



UP-SCALING RICE SEED PRODUCTION AND SUPPLY IN WEST AFRICA



Contribution to the Rice Offensive Initiative ECOWAP + 10

















17-19 NOVEMBER 2015, DAKAR, SÉNÉGAL









Table of Contents

ACRONYMS	3
Executive Summary	4
1. Introduction	5
1.1. The Importance of Rice in West Africa	5
1.3. Regional Policy Environment - CAADP, ECOWAP and CORAF/WECARD Strategy 1.4. Challenges to Address	6
2. Objectives and Results	
3. The WASP Capital for Scaling Up Rice Seed Supply	8
4. Current Existing Gaps, Issues and Problems in the seed sector	10
5. interventions of the Rice seed Up-Scaling Initiative	10
5.1. Key Expected Results for WASP Rice Up-Scaling Activities in Support of the Rice Offensive Initiative	11
6. Funding Support	



ACRONYMS

AGRA Alliance for Green Revolution in Africa
AFSTA African Seed Trade Association
AfDB Africa Development Bank

Africa Rice Centre

ASIWA Alliance for Seed Industry in West Africa

AVRDC World Vegetable Center

CAADP Comprehensive African Agricultural Development Program
CILSS Comité permanent Inter-Etats de Lutte contre la Sécheresse

CORAF/WECARD West and Central Africa Council for Agricultural Research and Development
CORAF Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles

ECOWAS ECONOMIC COMMUNITY OF WEST AFRICAN STATES

ECOWAP ECOWAS Agricultural Policy

FARA Forum for Agricultural Research in Africa
FAO Food and Agricultural Organization

ICRISAT International Crops Research Institute for the Semi-Arid Tropics
IITA INTERNATIONAL INSTITUTE OF TROPICAL AGRICULTURE

INSAH Institut du Sahel ISU Iowa State University

NARIS National Agricultural Research Institutes
NARS National agricultural research systems
NASC National Agricultural Seeds Council, Nigeria

NGOs Non-Governmental Organizations NSC National Seed Committees

NSS National Seed Service

NSTAs National Seed Trade Associations

RDCS Regional Development and Cooperation Strategy

ROPPA Réseau des Organisations Paysannes et de Producteurs de l'Afrique de l'Ouest

UEMOA Union Économique et Monétaire Ouest Africaine
USAID United States Agency for International Development

WECARD West and Central Africa Council for Agricultural Research and Development

WA West Africa

WAAPP West Africa Agricultural Productivity Program

WASP West Africa Seed Program



EXECUTIVE SUMMARY

Over the period, 2002-2012, rice consumption grew at an annual rate of about 5.4% in West Africa. Assuming that at least a 3.1% population growth rate is maintained and other factors influencing production remain unchanged, rice consumption in Africa overall is expected to increase from 24 million tons of milled rice in 2012 to 36 million in 2020. It is also estimated that 80% of this consumption will occur in West Africa. Currently, an approximately 10 million hectares devoted to rice production in Africa, with West Africa constituting about 45-50% this area. Given the growing demand for rice and the unexploited potential for increasing production, the Economic Community of West Africa States (ECOWAS) launched the "Rice Offensive" in December 2014 in response to the realization that rice has become essential for meeting food security needs throughout the region. Following the task given to CORAF/WECARD for coordinating the implementation of the ECOWAS Rice "Offensive", and considering CORAF/WECARD success in the implementation of WASP, CORAF/WECARD will coordinate a Rice Seed Up-Scaling initiative to support the "Rice Offensive". CORAF/WECARD recognizes that in improving rice productivity, the implementation of actions to bridge the yield gap of 75% will be essential. Farmer access to quality seeds of new climatesmart rice varieties, fertilizer, improved soil water and fertility management technology, appropriate post-harvest practices, as well as increased access to market and credit will be critical will be ensured through CORAF/WECARD Programs. CORAF/WECARD will capitalize on the opportunities provided by the policy environments and strategies created by CAADP, ECOWAP, CORAF/WECARD and the USAID-FtF, its experience, partnerships and networks to achieve a success in up-scaling rice seed production and supply to farmers.

