



# WAAPP REGIONAL IMPACT e-NEWSLETTER

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## The SRI Edition

No. 05, April - May 2018

- ▶ What's the Rice Situation in West Africa ?
- ▶ CORAF's SRI Experience in West Africa
- ▶ What are the Recommendations for Upscaling?
- ▶ The Obligation to Grow Competitive Rice
- ▶ Climate-smart production boosts West African rice self-sufficiency
- ▶ West African Researchers Challenged
- ▶ Progress in Cashew Production in Benin
- ▶ E-vouchers to facilitate Agri-inputs Access in Guinea
- ▶ WAAPP in the Media

**WAAPP, the West Africa Agricultural Productivity Programme**, transforms West African agriculture by boosting productivity and sustainability, reducing hunger and improving nutrition, creating jobs and supporting collaboration across borders. The West and Central Africa Council for Agricultural Research and Development, CORAF, implements the program. In 2016, WAAPP was rated as the second best project in Africa funded by the World Bank.



## WHAT WORKED IN OUR EXPERIENCE ?



**N**o one doubts the importance of rice to the people of West and Central Africa. As we have experienced in recent years, demand is outstripping production threatening the food and nutrition security of about 430 million living in both regions. Without the uptake of scientifically proven rice cultivation methods, we may struggle to produce enough rice to meet up with consumer demand.

Between 2014-2016, CORAF commissioned the System of Rice Intensification (SRI) method across fields in West Africa. Overall, the project benefited more than 50,000 farmers directly and reached more than 750,000 people indirectly — of whom 31.6% were women. Yields for farmers increased overall by 56% for irrigated rice from 4.23 t/ha to 6.6 t/ha (average of 292 sites) and 86% for lowland rainfed rice from 2.53 t/ha to 4.71 t/ha (average of 441 sites). The project trained 33,514 people (of which 1032 were technicians), and the number of institutions working with SRI increased from 49 to 215 during the project period.

These are impressive results, aren't they? So what worked and why? What lessons can we draw to improve future work in this area?

As we seek to scale up this practice across the region to meet rice self-sufficiency, we thought we should focus on this practice. To provide you with the results and lessons of this project which is a first in the sense of its extensive geographic coverage.

Enjoy the read and do not hesitate to share any comments with us.

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**Dr Abdou Tenkouano**  
Executive Director

## WHAT'S THE RICE SITUATION IN WEST AFRICA ?



**R**ice is one of the primary staple food for most of the 430 million people living in West and Central Africa. Its sustainable production and transformation are crucial to the food and nutrition security of the region. Other major staples include maize, millet, sorghum, and wheat.

While overall rice production in the 13 countries increased by 24% from 2010 and 2016/17 to 9.9 million tons of milled rice, rice consumption was growing by 35%, faster than expected. Self-sufficiency rate in 2016/2017 reached 54%. The goal set by the “Regional Rice Offensive” of the ECOWAS States is to reach rice self-sufficiency by 2025, producing the 24 million tons of milled rice that are projected to be consumed in the region.

## CORAF'S SRI EXPERIENCE IN WEST AFRICA



CORAF commissioned the System of Rice Intensification (SRI) method across fields in 13 West Africa African countries between 2014 and 2016. This is by far the largest SRI experience in the World based on its Geographic Scope.

Overall, the 'Improving and Scaling Up the System of Rice Intensification (SRI) in West Africa' (SRI-WAAPP) project benefited more than 50,000 farmers directly and reached more than 750,000 people indirectly — of whom 31.6% were women. Yields for farmers increased overall by 56% for irrigated rice from 4.23 t/ha to 6.6 t/ha (average of 292 sites) and 86% for lowland rainfed rice from 2.53 t/ha to 4.71 t/ha (average of 441 sites). This occurred by merely planting rice differently and in keeping with the SRI method. The project trained 33,514 people (of which 1032 were technicians), and the number of institutions working with SRI increased from 49 to 215 during the project period.

An independent socio-economic impact assessment of the project shows that SRI practice produced results much superior to conventional rice production practices, showing increased yields of 54% under irrigated systems, 65% in the rain-fed lowlands, and 153% in the rain-fed upland systems. Similarly, the average income for farmers using SRI was 41% higher than for those using conventional practice. The study concluded that the project “has proven that SRI can contribute successfully to improving agricultural productivity in West Africa.”

