



FEED THE FUTURE

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



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SENEGAL Naatal Mbay

Cereal Value Chains

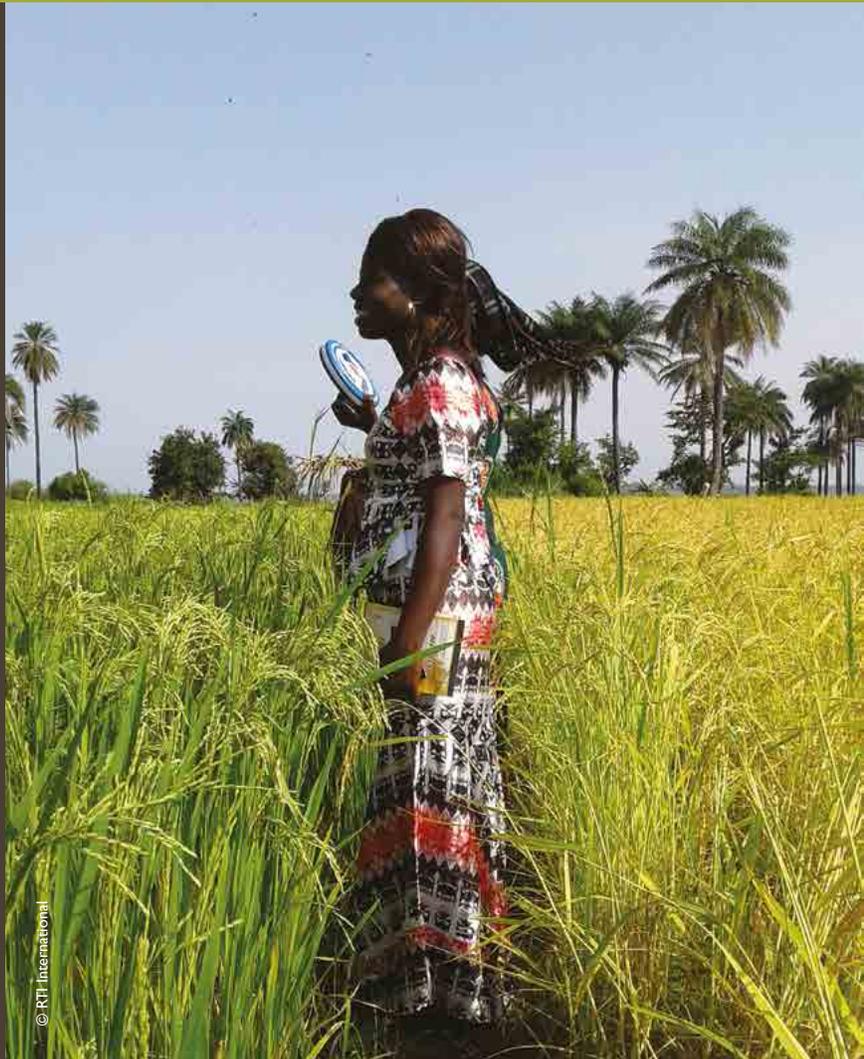
PRODUCER NETWORKS

Producer networks provide members with services that enhance productivity and provide access to financing and marketing. The promotion of an entrepreneurial culture supports their institutional development and allows members to become empowered and make an impact as agents of change within their communities.

2019

INTRODUCTION

For Feed the Future, strengthening producer organizations is a priority activity for realizing inclusive cereal value chains, a priority shared by the Government of Senegal. This support for producer networks is carried out through empowerment initiatives launched by organizations such as the Federation of Self-Administered Irrigated Rice Parameter Zones (FPA) of the Senegal River Valley, cooperatives affiliated with the Senegalese Association for the Promotion of Bottom-Up Development (ASPRODEB) and NGOs active in the South such as Symbiose and Entente. Feed the Future aimed to build on these achievements and offer organizations the opportunity to develop their entrepreneurial capacities by entrusting them with the responsibility of implementing training, and providing production guidance, connections to input suppliers, credit, and insurance, and marketing programs.



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BACKGROUND

In Senegal, the Government manages the dissemination of good agricultural practices to farmer organizations through various organizations and programs.¹ These technically oriented extension services are delivered by teams of technicians who serve as the main knowledge channels. Beneficiaries rely on periodic visits in their areas for training, monitoring of application of practices, and additional support. With population increases and the development of new value chains, the Government is

finding it increasingly difficult to meet these needs.

