



FEED THE FUTURE

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



SENEGAL Naatal Mbay

Cereal Value Chains

AGRICULTURAL LEASING

In Senegal, leasing offers a private sector option for improving agricultural mechanization. It finances the acquisition of heavy agricultural equipment with the prospect of transfer of ownership at the end of the lease. Its simplified collateral rules facilitate access to agricultural and processing equipment, which has supported the emergence of a dynamic new generation of agricultural service companies.

2019

INTRODUCTION

The US Government's Feed the Future initiative was launched in Senegal in 2011 and has since supported the development of the country's rice, maize, and millet value chains in the north, the center, and the south of the country. Increasing the competitiveness of smallholders requires access to efficient mechanized land preparation and harvesting services. Feed the Future has thus supported LOCAFRIQUE in the deployment of this new approach to equipment financing to enable the private sector to contribute to inclusive agricultural intensification, coordinating with and complementing Government of Senegal (GOS) subsidy programs.



© RT International

BACKGROUND

Historically, leasing in Senegal was mainly geared towards non-agricultural activities such as heavy equipment for construction and public works, and vehicles. Mechanization in agricultural areas is still limited and depends heavily on GOS support for expansion. The development of cereal value chains, especially for rice, requires a level of intensification that must be supported by the mechanization of agricultural activities such as soil preparation, harvesting, logistics, and processing. However, such investments are justified only if they are grounded in a profitable, commercial dynamic, which until 2013 was not the case for most

cereal value chains. Supported by Senegal's plan for an emerging economy (PSE - Plan Sénégal Emergent), the Government of Senegal has subsidized the acquisition of a significant fleet of agricultural equipment by stakeholders in rural areas, notably in the Senegal River Valley (SRV). However, the dynamic growth observed over the last few years in the Senegal River Valley prompted LOCAFRIQUE to offer leasing as a means of financing emerging companies to provide services and processing of agricultural products.

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

Ibrahima Sall and his company, Coumba Nor Thiam S.A., a pioneer service provider in the Valley, have relied on leasing to expand his fleet of equipment.

PHOTO. PAGE 2

The use of combine harvesters in the Senegal River Valley has increased significantly.

TECHNOLOGY DESCRIPTION

Agricultural leasing seeks to facilitate and promote agricultural mechanization through the engagement of financial institutions (FI) that buy heavy agricultural equipment from equipment manufacturers, becoming the equipment owners themselves. The FI then leases the equipment out to agricultural service organizations, in a rent-to-own scheme, collecting monthly leasing fees for use of the equipment. The lease maturity date is adjusted to the situation, but most of the time it is calculated with a view to amortizing more than 90 percent of the value of the equipment and the cost of financing. The remaining balance is refinanced through a new lease or settled through the definitive purchase of the equipment by the lessee.

The procedure for obtaining access to a lease is summarized as follows. The customer chooses the equipment and signs a financing contract with the leasing agency. The equipment supplier sells the equipment and bills the leasing agency. Then he delivers the equipment to the customer. The leasing agent charges rent to the customer. At the end of the lease, the latter returns the equipment in good working order to the leasing agent, or opts to purchase the equipment and becomes the owner.

Leasing Takes Place Under the Following Conditions:

Targeting of Heavy Agricultural Equipment

Leasing requires close monitoring of the working condition and the performance of each piece of equipment. It is therefore most suitable for high unit value equipment such as heavy motorized vehicles such as tractors and farming implements, combine harvesters, and industrial-scale processing equipment.

Acquisition Based on Productive Capacity

Leasing is a medium-term financial instrument adapted to an on-going economic activity. It aims to optimize the productive capacity of a producer or a business entity rather than focusing solely on asset valuation. Leasing assumes that the full value of the equipment will be factored into a business plan.

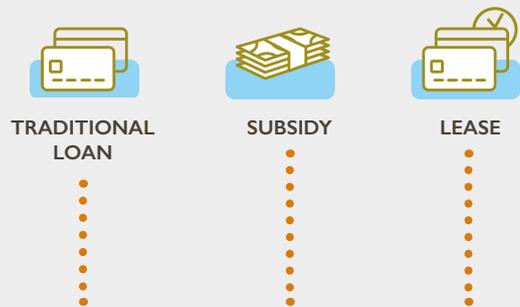
Securing Credit Through Control of Ownership

The distinguishing feature of agricultural leasing lies in its credit-securing system through the transfer of the property rights which takes place only at the end of the repayment period. In the meantime, the leasing company can recover the equipment at any time in case of non-payment of the rent, and then place it on the secondary market.