The 'Improving and Scaling Up the System of Rice Intensification (SRI) in West Africa' (SRI-WAAPP) project was part of the [West Africa Agricultural Productivity Program \(WAAPP\)](#), funded by participating countries under a regional competitive grant scheme managed by CORAF. The regional project coordination was assured by the [National Center of Specialization in Rice-based](#) in Mali in collaboration with [Cornell University, USA](#).

***Read more***

## WHAT ARE THE RECOMMENDATIONS **FOR UPSCALING?**

**R**ice self-sufficiency would be a reality in West Africa if all farmers adopt the practice.

“If SRI is to make a real contribution to rice self-sufficiency in West Africa, many more farmers must adopt it,” say Dr. Erika Styger, technical lead for the Regional Coordination of the project and Associate Director for Climate-Resilient Farming Systems at Cornell University, and Dr. Gaoussou Traoré, Regional Coordinator of the project and Coordinator of CNS-Rice who both authored the recent book.

As calculated by the authors “If 100% of rice farmers in West Africa had used SRI in 2017, rice self-sufficiency would already have been achieved with a 5% surplus. Replacing rice imports with rice grown in

the region would have saved 4.16 billion USD in foreign exchange for 2017 alone.”

Based on the needs expressed by the project stakeholders in the 13 countries, the authors recommend to apply a medium-term vision and support for continued scaling up of the SRI practice:

- Expand national and regional coordination
- Let farmers and farmer organizations take the lead
- Refine and assure the quality of technical training
- Emphasize adaptation and innovation
- Reinforce and improved the SRI monitoring systems
- Expand the communication platform.



# THE OBLIGATION TO **GROW COMPETITIVE RICE**

**I**ncreasing production may be one of the solutions to achieving rice self-sufficiency as desired by most African countries. But quality rice capable of competing favorably with the imported variety seems to be the sustainable solution.

“Our rice value chain needs to be better integrated and capable of competing with imported rice in terms of quality,” says **Dr. Abdoulaye Touré**, Lead Agriculture Economist, **World Bank** Agriculture Global Practice Team.

“Our experience with the **West Africa Agriculture Productivity Program (WAAPP)** has shown us that it is not sufficient to increase local rice production and think that it will replace imported rice,” said Dr. Abdoulaye Touré who is also the WAAPP Task Team Leader.

**AfricaRice** recently organized a discussion on comparative rice competitiveness during which lessons were drawn from the Asia rice experience to further improve on the West Africa practice.

During the consultation meeting, participants heard that the Asia rice success story is built around strong country commitment, enabling policy environment, long-term investments in infrastructure and research, and market-driven approach.

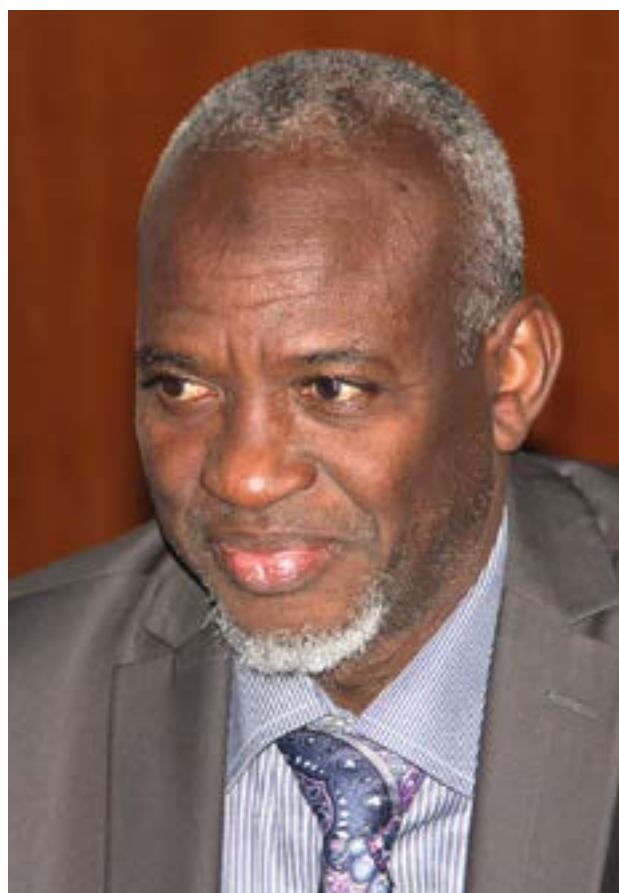
Other drivers of success in the rice value chain in Asia include:

- The professionalization of value chain actors;
- Strong farmers’ organizations;
- The use of high-yielding varieties and mechanization;
- Credit support system;
- The creation of market outlets for domestic production;
- Private sector participation in the supply of inputs;
- Enabled private sector milling;
- Quality assurance mechanisms;
- Branding and promotional activities;
- Administered procurement and distribution systems.

