



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

FEED THE FUTURE SENEGAL **DUNDËL SUUF** PROJECT

USAID Senegal: Buy-In to the Feed the Future EnGRAIS Project

2021 ANNUAL REPORT

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ACRONYMS

AEZ	Agro-Ecological Zone
APESEN	Association of Professional Fertilizers of Senegal
ANCAR	National Agency for Agricultural and Rural Advice
DA	Department of Agriculture
DRDR	Direction Régionale de Développement Rural
DS	Dundël Suuf
ECOWAS	Economic Community of West African States
EnGRAIS	Enhancing Growth through Regional Agricultural Input Systems
FDP	Fertilizer Deep Placement
FeSeRWAM	Fertilizer and Seed Recommendation for West Africa Map
GoS	Government of Senegal
IFDC	International Fertilizer Development Center
ISRA	Senegalese Institute of Agricultural Research
ISFM	Integrated Soil Fertility Management
MAER	Ministry of Agriculture and Rural Equipment
MEL	Monitoring, Evaluation, and Learning
M&E	Monitoring and Evaluation
MD	Microdosing
PNIASAN	National Agricultural Investment Program for Food Security and Nutrition
PRACAS	Senegalese Agriculture Cadence Acceleration Program
PSE	Plan Sénégal Émergent
Q4	Quarter 4
RESOPP	Network of Farmer and Pastoral Organizations of Senegal
SAED	Société Nationale d'Aménagement et d'Exploitation des Terres du Delta du fleuve
SDDR	Departmental Services for Rural Development
SODAGRI	Société de développement agricole et industriel du Sénégal
IR	Intermediate Result
IP	Implementing Partners
UDP	Urea Deep Placement
USG	United States Government
USAID	United States Agency for International Development
WAFP	West Africa Fertilizer Program
WARM	West Africa Regional Mission
ZoI	Zones of Influence

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1. SUMMARY OF THE PROJECT

The Government of Senegal (GoS), through the Senegalese Agriculture Cadence Acceleration Program (PRACAS), the National Agricultural Investment Program for Food Security and Nutrition (PNIA-SAN) and the Emerging Senegal Plan (PSE), continues to support the agricultural sector through a national program of subsidies for seeds, fertilizers and agricultural equipment with the objective of sustainably increasing production to achieve self-sufficiency in rice, maize, millet, sorghum, onion and potato, and even exporting surpluses of horticultural products.

To contribute to the goals of these GoS programs, the USAID/West Africa Regional Mission (WARM) signed, on September 30, 2019, an amendment to the Enhancing Growth through Regional Agricultural Input Systems (EnGRAIS) cooperative agreement to incorporate a buy-in from USAID/Senegal to fund the Feed the Future Senegal Dundël Suuf project for a period of 3 years (October 2019 - September 2022). The aim of Dundël Suuf (DS) is to increase agricultural productivity by promoting an inclusive and sustainable reduction of hunger, poverty, and malnutrition while its strategic objective remains to increase the availability and use of new quality fertilizers through efficient private sector-led supply systems to improve and maintain soil fertility in Senegal. The project activities are organized into three major components which are: (1) Improved and appropriate fertilizer formulas developed and made available to farmers, (2) Proven and environmentally sound fertilizer products and technologies disseminated and upscaled, (3) Improved fertilizer policy and regulatory environment. The main beneficiaries are small farmers; input supply chain actors; extension and research agents; and vulnerable groups. The project operates in the five Feed the Future Zones of Influence (ZoI) which are Casamance, Senegal Oriental, the Peanut Basin, Niayes and the Senegal River Valley. The target crops are dry cereals, rice, and vegetables.

2. RESULTS FRAMEWORK

The results framework shown in Figure 1 presents the goal and strategic objective of the project. To meet this goal and objective, the following three intermediate results (IR) and four cross-cutting activities are to be achieved:

- IR 1: Improved and appropriate fertilizer formulas developed and made available to farmers,
- IR 2: Proven and environmentally sound fertilizer products and technologies disseminated and upscaled, and
- IR 3: Improved fertilizer policy and regulatory environment

The cross-cutting issues are:

- Increased women's access to productive resources,
- Increased participation of young people in agriculture,
- Governance, policies, and institutions are more efficient, and
- Communication and information sharing more effective.

See details of the full results framework (RF) in figure 1:

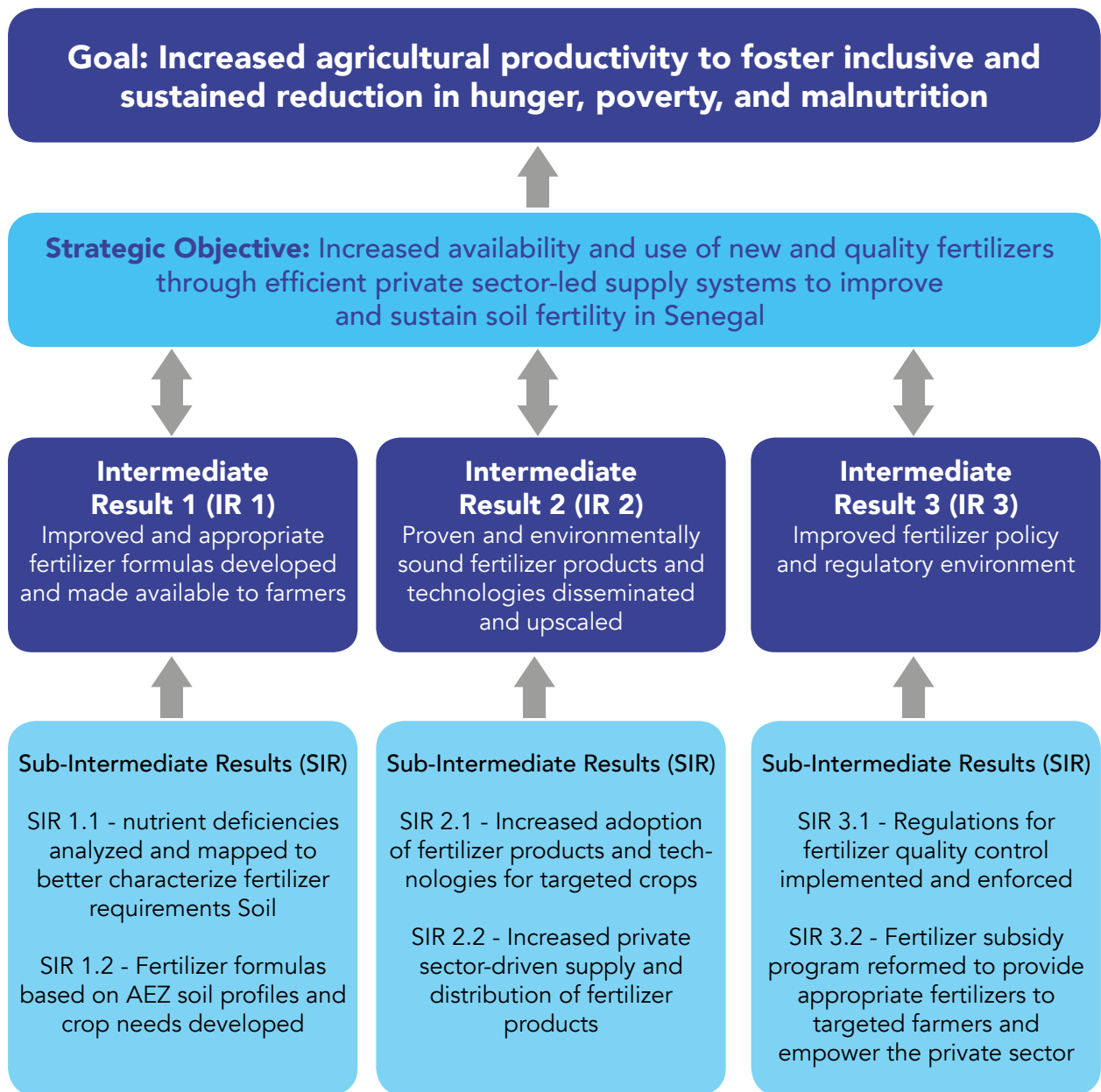


Figure 1: Dundël Suuf Project Results Framework

3. KEY ACHIEVEMENTS

The following is a summary of DS' key achievements for its second year of implementation (FY2):

