



AGRA SUPPORTS CREATION OF A VIBRANT SEED SYSTEM IN RWANDA



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AGRA EXISTS TO FULFILL THE VISION THAT AFRICA CAN FEED ITSELF AND THE WORLD, TRANSFORMING AGRICULTURE FROM A SOLITARY STRUGGLE TO SURVIVE TO A BUSINESS THAT THRIVES.

Agriculture is the economic mainstay of the majority of households in Rwanda and makes a significant contribution to the Rwanda's economy. It accounts for approximately 30% of the GDP and is the biggest employer.

In all development blueprints, agriculture is billed to play a significant role to the structural transformation of the economy, contributing to economic growth, exports, job creation, increased land and labour productivity.

However, the sector is still developing in most of all aspects including its seed system and product market. Yet, the national ambition is to shift agriculture from its current predominantly subsistence nature to a market-led sector.

The seed system and product market is one of those critical factors still developing for sustainability to support sector transformation that has to be private sector led as envisioned in The Strategic Plan for Agriculture Transformation 4 (PSTA 4).

Thanks to the fact that AGRA approach in Rwanda centers on investing technical and financial resources to create a functional and strong seed system in Rwanda and extension services to raise farmer

awareness on use of improved seeds.

Founded in 2006, AGRA is a farmer-centered, African-led, partnerships-driven institution that is working to transforming smallholder farming from a solitary struggle to survive to a business that thrives.

It aspires to modernize agriculture sector on the African continent by mainly making it market-driven and a data-based sector which will play an important role in the development of the countries on the continent, Rwanda inclusive.

This way, AGRA is committed to catalyze the economic development, wealth creation, hunger reduction and nutrition through inclusive agriculture transformation. And, its goals are aligned very well with Strategic Development Goals, Malabo Declaration, African Agenda 2063, and fall under Rwanda priorities to transform agriculture as stated in PSTA4.

AGRA INVESTS IN CREATING A SEED SYSTEM IN RWANDA

To this end, in Rwanda, since 2018, AGRA has invested USD 10.8 Million in availing in creating a functional and strong seed system. With this investment, 463,500

farmers reached out of which 239,0055 farmers have adopted skills in Yield-Raising Technologies 11 705 MT Blended Fertilisers have been processed and sold by local blenders and 4513.6 MT Certified hybrid maize, bean, potato and Soya bean Seeds have been produced and proceed Locally.

AGRA roots for a vibrant and functional seed system because of its significant role among other intervening factors in the transformation of agriculture. High quality seed of improved varieties is frequently the central carrier for new technology to be applied in crop production for agricultural development.

It is also the basic tool for a secure food supply, income, nutrition as it helps obtaining acceptable crop yields in even less favourable production area. And, this is very appropriate to Rwanda where agricultural land is limited due to high population pressure and historical neglect of good agricultural practices such as terracing and proper marshland management by past governments.

AGRA IN CAPACITY BUILDING FOR A FUNCTIONAL SEED SYSTEM IN RWANDA

Interventions in components of seed system has seen 37 researchers trained at postgraduate level in key



different breeding programs at Rwanda Agricultural and Animal Resources development board (RAB).

Of the 37 trained scientists, 29 are Master of Science graduates while 8 were trained at PhD level. These trainings have radically changed the seed sector in Rwanda by creating a pool of local researchers that has to date participated in the development of 47 varieties of different seed crops, among them maize, beans, soybeans, Irish potatoes, sweet potatoes, bananas and more.

Most of these varieties are under production and some such as high on iron beans are boosting national programmes to promote better nutrition feeding in the smallholder farming community.

Rwanda that has been until recently a net importer of hybrid maize, soybeans and wheat seeds. For the first time in history, from season B 2020 the country is now self-sufficient in maize hybrid seed which have substituted importation from region, and kept surplus for next season.

Thanks to AGRA work, complementing the unwavering commitment of the Rwanda Government, in particular, MINAGRI for creating and sustaining an enabling environment to do business in agriculture. To date there are 38 varieties of hybrid maize, beans, soybeans and Irish potatoes, candidates for release in 2020 and 2021.