Whilst the Rice Scaling Up initiative will be implemented within the existing WASP Result 4 (Supply of quality foundation and certified seeds by the private) the implementation of the remaining Results, Alliance for Seed Industry in West Africa (Result 1); Implementation of Seed Regulation (Result 2); Production and Supply of Breeder Seed (Result 3) will continue to strengthen the seed system in general. At least four new climate-smart and resilient rice varieties of regional importance will be indentified and parental seeds mobilized for multiplication. Seeds will be produced through contracting arrangements with major focus on countries with comparative advantage (such as Nigeria, Burkina Faso, Guinea, Mali and Senegal); this does not mean that the remaining WA countries will not be supported. Successes and experiences within the region will be shared. Technical and agri-business capacities of seed entrepreneurs and technicians will be strengthened for the production and marketing of foundation and certified rice seeds. At least 50% of the needed quantity of quality foundation and certified seeds, which presently stand at 5,250 tons and 250,000 tons respectively per year, could be supplied within 3 years. The NARIs will equally be strengthened to produce and supply 125 tons per year of quality breeder seeds. The establishment of market-driven demonstrations through Private Sector-Farmer Partnership, as well as the use of the voucher and the electronic wallet systems for seed marketing will facilitate the access of farmers to quality rice seeds. Through the use of the media, the web-site and other communication tools, the initiative intends to reach out to 5 Million target audience by Year 2 with technological and market information in scaling up rice seed supply to improve rice productivity and food security in West Africa.



1. INTRODUCTION

1.1. The Importance of Rice in West Africa

In terms of food security, rice has emerged as the most important source of caloric intake among crops in the region. Historically, the region has depended on imports of rice from Asia markets, which in recent years have been characterized by the food crises of 2007/2008. Currently, Africa produces 15 million tons of rice against 28 million tons of rice consumed per year, leaving a substantial gap in demand. Rice consumption is estimated to increase to 36 million tons by 2020. Currently, an approximately 10 million hectares devoted to rice production in Africa, with West Africa constituting about 45-50% this area. Studies conducted by the International Food Policy Research Institute (IFPRI) indicate that rice is the lead contributor to the economies of West Africa among all crop commodities¹.

1.2. Opportunities for Improving Rice Productivity

Assuming that at least a 3.1% population growth rate is maintained and other factors influencing production remain unchanged, rice consumption in Africa overall is expected to increase from 24 million tons of milled rice in 2012 to 36 million in 2020. It is also estimated that 80% of this consumption will occur in West Africa. West Africa is still far short of exploring its rice production as farmers lack the knowledge and means for increasing rice productivity and competitively, leaving most countries vulnerable to rice shortages and dependent upon uncertain markets. The value of rice in the sub-region2, vis-a-vis the large gap that exists between potential and current yields, estimated at 70-80%, as well as growing demands from the increasing urban population, growing industrialization, regional integration and globalization of markets, present an opportunity for raising rice outputs of most small farmers and thereby increasing rural family incomes and improving food security. Given the growing demand for rice and the unexploited potential for increasing production, the Economic Community of West Africa States (ECOWAS) launched the *Regional Offensive for a sustainable and sustained revitalization of rice production in West Africa* in December 2014 in response to the realization that rice has become essential for meeting food security needs throughout the region.

1.3. Regional Policy Environment - CAADP, ECOWAP and CORAF/WECARD Strategy

The two Malabo declaration of NEPAD-CAADP therefore took these challenges into consideration as follows: (i) Commitment to accelerate Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods and (ii) Declaration on Nutrition Security for Inclusive Economic Growth and Sustainable Development in Africa. The first Declaration seeks among seven others to (i) commit to end hunger, including nutrition by 2025; (ii) commit to half poverty by 2025; (iii) commit to boosting African Trade in agricultural commodities and services, (iv) commit to enhancing resilience in livelihoods and production systems to climate variability and other shocks..