- a total of 2556 soil samples have been analyzed for the following parameters: soil texture, pH, total N, total organic matter, P, K, Ca, Mg, Na, Zn, Cu, Fe, B, Mn, and S);
- partial soil nutrient deficiency maps for the regions of Saint Louis, Louga and Matam are available and shared with partners;
- 17 local implementing partners (LIPs) selected to carry out the off-season and rainy season activities with the following results:
 - training of 122,644 farmers on MD, UDP, and ISFM technologies out of which 67,384 are women (55%) and 18509 youth (15 %);
 - establishment of 3,053 demonstration and dissemination plots on FDP and MD technologies.
 - implementation of 8091.47 hectares demonstration and extension of UDP, MD and ISFM technologies.
- 900 target beneficiaries have been identified and have received agro-input packages (AIPs) for COVID 19 impact mitigation.
- 1 national workshop organized to share the results of the 2020/2021 rainy season campaign and to plan the activities for the 2021/2022 wet season campaign.
- 2 training workshops on (i) Environmental impact mainstreaming and (ii) Stata and advanced Excel;
- 9 Dundël Suuf monthly Flash Info from January to September published;
- 8000 Flyers on principles for smart fertilizer subsidy program reform produced and shared with stakeholders;
- a database of agrodealers operating in Senegal developed;
- an Online Monitoring, Evaluation and Learning System developed and implemented every two weeks;
- a partnership with University of Sine Saloum El hadji Ibrahima NIASS (USSEIN) has been implemented resulting in a selection of 8 internship students;
- a hiring of a new project IT and Communication specialist after the departure of the former one in August.

The main achievements are presented in detail and by intermediate results as follow:

4. INTERMEDIATE RESULT 1 (IR1): IMPROVED AND APPROPRIATE FERTILIZER FORMULAS DEVELOPED AND MADE AVAILABLE TO FARMERS

To implement this component, the project has signed a contract with the Senegalese Institute of Agricultural Research (ISRA) in charge of field activities related to the soil fertility mapping.

4.1.IR1.1: Nutrient deficiencies analyzed and mapped to better characterize fertilizer requirements Soil

Table 1: Planned activities and level of implementation

Activities	Level of Implementation
Soil sampling	This year, a total of 1 968 samples are collected in addition to 588 samples collected in FY1. Globally, 2 556 samples have been collected instead of 2 500 samples as planned.
Soil analysis	Completed. 2556 samples are analyzed.
Soil deficiency mapping	Draft maps are available for Matam, St Louis and Louga regions. National maps are expected by end of 2021.



Photo 1 : Soil sampling in a rice field in Rosso (Senegal River valley)



Photo 2 : Soil sampling in an onion field in Nder (Senegal River Valley)

Before sending the soil samples to the laboratory for analysis, they were pre-treated at ISRA's soil laboratory in St. Louis, Senegal (see Box 1).

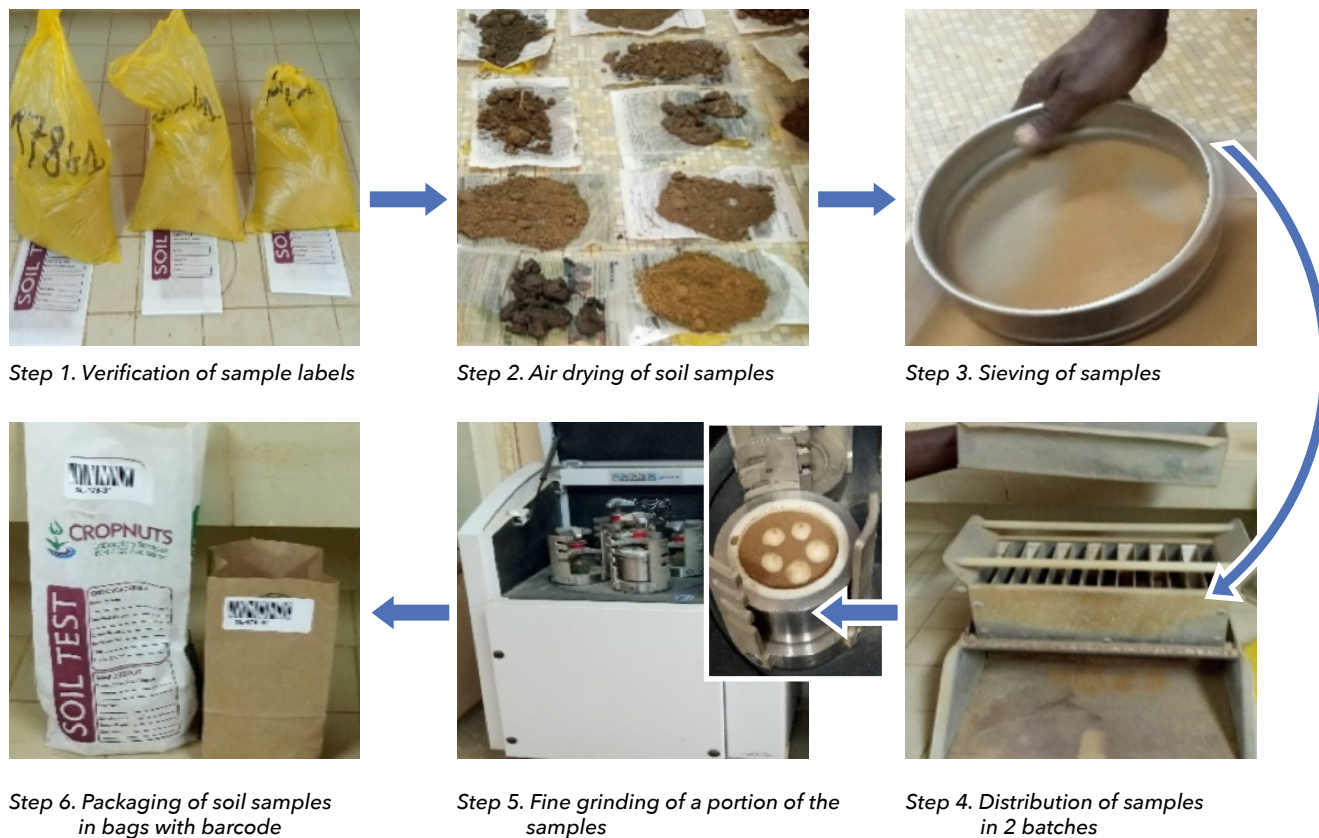


Figure 2: Pre-treatment steps of soil samples at ISRA's Saint-Louis laboratory

In all tables gap is the difference between realization and targets while rate is equal to gap over target.

Table 2: Level of achievement of targets

Indicators	Q1	Q2	Q3	Q4	Annual			Comments
					Target	Achieved	Rate	
Number of soil samples analyzed	588	711	1076	181	2500	2556	102%	
Number of soil nutrient deficiency maps	0	0	0	0	15	0	0%	Draft maps are available for Matam, St Louis and Louga regions. National maps are expected by end of 2021.*

* Analyses of the first samples taken from three border regions in the valley zone (figure 3), namely from Saint Louis, Louga and Matam regions (in dark orange), show that soils in this part of Senegal are mostly acidic with few neutral and basic pockets. Also, their nutrient contents are low and decrease significantly from north to south. In this part, the texture is dominated by sand with low levels of organic matter and consequently low cation exchange capacity. Therefore, organic amendments should be among priority actions to be undertaken in these areas. The maps of 15 soil elements: texture, soil organic matter, pH, cation exchange capacity (CEC), P, K, N, Ca, Mg, Na, Cu, Fe, S, B and Zn in the regions of Louga, Saint-Louis and Matam are presented respectively from figure 4 to figure 18.

