

**THE GUINEA AGRICULTURAL SERVICES PROGRAM:  
FEED THE FUTURE STRENGTHENING MARKET-LED AGRICULTURAL  
RESEARCH, TRAINING, AND EDUCATION (SMARTE)  
OCTOBER 2017 – SEPTEMBER 2018 (FY18)  
ANNUAL REPORT**



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## Acronym

AET	Agriculture Education and Training
APIP	Association de Promotion des Investissement Privée
AVENIR	Apprenticeship in Extension, Entrepreneurism and Rural Innovation (from French)
BES	Bureau d'étude stratégique
CRG	Credit Rural Guinée
CRRAF	Regional Agricultural Research Center of Foulayah
COP	Chief of Party
DQA	Data Quality Assessment
EAS	Extension and Advisory Services
ENABEL	Formerly CTB Belgian Technical Cooperation
FEPAF	Federation of Fruit Planters (from French)
F2F	USAID's Farmer to Farmer for Agriculture Education and Training
GAS	Guinean Agriculture Services
IBTCI	International Business and Technical Consulting, Inc
ISAV/F	Institut Supérieur Agronomique et Vétérinaire de Faranah
MELP	Monitoring Evaluation and Learning Plan
M&E	Monitoring and Evaluation
R&D	Research and Development
SAVY	Strengthening Agriculture Value Chains and Youth
SMARTE	Strengthening Market-Led Agriculture Research, Technology and Education
SPRING	Strengthening Partnership in Nutrition Globally
SOW	Scope of Work
TA	Technical Assistance
ToR	Terms of Reference
ToT	Training of Trainers
UNDP	United Nations Development Program
USAID	U.S. Agency for International Development
WAC	West African Consultants
WAAPP	West African Agricultural Production Program

## A. Executive Summary

On October 11, 2016, USAID and Winrock International executed cooperative agreement no. AID-675-LA-16-00002 for the Strengthening Market-led Agricultural Research, Technology, and Education (SMARTE) program. SMARTE focuses on three key areas for developing the agricultural sector, increasing production, and improving on-farm livelihoods in Guinea: 1) agriculture education and training (AET); 2) extension and advisory services (EAS); and 3) research and development (R&D).

This report covers the FY 2018 annual reporting period. Some of the key accomplishments this year were:

- 2,543 individuals received short-term agricultural sector productivity or food security training, primarily delivered through the youth entrepreneurship program called AVENIR.
- Three Cohorts of AVENIRs have been in progress. AVENIRs have been placed with hosts, and a total of 9 AVENIRs have graduated and are now in full time employment.
- Smallholder farmers and others had incremental sales of \$13,176; note that the rice harvest is due in December 2018 which will increase the sales considerably.
- Sales by agrodealers of \$12,311 due to SMARTE's facilitated linkages.

One of the primary services AVENIR provide is dissemination of technologies and best practices such as elevated vegetable nurseries, mobipompe, sales of high quality inputs, plastic mulch, and pineapple sucker nurseries through videos, technical guidance, and demonstrations provided to farmer clients. SMARTE conducted technology demonstrations to increase commercialization and adoption and trained individuals (45% women) on improved practices, including:

- 127.72 hectares of land was under improved technologies or management practices. These were in the equipment sales of mobipompe, and inputs of plastic mulch, and pineapple multiplication slips.
- 116 trials and demonstrations were put in place to test, adapt, and promote improved technologies and management practices.

For outreach on the technologies, SMARTE conducted radio advertisements to support the commercial dissemination, that supported SMARTE trained manufacturers and AVENIR training to producers and others on improved pineapple suckers and improved rice seed. The rural radio stations where the advertisements were placed had an estimated audience of 718,000 listeners covering a total of 22 administrative sub-divisions.

SMARTE created 55 equivalent jobs in full time and part time positions. This is primarily due to the AVENIR and host relationship developed during Cohort 1, where they are in full- and part-time jobs working with 17 private enterprises and 35 producer groups.

147 volunteers have provided technical assistance, training and support to producers, agrodealers, processors, and others in the zone of influence this year.

Strong private sector hosts for AVENIR have the potential for job creation and entrepreneurial success after AVENIR apprenticeships. Visits with large scale private sector actors EXIM and Bel Air Mining, a \$205M bauxite mining operation looking to employ 3500 Guineans, resulted in requests for partnership with AVENIRs. Both companies expressed interest in covering AVENIR stipends and some operational costs to engage AVENIR as middle managers, horticultural production experts, and financial service facilitators in their zones of influence. SMARTE also created partnerships with three local metal manufacturers to produce impact rice hullers and tube wells, which AVENIR will commercialize

through their service provision. Further partnerships developed including work with Regional Agricultural Research Center of Foulayah (CRRAF) to conduct the AVENIR training; engagement with Dalberg and AVENIR to identify pineapple producers' needs for irrigation equipment using the collector tablet application; support for commercial dissemination of University of California-Davis solar dryer; including CTB (Belgian technical cooperative) and AFD (French Development Agency) expressing interest in AVENIR, monitoring and evaluation (M&E) systems, and the capstone.

## I. Component I: Agriculture Education and Training (AET)

### Key Achievements and Lessons Learned in FY18

- Cohorts 1 & 2 completed, and Cohort 3 begun, resulting in 147 AVENIR being trained and gaining real-world experience working for private sector firms, producer organizations, and other partners.
- Ninety-five youth have graduated from the program after completing business plans. Seventy-one business plans have been submitted and approved, with some AVENIR working in groups to develop businesses.
- Developed, reviewed, tested, and revised training curriculums focused on value chain analysis, entrepreneurship, market analysis, and cost-benefit analysis, including practical exercises grounded in the Guinea market.

### ***Apprentissage en Vulgarisation, Entrepreneuriat, et Innovation Rurale (AVENIR)***

**Development:** SMARTE and the Strengthening Agricultural Value Chains for Youth (SAVY) project partnered on three AVENIR Cohorts in FY18. Through the AVENIR program, SMARTE and SAVY are empowering youth to modernize agriculture by giving them access to new technologies and techniques and placing them with host organizations to improve productivity, develop new business models, and fee-based services. The apprenticeships have largely been successful, as evidenced by positive response from the host organizations and local NGOs and private firms and individuals recruiting AVENIR for employment.

SMARTE worked with host organizations to select hosts and recruit AVENIR according to host needs, including:

- Four AVENIR with post-harvest processing and storage and extension skills for UC Davis' USAID-funded work in the Horticulture Innovation Lab;
- Two AVENIR for Compagnie Fruitière de Doubouya (CFD) to work with fruit exportation to Europe;
- Eleven AVENIR to support the pineapple sector with FEPAF (Federation des Planteurs de la Filiere Fruit) and Dalberg/ Bureau d'étude stratégique (BES);
- Four AVENIR for BelAir partners Sylla consulting and L'Association pour le Promotion Économique de Kindia (APEK) for AVENIR to support in community enterprise development initiatives.

Further details of the number of AVENIR results and demographics are summarized in Table I below.

**Table I: AVENIR results by cohort**

### **AVENIR Snapshot: Quality Management Solutions**

Lamah Kindi Bah, AVENIR Cohort 1, spent his apprenticeship learning how to produce the improved high yielding CK90 rice variety at a SMARTE demonstration plot in Ignaya. He learned production and management skills that have made him an asset for a local investor producing rice in Cefan. Mr. Bah is now providing overall crop management to a commercial operation, including nursery, transplanting, fertilizer, pest management, and irrigation. Mr. Bah earns over \$170 a month to manage the farm. Given the consumption preference for locally produced rice in Guinea and favorable price for the product, Mr. Bah expects his returns to increase once the product is harvested in December.

No. AVENIR	Cohort 1	Cohort 2	Cohort 3	Total
Recruited	49	50	48	147
Apprenticeships	48	48	Scheduled to complete on 2/28/2018	96
Completed Program	48	47	Scheduled to complete on 2/28/2018	95
Business Plans submitted	39	32	NA	71
Male	36	34	35	105
Female	13	16	13	42
Kindia	26	17	21	64
Mamou	10	18	9	37
Faranah	13	15	14	42
Boké	0	0	4	4

**AVENIR Cohort 1** - In April 2018, AVENIR Cohort 1 agents completed their capstone training. The two-week training, conducted by Dare to Innovate (DTI), marked the final milestone for the cohort. It covered developing business plans, specifically market research, financial analysis, and accessing funding. During the training, AVENIR finalized their business plans with support from SMARTE and SAVY technical and business experts. Business plans focused on crop production (market gardening, pineapple, rice), fruit drying, livestock breeding, marketing of agricultural and veterinary inputs, and service delivery through the supply of labor and agricultural advice.