Speaking at the event, **AfricaRice** Director General, **Dr. Harold Roy-Macauley** said: “Asia’s rice value chain has undergone a rapid transformation, and it is now highly integrated and organized.”

“We need to identify relevant upstream, midstream and downstream strategies from Asia, which could be applicable in West Africa, to make its rice value chains competitive and transformational, so that they can effectively contribute to food security in the sub-region.”

Rice is one of the primary staple food for most of the 430 million people living in West and Central Africa.



Its sustainable production and transformation are crucial to the food and nutrition security of the region. Other major staples include maize, millet, sorghum, wheat.

**AfricaRice**, the **World Bank**, and **CORAF** jointly organized the learning event. Some of the lessons drawn from the event are expected to feed into a more transformative agriculture program for West and Central currently under design.

Aggregate annual food import to Africa is estimated at US\$35 billion, and this is projected to rise to US\$110 billion by 2025. Despite improvements in rice production, it is still not able to match demand.

## **Recommendations to Improve the Rice Value Chain**

It emerged from the workshop a few recommendations to improve the sector. They include:

**Policy:** Governments in West Africa should pursue their support to the continued development of the rice value chain with focus on the establishment and implementation of adequate public policies and improved basic infrastructure, such as irrigation and storage facilities, access roads and power supply.

**Production:** The establishment of farming groups in various agro-ecological zones that would grow fewer (maximum of two to five) market-preferred rice varieties

as opposed to the traditional practice of growing several varieties. This will reduce grain mixtures and would be an incentive for capturing the lucrative urban, regional and international rice markets in Africa.

**Marketing strategy:** The classification of quality milled rice in West Africa, aimed at targeting different markets with different pricing, should be encouraged. Cross-border paddy trade that enables other countries to process rice and add value for their markets should be investigated.

**Data:** The on-going work on CIPriSSA, involving the collection and analyses of credible data to guide investments in the rice value chain in West Africa, should be sustained.

Creating synergy among various rice value chain initiatives: Various initiatives on improving rice value chain that exist in each country should align themselves to the national rice development strategy. This could be facilitated through the establishment of the Support System for Accelerating Rice Self-Sufficiency in Africa (SSARSSA) proposed by AfricaRice. SSARSSA will help expand the CIPriSSA studies to other countries and sustain rice self-sufficiency in Africa.

This article was adapted from an [AfricaRice](#) Press Release on the event.



# CLIMATE-SMART PRODUCTION BOOSTS WEST AFRICAN RICE SELF-SUFFICIENCY

The System for Rice Intensification (SRI) has significant potential to close the rice production gap in West Africa and put the region on the path to rice self-sufficiency, according to a new book published by researchers from Cornell University and the National Center of Specialization on Rice (NCoS-Rice), based in Mali, for the West and Central African Council for Agricultural Research and Development (CORAF).

The book, “50,000 Farmers in 13 Countries: Results From Scaling up the System of Rice Intensification in West Africa,” documents the results of the 2014-16 project, Improving and Scaling up SRI in West Africa, when SRI was introduced and evaluated in farmers’ fields in Benin, Burkina Faso, Côte d’Ivoire, Gambia, Ghana, Guinea, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo.

The authors report that more than 50,000 farmers started using SRI and more than 750,000 people benefited indirectly from the project, of whom 31.6 percent were women. By adopting the SRI method of planting rice, farmers’ yields increased overall by 56 percent for irrigated rice and 86 percent for lowland rainfed rice. The project trained 33,514 people (of whom 1,032 were technicians), and the number of institutions working with SRI increased from 49 to 215 during the project period.

“It has been a remarkable journey and adventure, characterized by commitment, hard work and genuine teamwork – the largest SRI project ever undertaken in the world, spanning 13 countries across West Africa,” said Erika Styger, associate director for Climate-Resilient Farming Systems, in International Programs in the College of Agriculture and Life Sciences, who is principal investigator on the project.

SRI is a climate-smart and agro-ecological method of increasing rice production that focuses on the management of plants, soil, water and nutrients. Practitioners are encouraged to adapt practices to local agro-ecological and socio-economic conditions.