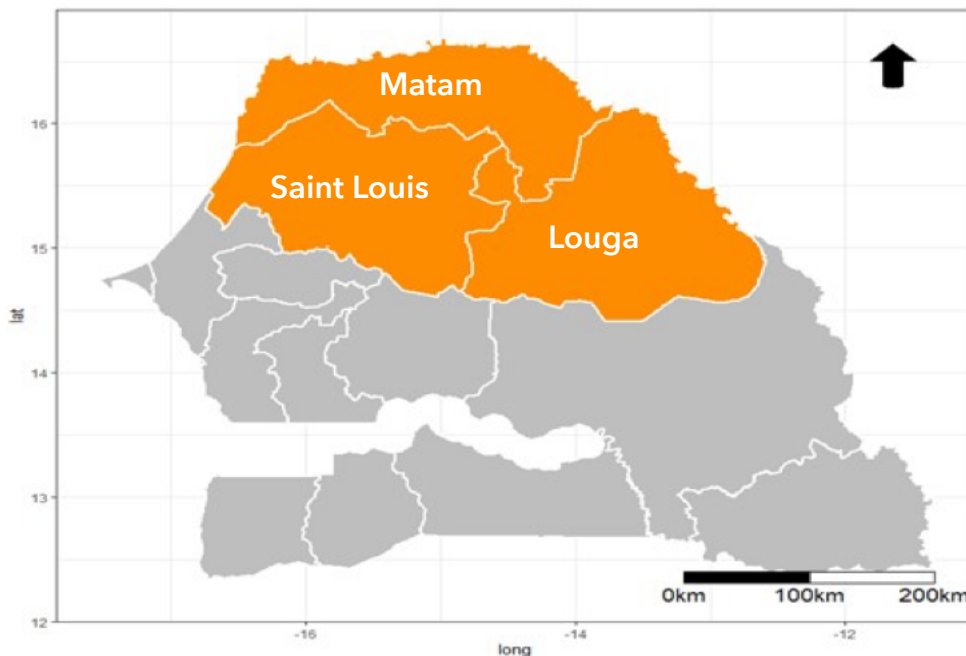


Figure 3: Map of Senegal with the northern sampled area in dark orange

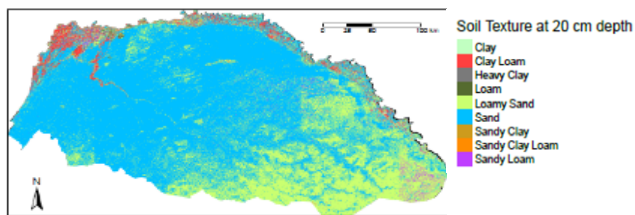


Figure 4 : Map of soil texture in the regions of Louga, Saint-Louis, Matam

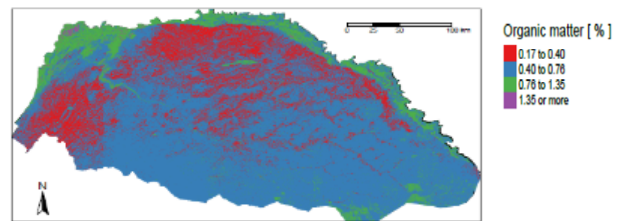


Figure 5 : Map of soil organic matter in the regions of Louga, Saint-Louis, Matam

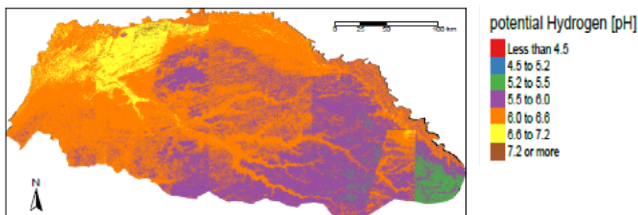


Figure 6 : Map of soil pH in the regions of Louga, Saint-Louis, Matam

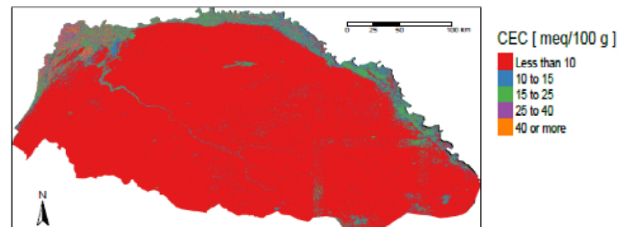


Figure 7 : Map of soil Cation Exchange Capacity (CEC) in the regions of Louga, Saint-Louis, Matam

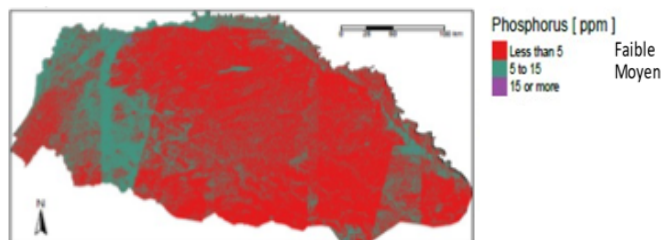


Figure 8 : Map of soil phosphorus (P) in the regions of Louga, Saint-Louis, Matam

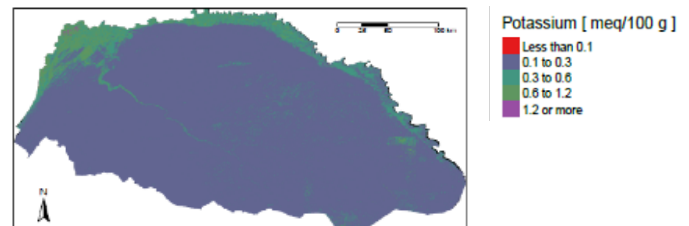


Figure 9 : Map of soil potassium (K) in the regions of Louga, Saint-Louis, Matam

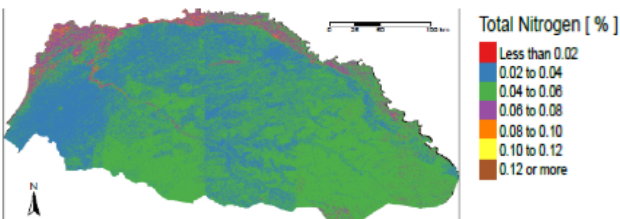


Figure 10 : Map of soil total nitrogen (Total N) in the regions of Louga, Saint-Louis, Matam

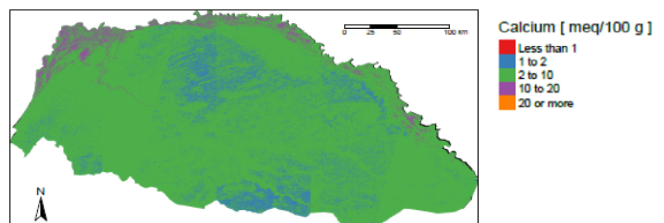


Figure 11 : Map of soil Calcium (Ca) in the regions of Louga, Saint-Louis, Matam

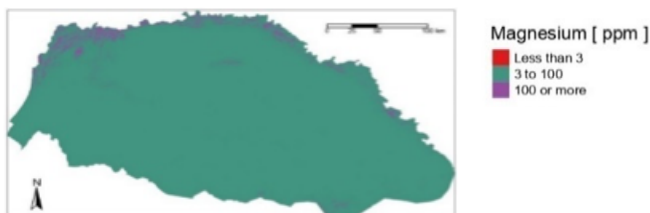


Figure 12 : Map of soil magnesium (Mg) in the regions of Louga, Saint-Louis, Matam