In recent years, Senegal has built a network of farmer organizations and local NGOs. Their lack of technical capacity in linking to markets and accessing finance in order to position themselves as self-reliant stakeholders in the value chain is a major constraint that needs to be overcome if they are to partake in the country's economic growth.

1. Agricultural Marketing Agency (OCA), Rural Coordination Center (CAR), Comprehensive Rural Expansion Center (CERP), Society for Technical Coordination and Cooperation (SATEC), National Marketing and Development Agency (ON-CAD), Regional Rural Development Society (SRDR), Society for the Development and Use of the Delta and Falémé (SAED), Agricultural Services and Farmers' Organizations Support Program (PSAOP), Agricultural and Rural Council National Agency (ANCAR), Regional Rural Development Division (DRDR).

2. See the capitalization note on «Data-Driven Agriculture»

Exchange Rate : Financial data originally presented in this note has been converted at the standard project exchange rate of US\$ 1.00 = 500 FCFA.

PHOTO. PAGE 1

A group of women rainfed rice producers, members of the Kissal Patim network in the Kolda Region, inspect their rice after it was processed using a mechanical rice huller.

PHOTO. PAGE 2

Adama, a young agent from the Youth Association of the Rural Community of Adeane (UJCRA) producer network holds a tape measure in her hand to mark the "yield squares" and assesses production of a rainfed rice field using a recognized sampling methodology. Adama supervises 25 women growers, working on 12.25 hectares of rice in the Ziguinchor Department in Casamance.

TECHNOLOGY DESCRIPTION

Feed the Future invests in pre-existing, functioning networks that demonstrate sufficient ability to self-organize and take charge of support programs for their members. This includes farmer associations, agricultural enterprises, NGOs, and other stakeholders that aim to increase member revenues. These networks, arising from or dependent upon grassroots producers, are strengthened in order to conduct training and extension activities, access finance, manage sales contracts, and other activities designed to integrate them into cereal value chains.

Training members to adopt good agricultural practices and to monitor their application

Producer networks must be able to build the capacity of their members through training in best agricultural and post-harvest practices, seed multiplication, and quality control. The ultimate aim of this approach is to ensure effective ownership of the practices over time and, consequently, an increase in yields, in production quality and an ability to adapt to climate variations and shocks.

Contracting directly with buyers and value chain service providers

The networks must be able to enter into contracts with the private sector, upstream and downstream in the production process. Upstream, it must put its members in contact with input suppliers, and providers of agricultural insurance and mechanized services for farming operations; downstream, it must be able to negotiate contracts with transporters, processors and buyers in order to market their production.

Generating and managing data and information²

Network productivity, area cultivated, and yield projections for the end of the season are all data which the network uses to inform its decisions. The networks must be able to collect, store, analyze, and share this data. The data collected determines the area to be insured, the quantity of inputs needed, and the volume of credit required, etc.

Facilitating market access

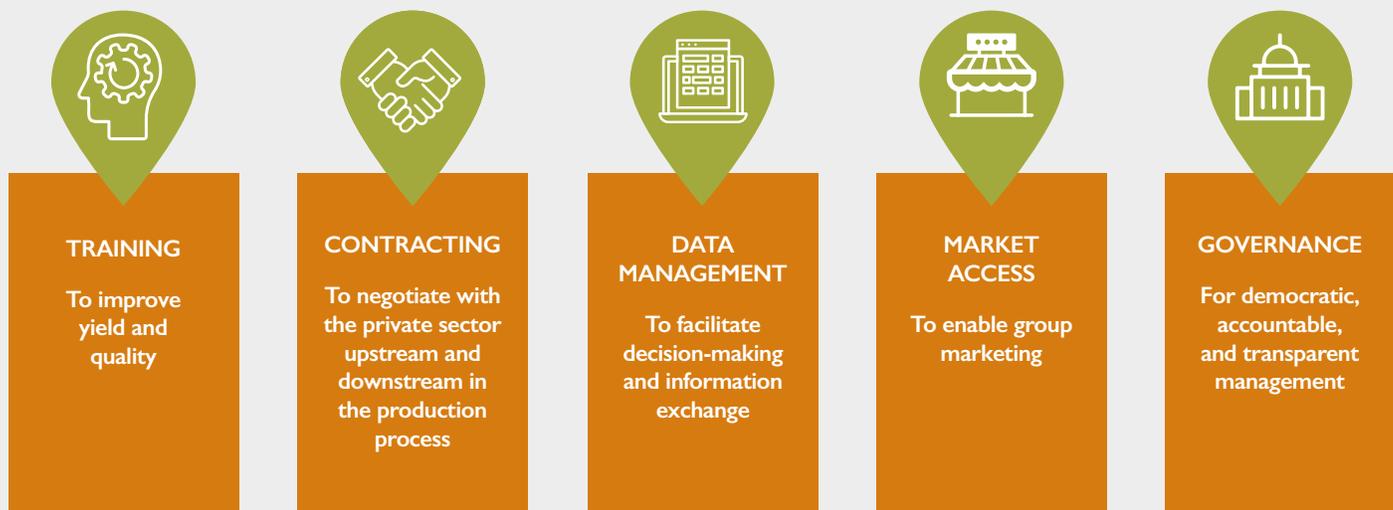
To improve marketing, a mechanism for consolidating cereals from individual farmers must be put in place. The production of network members intended for marketing or reimbursement of seasonal credits is consolidated in designated warehouses. On the basis of contracts signed at the beginning of the season or after harvest, the networks manage grouped marketing arrangements.