Use of External Services

The equipment owner is obliged to maintain the equipment properly, and to subscribe to an insurance policy covering the entire duration of the lease contract. Hence, it is necessary to deal with a quality equipment supplier who can train machine operators in proper maintenance and provide technical monitoring at the expense of the purchaser.

COMPARATIVE ANALYSIS OF THE TYPES OF FINANCING FOR AGRICULTURAL MECHANIZATION



JUSTIFICATION

Investment needs of the operator	Government agricultural programs	Business plan for provision of services
----------------------------------	----------------------------------	---

PROCEDURES

Long disbursement period	Administrative delays	Short disbursement period
--------------------------	-----------------------	---------------------------

SOURCES OF FINANCING

Bank credit lines	Agricultural mechanization programs financed by the GOS and its partners	- Supplier credit - Private lines of credit - Portfolio guarantees
-------------------	--	--

TYPE OF AGRICULTURE

Private farm: family farm or industrial farm	- Unions and producer Economic Interest Groups (GIEs) - Private companies	- Provision of services for producers - Industrial farming and processing
--	--	--

TYPE OF ACQUISITION OF AGRICULTURAL EQUIPMENT

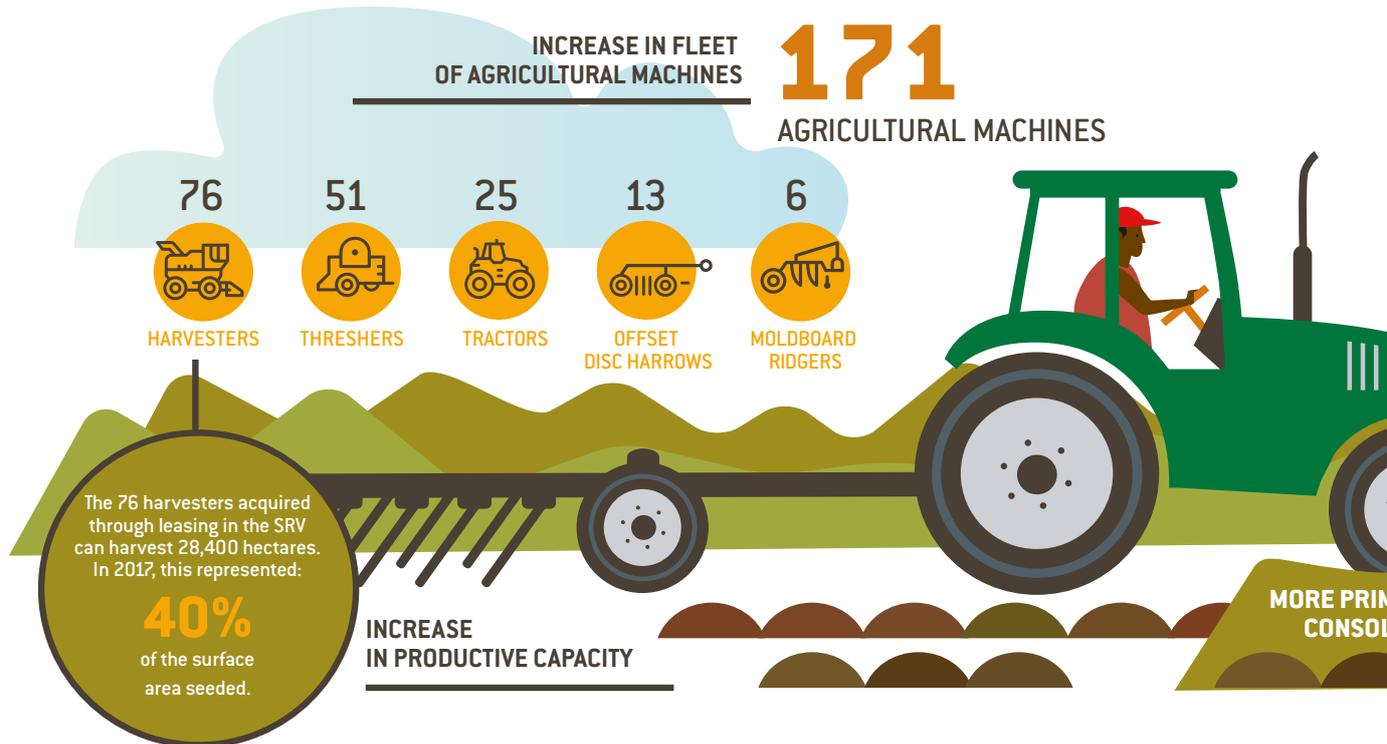
Direct purchase of agricultural equipment by the operator	Agricultural equipment imported by the GOS	Agreements with selected suppliers Purchases on demand
---	--	---