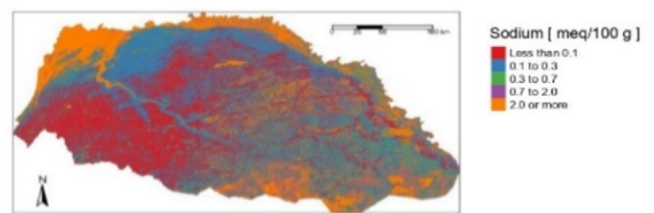


Figure 13 : Map of soil Sodium (Na) in the regions of Louga, Saint-Louis, Matam

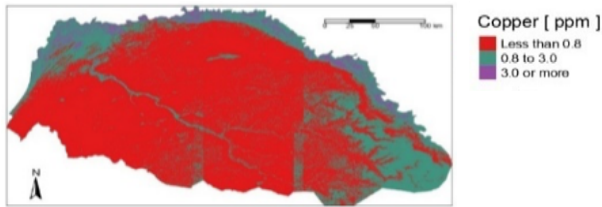


Figure 14 : Map of soil copper (Cu) in the regions of Louga, Saint-Louis, Matam



Figure 15 : Map of soil iron (Fe) in the regions of Louga, Saint-Louis, Matam

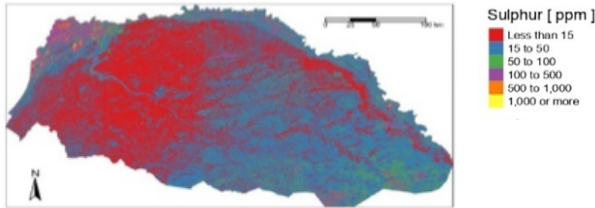


Figure 16 : Map of soil sulphur (S) in the regions of Louga, Saint-Louis, Matam

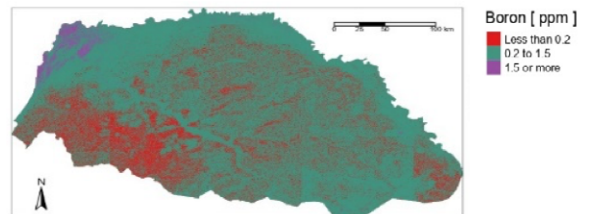


Figure 17 : Map of soil boron (B) in the regions of Louga, Saint-Louis, Matam



Figure 18 : Map of soil Zinc (Zn) in the regions of Louga, Saint-Louis, Matam

4.1.IR1.2: Fertilizer formulas based on AEZ soil profiles and crop needs developed

No activities planned for the FY2 because the mapping is still in progress. However, some nutrients recommendations mainly N, P ad K for peanut, rice, sorghum, maize, onion and tomatoes have been issued based on partial soil maps for Louga, Saint-Louis, and Matam regions.

5. INTERMEDIATE RESULT 2 (IR2): PROVEN AND ENVIRONMENTALLY SOUND FERTILIZER PRODUCTS AND TECHNOLOGIES DISSEMINATED AND UPSCALED

Activities are carried out under two key sub intermediate results for this fiscal Year1(FY1), namely increased adoption of fertilizer products and technologies for targeted crops (IR. 2.1) and increased private sector-driven supply and distribution of fertilizer products (IR. 2.2).

5.1. IR2.1 : Increased adoption of fertilizer products and technologies for targeted crops

The table below shows the planned activities under SIR 2.1 and the level of execution.

Table 3: Planned activities and level of implementation

Activities	Level of Implementation
Evaluation of the 1st demonstration phase	All agronomic and economic results are available and a workshop was organized in May 2021 to validate and share results from the first set of demonstration plots.

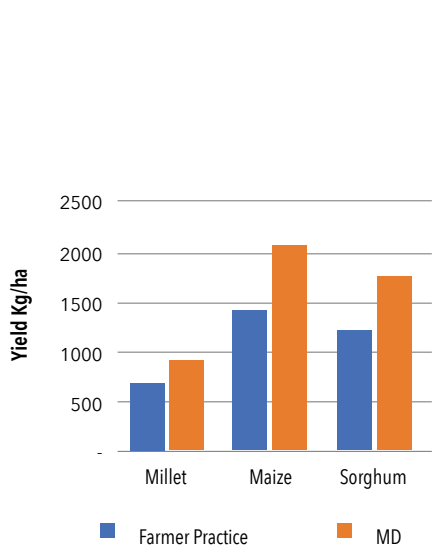


Figure 19. Average yield of millet, maize, and sorghum with farmer practice and MD technology

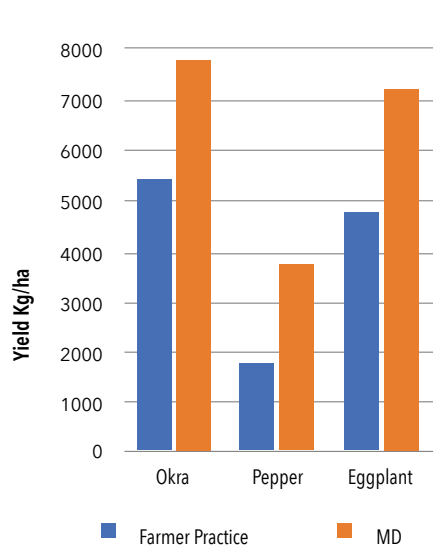


Figure 20. Average yield of okra, pepper, and eggplant with farmer practice and MD technology

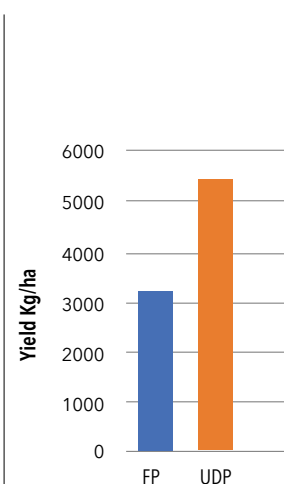


Figure 21. Average yield of rice under farmer practice and UDP technology

Table 4. Margins per crop and treatment

	Crops	Treatment*	Production Cost (F CFA/ha)	Income (F CFA/ha)	Margin (FCFA/ha)
Microdose / Dry Cereals	Millet	Farmer Practice	218 609	280 200	61 591
		Microdosing	313 343	420 656	107 313
	Maize	Farmer Practice	226 750	362 110	135 360
		Microdosing	346 917	472 556	125 639
	Sorghum	Farmer Practice	86 739	275 067	188 328
		Microdosing	135 696	417 898	282 202
	Okra	Farmer Practice	443 333	3 147 152	2 703 819
		Microdosing	1 939 583	4 901 388	2 961 805
Microdose / Vegetables	Eggplant	Farmer Practice	2 916 667	3 124 750	208 083
Microdosing		3 750 000	4 562 250	812 250	
	Pepper	Farmer Practice	1 875 000	2 083 000	208 000
		Microdosing	2 708 333	3 958 000	1 249 667
Rice	Farmer Practice		122 500	183 625	61 125
		UDP	221 780	417 625	195 845

*FP : Farmer Practice ; MD : Microdosing ; UDP : Urea Deep Placement

Selection of sites, targeted beneficiaries, and appropriate AIP for COVID impact mitigation activities	<p>530 sites have been selected and 900 targeted beneficiaries have been identified and received their AIP.</p> <p>29 259 farmers trained out of which 57% women and 17% youth, versus a total target of 7 000 farmers to be trained.</p> <p>657 hectares demonstration out of which of 209 ha under UDP and 448 under MD technologies.</p>
Selection of sites, and targeted beneficiaries for 2021 rainy season activities	3 053 sites have been selected. Plots' implementation is ongoing in all agro ecological zones.
Information, sensitization, and training of stakeholder	150 396 individuals sensitized and trained by 17 implementing partners located in the five agroecological zones
Digitalization approach for training in UDP/ MD fundamentals	Two (2) training videos produced and shared.
Implementation of Urea Deep Placement (UDP) and MD demonstration plots	17 implementing partners in the five agroecological zones have been identified Activities and budget defined for off and rainy seasons

Baseline of the COVID-19 indicators	Data provided by Dundël Suuf baseline study
Implementation of COVID impact mitigation activities	<p>Sites selected, beneficiaries identified, AIP distributed. Data collected from demonstration plots will be analyzed</p> <p>About 128 exchanges visits have been organized (5 256 people have participated)</p>

Box 2: Contractualization with implementing partners

As part of the implementation of the technology demonstration activities, twelve (12) providers known as implementing partners have so far been identified by the project, after a long selection process. These are: 04 regional directions of ANCAR (*Agence Nationale de Conseil Agricole et Rural*) whose contracts were signed between 20 and 29 May 2020; 07 DRDR (Direction Régionale de Développement Rural) whose contracts were signed between 29 April and 18 May 2020; and 01 umbrella farmers' organization called RESOPP (Réseau des Organisations Paysannes et Pastorales du Sénégal) whose contract was signed on 25 May 2020.