Improving governance

Producer organizations need to adopt rigorous administrative and financial management procedures to support the multiple services they provide and manage their growing membership. This includes in particular, transparent management and accounting systems, efficient and democratic governance procedures, and fair representation of the different member categories within decision-making bodies.

THE PRODUCER NETWORK VALUE CHAIN PACKAGE

Networks capable of providing value-added services to their members



RESULTING CHANGES

Improved Agricultural Yields

The various tools made available to producer networks such as rain gauges, georeferencing equipment, agricultural advice shared by the producers themselves, and facilitation of access to inputs, have contributed to yield improvements in the rice, millet, and maize value chains. The Wack Ngouna producer group estimates, for example, that since the advent of the project, millet yields have increased from 500 kg/ha to 1,200 kg/ha.

Improvement in Marketing of Agricultural Products

The application of good practices in association with the implementation of a consensual quality control system has improved the competitiveness of products entering the market. The introduction of a supply consolidation mechanism has also helped to strengthen the competitiveness of products thanks to the economies-of-scale generated by this system for processing units. A reduction in transaction costs is one of the key benefits of this system.

Improved Revenue

Supply consolidation through the networks has boosted marketing and, consequently, producer incomes. In the Casamance, increased rainfed rice yields have created a marketable surplus, spurring the gradual integration of rainfed rice into the market economy. Previously, rice was cultivated exclusively for household or subsistence needs, predominantly by women on small plots (0.25 ha - 1 ha).

Implementation of a Sustainable Advisory System

Advice is given by producers to their peers on the basis of training received from different projects and the practical experience shared by others. Debriefing sessions are organized at the end of the crop to take stock of the results of the season. Sessions highlight differences in performance and agricultural practices, and lessons learned to be applied the following season.

Technical Tools Available to Producers

Peer-to-peer exchanges across demonstration plots promote the dissemination of technologies. Producers are thus at the center when it comes to using and managing technical tools that were once managed by Government technical agents.

Networks Expand and Diversify their Production

Feed the Future has set recruitment objectives for each organization with a view to expanding their membership base and diversifying their production. Because of the results achieved in terms of productivity, the networks have had no trouble recruiting new members. For example, membership of the African Agricultural and Cultural Youth Association - Anti-Hunger Committee (AJAAC-COLUFIFA), grew from 1,000 rice producers and 1,500 maize producers in 2015 to 2,549 and 3,000 respectively. Faced with this explosive expansion, only 2,034 members of maize networks were selected for the project.