All but one AVENIR from the cohort remained interested in starting a business at the completion of the program, but with access to financial services limited, some have continued to provide services to their hosts rather than branching out. To address this need, using an open competition process,



*AVENIR agent Mamdouba Bangoura (right) receives his certificate from the SAVY Coordinator (left) in Kindia. This agent established the Jeune AVENIR enterprise which provides agriculture advisory services and inputs such as pineapple suckers to producers. He has also expanded his own pineapple*

SMARTE has selected eight AVENIR to receive start-up capital through its grants fund. AVENIR enterprises. A panel reviewed 37 submitted applications and shortlisted 14 enterprises. These candidates participated in a live business pitch competition before a panel of judges with representatives from SMARTE, SAVY, and SAREF. AVENIR had five minutes to pitch their business idea and 10 minutes to defend their pitch to the panel, describing what their business was, how it would impact the community, and why it would be sustainable and profitable. Based on criteria including alignment with program objectives, technical approach, level of innovation, sustainability, and profitability, eight enterprises (25% women) were selected to receive start-up innovation grants, contingent upon USAID approval. Grant sizes range from \$650 to \$2,400. The eight winning Cohort 1 enterprises are detailed in Table 2 below. SMARTE is currently finalizing the approval process with home office and USAID and will disburse

funding to grant recipients in quarter 1 of FY 2019. One important step with the formalization of

AVENIR business as selected proposals were required to legalize their business with Association de Promotion des Investissement Privée (APIP).

**Table 2: Summary of Cohort I winning enterprises**

<b>Enterprise Candidates</b>	<b>Area of Intervention / Region</b>	<b>Total Initial Budget (GNF)</b>	<b>Total Negotiated Budget (GNF)</b>
<b>Entreprise Fatou &amp; Kadija (EFK)</b>	Production of dried pineapple / Kindia	8 134 500	8 134 500
<b>Prestation Privée la Solution</b>	Opening of a Veterinary Cabinet	7 116 500	6 940 000
<b>Djike Agriculture</b>	Agriculture input supply shop / Faranah	26 918 670	22 098 600
<b>Entreprise Jeune Avenir</b>	Pineapple sucker production / Kindia	8 972 500	8 250 000
<b>Société Univers Agricoles De Guinée Sarl</b>	Opening of an Agricultural input supply store	26 915 000	22 015 000
<b>Rejets disponible</b>	Pineapple production	8 972 300	8 900 000
<b>Univers Agricole</b>	Installation of the Agricultural Counter	8 100 000	7 229 000
<b>Entreprise Multiplication Des Rejets D'Ananas</b>	Production and Marketing of Pineapple Releases	8 972 890	6 100 000

Based upon the work with the first cohort, SMARTE refined the apprenticeship program reducing the duration from nine to seven months. We found that seven months was sufficient time for AVENIR to gain some experience and many were eager to start their businesses. Also following Cohort I we strengthened the in-field support to ensure more regular oversight of AVENIR. This process of entrepreneurial development aims to provide the support and tools necessary for AVENIR to successfully start and grow their businesses along targeted value chains.

**AVENIR Cohort 2** – Cohort 2 started in November 2017 and were placed with hosts including pineapple, rice and vegetable producers, microfinance institutions and veterinary clinics. AVENIR progress was followed via bi-monthly meetings with AVENIR coordinators, M&E personnel, and technical team leads to track progress with hosts, clients and monitor development of the business pilot.



*AVENIR Cohorts 1 & 2 were made up of 106 men and 41 women with the average age of 29.*

In August SMARTE worked with our training partner, DTI, and SAVY to conduct joint field missions to support AVENIRs in developing business plans. This took place in Kindia, Maferinya, Mamou, Pita, Dalaba, Faranah, Dalaba and Kissidougou. During this mission, SMARTE and SAVY staff supported individual AVENIR agents, depending on their level of progress with a business idea, to develop technical description of the business, market understanding (list of main target customers, list of main suppliers, analysis of main competitor strengths and weaknesses,

etc.), and the financial aspects, notably the cost-benefit analysis and the business development plan over 2 to 3 years. Common weaknesses included overestimation of amounts for external project funding and business scale, poor group organization, detailed understanding of technical aspects of project implementation, and legal and regulatory requirements. Staff provided recommendations to each AVENIR on how to address these issues. Project staff helped AVENIRs to develop or deepen their plans in technical description of the business, the market (list of main target customers, list of main suppliers, analysis of main competitor strengths and weaknesses, etc.) and financial aspects, notably the cost-benefit analysis.

AVENIR business ideas focused on crop production (market gardening, pineapple, rice, etc.), livestock, marketing of inputs and veterinary services, and the supply of labor and agricultural councils. The capstone for Cohort 2 was completed in September and business plans are under final evaluation. At the end of the capstone, SMARTE released a request for proposals for start-up capital and held a question and answer session with AVENIR on the grants.

**AVENIR Cohort 3** – Cohort 3 was launched with training in July 2018 at the CRRAF training center in Kindia. The training provided important business skills such as market analysis, cost-benefits analysis, pricing, keeping stock and financial records, value chain analysis, budgeting, commercialization and accessing and managing credit. Before completion of the training, SMARTE and SAVY had placed AVENIR with host organizations including agro-business, veterinary offices, producer organizations, microfinance institutions, poultry farms, local NGOs, and one program partner (UC Davis). Cohort 3 is currently in the midst of their seven-month apprenticeships.

For AVENIR agents to provide effective support for their apprenticeship hosts and to identify business opportunities, they need a suite of diagnostic and analytical tools. SMARTE developed and trained AVENIR on tools including cost-benefit analysis, market analysis, farm budget, SWOT analysis (strengths, weaknesses, opportunities, threats), action plan, and business model canvas. The tools were uploaded to AVENIR tablets for ease of access and use in their apprenticeships. SMARTE also developed tools to facilitate financing of AVENIR. An Excel operating account template, a video tutorial, and an agricultural production account have already been developed. Table 3 below outlines the business development process for the AVENIR training program.

#### Who Is An AVENIR

The 147 AVENIR trained under the first three cohorts of the GAS program were selected after a three-phase recruitment process that included applications and individual and group interviews. AVENIR were selected based upon expressed interest and engagement in activities at various levels of intervention within the value chain (inputs, production, finance, post-harvest, and commercialization).

**Table 3: Business Development Process**

Phases	Training Provided	Milestones	Period
<b>Initial Training</b>	Entrepreneurship; Value chain analysis; Cost benefit analysis.	Testing on training modules and completion of the core training for all AVENIR.	Four weeks
<b>Service Provision with hosts, Client and Market Identification for Business Opportunities</b>	M&E use of Survey 123; Technology and service commercialization. Technical, market, and financial analysis; Technical sheets on technology; Commercialization budgeting; How to identify and take advantage of an opportunity.	Use of Survey 123; List of potential services, technologies and clients. Business idea based on market needs	End of second month of apprenticeship
<b>Individual and collective follow-up with business idea development</b>	Selection criteria for a viable business idea; Sourcing and collecting information and data; SWOT analysis.	A report on the advancement of the business idea	End of third month of apprenticeship
<b>Business model and prototype</b>	Business model canvas; What is a business prototype and how to create it?; Undertaking a market analysis: clients, competitors, and suppliers Inspiration and entrepreneurship: learning from other entrepreneurs.	Business model; Enterprise prototype; Contact with first clients.	End of fourth month of apprenticeship
<b>Facilitating access to finance</b>	Identifying sources of finance; How to sell your business idea (business pitch).	Report on the advancement of financial negotiations for the business plan.	End of fifth month of apprenticeship
<b>Capstone and Business Plan</b>	How to identify and take advantage of funding opportunities; Collecting the information necessary for the business plan; Preparing your business plan; How to sell your business idea (business pitch).	Business Plan; Business Pitch.	End of six month apprenticeship

SMARTE also contacted the Europe-Africa-Caribbean-Pacific Liaison Committee (COLECAP) to support AVENIR to master the best modern and innovative practices in the production and sustainable management of agricultural enterprises. COLECAP provides online training that can be downloaded onto AVENIR tablets on: (i) Sustainable production and trade, (ii) Agricultural production and processing, (iii) Respect for the individual and professional development, and (iv) Environmental management. SMARTE requested access to COLECAP's curriculum to review the curriculum to see if it was suitable for AVENIR. After review, SMARTE has decided to test this curriculum with 10 AVENIR agents that will take the coursework and gain certification and provide post-training services to clients.

## I. Component 2: Extension and Advisory Services (EAS)

### Key Achievements and Lessons Learned in FY18

- Production of 9 ag-extension videos in national languages to promote improved technologies and practices including, mobipompes, raised nurseries and pineapple multiplication.
- 8 Radio programs were launched to promote AVENIR in the commercialization of improved inputs such as pineapple suckers and use of improved rice seed and practices. According to radio station demographic statistics, these programs likely reached an audience of over 700,000 Guineans.

