Sasakawa Africa Association
and Sasakawa Africa Fund for Extension Education

ANNUAL REPORT 2017

"Feeding the Future"

Supported by
THE NIPPON FOUNDATION

Sasakawa Africa Association

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A farmer using an SAA-promoted power rice tiller in Molodo, Mali

Acronyms

ACAI	African Cassava Agronomy Initiative
AFAAS	African Forum for Agricultural Advisory Services
AGRA	Alliance for a Green Revolution in Africa
AGRF	African Green Revolution Forum
ATA	Agricultural Transformation Agency
BMGF	Bill & Melinda Gates Foundation
CA	Commodity Association
CAD	Centre for Academic Development
CAT	Commodity Association Trader
CBF	Community-Based Facilitator
CBSM	Community-based Seed Multiplication
CCAFS	Climate Change, Agriculture and Food Security
CDP	Community Demonstration Plot
CGIAR	Consultative Group on International Agricultural Research
CIDA	Canadian International Development Agency
CIMMYT	International Maize and Wheat Improvement Center
CIS	Climate Information Service
CP	Community Practice
CPE	Crop Productivity Enhancement
CSP	Community Seed Plot
CST	Climate-Smart Technology
CSV	Climate-Smart Village
CVP	Community Variety Plot
DA	Development Agent
DAD	Disabled Assisted Demonstration
DG	Digital Green
DTM	Digital Terrain Model
EA	Extension Agent
EAAP	Ethiopian Association of Agricultural Professionals
ECOWAS	Economic Community of West African States
EIAR	Ethiopian Institute of Agriculture Research
ESPHM	Ethiopian Society of Postharvest Management
EW	Extension Worker
FAO	Food and Agriculture Organization of the United Nations
FBO	Farmer-Based Organisation
FCA	Federal Cooperative Agency
FD	Field Day
FLP	Farmer Learning Platform
FO	Farmer Organisation
FTC	Farmer Training Centre
GAP	Good Agricultural Practice
GOP	Global Operational Plan
ICRISAT	International Crop Research Institute for the Semi-Arid Tropics
IFAD	International Fund for Agricultural Development
IFDC	International Fertilizer Development Center
IITA	International Institute of Tropical Agriculture
IPNI	International Plant Nutrition Institute
IPR/IFRA	Rural Polytechnic Institute for Training and Applied Research (Mali)
JICA	Japan International Cooperation Agency
LGA	Local Government Area (Nigeria)
MAP	Model Adoption Plot
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries (Uganda)
MAVCP	Multi Actor Value Chain Platform
MoANR	Ministry of Agriculture and National Resources (Ethiopia)
MELS	Monitoring, Evaluation, Learning and Sharing
MFTC	Mobile Farmer Training Centre
MIC	Market Information Centre
MIS	Management Information System
MIT	Market Information Trader
MoU	Memorandum of Understanding
NAADS	National Agricultural Advisory Services (Uganda)
NARO	National Agricultural Research Organisation
NARS	National Agricultural Research System
NF	The Nippon Foundation
NGO	Non-Governmental Organisation
NIRSAL	Nigeria Incentive-Based Risk Sharing System for Agricultural Lending
NUC	National University Council (Nigeria)
NuME	Nutritious Maize for Ethiopia Project
OSCA	One Stop Centre Association
PHTC	Postharvest and Trade Centre
PHAP	Postharvest Handling and Agro-Processingg
PICS	Purdue Improved Crop Storage
PO	Program Officer
PPP&MA	Public Private Partnerships and Market Access
PSP	Private Service Provider
PTP	Production Test Plot
P4P	Purchase for Progress
OBC	Open-the-Bag Ceremony
QPM	Quality Protein Maize
RUFORUM	Regional Universities Forum for Capacity Building in Agriculture
SAA	Sasakawa Africa Association
SAFE	Sasakawa Africa Fund for Extension Education
SEP	Supervised Enterprise Project
SG 2000	Sasakawa Global 2000
SNNPR	Southern Nations, Nationalities, and People's Region (Ethiopia)
SO	Strategic Objective
SP	Strategic Plan
SUA	Sokoine University of Agriculture (Tanzania)
TAP	Technology Adoption Plot
TAMASA	Taking Maize Agronomy to Scale in Africa
TOP	Technology Option Plot
ToT	Training of Trainers
UDP	Urea Deep Placement
UPB	Polytechnic University of Bob Dioulasso (Burkina Faso)
USAID	United States Agency for International Development
USG	Urea Super Granule
VCA	Value Chain Actor
VBE	Video-Based Extension
VODP	Vegetable Oil Development Project
VSLA	Village Savings and Loan Association
WAD	Women Assisted Demonstration
WFP	World Food Programme

About SAA and SAFE

The Sasakawa Africa Association (SAA) concentrates its operations on four country programs in Ethiopia, Mali, Nigeria and Uganda. Originally operated as Sasakawa Global 2000 (SG 2000) through a joint venture with the Carter Center of Atlanta, Georgia (USA), SAA served as the lead management organisation while former US President Jimmy Carter and his advisors worked through the Global 2000 Program to provide policy advice to national political leaders in support of program objectives. Funding for SAA comes principally from The Nippon Foundation, whose Chairman is Mr Yohei Sasakawa and President is Mr Takeju Ogata. SAA was founded in 1986 by Mr Ryoichi Sasakawa, Dr Norman E Borlaug and President Jimmy Carter. SG 2000 is still widely used to describe SAA programs.

SAA relies on the Sasakawa Africa Fund for Extension Education (SAFE) – a legally separate organisation also funded by The Nippon Foundation – to provide leadership for building human resource capacity in agricultural extension. These two organisations share a common Board of Directors and work together to harmonise and implement their highly complementary agendas.

MELS Theme Coordinator conducting a focus group discussion with Awili farmer group in Apac District, Uganda

SAA Founders

Ryoichi Sasakawa
(The Nippon Foundation Founder)

Norman E. Borlaug
(Nobel Peace Prize Laureate)

Jimmy Carter
(Former US President)

SAA Board of Councillors

Takeju Ogata

Shuichi Ohno

Katsumi Hirano

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Yoshimasa Kanayama, President
Fumiko Iseki, Executive Director
Jean F. Freymond, Director
Nicéphore D. Soglo
(Former President of Benin), Director
Amit Roy, Director

SAA Auditor

Keiichiro Yamada, Auditor

SAA/ SAFE Principal Staff

Executive Management

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Fumiko Iseki, Executive Director

Management

Juliana Rwelamira, SAA Managing Director
Deola Naibakelao, SAFE Managing Director

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Leonides Halos-Kim, Thematic Director, Postharvest Handling and Agro-Processing
Kebba Ngumbo Sima, Thematic Director, Monitoring, Evaluation, Learning and Sharing
Ande Okiror, Acting Thematic Director, Public Private Partnerships and Market Access

Senior Staff (Country Offices)

Aberra Debelo, Ethiopia Country Director
Sokona Dagnoko, Mali Country Director
Sani Miko, Nigeria Country Director
Roselline Nyamutale, Uganda Country Director

SAFE Associate Staff from Winrock International

Mercy Akeredolu, SAFE Technical Director
Assa Kanté, SAFE Regional Coordinator
Oladele Idowo, SAFE Regional Coordinator

Front page:
Habiba Ahmed (left) and Halimus Umar (right) on their rice farm in Gombe State, Nigeria, following media interviews in which they shared their success stories through their work with SAA

(As of December 2017)

Introduction from the Chairperson *Ruth K Oniang'o*

Facing the Challenges

We face many challenges these days – but I am confident that SAA is up for them. One of these is certainly nutrition. I wrote recently that nutrition matters, and we should remember that it is a science, and a complex one at that. For Africa's food security and nutrition to make a difference; to stop children from dying, and afford the majority of people decent meals; we should first appreciate our own food and its nutritional benefits.

In our SAA focus countries, women's groups have a vital role to play, not just as producers of food, but as cooks and mothers as well. This is an area that we are particularly keen to encourage, and I take particular pleasure in watching our women's groups selling quality produce into a wider range of markets, such as supermarkets, where Africa's growing middle class – with disposable income – can make a considered choice for the family cooking pot.

The importance of nutrition was emphasized when I was awarded the Africa Food Prize for 2017, which I shared with Ms Maïmouna Sidibe Coulibaly of Mali, who produces and supplies high quality seed for Mali and other West African countries.

There is no doubt that Africa has made rapid progress in reducing extreme hunger in the last couple of decades – partly because agriculture has made great strides in gaining recognition as essential for growth and development. But, as my SAA colleagues make clear in this report, there are many more daunting challenges ahead, not least the new ravages of fall/autumn armyworm.

As a recent report by the prestigious Malabo Montpellier Panel states: "Population growth, demographic changes and urbanization are placing pressure on food systems to increase yields and make more food available, as well as to produce more diverse and nutritious foods to address all forms of malnutrition."

Notably, the United Nations Sustainable Development Goal 2 (SDG2) aims to "End hunger, achieve food security and improve nutrition, and promote sustainable agriculture." The Scaling Up Nutrition (SUN) Strategy and Roadmap, 2016-2020, emphasizes the importance of nutrition as a universal agenda integral to delivering on the SDGs and the UN Decade of Action on Nutrition, according to the Malabo Montpellier Panel report.

As can be seen in the following pages, we stand shoulder to shoulder with our constituency of smallholder farmers in the countries where we operate. Their problems are our problems. Together with Ministries of Agriculture we demonstrate proven technologies, which are then taken to as many farmers as possible, ensuring their adoption. Norman E Borlaug described it as "setting the grassroots on fire", mobilising Africa's farming communities to ensure that political leaders heard their voices and took action. We believe that these leaders are now listening.

As has been said in introducing this report, we too face changing and challenging times at SAA. But, looking back over the past few months, I should like to congratulate our new management team in their commitment to maintaining our momentum in Africa. We will rely on this in the months and years ahead.

Students from Bayero University, Nigeria, join Ruth Oniang'o, to celebrate her being awarded the 2017 Africa Food Prize

Ruth Oniang'o and SAA Managing Director Dr Juliana Rwelamira visit a women's group Model Adoption Plot (MAP) for rice in Nigeria

Ruth Oniang'o receives the Africa Food Prize at the 2017 African Green Revolution Forum (AGRF) in Abidjan, Ivory Coast. From left to right: Professor Ruth Oniang'o; HE Mr Alassane Ouattara, President of the Ivory Coast; Ms Maïmouna Sidibe Coulibaly, joint recipient of the Africa Food Prize; and HE Olusegun Obasanjo, Former President of Nigeria

Rural women attending nutrition training in Mota, in the East Gojjam zone of Amhara, Ethiopia

Hon Professor Ruth K Oniang'o

Chairperson,
Sasakawa Africa Association

Chairperson,
Sasakawa Africa Fund for Extension Education

Hon Professor Ruth Oniang'o is a Kenyan graduate of Washington State University, Pullman, and University of Nairobi. She has taught in Kenyan universities and is Adjunct at Tufts University, Massachusetts. She spearheaded the completion of Kenya's food and nutrition policy, facilitated the establishment of nutrition departments in Africa and has given a voice to these issues internationally. She served in the Kenyan Parliament; founded Rural Outreach Africa, to serve women smallholder farmers; and founded the African Journal of Food, Agriculture, Nutrition and Development, to highlight African issues. She is Board Chair of the Sasakawa Africa Association and the Sasakawa Africa Fund for Extension Education, stepping into the shoes of co-founder, the late Dr Norman Borlaug, who was president of SAA and SAFE. She received the 2014 International Food and Agribusiness Management Association (IFAMA) Lifetime Award, and is a member of the Board of the Centre for Agriculture and Biosciences International (CABI), which has its headquarters near Wallingford, Oxfordshire, in the UK. She is a joint recipient of the 2017 Africa Food Prize. She is a strong advocate for nutrition and the eradication of hunger and poverty, as well as women's empowerment and youth mentoring.

President's Message *Yoshimasa Kanayama*

I have much pleasure in introducing our Annual Report for 2017 – one of the most significant years in SAA's history.

It has essentially been a year of transformation for both SAA and SAFE, with SAA becoming a general incorporated foundation in Japan. As a result, SAA in Switzerland was transferred to SAA in Japan from 1 January 2017, leading to major changes in terms of organisational structure, corporate governance and accounting rules. A year later, SAFE has been fully integrated into SAA, thereby creating one stronger and more efficient organisation to tackle Africa's agricultural development challenges as "One SAA". However, this report – covering our activities in 2017 – treats (as in previous years) SAA and SAFE as separate entities.

Our transformation process also resulted in a change of leadership. Mr Masaaki Miyamoto, former Senior Executive Director, left the organisation early in 2017, and I was appointed as President on 1 July, with Ms Fumiko Iseki being appointed Executive Director on 1 August. My new appointment, based on my experience of major commercial corporations in Japan, was a reflection of SAA's change of direction.

For SAA – an organisation with more than thirty years' history – this was indeed an important change. I came from the world of commercial corporations, but was excited to join the management team of SAA. I firmly believe that with my diverse experience and expertise, I can contribute much to the task of ensuring that SAA is an efficient, active, and impactful organisation for the benefit of smallholder farmers.

The spirit of working together is paramount. Organisations are, after all, made up of people, and without the support and collaboration of staff, we could not make anything happen. I believe this to be a universal truth for any organisation, and one that is epitomised by SAA. This period of change presents challenges, but it is also an opportunity for us to continue working better together as "One SAA".

While SAA is changing direction, so is Japan's outreach into Africa. When SAA was established in 1986, it was the first Japanese Non-Governmental Organisation (NGO) to be involved in Africa, not least in the agriculture sector. Today, major Japanese corporations are taking advantage of the potential of Africa and investing in a number of countries, encouraged by their rapid growth in infrastructure and manufacturing.