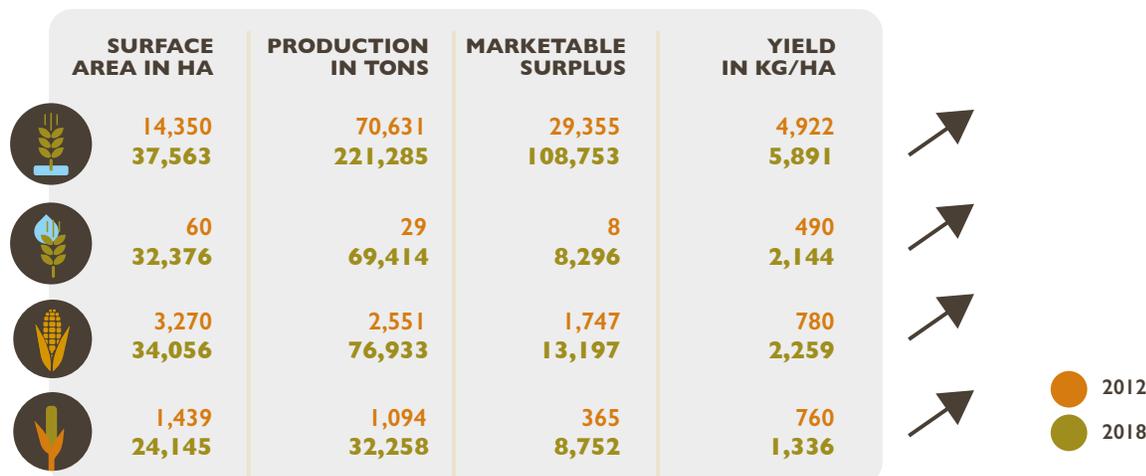
Institutional Network Development

As networks diversify their service offerings, demand becomes clearer, and they are called upon to improve their governance. As the network grows in terms of volume of credit mobilized, the number of members, the area covered, etc., transparency becomes imperative and accountability a requirement.

Development of an Entrepreneurial Culture

Relationships created or strengthened with the private sector have had the effect of professionalizing the networks. Now, networks are aware that they must offer quality products in order to be competitive and that they must no longer simply rely on the support of projects for their development.

