agricultural Practice		
2.1 Scaling quality seed use and good agricultural practices (GAPs) through private sector-led extension		<ul style="list-style-type: none"> • 54 extension workers and 6 hub coordinators were trained in GAPs, integrated soil fertility management (ISFM) and conservation agriculture, integrated pest and disease management, and postharvest handling and management. • The trained extension workers were able to establish 51 crop demonstration plots following the IFDC demonstration protocol guide. • 7,303 smallholder farmers were reached with extension services following group trainings and farmer field days organized on the demonstration plots. • 2 training manuals were developed, including a mini guide on postharvest handling and management for use by extension workers in the project hubs.
2.2 ICT4Ag solutions to support private sector led extension		<ul style="list-style-type: none"> • 28 audio jingles have been developed and translated into various local dialects of the project locations (Azande, Bari, Dinka, and English) and are currently being broadcast on the radio¹. • 17 radio talk shows across all hubs were conducted in 2022, reaching over 29,633 listeners who are mostly smallholder farmers. • Over 1,000 flyers were distributed to smallholder farmers to disseminate extension messages during farmer field days.
2.3 Develop evidence-based soil fertility management recommendations		<ul style="list-style-type: none"> • The soil fertility and farming systems assessment conducted during the reporting period generated a set of ISFM recommendations to help smallholder farmers increase efficiency and profitability in food production. • A manual on ISFM and conservation agriculture was developed for field use by extension workers. • Following development of the field manual, extension workers directly trained 7,303 smallholders on ISFM and conservation agriculture; 29,232 smallholders were indirectly trained.
2.4 Develop evidence-based crop protection recommendations		<ul style="list-style-type: none"> • A manual on integrated pest and disease recommendations was developed and hard copies were distributed to seed company extension workers. • Following capacity building, the extension workers were able to directly train 7,303 smallholders on integrated pest and disease management; 29,232 smallholders were indirectly trained.

¹ The listenership of radio jingles and talk shows is proven by the fact that farmers call in during the talk shows and for the jingles, the number of calls to seed companies enquiring about seeds is another way of assessing listenership.

IMPLEMENTATION ACTIVITY	STATUS	PROGRESS TOWARD ACHIEVEMENT OF OBJECTIVES
RA3: Quality Seed, Input and Output Marketing and Distribution		
3.1 Facilitate last-mile distribution through private seed and input dealer network		<ul style="list-style-type: none"> The seed companies supported under A3-SEED established last-mile distribution through agro-input dealer networks, comprising 33 agrodealers, 19 sales agents, and 60 village agents at the project hubs. IFDC, in collaboration with the marketing officers of the seed companies, built the capacity of the agro-dealers, sales agents, and village agents in seed marketing and customer care. Following the training, 92 mt of quality seeds were sold to smallholder farmers through agro-dealer networks.
3.2 Establish agribusiness clusters through seed producers, input dealers, and traders		<ul style="list-style-type: none"> In 2022, 13 agribusiness clusters (ABCs) were established at the project hubs to improve the supply of agro-inputs in rural markets; this increases smallholder farmers' access to quality inputs within their locality. A total of 13 ABC coaches were identified and trained to build their networks and business relations among the cluster members. Several ABC meetings were organized by IFDC, in collaboration with 2SCALE, and facilitated by the ABC coaches. Participatory ABC actor mapping exercises were conducted by the entrepreneurs under the guidance of the trained ABC coaches. An ABC training curriculum was adopted and refined for the ABC coaches in 2022.
3.3 Promote women and youth empowerment in seeds, inputs, and commodity aggregation and marketing		<ul style="list-style-type: none"> In 2022, the A3-SEED inclusion strategy was developed to give strategic guidance to project implementers and relevant stakeholders on how to integrate gender across the different result areas. 17 participants (14 male, 3 female) from seed companies were trained on how to integrate an inclusive approach in their seed production activities. 1 male and 2 female role models/champions were identified in Torit hub; they encourage youths to participate in various seed value chain functions for income generation and employment.
3.4 Facilitate access to input support mechanisms, including savings clubs, smart vouchers, and seed fairs		<ul style="list-style-type: none"> In collaboration with the state government, STASS, and seed companies and input dealers, IFDC organized an agricultural trade show in Yei; 1,000 smallholder farmers (700 male and 300 female) accessed quality agricultural inputs. In Torit, 1,500 smallholder farmers (800 male and 700 female) purchased agro-inputs from agrodealers and seed companies. The World Food Day celebration in Rumbek attracted over 2,500 smallholder farmers (1,500 male and 1,000 female). Amal Modern Agricultural Seed Company (AMASCO) exhibited the quality seed produced through contract farmers.
RA4: Capacity Building and Learning Agenda		
4.1 Capacity building of local professional cadres		<ul style="list-style-type: none"> 120 local field experts were trained, including agronomists, extension staff, agro-dealers, marketing staff, and sales agents. 4 training manuals were developed and shared with extension workers for seed companies and government extension workers in the areas of the project operations. The training materials covers topics such as ISFM, integrated pest management (IPM), postharvest handling (PHH), and weed management. However, some activities under this result area are planned for 2023 and will be accomplished by: <ul style="list-style-type: none"> Supporting a curriculum to be developed to ensure it is gender and youth sensitive. Developing an inclusion module in the curricula on women's empowerment and youth employment promotion. Designing a ToT module on inclusion. Delivering the ToT inclusion module.