The pace has been set by the Government of Japan through the TICAD process and in the commitments made. The sixth annual Tokyo International Conference on African Development (TICAD VI), in 2016, was the first TICAD to be held in Africa

SAA Board members take part in a tree-planting ceremony at the Bugiri Agribusiness Institutional Development Association (BAIDA), during the SAA Board meeting in Kampala, Uganda (November 2017)

– in Nairobi – and brought to Africa wide representation from Japan's business sector. It may be recalled that SAA organized a well-attended side event at which a memorandum of understanding between SAA and the African Development Bank was signed. We look forward to productive outcomes from this.

This Annual Report for 2017 – the first to be introduced by our new leadership team – is a comprehensive review of our operations. It is a tribute to our management team and staff on whom we rely to support Africa's smallholder farmers. It is also a tribute to The Nippon Foundation, and its Chairman Mr Yohei Sasakawa, which continues to underwrite much of the cost of our programme.

Yoshimasa Kanayama is President of the Sasakawa Africa Association, overseeing all operations of the organisation. Prior to joining SAA, he served on the Board of Japan Airlines Co., Ltd., with responsibility for finance and accounting. A distinguished professional with abundant knowledge and experience of business operations, he also served as a Board Member of Billing System Corporation, Chief Financial Officer of Housing & Services Business, LIXIL Group Corporation, and President of LIXIL Home Finance Corporation. He graduated from Tokyo University, where he majored in Economics.

Executive Director's Message *Fumiko Iseki*

When I was appointed Executive Director in August 2017, I was already keenly aware of the history of SAA, spanning more than 30 years, and the spirit of its eminent founders, Mr Ryoichi Sasakawa, former US President Jimmy Carter, and Nobel Laureate Dr Norman E Borlaug.

For me it was an exciting opportunity to work again in Africa. But it was much more than that. My parents came from the generation in Japan who suffered from hunger in World War Two, and my parents' influence and experience of those grim times – and ultimately the search for world peace – made a deep and lasting impression on me. If, as I reasoned, the world could devote vast resources to a destructive force such as an atomic bomb – which decimated hundreds of thousands of our people – surely the same resources and energy could equally be put into constructive development, to lift people out of poverty, misery – and hunger. Fundamentally we could then alter and improve the human condition in developing countries.

This helped to define my career path and empowered my future work. For over 15 years, I spent most of my professional life in Africa on refugee assistance and the reconstruction of conflict-affected countries. I was struck by the interrelation between food insecurity, conflict and forced migration. As an international study states: "one per cent of food insecurity increases the outflow of refugees by two per cent."[1] I therefore developed my interests into becoming involved in work that not just gave humanitarian assistance to refugees, but dealt with the root causes of the problem. I wanted, above all, to work on preventative solutions. One of these was to enhance the capacity of marginalized people to be productive, and thereby contribute towards removing the scourge of hunger which reminded me so much of the sacrifices made by my parents in those dark, difficult days of world conflict. So I welcomed the approach by The Nippon Foundation and the SAA Board to work in Africa in an area where I felt I would make a constructive contribution. I was attracted, too, by the vision of The Nippon Foundation: 'Share the pain. Share the hope. Share the future'. It was also inspirational for me to return to Iowa, the birthplace of Dr Borlaug, during last year's World Food Prize celebrations, when Dr Akinwumi Adesina, President of the African Development Bank, was awarded the Prize. Twenty-five years before, I was an exchange student at Grinnell College in Iowa, the American food basket, and this experience strengthened my wish to work internationally.

As reported here, our SAA programme is concentrated on four focus countries – Ethiopia, Mali, Nigeria and Uganda – with SAFE expanding its university programs into an additional five African countries. I have had the pleasure of visiting the focus countries in the months since my appointment – and have been inspired by the passion and dedication of our team on the ground. I was moved when witnessing SAA-trained

Executive Director Fumiko Iseki with Audu Ogbeh, Minister of Agriculture and Rural Development, Nigeria

farmers confidently demonstrating technology to village members, passing on their skills to others in their community. In the broader sense, we appreciate that Africa's farmers have immense challenges to face with climate change, erratic weather conditions and invasions of armyworm devastating vital food crops. We must engage with farming communities in combating these conditions.

President Kanayama has outlined some of the fundamental changes made in 2017, the year of transformation for SAA which is also, with 2018, a transitional period before we implement our Strategic Plan 2019 to 2023. As we create one entity with the merger of SAA and SAFE, our vision is to disseminate the impact of SAA's field operations into African countries through the highly successful SAFE programme. SAFE is considered to be one of the most cost-efficient mechanisms for strengthening extension services in Africa.

Finally, in thanking our Board for its continued support, I would like to congratulate our Chairperson, Professor Ruth Oniang'o, for her outstanding achievement in winning the Africa Food Prize; an example to us all and certainly a highlight in our year of transformation.

Fumiko Iseki serves as the Executive Director, overseeing SAA operations alongside the President. She has a wealth of experience, mainly in refugees and reconstruction assistance in conflict-affected African countries. She began her international development career as a community development officer at the Japan Overseas Cooperation Volunteer (JOCV) in Bangladesh, and obtained a Master's from the Fletcher School of Law and Diplomacy at Tufts University, majoring in Human Security (Refugee assistance/Islamic civilization). She also studied Humanitarian Assistance (Food security/Nutrition) at the Nutrition School of Tufts University. Working with the World Food Programme (WFP) she covered refugee operations in Ethiopia, and program management in Zambia. With Global Link Management, Inc., she served as a consultant for JICA/JPF/JETRO, lending her expertise in bridging humanitarian and development assistance.

[1] WFP (2017) At the Root of Exodus: Food security, conflict and international migration

Management Report 2017

SAA 2017 – 2021 Strategic Plan

2017 has been a year of profound changes. On 1 July, Mr Yoshimasa Kanayama assumed the Presidency of SAA, and on 1 August Ms Fumiko Iseki became Executive Director. Mr Masaaki Miyamoto, previously the Senior Executive Officer, left SAA on 31 July. After a successful end to the 2012-2016 Strategic Plan (SP), SAA began implementing the new 2017-21 SP in its four focus countries: Ethiopia, Mali, Nigeria and Uganda. The Global Operational Plan (GOP), based on the approved SP, is still undergoing changes. The development of the new SP has been a truly participatory and bottom-up process, beginning with country-level consultations and workshopping with all senior members of the SAA and SAFE technical teams, with invaluable contributions from SAA Tokyo Headquarters. As a result, staff feel a deep sense of ownership in the SP.

Key interventions along strategic objectives

The Crop Productivity Enhancement (CPE) teams in the focus countries have undertaken interventions to address Strategic Objective 1 (SO1). Details of key interventions under SO1 are well presented on pages 8 and 9 of this report. Similarly, the teams for Postharvest and Agro-Processing (PHAP) and Public Private Partnerships and Market Access (PPP&MA) implemented interventions towards achieving SOs 2, 3, and 4. In 2017, the PHAP Theme focused on food quality and safety, private service providers (PSPs), and the promotion of nutritionally-balanced diets among farming households. The focus of PPP&MA activity was the strengthening of Farmer Organisations (FOs), linking them to markets, helping them to set up Village Savings and Loan Associations (VSLAs), and linking them to financial institutions. All five Themes conducted a mix of training sessions, workshops and forum meetings towards strengthening the capacity of Extension Workers.

SAA Managing Director Dr Juliana Rwelamira with K+S CEO Dr Burkhard Lohr and his team during their visit to Uganda

Vision, Mission and Strategic Objectives of SAA

SAA Vision

A Sub-Saharan Africa free from hunger and poverty, sustainably producing nutritious food in an eco-friendly, market-oriented and socially viable system.

SAA Mission

Working in partnership with public and private stakeholders, namely extension and advisory services, to influence the transformation of African agriculture. Empowering smallholder farmers to increase productivity in a sustainable manner and in response to market demand.

SAA Strategic Objectives

Strategic Objective 1:
Improve sustainable crop production and productivity among smallholder farmers.

Strategic Objective 2:
Improve the harvesting, postharvest handling, storage, and processing of agricultural produce of smallholder farmers and agro-processors.

Strategic Objective 3:
Promote market-oriented agriculture among smallholder farmers.

Strategic Objective 4:
Contribute towards strengthening the capacity of extension and advisory services in partner countries.

The most important of the events was the SAA 30th Anniversary celebration organized by each SG 2000 office, involving most stakeholders and partners. Throughout the year the MELS team was busy guiding the development of the SP, in addition to their normal activities.

We are also delighted that SAA/SAFE Board Chair Hon Professor Ruth Oniang'o has been awarded the prestigious Africa Food Prize, which recognizes outstanding contributions to African agriculture. The prize was awarded during the 7th African Green Revolution Forum (AGRF), in Abidjan, Cote d'Ivoire, on 5 September 2017. Prof Oniang'o continues to champion the mission and achievements of SAA at a host of events and engagements.

In December 2017, K+S KALI GmbH Chairman Dr Burkhard Lohr came to Uganda for the first time with his team and visited the Growth for Uganda Project. They were impressed by the project's progress in the field and convinced of the importance of its extension. Members of the visiting team included Professor Andreas Gransee, Head of Tech and Nutrition at Innovation Lab Ag; Ms. Janina Kaiser, Mr. Guido Schernewski, and their Sub-Saharan Africa Consultant Hilary Rugema.

SAA Managing Director:
Dr Juliana Rwelamira

Staff affairs

In August 2017 Mr Ande Okiror, PPP&MA Coordinator in Uganda, was recruited as Regional Program Officer to coordinate the work of PPP&MA in all four focus countries. The executive decision was taken to merge the work of PPP&MA with that of CPE and PHAP under the new SP. Mr Okiror will act as interim Theme Director for PPP&MA until such time as the new SP is approved. In December 2016, Uganda recruited a new Deputy Country Director, Mr Joseph Bbemba.

SAA operates in a competitive field of international NGOs, and some turnover was experienced as a result of SAA staff leaving to join other organisations working in similar fields. Mali and Uganda each lost one Program Officer, while Ethiopia lost two Program Officers. Nigeria also saw the departure of one Theme Coordinator. In-country recruitment of national staff continued as required to fill positions for core and extra-core projects.

Staff development and growth

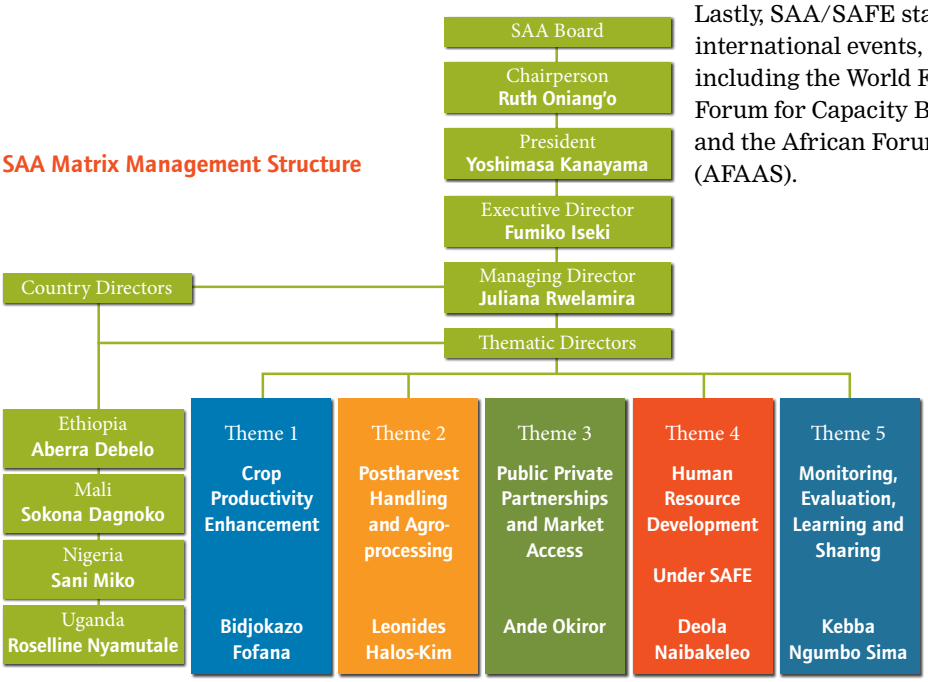
There is a broad general need for SAA to build staff capacity, especially with Extension Agent (EA) skills. Thematic Directors have conducted a series of training sessions, while a number of staff members pursued higher academic qualifications to improve performance and promotion prospects. SAA has committed itself to being a learning organisation that continually adapts to meet new demands and challenges. Through a grant from the Borlaug Scholarship Fund, one Master's and one PhD award were provided to staff members, while four short-term training courses were also supported.

Dr Juliana Rwelamira on a field visit in Uganda

Resource mobilisation

SAA has enjoyed the strong and committed support of The Nippon Foundation (NF) since its inception. Such long-term support is a rarity and has enabled SAA to focus on program implementation with consistency. In order to continue scaling-up its operations, SAA has also been successful in diversifying its funding sources, and in 2017 received funding from the Alliance for a Green Revolution in Africa (AGRA) in Ethiopia and Nigeria, and the Canadian International Development Agency (CIDA) in Ethiopia. Nigeria also received funding from USAID, the World Bank, and the Bill & Melinda Gates Foundation (BMGF). In 2017 Mali received funding from the Netherlands Organisation for Scientific Research (NWO/WOTRO). Uganda continued to receive funds from K+S KALI GmbH and from the Uganda Ministry of Agriculture. Lastly, SAA/SAFE staff participated in a number of international events, conferences, workshops and meetings, including the World Food Prize, the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM), and the African Forum for Agricultural Advisory Services (AFAAS).