SMARTE produced and used 9 agricultural extension films in national languages. Working with video hubs trained under the Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) program in Faranah and Mamou, the films provide training on SMARTE-introduced technologies using local actors including AVENIR. This included:

- Faranah – 3 videos in Malinke: Raised nursery; forced air dryer and mobipompe
- Mamou – 2 videos in Puular: Raised nursery; and mobipompe
- Kindia – 4 videos in Soussou: Raised nursery; UC Davis Solar dryer plus Dry Card; mobipompe and Rapid Pineapple Sucker Multiplication using slips.

In collaboration with Kindia Rural Radio, SMARTE developed two magazines that discuss the plastic mulch technology and the advantages of reducing watering, weeding, and input usage. Technical aspects such as improved root development and development of improved microbiological life of the soil accelerating vegetative growth were also discussed. An estimated 300,000 listeners followed these magazines.

SMARTE supported six radio coverage broadcasts in local languages to increase awareness and knowledge on ARICA 6 improved rice variety and complimenting improved rice management practices. Field coverage programs were provided during the harvest at four locations (Faranah, Mamou, Kindia, Kissidougou). The episodes were aired on the radio and featured feedback from experts and the farmers involved onsite. Impressions of the technical rice package were overwhelmingly positive; a total of 93 producers adopted the technologies in the 2018 growing campaign.

AVENIR Cohort 3 were trained to promote and evaluate the raised nursery system, mobipompe equipment, and other dryers. AVENIRS trained on preparation of a raised nursery, highlighting the advantages and durability of the installation, production time and cost. SMARTE used the ISAV/F experimental station as a demonstration site so that students could learn how to build and maintain the nurseries.

During FY 2018, SMARTE continued to support promotion of AVENIR as services providers, and the commercialization of technologies. AVENIR working with agro-dealers to expand their product and

service delivery generating \$26,802 in sales of inputs demonstrating AVENIR's impact on extending inputs and services to farmers.

SMARTE built the capacity of three metal workers on manufacturing and installing tube wells to support irrigated horticulture activities. After training a total of 29 people, including AVENIR agents, metal shop workers, and tube well diggers, nine tube wells were installed in Mamou, Faranah, and Kissidougou. These wells, which are accessible to an estimated 2,850 users, will serve as marketing and demonstration sites to promote the tube wells for horticultural purposes. As the dry season approaches, AVENIR have already begun work with manufacturers to promote the technology on a commercial basis. Trained and qualified AVENIR are working as sales agents to introduce potential clients to tubewells and take a commission from the trained tube well installers.

To build AVENIR capacity in the marketing aspect of their role, SMARTE produced high quality extension materials that are ready to be uploaded to their tablets. These include: technical guides on pineapple multiplication, elevated vegetable seedling production, and the mobipompes. In addition to the written guides, SMARTE worked to promote access to quality agricultural extension services.

## II. Component 3: Research and Development (R&D)

### Key Achievements in FY18

- 124.72 hectares of land were under improved technologies or management practices
- 95 producers adopted improved seed varieties (ARICA) and/or best practices placing over 46 Ha of land under improved management.
- 25 sites have installed 28 raised bed vegetable nurseries serving 185 producers
- Installation of 19 pineapple sucker nurseries using improved fragmentation techniques. Currently over 30,000 suckers are under production with another 200,000 more ready to be produced.
- Sales of 37 mobipompes and sales are increasing with 15 mobipompes sold in the most recent quarter

R&D continued to introduce, support, and monitor technologies. This included support to expand pineapple sucker multiplication, monitor application of improved rice varieties and practices by producers and support AVENIR to commercialize mobipompes and raised nurseries.



*Tablets are a technical, marketing, and business tool that enables AVENIR agents to be accurate, responsive, and mobile in their service delivery. This dynamism increases client confidence and demand.*

Since the introduction of sucker multiplication by SMARTE, producers have practiced the technology in the large pineapple production basins of Friguiagbé and Maferinya. This innovation allows growers to rapidly expand their surface area under production. To date 19 nursery sites have been established for producers, including AVENIR agents who are setting up their own propagation fields.

A Memorandum of Understanding to produce 2,000,000 pineapple suckers on a 5-hectare site has been signed between the Federation of Producers (FEPAF-BG) and the WAAPP (West African Agriculture Productivity Program). FEPAF-BG is collaborating with AVENIR agents

to set up and monitor these multiplication areas. Through the BES, Cohort I AVENIR agent Mohamed Soumah is partnering with a Guinean diaspora investor to set up and monitor a nursery of 50,000 pineapple nodes (stumps at the base of the plant) in the town of Kaaly.

### Use of Improved Rice Varieties and Production Practices

The Guinean Government has an objective to have a 62% increase in rice yields from 1.17 Kg/Ha to 1.9 MT/Ha by 2025 (PNIASAN 2018-2025). In the 2017 growing season, SMARTE introduced improved ARICA<sup>1</sup> 6 rice seed varieties and production techniques leading to rice growers increasing their production levels from 1.2 Mt/Ha to 4.5-6 MT/ha on demonstration plots. Adoption of improved varieties, transplanting of rice, use of improved inputs and mechanization are all important steps for increasing rice yields and improving food security.

SMARTE built on the work conducted with growers in 2017 and conducted promotional radio campaigns and community meetings to encourage growers to adopt ARICA varieties and corresponding production practices. In June and July 2018, SMARTE and lead farmers installed seven demonstration plots. SMARTE contacted three certified rice seed producers in Kindia, Soumbalako, and Kissidougou and has entered into partnership agreements to provide AVENIR to support commercialization of improved rice seed and the use of mechanization. Each rice seed producers grows producing 0.5 Ha of the Arica 6 rice varieties. Working with the AVENIR, they provide advisory services to other farmers, as well as provide the rental of mechanized soil preparation and harvesting equipment. A total of 95 producers adopted improved seed and/or best practices placing over 46 ha of land under improved management.



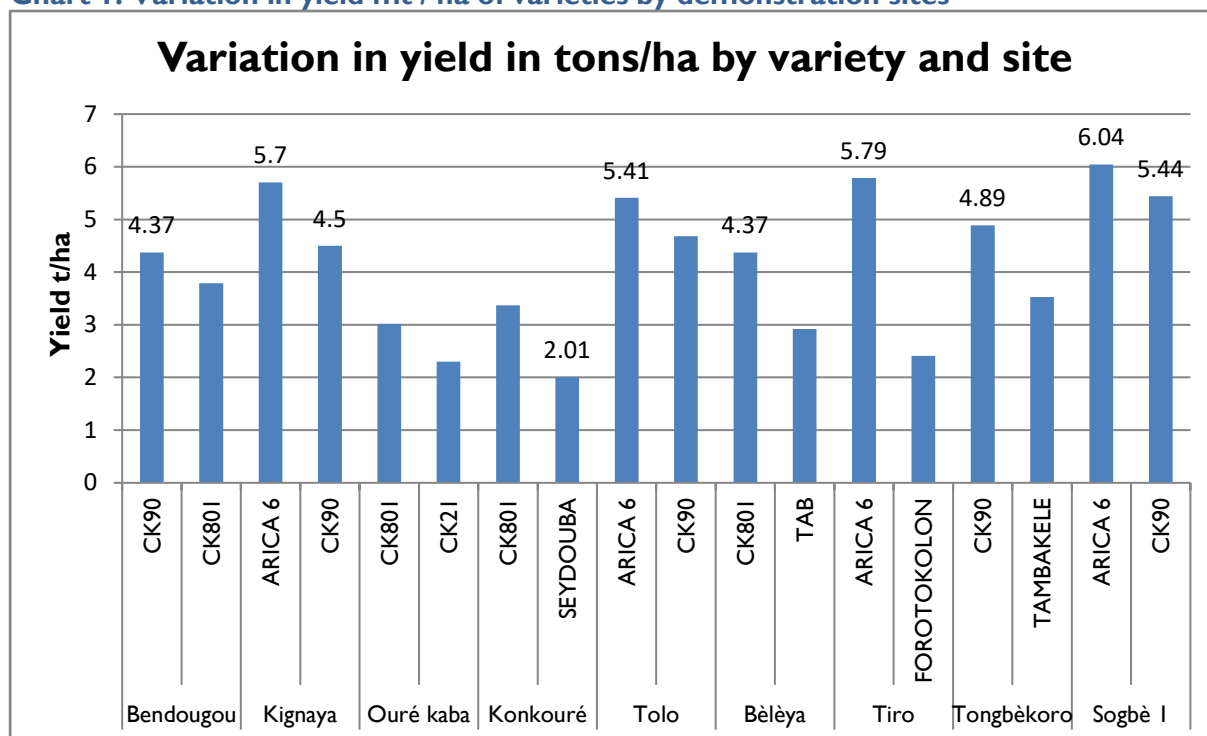
*ARICA 6 Harvest in Tolo*

At the end of the demonstration trials, the introduced Arica 6, CK 801, and CK 90 varieties proved to be suitable for the agro-ecological conditions of the experimental zones. Based on the results obtained at all the demonstration sites, the ARICA 6 variety was the most successful in terms of fertile tufts, number of grains per panicle, and paddy yield. Chart 1 shows the results on paddy yields of the three different varieties (Arica 6, CK 801 and CK 90) on the demonstration sites are shown below.