CORAF/WECARD recognizes the adjustments to the CAADP approaches in increasing the CAADP momentum within the next 10 years (2014-2023) after 10 years of implementation (2004-2013) and thus

¹IFPRI, 2014. Fofana, Ishmael and Goundan, Anatole and Domgho, Lea Vicky Magne, Impact Simulation of ECOWAS Rice Self-Sufficiency Policy (December, 31 2014), IFPRI Discussion Paper 01405 Available at SSRN http://ssrn.com/abstract+2545492

² CORAF/WECARD IFPRI (2006) Regional Strategic Priorities in Agriculture for Growth and Poverty Reduction in West and Central Africa: An Economic and GIS Analysis



responds to the ECOWAP+10 to increase agricultural productivity and competitiveness in West African. CORAF/WECARD mission is defined as: Sustainable Improvements to the Productivity, competitiveness and Markets of Agricultural Systems in West and Central Africa by Meeting the Key Demands of the Subregional Research System as expresses by Target Groups.

CORAF/WECARD being the Technical Arm of the ECOWAS and the UEMOA Commission is implementing the seven programs to respond the to regional policies; these include (i) Livestock, Fisheries and Aquaculture, Crops, Natural Resource Management, Bio-technology and Bio-safety, Policy Markets, Trade and Institution, Capacity Strengthening and Knowledge Management. The West Africa Seed Program (WASP) and the West Africa Agricultural Productivity Program (WAAPP) funded by USAID and World Bank respectively in addition to the seven programs contribute directly to both CAADP and ECOWAP though the CORAF/WECARD strategy and operations. CORAF/WECARD's new operational plan 2014-2018 therefore responds to the CAADP+10 and ECOWAP+10 objectives and the USAID-RDCS by addressing challenges relating to climate change, food security, nutrition and health.

1.4. Challenges to Address

Challenges facing rice development effort had included inadequate political will to implement policies at regional and national levels, inadequate use of improved technology and inputs and low access to markets. Major technological constraints faced by farmers³ are as follows: low access to improved seeds, inadequate production management practices and machinery, limited access to fertilizer which is currently estimated at 10 kg/ha N, and the adverse effects of climate variability and/or change. Furthermore, poor storage systems, limited use of improved genetic material, poor soil fertility, and limited access to irrigation facilities were additional constraints. Cross-cutting constraints include low access to credit and the output market, weak producer capacity, weak technology transfer system, inadequate functional capacity of farmer associations and low women access to resources. The observed low crop yields and stagnant agricultural productivity growth over 40 year period (1960-2006), could therefore be attributed to these constraints.

From a survey conducted before the onset of WASP, challenges facing the private sector were related to insufficient access to credit to expand businesses; poorly developed seed market; weak human, institutional and logistic capacity for seed production, marketing, quality control; weak policy and regulatory system and insufficient breeder and foundation seeds. Other constraints were insufficient or dilapidated state of processing equipment; inadequate knowledge of seed production technology; insufficient germplasm; weakness in the technology transfer system, and inadequate seed storage facilities⁴. Seed marketing constraints included farmers' perception of certified seeds being expensive, insufficient supply of good quality seed, poor quality control certification systems, farmers' reluctance to invest in improved seeds due to poor performance from previous purchases, adulteration, insufficient promotion and demonstration and long distances to input supply centres (mainly located in urban centres). Other constraints were lack of demand forecasting and market information systems, weak and underdeveloped agro-dealer networks and limited capacity of National Seed Trade Associations.

³³ CORAF/WECARD (2008) Analyses of the Value-Chain of Priority Staple Crops for Research and Development Interventions in West and Central Africa. www.coraf.org

⁴ CORAF/WECARD (2008) Analyses of the Value-Chain of Priority Staple Crops for Research and Development Interventions in West and Central Africa