IMPLEMENTATION ACTIVITY	STATUS	PROGRESS TOWARD ACHIEVEMENT OF OBJECTIVES
4.2 Share with and learn from existing experience in South Sudan		<ul style="list-style-type: none"> • 2 knowledge-sharing events were conducted in 2022, bringing together the different project stakeholders, such as the government, seed companies, processors, an NGO, and the donor community.
4.3 Targeted action research		<ul style="list-style-type: none"> • A deep-dive study was conducted on gender and youth knowledge gap studies in the all 5 project hub locations. • A research paper on seed aid has been jointly written by IFDC and KIT.

4. PARTNERSHIP WITH STATE SERVICES AND LOCAL NGOS

In order to ensure a synergy of actions for the benefit of stakeholders, IFDC develops partnerships with projects, NGOs and other support structures that operate in the same area of action to exchange experiences and develop synergies and complementarities in the implementation of agricultural development activities. The following table shows the synergies developed.

Relationship with Other Stakeholders and Partners

Coordination with Other Dutch and Non-Dutch-Funded Projects in South Sudan

The project has continued to maintain close field-level coordination with other projects, such as:

Agricultural Markets, Value Addition and Trade Development Project (AMVAT), funded by the African Development Bank and implemented by FAO. The project works in the same areas of Torit, Magwi, and Bor.

South Sudan Livelihood and Resilience Project (SSLRP), funded by the International Fund for Agricultural Development (IFAD) and implemented by Vétérinaires Sans Frontières

(VSF) Germany. This project focuses on community empowerment and infrastructure, thereby contributing to creating an enabling environment for markets in the areas where both projects are implemented, Magwi and Bor.

Toward Sustainable Clusters in Agribusiness through Learning in Entrepreneurship (2SCALE), a multi-year project funded by the

Netherlands Ministry of Foreign Affairs and implemented by IFDC in nine countries, including South Sudan. A3-SEED will collaborate with 2SCALE particularly at the market end of the value chain.

Apart from the coordination with the above-mentioned projects, the project has maintained close collaboration with the following stakeholders:

Donors – EKN, European Union, USAID, World Bank, African Development Bank

Ministry of Agriculture and Food Security

NGOs/UN – FAO, World Food Programme, Norwegian People’s Aid (NPA), Agency for Technical Cooperation and Development, World Vision International

Seed Trade Association (STASS)

Private sector – seed companies

- Private sector – agro-dealers/distributors
- Farmers – individuals and groups
- Ministry of Gender, Child, and Social Welfare

Apart from these projects/programs, IFDC as part of the implementation of field activities has developed partnerships with Entrepreneurial Support Structures (EAS) composed of NGOs and farmers' organizations.

5. OTHER IFDC ACTIVITIES / PARTICIPATION OF IFDC IN EXTERNAL ACTIVITIES

Stakeholder Collaboration and Learning

ISSD Africa Conference: The strides made by A3-SEED to develop the seed system in South Sudan would not go far without learning from other projects that faced similar challenges. As such, the A3-SEED project participated in ISSD Africa conference, held in Kigali, Rwanda, on October 17-19, 2022, drawing valuable lessons based on practices from other countries and documented lessons learned from various projects. Collective efforts from all stakeholders are needed to develop the seed system in South Sudan, with A3-SEED work contributing to only a fraction of the work in the South Sudan seed sector – building

a resilient private seed sector; other components of the seed system need to be strengthened as well, such as inspection/government regulations, financing, quality assurance, and research.

