

荃银高科助力非洲水稻发展 How WinAll Bumper the Rice Production in Africa

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Huge Potential for Rice Production in Africa

Huge potential for rice production:

The potential arable land in Africa is 637 million ha (Okigbo, 1982), and about 68% of the total area is in reserves. The climate of Africa, except for a few cold and some extremely hot environments, is generally suitable for the cultivation of rice.

High gap on local production and consumption:

Africa consumes a total of 11.6 million tonnes of milled rice per year (FAO,1996), of which 40% is imported. 21 of 39 rice-producing countries in Africa import between 50-99% of their rice requirements.

Big potential in rice yield increase

Africa VS China: 2-3 t/ha VS 6.95 t/ha.

Rice Area, Yield, and Production 2019/20 Proj.					
Region	Country	Yield (Metric tons per hectare)		Production (Million metric tons)	
		Aug	Sep	Aug	Sep
United States		8.49	8.48	6.52	5.95
European Union		6.89	6.89	2.01	2.01
Asia	China	6.95	6.95	146	146
Asia	India	3.92	3.91	115	112
Africa	Egypt	8.84	8.84	3.05	3.05
Africa	Madagascar	2.8	2.8	2.69	2.69
Africa	Nigeria	2.16	2.16	4.9	4.9
World		4.56	4.55	497.86	494.22

Date: Foreign Agricultural Service/USDA 25 September 2019

Key challenges for rice production in Africa

Key Challenges

To develop **new varieties** with higher yield potential

To introduce **Hybrid Rice Technology** to minimize the yield gap

Biotic & Abiotic Stresses

Soil Fertility and Fertilizer

Integrated Crop Management & Post-Harvest

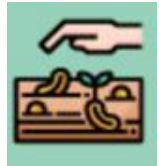
Funding support for long-term rice production strategy in Africa



Main Activities in African

New Variety breeding & Selection

Breed new hybrids locally since 2009 in main west and east Africa, and selected >30 new combinations



Agri-technical service & large-scale farm cultivation

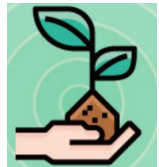
Reclaimed and constructed >100,000 mu of rice and corn farms in Africa during 2012-2017



Agri-technical cooperation project in Sierra Leone and Togo



Set up subsidiary in Angola and JV in Mali respectively to layout in South West Africa and West Africa markets



Key challenges for rice production in Africa

Ecosystem	Rice Production	Obstacles	Variety
Rainfed Upland	44% of rice production in Africa Avg. yield: 1-3t/ha	Drought and Rainfall shortage	Upland rice variety Herbicide-tolerant variety
Rainfed Lowland	Cover area of 130m ha Avg. yield: 1.4-5t/ha	Fluctuating water table & poor drainage Severe Pest & Diseases	Pest & diseases tolerant variety
Mangrove Swamp	Cover area of 1.2 m ha (16% has been developed for cultivation)	Lodging & silting Soil with acidity & salinity Weed buildup	Acidity and Salinity tolerant variety
Irrigated Ecology	11% of rice production in Africa, best ecosystem for rice cultivation Avg. yield: 3.5-7 t/ha	Nutrient deficiencies Diseases (rice yellow mottle virus, blast, bacterial leaf blight etc.)	Infertility tolerant variety

WinAll Actions In Africa Rice Production

At present, Chinese existing varieties is generally low yield with no lodging tolerance. Winall has made a long-term variety research and development program for Africa since 2009, bred hybrid and conventional high-yield varieties suitable for Africa, providing Africa with excellent varieties, technology and talent training.



Establish ecological testing sites to select varieties

Since 2011, Winall conducted variety trials and selection breeding in >10 African countries, tested >100 varieties and selected >30 new combinations.



Invest locally for integrated development of breeding, production & promotion

Set up subsidiary in **Angola** in 2016 for South West Africa layout; 1 rice variety released;

Set up JV in **Mali** in 2019 for West Africa layout; 3 new rice varieties in registration.

WinAll Actions In Africa Rice Production

Variety Highlights



Suitable in **acid** and neutral soils
in **Southwest** Africa

High resistance to **rice blast**

Yield increase >50%



Suitable in **saline-alkali** and
neutral soils in **East** Africa

High resistance to rice blast

Yield increase >50%

Testing Sites

in Tanzania, Mali, Mozambique, Sierra Leone, Togo,
Angola...



WinAll Actions In Africa Rice Production

Exploration On Production Technical System for Big Farms & Small Famers

Through long-term and continuous basic research and practice in Africa, Winall developed a set of rice production technology system suitable for Africa, offer different solutions for the main different ecological areas, esp. **irrigation and rain-fed areas**, and **for large-scale farms and small farmers**.