Photo 3 : Exchanges between the DRDR of Kédougou and maize producers during the exchange visit of the Microdose maize demonstration plot in Dar Salam Salémata, Kédougou

Table 4: Level of achievement of targets

Indicators	Q1	Q2	Q3	Q4	Annual			Comments
					Target	Achieved	Rate	
Number of individuals participating in USG food security programs	52 740	20 406	28 057	73 515	94 894	174 718	184%	Many farmers have participated to training, sensitization meetings, and exchange visits.
Number of blending companies linked to farmers	0	3	0	2	2	5	100%	This performance is due to the fact that farmers organizations were linked to the available briquetting machines. In fact, only 03 of them were fonctionnal this year
Number of fertilizer-based technologies developed and delivered to farmers through private sector	3	0	0	0	11	3	27%	Currently 3 technologies are being disseminated (MD, UDP, ISFM). However, studies on new fertilizer formulas are being conducted by our partner ISRA. We expected to get new formulas by end of Quarter 1 FY3
Number of fertilizer-based technologies developed and delivered to farmers through private sector	0	1	0	1	2	2	100%	
Number of technology transfer sites/demonstration sites established	95	530	2428	0	30	3053		The important positive gap is mainly due to the large number of demonstration plots. In fact, the demonstration plots under MD and UDP include 3 dried cereals, rice and 5 vegetable crops in five AEZ

Indicators	Q1	Q2	Q3	Q4	Annual			Comments
					Target	Achieved	Rate	
Number of people in the farming system who have applied FDP	827	1 442	448	5 978	4 000	8 695	217%	Through its 17 implementing partners, the project has been able to mobilize more farmers, especially women's groups. However, the numbers of hectares under improved technologies is still low because targets are based on a dissemination program, whereas they are demonstration on small plots. New partners are being identified to improve the rate of achievement
Number of people in the farming system who have applied MD	12 890	12 226	3 079	6 951	17 700	35 146	199%	
Number of people in the farming system who have applied ISFM	13 717	13 668	3 527	12 929	57 300	43 841	77%	
Number of hectares under FDP	204,03	161,43	47,83	988,32	1 200	1 402	117%	
Number of hectares under MD	381,15	277,00	170,64	1 814,99	19 680	2 644	13%	
Number of hectares under ISFM	585,18	439,00	218,47	2 803,31	50 720	4 046	8%	
Number of people trained on the fundamentals of FDP and ISFM	23 630	1 442,00	10 495	24 946	24 000	60 513	252%	The high level of performance this year can be explained by the increasing number of participants in demonstration and diffusion activities
Number of people trained on the fundamentals of MD and ISFM	28 644	13 387	5 377	14 723	70 800	62 131	88%	Training on the fundamentals of MD and ISFM will continue over the remaining time of the project
Number of hectares under FDP demonstration and related best agricultural practices	1	161,43	47,83	810,64	20	1021		The important achievements for these indicators can be explained by the increase in the number of demonstration plots based on farmer's request

Indicators	Q1	Q2	Q3	Q4	Annual			Comments
					Target	Achieved	Rate	
Number of hectares under MD demonstration and related best agricultural practices	3,6	277,35	170,64	614,72	72,00	1 066		The high level of performance this year can be explained by the increasing participation of women and youth in off and rainy season activities. Also, strong efforts have been made by the project to catch-up the delay of the first year The high level of performance this year can be explained by the increasing number of participants in demonstration and diffusion activities
Number of individuals who participated in the demonstrations of the FDP and the related best agricultural practices	55	1 442,00	192	5 649,00	1 000	7 338		
Number of individuals who participated in the demonstrations of the MD and the related best agricultural practices	1 350	12 226	2 652	5 028	1 951	21 256		
Number of people who have participated in guided tour on FDP demonstration plots	2 007	0	565	80	1 000	2 652	265%	The high level of performance is due to the large campaign of sensitization organized by SODAGRI on FDP technology in Casamance and Senegal Oriental which have increase the number of participants in exchange visits.
Number of people who have participated in guided tour on MD demonstration plots	714	0	1786	104	5500	2 604	47%	Exchange visits just started with three Lips for Q4 (ANCAR Senegal River Valley, RESOPP and DRDR Diourbel). Others will follow.

■ Training of farmers



Photo 4 : Farmers' training session in the field at Essyl

The farmers showed a strong enthusiasm during all the training sessions. The presentation of the technologies of microdosing and fertilizers deep placement and their application was an important step in the training sessions as it was an opportunity to introduce the participants to the project-promoted technologies. The practical stage of technology demonstration in the field, with the producers, reinforced the knowledge of the participants.

The sharing of experience between participants was a high point during the training sessions

■ Technology demonstration



Photo 5 : Application of MD technology on maize by farmers in Kafori (Kédougou)

Demonstrations of proven fertilisation technologies, including fertilizer deep placement (FDP) and microdose (MD), were initiated in April 2020 in rural areas with the support of IPs such as DRDR (Matam, St Louis, Kédougou, etc.), ANCAR and RESOPP. Presently, these two technologies and ISFM have been chosen for demonstration in the different agro-ecological zones of Senegal. The demonstration plots established in the five AEZ of Senegal covered by the project are geo-referenced.

Each demonstration plot is led by a farmer around whom other farmers come to learn and comment.

5.2. IR2.2 : Increased private sector-driven supply and distribution of fertilizer products

The table below shows the activities planned under Sub IR 2.2 and the level of implementation.

Table 5: Planned activities and level of implementation

Component and activities	Level of execution
Characterizing and mapping Agrodealers operating in Senegal	321 agrodealers characterized and mapped. A report is available
Facilitate the availability and operationality of urea super granule and applicators Strengthen the capacity of super urea pellet producers and fertilizer suppliers	A support was given to The Fédération des Producteurs de l'Anambé (FEPROBA) for acquiring two urea briquetting machines from Bangladesh. In addition, the project is working with mechanization specialist to develop two (02) prototype of applicator for MD and UDP
Facilitate setup and operation of (national) fertilizer platform	Seven regional fertilizer platforms are already operational and activities within each regional platform are ongoing under the facilitation of DS. This is the case of the Tambacounda platform which organized a meeting to reflect on the availability of fertilizer in the region. Beside the participation of the national platform (APESEN) to the national workshop organized on August 31, 2021 to share partial results of soil fertility mapping, no other activities have been conducted by APESEN.
Minimizing distortions in the agro-input supply chain: Senegal COVID-19 Fertilizer Watch.	Data on fertilizer market price in Senegal is being collected on a monthly basis and results after analysis shared through the project monthly Flashinfo. For illustration below is the Q4 key fertilizer price status (see table 7).