“Although SRI was introduced to West Africa in the early 2000s, the results remained mostly at the local level. This is the first time that the impact of the SRI system has been demonstrated at such a large scale,” said Styger. “It has been a privilege for us at Cornell to be actively involved. The results speak for themselves: SRI has the potential to significantly contribute to the goal of rice-self-sufficiency in West Africa.”

## Participatory-driven research and implementation

For most of the 430 million people living in West and Central Africa, rice is one of the primary staples. Achieving sufficient production has been a challenge, particularly when some intensification methods are associated with the high cost of inputs like fertilizer. Sustainability and negative environmental impacts are concerns for many countries in the region, which have varied geography and natural resources.

West Africa only produced 54 percent of rice consumed in 2017 and spent \$4.16 billion in foreign exchange on rice imports. Achieving rice self-sufficiency by 2025 is a goal set forth by the Regional Rice Offensive of the Economic Community of West African States (ECOWAS).

The inception of the project began with Styger’s work in Mali with SRI before joining Cornell in 2010. Based on increased interest in SRI in other West African countries, she met with Gaoussou Traoré, coordinator of NCoS-Rice in Mali, as well as with representatives from the World Bank and CORAF to discuss opportunities for a regional initiative to support scaling-up SRI across West Africa.

Styger and Traoré teamed up to engage farmer, extension and research representatives from 13 West African countries to develop the project. Each of the national teams developed their own country plans, selected project zones, set national targets and created coalitions of institutions to help with project implementation.

Traoré coordinated the project and Styger was technical lead for the regional coordination unit. The Cornell team also included Devon Jenkins, technical and communication specialist, and Thomas Archibald, monitoring and evaluation specialist. The regional coordination team provided training, technical assistance, monitoring and evaluation support, a communication platform, supported institutional set-up, and organized regional workshops to plan activities and share results.

“If 100 percent of rice farmers in West Africa had used SRI in 2017, based on project participants results, rice self-sufficiency would already have been achieved with a 5 percent surplus,” Traoré said.

The project was funded by the World Bank under its West Africa Agriculture Productivity Program and managed by CORAF under the umbrella of the ECOWAS.

“50,000 Farmers in 13 Countries: Results From Scaling up the System of Rice Intensification in West Africa” is available free online.

*The original blog appear on Cornell University Website*





## WEST AFRICAN RESEARCHERS **CHALLENGED**



The Senegalese Minister of Agriculture and Rural Infrastructure, [Dr. Papa Abdoulaye Seck](#) has challenged agricultural researchers of West and Central Africa to step up their game to anticipate challenges facing their communities and to generate relevant innovations that meet the needs of users.

Dr. Seck, also a career researcher was speaking at the opening ceremony of the [12<sup>th</sup> General Assembly of CORAF in Dakar, Senegal](#).

“It is through sustainable and uninterrupted funding that we shall be able to cover the complex research stakes facing us,” said Dr. Seck.

With no guarantees to the sustainable funding of research activities, the Senegalese Minister said that researchers in the region have to remain competitive to be able to attract scarce resources to conveniently carry out the critical research activities needed to accompany the region’s growth.

“Research institutes are fighting every day to have funding. I don’t think there exist a system of sustainable funding anywhere because we are in a competitive world. And researchers do not only need to be excellent but also to attract funding to carry out their activities while the state provides the enabling environment.”

Over 150 delegates are now gathered in the Dakar, Senegal for the 12th General Assembly of CORAF. During the next 72 hours, they will examine and adopt a new strategic and operational plan which opens new opportunities to generate further technological innovations to address

climate change, youth employment, gender disparities, and food and nutrition challenges facing the region.

The new strategic direction is intended to make CORAF organizationally efficient and financially sustainable.

Speaking on behalf of donors, [Mr. Abdrahamane Dicko](#), Program and Policy Advisor at the Regional Economic Growth Office at the West Africa Mission of the United States Agency for International Development reaffirmed the support of donors to CORAF.

“We wish to reaffirm the commitment of partners to continue supporting CORAF to fulfill its regional mandate,” said the USAID West Africa Mission Senior official.

USAID on behalf of CORAF partners recommended lasting funding arrangements that rely less on donor funding.

“There is a need to define and put in place mechanisms to ensure that CORAF funding is generated from its constituents.”