GUARANTEE

-Deposit -Pledge -Mortgage	-Subsidy -Contribution of own funds	-Lease agreement -Property Transfer
----------------------------------	--	--

RESULTING CHANGES

LEASING MAKES AGRICULTURAL MECHANIZATION SERVICES AVAILABLE TO SMALLHOLDERS



Since its launch in 2012 in the Saloum region, and in 2013 in the Senegal River Valley, leasing has become a powerful tool for financing agricultural mechanization, adapted to the context of cereal value chains.

Increase in Equipment Financing, Machine Fleets, and Productive Capacity

Leasing has made it possible to inject US\$ 23.2 million (11.6 billion CFA francs) into the Senegal River Valley from 2012 to 2018 to finance the acquisition of 171 agricultural machines (tractors, threshers, harvesters, offset disc harrows, and moldboard ridgers). The 76 harvesters financed through leasing represent a harvesting capacity that is capable of harvesting 28,400 hectares, i.e. 40 percent of the areas seeded with rice in 2017 in the Senegal River Valley. As an example, the seven combine harvesters in the Brahima Fall GIE have harvested more than 5,000 tons. With this increase in available heavy agricultural equipment, more and more producers have the opportunity to participate in double rice cropping in the Senegal River Valley. Yields have followed an upward trend and today production exceeds seven tons of paddy per hectare during the hot off-season.

Emergence of Mechanized Agricultural Service Providers

Leasing has led to a diversification of activities in the agricultural sector with the provision of mechanized agricultural services as a business activity in its own right. In fact, in 2018, 164 mechanized agricultural service providers operated 256 tractors and 108 combine harvesters (76 of which were financed by leasing) in the Senegal River Valley and helped create jobs related to soil preparation and harvesting. Services provided by service providers to smallholder farmers and their producer groups are paid in cash, in-kind or with vouchers from the Senegal National Agricultural Bank (CNCAS). In-kind payments (typically in grain) can be easily converted into cash by service providers at processing plants that have credit lines for this purpose. Because of these diversified payment options, the provision of services to smallholder farmers has become a profitable activity.

Emergence of New Consolidators

With the possibility of being paid in-kind, mechanized agricultural service providers are also becoming consolidators of the paddy, the same way banks do through the integrated financing mechanism. Agriculture service providers contribute to the value chain by

INCREASE IN VOLUME
23.2
 US\$ MILLION
 WAS INJECTED THROUGH LEASING INTO THE SRV, FROM 2012 TO 2018

EMERGENCE OF MECHANIZED AGRICULTURE SERVICE PROVIDERS



TESTIMONY



MOHAMED SAÏD FALL,
 President of the **SONS OF BRAHIMA FALL, GIE**

Hats off to leasing, the best financing system!

Mr. Fall started his service business with a lease for a combine harvester. Before the end of the loan he was ready to settle his debt with LOCAFRIQUE. The leasing system allowed him to acquire one tractor and one combine harvester in 2014, and then three tractors and three combine harvesters in 2015. Today, his fleet of heavy agricultural equipment consists of nine tractors with accessories and seven combine harvesters.