SAA Matrix Management Structure



THEME 1
CROP PRODUCTIVITY ENHANCEMENT (CPE)

The overall objective of the Crop Productivity Enhancement (CPE) Theme is to increase agricultural productivity while strengthening the capacities and skills of vulnerable smallholder farmers and national extension systems. Its technology intervention strategy consists of establishing simple Farmer Learning Platforms (FLPs) to illustrate and train farmers and partner Extension Agents (EAs) in scalable and cost-effective production technologies.

In 2017 the CPE Theme has revised its FLPs using a holistic and science-based, problem-solving approach to simplify the extension message while improving knowledge and technology transfer to smallholder farmers. The revised FLPs encompass four different plot types: Community Demonstration Plots (CDPs) that showcase SAA's productivity-increasing technologies, Technology Adoption Plots (TAPs) carried out by early adopters, Model Adoption Plots (MAPs) illustrating exemplary adoption plots, and Community Practices (CPs). Details can be found in the newly published SAA brochure entitled "Farmer Learning Platform Concepts & Implementation".

Key achievements and production constraints in 2017

FLPs are mainly established in rainfed cropping systems, and are therefore highly vulnerable to climate change and variability. Despite the climate change-related negative impacts recorded, particularly drought and outbreaks of armyworm *(spodoptera frugiperda)*, most of the FLPs were implemented without major setbacks. The main activities carried out include development and distribution of training manuals, training of smallholder farmers and partner EAs, and the establishment of FLPs.

Pre-season activities towards establishing FLPs

Prior to establishing FLPs, annual stakeholders' planning workshops were organized to discuss SAA technology implementation, achievements, and challenges. These workshops were followed by participatory community entry processes to identify extension training needs and gaps, and select motivated host-farmers, community-based facilitators (CBFs) and priority crops. Eighteen training manuals were developed and 14,764 copies produced and distributed to host-farmers and partner EAs. These training manuals include information on good agricultural practices (GAPs), identification and control of armyworm, various climate-smart technologies (CSTs), and a revised FLPs handbook.

Farmer Learning Platforms (FLPs)

FLPs were used as training platforms to strengthen the technical capacities of 1,614 EAs and Community-Based Facilitators (CBFs), who in turn transferred their knowledge to 100,233 host-farmers (Fig. 1). Training topics were needs-based and focused on GAPs, the fundamentals and proper establishment of FLPs, various climate-smart soil, water and fertilizer management techniques, proper harvesting, and yield data collection techniques. A particular emphasis was put on the efficient control of armyworm. In total, 3,165 CDPs were established and 5,221 TAPs identified. The number of CDPs and TAPs varied widely among countries as a result of country-specific rainfall distribution, the number of projects, and the involvement of the private sector. The FLPs focused on GAPs, CSTs and site and/or crop-specific fertilizer use. Overall, crop yields were significantly higher in CDPs as compared to other plots. The superiority of CDPs over other plots was noticeably higher in Uganda as a result of a well-designed package of practices (Fig. 1). A similar trend was observed in rice crops in Nigeria, as a result of increased Nitrogen (N) efficiency using Urea Deep Placement (UDP) technology. The lower crop yields recorded in plots other than CDPs can in part be attributed to climate-related production risks (dry spells, drought, outbreaks of armyworm etc.). The FLPs provided learning and knowledge-sharing opportunities to host-farmers while increasing awareness about SAA-technologies. In total, 440 green and brown Field Days (FDs) were carried out, and were attended by 70,727 participants.

Production constraining factors, future adaptation measures and action points

Prolonged dry seasons, droughts, floods and sudden outbreaks of armyworm were recorded across all priority countries, particularly in Uganda and Ethiopia, impacting on crop productivity in the FLPs.

Responding to climate change – impacts on crop productivity

Climate Smart Villages (CSVs)

SAA is streamlining needs-based and agroecology-specific CSTs within its technology intervention strategy. There is a need to introduce a climate information service (CIS) along with CSTs for informed weather-smart technology demonstration. CIS has been shown to guide climate-vulnerable smallholder farmers on using real-time forecasts to acquire quality inputs and select appropriate CSTs for enhanced adaptation to climate change. In 2018, the CPE Theme will therefore pilot CSVs using CIS for weather-based agro-advisory service provision, in order to guide partner EAs and host-farmers through weather-based climate-smart decision-making processes. The expected end output is to take the right CSTs to the right agro-ecological zones and the right farming communities, moving towards increasing adoption and impact.

Theme Director:
Dr Bidjokazo Fofana

Timely access of smallholder farmers to climate-smart genetic material

Smallholder farmers' access to productive genetic materials poses a serious problem for increasing crop productivity and adaptation to climate change. In 2018, the CPE Theme will pilot country-specific Community-Based Seed Multiplication (CBSM) models at farm gate. The ultimate aim is to facilitate the timely access of climate-vulnerable smallholder farmers to appropriate genetic materials, and to stimulate the adoption of CSTs while improving their adaptation to climate change.

Responding to the outbreaks of armyworm

A plague of armyworm devastated crops (mainly cereals) in Africa in 2016 and 2017, including in SAA priority countries, posing a significant threat to food security. The CPE Theme therefore developed a technical guide entitled "Technical Guide on Identification and Control of Armyworm" along with an intensive training program for host-farmers and partner EAs. The guide has been widely distributed and trained partners have been urged to disseminate this information.

Building an enduring Strategic Partnership with research and extension

CSVs are being promoted by the Consultative Group on International Agricultural Research (CGIAR) program on Climate Change, Agriculture and Food Security (CCAFS) in East and West Africa. CSVs act as "incubators" for weather-based climate-smart decision-making and the demonstration and dissemination of technologies. The CPE Theme initiated a "win-win" strategic partnership with CCAFS to promote CSVs, aiming to jointly popularize the CSV concept towards enhancing vulnerable smallholder farmers' resilience to climate change. In addition to the above, sourcing drought-tolerant crop varieties and CSTs will require an additional partnership-building effort with other strategic research partners, including national research institutes, the National Agricultural Research System (NARS), and the International Crop Research Institute for the Semi-Arid Tropics (ICRISAT) for appropriate genetic materials, the International Institute of Tropical Agriculture (IITA) and International Fertilizer Development Center (IFDC) for climate-smart fertilizer nutrient management, and private seeds and specialized irrigation equipment companies for specific crop varieties (i.e. hybrids) and irrigation equipment and advisory services.

List of published manuals

- Farmer Learning Platforms: Concepts and Implementation (Sasakawa Africa Association (SAA), 2017)
- Technical Guide on Identification and Control of the American Armyworm (SAA, 2017)
- Urea Deep Placement Technology: A Technology development to Improve Nitrogen Fertilization in Irrigated Rice (USAID, ECOWAS, IFDC and Sasakawa Africa Association, 2017)

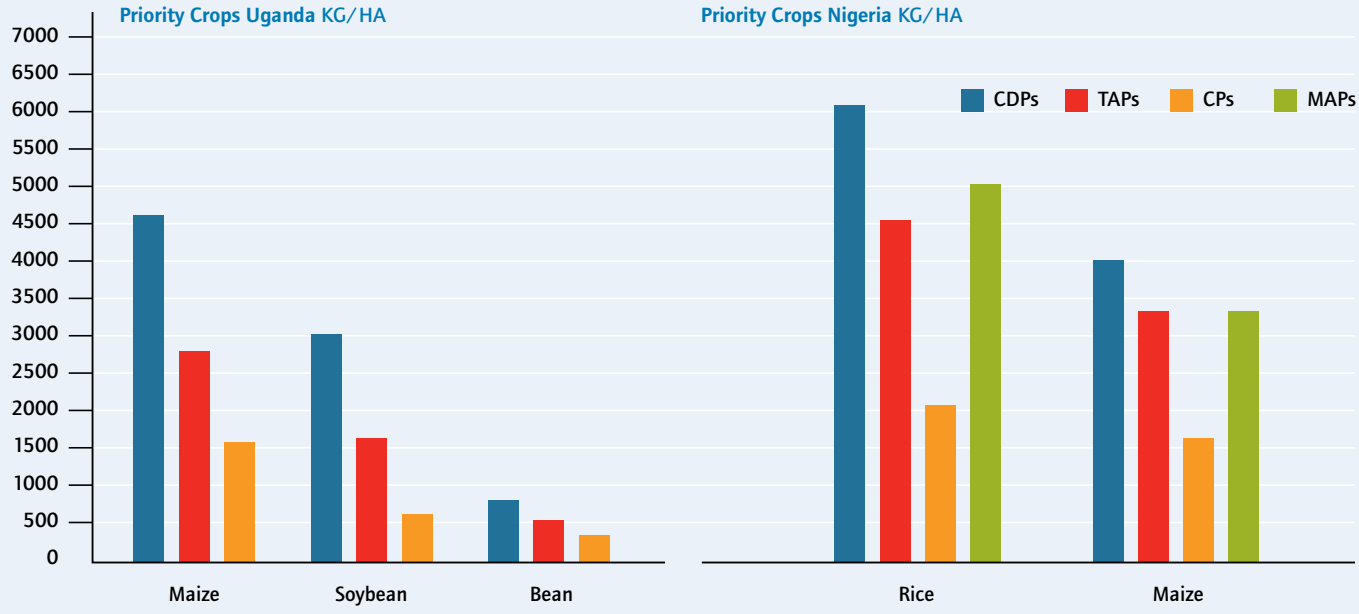


Fig. 1: Crop yields in Community Demonstration Plots (CDPs) as compared with Technology Adoption Plots (TAPs), Model Adoption Plots (MAPs - Nigeria) and Community Practices (CPs); vertical bars show least significant difference values (1230 kg ha-1 for Maize, 1112 kg ha-1 for Soybean, 147 kg ha-1 for Bean) between Practices at P < 5% (Uganda)

THEME 2
POSTHARVEST AND AGRO-PROCESSING (PHAP) EXTENSION

Strategic Objective 2 of the SAA Strategic Plan (2017-2021) contributes to improving the harvesting, postharvest handling, storage and processing of agricultural produce. Its long-term goal is to increase the availability of good-quality food and to increase the incomes of 200,000 smallholder farmers and processors. This will be done through the reduction of losses and the establishment of agro-processing enterprises in rural areas. It also aims at increased consumption of nutritionally-balanced food by rural farm families.

From a more focused PHAP activity-led program, the PHAP team has gone on to work with the CPE team in promoting small-scale farm machinery, and with the PPP&MA team in strengthening private service providers (PSPs) and agro-processors, linking them to financial resources and profitable markets.

Key achievements

In 2017, SAA saw increased adoption of improved PHAP technologies by smallholder farmers and some scaling-up of good practices. It also identified the need for more appropriate technologies, and the recurring challenges of technology adoption.

- In Ethiopia, the Ministry of Agriculture and Natural Resources (MoANR) has started to scale-up the SAA model of youth threshing/shelling service provision, and has established one youth group for its threshing service. Ethiopia also successfully completed the third stage of the Purdue Improved Crop Storage (PICS) project, and the team is working with private suppliers and Regional Cooperative Offices to develop the supply chain.
- A modified mobile maize sheller from Uganda, adapted for use in Mali, was demonstrated to positive feedback from farmers due to its added feature of de-husking, with the by-products (cobs) suitable for animal feed.
- Nigeria claimed a breakthrough in adapting the International Institute of Tropical Agriculture (IITA) multi-crop thresher into a soybean thresher. In-field testing saw an average threshing capacity of up to 450kg/hr of clean beans. The capacity depends on the grain-to-biomass ratio and the rate of feeding. No breakage was observed in the output. Positive feedback from farmers was noted:

'It is very good to see this development from Sasakawa. What will take us 2-3 days to thresh is being done within one hour by this machine. All the soybean threshers I have seen require our women to winnow; the output from this machine does not require further cleaning. It saves money and energy. It will cost us N1,200 to thresh and winnow one bag of soybean. The collection and stacking of the chaff is a problem, but now we can easily collect and even sell the chaff at N400/bag for animal feed.'

A manually-operated grinder was introduced to produce smooth paste from the boiled locust beans, further improving the processing of dawa-dawa. A combined grinder and kneader was also demonstrated for the production of groundnut oil. The technologies increased processing capacity (Table 1), improved the quality of products, and significantly reduced labour.

- In Uganda, farmers reported buying technologies (maize shellers, cassava chippers and others) as a result of demonstration activities. The maize cribs in the Dokolo and Apac districts were visited by farmers from neighboring villages, who recognised the advantage of using the cribs and expressed an interest in replicating them on their farms.
- Open-the-Bag Ceremonies (OBC) were conducted by all country teams to demonstrate the effect of hermetic storage. Host-farmers led the opening of the storage facilities (PICS bags, metal silos and sealed plastic tanks) to show farmers the condition of grains stored for 5-8 months without chemicals. Observers testified that no live insects, mold, or signs of deterioration were found in the stored grains. An increased adoption rate had been recorded.
- More than 100,000 farmers were trained by trainers facilitated and technically supported by PHAP teams. The training focused on good practices in harvesting, postharvest handling, and storage management. The awareness created through the training, particularly on the use of PICS bags for storage, resulted in farmers storing more grains in order to obtain a more favourable price for their produce.