MORE EFFICIENT PRODUCER NETWORKS GO HAND-IN-HAND WITH PROGRESS IN ALL AREAS



ACROSS THE COUNTRY NETWORKS INTEGRATE THEIR MEMBERS INTO CEREAL VALUE CHAINS

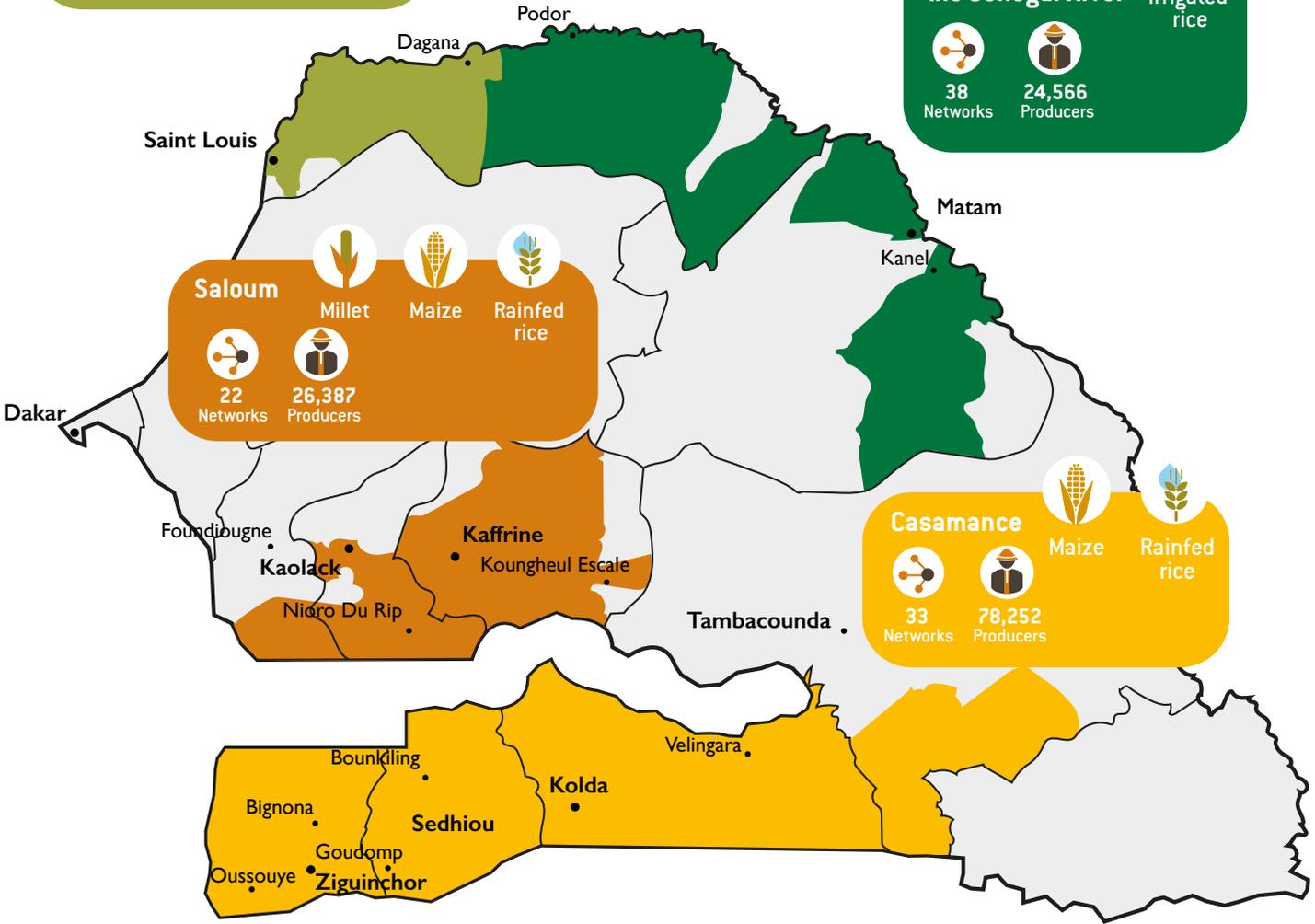
123 Networks 151,921 Producers

Senegal River Valley
Irrigated rice
30 Networks 22,716 Producers

Middle Valley of the Senegal River
Irrigated rice
38 Networks 24,566 Producers

Saloum
Millet Maize Rainfed rice
22 Networks 26,387 Producers

Casamance
Maize Rainfed rice
33 Networks 78,252 Producers



FACILITATION APPROACH

The project's philosophy is based on facilitation and partnerships with farmers who are already organized into networks, and have experience working together. Focusing on groups that have already demonstrated minimal organizational capacity builds on these existing skills for greater impact on the program's intervention areas. At the end of a competitive selection process, chosen in the skill sets needed to carry out their annual program. The focus on facilitation, partnership, and the gradual transfer of skills and technologies for the benefit of direct and indirect stakeholders reflects the goal of implementing a process for structuring and professionalizing the networks in a sustainable manner.

The networks selected are considered important partners in project implementation. They are empowered to conduct value chain enhancement activities with the support of the project's technical teams. To cover costs, a financing mechanism that gradually reduces project funding is implemented. It allows the project to support networks financially while they successfully introduce technologies, and it also calls upon the networks to be responsible for covering its costs.

Generally, partnerships follow an annual cycle based on the value chain seasonal calendar. During the four years of project implementation, network reinforcement took place as follows:

Season 1 – Boosting Productivity to Achieve a Trade Surplus

The project works at improving the productivity of networks to ensure, first of all, the food security of producers and then to generate a marketable surplus. This is achieved through advisory and support services managed by the network itself. Producers are made aware of and trained in the use of certified seeds, good cultivation techniques, and simple but improved technologies compared with traditional methods. Producers are also introduced to agricultural insurance.³

Season 2 – Facilitating Access to Credit

With a higher volume produced by the networks, advisory and support services during the second year focus first on the introduction of inputs and the reinforcement of quality. Simultaneously, they facilitate contracting between financial institutions and network members who are able to take out sizable loans to conduct agricultural activities. Group marketing is geared initially towards the repayment of credit and provides an opportunity for training on setting sales prices on the basis of costs and market expectations.

Season 3 - Introducing Mechanization

By the third year, the "big producers" in the network will have taken credit and reimbursed their loans. The project encourages the network to engage in contracting more of its members, thereby including smaller producers who, during the second year have improved their productivity and the quality of their production. At this stage, mechanization services are introduced and reinforced through leasing.⁴

Season 4 - Consolidating Services

The network offers a wider range of services. It also becomes an insurance broker for its members which helps to improve its revenue while helping members secure the loans taken out. Often, at this stage, the network manages an integrated credit portfolio that incorporates contract sales for large volumes, thereby justifying a substantial contribution to cover operating costs.⁵

Throughout the four seasons, the project supports the networks so they can improve their governance. This also takes place through the provision of information technology tools that simplify data collection and analysis.⁶

The information collected and analyzed by the network managers is used in debriefing sessions at the local level by network agents. These meetings take place annually at the end of the harvest. The performance of members in terms of yield and quality is discussed, the effects of climate, and the marketing results. These discussions inform the following year's program.