We consider this to be the most suitable type of credit for agricultural entrepreneurs. In fact, considering the way it works, leasing has the advantage of being like a finance guarantee itself. As a result, the collateral required for leasing is virtually nil, compared to the amount of financing. It also presents a certain security for the lending institution that provides the financing. In the event that a borrower does not make the required payments, the lender recovers the financed equipment in addition to the credit repayments already received. Therefore, the lending institution enjoys significant security in the transaction. This situation pushes the borrower to do his utmost to honor his commitments or lose his funding and the payments he has already made. This situation ensures that the lending institution recovers the full amount of credit granted.

facilitating access to raw materials for processors and by signing contracts with them. These agreements initially allowed them to convert the in-kind payments from producers into cash, paid by the rice millers. The system has evolved today where some equipment operators have become intermediaries between producers and factories for the share of the crop assigned by the producers for marketing. In other words, there has been a diversification of the activities of the mechanized agricultural service provider, which has become one of the linchpins of the rice value chain.

Stimulating Business Opportunities Linked to Mechanization
 Agricultural leasing has led to major structural changes that positively impact all players in the cereal value chains. The rapid expansion of agricultural mechanization services has led to a surge in production and stimulated the emergence of new jobs for operating and managing heavy machinery, preventive maintenance, equipment repair, and equipment insurance.

FACILITATION APPROACH

The implementation of agricultural leasing in Senegal was realized largely because of the dynamism and tenacity of LOCAFRIQUE and its partners (suppliers of equipment and spare parts, credit refinancing financial institutions). Feed the Future developed a partnership with value chain stakeholders to facilitate the effective roll-out of the leasing service through a number of activities. Activities were designed to clear a path so that both local service providers and smallholder farmers could benefit from the program. Given the importance of building on a solid financial foundation and of determining the risk level of the loan portfolios, the facilitation approach adopted by Feed the Future vests significant responsibility with the partner. The facilitation role of the program focuses on linking value chain actors to capitalize on the new investment opportunity and integrate it into the value chains' growth dynamics.

These activities were as follows:

1. Market Prospecting and Lease Securing

The initial work of identifying promising value chains led to the establishment of the first public-private pilot partnership, initially in the maize sector. Capitalizing on the lessons learned from this experience made it possible to adjust and refine the system and practices. Based on this early experience with maize, the leasing system was subsequently redirected towards the irrigated rice sector in the Senegal River Valley to develop a supply of appropriate equipment with a reliable supplier partner.

2. Training and User Awareness

Agricultural leasing extension activities through workshops, forums, publicity campaigns, and infomercials helped to raise awareness about leasing. The service providers and the processors applying for leasing were trained in technical management of the equipment, accounting, and databases to strengthen their professional capacities.

3. Linking Stakeholders With Each Other

Linking activities between the leasing institutions, the equipment manufacturers, and the other stakeholders made it possible to supply the national market with tractors, combine harvesters, etc. This intermediation work made it possible to target leasing in the agricultural sector. During routine fieldwork, insurance companies were encouraged to incorporate leased agricultural equipment into their agricultural insurance products.