Table 1: Increased processing capacity using simple tools compared to traditional method (Nigeria, 2017)

Unit Operation	Method	Output capacity	Remarks
Milling for	Hand-operated Mill	5.0 kg/hr	Also used for wet maize milling
Dawa-dawa processing	Traditional	0.83 kg/hr	Grinding with stone
Grinding and kneading for	Combined grinder and kneader	90 kg/hr	Motorized; Engine-driven
Groundnut oil extraction	Traditional	2-3 kg/hr	Using mortar and pestle for grinding and hand for kneading

Theme Director:
Engr Leonides Halos-Kim

Threshing service providers at work in Shashamene Zuria, Ethiopia

Strategic shifts – adapting to new challenges

Technology adaptation

SAA collaborates with research and development (R&D) institutions and private manufacturers to source technologies within its focus countries. In-field testing has enabled refinement of these technologies, and the recurring challenge of frequent machine breakdown is being addressed by improving the skills of local manufacturers and developing technical support groups comprised of trained technicians.

Establishing the Postharvest and Trading Centre (PHTC)

The Postharvest and Trading Centre (PHTC) evolved from the implementation of Niet@kene and the Postharvest Extension and Learning Platform (PHELP), and has been adopted by the Mali program as a value chain extension platform. The platform is used by all Themes to demonstrate market-driven innovations, ranging from production to marketing. Working with Farmer Organisations (FOs), the platform is expected to develop into a self-sustaining farming enterprise managed by the FOs.

Promoting awareness of food quality and safety

PHAP has raised awareness of aflatoxin issues and pesticide residues in crop and food products, and promoted improved postharvest handling (drying and storage) as a primary control measure. Improvement in quality was observed and appreciated by farmers, who said: "We are now more confident that we are eating safe food". Concern regarding the nutritional balance of rural families' diets is being addressed by promoting awareness and knowledge of nutrition and the importance of diet diversification, with a focus on developing recipes using homegrown ingredients.

Sustainability of agro-processing enterprises

Agro-processing enterprises, especially for women processors, are still challenged by the lack of continuing support for group and enterprise management, as well as start-up and operating capital. PHAP, in collaboration with PPP&MA, will develop appropriate support and exit strategies to encourage processors to be more self-sustaining.

Private Service Providers (PSPs)

The role of PSPs is important in making technologies accessible to smallholder farmers and processors, and is key to the adoption of improved postharvest handling and storage techniques. SAA is hopeful that young entrepreneurs in rural areas will take up service provision as a business. Their lack of capital and training will require more investments from SAA in terms of capacity-building, both in technical and business management.

The next steps

With sustainability as our target, PHAP is committed to strengthening partnerships in technology adaptation and the scaling-up of good practices, developing strategies responsive to changing environments. Through collaboration within and outside SAA, the PHAP Theme will continue to support smallholder farmers – with special focus on women and youth – to improve postharvest handling and value addition, provide more and better food to farming communities, and create job opportunities.

THEME 3
PUBLIC PRIVATE PARTNERSHIPS AND MARKET ACCESS (PPP&MA)

The overarching goal of the Public Private Partnerships and Market Access (PPP&MA) Theme is to promote market-oriented agriculture among smallholder farmers.

Key achievements

A comprehensive market study was commissioned by the PPP&MA Theme as a means of developing a market-driven approach to promote sustainable production and increase income at household level. The results of this study enabled PPP&MA to craft effective messages and develop campaign strategies to engage specific audiences and meet identified markets. The involvement of various stakeholders, including public and private bodies and Farmer Organisations (FOs), was facilitated to enable collaboration in addressing and mitigating challenges along the value chain. Conscious of this, PPP&MA mapped out private service providers – namely microfinances, agro-input suppliers and service providers, and agro-processors – and linked them with FOs. A directory of public and private service providers was developed, shared and is being continuously updated in each of the four focus countries, while networks and partnerships were promoted to further support and strengthen value chains in the four countries.

The PPP&MA Theme organized functional FOs and developed their skills in collective action marketing, using the examples of the Commodity Association Traders (CAT) model, the Village Savings and Loans Association (VSLA), warrantage, and Community-Based Seed Multiplication (CBSM) among others. Commodity Associations (CAs) were organized around selected commodities and provided with training in group dynamics, agribusiness, and gender issues. Topics were strategically selected during community assessments that helped develop economically viable groups that will carry out joint household planning, share proceeds, and enhance the capacity of people with special needs to meet their basic requirements. These FOs were linked to input and output markets including large-scale firms, processing companies and other service providers like Cooperative Unions in Ethiopia, FasoKABA in Mali, Hybrid Feeds in Nigeria and Savannah Commodities in Uganda. In 2017 a total of 10,206 farmers were trained in marketing, value chain analysis, business planning, negotiations, conflict resolution, joint household planning, financial management, and collective actions to secure inputs, services, and markets. The training resulted in 30 per cent of FOs becoming economically viable. The plan is to reach 68,900 individual farmers by 2021.

To improve information sharing and networking, four country-specific databases were set up and shared with partners, and a wide-ranging publicity campaign consisting of radio talk show appearances, agricultural shows, message alerts, billboards and posters brought market information to 1,440 FOs. Seven needs assessments were conducted and identified 49 different actors that delivered services to FOs.

In addition, 178 groups of women, people with special needs, and youth were trained in group dynamics and agribusiness management. They developed 87 business plans that enabled 47 FOs to access funds from commercial banks in Ethiopia ($11,200), Mali ($3,800), Nigeria ($7,800),

VSLA engaging in soybean production in the Bambasi woreda, Benishangul-Gumuz region, Ethiopia

Acting Theme Director:
Ande Okiror

and Uganda ($1,450,500), while another four Ugandan FOs of people with special needs each accessed $1,400 of government funds. In the VSLA model, 776 FOs involved saved $785,125 – money which can be invested in production, meeting basic needs, and paying school fees.

Building positive partnerships

Seven value chain workshops were held, resulting in 36 positive memoranda of understanding that influenced 957 FOs to bulk-produce and sell collectively (see Table 1). The private sector leveraged both cash and in-kind contributions in the form of training, inputs, and commissions to FOs and CATs, totaling $30,900. Four models (CAT, VSLA, bulking, and CBSM) facilitated skills and knowledge step-down to Apex associations and individual farmer groups. The models have been adopted by other partners such as input companies, buyers, banks, and non-governmental organisations (NGOs). Big buyers were identified and linked to farmer groups in all four countries, while in Uganda, Savannah Commodities, which established the first fertilizer plant in the country, selected four CATs as distributors.

Future action plans

SAA will continue to create market linkages for FOs and support input/output market service providers in extension service delivery. The plan is to enhance the capacity of value chain actors, while establishing and strengthening FOs.

Strengthening models

PPP&MA has developed and used models like CATs, VSLA, bulking, and CBSM with measured success. The CATs model is in-built within the community extension system, and CATs are trusted by actors in the value chain. VSLA helps build critical funds to invest into agriculture and

Group saving session in Ntungamo, Uganda

meet basic needs, while CBSM ensures access to improved seed. All of these initiatives contribute to building economically viable and sustainable FOs.

In 2017 the PPP&MA Theme has recorded positive progress in the achievement of its core goal of delivering market-oriented agriculture to smallholder farmers and building positive partnerships with public and private partners, working towards economically viable and sustainable FOs.

Table 1: **Theme 3 major achievements for 2017**

DETAILS	ETHIOPIA	MALI	NIGERIA	UGANDA	TOTAL
Databases of partners (Developed/updated)	1	1	1	1	4
MIS training for DAs, FOs and Subject Matter Specialists	65	28	10000	113	10,206
Number of market studies conducted	1	1	1	1	4
Number of farmers accessing market information	3,500	450	4,800	3,120	11,870
Number of Multi-information Exchange fora held	3	2	2	4	11
Number of radio talk shows held	0	2	0	6	8
Number of FOs linked to Outputs Markets	47	83	420	355	905
Farm produce marketed collectively by FOs (metric tonnes)	12,525	10,000	1,650	29,400	53,575
and amount earned in USD	$927,700	$2,500,000	$135,900	$95,200	$3,658,800
Number of revenue generation and collective action models developed for farmers	3	2	3	4	-
Number of MoUs reached	23	4	3	4	34
Number of business plans developed	10	0	30	22	62
Number of women, people with special needs, and youth FOs trained on governance and leadership	13	99	26	8	146
Amount of credit access by FO linked to financial institutions	$11,200	$3,800	$7,800	$1,450,500	$1,473,300
Number of FOs involved (VSLA)	4	4	30	110	148
and amount saved	$16,600	$4,500	$15,500	$748,525	$785,125

SAFE/ THEME 4

SASAKAWA AFRICA FUND FOR EXTENSION EDUCATION HUMAN RESOURCE DEVELOPMENT

The Sasakawa Africa Fund for Extension Education (SAFE) began as a regional program of SAA and became a separate legal entity in 2002. SAFE performs, in parallel with SAA, a crucial capacity-building role by incentivizing mid-career Extension Agents (EAs) to gain academic qualifications in order to advance their career opportunities. These qualifications are obtained through degree courses across a network of participating African universities and colleges which, in turn, benefit through shared and targeted curricula in an industry – agriculture – that is vital for African economies.

Country Activities

ETHIOPIA

Supervised Enterprise Projects (SEPs) training seminar

In January 2017 a training seminar was organized for staff of Jigjiga University, in response to concerns expressed by faculty staff that they had different levels of understanding regarding SEPs. The training helped lecturers to develop a common and better understanding of SEPs and SEP proposal preparation, thereby ensuring that uniform guidelines are used to advise students.

National Deans' Forum

The annual National Deans' Forum meeting was organized in November 2017 and attended by Deans, Department Heads and Program Coordinators. The objective of the meeting was to review the progress of the program in the nine participating Ethiopian universities. Delegates discussed challenges pertaining to program sustainability and set out how to address them. Universities also agreed to revise their Memoranda of Understanding (MoU) with regional Bureaus of Agriculture and Natural Resources and Bureaus of Livestock and Fisheries, to account for the division of the former Ministry into two units. A new Chair and Secretary of the National Dean's Forum were also nominated to serve for the period 2018-2020.

MALI

Visit of SAA/ SAFE Executive Director

The Executive Director of SAA/SAFE, Fumiko Iseki, visited Mali in November 2017 and met with the representatives of the Rural Polytechnic Institute for Training and Applied Research (IPR/IFRA), Samanko College, the University of Ségou, and the SAFE Alumni Association. The visit was a good opportunity for Ms Iseki to gain first-hand experience of the work of SAFE Mali.

Value chain SEPs manual validation workshop

A validation workshop was organized in September 2017 at IPR/IFRA to validate the agricultural value chain-oriented SEPs manuals. Based on the discussions and the review of the manual, it was agreed that the manual would be uploaded to the university database for official use by faculty members.

Supervised Enterprise Projects

Supervised Enterprise Projects (SEPs) provide an opportunity for students to develop their expertise in specific aspects of their work. In essence, they narrow the gap between theory and practice – immersing students in valuable farmer-focused learning activities.

SEPs are organised into two phases. The first phase takes place at the end of the first year of study. Students then conduct an assessment of farmers' extension needs, while developing extension projects to address those needs. Farmers, employers, and lecturers (supervisors) are involved. During the second phase, which takes place after the completion of three semesters of study on campus, students return to the farming areas concerned to implement their projects independently over six-to-nine months.

Centre for Academic Development (CAD)

In January 2017 a new library and Centre for Academic Development (CAD) were established at the University of Ségou. The CAD is equipped with IT equipment and books, and will serve as a place where faculty members can interact, share experiences, and improve their professional efficiency. Groups of instructors from the "Farmer to Farmer" Volunteer Program of Winrock International served as trainers in the CAD.

NIGERIA

SAFE Management Committee meeting

The SAFE Management Committee Meeting was held in April 2017 and was attended by representatives from five partner universities, who presented reports on their various programs. The issue of the recent accreditation and mainstreaming of the SAFE Program by the National University Council (NUC) was presented and the approval document circulated. The functionality and income-generating capacities of the Enterprise Centres were elaborated and agreed upon. A major challenge across the universities is the issue of funding for SEPs supervision. The issue of publication in the online journal available for the SAFE community was further discussed and universities were encouraged to submit papers for consideration.

Enterprise Centres

Various efforts were made to expand the activities of the Enterprise Centres in Nigeria. The beekeeping enterprise at Adamawa State University began marketing processed honey products, and the University of Ilorin continued to operate activities along the value chain on the fish commodity, selling products to the university community. The income generated will help Enterprise Centres to sustain their activities.

SAFE Managing Director:
Dr Deola Naibakelao

Prof Oniang'o and Dr Deola Naibakelao with Benin Alumni Association members

New program

Interest in the SAFE program increased among universities in Nigeria during the academic year ending in 2017. One new university, the Michael Okpara University of Agriculture, Umudike, has approved the SAFE program in Agricultural Extension and officially requested technical back-up to start the program.

BURKINA FASO

The Department of Agricultural Extension at the University of Nazi BONI updated its degree program and and curriculum to incorporate new value chain courses. The SAFE program has helped to build the technical capacity of many Extension Workers (EWs) in the country, and graduates are currently working in different regions throughout the country on the effective implementation of rural development policies.

BENIN

The semi-distance mid-career program at the University of Abomey Calavi was inaugurated four years ago and is still ongoing. So far, 73 mid-career students (21 women and 52 men) were admitted. More than 1,000 EWs have expressed an interest in the program in order to improve their professional status and prospects.

GHANA

Admission numbers for the University of Cape Coast remained stable despite the effects of development issues such as decentralization and economic meltdown. The inflow and outflow of students have not been negatively affected over the years. The Department of Agricultural Extension selected 22 students for admission into the SAFE program for the 2017/18 academic year.