3. See the capitalization note on «Agricultural Insurance»

4. See the capitalization note on «Leasing»

5. See the capitalization note on «Integrated Financing»

6. See the capitalization note on «Data-Driven Agriculture»

CYCLICAL FACILITATION FOR GRADUAL NETWORK DEVELOPMENT



FACILITATING ACCESS TO CREDIT



CONSOLIDATING SERVICES

- Certified seeds
- Good agricultural practices
- Simple but improved technologies
- Agricultural insurance

- Inputs
- Quality
- Contracting
- Group marketing
- Pricing and market training

- Productivity
- Consolidation
- Access to credit
- Mechanization through leasing

- Insurance brokerage
- Integrated credit management
- Contracting for large volumes
- Mechanized services
- Storage

BOOSTING PRODUCTIVITY TO ACHIEVE A MARKETABLE SURPLUS



INTENSIFICATION AND MECHANIZATION



GOVERNANCE+DATA MANAGEMENT+DEBRIEFINGS+ADAPTATION

SEASON 1

SEASON 2

SEASON 3

SEASON 4

PARTNERSHIPS AND SYNERGIES

Part of the success of Feed the Future is that the program was able to build on the considerable organizational development capital handed down from past initiatives such as the Agricultural Services and Farmers' Organization Support Program (PSAOP), the Bey Dunde project in the Senegal River Valley, as well as the successive programs of the International Fund for Agricultural Development (IFAD) and other agencies working in rainfed areas.

By making the strategic choice to work with preexisting structures, Feed the Future sought to ensure that organizations that receive support to develop their networks strengthen their links with the national development ecosystem. Thus, the skills acquired through the support of Feed the Future have enabled these organizations to establish active links to local and national initiatives and institutions.

Some examples :

- Contribution of statistics to Regional Rural Development Divisions (DRDR) of the Ministry of Agriculture and Rural Equipment;
- Participation as members of technical committees for monitoring the annual crop cycle, organized by the National Agency for Civil Aviation and Meteorology (ANACIM) in the southern regions;
- Collaboration with initiatives such as the Pole Project for Casamance Development (PPDC) for the distribution of seeds and in-kind repayment in the context of the National Rice Self-Sufficiency Program (PNAR);
- Working with seed companies to test performance of high yield, climate-resilient hybrid seed varieties.
- Participation in experience-sharing activities such as IFAD's Learning Route Program, which over the course of two annual cycles in Senegal, will have hosted more than 50 project and organizational representatives who are active in Africa, so that they can immerse themselves in network contracting practices.

INCREASED DEMAND FOR QUALITY RAINFED RICE FROM YEAR-TO-YEAR

The Feed the Future Senegal Naatal Mbay project supported partner networks in drawing up three year seed plans for rainfed rice, in particular in the regions of Kolda, Sedhiou, Ziguinchor, and Fatick. With technical support from ASPRODEB, thirteen producer networks that are highly active in rainfed seed production, joined together to increase rainfed seed production, in coordination with agricultural research programs, rice farming projects and programs, DRDR, extension agencies, and financial institutions.

In order to standardize interventions and sector specific programs for certified seeds in the context of the implementation phase of the Triennial Seed Plan, the stakeholders meet each season, create a database, and organize visits to the plots of land of participating growers. For the 2017-18 crop year, the networks announced the production of 3,480 tons of seeds and are planning for the production of more than 7,000 tons in 2018-2019.



RAINFED RICE STEERING COMMITTEE FIELD TRIP

Anna Gaye (in the foreground, on the left), manager of the Kissal Patim Network, speaks with Dabo Mballo, a seed producer, in the company of Seydou Diallo of the Diankancounda Cooperative and the managers of the Agricultural and Industrial Development Corporation (SODAGRI), Samba Baldé and Mahmoud Ndiaye.

ACHIEVEMENTS



THE DIANKANCOUNDA MAIZE PRODUCERS' COOPERATIVE, THE SUCCESSFUL EXPANSION OF A PRODUCER NETWORK

By the end of the Naatal Mbay Project, Feed the Future had supported more than 120 producer networks in the Senegal River Valley and the Southern Forest Zone (Saloum and Casamance regions). These local organizations are an important resource, creating a foothold for future development actions. This approach of local engagement is now well established and has demonstrated its effectiveness.

The project capitalized on the knowledge and experience of farmers

It is important for farmers to understand the objectives being targeted by project activities, and they should be encouraged to actively participate in the selection of methods and solutions that best fit their needs. By building on their expertise in planning, executing, and evaluating activities, the project has defined activities that are feasible, appropriate, relevant, and sustainable.