4. Development of Leasing Security Mechanisms

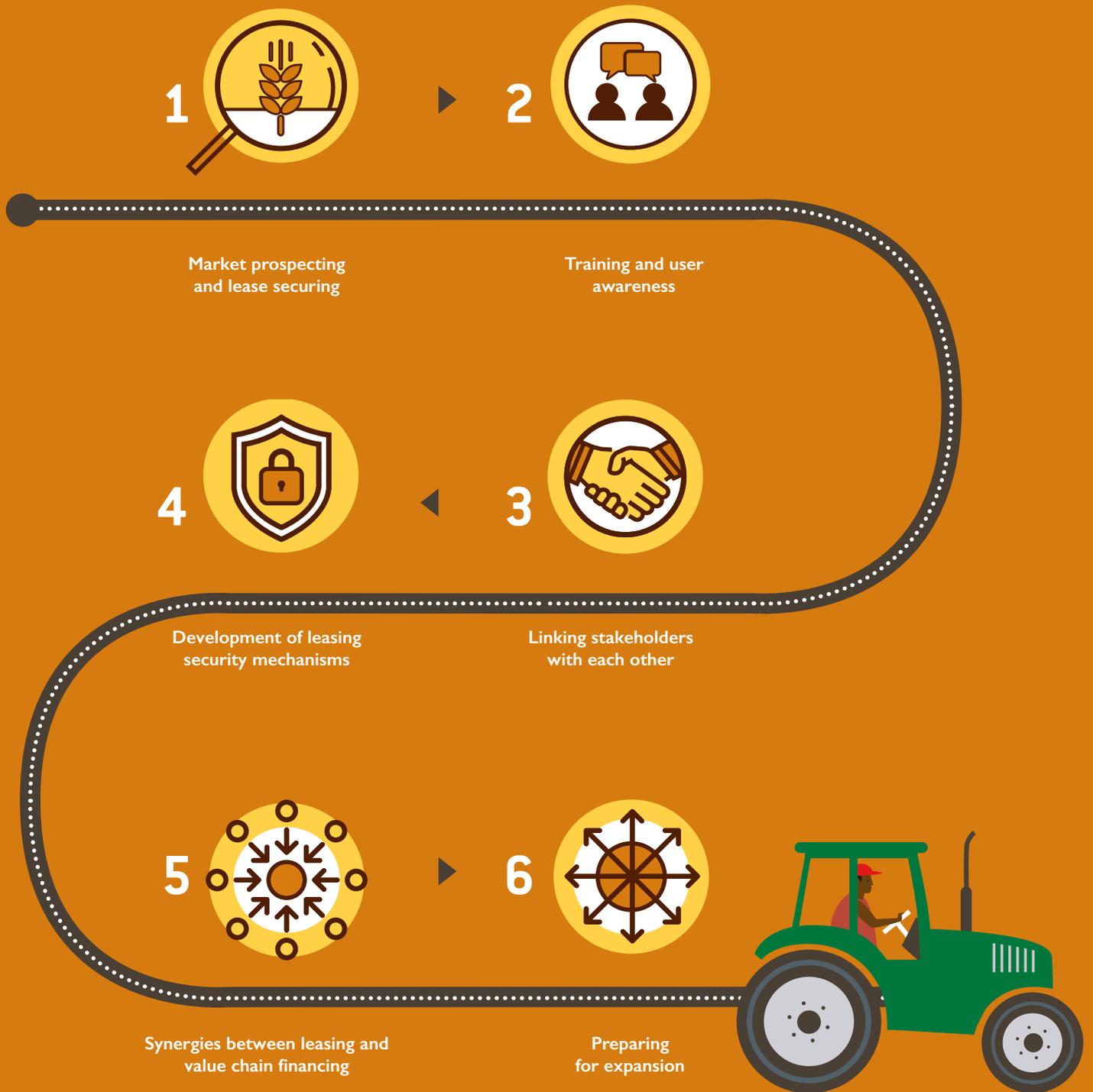
Feed the Future supported the launch of LOCAFRIQUE's agricultural leasing activities by developing in coordination with USAID's Development Credit Authority (DCA) and the Italian Cooperation, a portfolio guarantee mechanism of more than US\$5 million (2.5 billion CFA francs). This facility enabled the rapid take-off of leasing, while other private refinancing lines of credit were subsequently developed. In 2017, a second portfolio guarantee valued at US\$7.1 million (3.6 billion CFA francs), this time dedicated to logistics and storage equipment, was approved to support the structural transformation of Senegal's agricultural sector.

5. Synergies Between Leasing and Value Chain Financing

At the same time, Feed the Future facilitated the establishment of credit mechanisms in rice processing plants for the purchase of paddy rice. Third party holding lines of credit developed in this context have become a powerful tool for monetizing in-kind payments made by producers to LOCAFRIQUE's customer base of service providers, which has helped to reinforce the viability of leasing.

6. Preparing for Expansion

At the request of several stakeholders in the financial sector, Feed the Future financed a study describing the achievements derived from the introduction of leasing in order to inspire the launching of similar initiatives. This opportunity has captured the interest of the Senegal National Agricultural Bank (CNCAS) which has included the creation of a leasing desk in its 2022 strategic plan.



PARTNERSHIPS AND SYNERGIES

Leasing for agricultural mechanization highlights the potential of public-private partnerships for promoting investment. In Senegal, the partnership between LOCAFRIQUE and Feed the Future has made it possible to mobilize almost US\$ 24 million (12 billion CFA francs) from private investment in 6 years.