MALAWI

The Extension Department at Lilongwe University reviewed the two programs that it had previously offered: the BSc in Agriculture (Extension Option) and BSc in Agricultural Extension (mid-career program). As a result of the review the two programs were merged into one, with a focus on action research and experiential learning orientation, while the mid-career program influenced the design of the new curriculum, including its value chain orientation.

TANZANIA

A stakeholders' workshop was organized in January 2017 to bring together representatives of the three institutions concerned: the Ministry of Agriculture (MoA), Ministry of Local Government, and Sokoine University of Agriculture (SUA). The objective of the workshop was to address challenges that SUA was experiencing stemming from the cancellation of government grants to mid-career students. At the meeting the MoA expressed renewed interest in the SAFE program and requested that SUA review the MoU in light of the changed circumstances. The MoU was shared with the relevant Ministries for signatures.

Regional activities

Regional Networking Workshop

The SAFE technical Regional Networking Workshop was organized in Addis Ababa, Ethiopia, from March 13-15, 2017. Eighty participants were drawn from the universities, colleges, and Ministries of Agriculture of all participating countries.

Theme of the workshop

To align teaching to smallholder farmers' needs, with special focus on value-enhancement technologies and practices.

Background to the workshop

Based on the premise that smallholder farmers can enhance their incomes substantially by adding value to their products, SAFE partner universities and colleges have, in recent years, developed value chain-oriented curricula. However, a number of challenges have arisen in the implementation of the curricula, namely that there seems to be very little of practical value that is taught – beyond what smallholder farmers are already doing – that could enhance the value of their crops and crop products, especially from harvesting to marketing. There also seems to be limited practical value to what is taught regarding the value enhancement of livestock and livestock products at smallholder farmer level.

As a result, students tend to avoid the topic when they choose their SEPs, and the number of SEPs on livestock remains very low, meaning that farmers are missing opportunities for enhancing their incomes through livestock.

Purpose of the workshop

To share experiences on appropriate value-enhancing technologies and practices that can make a difference at the smallholder farmer level.

Specific objectives

The workshop was designed as a forum for:

- Employers to share their experiences with value-enhancing technologies and practices for crops and livestock among smallholder farmers, and;
- Universities to present examples of smallholder farmer-specific crops and livestock value-enhancing technologies and practices that they teach.

SAFE/THEME 4

SASAKAWA AFRICA FUND FOR EXTENSION EDUCATION
HUMAN RESOURCE DEVELOPMENT

Farmers from the Nyarakot Field School FBO in Tororo District, Uganda, whose enterprises include rice, groundnut, and maize production

Output from the workshop

- Most SEPs reports lacked a complete picture of value chain process
- SAFE-organized training resulted in an improved awareness of value chains among university lecturers
- SEPs are a partnership between the MoA and the University:
  - Universities and colleges need recommendations from employers to fit SEPs with employers' interests
  - SEPs should influence employers' recommended technologies and practices
  - The development of SEPs should incorporate indigenous knowledge
- There is a need to have value chain-friendly technology and practice manuals and compile an inventory of technologies and practices.

The workshop identified the following challenges in mainstreaming value chain concepts:

- Financing and capacity building
- Limited technology availability
- Inadequate information
- Lack of commitment on the part of employers

Recommendations

1. Value chain is now part of the university curricula, but it seems courses are fragmented in different departments. They should be taught in a way that captures the whole value chain process.
2. Institutionalize SEPs in the university system.
3. In addition to universities, colleges, and Ministries of Agriculture, involve other stakeholders (research centres, the private sector, students, farmers) in SAFE networking workshops.

Board Chairperson's visit to Benin

SAA/SAFE Board Chair Hon Prof Ruth Oniang'o visited Benin in March 2017 to review SAA/SAFE interventions. During the visit, Prof Oniang'o held a brief discussion with Dr. Delphin Koudande, Minister of Agriculture, Livestock and Fisheries.

The Minister briefed the team on the Government's agricultural development policy, while Professor Oniang'o indicated that SAA was happy to learn that it had contributed to improving the productivity of major food crops. She also noted that the semi-distance learning program at the University of Abomey Calavi is addressing the specific training needs of mid-career professionals, particularly women, and appealed to the Government to support the program.

Professor Oniang'o commended the Government for its efforts at streamlining its agricultural development program, but cautioned that it should include measures to address and mitigate the effects of climate change.

On March 21, 2017, the team led by former Beninese President Nicéphore Soglo and Professor Oniang'o met with current President Patrice Guillaume Talon. The team briefed the President on the activities and achievements of SG 2000 and SAFE in the country, and emphasized farmers' adoption of new technologies introduced by SG 2000 and the training of extension personnel. In response, the President acknowledged the positive legacy of SAA and its current value chain approach, and requested that the Minister propose a concrete plan for implementing the partnership.

ECOWAS Education Ministerial Meeting

SAFE participated in the meeting of Ministers of Education of the Member States of the Economic Community of West African States (ECOWAS) in Lomé,

Togo, from September 28-29, 2017. During the meeting, a presentation was made about the strategic role played by SAFE in bridging the gaps in the knowledge and technical skills of agricultural advisory service staff, as well as identifying the human capital needs in the region. At the conclusion of proceedings, the ECOWAS Ministers of Education recommended the dissemination of the SAFE training model for technicians in rural areas of Member States through partnerships between employers and training institutions. This recommendation has been forwarded for adoption by the Council of Ministers and by the Authority of Heads of State and Government.

Alumni Association

Alumni associations continued to participate in SEPs supervision and compiling graduates' tracer information. They have conducted their annual conferences and produced their annual newsletters. Representatives of the Alumni associations also participated in the regional technical workshop in Addis Ababa, Ethiopia.

Farmer Based Organisations (FBOs)

In Ethiopia, SAFE supported the national cooperative exhibition and bazaar organized by the Federal Cooperative Agency (FCO). FBOs displayed and sold their products, signed an MoU, and shared their experiences and learned from similar groups across the country. An exchange visit was also organized for eight FBOs to share experiences on drip irrigation techniques.

In Mali, eight Training of Trainer (ToT) sessions were organized for 374 EAs. More than 200 FBO members, including 23 members with special needs, were trained on principles of integrated fish and vegetable production, marketing, and packaging. Women's leadership across Multi Actor Value Chain Platforms (MAVCPs) has also improved. Out of nine MAVCPs, five are led by women. The project helped FBOs to get market information through SMS and via emails. Radio broadcasting as a means of communication is currently being used in Mali.

In Nigeria, 25 Disabled Assisted Demonstration (DAD) plots in Kano, Jigawa and Gombe states were used to train groups with special needs on agronomic practices and farm management. Six women enterprises also received training on business plan development. The project facilitated market linkages with relevant organisations, and business contracts (MoUs) were signed. Training sessions were organized for around 9,000 FBO members, and a total of 96 viable business plans were developed and documented for FBOs.

In Uganda, a district planning meeting was carried out in January 2017 and was attended by all stakeholders. The project organized a series of training workshops on enterprise selection and development for 215 groups, and trained 3,225 FBO members. The project also played a big role in strengthening savings and ensuring the good management of the groups' funds. In 2017, a total of $126,000 was saved by 185 FBOs. The project also supported four groups of people with special needs.

The end-of-project evaluation and stakeholders' validation workshops were also conducted in the four countries, and reports showed that the project has successfully achieved its objectives.

The way forward

SAFE continues to gain recognition both at the national and regional levels, and this calls for expansion and improved stakeholder participation and support. Henceforth, SAFE should therefore widen the pool of stakeholders at country-level to include the private sector, farmer groups and development organisations that are operating in the field of Agricultural Extension and Advisory Services. Representatives of these groups should be invited to key workshops and meetings at both national and regional levels.

Numbers of mid-career students as of December 2017

Mid-career B.Sc. and Diploma Courses	Graduated	Current	Total
University of Cape Coast, Ghana (B.Sc.)	550	19	569
Kawadaso Agric. College, Ghana (Dip.)	585	4	589
Haramaya, Ethiopia (B.Sc.)	524	79	603
Hawasa, Ethiopia (B.Sc.)	231	81	312
Makerere, Uganda (B.Sc.)	393	209	602
Sokoine, Tanzania (B.Sc.)	955	144	1099
IPR/IFRA, Mali (Maîtrise)	222	68	290
Samanko Centre, Mali (Diploma)	260	27	287
Ahmadu Bello, Nigeria (B.Sc.)	186	30	216
Bayero University, Nigeria (B.Sc.)	180	51	231
Abomey-Calavi, Benin (B.Sc.)	166	57	223
Bobo-Dioulasso, Burkina Faso (B.Sc.)	133	20	153
Lilongwe University, Malawi (B.Sc.)	125	25	150
Bahir Dar University, Ethiopia (B.Sc.)	124	64	188
Adamawa State University, Nigeria (B.Sc.)	24	75	99
Ilorin University, Nigeria (B.Sc.)	43	14	57
Mekelle University, Ethiopia (B.Sc.)	126	60	186
Wollo University, Ethiopia (B.Sc.)	93	40	133
Jimma University, Ethiopia (B.Sc.)	41	70	111
University of Ségou, Mali (B.Sc.)	-	34	34
Usmanu Danfodiyo Univ., Nigeria (B.Sc.)	-	44	44
Arba Minch Univ., Ethiopia (B.Sc.)	-	70	70
Semera Univ., Ethiopia (B.Sc.)	-	32	32
Jigjiga Univ., Ethiopia (B.Sc.)	-	16	16
Sub-Total	**4,961**	**1,333**	**6,294**
SCHOLARSHIPS	**Graduated**	**Current**	**Total**
Diploma	6	-	6
B.Sc.	33	-	33
M.Sc.	61	-	61
PhD	10	4	14
Sub-Total	**110**	**4**	**114**
Grand Total	**5,071**	**1,337**	**6,408**

THEME 5
MONITORING, EVALUATION, LEARNING AND SHARING (MELS)

The MELS Theme provides information on program quality and performance. It also oversees the work of the Communications Unit.

Staff training on Management Information Systems and Monitoring & Evaluation

MELS renewed the SPSS Statistics software license and acquired a new license for ArcGIS software for the four SAA countries. Training was provided for program staff and interns on various analytical software packages and data collection tools, and a regional workshop was convened to share experiences across countries on key activities implemented.

Needs assessments

In Ethiopia, the needs assessment covered 20 kebeles (wards) in five regions, and a further assessment was carried out under the Packard Foundation project. The assessments identified low levels of conservation and sustainable agriculture intensification practices. For AGRA project sites in Mali, needs identified included training, marketing, and access to credit. Major constraints included lack of Extension Agents (EAs), soil infertility, and the high cost of agricultural equipment. In Nigeria, a needs assessment was conducted in Gombe State to determine the requirements of women's groups for postharvest technologies. In Uganda, maize (42 per cent) and beans (26 per cent) were identified as the major cash crops. Key challenges include unpredictable weather conditions (75 per cent), and pests and diseases (25 per cent). Drying on the ground was more prevalent in Gulu (100 per cent) and Mukono (75 per cent). A majority threshed their crops using sticks (88 per cent), and 86 per cent carried out marketing individually.

Output tracking

In Mali, hermetic storage facilities contributed to maintaining seed quality, and farmers reported increased incomes. However, the accessibility and cost of hermetic storage equipment were identified as key challenges.

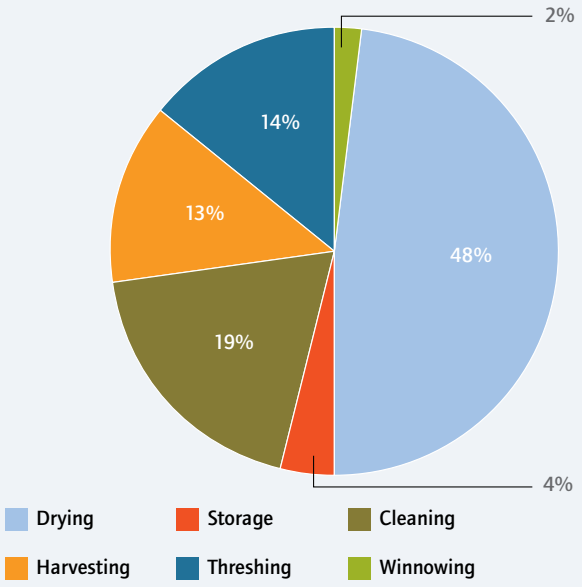
In Nigeria, MELS visited Kano, Jigawa and Gombe states and advised farmers to keep records of their costs, yield, and income data. MELS also visited women's groups in the Doho and Kwami Local Government Areas (LGAs), which are now making better sales on dawa-dawa. In Uganda, under the K+S KALI GmbH project, farmers in Apac and Dokolo are practicing line planting, although fertilizer application is still low. The main reasons cited for non-adoption were costly inputs and labour-intensive practices. Tarpaulins were mostly used for harvesting and drying, while 91 per cent of farmers are using motorized maize shellers. Reasons for non-adoption included the high cost and unavailability of shellers and PICS bags. Under phase 2 of the Vegetable Oil Development Project (VODP2), average yield for soya beans was 150kgs/ha.

Outcome monitoring

In Ethiopia, crop demonstrations created demand for improved technologies, although a weak input supply chain remains a challenge to technology adoption. In Mali, crop production was affected by low rainfall. However, some yields have been recorded for maize variety: Dembanyuma at Fanidiama, Tiola and Monzomblena. The millet variety NKO at Dacoumani PHTC had a yield of 1450 kg/ha, almost 50 per cent higher than the average yield of the area. Seventy-two per cent of respondents were potential adopters.