In the last 10 years, AGRA has also supported RAB in 19 research projects valued at USD 4.58 Million, 6 of which valued at USD 1.18 Million are ongoing with 1 of them focused on reinforcing seed companies in seed technology and good agricultural practices.

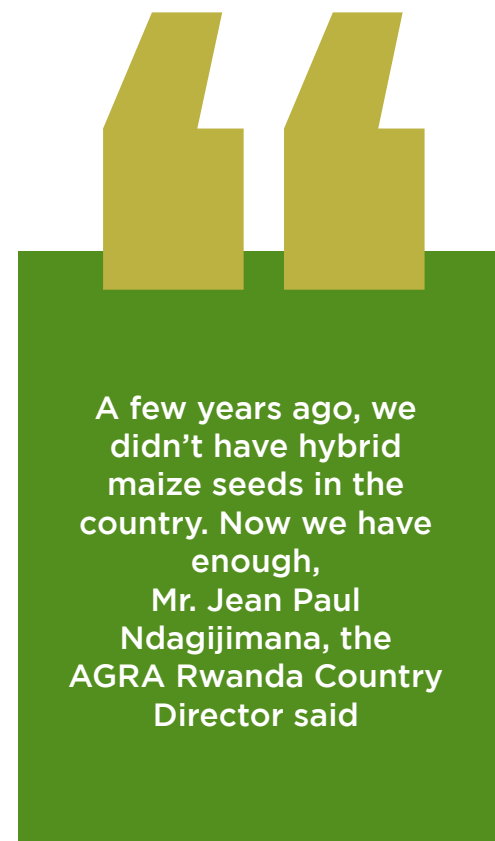
Thus, by creating a pool of researchers, among other interventions, AGRA is making a big sustainable and strategic response to the ills that traditionally inhibited the country's desire to develop sustainable seed breeding programmes.

Mr. Jean Paul Ndagijimana, the AGRA Rwanda Country Director sums it up:

"A few years ago, we didn't have hybrid maize seeds in the country produced locally. Now we have enough." And, RAB Deputy Director General Dr. Bucagu Charles expounds on the importance for this impressive development in Rwanda's agriculture sector saying the advantage of applying hybrid seed is 'that we know the parents of the breed and we are sure that the production will be huge.'

SUPPORT PRIVATE SECTOR LED SEED PRODUCTION

Rwanda's agenda to transform its agriculture is billed to private sector driven with government enacting policies to create an enabling environment. This, among other things explains AGRA's interest of building a vibrant seed sector.



**A few years ago, we didn't have hybrid maize seeds in the country. Now we have enough,
Mr. Jean Paul Ndagijimana, the AGRA Rwanda Country Director said**



In this endeavour, AGRA established a grant in 2017 through 2019 that acted as a vehicle to create seed companies in Rwanda, 15 seed companies were created as a result. Part of the grant was extended to RAB to train weak start up seed companies to in seed technologies and support them in seed production activities through on-site skills transfer.

Seed system is a sophisticated value chain. It involves capacity building and research, coordination of logistical work and strong regulatory system to examine the quality of seeds, and AGRA has been able to support set up such a connected network in Rwanda.

AGRA has extended funding to 15 seed companies as a way of boosting seed production, processing and marketing capabilities in the private sector, an approach that fits well into the national aspiration of attain a market-led agriculture sector driven by the private sector.

RESULTS AT GLANCE

In season 2020A, 4,513.6 MT of improved seed were produced

 **3,560.4MT**
of Hybrid maize

 **388.4MT**
Soyabeans

2,794.8MT valued

 **106.9MT**
of beans

 **457.9MT**
Soyabeans

USD 5.18 Million

were directly sold to farmers through agro-dealers to plant in season 2021 A which starts from September 2020.

After liberalization of the seed sector, one kilogramme of hybrid maize fetches FRW 2,281 compared to previous FRW 1,450. This gives optimism that while local seed companies are still nascent, they are abound to be able to produce and process seeds locally. All seed companies except two, sold 100% of their seed under their company name brand. Thus, AGRA's work is aligned with PSTA 4 where it works with partners to increase incentives for private sector participation and investment into the sector.