Appropriate programming of interventions translated directly into higher adoption rates

Training courses on post-harvest processing were organized just before the post-harvest activities so that farmers could immediately apply the new technologies and learn while engaged in action. The training courses were not ad hoc events but were part of a support program that included scheduled follow-up activities by locally based trainers, available for assistance, as needed.

Private sector partnership instrumental in achieving project objectives

The first partner in the project was the financial sector which has the capacity to support the growth of farmer organizations with a constant flow of funding for organizations that fulfill the loan guarantee conditions.

Emergence of leaders

The project has promoted the emergence of both male and female community leaders. Indeed, the project has strengthened the skills of network leaders through various tools made available to them that facilitate negotiations with banks and other partners, and allows them to better control the challenges of the agricultural sector.

When it was created in 2013, the Diankancounda Maize Producer's Cooperative targeted only producers from Diankancounda and the neighboring villages of Mampatim and Médina Chérif. With the advent of Feed the Future Senegal Naatal Mbay, it signed a partnership agreement with the project which allowed it to benefit from technical support. By applying new technologies and good agricultural practices, and accompanied by targeted organizational support, the network is now high performing. During its expansion, the monitoring and training cell of the Cooperative went from three agents in 2015 to ten, including two women, in 2017. In addition, the Cooperative hired an assistant to support the database manager and acquired a second laptop. Contacts with suppliers have allowed the organization to obtain hybrid maize seeds for 50 hectares in the context of a production contracting model. Gradually, the Cooperative is trying to improve the working conditions of its members. Thus, in 2016, it purchased a tractor, then a mill and a maize sheller in 2017. In Diankancounda, the producers unanimously recognize the strong leadership of Souleymane Baldé, the President of the Cooperative, who has united the producers around the objective of increasing productivity and production by observing good agricultural practices. As Baldé says, "The immense progress we have made in so little time has only been possible with the support of Naatal Mbay, which believed in our desire to self-manage and has set us on the path to autonomy."

CROP YEAR DATA

| 2014-2015 | 2017-2018 |
|-------------------------------------|-----------|
| WORKFORCE | |
| 118 | 1,627 |
| SURFACE AREAS CULTIVATED (HECTARES) | |
| 118 | 1,568 |
| NUMBER OF COMMUNES | |
| 2 | 9 |
| PRODUCTION ACHIEVED (T) | |
| 317 | 4,077 |

CHALLENGES

To achieve complete autonomy as full partners in cereal value chains, producer networks must, however, overcome a number of challenges.

Access to Infrastructure and Equipment

The growth of network activities and their progression towards commercial agriculture is slowed down by the lack of infrastructure, e.g. inadequate storage capacity in production areas. The shortage of modern agricultural equipment to reduce the burden of manual labor on farmers is also a problem for meeting marketing requirements. In the Casamance regions, despite all efforts to improve performance, some networks have experienced significant losses during the rainfed rice harvest which is still done manually with a traditional sickle.

Maintaining Network Connection to the Market

The sustainability of the approach and of the application of tools and technologies is closely connected to being able to market a surplus on the local market. Household food self-sufficiency is not enough. A competitive supply allows producers to generate the necessary margins to self-finance services to members.

Ensuring the Stability of the Model

The organizational capacities of local groups vary. Network governance must be strengthened through internal controls and transparency, as the system may be vulnerable to corruption or abuse of power as its commercial and financial activities expand.

Working in Synergy with the Government

Networks call for new partnership arrangements with the Government and may contribute effectively to the implementation of various public initiatives to come in their intervention areas.



MANUAL WEIGHING OF MILLET DELIVERIES FROM MABO PRODUCER GROUP MEMBERS.

With the growth in group marketing surpluses, today producer networks need logistic infrastructures suitable for handling high volumes and storage that is suitable for their industrial clients.

OUTLOOK

Producer networks supported by the project are constantly expanding, and looking for new opportunities. This is the case for Nerica Seed Production Networks (REPROSENER) which has become the cornerstone of the Steering Committee of the Triennial Seed Plan (COPI-PTS) in Casamance and whose objective is to define the annual certified seed production programs for rainfed rice and increase its availability. This example foreshadows the emergence in Casamance of strong producer networks, able to self-finance and meet the needs of their members, particularly in terms of inputs and agricultural equipment.