1.5. Justification

In the case of rice, current farmers' yields range between 1 ton/ha under upland/rain-fed condition to 3 t/ha under lowland condition but sometimes to 6 t/ha under irrigation. Yields could, however, go as high as 3 t/ha in the case of upland rice and 8/ha in the case of irrigated rice under improved practices such as planting high yielding stress tolerant varieties, sowing good quality seeds, and applying fertilizer. It is worth to note that Farmers in the Senegal River Basin and Office du Niger in Mali commonly realize 6-8 tons/ha yield under irrigation. These successes among others will be up-scaled under the *Rice Offensive* initiative to boost rice production. There are high performing rice varieties developed through National Agricultural Research Systems (NARS), the AfricaRice networks and other research entities. WASP is currently vigorously promoting these new varieties (NERICAS, ARICAS, Sahelian varieties) through its collaboration with a network of plant breeding institutions in West Africa and AfricaRice. WASP is already facilitating private sector access to the breeder seed for the production of foundation seed through the Public-Private-Partnership (PPP). This support provided to the private sector, alongside the capacity strengthening programs in business management delivered to them have set the ground to boost increased supply of quality certified seed⁵.

Increasing the use of improved rice seeds, fertilizer, IPM, soil water management, climate-smart technologies, access to market and credit, are critical in raising agricultural productivity and production and, therefore, in responding to the CAADP, ECOWAP, PAU, CORAF/WECARD and the USAID FtF objectives. Capitalizing on the opportunities provided by these policy environments and strategic orientations will, therefore, be critical to the successful implementation of the Rice Seed Scaling-Up project under the Rice Offensive initiative.

2. OBJECTIVES AND RESULTS

General Objective: Improved Sustainable Agricultural Productivity, Competitiveness and Markets **Specific Objective:** Sustainable increase in the production and availability of rice seeds of new and highly performing varieties

The CORAF/WECARD-WASP Axes will be used to support the rice seed up-scale initiative as follows:

- (i) Alliance for Seed Industry for WA effectively coordinated and sustained,
- (ii) ECOWAS-UEMOA-CILSS Seed Regulations implemented,
- (iii) Production and supply of breeder seeds of climate-smart new genetic material increased,
- (iv) Production and marketing of foundation and certified seeds of climate-smart new genetic material increased and
- (v) "Rice Seed Up-Scale to support Rice Offensive" Program performance effectively coordinated and managed

⁵Ibid. Most references related to the seed sector will draw from IFPRI's document.



3. THE WASP CAPITAL FOR SCALING UP RICE SEED SUPPLY

Seed requirement to cover nearly 5 million ha land cultivated to rice yearly in West Africa are as follows: 250,000 tons of certified seeds, 6,250 tons of foundation seeds and 156 tons of breeder seeds. If the current yield (2.2 tons for irrigated rice, 1.89 tons for lowland rice and 1.23 for upland) can be increased to an average of 3 tons/ha by adoption of improved technology including quality seeds of climate-smart rice varieties, West Africa will be able to produce 15 million tons of rice to feed its growing population. The current consumption is 19.2 million tons per year.