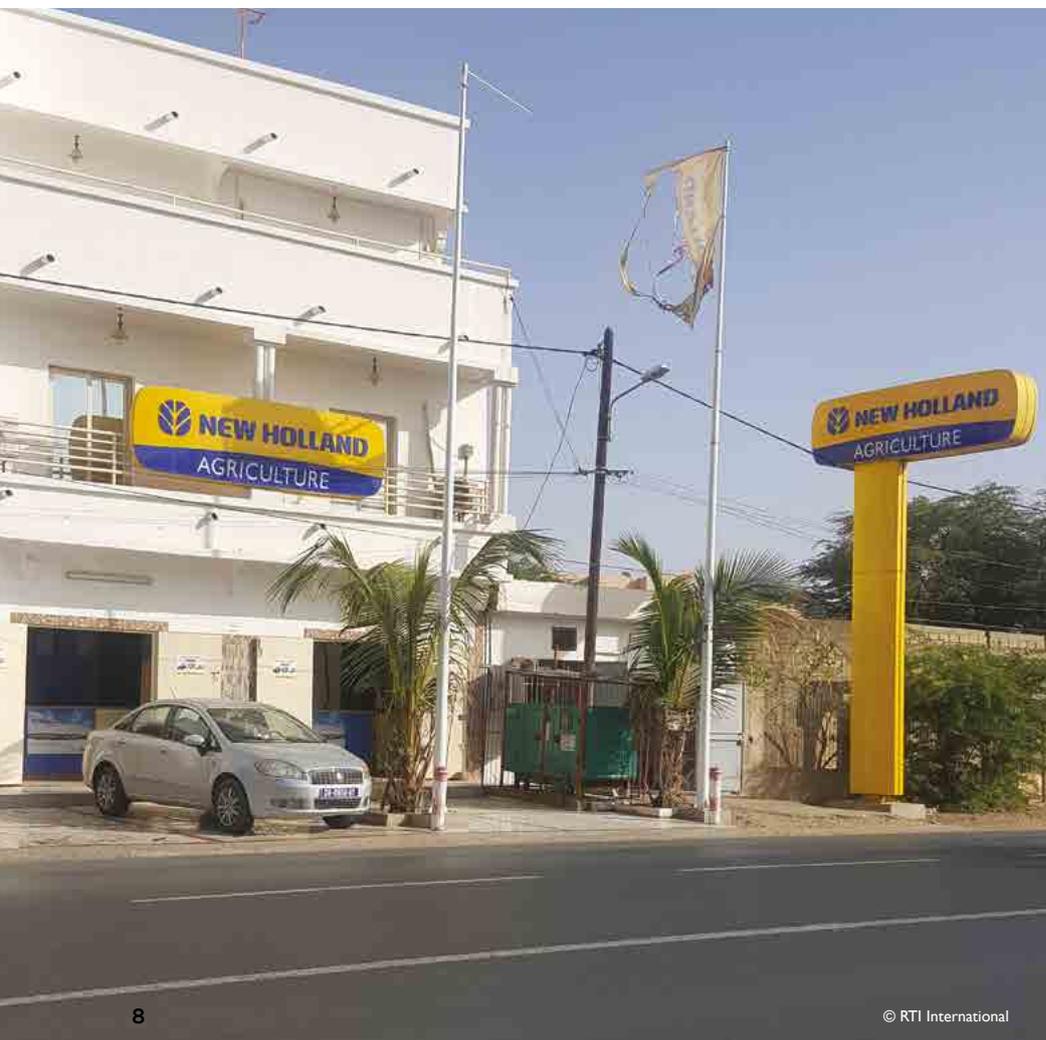
The partnership developed by USAID's Development Credit Authority (DCA) with the Italian Cooperation for setting up a start-up guarantee is a good example of pooling resources. LOCAFRIQUE's ability to mobilize CFA francs after the initial DCA support shows how the private sector can effectively leverage support from a development partner and maximize its impact.

CNCAS' commitment to develop a leasing program was facilitated by targeted technical support and the sharing of experiences with Feed the Future. This development demonstrates how the adoption

of an innovation within the banking sector can have a powerful multiplier effect.

From a business-to-business perspective, leasing facilitates links between the financing institutions and technology providers. It is in the interest of financial institutions to partner with brands that have a solid reputation in order to preserve the value of the credit guarantee. LOCAFRIQUE serves as an example through its partnership with the New Holland company, and other agreements with top tier technology providers are to be expected.

The success of agricultural leasing stems from the fact that the leasing concept was effectively aligned with a pool of dynamic companies that are well integrated into cereal value chains. This connection to commercially-minded companies created a profitable demand for mechanized agricultural services.