Table 6. Level of achievement of targets

Indicators	Q1	Q2	Q3	Q4	Annual			Comments
					Target	Achieved	Rate	
Number of fertilizer blending companies trained/strengthened	0	2	0	0	5	2	40%	Discussions are ongoing with APESEN to strengthen their capacities according to their needs
Total volume of urea briquettes sold through input suppliers because of the FDP scaling-up (in metric tons) *	23,05	18,24	5,4	111,68	678	158	23%	The gap between achievements and targets is due to the fact that targets are based on scaling program while DS should focus on small demonstration plots since the technologies are not well known.
Total volume of NPK / DAP and balanced fertilizer sold through input suppliers due to reduction in FDP and MD (mt)	127,12	71,91	49,95	263,29	6 023	512	9%	
Value of agriculture-related financing accessed as a result of USG assistance (US\$)	0	4 749	719 250	599 288	20 000	1 323 287		The value of this indicator is underestimated. The huge amount of the achievement (\$1 323 287) compared to the target (\$20 000) is explained by the support in inputs provided by the project to small farmers.
Value of new U.S. government commitments and private sector investments mobilized by the U.S. government in support of food security and nutrition (US\$)	0	46 369	21 033	0	50 000	67402	135%	The investments on agricultural input packages (\$46 369) to support the farmers during the off-season, Feproba for acquisition of 2 granulation machines (\$13,350), CMAS for the fabrication of applicators (\$7,053), and ICS Indorama (\$630) for field activities.

6. INTERMEDIATE RESULT 3 (IR3): IMPROVED FERTILIZER POLICY AND REGULATORY ENVIRONMENT

Under this component, two key activities were carried out in FY1, namely Regulations for fertilizer quality control implemented and enforced (Sub-Intermediate Result 3: SIR. 3.1) and Fertilizer subsidy program reformed to provide appropriate fertilizers to targeted farmers and empower the private sector (Sub-Intermediate Result 3: SIR. 3.2).

6.1. IR3.1: Regulations for fertilizer quality control implemented and enforced

The table below shows the activities planned under SIR 3.1 and the level of implementation.

Table 7: Planned activities and level of Implementation

Activities	Level of Implementation
Sub-IR 3.1 - Regulations for fertilizer quality control implemented and enforced	
Quality control regulations	An action plan is being implemented to support CERES-Locustox in having proper equipment and stronger capacities to facilitate fertilizer quality control.

The results reported below show the project's efforts in improving the policy and regulatory framework of the fertilizer sector and the application and enforcement of regulations related to fertilizer quality control.

Table 8. Level of achievements toward the targets

Indicators	Q1	Q2	Q3	Q4	Annual			Comments
					Target	Achieved	Rate	
Number of meetings/events facilitated by project on subsidy program review and reform	0	2	0	0	5	2	40%	Discussions are ongoing with APESEN to strengthened their capacities according to their needs
Number of national-level policies supporting regionally agreed-upon fertilizer regulations in Senegal	0	3	0	0	2	5	0%	4 drafts texts to facilitate implementation of regional regulations have been validated in January 2020 but still on standby at the Ministry in charged of Agriculture for fine turning.

6.2. IR3.2: Fertilizer subsidy program reformed to provide appropriate fertilizers to targeted farmers and empower the private sector

In accordance with the project work plan, the activities planned for FY1 and the levels of execution are shown in the table below:

Table 9: Planned activities and level of implementation

Component and activities	Level of execution
Disseminate guides on principles for grant program reform	4,500 Brochures and flyers on inputs subsidy policies have been already shared with LIP and other partners.
Sensitize and prepare key stakeholders for advocacy for program reform	Sensitization of key national stakeholders to support advocacy for subsidy program reform is ongoing within platforms of dialogue on fertilizer sector

Table 10: Level of execution toward the target

Indicators	Q1	Q2	Q3	Q4	Annual			Comments
					Target	Achieved	Rate	
Number of brochures/leaflets produced and distributed on the new systems	0	3 500	4 500	0	10 000	8 000	80%	The 8 000 copied are still being distributed.

7. CROSS-CUTTING ACTIVITIES:

Cross cutting issues include mainly gender, youth, and communication.

7.1. Gender

Table 11: Level of participation of women in project activities

Indicators	Q1	Q2	Q3	Q4	Annual			Comments
					Target	Achieved	Rate	
GNDER-2 Percentage of women participating in U.S. government-supported programs designed to increase access to productive economic resources	48%	74%	44%	58%	12%	54,60%	-	This high rate of achievement is due to the important involvement of women's groups in the project activities.



Photo 6 : Participation of women from Baïtilaye in rice sowing (Saraya Kédougou, Eastern Senegal)

7.2. Youth

Table 12: Level of youth participation in project activities

Indicators	Q1	Q2	Q3	Q4	Annual			Comments
					Target	Achieved	Rate	
YOUTH-3 Percentage of participants in USG-assisted programs designed to increase access to productive economic resources who are youth (15-29)	8%	17%	16%	22%	8%	16%	200%	Youth are getting more and more interested in the project activities due to a very oriented sensitization

7.3. Communication

During the first year of the project (October 2019-Septembre 2020), communication activities were focused on:

- Developed and hosted the Monitoring, Evaluation and Learning System. The system will be used for recording, reporting data and other information related to Project Performance Indicators. This database application is the main avenue for data entry, mostly to be done by the RAM's, Monitoring, Evaluation and Learning (MEL) specialist and give access to partners to view various project indicator reports <https://dundelsuuf.engrais.org/login>
- Developed and validated database for agro-dealers and agriculture input suppliers operating in Senegal
- Design and printed Dundël Suuf project souvenirs (agenda book, calendar, and bag)






Photo 7, 8 & 9: Dundël Suuf souvenirs as communication tools (agenda book, calendar, and bag)

- Coordinated the fertilizer production, trade, and apparent consumption in Senegal. This was done in collaboration with AfricaFertilizer.org and EnGRAIS.



Photo 10 : National Workshop for the Validation of Fertiliser 2020 Statistics in Senegal by the EnGrais Technical Working Groups (GTTE)

- Coordinated and supported the official launch ceremony of the Integrated Development Project of the Sahel Semen Sector (ISSD) held on Wednesday, February 17, 2021.
- Coordinated and supported the online validation workshop on Integrated Communication and Marketing of FeSeRWAM and AIPs strategy in March 2021. The workshop aimed at validating the integrated communication and marketing strategy for the large-scale dissemination of the FeSeRWAM platform and AIPs to start its operationalization. <https://feserwam.org/>
- Finalized the digital training video on microdose and urea deep placement technologies
- Provided support for activities of Intermediate Results Leads and the regional activity managers in their various zones
- Coordinated and processed the 2020/2021 agronomy and agroeconomic data from demonstration plots.
- Production of 3 success story on the use of Microdose and Urea Deep Placement technology in the village of Notto, Beer and Podor in both videos and hard copies in French and English.

Village	AEZ	Videos	PDF Documents
Beer	Niayes	 <p><i>French Video : (link)</i> <i>English Video : (link)</i></p>	<p><i>PDF English version (link)</i> <i>PDF French version (link)</i></p>
Noto	Niayes	 <p><i>French Video : (link)</i> <i>English Video : (link)</i></p>	<p><i>PDF English version (link)</i> <i>PDF French version (link)</i></p>
Podor	Senegal River Valley	 <p><i>French Video : (link)</i> <i>English Video : (link)</i></p>	<p><i>PDF English version (link)</i> <i>PDF French version (link)</i></p>

- Contribution to the market study on USG by improving and sharing the questionnaire through the Kobocollect tool.