In Uganda, farmers received tailor-made training on confectioneries, and average annual income ranges from $50 to $387. Sixty per cent of farmers used improved seed and 20.3 per cent implemented pest and disease control. Individual selling was 71.2 per cent. Line planting was the most common technology adopted, with a 50 per cent uptake. Use of tarpaulin for drying was recorded by 48 per cent of respondents, whilst use of sieve nets for cleaning was recorded at 19 per cent.

Postharvest handling practices applied in Uganda



Impact assessments

An in-depth study was conducted in Ethiopia on the adoption and multiplier effects of promoted technologies. A Technology Option Plot (TOP) host-farmer trained an average of 16 farmers, and a Production Test Plot (PTP) host trained a further 12 farmers. Women Assisted Demonstration (WAD) hosts and Digital Green video viewers trained an average of five and three farmers respectively. A study on the use of threshers revealed that use of machinery reduced labour by 49 per cent. In Mali, some VSLA women testified: *"Thanks to VSLA I now have the financial means to trade"*, and *"VSLA has helped me to get my children treated when they are sick"*.

Theme Director:
Dr Kebba Ngumbo Sima

Focus group needs assessment in the village of Tiola, Sikasso Region, Mali, one of 11 PHTCs

In Nigeria, special needs farmer groups were trained on group dynamics and management, poultry keeping, small ruminant rearing, and horticulture. One member, Musa Kuturu, testified: *"The intervention gave us the supporting hand, I thought people with special needs are completely forgotten, I have more hope now"*. Economic analysis for dry season maize production in Kaduna and Kano States indicated average total costs of production/hectare as $556 and $519 respectively, and mean total outputs/hectare were 62,000 and 64,000 cobs respectively with a net profitability level of $3,749 and $2,147/hectare. In Uganda, an in-depth study on the role of CATs showed supply of inputs as the most popular type of support. Postharvest handling and agro-processing facilities purchased were tarpaulins (66 per cent) and PICS bags (18 per cent). Issues experienced included high cost of inputs (25 per cent) and unavailability of inputs (15 per cent), while the major challenges identified for CATs were low demand for agro inputs (26 per cent) and limited capital (23 per cent).

MELS Enumerator collecting data from a farmer in the Silte woreda, Ethiopia

Evaluations

In Nigeria, MELS participated in developing methodologies and approaches for the evaluation of two projects: the USAID-MARKETS II rainy season Maize project in Kaduna, and the AGRA project in both Kaduna and Kano. In Uganda, 90 per cent of farmers who responded to an evaluation of training given by EAs felt that the sessions were relevant to them, and 93 per cent reported that the subjects taught (harvesting, drying and shelling) were easily understood. Eighty per cent of the farmers who took part reported that it was easy to apply the skills and knowledge acquired from EA training. An evaluation of promoted postharvest and agro-processing equipment has been initiated in Mali and is ongoing.

Knowledge management – documentation and sharing

Quarterly staff review meetings in all countries are used to present study findings. Media field days were facilitated across all countries, and in Mali, pamphlets covering a success story on SAA/AGRA intervention were distributed. In Nigeria, as part of the Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL), crop guide manuals were published for groundnut, soya, maize and rice. An extension manual was also published under the Federal Government's N-Power project. In Uganda, feedback meetings were carried out at district level to share study findings.

ETHIOPIA
Country Report

In 2017 SG 2000 Ethiopia implemented six projects in five regional states, covering more than 55 woredas and 180 kebeles. These were the Core Fund, Nutritious Maize for Ethiopia (NuME), Digital Green (DG), the Alliance for a Green Revolution in Africa (AGRA), Purdue Improved Crop Storage (PICS) 3, and Farmer-Based Organisations (FBOs) projects, all of which are aligned with governmental policies and strategies. The climatic conditions throughout the year were favourable for production and harvesting operations, although there were some irregularities in the onset and distribution of rainfall in the Amhara, Tigray, and Southern Nations, Nationalities, and People's Regions (SNNPR).

Crop Productivity Enhancement (CPE)

The main interventions for the 2017 cropping season were capacity development training of Extension Agents (EAs) and farmers, establishing Good Agricultural Practices (GAPs) on new technologies and methods, and undertaking field days and experience-sharing events to raise awareness and demand. A total of 1,319 EAs and 2,157 farmers were trained in pre and mid-season sessions. Following this training, a total of 1,836 demonstrations focusing on GAPs, Community Variety Plots (CVPs), Quality Protein Maize (QPM), NPS fertilizer, and Urea Super Granule (USG) were implemented in 41 woredas. CVPs were established on Farmers' Training Centers (FTCs) to enable farmers to evaluate differences and select the crop varieties and technologies that best suit their needs. Ten Community-based Seed Multiplication (CBSM) groups incorporating 240 farmers were organized in 10 woredas, and multiplied 225 metric tonnes (mt) of different improved seeds. A total of 228 field days were organized for 55,563 participants, including 52,642 farmers. An experience-sharing visit was organized for 174 farmers, extension staff and officials from 18 woredas, with the aim of scaling-up the introduced technologies.

Postharvest and Agro-Processing (PHAP)

The Postharvest and Agro-Processing (PHAP) Theme intensified the promotion of multi-crop threshers, maize shellers and hermetic storage systems, including PICS bags and metal silos. More than 6,000 demonstrations and 18 field days were organized for 67,045 farmers and officials (including 24,013 women). Training of trainers (ToT) on postharvest handling and storage management was given to 251 extension staff, who in turn trained 66,246 farmers (including 24,207 women). The Theme also organized five youth groups (comprising 45 members) to provide threshing and shelling services to farmers. Members of the groups were trained on enterprise management and machine operation and handling, and participated in an experience-sharing visit to observe and learn shelling and threshing businesses. Repair and maintenance training was conducted for 13 technicians to support the service provision by youth groups. These youth groups went on to serve 233 farmers, and earned a total income of 85,000 Birr in one threshing season. Nutrition training was conducted

Officials from the Ministry of Agriculture and Natural Resources observing the results of PICS bags during a field day in Mecha, Amhara, Ethiopia

for 108 rural women to acquaint them with basic knowledge on nutrition, formulation of complementary food for infants (7-23 months), and diversified family food consumption.

Following the successful promotion of PICS bags and postharvest machines, 200,000 bags were sold to farmers, and the Ministry of Agriculture and Natural Resources (MoANR) deployed 100 maize shellers, 96 multi-crop threshers, and 96 hand-held crop harvesters for demonstration. MoANR has also scaled-up the SG 2000 model of organizing youth group service providers for promotion of mechanization technologies. To date, 35 youth groups with 525 members have been established. The World Food Programme's Purchase for Progress (P4P) initiative has purchased 35 maize shellers and 35 grain cleaners; the Clinton Foundation has purchased 50 maize shellers; and the Food and Agriculture Organization of the United Nations (FAO) has purchased four maize shellers, four multi-crop threshers, 11 metal silos and 1,800 PICS bags for demonstration, and has promoted hermetic storage methods in 14 woredas of the Benishangul-Gumuz region.

Public-Private Partnerships and Market Access (PPP&MA)

In 2017, PPP&MA joined with other SAA thematic areas in their unreserved efforts to promote market-oriented agriculture among smallholder farmers in SAA/SG 2000 project intervention areas. Two long-term and four intermediate outcomes were designed to increase the incomes of smallholder and emerging commercial farmers. The aim was to train 50 EAs, assist 4000 smallholder farmers to access Management Information Systems (MIS), capacitate 62 Value Chain Actors (VCAs), formulate the capacity development needs of 90 Farmer Organisations (FOs), link 50 FOs to VCAs, and facilitate the access to market of 5000mt of smallholder farmers'

produce. PPP&MA was able to exceed some of these goals and ultimately trained a total of 66 experts and 70 VCAs, facilitated the access of 5000 farmers to MIS, established and strengthened 98 FOs, and created market linkage for FOs that were able to supply 6635mt of produce. It also published five best practice guides and organized six field days, and supported 116 FOs through the FBO project.

Promoting video-based extension approach

The DG scaling-up project was implemented in five woredas of the Amhara region to promote Video-Based Extension (VBE) systems. Two woreda Steering Committee Review Meetings were attended by a total of 42 participants. Throughout 2017 the project has provided technical skills training for 23 woreda Video Production (VP) members and 326 EAs, and facilitated the production of 38 seasonal videos. These videos were screened to 24,313 targeted farmers, 5,984 of whom adopted the technologies exhibited. All project woredas have now incorporated the technology in their regular monitoring checklists and allotted 10-20 percentage points for the DG activities to evaluate the performance of extension staff. Frequent quality assessments and supervision have helped to enhance performance and improve the quality of video and video dissemination sessions.

Monitoring, Evaluation, Learning and Sharing (MELS)

MELS continued to generate evidence to deepen the impact of its work. To enable and measure impact, MELS coordinated the development of the new Country Strategy Paper 2017-2021 and established the Monitoring and Evaluation framework for the Country Strategy Paper.

In order to ensure needs-based interventions in both core and extra-core projects, MELS coordinated joint needs assessment surveys involving all program Themes, the findings of which enabled Themes to implement value chain extension activities. MELS also undertook outcome monitoring surveys of core project activities on former intervention locations (2014-2017). The survey revealed that technology demonstrations and field days created demand for improved technologies and practices, and created opportunities for capacity-building of extension staff at both kebele and woreda levels. Prospects for the adoption and use of technologies is challenged by a weak input supply chain and system, with the exception of PICS bag promotion and the youth-based thresher/sheller service provision. The sustainability of the latter requires diversification of the thresher/shelling service business to enable the youth groups to generate income throughout the year. The output market linkages involved capacitating FOs through training, exposure visits, and participation in market linkage forums. However, the FOs are hampered by a lack of initial capital to buy inputs, and limited storage capacity to engage in output marketing.

MELS shared two working papers and coordinated documentation activities for two exhibitions and symposia organized by government ministries. MELS also coordinated documentation activities for the 30th anniversary of SAA in Africa.

External/donor relations

SG 2000 Ethiopia continued to enjoy a good working relationship with MoANR, the Ethiopia Institute of Agriculture Research and Regional Institutes (EIAR), the Agricultural Transformation Agency (ATA), the Federal Cooperative Agency (FCA) and Regional Offices, international agricultural research centres, partners (see table below), and private and public enterprises.

Awards received

In 2017 SG 2000 Ethiopia was recognized for its contribution to strengthening FOs and agricultural professional societies, and received awards from the FCA, the Shashamene Association of Persons Affected by Leprosy, the Ethiopian Society of Postharvest Management (ESPHM), the Ethiopian Association of Agricultural Professionals (EAAP), and the Crop Science Society of Ethiopia.

Summary of new extra core projects

Project name	Donor	Duration	Amount in USD	Project overview
Purdue Improved Crop Storage -3 Bags project (PICS)	Purdue University	August 2015 - August 2017	$492,653	PICS bags were introduced and promoted on a large scale to reduce crop storage losses. Farmers have widely adopted the bag.
Scaling up K fertilizer	AGRA	October 2015 - March 2017 (no-cost extension until March 2018)	$562,326	To establish demonstration plots on use of potassium (K) fertilizer to increase the agricultural production and productivity.
Nutritious Maize for Ethiopia (NuME)	CIMMYT/ DFATD	2011 - 2018	$2,517, 100	Widespread and sustainable adoption, production and utilization of Quality Protein Maize was achieved to reduce under-nutrition, especially among young children.
Digital Green	Digital Green Foundation India	January 2014 - April 2017 (no-cost extension until April 2018)	$365,208	IT is used as a tool to improve efficiency of extension service delivery through building the capacity of Development Agents (DA) on video production, dissemination among group of farmers.
Needs assessment for promotion of Conservation Agriculture	Packard Foundation	September 2017- January 2018	$50,084	The needs for widespread promotion of CA for sustainable agriculture and natural resource use was determined.

MALI
Country Report

SAA/ Mali strengthens its Postharvest and Trade Centre approach

The year's activities began while SAA was developing its second Strategic Plan (SP). The Postharvest and Trade Centre (PHTC) extension model is the backbone of the Mali SP, and was developed and implemented during the first SP (2012-16) to help farmers add value, get premium rates for their products, and move out of poverty.

In 2017, this concept progressively evolved to become the Production, Postharvest and Trade Centre, so as to include the production segment and embrace a comprehensive value-chain approach. Eleven such centres were operated in 2017 across our four intervention regions: Kayes, Koulikoro, Sikasso, and Ségou. At each PHTC, farmers' needs are assessed to identify entry points, and Farmer Learning Platforms (FLPs) including Community Demonstration Plots (CDPs), Community Seed Plots (CSPs), Technology Adoption Plots (TAPs), Model Adoption Plots (MAPs), agro-processing enterprises and input shops were all implemented. Government Extension Agents (EAs), field technicians, and community-based facilitators were given instruction on training other smallholder farmers. Media field days, inter-Theme field visits, equipment and input supply to farmers, feedback meetings, stakeholder meetings, a 30th anniversary celebration, and trade fairs were organized in collaboration with national partners. All these activities were monitored by the MELS unit and by the National Directorate of Agriculture. In this review report, we highlight some of the key achievements of 2017, and other important information.

Achievements

Crop Productivity Enhancement (CPE)

SAA identified community need for Good Agricultural Practices (GAPs) including seed treatment, row planting, and fertilizer management (both method and period of application), and introduced these to farmers through CDPs and CSPs in all areas, strengthening farmers' capacity to apply these practices. In the driest areas, Climate Smart Technologies (CSTs) such as use of early maturing crop varieties, seed priming, seed treatment, and water management (ridging, bonding and contour ploughing) were demonstrated. In total, 480 kits of inputs (Fig. 1) were prepared and distributed to farmers to set up 480 CDPs (240 women-led and 240 men-led) across the four intervention regions. Early cessation of rains has caused yield reductions or zero harvest in the drier areas (Fig. 1 & 2; Table 1).