CORAF has consulted broadly with partners such as Ministries of Agriculture, Livestock, Fisheries, and Rural Development, farmer organizations, agri-inputs producers and suppliers, the private sector, non-governmental organizations, women groups, regional and international partners, etc. in the past year in view of designing a responsive plan. The 12th General Assembly is expected to examine and adopt this strategy.

The 12<sup>th</sup> General Assembly is also expected to elect new members of the Governing Board and discuss the contribution of R&D to agriculture in the past 30 years.

## PROGRESS MADE ON CASHEW YIELDS IN BENIN



**T**rails on plantations of cashew growers in Savè, Benin show an increase in yields and incomes when producers take suggestions on best agriculture practices from scientists.

Yields in cashew nuts are generally low in Benin. They vary between 300 to 600 kilograms (kg) per hectare. Experts blame this on the poor agricultural practices. Adopting new fertilization methods can improve productivity.

Benin's leading agricultural research institution (INRAB) conducted fertilization tests on cashew trees from 2015 to 2017 in selected rural areas. The results show that, when the NPK mineral fertilizers are applied to cashew trees, they lead to positive results.

Besides generating dark green leaves, fertilized cashew trees have a significant increase in nut production. Dark green leaves are a sign of the health of the cashew trees.

### The Case of Mr. Hyppolite Kotchadan

Trails were conducted on 0.40 hectares belonging to Mr. Hyppolite Kotchadan. In 2017, he harvested 420 kg of cashew nuts. This is about double the harvest made in the same surface area before the start of the trial in 2015. This also corresponds to a yield of 1050 kg/ha. Mr. Kotchadan

argues that nuts harvested on the trail plot represent about a quarter of the total quantity that he harvested on his five hectares plantation. The fertilized area was less than a tenth of the total area of the plantation. In 2017, Mr. Kotchadan sold about 1700 kg of cashew nuts for a total amount of 1,358,000 F CFA (USD 2700). Thanks to the proceeds, he was able to purchase a motorbike that now allows him greater flexibility to move around.

Encouraged by the results, Mr. Kotchadan is now saving money and planning to apply similar practices in other parts of his plantation.

As part of the implementation of the West Africa Agriculture Productivity Program, a project designed to improve on job creation and raise the income levels of actors in the cashew value chain in was implemented in Benin, Burkina Faso, Côte d'Ivoire, Ghana, and Senegal.

Over 4420 producers, processors, and students were supported during phase one of this project.

The cashew industry is growing and becoming a considerable source of revenue for the most economies in the region. Three West African countries (Côte d'Ivoire, Guinea-Bissau, and Benin) are among the world's top five exporters of raw cashew nuts.

## E-VOUCHERS TO FACILITATE AGRI-INPUTS ACCESS IN GUINEA



**T**he government of Guinea has announced that it will begin piloting the use of electronic vouchers to deliver critical agri-inputs to farmers in remote corners of the country. This is thanks in part to the West Africa Agriculture Productivity Program (WAAPP).

Access to seeds, fertilizers, and other agri-inputs is a major challenge in most West African countries. With this electronic system, fragile rural communities may experience a revival of the local markets and the timely access to inputs.

According to the communication service of WAAPP Guinea, this new system will considerably improve the seed distribution, allow for better tracking, and reduce losses observed in previous distribution exercises.

“This is a real revolution in the distribution of inputs in Guinea, and it will help to overcome the shortcomings observed in recent years in the distribution of seeds,” says an official of the National Chamber of Agriculture of Guinea.

The prefectures of Kankan, Mandiana, Sigui, and Kouroussa (Kankan Administrative Region) will be involved in the pilot phase.

About 200 persons are now being trained on the enrollment techniques of the system.

“The establishment of this mechanism will significantly reduce losses during the supply of seeds. This is a first because the risks associated with transport logistics failures, the lack of information from producers and delays in deliveries cause enormous damage to farmers. The system will ensure that the quantities delivered have reached the beneficiaries,” says Dr. Boubacar Diallo, Coordinator of WAAPP Guinea.