DRIVE TO INCREASE UPTAKE OF IMPROVED SEEDS IN FARMING COMMUNITY

In the last two last years, AGRA has embarked on sensitizing farmers to embrace use of improved seeds; 6,682 events of agricultural extension service were conducted, including 5,785 variety demonstration plots, 229 farmer field days, 649 seed pack distribution, 8 radio programs, 2 TV programs, 2 trade shows and 7 through bulk SMS.

These activities raised awareness on the use of improved seeds and good agriculture practices. Some 287,995 smallholder farmers participated in the events, and AGRA is aware about 70 percent adopted improved seeds;

3,497 agronomic trainings events were conducted reaching 239,055 people including smallholder farmers, seed company personnel, agro-dealers, field technicians, in the framework of increasing farmers' adoption of improved seeds.

In this reporting period, AGRA –Rwanda has reached to 463,500 new farmers, with 'the good agricultural practices and seed technology', and this number surpassed the initial life of strategy target of 400,000 farmers.



Mr. Sibomana Edouard, Production Officer at Top Seed Company in a multiplication plot.



Once hybrid seeds have been produced and farmers mobilised to use them, accessibility must be ensured. Thus, AGRA has intervened in strengthening a network of agro dealers in Rwanda as a powerful tool to enable farmers' access inputs.

Agro dealers have been trained in management of agricultural inputs, this is on top of digitizing management of seeds and fertilizer subsidy through Smart Nkunganire System (SNS).

AGRA has supported Bank of Kigali to develop online application to ease the purchase of seeds and fertilizers. MOPA platform facilitates agro dealers to purchase seeds and fertilizer from accredited suppliers while IKOFI (E-wallet) enables farmers purchase seeds and fertilizer from agro dealers.

Subsequently, these initiatives have reduced the distance from farmers to agro dealer from 15km to 5 km. This helped many farmers accessing timely agricultural inputs and increase staple food crop production.

IMPROVING QUALITY OF GRAINS AND REDUCING POSTHARVEST LOSS

Maize farmers in Rwanda have for some time suffered big losses as their produce got rejected by agro-processors due to high levels of aflatoxin in their maize.

In response, AGRA has also partnered with Agro-processing firms to train farmers on how to reduce aflatoxin in the post-harvest. Also, they were given driers and improved storage equipment.

With the rejection rate of 90% of Rwanda produced maize by off takers before the training and support due to High aflatoxin levels, AGRA worked with research institutions and grain buyers and introduced "Aflasafe" which is a biological control of Aflatoxin.

This measure, coupled with rigorous training in postharvest management, have created confidence from buyers and dropped the rejection rate to 10% for season A 2020. This measure boosted incomes for small holder farmers as they are assured of the market and plays a key role in increasing operating capacity for Agro-processors as they are assured of supply of good quality grains produced locally.

BUSINESS ENABLING ENVIRONMENT AND REGULATORY FRAMEWORK

Seed production is a very sophisticated value chain where all linkages must speak into each other for maximum result to be achieved – from production to the last mile - quality seeds reaching the smallholder farmer.

That is why any investment right from variety development research to seed production, requires an intact regulatory framework to guide the whole process.

Acting proactively, AGRA has invested USD 1.7 Million to build a sustainable regulatory system that will be able to coordinate, examine, quality and legal framework of this whole value chain to meet international standards, in particular ISTA and OECD, which will ensure smallholder to buy quality seed true to the variety and increase productivity and income, and will also enable seed companies to export seed produced in the country to the rest of the world..

LESSONS LEARNT FROM COVID-19

Agriculture Mechanization: With the advent of Covid-19 pandemic, most countries worldwide went into lockdowns and social distancing to minimize the contagion spread. Rwanda government allowed agricultural activities to continue but still there was a notable scarce of labor market during Covid-19 period and to mitigate a looming food crisis, AGRA joined hands with the government and adopted the use of tractors and other mechanized tool to keep production moving as people were self-isolating and keeping social distances from each other

From this experience, we have learned that that the best way forward for the Rwandan agriculture is to shift from relying on intensive human labor system to mechanized-production system, which relies on machines than human labor. This initiative has started, but must be scaled up in order to yield needed results.



Ms. Mukeshimana Francois, MD Sozo Seed Company