Handover of equipment to women farmers from Koloniboudio at a ceremony in Kolonto, Mali

Fig. 1: **Number of production kits distributed to host farmers per crop**

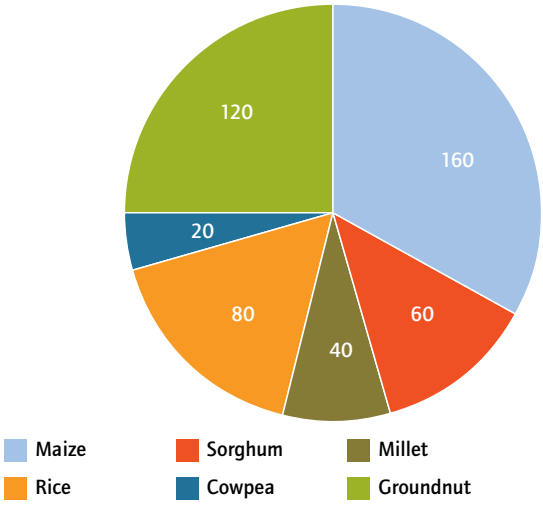


Fig. 2: **Grain yield [kg/ ha] of men CDPs**

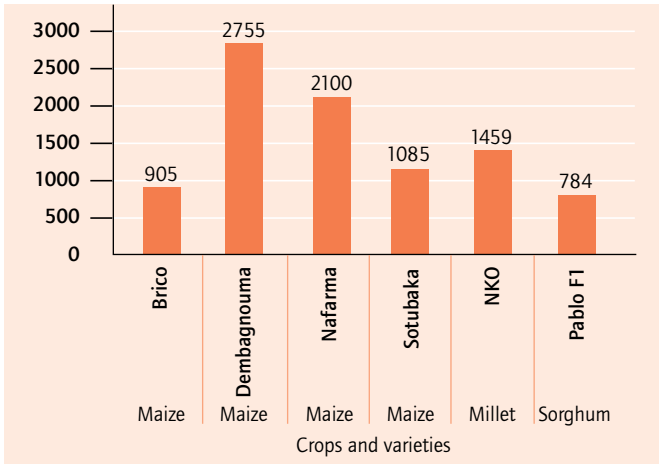


Table 1: **Average grain yield [kg/ ha] of women CDPs**

Crop	Variety	Grain yield [kg/ha]	Potential grain yield [kg/ha]	Percentage achievement
Groundnut	**Fleur 11**	**1123**	**1200**	**93.58**
Cowpea	**Korobalen**	**600**	**2000**	**30**
Rice	**Nerica 8**	**1074**	**4000**	**26.85**

Country Director:
Dr Sokona Dagnoko

Women's group from the rainfed rice demonstration plot in Zampedougou, Sikasso Region, Mali

Postharvest and Agro-Processing (PHAP)

Interventions encompassed the promotion and demonstration of small pre-harvest machinery (power tillers, motorized planters, etc.), and postharvest and agro-processing operations (rice mills, cereal grinders, fonio de-huller and cleaner, etc.). EAs, farmers and processors were trained on the proper use of these machines, and communities were supported to develop new food recipes. Key achievements include reaching 10 of 12 PHTCs; introducing a mobile maize sheller to 255 farmers (190 women and 65 men); demonstrating a manual micro-dose seed planter and a groundnut decorticator to 200 farmers (110 men and 90 women); and demonstrating hermetic storage tools (plastic tanks and PICS bags) to 170 farmers (including 71 young people).

Awards & Certificates

Recognition certificate of the Government of Mali (March 2017)

Business development for farmers and agro-processors

SAA promoted a variety of different business models including input shops, warrantage, trade fairs, and collective marketing. SAA has been particularly successful in warrantage, through which 80 Farmer Organisations (FOs) were supported to store 10,000mt of cereal awaiting an increase in market prices, secure a credit of $200,000, and a premium price of 8 per cent. A women's group from the village of Sakoiba (Ségou region) was supported with shea butter processing kits and training, which enabled group members to produce and market two tonnes of butter and 500kg of soap, thus creating further job opportunities.

Monitoring, Evaluation, Learning and Sharing (MELS)

SAA's evidence-based decision-making approach is founded upon needs assessments, output and outcome monitoring, impact assessments, and intervention evaluations. In 2017, seven needs assessment surveys were conducted in seven new intervention sites.

Selected publications

1. Warrantage business model - Case study of Fanidiama; SAA/Mali; September 2017
2. Impact assessment of Village Savings and Loan Associations (VSLAs), SAA/Mali; December 2017
3. Output monitoring of Crop Productivity Enhancement activities conducted in 2017. SAA/Mali; September 2017
4. Public and Private Service providers' database in Mali: Experiences of SAA Mali from 2012-2016

Development of new partnerships

Partner	Purpose of partnership
Netherlands Organisation for Scientific Research NWO/WOTRO	Seed sector development / food security
Food & Business Knowledge Platform – F&BKP	Food and nutrition security
Royal Tropical Institute - KIT	Seed sector development / food security
Netherlands Embassy in Mali	Food security
Integrated Seed Sector Development in Africa- ISSD/AFRICA	Seed sector development / food security
Embassy of Japan in Mali	Food security

Summary of new extra core projects

Project Title	Partner/donor	Duration	Amount (Entire project)	Project overview
Developing economically viable foundation seed models for vital food security in Mali	Netherlands Organisation for Scientific Research - NWO	2017 - 2020	$444,795	Through co-creation with national and international partners, we will test three foundation seed models for efficacy, effectiveness and sustainability. The best performing models will be promoted and actors' capacities strengthened.

NIGERIA
Country Report

The visibility of SAA in value chain extension continues to improve through various interventions conducted by SAA, including the United States Agency for International Development (USAID) MARKETS II Project, N2AFRICA, AGRA, the Africa Cassava Agronomy Initiative (ACAI), Taking Maize Agronomy to Scale in Africa (TAMASA) and our partnership with the Japan International Cooperation Agency (JICA). In 2017 we also witnessed the completion of some extra-core projects, including USAID MARKETS II and the AGRA soil health project.

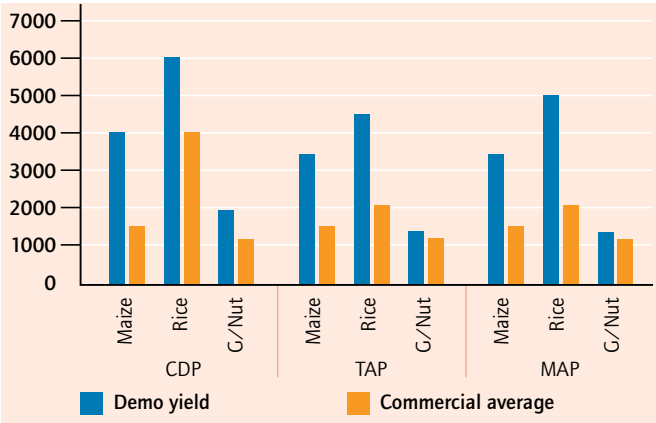
Stability in the value of the local currency throughout the year was reflected in the price stability of some commodities, including farm inputs. Extreme climate variability predisposes production systems to shocks and stresses; last year saw early rains in the country, but the premature cessation of the rains coupled with the early setting of the cold harmattan affected the yields of late-sown crops, especially rice. Thus, it is becoming increasingly important to understand the complexity of factors and processes that constrain or enable farmers' ability to build resilient livelihoods. The ability of farmers to access and control the resources needed to adapt to shocks and stresses and become food secure is imperative. Two Program Officers (POs) were recruited for Themes 3 and 5, and 18 agricultural students from universities were welcomed on industrial placements.

Kick-starting a new Strategic Plan (SP)

Crop Productivity and Extension

The need for a knowledge-based agriculture is now more urgent than ever before, as development is increasingly shaped by the trends of urban markets, globalization, changing consumption patterns, land and water constraints, climate change, the need for renewable energy, and emerging pests and diseases. Key to SAA's successes is continuously sourcing new and proven technologies and showcasing them to farmers through demonstrations and in-situ training. Based on identified production constraints, a total of 420 Community Demonstration Plots (CDPs), 1575 Technology Adoption Plots (TAPs) and 210 Model Adoption Plots (MAPs) were proposed. All of the proposed TAPs have been established, as have 396 CDPs and 289 MAPs. Similarly, the ACAI project established 259 on-farm trials to address site-specific fertilizer recommendations on cassava. The yields from demo plots compared favourably to those from community plots (Fig. 1). SAA also printed 3,000 Crop Production Guides on Rice and 2,000 copies of a maize Urea Deep Placement (UDP) manual for distribution to EAs and farmers. EAs were able to train 10,500 farmers on Good Agricultural Practices (GAP) and organized three major and 105 minor field days, attended by a total of 3,376 farmers (2,450 men and 926 women).

Fig. 1: **Average maize, rice and G/nut yield data from CDP, TAP and MAP plots in 2017 rainy season**



Postharvest Handling and Agro-Processing

Demonstration and adoption of Postharvest Handling and Agro-Processing technologies can contribute to farmers' food security, nutrition, and incomes. SAA is cognizant of socio-cultural restrictions and addresses skill gaps and any economic or technical constraints by sourcing, testing, and promoting technologies among smallholder farmers, while upgrading the knowledge and skills of fabricators. Needs assessments conducted in 15 new locations saw 10,687 farmers trained on postharvest handling and storage techniques, while demonstrations on hermetic storage, soybean and millet threshers were conducted in Kano and Kaduna States, helping to solve an age-old challenge faced by farmers. Addressing nutrition and food safety, SAA trained 90 participants on preparation of nutritionally balanced complementary foods for infants and adults using local ingredients from maize, rice and sorghum, and raised the capacities of 29 machine operators and 38 technicians – as well as six women's groups – on maize processing and rice milling. A total of 500 training manuals and 1,000 pamphlets on postharvest handling of maize and rice were produced and distributed to users.

Business development and partnerships

Recognizing collaboration as an effective solution to the myriad agricultural development challenges, SAA maintains partnerships that leverage combined skills, assets, technologies and resources to deliver impactful interventions for smallholder farmers. SAA has recorded successful partnerships with governments, USAID, JICA, processors, universities, research centres, and donors, all to the benefit of smallholder farmers. A directory of credible public and private service providers was updated and shared with value chain actors to guide partnerships for effective resource use. As farmers' access to input/output market information is limited, SAA established 30 Market Information Centres (MICs) staffed by 30 Market Information Traders (MITs), and raised the capacities of 120 EAs to enable them to mentor farmer groups to

Country Director:
Dr Sani Miko

Tudun Wada collective marketing center in Kano state, Nigeria

be more functional, effective, and sustainable. Collective action capacity was boosted through training sessions for 48 participants on agribusiness, group dynamics, enterprise management, village savings and loans, and market access. A discussion platform for 30 farmer representatives and 30 output market actors was created, which resulted in 1,650mt of produce worth $135,836 supplied to traders and processors.

Strengthening the extension system

Effective extension improves farmers' access to innovations, linkages and information, which in turn leads to increased yields and incomes. Trained agents ensure the dissemination of best practice, helping to organize cooperatives or implement secondary programs in local communities. Nigeria continues to spend huge resources in promoting agriculturally oriented interventions through agricultural extension services, though EAs receive limited training and infrequent field visits, meaning that the complexities of agricultural issues are not easily addressed and key steps in the farmer advisory process are skipped. Thus, 105 EAs, six zonal coordinators, and three state coordinators were trained on best-bet agronomic practices, while EAs also received step-down training in intervention communities, reaching 6,300 farmers. SAA staff were also trained by TAMASA and the International Plant Nutrition Institute (IPNI) on the Nutrient Expert (NE) decision support tool. This training was then passed on to 48 EAs, 25 of whom were each supported to establish 25 validation plots. Perfecting the use of this app will enhance e-extension service delivery, reaching a substantial number of farmers in a cost-effective and efficient manner.

Tracking our progress

Effective monitoring and evaluation practices determine the inherent benefits, risks, and limitations of SAA interventions. They provide a consolidated source of information on project progress, allow collective learning from experience, build on expertise and knowledge, and generate reports that contribute to transparency and accountability. This approach also reveals mistakes and offers paths for improvements, provides a basis for questioning and testing assumptions, offers a way to assess the crucial link between implementers, beneficiaries and decision-makers, and contributes to institutional legacy data and provides a basis for raising funds and influencing policy. In 2017, several actions were carried out ranging from training and supervision to needs assessment and monitoring activities. To increase visibility, SAA broadcast a weekly radio program and documented key achievements, and shared results and lessons learned with staff, partners, communities and key stakeholders through visual, print and audio means. SAA plays an important role in the formal education of agriculture students, and this year the MELS Team coordinated the training of 18 IT students. MELS has played a leading role in the development of the country strategy paper for the new strategic plan.

Conclusion

The new SP has a lot to offer smallholder farmers, considering the level of preparations and valid suggestions from the evaluation report of the previous SP implementation. We are optimistic about forthcoming extra-core projects which will expand our reach and impact.