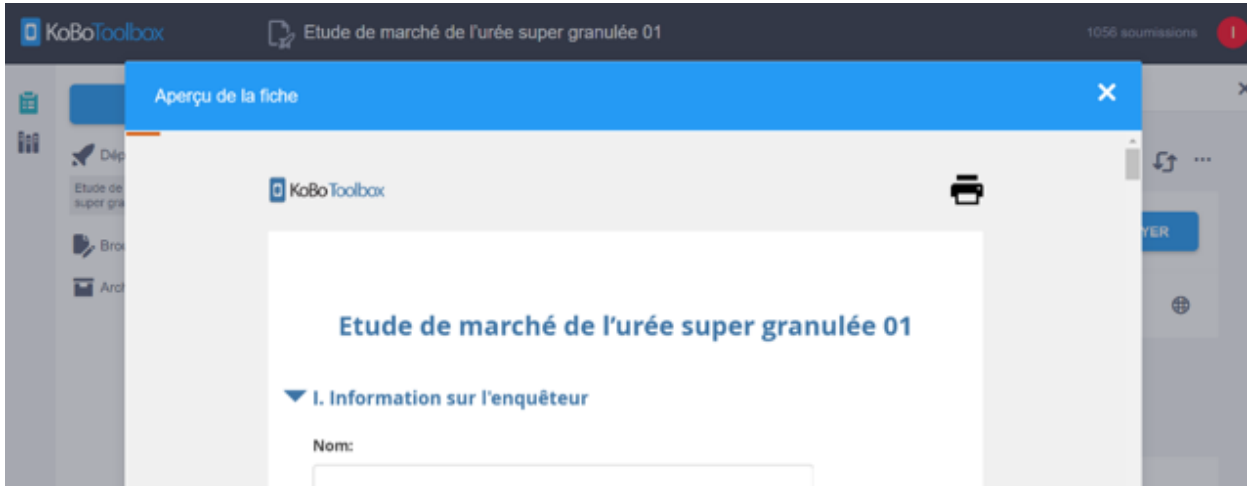
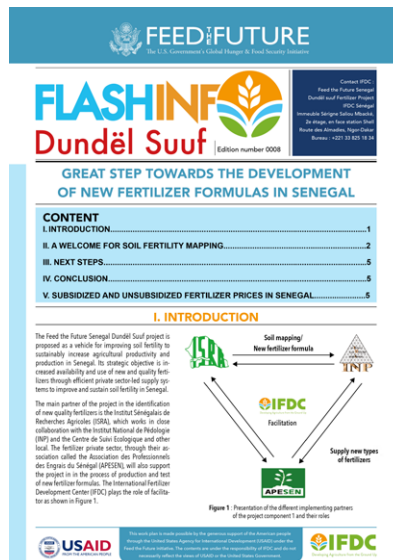


Photo 11 : Screenshot of kobocollect tool for data collection

- Editing the factsheet of The Feed The Future Senegal Dundël Suuf
- Coordination and publication of Dundël Suuf’s monthly Flash Info for July, August, and September



July (See document)



August (See document)



September (See document)

- Contribution to the organization of the online workshop on partial results of soil fertility mapping under the lead of ISRA on August 31, 2021.

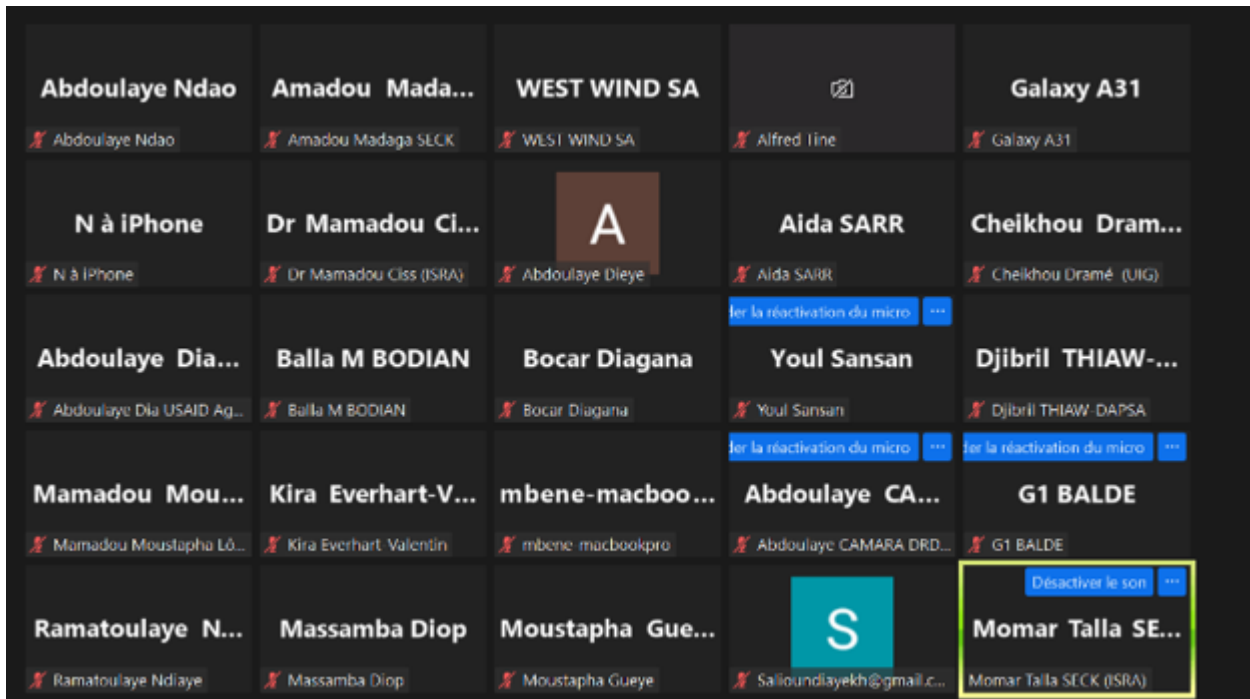


Photo 12 : Screenshot of the participants during the meeting

- Over this year, several events have been organized and have benefited from large media coverage. Below is the summary of press releases.

Peanut Bassin			
Event	Media	Date	Link
Workshop to share and validate the results of the 2020 rainy season campaign as part of the Dundël Suuf project activities in the Diourbel region organized by IFDC and DRDR Diourbel	Sud Quotidien	April 16, 2021	https://www.sudonline.sn/454-producteurs-agricoles-en-roles-dans-le-bassin-arachidier_a_51698.html
Workshop to share and validate the results of the 2020 rainy season campaign as part of the Dundël Suuf project activities in the Diourbel region organized by IFDC and DRDR Diourbel	RFM	April 16, 2021	https://ifdc-my.sharepoint.com/:u:/g/personal/amadaga_ifdc_org/ET2Es-GB_qZICnZ0Ql1cRblgBVKjnvQTLYQWj0GAWbH5xSQ?e=65HgDc
Workshop to share and validate the results of the 2020 winter season within the framework of the Dundël Suuf project activities in the southern regions of the groundnut basin, organized by IFDC and ANCAR BAS	RTS Kaolack	April 27, 2021	https://ifdc-my.sharepoint.com/:u:/g/personal/amadaga_ifdc_org/Ed-vID_Kq0OVGqB14zGi159oBoBNuzoMrAhjUdPpgIVR0GA?e=F0hOD1
Supervision visit by the Director of DRDR Diourbel at the level of demonstration plots of microdose on vegetables in the town of Ngohé, department of Diourbel	La Tribune	August 5, 2021	https://ifdc-my.sharepoint.com/:i:/g/personal/amadaga_ifdc_org/EY-MzepvF_IGjBWomCre1vABwOibUqnnOBupy5F8gyQvgv?e=hid5rU
Workshop to share results of rainy season 2020 RESOPP-ANCAR Niayes-IFDC	Sud FM	May 12, 2021	https://ifdc-my.sharepoint.com/:u:/g/personal/amadaga_ifdc_org/EaYreykESHtPtis21zx-m3IIBEHFmlG6eFZxebfhYNr-5JVg?e=oKcL1S
Eastern Senegal			
Meeting on the availability of fertilizers in the Tambacounda region	RFM	August 24, 2021	https://ifdc-my.sharepoint.com/:v:/g/personal/amadaga_ifdc_org/EU7qsdzgzktOoMSFr-FyXH14BexwHwN9j5-lirgm47YhAnA?e=gdrOfZ