THE PRIVATE SECTOR IS HERE TO STAY: LOCAFRIQUE'S SAINT-LOUIS REGIONAL OFFICE IN THE SENEGAL RIVER VALLEY

Following the fast expansion of its leasing portfolio in the Senegal River Valley, LOCAFRIQUE, and its partner equipment supplier New Holland, have opened a permanent office in Saint-Louis to stay close to its growing client base. The leasing company is currently seeking local partners to provide equipment maintenance services and ensure spare parts distribution in order to meet growing demand across the Valley.

ACHIEVEMENTS

The introduction of agricultural leasing has made it possible to build a solid foundation, upon which it can expand as an alternative financing solution for private investment in agricultural mechanization, post-harvest logistics, and processing.

A Sustainable Hub of Activities in the Senegal River Valley

The emergence of leasing in the Senegal River Valley has generated a critical mass of clients and equipment, making it a sustainable hub of activities for LOCAFRIQUE, and soon to be followed by CNCAS. This noticeable presence in rice production areas in Senegal is encouraging the implementation of related services linked to lease financing, namely the maintenance and upkeep of equipment, the continuous supply of spare parts, support services for investment projects, and technical training for operators and mechanics specializing in heavy equipment. With the likely diversification towards logistics equipment for handling, transportation, and storage, even more new types of specialized jobs can be expected.

Dissemination of a New Generation of Equipment Adapted to Agricultural Intensification

Leasing has facilitated the introduction and dissemination of high-performance soil preparation and harvesting equipment models, thereby raising the technical specifications of the rice value chain and improving its competitiveness. The increase in the number of combine harvesters available to smallholder producers in the Senegal River Valley in recent years is an example of a qualitative leap that foreshadows a true technological revolution in which silos and bulk grain transport will play a key role in keeping small farmers engaged.

Emergence of Models for Profitable and Successful Service Provider Companies

Leasing programs are best targeted to companies focused on agricultural service provision as their main revenue generating activity. Service provider companies that are leasing customers have spontaneously created business models geared towards small-scale producers and the role they can play as consolidation intermediaries for processing plants. This ecosystem that integrates and capitalizes on the productive capacity of smallholder farms is today an asset on which the Senegal River Valley can base a strategy of expansion and inclusive transformation. The presence of leasing can help to boost future investments.



CNCAS TO OPEN A LEASING DESK THAT TARGETS THE NEEDS OF SOUTHERN PRODUCERS

In the feasibility study for the opening of an agricultural leasing desk at CNCAS, there is clear potential due to the low coverage of the needs for mechanized services. CNCAS plans to expand leasing to smaller-scale, light agricultural equipment, therefore to smallholder, family farming which is more developed in the center and the south of the country. However, a minimum funding threshold of US\$ 10,000 (5,000,000 CFA francs) is considered necessary to make leasing profitable. To ensure success, CNCAS intends to set up consulting and assistance services for the acquisition of standard equipment. In general, three categories of equipment will be covered: agricultural equipment and accessories, processing equipment, and transportation equipment.

CHALLENGES

Although leasing has already been implemented successfully in the Senegal River Valley and developed in the irrigated rice value chain, there are still challenges to be met before expansion of the service to other areas and in other cereal value chains can be realized.

Access to Credit Lines

Leasing operators find it difficult to access credit lines with sufficiently low interest rates to offer business customers rates that are suitable for the agricultural sector.

From Subsistence Farming to Commercial Farming

Leasing requires a certain level of investment and economic and financial profitability within the realm of private entrepreneurship. Such priorities are not readily compatible with smallholder family farms. The challenge is to create conditions such that leasing helps to expand access to mechanized services in low intensification areas where subsistence agriculture prevails.

Diversification of Value Chains

Partnerships are being considered with more service providers to expand the coverage area beyond the Senegal River Valley. For this, the penetration of equipment leasing into new areas such as the center and the south in the millet, maize, and rainfed rice value chains is possible. However, this will require an adaptation and recalibration of the commercial model to fit the lower unit cost of the equipment used in the rainfed zones.

Position of Leasing vs. State Subsidies

The coexistence of leasing with the distribution of subsidized equipment has created an element of competition that has slowed down the expansion of this private financing model. There is a coordination problem between these two mechanisms each designed to improve access to agricultural equipment services.