Large-scale farm Construction: Winall reclaimed and constructed >100,000 mu of rice and corn farms in Africa during 2012-2017

2011-2016

Angola 1500ha

2014-2017

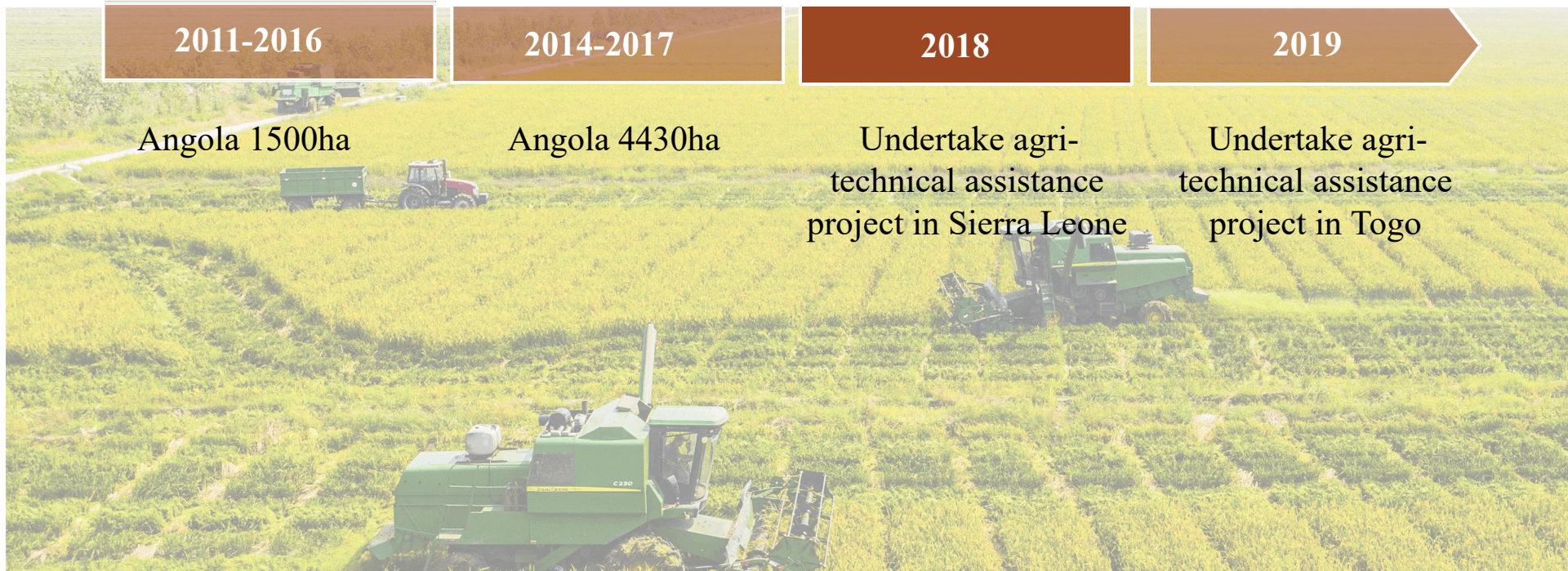
Angola 4430ha

2018

Undertake agri-technical assistance project in Sierra Leone

2019

Undertake agri-technical assistance project in Togo



WinAll Actions In Africa Rice Production

Mechanized Production Solution for Big Farms

Winall demonstration farm realized **all-rounded mechanized solutions** for the whole process of agri-production from **sowing, land preparation, field management, harvesting, processing and warehousing**.



WinAll Actions In Africa Rice Production

Bridge Knowledge Gaps for Small Farmers

Farmer Education for Crop Management: to set up test and demonstration plots for local farmer education on nutrient, weed control, pest and disease Management;

Post-harvest Technology Support: offer machinery for harvesting, threshing, cleaning, drying etc. for higher head-rice yield, production and post-production practices;

Train the extension staff and equip them with adequate tools so that they can educate local farmer-clients on modern rice farming to improve farmer decision-making capacity and properly utilize the new techniques.



WinAll Actions In Africa Rice Production

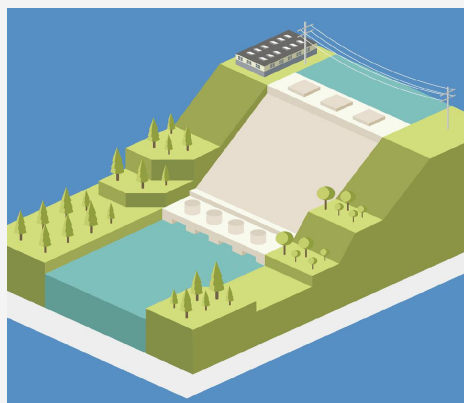
Galaroy on Farmers Bumper Harvest



Strategies for rice production in Africa

Appeal Funding Support for Long-term Production Strategy in Africa

To ensure a long-term, strong and sustainable production base, it's necessary to **improv market infrastructures**, **develop small-scale irrigation schemes** to cover more favourable ecologies, **strengthen research and extension facilities** and overcome the major biophysical constraints for rice production, we call for **Chinese enterprises, African governments and international communities** to **invest and assist** in Africa's rice production and work together to solve hunger and poverty in Africa.



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