Casamance			
Event	Media	Date	Link
Agricultural tour of the Minister of Agriculture and Rural Equipment in the South of Senegal	RTS1	August 21, 2021	https://ifdc-my.sharepoint.com/:v:/g/person/amadaga_ifdc_org/EYIDHbOyGEFKqBXut-D1RRkkBvB9t-ttkDphgs-b66PZpzOQ?e=fVIKdl
Senegal River Valley			
Projects to strengthen rural development	LE SOLEIL	Jan. 17, 2021	https://ifdc-my.sharepoint.com/:i:/g/person/amadaga_ifdc_org/EVW-gjGPZypINukKQM4AStFEBGDMzK-K6lcxkWfDrGOJ6YYw?e=Dvs5Rd
Exchange visit organized by the DRDR of Saint Louis in Keur Mbaye (Dagana) (French version)	Radio Senegal	May 12, 2021	https://ifdc-my.sharepoint.com/:u:/g/person/amadaga_ifdc_org/EaJYejnZQBLusnDBA5kPDQ-BerUdjStpRUjm7azB8IKyjq?e=uL4jrr
Exchange visit organized by the DRDR of Saint Louis in Keur Mbaye (Dagana) (wolof version)	Radio Senegal	May 12, 2021	https://ifdc-my.sharepoint.com/:u:/g/person/amadaga_ifdc_org/EUGyHayvxFNJqhO-tuN8boEcBuGY3cGhqSx-hg8Qp0bPUSLQ?e=xwoO3J
Exchange visit organized by the DRDR of Saint Louis in Keur Mbaye (Dagana) (Wolof version)	2S TV	May 12, 2021	https://ifdc-my.sharepoint.com/:v:/g/person/amadaga_ifdc_org/EQ_0WQqqGhplvG18V5tD-mqgBI4OwX8hhF_t0dulX6LpA-7Q?e=R2EKS0
Exchange visit organized by the DRDR of Matam in Garly (Podor) (Wolof version)	RTS1	June 23, 2021	https://ifdc-my.sharepoint.com/:v:/g/person/amadaga_ifdc_org/EaXD-CuljSSxLvJABf7_CV3oBA1WUicbr-pjsDwAUmJkmqrQ?e=euM4fz
Exchange visit organized by the DRDR of Matam in Garly (Podor) (Pulaar version)	RTS, TFM	June 23, 2021	https://ifdc-my.sharepoint.com/:v:/g/person/amadaga_ifdc_org/EX-DOywcIKFFkBKo-KOMBYMB6l-viy1i0wany5s2tvempXQ?e=Tejj5G https://ifdc-my.sharepoint.com/:v:/g/person/amadaga_ifdc_org/ESfsJN-hOLD5FkNAyVCflncwB5z71U_z4I-2B3UeqaomsPkw?e=JlhpsB

Niayes			
Event	Media	Date	Link
Sharing workshop on rainy season results 2020 RESOPP-ANCAR Niayes-IFDC	SUD FM	May 12, 2021	https://ifdc-my.sharepoint.com/:u:/g/person/amadaga_ifdc_org/EXvXioZd82dHqRqPJ-miVYLoBc5J0qVPiX40FKF-25bUlVA?e=CZRcbC
Sharing workshop on rainy season results 2020 RESOPP-ANCAR Niayes-IFDC (Wolof Version)	SUD FM	May 12, 2021	https://ifdc-my.sharepoint.com/:u:/g/person/amadaga_ifdc_org/Ec_TNSyB9gZLn_OfzO-nUsmkBoL9bPvGJ_fW_Qk8_Qu-Birg?e=LdyUfC

- Coordinated and processed data for the monthly Senegal fertilizer prices starting from April 2021. The table below summarize data collected up to September 2021.

Table 13: Fertilizer price variation

AVERAGE FERTILIZER ANNUAL PRICE FY2

Fertilizer	Type	Unit	April	Mai	June	July	August	Sept.	Variation	Average
DAP	Unsubsidized	50kg	16218	16218	17418	17418	20034	19250		17759
	Subsidized	50kg	8800	8800	9000	9000	10000	10000		9267
Foliar fertilizer	Unsubsidized	1 litre	6000	6000	6000	6000	8000	8000		6667
NPK 10 10 20	Unsubsidized	50kg	13061	13061	13635	13635	17100	18500		14832
	Subsidized	50kg	8457	8457	9225	9225	9500	9500		9061
NPK 15 10 10	Unsubsidized	50kg	9750	9750	11138	11138	12420	13278		11246
	Subsidized	50kg	7300	7300	7500	7500	7750	8167		7586
NPK 15 15 15	Unsubsidized	50kg	13100	13100	12781	12781	13776	14552		13343
	Subsidized	50kg	8704	8704	9000	9000	9000	9000		8901
NPK 6 20 10	Unsubsidized	50kg	10400	10400	10646	10646	12425	13021		11256
	Subsidized	50kg	7360	7360	7142	7142	7000	7000		7167
Urée	Unsubsidized	50kg	13406	13406	13518	13518	15244	15786		14146
	Subsidized	50kg	8040	8040	9000	9000	9000	9000		8680

8. MANAGEMENT AND GENERAL COORDINATION

During the FY2 of the project, coordination activities were focused on:

- Planning off-season activities on vegetable crops and rice production under MD and FDP technologies.
- Supervision of the preparation of project communication documents.
- Staff recruitment (2 Regional Activity Managers for Peanut Basin and Niayes).
- Consultants recruitment (communication specialist, machinist).
- Organization of the project team scientific retreat.
- Facilitation of the implementation and monitoring of demonstration plots with the IP.
- Treatment and analysis of 2020 rainy season data.
- Organization of a national workshop to share the results of the 2020/2021 wet season campaign and to plan the activities for the 2021/2022 wet season campaign.

At the end of the exchanges and discussions, the following recommendations were made:

- The involvement of the private sector in the formulation of new fertilizers and the manufacture of urea super granular.
- The diligence of ISRA in finalizing the soil mapping and making available the new fertilizer formulas in collaboration with the fertilizer manufacturers.
- The sensitization of producers in the different regions for future validation tests of the new fertilizer formulas.
- Mechanization of the application of PPU and MD technologies.
- Advocacy by the regional platforms for reflection on soil fertility for the inclusion of super granular urea and PPU/MD equipment in government subsidies;
- The choice of adapted varieties and seasons for market gardening activities;
- Training of producers by PMOs on the technologies before setting up nurseries; and
- Facilitating the availability of super urea granules wherever they are needed.
- Organization of training session for trainers (RAM) on the environmental considerations of DS activities.
- Training of project team on advanced Excel and Stata software.
- Fields visits.
- Follow up and development of monitoring plan after training of project team on advanced Excel and Stata software.

- Organization of 6 online monitoring & evaluation meetings.
- A hiring of a new project IT and Communication specialist after the departure of the former one in August
- A partnership with University of Sine Saloum El hadji Ibrahima NIASS (USSEIN) is being implemented.
- 8 internship students started field work in 5 agroecological zones since September 2021.
- Discussion with ISRA Djibelor to extend MD and UDP demonstration tests on Banana.



Photo 13: Scientific retreat of the project team: Saly-Mbour, Senegal



Photo 14: Presidium during national workshop in Saly: from left to right, Youl Sansan IFDC, Abdoulaye Ndao USAID, Pierre Diouf MAER, Ablaye Dièye APESEN and Mbène Dièye Faye DS



Photo15 : Participants national workshop on results sharing in Saly



Photo 16 : Field exchange visit with the leader producer Anta Ndiaye (Diewrigne, Lompoul and Bercome, Kolda)



Photo 15 : Field exchange visit with Bineta producers in BOYNGUEL, Mboro, Thiès



Photo 17 : Marème Fall, stagiaire à la DRDR de Tamba en train d'expliquer la technologie de la MD sur le maïs aux autres stagiaires de l'ANCAR/SOHC et de la SODAGRI, antenne Tamba

9. CHALLENGES, PERSPECTIVES AND OPPORTUNITIES

Major challenges during the FY2 of the project were:

1. Implement widely the project communication strategy
2. Keep up with deadlines on field activities because of Covid19
3. Finalization on time PMOs' contract's amendment #2
4. Finalization of 15 national soil fertility maps and new fertilizer formulas development. For now, three maps are available for Saint -louis, Louga and Matam regions (northern part of the country). On the other hand, significant progress has been observed in the analysis of soil samples.

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