Summary of ongoing extra-core projects in 2017

Project name	Partner/donor	Duration	Amount	Project overview
African Cassava Agronomy Initiatives (ACAI)	ACAI (BMGF related program) Phase I	2 years	$15,000 for 2018 training cost	Phase II involves piloting of software and upscaling by SAA beginning in June 2018 and running until December 2019.
Taking Maize Agronomy to Sub-Saharan Africa (TAMASA)	TAMASA (BMGF related program led by IITA) Phase I	2 years	Not Applicable	Phase I involves field testing and software development

UGANDA
Country Report

The year 2017 was significant for SAA in Uganda, which saw the SG 2000 country program implement interventions in eight districts under the core Nippon Foundation (NF) project. Two of these were under the Growth for Uganda project funded by K+S KALI-GmbH, three were conducted as part of the Vegetable Oil Development Project2 (VODP2) project funded by the International Fund for Agriculture (IFAD) and the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), and a further eight were under the NF-funded Farmer Based Organisation (FBO) project. Uganda was also delighted to host the SAA/SAFE Board meeting, and celebrate Hon Professor Ruth Oniang'o's Africa Food Prize with MAAIF.

Despite the prolonged drought and fall armyworm infestation experienced in the first season, the second season resulted in good crop yields and achieved the set targets for 2017. The year also saw SG 2000 Uganda place second in the annual National Agricultural Show, earning a trophy and certificate, and host a delegation from K+S led by CEO Dr Burkhard Lohr and Professor Andreas Gransee.

Crop Productivity Enhancement (CPE)

Access to information and practical training is critical for smallholder farmers and the process of technology adoption. To this end, SG 2000 Uganda has distributed 4,220 copies of learning materials to farmers, partners and Extension Agents (EAs) on maize, soybean, rice, bean, millet, sunflower and simsim, as well as flyers on fall armyworm and posters on good gender practices.

A total of 403 EAs were trained in agronomy, irrigation, crop insurance, soil fertility, water management, Climate-Smart Agriculture (CSA), gross margin analysis, and farm and business planning. In partnership with the National Agricultural Research Organisation (NARO) and International Plant Nutrition Institute (IPNI), SG 2000 Extension Workers (EWs) and Uganda Soil consortia stakeholders were trained on plant nutrition. SG 2000 staff and 34 EAs were trained on yield data collection techniques and data analysis, and staff and EWs were also trained in Urea Deep Placement (UDP) by CPE Director Dr. Fofana to address the challenges of climate change. A total of 186 EAs (117 men and 69 women) were trained by NARO on commercial community seed production, while four demonstration gardens were established on maize, and 47 seed multiplication gardens established for rice, soybean and groundnuts. In collaboration with MAAIF, 33 entrepreneurs (23 women and 10 men) received training on the safe use of agro-chemicals and established agro-input shops. EAs and SG 2000 staff also trained 20,254 farmers (11,240 men and 9,014 women), including host farmers for Community Demonstration Plots (CDPs) and adopters. Group training by Community-Based Facilitators (CBFs) reached 34,821 farmers (18,945 women and 15,876 men), while 7,108 (3,849 men and 3,259 women) used the Mobile Farmer Training Centre (MFTC). Use of improved inputs has increased, more input shops have been established, and 11 treadle pumps were acquired by farmers.

Crop Community Demonstration Plots (CDPs), Technology Adoption Plots (TAPs), and Community Practices (CPs)

Under the NF project a total of 1382 CDPs, eight Community Variety Plots (CVPs), 16 seed priming and 36 Seed Multiplication Plots (SMPs) were established, in addition to 266 CDPs under VODP2 and 480 under K+S, using drought tolerant (DT) varieties for maize, soybean, rice, beans, groundnuts and fertilizer. 38ha of soybean were planted by adopters under VODP2, while manual weeders and planters were also demonstrated. At the National

SAA Theme Directors, SG 2000 staff and District local government officials hosted by Nyarakot rice farmers' group at the postharvest centre in Tororo, Uganda

Agricultural show, PHAP technologies and Climate-Smart Technologies (CSTs) and practices such as Digital Terrain Models (DTMs), ridging, mulching, basins, and small-scale irrigation attracted 42 schools, 54 farmer groups and individual farmers. Two sets of field days were organized: greenfield days, attended by 408 farmers (220 women and 188 men), and brownfield days, which attracted 2,483 farmers (1255 women and 1228 men), agro-input dealers, off-takers, and irrigation and insurance companies.

Postharvest Handling and Agro-Processing (PHAP)

Use of proper postharvest handling practices and technologies is critical to ensuring that farmers obtain premium prices for their products. Twenty-two PHAP technologies were demonstrated to 24,878 farmers and eight cribs were established for demonstration, resulting in the adoption of 94 various maize shellers, eight motorized groundnut shellers, 389 plastic silos, 4,592 PICS bags, 135 tarpaulins and 11 cassava chippers. A total of 348 (199 women and 149) store attendants, farmers, EAs and agro-processors were trained on storage management, while 405 (227 men and 178 women) EAs, produce dealers and CDP host farmers received training from Rural Producer Organisations (RPOs). Twenty-four youth technicians were also trained in quality welding and fabrication.

Four agro-processing centres for rice and maize were established, and 10 machine technicians were trained on machine operation, maintenance, and record keeping. Training on postharvest handling and storage was conducted for 91 EAs (67 men and 24 women), 126 CBFs and 488 host farmers (330 men and 284 women) who in turn trained 33,331 farmers (18,847 women and 14,484 men) and 343 rice farmers (213 men and 130 women) on rice postharvest handling practices. Training was also given to 212 (199 men and 13 women) Private Service Providers (PSPs), machine operators, and technology adopters. Ten ox-ploughs were awarded to an organized cassava agro-processing group by the National Agricultural Advisory Services (NAADs). The major challenge remains the high cost of postharvest technologies and supply of poor quality grain to market.

Public Private Partnerships and Market Access (PPP&MA)

With limited government resources available, partnerships between the public and private sectors and development agencies are promoted to drive growth in the agricultural sector in Uganda. Such partnerships have borne fruit, such as that with K+S, which resulted in the establishment of the first fertilizer blending factory in Uganda. The PPP&MA Theme focused on building the capacities of farmer groups and associations and linking them to various value chain actors. Training on farm planning, enterprise selection and business plans was conducted for 93 EAs, who in turn trained a further 1,422 individuals (803 men and 619 women) under the NF and K+S projects, and 215 groups under the VODP project. Primary groups and associations developed 398 business plans, and skills training in agribusiness and Village Savings and Loans Associations (VSLAs) methodology was conducted for 275 farmers with special needs (145 men and 130 women), 270 leaders, and 157 EAs (113 men and 44 women), who in turn trained a further 8,400 farmers (5,312 men and 3,088 women). A total of 250 groups each received VSLA cash boxes, 271 groups and 20 CATs opened bank accounts and accessed loans worth $1,458,541, and four groups were given $1,389 each from the Government livelihood grant. Conflict management sessions were also conducted for 469 farmers' groups.

In total, 592 groups were able to acquire improved seed through the CATs model: 20mt of white sorghum, 53.14mt of maize, 8.294mt of beans, 0.012mt of groundnuts, 2,875mt of soybeans and 0.004mt of sunflower seeds. They also accessed 27.03mt of fertilizer, 800 bags of cassava cuttings from NAADs, and maize seed worth $18,000 from input companies. Nine FOs, including two One Stop Centre Associations (OSCAs), were linked to off-takers and the World Food Programme (WFP). The CATs model is now being scaled-up by other development partners, including USAID and input companies.

Monitoring, Evaluation, Learning and Sharing (MELS)

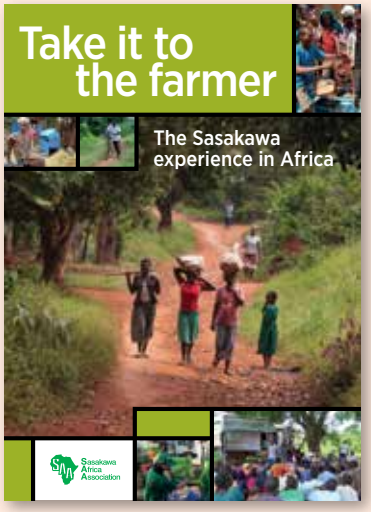
MELS has continued to guide SAA in tracking progress and facilitating decision-making. A needs assessment, impact studies, outcome monitoring, documentation of success stories and feedback meetings were all undertaken. Four success stories were documented at media field days, and testimonies from farmers and PSPs in the field were also recorded.

Summary of ongoing extra-core projects in 2017

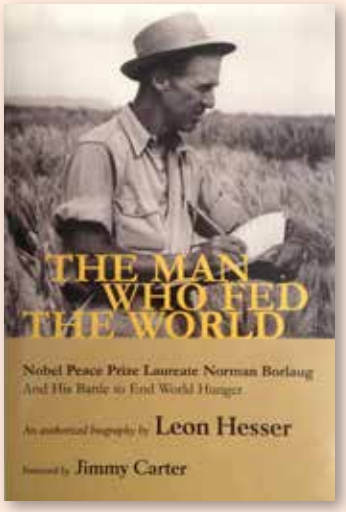
Project name	Partner/donor	Duration	Amount	Project overview
Growth for Uganda	K+S KALI GmbH-Germany	5 (2013-2018)	EUR 1,658,200	Farming as a business for smallholder farmers. Maize productivity increased from 1000Kg/ha to 5,000Kg/ha; Postharvest loss reduced (from 35% to 15-17%). Groups/FBOs linked to more than 40 off-takers
VODP2	IFAD/MAAIF	2 (2016-2018)	USD 378,857	Build extension capacity for production and postharvest handing of oil seed crops; Promote supply of affordable vegetable oil products nationally and internationally; Support 215 smallholder farmer groups to improve their incomes

PUBLICATIONS

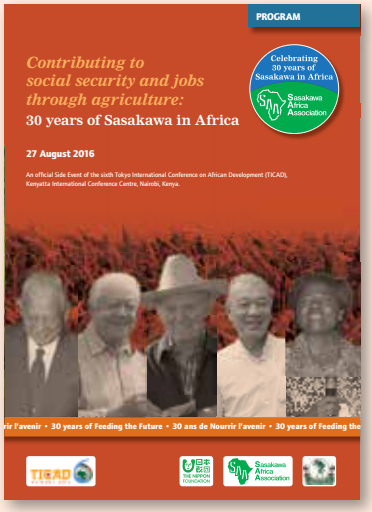
A number of publications and reports are available from SAA.
To access the full range of our publications, newsletters and videos, please visit www.saa-safe.org



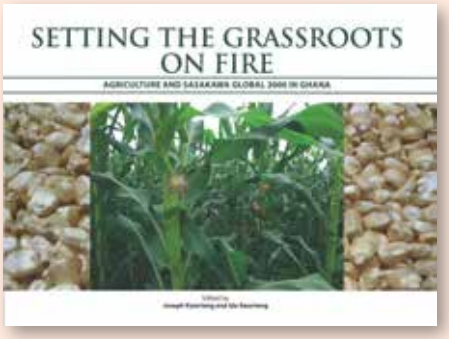
Take it to the farmer – The Sasakawa experience in Africa



Biography of SAA co-founder Norman E Borlaug



Program produced for SAA event at TICAD 2016



Setting the Grassroots on Fire Agriculture and SG 2000 in Ghana

SAA Annual Report 2016

SAFE Annual Report 2016

Voices from the Field

SAA is an organisation that works at grassroots level to improve the livelihoods of smallholder farmers. *Voices from the Field* gives examples of such work – short case histories on individual members of the farming community and the impact that SAA and SAFE have made on their lives. They are published on a regular basis and are written and researched by SAA's communications unit in Addis Ababa.

To subscribe, please visit our website.

Voices from the Field – Mali

Voices from the Field – SAFE

FINANCIAL REPORT HIGHLIGHTS FOR SAA AND SAFE 2017 *US dollars*

SAA Overview	2017 ($US)
Approved Budget	$9,451,045
Total Ordinary Income	$10,079,610
Total Ordinary Expense	$7,608,918
Total Net Assets	$3,110,674
Cash balance at the end of the year	$5,123,020
Details of income	
NF Grant	$4,656,903
K+S (Uganda)	$473,194
VODP (Uganda)	$101,389
NuME (Ethiopia)	$182,649
MARKET II (Nigeria)	$119,204
Other Grants	$230,640
Other Income	$88,430
Contribution Received	$4,227,202
Details of expense	
NF Core Project	
Operating Expenses	$3,832,045
Management Expenses	$2,488,651
K+S Project	
K+S (Uganda)	$320,982
VODP Project	
VODP (Uganda)	$133,677
NUME Project	
NuME (Ethiopia)	$188,149
MARKET II Project	
MARKET II (Nigeria)	$161,166
Others	
Others (Ethiopia/Mali/Uganda/Nigeria)	$484,248

Note: *Due to the integration of SAA/Tokyo and SAA/Geneva, the Japanese accounting standard for public incorporated foundations has been adopted, which is based on accrual basis accounting from January 1st, 2017. Therefore the financial figures for 2016 which were based on cash basis accounting are not showed in this report.*

SAFE Overview	2017 ($US)
Approved budget	$2,216,000
Actual Spending	$2,151,358
Actual Receipt	$2,216,000
Cash balance at the end of the year	$418,086
Details of receipt	
NF Grant	$2,216,000
Others	$0
Details of expenditure	
Ethiopia	$264,832
Mali	$169,331
Nigeria	$166,587
Uganda	$88,612

Note: *The financial figures for SAFE provided in 2017 are on a cash basis.*

SAA President, Executive Director and Managing Director with Dr Akinwumi Adesina, President of the African Development Bank, at the World Food Prize

African Cassava Agronomy Initiatives (ACAI) Project in Ogun State, Nigeria

SAA Theme Coordinators exchanging field experience in Uganda

Back page:
Youth group service providers receive training on machine operation and handling in Ethiopia

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