- **3.1. Access to Quality Seeds Increased:** At the onset of WASP in 2012, cereals (rice, maize, sorghum and maize) and legumes (cowpea and groundnut) were planted on 52,300,000 ha in West Africa. Certified seeds of these crops supplied stood at 183,000 tons with a value of US\$ 214,593,900 whereas potential demand was 1,336,000 tons with a value of US\$ 1,713,265,500. Thus seed supplied met 13.6% of the potential demand with only 12.5% of the potential value exploited. Since the inception of WASP, certified seeds supplied to farmers have increased steadily from the initial 183,000 tons in 2012/13 to 372,000 tons, representing 103% increase. In the case of rice, seed supply increased from 106 tons to 114 tons with about 70% of the production coming from Nigeria. The new rice varieties (NERICAs, ARICAs and Sahelian varieties) currently being promoted are climate smart, tolerant to stresses such as drought, extreme temperatures, iron toxicity, drought, salinity, diseases and pests.
- 3.2. Capacity of Plant Breeders Strengthened to Deliver Quality Breeder Seeds: In addition, WASP has facilitated the training of about 830 NARIs plant breeders, technicians, field inspectors, laboratory technicians and quality control personnel's in the techniques and best practices of breeder seed production, Intellectual Property Rights and has nearly completed the process of providing four NARS with laboratory and processing equipment. Furthermore the WASP has provided grants to 7 NARIs and AfricaRice to support the production and supply of quality breeders seeds of resilient and climate smart rice varieties. These alongside the provision of a tool to correctly estimate the potential and actual demands of seeds are facilitating increased supply of quality breeder seeds in recent times. Thus WASP has been contributing 34% of the total breeder seed produced yearly. Through the facilitation of Private-Public-Partnership, WASP has ensured that breeder seeds produced are received by the private sector for the production of foundation seeds and certified seeds. Through the supply of breeder seeds, WASP has contributed 37% to the production of foundation seeds. WASP has trained 100% of the technical experts from the National Agricultural Research Institutions' breeder seed units in Benin, Burkina Faso, Ghana, Mali, Niger and Nigeria, Senegal.
- **3.3. Small and Medium Enterprises Strengthened to Produce and Market Quality Foundation and Certified Seeds:** To produce and supply quality foundation and certified seeds, a total 1,000 Small and Medium Enterprises (SMEs) have been trained in the best practices of agri-business management. The SMEs have been supported to develop business plans to help manage their businesses better and to gain increased access to bank credit. The SMEs have been supported by linking them to the NARIs through Public-Private-Partnership in gaining access to 120 tons breeder seeds (37% of regional supply) funded under the WASP to multiply into 3,000 tons of foundation seeds and subsequently over 100,000 tons certified seeds.

WASP support to ROPPA in the implementation a seed project under the funding of WAAPP, resulted in marketing 23,000 tons of seeds in 2014/15 cropping season. One of the lasting legacies is the relationship



developed between the public and private sector stakeholders for sustainable production and supply of breeder, foundation and certified seeds. Through WASP's activities, some SMEs have established joint ventures with international seed companies. Furthermore, a web-based electronic seed platform has been created and national and regional alliances established which are facilitating information sharing and seed marketing in the region.

- **3.4. Seed demand forecasting and market information systems Improved:** The WASP has developed a tool that has been used consultatively in each of the seven focus countries to estimate seed supply and demand and to develop 5-year roadmaps for each country. This has increased stakeholder knowledge in the supply and demand gap to improve national level planning for seed production. With the Collaboration with WAAPP, WASP collects periodic data on seeds (breeder, foundation and certified) to determine the demand and supply gaps aggregating at the regional level and to determine the growth of the seed industry. The web-based electronic platform, WASIX (www.wasix.net) alongside the ASIWA Regional and National has provided spaces for access to seed market information and to marketing seeds regionally.
- **3.5. Capacity of National Seed Trade Associations Strengthened:** Seven National Seed Trade Associations (NSTAs) and the Africa Seed Trade Association-West Africa (AFSTA-WA) have been strengthened and supported with office spaces, tools for managing associations and for advocacy. The NSTAs and the AFSTA-WA have become more visible and have become champions in national, regional and continental events, such as national convening, AFSTA congresses, as well as ASIWA and WASC/COASem convening.
- **3.6.** Alliance for Seed Industry in West Africa Established: The successful launching of the Alliance for Seed Industry in West Africa (ASIWA) in August, 2015 in Abidjan, which brought wide range of seed industry partners from all over the world and the establishment of the National Affiliates in 10 countries have providedsustainable, inclusive, effective platform to facilitate consultation and dialogue among the wide range of West African seed industry stakeholders. This is enabling expanded cooperation between public and private seed stakeholders, and driving collaborative learning to expand production, supply and use of quality seed in West Africa. The Alliance is private sector led and serves as a convening point for seed sector stakeholders, a communication hub and a market facilitation and industry Development platform. These interventions have opened the regional seed market for increased seed supply.
- **3.4. Mechanism to enforce Seed Regulations Reinforced:** WASP has strived to strengthen the capacity of over 647 seed quality control agencies and provided tools for implementing seed regulation more correctly. A Seed Policy Task Force put in place has systematically carried out missions to the 15 out of the 17 ECOWAS-UEMOA-CILSS countries to train and coach relevant seed sector stakeholders in variety registration and release, seed quality control and certification and seed import and export rules. To date twelve countries have published the ECOWAS-UEMOA-CILSS Seed Regulation in their official gazette. As a result the implementation of the Seed Regulation increased from 41 to 77% in West Africa and Mauritania and Chad between 2013 and 2015. The West Africa Seed Committee was successfully launched in August, 2015 to carry out its mission in assisting the ECOWAS and UEMOA Commissions and CILSS Executive Secretariat in the implementation of the Regulation.
- **3.5. Support to Countries Affected by the Ebola Epidemic:** CORAF/WECARD through WAAPP and WASP with support from ECOWAS, World Bank, African Development Bank USAID, AfricaRice, Private Sector, and Ministries of Agriculture from 13 countries led an unprecedented regional effort to mobilize and supply the three countries affected by the Ebola epidemic (Liberia, Sierra Leone and Guinea) with quality seeds. About 5,000 tons of rice, maize and cowpea seeds (rice constituting over 95%) have been distributed to over 200,000 beneficiaries for planting in the current cropping season. The new varieties