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<sup>1</sup> A group of rice breeding experts has agreed and adopted six new rice varieties under ARICA - Advanced Rice in Africa. The varieties were selected and labelled ARICA because they are tolerant to cold, salinity, and iron toxicity <https://www.aatf-africa.org/node/490>

**Chart 1: Variation in yield mt / ha of varieties by demonstration sites**



After establishing demonstration plots for improved rice seed in production practices, SMARTE began documenting producer adoption and hectares under cultivation from the nine demonstration sites established in FY 2017. The data will be collected in December 2018, and results and learnings will be reported in the FY19/Qtr2 report. Table 4 below provides further information on technology adoption for improved rice in 2018.

**Table 4: Technology Adoption of Improved Rice in FY 2018**

N°	Region	Site	# of Producers adopting	Area under Production (ha)	Technology (Seed or GAP)
1	Kindia	Kignaya	13	3	Seed and GAP
2		Bendougou	29	19.01	Seed
3	Mamou	Tolo	3	7.25	Seed
4		Konkouré Gare	1	1.125	Seed and GAP
5		Ourékaba	2	1.84	Seed and GAP
6	Faranah	Bèlèya	5	4.55	Seed and GAP
7		Tiro	5	1.58	Seed and GAP
8		Tongbèkoro	33	7.25	Seed and GAP
TOTAL			93	45.6 ha	

In FY18 SMARTE established additional improved rice plots, including:

- 3 plots of 0.5 ha of Arica 6 in the regions of Mamou and Kissidougou for the multiplication of ARICA 6 seeds with certified seed rice producers and AVENIR. These plots along with

outreach campaigns in FY2019 will target rice producers in zones of production to scale up adoption and application of the technologies.

- 7 plots of 1000 m<sup>2</sup> each for the demonstration of rice production techniques and technologies in the three project areas.

### **Vegetables - Continued Sales of Seedlings from Raised Nurseries**

In FY 2017, SMARTE introduced an elevated vegetable nursery system that would help vegetable producers to produce healthier and stronger seedlings. An elevated nursery is easier for producers to



*AVENIR build a nursery in Kindia*

sow and weed. Additionally, the distance from the ground soil reduces the incidences of diseases and pest attacks, resulting in vibrant seedlings for transplanting. Seedlings out planted from this type of nursery technology can increase yields by 20-25%. AVENIRs promoted the raised vegetable nursery this year, and a total of 28 nurseries were established at 25 production sites (see photo). Market gardeners in the Kissidougou Urban District have responded very favorably to this innovation as producers like Sékou Traoré of Kissidougou have earned an additional 7,000,000 GNF from crop sales when using the nursery. While some monitoring of seedling sales has been done by AVENIR, the project will likely need to place sales logs with nursery operators to fully

capture results.

### **Pineapple - Improved Pineapple Multiplication Slips**

The Guinea Government is supporting investment in pineapple with a desire to double the current area under cultivation by 2020. To expand the planting area, producers need access to high quality planting materials. Using a technique to multiply pineapple slips developed by the Guinean Agronomic Research Institute (IRAG), slips are treated, cut, divided, and then planted. Each slip produces at least seven suckers that are ready for transplanting into a nursery after approximately two months. After an additional four months in the nursery, the suckers are ready for planting in the field. Producing more planting materials means that producers can expand the area under production.

AVENIR agents involved in the pineapple sector participate in a training course on pineapple plot management. The training covers economic and technical management of pineapple cultivation from identification of the growing soil to marketing.

The training has allowed AVENIR agents to:

- Understand and take advantage of the potential revenue offered in pineapple production;
- Strengthen the technical capacity to increase yield and incomes;
- Strengthen the technical capabilities of AVENIR agents for the processing of pineapple to generate added value;
- Support marketing and traceability to position Guinea pineapple on the international market.



*Pineapple is a profitable value chain in Guinea. With improved multiplication techniques, farmers can further increase their incomes.*

To create awareness and understanding of the technique for producers, SMARTE

developed a technical guide on multiplication that is on the AVENIR tablets. AVENIRs who are involved in the pineapple sector have already started to provide fee-based services to producers and investors, such as measuring plot size and calculating input needs. Development partners, such as ENABEL and WAAPP, are interested in engaging them to provide training and support to clients and partner institutions. AVENIR charge a fee of between \$5-10 to measure the plot and calculate input needs depending on the size of the plot.

Since the introduction of the seed fragmentation multiplication technology by SMARTE, several producers have practiced the technology in the large pineapple production basins (Friguiagbé and Maferinya). This technology has allowed growers to experience other types of rapid release multiplication to improve their production. To date, following the success of demonstration plots, several producers including the AVENIR agents are setting up their own fields for propagation.

As part of the revitalization of pineapple production activities, Cohort 2 AVENIR agents participated in a training course on pineapple plot management. The aim was to train AVENIR agents assigned to pineapple producers in the Friguiagbé area (Prefecture of Kindia) and those of Maferinyah (Prefecture of Forécariah) on economic and technical management of pineapple cultivation from identification of the growing soil to marketing. Cohort 2 followed up on this training to install plastic mulch and are prepared to begin work at the start of the rainy season in May. The training has allowed AVENIR agents to:

- Understand and take advantage of the potential revenue offered in pineapple production;
- Strengthen the technical capacity to increase yield and incomes;
- Strengthen the technical capabilities of AVENIR agents for the processing of pineapple to generate added value;
- Support marketing and traceability to position Guinea pineapple on the international market.

## Application of Inputs - Plastic Mulch



AVENIR Safiatou Bah installing plastic mulch

As part of continuing the identification of economically viable technologies for producers, SMARTE worked with local plastic manufacturer Topaz to demonstrate one ton of biodegradable plastic mulch through demonstrations in the fields of pineapple producers in collaboration with the Federation des Planteurs de la Filiere Fruit (FEPAF) and AVENIR. Plastic mulch reduces the use/need for chemicals (herbicide, insecticide, fertilizer), significantly reduces the rate of irrigation due to moisture retention in the soil and allows the reduction of the production cycle due to the rapid development of the plants through assimilation of the nutrients and increased soil temperature. The estimated increased income from using the technology is outlined in Table 5 below.

**Table 5: Cost benefits comparison for pineapple production with and without plastic mulch**

	Production costs with plastic mulch	Production without costs plastic mulch	Difference
<b>Total costs (GNF)</b>	91 585 000	74 085 000	17 500 000
<b>Total Yield Mt/Ha</b>	55	35	20
<b>Benefits (GNF)</b>	73 415 000	30 915 000	42 500 000

For the demonstration of the mulch, 11 producers were selected by FEPAF to experiment with the technology on their plots. Producers paid for the installation and the suckers. AVENIR, SMARTE staff, and a marketing specialist provided support during the mulch installation activities.

Selected producers covered the installation costs, including purchase of the plastic and suckers, while trained AVENIR agents worked with the producers and their hired labor to install the mulch. To date, the 11 producers/owners are using the technology on 10,126 m<sup>2</sup> of land. SMARTE is working to connect FEPAF and CFD directly to Topaz, the company producing the mulch. FEPAF has a network of more than 700 producers on 400 Ha in Kindia with 27 distribution branches. Topaz can increase its reach in rural markets by working through FEPAF, thereby increasing smallholder access to the plastic mulch. Thirteen trained AVENIR agents worked with 91 producers (88% women) to install plastic mulch technology on pineapple plots in Kindia and Maferinya. As part of the activity, a practical plastic mulch installation guide has been developed for AVENIR agents who will continue to inform and train other producers on this technology.

Agents and pineapple producers participated in a training on liquid fertilization using the mulch technology in Friguigbé, Foulayah, Maferinyah and Coyah. This training course was based on the Dahlberg Fertilizer Fact Sheet for Good Agricultural Practice (BPA), a guide for producers wishing to export their fruit to Europe. As Guinea aims to export 2,500 tons of pineapple to the European Union

by 2020, this training provided AVENIR and producers with technical knowledge and skills to take advantage of the opportunity to export their production through FEPAF. A practical fertilization guide is being developed.