FNS-REPRO Learning Event: As part of a learning event for the FNS-REPRO project, participants from Sudan, Somalia, Ethiopia, and South Sudan converged in the Netherlands to discuss important lessons learned from its three years of implementation. The meeting was co-organized by FAO and Wageningen University. It attracted various stakeholders, including representatives from the Directorate-General for International Cooperation (DGIS) and Netherlands-based

NGOs – Care, World Vision, ZOA, and Save the Children. The A3-SEED team comprised a delegation of two IFDC staff, one representative of STASS, and one seed company representative and was later joined by our partner KIT. Other attendees from South Sudan included the MAFS Undersecretary, three from the University of Juba, and one other seed company representative under FNS-REPRO. In the meetings, the A3-SEED team discussed the important contribution of the private sector to seed system development. Quality seed is critical to success in agricultural development. An efficient seed delivery system should ensure that farmers have access to high-quality seed at the right time and place and at an affordable price. A blend of public and private sector approaches has the potential to efficiently deliver quality seeds to smallholder farmers.

Seed Certification Multi-Stakeholder Meeting:

This event was held on March 7, 2022, with representatives from IFDC, KIT, STASS, seed companies, the seed quality control board, FAO, government (public breeding and research director), and Cordaid. Discussions were held on actions to be taken for seeds from South Sudan to be officially certified, rather than being quality declared. The outcome of this stakeholder meeting was the recommendation for IFDC to conduct refresher training for all seed inspectors as well as seed lab technicians as a beginning to the seed certification process. As a result, 21 seed inspectors and seven laboratory technicians were trained. The second recommendation was for the government and STASS to initiate a dialogue to discuss the possibility of a ministerial order to guide the certification process. This remains an ongoing activity.

Multi-Stakeholder Conference: This conference served as a platform to discuss A3-SEED's progress in its work with the private sector and lessons learned in the field by seed companies. It was also an opportunity for the government and the University of Juba to discuss aspects of seed regulations, early generation seed production, and the significance of research. KIT presented the Seed Aid Study, which highlights the challenges a seed aid system that relies on imports can pose to the nascent seed private sector in the country. This meeting was attended by representatives of other NGOs, UN agencies, the government, University of Juba, IFDC, KIT, STASS, and 10 seed companies. *The meeting resolved that it is importance of considering a semi-autonomous research body that is focused on aspects of research and quality improvement. It was agreed that, to some extent, seed aid is still needed in the country but should be targeted to specific areas. Where possible, seed aid should rely on locally produced seeds. Seed companies were urged to market themselves more extensively, increase production, and expand to areas where there is currently no available seed.*

Development of a Joint Research paper

The learning event, together with the general information shared by stakeholders in the seed sector, sparked an interest in supplementing this anecdotal evidence with scientific evidence on the impact of seed aid on farmers in the project regions. Using project baseline data, a research paper was developed. This research paper focuses on the targeting and effectiveness of seeds distributed through aid programs. The following is the abstract of this research paper:

Seed aid—or free distribution of seeds to farmers—is a popular intervention to simultaneously reduce food insecurity and dependency on food aid in rural areas. However, seed aid distribution also has the potential to disrupt the development of local seed markets.

In this study we analyze the targeting and impact of seed aid across the green belt or equatorial states of South Sudan. Using primary survey data on 1,990 farm-households, we find that seed aid is widely rather than selectively distributed. Almost a third of farm households receive seed aid despite the general availability of locally recycled seed varieties. Seed aid distribution does not seem to favour particularly poor, vulnerable, and food-insecure households, but those that are better connected to community-based networks and organizations.

*Using a double robust methodology based on **Inverse Probability Weighted Regression Adjustment (IPWRA)**, we also find that the adoption of seed aid by farm households does not result in increased agricultural production. And because seed aid is largely sourced from outside **South Sudan**, it is also creating a disincentive for the development of local seed producers, traders, and markets.*

Still, seed aid distribution is expected to be more effective and less disruptive above the green belt and especially in parts of the country characterized by lower agricultural potential, persisting conflicts and frequent natural disasters, where farmers would otherwise have insecure access to seeds.