supplied originated from AfricaRice are climate-smart, resistant to stresses (drought, iron toxicity, soil salinity, pests and diseases), and yield at least 3-4 times more than the older varieties earlier used in the three countries. During the 2015 cropping season, about 8,000 tons of additional seeds are expected to be produced from the foundation seeds supplied to cover more beneficiaries in 2016. Within two years, the initiative is expected to directly cover 600,000 farmers, which will lead to the production of 2 Million MT of paddy rice. The rapid decision and actions taken to timely supply seeds provided hope to the governments and the peoples of Liberia, Sierra Leone and Guinea. This initiative will leave a lasting impact in transforming agriculture in these countries.

4. CURRENT EXISTING GAPS, ISSUES AND PROBLEMS IN THE SEED SECTOR

A large seed demand gap of about 75-95% still exists. Whiles the present maize and rice certified seed supplies are relatively higher, standing at 114,000 (rice). This represents over 25% of certified seed needs but skewed to Nigeria, which constitute about 70% of the total seed production in the region. The shortfall of human and infrastructural capacities of the NARIs and the private sector to produce and supply all the needed seed classes has adversely affected the delivery of seed required. Although the NSTAs and AFSTA-WA have been established and supported, their organizational capacities are weak for effective advocacy for seed industry reforms. Despite the support provided by the WASP to AFSTA-WA the functional capacities of this private sector association and the seven NSTAs need to be strengthened to implement jointly developed actions to bring them to the desired levels. The Seed Alliance has just been launched and room exists to strengthen it to play its role as a private sector-led convening point for seed sector stakeholders, a communication hub and a market facilitation and industry development platform. There is work to be done to strengthen and manage the Alliance at the regional level, holding yearly Alliance and steering committee meetings, while the need to hold sensitization meetings in the remaining West Africa countries, namely Guinea, Gambia, Guinea Bissau, Sierra Leone and Liberia still exist. Furthermore, a gap remains in the expansion of stakeholders, particularly to cover other international partners, financial institutions and food processing companies.

With respect to seed regulation, presently, countries that have made significant advances in the implementation of the Regulation are Benin, Burkina Faso and Senegal. These countries are currently addressing 12 out of the 12 elements (100%) and are followed by Nigeria and Togo with 11 elements (92%) being addressed, Cote d'Ivoire and Mali with 10 (83%), and then Ghana and Guinea, 9 (75%). Countries with moderately low levels of implementation are The Gambia and Sierra Leone (50%). Liberia, Chad, Mauritania, Guinea Bissau and Cape Verde are considered very low (less that 33%). While the harmonization process will continue across board, priority will be given to strengthen the capacities of countries with low levels of adoption in opening the regional seed market. The newly established ECOWAS-UEMOA-CILSS Regional Seed Committee (WASC/COASem-CRSU) will need to be strengthened and Members trained to effectively carry out its mission.