### **Application of Technology Equipment**

**Rice Parboiler** - Based on AVENIR analysis that paddy rice can be purchased at low cost directly after harvest and processed and stored for significant profit, SMARTE identified a local metal workshop in Faranah capable of producing high quality parboilers. A partnership agreement was signed between SMARTE and the Faranah Metalworkers Cooperative (COMFAR) to conduct rice parboiling tests using an improved steamer designed by COMFAR and two other semi-improved and unimproved steamers to compare results. Participants in the test included representatives from COMFAR, Winrock, KANKELENTY Women's Union, and AVENIR agents. The improved steamer performed better than the two other options in terms of ease of handling, ease of maintenance, low wood consumption, time saving for parboiling, and affordability in terms of price. As of the end of FY18, this technology had not yet been adopted or purchased, however, the results of these tests will provide content for the marketing campaign which will include informational brochures, a commercial, and radio program, and SMARTE will continue to monitor this equipment's potential in FY 2019.

**Mobipompe** - Smallholder farmers throughout Guinea face a common problem, lack of access to economical irrigation. Although Guinea is blessed with rich water reserves and plentiful rainfall, inefficient control and management of water resources are major limiting factors to improving agricultural productivity and increasing farmer incomes. Access to irrigation is limited by affordability of systems, which constrains Guinean producers are constrained to only small parcels of land with low yields.

To overcome this problem, in July 2017 SMARTE identified the mobipompe as a technology that was suitable for small to medium scale irrigation requirements. The mobipompe uses a small engine motorcycle, a ubiquitous form of transportation in Guinea, to distribute water, using about a third of the fuel when compared to standard motorpumps. The mobipompe comes in a kit that includes intake and output tubes, as well as the mechanism to attach the pump to the motor without requiring any changes to the motor itself. SMARTE has introduced the mobipompe as a \$100 kit. It can be connected in about 15 minutes and delivers the power of a 5hp pump providing 11,000-14,000 liters of water per hour.

To offer a market-based solution to irrigation, SMARTE worked with AVENIRs to market, demonstrate, and sell the pumps. Under the scheme, beginning in September 2017 SMARTE worked with the Burkina Faso-based supplier, JBS Global Business, to provide pumps to the Guinean market on consignment. AVENIR apprentices have been trained by SMARTE in partnership with a JBS technician to demonstrate the pumps in communities where they live. Two AVENIR in each region were engaged for the diffusion of this technology with an offer of a 10-15% commission for the sales of a mobipompe and corresponding equipment. In year 4, 72 demonstrations were conducted for 1,221 horticulture producers to 873 potential clients resulting in sales of 37 pumps. This is a mutually beneficial and sustainable model of service provision: allowing a technology supplier to reach more clients through mobile sales agents (AVENIR) who receive a commission for their services and farmers gain access to technology that increases their productivity.

While demonstrating the mobipompe, AVENIR received feedback from pineapple producers that they needed sprinkler systems to be fitted with the mobipompe. SMARTE assessed the ability for pumps to be fitted with sprinklers. The findings showed that the mobipompe can distribute water to operate a minimum of four sprinklers with an interval of 16 meters between two sprinklers as each sprinkler has

an 8-meter radius. AVENIR were involved with initial testing of the mobipompe with sprinklers and can provide installation services with sprinklers if necessary. This demonstrates the importance of on-the-ground and in-person technical service provision for all market actors – adapting to consumer needs leads to increased demand and profit for suppliers, service providers, and farmers.

### III. Volunteer Impact

SMARTE has fielded one international volunteer and 147 AVENIR agents, who are serving as local volunteers.

SMARTE worked with F2F to mobilize and field volunteer expert Ed Perry to assess and recommend improvements for marketing and distribution of previously introduced technologies. Mr. Perry identified important distribution partners, such as input supply shops, to develop marketing/distribution strategies. During the assignment, three main recommendations were made:

1. Recruit and hire ag-machinery technicians to train manufacturers and monitor manufacturers and users.
2. Implement marketing interventions, especially demonstrations, radio ads, and agricultural fairs.
3. Develop distribution network, starting with the development of production capacity of many metal workshops.

SMARTE has already begun promoting the technologies through radio campaigns and demonstrations and will continue to do so. SMARTE is building capacity of metal shop workers and other private sector service providers to ensure they have the requisite skills and knowledge to provide these services and products to the market. SMARTE is coordinating with metal workshops and AVENIR to ensure quality, conduct demonstrations, and market technologies using a commercial commission-based approach.

SMARTE' prepared scopes of work and recruited several local volunteers. The first was an assignment for Delta Irrigation in collaboration with FEPAF and Dalberg to work with AVENIR and members of the pineapple sector on installation and maintenance of irrigation systems with 12 pineapple producers. Due to delays in shipment of pumps by Delta Irrigation, the irrigation assignment was delayed until the upcoming quarter. Assignments in collaboration with regional private sector partners offer an opportunity to strengthen high quality input supply in Guinea. In creating linkages through FEPAF and Delta, SMARTE hopes that additional producers will be inclined to purchase equipment in the future.

#### **Post-Ebola Conference, Conakry**

USAID hosted a Learning Summit conference for post-Ebola recovery programs May 2018. SMARTE presented lessons learned in technology commercialization. SMARTE reinforced the role of AVENIRs in entrepreneurial initiatives. Recommendations were:

- Create an appropriate finance mechanism;
- Continue to support youth empowerment and training;
- Work to improve the GoG national budget allocation for rural development;
- Develop stakeholder synergy to support youth employability.

SMARTE supported preparation and on the ground support during a SAVY fielded F2F assignment to continue work with AVENIR on their business plans. SMARTE staff supported organization of the AVENIR for the training and helped the volunteer and AVENIR to review key aspects of the business plans.

Given a reduction of funding for FY 2019, SMARTE will leverage international volunteer support from the F2F leader award as needed.

#### IV. Collaboration with Guinean Agriculture Services (GAS) Partners

In August 2018, SMARTE attended a meeting at the USAID mission in Conakry with other implementing partners for a mid-term review of the Country Development Cooperation Strategy. As part of the review process GAS partners discussed what had been successful and priority interventions to develop the agriculture sector. Priorities centered around increasing access to finance, access to quality inputs, and collaboration among development partners. Discussion with ENABEL, UNDP, Dalberg, and WAAPP have all focused on how they can build on GAS work to harness trained AVENIR to achieve rapid results in the creation of successful youth owned agribusinesses.

**SAVY** – The GAS partners – SAVY and SMARTE – collaborated on MEL. This included collaboration in November 2017 to complete the field work for the baseline study and gender assessment. Winrock hired West Africa Consultants (WAC) by a Guinean research firm to carry out this work. A final version of the baseline was completed in April 2018 and still awaits USAID approval. The two projects share responsibilities and personnel for the AVENIR program management, M&E, and communications. The two projects have worked together in other ways, such as:

- Collaborated on the training for AVENIR Cohort 3;
- Collaborated on AVENIR Cohort 2 capstone;
- Jointly respond to USAID comments on the Monitoring, Evaluation and Learning Plan (MELP), and changes were made to the indicator table and the performance indicator reference sheets (PIRS). Including adding livestock indicators to the MELP and working out processes and procedures to collect, disaggregate and store data;
- Review of Survey 123 data across M&E and technical staff in both projects.

**SPRING** – SPRING and SMARTE published a blog post on the production and use of ag-extension videos under SMARTE on [Agrilinks](#).

**UC DAVIS** - SMARTE worked with UC Davis Horticulture Postharvest Center to:

- Produce a video in Soussou on the UC Davis Solar Dryer and Dry Card Technology, as well as promote the technology in Berteau- Mamou zone;
- Support UC Davis to provide demonstration on the construction and use of the solar dryer with seven AVENIRs, one micro-enterprise (wood mason/carpenter), and 202 community members in Mamou;
- Placed four AVENIRs from Cohort 3 at their Center. These AVENIRs supported the Center to conduct protocol testing of the solar dryer and coolbot; test composting and polyculture practices; test variation of raw materials on the performance of the solar dryer for local market needs; and, conduct technology commercialization demonstrations in Kindia and Mamou. The AVENIRs are currently supporting UC Davis to install cold storage units and vegetable plots at CRRAF and test drip irrigation equipment provided to them by SMARTE.