Greater gains can be expected from the use of more advanced technologies (such as modern logistics systems, etc.). The next step is for networks to access national or even international markets. This assumes, however, more rigorous quality control to meet food safety standards and much greater organizational and financial capacity to be able to meet the demand of city dwellers. The growth of networks and higher member productivity must go hand-in-hand with the sustainable and equitable management of natural resources. They must also develop resilience strategies to combat climate change, together with communities.

The professionalization of networks must not come at the expense of their potential to contribute positively to the social welfare of the communities from which they arose. Networks must include representatives of vulnerable groups (young people, women, people with disabilities, etc.) within their ranks, particularly at the level of decision-making.

TESTIMONY



NIMNA DIAYTÉ,
*President of the Federation
of Saloum Maize Producers
(FEPROMAS)*

An Expanding Network

We envision a sustainable future that will no longer depend on ad hoc support from partners and projects. We think that if we manage to self-finance, through regular membership dues, any partner that wishes to support us will become part of our dynamic, and will adopt the objectives that we set.

When FEPROMAS began, farmers complained about the lack of agricultural equipment and inputs; today, however, they need a storage warehouse and a processing unit. This shows the progress we have made in improving agricultural yields and providing basic services to our members. At FEPROMAS, we have understood the importance and the added value of offering quality products; this equipment will no doubt contribute to maintaining production quality.

We also wish to expand our network. Today we cover three regions representing approximately 5,000 hectares, but in the future, we expect to cover many more. The database made available to us by the project will help us to monitor this expansion. We are also counting on the support of the network database managers, who have already been trained and with whom we will certainly continue to collaborate.

PHOTO :

In 2012, Nimna Diayté (center of the photo), current President of the FEPROMAS Cooperative network, received the keys to her first tractor, financed with a bank loan – in the context of the first Feed the Future program. Today, FEPROMAS is coordinating services for its members from a pool of service providers who, together, operate 15 tractors for soil preparation activities and 15 maize threshers.

© Photo RTI International



TO LEARN MORE

- Senegal: In-depth Assessment of Extension and Advisory Services: Developing Local Extension Capacity (DLEC) Project, Franzel, Steven; Ndiaye, Amadou; and Tata, Joyous S. USAID, Washington D.C., 2018
- Finding the best fit: Naatal Mbay case study, Cristina Manfre, USAID, Washington D.C., 2017
- Farmer-owned extension services community level service provision for scaling small farmer market integration, USAID, 2015

This capitalization note and the publications mentioned are available at the following addresses:

www.usaid.gov/senegal

www.ipar.sn/chaines-de-valeur-agricoles-au-senegal

PHOTO

Gnima Koma, a supervisor for the ASSOLUCER producer network in the Sedhiou region. The 53 year old manages the group's database, coordinates the production of prized rainfed rice seed varieties and is turning today to processing and providing mechanized services.



The Naatal Mbay project (Flourishing agriculture in Wolof), spanning four years (2015-2019), invested nearly US\$ 24 million (12 billion CFA francs) to support the rice, maize, and millet cereal value chains. It has created business opportunities for inclusive growth and development of the agricultural sector in the Delta and the Senegal River Valley, in the southern portion of the central peanut basin, and in the southern regions of Ziguinchor, Sédhiou, and Kolda. Naatal Mbay was implemented in the context of Feed the Future, an initiative launched by the Government of the United States of America in 2011 to combat hunger and food insecurity in the world.

For more information :
www.feedthefuture.gov

USAID is the United States Agency for International Development, one of the most active agencies in the world in this field. In Senegal, USAID is working in close collaboration with the Government of Senegal in the fields of health, economic growth, agriculture, education, and good governance.

For more information :
www.usaid.gov/senegal

The Agricultural and Rural Prospective Initiative (IPAR) is a space for reflection, dialogue, and coordinated agricultural and rural policy proposals in Senegal and in the West African region. IPAR's main research topics are: (i) structural transformation of agriculture; (ii) climate change; (iii) migration and youth employment; (iv) sustainable development objectives; and (v) governance of natural and land resources

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This publication is part of a series of eight thematic notes prepared in the context of key findings on the Naatal Mbay project. Produced by the Senegalese think tank, IPAR, together with RTI International, it has been made possible thanks to the support of Feed the Future through USAID (United States Agency for International Development), in accordance with contract no. AID-685-C-15-00001. The opinions expressed in this document are those of the author or authors and do not necessarily reflect the views of USAID.