5. INTERVENTIONS OF THE RICE SEED UP-SCALING INITIATIVE

- The WASP has presently acquired the necessary strength, asset and capital to scale up the
 production and supply of rice seeds in the region. In the implementation of the Rice Up-Scaling
 initiative, special priority to the production and supply of rice foundation and certified seeds to
 support the ECOWAS *Rice Offensive* initiative, within sound regulatory environment and PublicPrivate Partnership (PPP).
- The implementation of the WASP gender strategy will equally be up-scaled to ensure gender equity in conformity with the proportion and the roles that women and youth play in agriculture.
- Varieties which are stress tolerant and climate smart, as well as sound environmental management practices will be promoted.
- The experience gained in the ECOWAS-led regional initiative to support the countries affected by the Ebola epidemic will be brought on board to further open the regional market and to make investment in the seed industry more attractive. Support to these countries will continue.

The WASP will engage a full time Communication Specialist to facilitate the development of publications for sharing with seed sector stakeholders in the region and beyond. In addition a Rice Scaling-Up Specialist will be engaged to coordinate technical activities.

5.1. Key Expected Results for WASP Rice Up-Scaling Activities in Support of the Rice Offensive Initiative

Thus, it is in this context that ECOWAS member states launched the "Rice Offensive" initiative and requested USAID/West Africa to assist in rice seed supply through the WASP. The goal of the effort is to achieve rice self-sufficiency in West Africa by 2020. WASP will contribute specifically by intensify its program to achieve sustainable increase in the production and availability of rice seeds of new and highly performing varieties. WASP already is well placed to deliver assistance for developing and facilitating greater supply of foundation and certified rice seeds, a fundamental requirement for any developing for any measure of increased productivity. The program has strong and extensive linkages with AfricaRice, the NARS (including the WAAPP National Centres of Specialization - NCoS for Irrigated Rice, which is Mali and for Mangrove Rice which is Sierra Leone), ROPPA, AFSTA, NSTAS, AGRA and multitude agribusinesses operating throughout the region.

WASP will work to achieve the following intermediate results identified as part of the "Rice Offensive" under the current four WASP Result (i) Alliance for Seed Industry for WA effectively coordinated and sustained, (ii) ECOWAS-UEMOA-CILSS Seed Regulations implemented, (iii) Production and supply of breeder seeds of climate-smart new genetic material increased, and (iv) Production and marketing of foundation and certified seeds of climate-smart new genetic material increased.

Results 1 and 2 will be respectively implemented within the framework of the Alliance for Seed Industry for WA effectively coordinated and sustained, and the ECOWAS-UEMOA-CILSS Seed Regulations implemented. Focus on rice seed up-scaling will be given to Results 3 and 4.

Result 3 will be production and supply of new and highly performing foundation rice seeds in sufficient quantities increased

Close interactions and feedback between research institutions, farmers and rural entrepreneurs on seed the performance of new seed varieties which has been established through the seed need roadmaps

11

⁶ ECOWAS, 2014 "Up-Scaling the Use of Seeds of Resilient Rice Varieties in West Africa: Project Concept Note



consultatively developed at the national level, will continue to be part of the overall CORAF/WECARD effort. These varieties (NERICAs, ARICAs and the Sahelian varieties) are *resilient* exhibited by their tolerance to stresses and to the effects of *climate change*, including drought, soil salinity, iron toxicity, foliar diseases and pests). The list of regionally important rice varieties will be updated and 4 key varieties promoted. These activities will be carried out at a stakeholder planning forum (involving researchers, agribusinesses, farmers, financial and technical partners, etc.). High emphases will be given to countries with comparative advantage for rice seed production (such as Senegal, Burkina Faso, Mali and Nigeria) while supporting the remaining countries to become self-sufficient in rice seed production. These countries have large farming lands, large irrigation schemes and conducive environment for seed production, drying and storage. The private sector stakeholders in these countries have the requisite technical and agri-business skills. Foundation and certified seed produced will be marketed regionally. Illustrative Activities are as follows:

- Update the list of the improved climate-smart rice varieties, newly released with high market demand in the region
- Identify improved climate-smart rice varieties newly released in collaboration with stakeholders
- Plan the need for breeder seed for the production of foundation seeds
- Facilitate access to breeder seed of identified rice varieties
- Support the production and supply of foundation seed (using contracting arrangement)
- Train foundation seed producers, particularly the private sector, on techniques of production, processing, storage, marketing (contracting, business management, etc.), internal quality control and certification, etc.
- Support for seed quality control and certification

Result 4: Production and supply of new and highly performing certified rice seeds in sufficient quantities Increased

The interventions under the Intermediate Result Area (IR 4.2) of the current Program expansion will focus on the following activities: (i) Updating the list of the improved rice varieties, newly released with high market demand in the region, (ii) identifying improved rice seed varieties newly released in collaboration with stakeholders, (iii) facilitating access to foundation seed of identified rice varieties; (iv) supporting the production and supply of certified seeds, (v) training certified seed producers on techniques of production, processing, storage, marketing (contracting, business management, etc.) and, (vi) advocating for private sector to invest in seed sector based on empirical evidence and successful business models

Summary of the activities and deliverables in the production and supply of rice certified seed are as follows:

- Update the list of the improved rice varieties, newly released with high market demand in the region
- Identify improved rice seed varieties newly released in collaboration with stakeholders
- Facilitate access to foundation seed of identified rice varieties
- Support the production and supply of certified seeds
- Train certified seed producers on techniques of production, processing, storage, marketing (contracting, business management, etc.).
- Advocate the private sector to invest in seed sector based on empirical evidence and successful



business models

Support seed quality control and certification

Result 5: Famer Access to Improved Seeds Increased

Access to good quality seed is often a major problem for production due to limited availability and also resources particularly credit. The program will seek innovative ways to establish mechanisms to bring farmers, producer organizations and the private seed enterprises together through various forums, such as the ASIWA-National Affiliates, Innovation Platforms and the National Seed Committees to establish trust and seek common solutions to rice seed supply constraints.

Stronger commercial relationships between producer organization and other farmer groups and seed businesses will be facilitated. Thus, seed marketing-based demonstrations through the Private Sector-Famer Partnership which has been successfully tested by the WASP in Nigeria will be up-scaled to increase the use of certified rice seeds. Joint field days will be held with seed system stakeholders, including farmers where performance of specific varieties of rice as well as the profitability in investing in certified seeds will be assessed. Famer seed access facilitation models such as production contracts, the use the voucher and the electronic wallet systems which have been effectively tested in Nigerian and Malawi will be up-scaled in the region alongside the use of the extension services, NGOs, FBOs and WAAPP channels. The private sector will be encouraged to establish sales outlets close to the farming communities and farmers trained basic production techniques in relation to benefits in the use of certified seeds. Activities to improve farmer access to rice certified seeds are summarized as follows:

- Expand innovation platforms, private sector led promotional demonstration (including field days) of improved rice varieties, newly released
- Facilitate communication/ information/sensitization on the availability of seeds through the use of the West Africa Seed Information Exchange Platform (WASIX), media, common e-mails, etc.
- Facilitate farmers access to seed through the Voucher System, Electronic Wallet, Extension Services, NGOs, FBOs, the WAAPP Channel, etc.
- upp
- ort for private expansion of commercial channels for rice seed marketing strengthened
- Train farmers and sensitize them on the profitability of using certified seed.

6. FUNDING SUPPORT

Between 2016 and 2025, CORAF/WECARD will need funding support of US\$ 50 Million to carry out the following activities: (i) coordinate, monitor and evaluate actions proposed-15% of budget, (ii) provide good information technology and knowledge management systems to up-scale best practices – 5% of budget, (iii) accompany the privates sector to up-scale the production and supply of quality foundation and certified seeds – 50% of budget and (iv) facilitate farmers' access to quality certified rice seed – 30% of budget.

CORAF/WECARD has approached partners, including the ECOWAS and UEMOA Commissions, USAID, the Africa Development Bank, the World Bank to support this initiative.





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