**DAI** - In collaboration with DAI and AEMIP, a Champions for Change training was conducted by DAI under the AfricaLead initiative. The training supported faculty from AET institutions, ISAV/F students and AVENIR agents to:

1. To identify CAADP food security initiatives (Comprehensive Africa Agriculture Development Program);
2. To explore, analyze key issues, and identify innovative actions to implement key initiatives in agriculture;
3. Showcase the necessary skills to become champions of food security, and;

4. Develop individual action plans to expand their role and become active and creative participants for their countries and region to be the initiators of food security under CAADP.

SMARTE selected 12 AVENIRs to attend the training along with coordinators from the AET component. Following the training, an investor decided to engage three AVENIR agents from Cohort 1 to establish a 3-hectare plantation of pineapple and 1-hectare for producing 600,000 pineapple suckers using the sucker fragmentation technique. These three agents will provide technical assistance and receive a monthly salary payment for their work.

#### **V. Collaboration with other USG and non-USG partners**

SMARTE collaborated with the Government of Guinea, including participation by the Minister of Youth and Employment in the closing ceremony of AVENIR Cohort 2 in August 2018. The minister praised USAID for the innovative program and encouraged the AVENIRs to seize the opportunity to become self-reliant. SMARTE has had further discussions with the minister to learn about potential funding for youth entrepreneurship programs.

SMARTE collaborates with several other non-USG projects as described table 6 below.

**Table 6: Summary of public-private partnership and collaboration**

Partner & Rationale for Collaboration	Outcomes of Collaboration in FY18
<p>Federation of Pineapple Planters of Friguigbé (FEPAF) -</p> <p>In partnership with BES (Bureau of Strategic Studies), SMARTE and SAVY have established a financing mechanism to facilitate the acquisition of irrigation equipment by pineapple producers through the Islamic Bank in Guinea. The AVENIR facilitate equipment selected. Using their tablets to produce detailed maps, Delta Irrigation uses the data to design irrigation systems.</p> <p>SMARTE, in collaboration with BES, will partner with two Delta Irrigation technicians to provide training to 12 AVENIR to develop technical skills in monitoring and maintenance for the selected irrigation equipment.</p> <p>Linkages between producers and technicians are critical for after-sales maintenance services.</p>	<p>Working with FEPAF the AVENIR Cohort I supported an agreement between FEPAF and WAAP to produce 2,000,000 pineapple suckers using multiplication techniques.</p> <p>FEPAF and SMARTE demonstrated the plastic mulch technology at over 10 production sites.</p> <p>FEPAF members purchased 12 motor pumps from a loan program with the Islamic bank initiated by DALBERG.</p> <p>Two regional volunteers will provide technical assistance in 2019.</p>
<p>JBS, a Burkina based supplier of the mobipompes –</p> <p>SMARTE formalized a partnership to commercialize mobipompes in Guinea through AVENIR agents.</p>	<p>JBS supplied 72 pumps and complimenting tools and tubing.</p> <p>AVENIR agents in the SMARTE zone of influence have begun successfully commercializing the equipment.</p>
<p>Dalberg – partner to the Office of Strategic Studies –</p> <p>To support initiatives in the pineapple sector, Dalberg and SMARTE worked together to support mapping of farms for producers who are interested in financing irrigation equipment.</p>	<p>BES/Dalberg, SMARTE and FEPAF worked collaboratively to organize a training in which 11 AVENIR and 41 members of the federation.</p> <p>The training equipped the participants with techniques of negotiations/discussions with potential investors as well as tools for monitoring and technical support to produce pineapple. These included:</p> <ul style="list-style-type: none"> <li>• The cycle of activities for pineapple production;</li> <li>• Fertilization plan;</li> <li>• Forecast cash flow plan;</li> <li>• Site activity management plan;</li> <li>• Inventory management; and</li> <li>• A weekly monitoring report template.</li> </ul>

<p>West African Agriculture Production Project (WAAPP). Funded by the World Bank, WAAPP works with technology commercialization in rice, poultry and livestock. WAAPP is interested in technology commercialization and have new breeds of chicken and goat and a solar powered incubator for producing one-day old chickens. This program looks to promote agricultural services and could be a source for funding our engagement with AVENIR that are near the end of their service with GAS.</p>	<p>WAAPP has expressed interest in funding over 200 young Guinean agro-entrepreneurs with amounts between \$5,000 - \$10,000 USD. SMARTE and WAAPP are pursuing an MOU for collaboration of business plan development and funding, commercialization of technologies and placement with AVENIR in viable agro-enterprises.</p>
<p>BelAir Mining.</p> <p>SMARTE completed a partnership agreement with BelAir Mining SAS to provide five AVENIR agents from Cohort 2 for development of BelAir's food cropping and small and medium enterprise projects that will train 240 people in the development of SME business plans for funding of approximately 80 projects in communities surrounding BelAir's mining concession.</p>	<p>Following successful cooperation with SMARTE, Bel Air completed a partnership agreement for an additional four AVENIR from Cohort 3.</p> <p>Under the partnership agreement BelAir will cover AVENIR stipends and tablet costs during their apprenticeship.</p>
<p>CRRAF (Regional Center for Agricultural Research at Foulayah) - Providing training site for AVENIR Cohort 2.</p>	<p>SMARTE took on the responsibility of renovating the conference hall for the trainings, while SAVY renovated two onsite houses to lodge AVENIR. To prepare the training site, CRRAF, SAVY, and SMARTE developed an MOU concerning responsibilities for renovations and management of the site during the training.</p>
<p>Compagnie Fruitière de Dabouya. CFD is a large exporter of mango and passion fruit with over 60 hectares currently under mango production.</p> <p>Early in FY2018, SMARTE visited CFD to discuss taking on AVENIR agents to help manage the far and work with the companies approximately 200 outgrowers.</p>	<p>CFD has taken two AVENIR from Cohort 3 and are participating in the training taking place on pineapples and want to expand their holdings to 50+ hectares as well as scale up their passionfruit production under drip irrigation from 1 to 7 hectares.</p>

## **VI. Monitoring, Evaluation and Learning (MEL)**

SMARTE uses the three monitoring tools of DevResults Database Management System, Esri Survey123, and Esri ArcGIS to track project performance. The project staff on both SMARTE and SAVY project input data using these tools.

The MEL team conducted a training on the joint SMARTE and SAVY MEL plan project staffs in Mamou in November 2017 and covered data collection tools, staff roles and responsibility in collecting data, analysis and data treatment process, and data reporting. The training allowed staff to better understand and begin using the M&E system methodically. It also gave an opportunity for the M&E team to explain the role of the program staff and AVENIR agents in activity implementation and quantify results using Survey123 in their tablets. During the training, data collection tools were shared by all program staff and the MEL handbook translated in French was given to all staff for reference.

In Q1/FY 2018 USAID carried out a DQA of SMARTE and SAVY for year one performance data. In general, the DQA report revealed strengths in the overall process. There were a few validity limitations between the Performance Indicator Reference Sheets (PIRS) and the data collection tools and the source documents. The PIRS were amended and submitted for approval. Additionally, livestock indicators for SAVY project was submitted for approval in September 2018.

SMARTE and SAVY's data collection strategy and structure is to directly build the capacity of AVENIR agents in the activity. Young entrepreneurs in Guinea are being given an opportunity to learn the new skills of accurately transcribing information into an electronic format with the use of a tablet and uploading that into a cloud-based system for the data repository. However, some of the AVENIRs are using a tablet for the first time, and they have been unable to record the information well, which results in a lot of back and forth to scrutinize the data for quality and accuracy. Teaching them how to use the tablets has required consistent training. The SMARTE MEL team continuously train, guide, mentor, and assist the AVENIRs in this process. With each new cohort of AVENIRs, SMARTE becomes better at training them and understanding the challenges the AVENIRs will face with the data. Recognizing the challenges, SMARTE simplified the survey tools, in part by reducing the number of questions, to more accurately collect data.

The DQA recommendations were also incorporated into the DevResults database management system. SMARTE MEL team have cleaned, verified and validated datasets, and uploaded these to DevResults. Issues of under-reporting and duplicated records, for example, an AVENIR uploads a Survey123 form twice for the same beneficiary, have as of September 2018 been resolved. The DevResults datasets reflect the current data for SMARTE. Changes in SAVY's scope of work under the global health initiatives and monitor livestock diseases meant that a new list of 6 livestock indicators were added into the MELP. In the meantime, considering the reduction in the funding ceiling, the MEL unit proposed to the mission revised targets and indicators that could be dropped. Winrock is still working on incorporating SAVY's livestock data.

See Annex 2: Targets and Actuals, FY18 for details of project performance against the indicators.

## **VII. Issues and Challenges**

The uncertainty and delays in the incremental funding obligation on two occasions (March and September) directly impacted the speed at which technical activities could occur. For example, a volunteer assignment was delayed, and hiring a replacement MEL Director has been contingent on the next obligation.