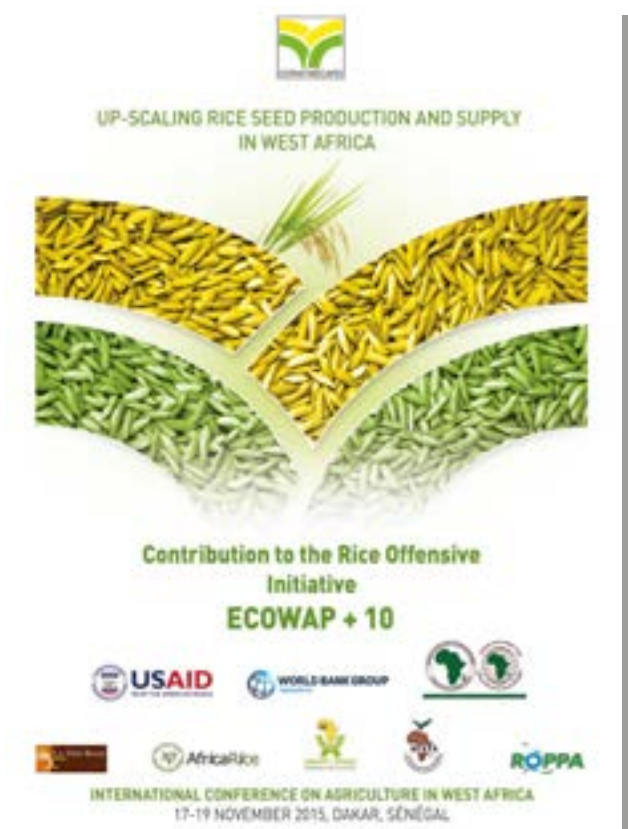
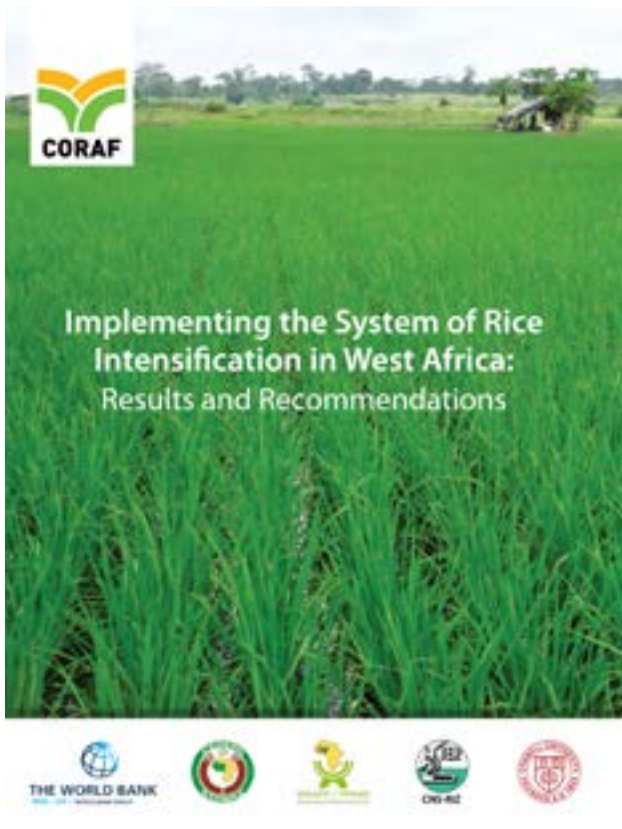
Guinea received an additional loan from the World Bank under the WAAPP to carry out activities designed to strengthen research and development in Guinea. The implementation of the e-voucher system falls within this framework.

## WAAPP IN THE MEDIA

As usual, WAAPP attracted so much media coverage. Here are a sample articles in the region leading media.

- Production rizicole : le Mali deuxième ouest-africain après le Nigeria
- Agriculture : relance de la filière arachidière : le ppaoa équipe 853 organisations de producteurs
- Sénégal: Atelier du CORAF sur les Centres nationaux de spécialisation, à partir de jeudi à Mbour
- L'avenir du CORAF en question
- Assemblée générale du Coraf : Pape Abdoulaye Seck pour une “dynamique de croissance ininterrompue” de l'Agriculture
- Près de 49 millions d'Africains bénéficiaires des retombées du PPAO (responsable CORAF)
- Compétitivité de l'agriculture régionale : Un moteur essentiel au changement
- Bourses de Formation en Master II (Num: 7941)
- PPAO/WAAPP : Épauler les agriculteurs ivoiriens pour améliorer leur productivité
- Sénégal : Division du travail - La gent féminine à l'assaut des disparités dans l'agriculture
- Agriculture : vers la mise place de e-voucher plateforme numérique de distribution d'intrants agricoles

## PUBLICATIONS



*WAAPP Newsletter is a publication of the West Africa Agriculture Productivity Program (WAAPP).  
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