Financial Integration

The strong growth in the mechanized service delivery business has relied on the increased solvency of clients as a result of the integration of services into the seasonal credit system. However, smoother collaboration between banks and leasing companies has yet to be developed.

TESTIMONY

MAME KHADY C. DIOP KANE,
Head of the Saint-Louis Locafrique Agency

Evolution of the Leasing Portfolio at Locafrique

The partnership with Feed the Future has allowed us, since the advent of the Economic Growth Project, to support our communication strategy on the benefits of leasing as an effective and adapted way to develop agricultural mechanization. As a result, it has enabled us to establish our position as a leader by strengthening our financing performance in agricultural value chains and particularly in the Senegal River Valley. The drop in 2016/2017 is mainly due to a stock shortage of agricultural equipment in the Senegal River Valley and the introduction of State-subsidized equipment.

EVOLUTION OF THE LEASING PORTFOLIO AT LOCAFRIQUE

(Data source : Locafrique Saint-Louis)



Amount in million of US Dollars

OUTLOOK

The future of leasing is linked to several aspects that concern the diversification of financial players, of sectors of activity, of areas of intervention, and especially of ways to secure both credit and agricultural equipment.

Leasing Market Potential

Given the still unmet need for equipment, the leasing market is registering new players such as CNCAS, which plans to open a leasing desk. From the perspective of competition, this multiplication of financial options, and also of equipment suppliers, will be beneficial for providers in the long run. It will also make it possible to expand leasing to the center and south, characterized by family farming using small equipment.

Diversification of Equipment Financed by Leasing

The success of combine harvesters in the Senegal River Valley heralds a diversification of leasing for the financing of silos, bulk transport equipment, and advanced processing equipment. This diversification will need to be accompanied by capacity building of service provider companies and other leasing customers so that these technologies are used to their full potential. They will also require the development of new skills and small enterprises to ensure the operation and maintenance of this new generation of equipment.

Emergence of a Secondary Market

The financial health of the leasing market is linked to the capacity of a secondary market for lease takeover in the event of default or non-exercise of the purchase options at the end of the lease. The creation of joint ventures with equipment dealers and mechanical maintenance companies to ensure upkeep and maintain the market value of the equipment being taken over is an important way to enhance the development of leasing.



© RTI International

THE BEGINNINGS OF SMALL-SCALE EQUIPMENT FINANCING IN SENEGAL

The agricultural equipment program known as Large-Scale Distribution Kits (DGE-Kits), is a collaboration facilitated by Feed the Future between the Senegalese Association for the Promotion of Bottom-Up Development (ASPRODEB), the Sahel Industrial Company for Mechanical Engineering, Agricultural Material, and Sales (SISMAR), the Food Technology Institute (ITA), the Senegalese Institute for Agricultural Research/Office of Macro-Economic Analysis (ISRA-BAME), and CNCAS which has set up an innovative financing mechanism for small-scale agricultural equipment with a loan of US\$ 146,000 disbursed by CNCAS for the acquisition of 234 production kits and of processing equipment. Although the value seems modest compared to the value of equipment leased in the Senegal River Valley, this mechanism is a departure from the common practice of farmers in the southern zone relying on Government subsidies for their mechanization needs. It paves the way for growth driven by the private sector. The initiative included the support of Naatal Mbay for the training of 14 local artisans in the production and maintenance of agricultural equipment in order to ensure the sustainability of the program.

PHOTO : Reception in Kaolack of equipment financed by CNCAS through ASPRODEB's DGE-Kits Program.



© Xaume Olleros / RTI International

TO LEARN MORE

- Rapport final : Recensement du matériel agricole de travail du sol et de récolte-battage dans la Vallée du Fleuve Sénégal, CGERV, 2017,
- Rapport final : Etat des lieux des impacts des importations de riz sur la commercialisation du riz local, Hathie I. et Ndiaye O. S., IPAR, 2015
- Senegal: building an integrated agriculture sector, USAID Development Credit Authority, 2017
- LEO Report n°49: Case studies on facilitating systemic change: a synthesis of cases from Ghana, Senegal, Zambia, and Rwanda, USAID, LEO, and ACDI/VOCA, 2016

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

www.usaid.gov/senegal

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

PHOTO

The heavy soils in the Senegal River Valley require powerful tractors.



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

For more information :
www.ipar.sn

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.