In December 2017, SMARTE restructured the program and terminated eight staff and positions due to budget constraints. This included administration and technical positions across the AET and EAS components. The team leader for the EAS component was also informed that her contract would be terminated. The SAVY project, implemented by CNFA, has had to eliminate positions, as well, making planning and delivering activities in cross-project collaboration more difficult. These staff changes, and to some extent requested changes to the program design and approach, have had a detrimental effect on the quality of the AVENIR brand before it has been proven. There have also been resignations, such as the MEL Director in June 2018. Winrock brought in Home Office MEL support to fill the gap in interim while Winrock awaited the next obligation of funding that would enable SMARTE to hire a replacement MEL Director.

The budget reduction also impacted SMARTE's ability to provide funding for innovation projects for AVENIR after the capstone training. Initially SMARTE had budgeted \$25,000 for funding of AVENIR enterprises under the innovation projects per cohort. With reduced funding this number has gone down to \$10,000 USD per cohort. This means that fewer AVENIR will receive funding.

To resolve difficulties in the financial services sector on agricultural lending and interest rates (usually at 24%-36% year), USAID, SAVY and SMARTE have had discussions with various entities involved in finance in Guinea. Supporting the AVENIR Cohort 2 capstone agents' access to financial services to launch their enterprises has been a challenge, and this is slowing down the creation of agribusiness development. Cohort 2 business plans required less capital investments than Cohort 1, however the lack of accessible and affordable credit is limiting the AVENIR's ability to fund viable enterprises.

To attempt to address this challenge, SMARTE is collaborating with development partners such as WAAPP, ENABEL, and UNDP that are aware of the constraints for startup agribusiness related to financial services. They are trying to create solutions within their program activities that recognize AVENIR with viable business plans are high potential clients capable of providing services and creating employment within project targeted value chains.

Interest was also expressed in the newly renewed DCA funding mechanism with Ecobank. Discussions between Ecobank, USAID Guinea Mission Staff, Guinea Rural Agrodealer Network Development (GRAND) Alliance/Guinea, SAVY and SMARTE revealed the current criteria for obtaining DCA funding:

- Must be active for at least 3 years in the business activity; and,
- Must have land and/or real estate titles in Conakry (land and real estate titles outside of Conakry are insufficient for guarantees).

Given that AVENIR are unlikely to meet the above criteria, Ecobank considers AVENIRs high risk clients and would require a Guarantee Mechanism of 100% coverage to fund them. Presently, it is unknown whether the DCA mechanism would be interested in modifying the conditions of the guarantee, but 100% guarantee is unprecedented and highly unlikely unless a second actor or mechanism could cover the remaining 50% guarantee provided by the DCA mechanism.

## Annex I: Success Story



**USAID**  
FROM THE AMERICAN PEOPLE

**GUINEA**

# AVENIR Enterprises Produce and Sell in Regional Markets

## AVENIR make profits in high value horticultural markets



Photo: Abdoulaye Fadiga Winrock International

*Mariama Cisse purchases her tomatoes from Aboubacar Sylla. Consumers appreciate the variety and high quality of the tomatoes in Sierra Leone.*



*Mr. Sylla with the Guinea Agriculture Services team on his pineapple plot.*

Prior to receiving training under the AVENIR program, Aboubacar Sylla was an unemployed ag-engineer. Mr. Sylla participated in the one-month agro-entrepreneurial training and eight-month apprenticeship with pineapple and tomato producer Nfassory Soumah, which enabled him to create his own tomato and pineapple production enterprise. Five months after receiving training, Mr. Sylla's life has been changed through his success in agriculture production.

The AVENIR training and apprenticeship funded by USAID as part of the USAID Guinea Agricultural Services Program provided Mr. Sylla with important skills to analyze value chains, markets and cost benefits that have led to his recent success. This analysis allowed him to select the crop and specific variety and to identify potential clients before deciding which production activity to undertake. Equally, Mr. Sylla's apprenticeship allowed him to master a technical itinerary for the production of two high value horticultural crops: tomatoes and pineapple. Presently, Mr. Sylla is producing 0.5 ha of tomato and 0.18 ha of pineapple.

Initial costs for the tomato plot were 2,560,000 GNF with a current gross revenue of over 10,000,000 GNF. Mr. Sylla's primary market is local with buyers also coming from Sierra Leone to purchase his tomatoes. Mr. Sylla plans to harvest and sell another 180 cases valued at 100,000/case on the existing plot. He is currently employing four farm laborers and is adding an additional 0.8 ha plot of tomatoes to meet the known market demand.

### Telling Our Story

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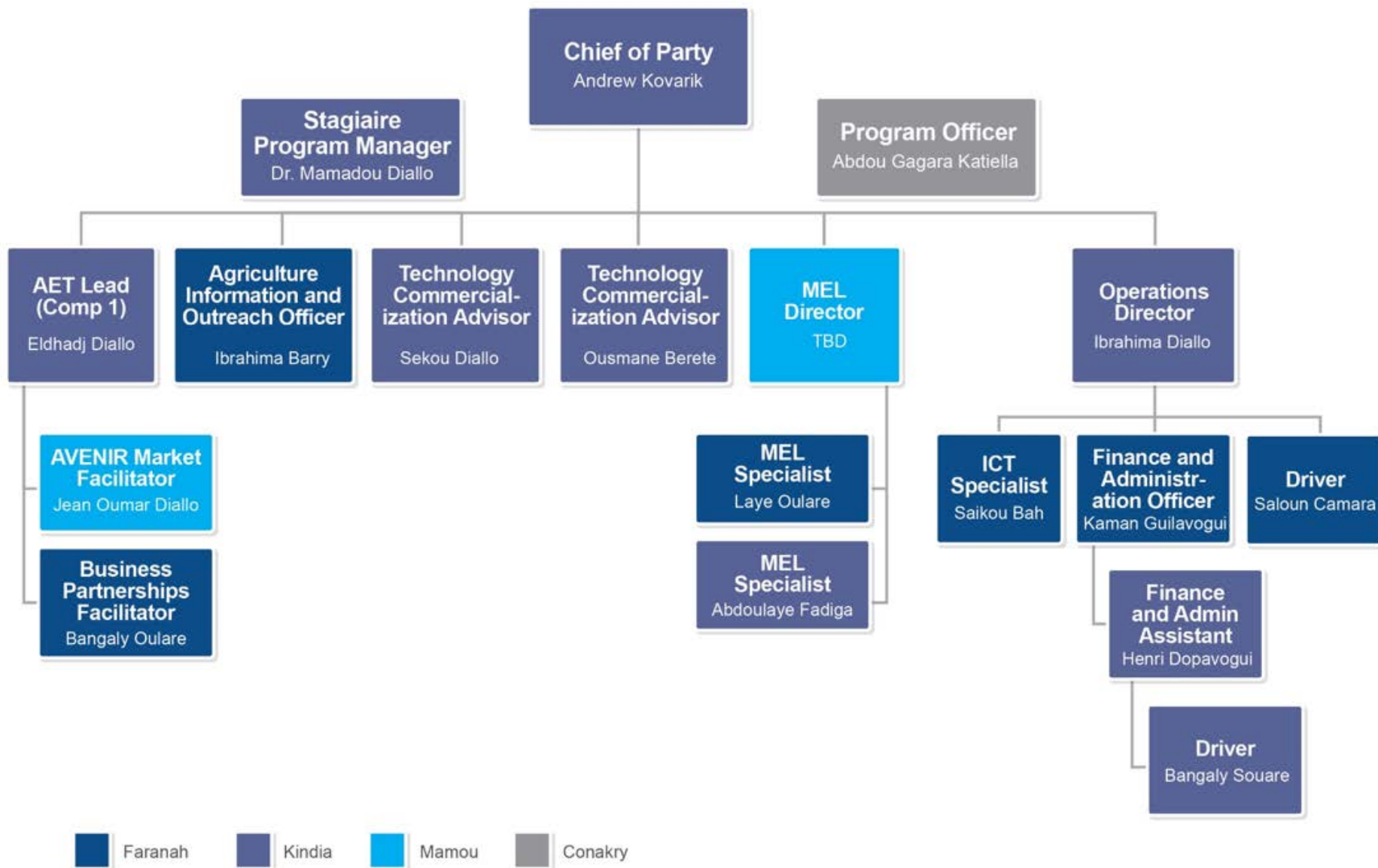
## Annex 2: Targets and Actuals, FY18

