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On the cover:
A boy harvests NERICA4 in Deve, Benin, West Africa. Rice is generally grown by smallholders in Benin, which is a net importer of rice from East Asia. Rice production, in particular upland varieties grown on dry land, has been boosted by the introduction of NERICA varieties by the Africa Rice Center.

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IRRI is the world's leading international rice research and training center. Based in the Philippines and with offices in 13 other countries, IRRI is an autonomous, nonprofit institution focused on improving the well-being of present and future generations of rice farmers and consumers, particularly those with low incomes, while preserving natural resources. It is one of the 15 nonprofit international research centers supported, in part, by members of the Consultative Group on International Agricultural Research (CGIAR – www.cgiar.org) and a range of other funding agencies.

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A NERICA₄ seed multiplication field in Namutumba District, eastern Uganda.

UGANDA'S RICE REVOLUTION

by Savitri Mohapatra

Sub-Saharan Africa's "new kid on the block" positions itself as the rice granary of the region by adopting the right policies and appropriate technologies, strengthening capacity building, and engaging both the public and private sector

Compared with other West African countries such as Mali and Senegal, which have been growing rice for centuries, Uganda is just "a new kid on the block."

Yet, in 2008, when the government of Mali was desperately trying to procure for its farmers large quantities of seeds of the New Rice for Africa (NERICA[®]) varieties developed by the Africa Rice Center (WARDA), it was Uganda that offered to supply Mali. Not bad for a country where, only 15 years ago, rice was considered a special dish for Christmas.

According to the Ministry of Trade, rice production in Uganda has increased 2.5 times since 2004. In 2008, the country's paddy (unmilled rice) production

was estimated to be 180,000 tons, which was 11% more than in 2007.

Moreover, records from the Uganda National Agricultural Research Organization showed that Uganda's rice imports dropped from 60,000 tons in 2005 to 35,000 tons in 2007. This is a remarkable achievement, considering that 40% of sub-Saharan Africa's (SSA) demand for rice is met by imports, which cost about US\$3.6 billion in 2008.

Uganda is so keen to boost its rice sector that it became the first country from eastern Africa to join WARDA as a member in 2007. Uganda is also one of the focal countries of the new East and Southern Africa Rice Program (ESARP), a partnership between IRRI and WARDA. ESARP started in 2009 and it focuses on

- Rice breeding, varietal release procedures, and seed production systems
- Crop production and postharvest practices
- The rice value chain and agricultural policy
- Improving rice production at the village level
- Capacity building related to rice production, processing, and marketing

Today, Uganda is fast positioning itself as a potential rice granary of the subregion, as its traders have started selling home-grown rice to Congolese, Kenyan, and Sudanese markets.

In early 2009, the government of Uganda and the Japan International Cooperation Agency (JICA) signed an agreement to establish a national

rice research center. The center is expected to become a key partner in the ESARP.

Right policies and appropriate technologies

Ever since 2004, when President Yoweri Museveni launched the Upland Rice Project, rice cultivation has boomed in Uganda. At the core of this project are upland rice varieties, particularly NERICA upland varieties, which Vice President Professor Gilbert Bukenya has actively promoted throughout the country as a means to reduce poverty. NERICA4 was released in 2002 and NERICA1 and NERICA10 were released in 2007. “We promote rice as something that brings food and also money,” he said.

The Food and Agriculture Organization of the United Nations (FAO) attributes Uganda’s rice success to the re-introduction of a 75% import duty under the East Africa Community common external tariff, and to the dissemination of NERICA varieties. These measures have fostered large private investment by the rice industry, including millers and traders, and have also encouraged many local farmers to take up rice cultivation.

For Henry Kaddu, a Ugandan rice farmer, the main reason is the premium price that rice fetches. In fact, some farmers have already switched from tobacco to rice, as they realized that growing rice was more profitable. Kaddu said that profits from the sale of his NERICA rice harvests have enabled him to build two houses, send his

children to school, and buy four cows. The *Ugandan Daily Monitor* reports that NERICA varieties have turned many local rice farmers into “USh¹ millionaires.”

Public-private partnerships and capacity building

One of the outstanding factors behind the rice success story of the country is the role of public-private partnerships.

Key partners of the national agricultural research and extension system include JICA, which has been at the forefront of rice promotion in SSA; USAID-funded nongovernment organizations such as the Investment in Developing Export Agriculture (IDEA) and the Agricultural Productivity Enhancement Program (APEP); Sasakawa-Global 2000; FAO; Alliance for a Green Revolution in Africa; and companies such as Tilda Uganda and Nalweyo Seed Company (NASECO).

The potential of rice as a cash crop quickly captured the attention of Uganda’s seed companies, such as NASECO, which has been an integral part of the nation’s rice success story. Another rice company that has become well known is Tilda Uganda, which sells rice in the subregion under its brand.

In partnership with the government agencies, Sasakawa-Global 2000, IDEA, and APEP have focused on the capacity building of young scientists, field technicians, extension agents, farmers, and processors. Areas covered are improved seed production; crop, soil, and water management; the

use of agricultural machinery; and postharvest handling techniques.

Extension manuals on upland rice were produced and disseminated. Rice farmer learning videos produced by WARDA and its partners were widely used. In northern Uganda, for instance, APEP showed the videos to 7,000 farmers living in refugee camps to revive agriculture in war-torn villages.

The National Cooperative Business Association, in partnership with APEP, also provided training to rice farmers and processors in organizational, financial, and marketing skills.

The importance of capacity building in Uganda is confirmed by the article *How revolutionary is the “NERICA revolution”? Evidence from Uganda* (published in 2006). “Strengthening training, extension, and other supporting systems is the key to the success of the NERICA revolution in Uganda,” the article stated.

Public-private partnership also helped provide credit to farmers, linked them to input and output markets, and encouraged them to form cooperatives so that they could have stronger bargaining power. It facilitated the establishment of rice mills and introduced agricultural machinery.

According to Robert Anyang, rice seed systems consultant at WARDA who was formerly with APEP, all these efforts have paid rich dividends. By early 2007, 36,000 organized rice farmers were linked to nine medium-capacity rice processors.

For the government of Uganda, however, this achievement is not enough. Its ultimate aim is to ensure that rice becomes not only a foreign exchange saver but also a foreign exchange earner by capitalizing on the country’s excellent agroecological conditions. 🌾



MZE WILLIAMS Sentogo, an 81-year old rice farmer, shows the NERICA4 rice planted in his field in Nakaseke District, central Uganda.



SENTOGO'S FAMILY in the NERICA4 field.

¹Ugandan shilling.