6. IFDC INVESTMENTS IN SOUTH SUDAN IN 2022

The following table summarizes the cost of implementing activities and maintaining IFDC Representation in the country in 2022:

A3 SEED Project

Tableau 1. Summary of IFDC investment in 2022 in South Sudan

COST ELEMENT	LOA BUDGET	ACTUALS THRU
		JANUARY - DECEMBER 2022
Direct Staff Costs		
National Staff	€ 2,111,700.00	€ 556,315.17
Expat Staff	€ 349,500.00	€ 89,629.61
LCB'S, Consultants, Associate Advisors	€ 179,800.00	€ 33,253.01
Direct Staff Costs	€ 2,641,000.00	€ 679,197.79
Activity Cost	€ 3,613,000.00	€ 1,104,289.76
Activity Related Travel Costs	€ 198,100.00	€ 53,002.50
Other Project Related Costs	€ 1,133,600.00	€ 202,895.19
Other Direct Cost	€ 4,944,700.00	€ 1,360,187.45
Sub Total Direct Costs plus Global OH		€ 2,296,267.54
TOTAL	€ 9,350,000.00	€ 2,296,267.54
RASS Annual Budget		€ 237,906.36
2SCALE Annual Budget		€ 108,073.64
TOTAL		€ 2,642,247.54

7. CONCLUSIONS AND PERSPECTIVES

During 2022, IFDC invested in agricultural development in South Sudan through 3 projects. During the implementation of the different projects, several challenges were encountered. Some of the challenges are highlighted below.

- **Limited access to locally produced Early Generation Seeds** – the proposed intervention for this is strategic investment with research institutions such Polataka basic Seed Centre to increase production of: Some seed companies (in areas such as Rumbek and Bor) are now being supported to use local varieties.
- **Continued Relief Market:** There is still ongoing free distribution of seeds in various areas in the country. Blanket distribution of imported seeds distorts the seed market.
- **Difficult Road Access to storage and market facilities** – The roads to and from some of the production areas are in a dare state. This increases the cost of production and handling of seeds locally. Construction of community access roads using labour intensive technologies could contribute to alleviating this challenge. A3SEED will seek active collaboration with IFAD Funded SSLRP to help communities to priorities access roads to production areas.
- **Underdeveloped Seed Inspection** and other quality control measures – Inspected and
- Certified seeds carry quality tags and competes favourably in the market.
- **Pests and diseases:** in collaboration with government and private sector, agro dealers are being empowered to offer pest control education to seed buyers.
- **Limited access to Finance** – low capitalization of seed companies – through flexible loans and co-investment to establish processing and packaging lines for quality seeds. The project is discussing with local banks – Cooperative bank of South Sudan and Equity Bank to consider extending loans to seed companies. The same effort is being made to reach out to UNDP who are considering a guaranteed scheme with STANBIC Bank.

Despite these challenges, the project learnt the following lessons:

- ✓ With strategic investment in private sector, it is possible to produce quality seeds locally in various parts of South Sudan. This was evidenced by the fact that over 4000MT of seeds have been produced by seed companies in the past 12 months alone.
- ✓ Increasing availability of locally produced seeds has created interest in small holder farmers going semi-commercial agriculture. In Magwi, area, it was evident that grain producers were already selling to milling companies from Juba.
- ✓ With customized capacity building - companies contracted by A3SEEDs have developed a marketing strategy that is farmer oriented and more sustainable. They have increased their direct sales to farmers from less than 10% in 2020 to 40% now. The relief seed still enjoys the 60% market. However, if this is bought locally, it has the positive effect of capitalizing the seed companies.
- ✓ There are several businesses along the seed value chain - seed companies, outgrower, Agro dealer networks village agents that are being strengthened through this project are really businesses employing at least 2-5 persons.
- ✓ Government at national and state level are fully engaged. Despite lack of resources, they give technical guidance on early generation seeds, extension, inspection, and seed testing.
- ✓ Farmers can buy quality seeds; Farmers interacted with want quality seeds that germinate and give them high yields. They seem not to appreciate free seeds associating them poor quality.

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