SMARTe Indicators			
Results Framework Level	Indicator	Indicator Type	SMARTe FY18 Yearly Results
Results Level (baseline and final stage measurements)			
Goal: <b>Improved productivity in Guinea's agriculture sector</b>	Number of households benefitting directly from USG assistance	Standard: <b>EG. 3.1</b>	2,949 (all households including Male HH, Female HH, Child HH, joint M/F)  2,561 (New) 388 (Continuous)
	Yield per hectare / animal of selected crops / animals Unit of Measure: (MT/ha, animal/farm)	Custom: <b>C.1</b>	Average of 3.6 metric tons / hectare with rice; 14.68 metric tons / hectare with horticulture (various crops)
	Percentage reduction in post-harvest losses due to improved storage	Custom: <b>C.2</b>	0%
Sub-Project Goal: <b>Engage youth (age 18-35) as an integral component in agricultural development</b>	Percentage of SMARTe and SAVY host organizations who are satisfied with quality job from the AVENIR agents	<b>Custom C.3</b>	88% 44% satisfied 44% very satisfied
	Number of individuals graduating from Guinea AVENIR Program	<b>Custom C.4</b>	55 Total 41 male 14 female
	Number of full-time equivalent (FTE) jobs created with USG assistance (RAA)	<b>EG. 3-9</b>	55 (15 Full time, 4 ½ time, 8 1/3 time, 28 ¼ time; 54 rural; 29 men 26 women; 55 new; 0 continuing; 1 rice; 54 horticulture)
	Number of AVENIRS gainfully employed beyond graduation	<b>C.5</b>	9 (6 men 3 women; 3 employed 6 self- employed)
Sub-IR 1.1: <b>Increased availability of credit tools to support value chain development</b>	Value of new private sector capital investment in the agriculture sector or food chain leveraged by Feed the Future implementation (RAA)  Unit: USD	Standard: <b>EG.3.2-22</b>	\$12,119.65 (all private enterprise)
	Number of firms (excluding farms) or civil society organizations (CSOs) engaged in agricultural and food security-related manufacturing and services that have increased profits or become	Standard: <b>EG.3.2-21</b>	23 (22 private enterprise; 1 producers; this is a combined SAVY and SMARTe result)

	financially self-sufficient with USG assistance (RAA)		
IR-2: <b>Enhanced human and institutional capacity for profitable and nutrition sensitive agriculture</b>	Number of individuals who have received USG-supported short-term agricultural sector productivity or food security training (RAA) (WOG) Unit of Measure: Number	Standard: <b>EG.3.2-1</b>	2,543 (1,574 Men; 969 women; 1,120 <35 years; 1,423<35); 2,011 new; 532 continuing; 2,177 producers, 8 input suppliers, 325 service providers, 12 processors; 12 N/A).
	Number of hectares of land under improved technologies or management practices with USG assistance (RAA) (WOG) Unit of Measure: Number	Standard <b>EG.3.2-18</b>	124.72 ha (28.53 ha Soil Fertility and Conservation, 21.95 ha Irrigation and Water Management, 49.82 Production; 5.4 ha Male & Female; 79.72 ha Age 36+, 45.00 ha Age<35) Please note that project is still gathering, analyzing, and collating data for this indicator.
Sub-IR 2.1: <b>Higher quality information communicated to agricultural producers and businesses</b>	Number of direct individuals receiving information on nutrition-sensitive agriculture practices	C.7	13 (10 male; 3 female; 10 new; 3 continuing); Please note that SPRING provided nutrition-sensitive agriculture practices however, the data was not provided by SPRING.
Sub-IR 2.1: <b>Demand-driven, quality &amp; relevant extension &amp; advisory services delivered</b>	Number of farmers and others receiving extension services as a result of USG assistance  Unit of Measure: Number	Custom: <b>C.8</b>	239 (115 male, 124 Females; 154 Age 36+, 85 Age < 35; 197 New, 42 Continuing)
	Number of Trials and Demonstrations put in place to test, adapt and promote improved technologies and management practices Unit of Measure: Number	Custom: <b>C.9</b>	116 (67 peri-urban, 49 rural; 7 rice; 83 horticulture; 23 livestock; 3 other; 21 pest management; 13 soil fertility and conservation; 1 irrigation and water management; 12 value added processing; 69 production)
IR-3 <b>Expanded market access for improved technologies and agricultural produce</b>	Number of farmers and others who have applied improved technologies or management practices with USG assistance (RAA) (WOG)	Standard: <b>EG.3.2-17</b>	125 (16 women, 109 men; 11 Soil fertility and conservation, 2 Irrigation and water management, 2 Value added processing, 94 Production; 97 Producers, 12 Processors, 75 New, 50 Continuing)
Sub-IR 3.1 <b>Appropriate agricultural technologies co-</b>	Value of small-holder incremental sales generated with USG assistance (RAA)	Standard <b>EG 3.2-19</b>	\$13,176 (\$9,417 male; \$3,759 female; \$243 rice; \$12,933 horticulture). Note, rice harvest is imminent in December 2018. Data comes from

developed with private sector & R&D institutions			
	Number of technologies or management practices under research, under field testing, or made available for transfer as a result of USG assistance (RAA) Unit of Measure; Number	Standard <b>EG.3.2-7</b>	22 (4 under field testing; 17 made available for transfer; 1 N/A)
Sub-IR 3.2: Increased sales of quality agricultural inputs and equipment	Value of sales by agro-dealers as a result of USG assistance Unit of Measure: USD	Custom: <b>C.11</b>	\$ 12,311.13 (\$8,997.31 men; \$3,313.96 women; \$1,944.14 irrigation; \$7,158.88 other). Note that GAS (SAVY and SMARTE) sales are \$26,802.40.
Sub-IR 3.3: Facilitated market information to enhance private and public sector opportunities	Number of farmers and others who have received market information Unit : Number	Custom: <b>C.12</b>	0
	Number of formal arrangements between Buyers and producers Unit: Number	Custom: <b>C.13</b>	0
	Number of public-private partnerships formed as a result of FTF assistance (S) Unit: Number	<b>EG. 4.5.2-12</b>	17 (13 private enterprises, 3 producer organizations, 1 business association)
Cross Cutting Issues	Number of volunteer assignments completed	<b>F2F1</b>	26 (21 male, 5 female; 26 Technology Transfer)
	Number of days of volunteer service	<b>F2F3</b>	9,528 (8,670 technology transfer, 572 business and enterprise development; 286 financial services)
	Number of host organizations assisted by volunteers	Standard <b>F2F10</b>	52 (25 private enterprises, 13 unions, 14 producer associations)

### Annex 3: SMARTE Organizational Chart



## Upcoming Activities, Quarter I, FY19

SMARTE Program Activity Implementation Plan	Quarter I (FY19)											
	Oct-18				Nov-18				Dec-18			
	1	2	3	4	1	2	3	4	1	2	3	4
<b>Monitoring, Evaluation &amp; Learning</b>												
Clean, verify and validate data from FY18; prepare for upload to FTFMS (Nov 2018))												
Year 2 performance report and M&E narrative report												
Conduct Annual Survey for Outcome Indicators												
Conduct Internal DQA												
In-house collaborating, learning and application meeting (SMARTE & SAVY team)												
Training and practical exercise on collecting survey data, using Survey123 with AVENIR agents (Cohort 4)												
Data collection using Survey123 through the AVENIR												
Knowledge and Learning event with (USAID, GOG representatives, GAS implementing mechanisms and Development partners)												
<b>Agriculture Education and Training Activity</b>												
Field STVTA to support role out and costing of the certificate program within GAIN institutions.												
Support to GAIN staff to participate in AVENIR Core and Capstone trainings.												
AET Staff support to finalize a modified core and capstone training for a certification course presented by ISAV/F												
<b>Recruitment and mobilization of AVENIR</b>												
Host Identification Cohort4												
AVENIR Recruitment - Cohort 4												
VCI engagement of AVENIR agents - Cohort 4												
Review and update AVENIR Training Curriculum												
Training of AVENIR (Cohort 4)												
Placement of AVENIR with hosts - Cohort 4												
Provide monitoring of entrepreneurial objectives and necessary follow up trainings to support AVENIR												

<b>Extension and Advisory Services Activity</b>													
Identification and Placement of AVENIR Hosts and Mentors (Cohort 4)													
Development of technical sheets for a number of crops (Rice, Potato, Radio and video promotion for AVENIR as fee-based advisors													
STVTA to develop guidelines and strategy for AVENIR marketing and pricing of service provision													
<b>Research and Development Activity</b>													
Coordination with private sector actors to leverage investment in AVENIR business to expand distribution and outreach.													
Review AVENIR hosts and client needs using survey tools with AVENIR													
Train AVENIR in appropriate commercialization strategies and technology usage													
<b>Recruitment and Mobilization of Volunteers</b>													
Recruit and mobilize F2F volunteer consultants													
<b>Program Administration</b>													
Move of CoP and OD to Kindia													
Finalize recruitment of ME&L Director													
Update Inventory													

