China plans to feed 80 million people with 'seawater rice'

JINGHAI district in northern China is hardly a rice-growing paradise. Located along the coast of the Bohai Sea, over half of the region's land is made of salty, alkaline soil where crops can't survive. Yet, last autumn, Jinghai produced rice from 100 hectares.

The secret to the bountiful harvest is new salt-tolerant rice strains developed by Chinese scientists in the hope of ensuring food security that's been threatened by rising sea levels, increasing grain demand and supply chain disruptions.

Known as "seawater rice" because it's grown in salty soil near the sea, the strains were created by over-expressing a gene from selected wild rice that's more resistant to saline and alkali. Test fields in Tianjin — the municipality that encompasses Jinghai — recorded a yield of 4.6 metric tons per acre last year, higher than the national average for production of standard rice varieties.

The breakthrough comes as China searches for ways to secure domestic food and energy supplies as global warming and geopolitical tensions make imports less reliable. The nation has one-fifth of the world's population, and that many mouths to feed, with less than 10% of the Earth's arable land. Meanwhile, grain consumption is rising quickly as the country grows more wealthy.

"Seeds are the 'chips' of agriculture," said Wan Jili, a manager at Qingdao Saline-Alkali Tolerant Rice Research and Development Center, drawing a parallel between the crucial role semiconductors play in the development of new technologies and their role in the ongoing trade war between the US and China. Seawater rice could help improve China's grain production in the face of an "extremely complicated situation regarding climate change and global food security," she said.

China has been studying salt-tolerant rice since at least the 1950s. But the term "seawater rice" only started to gain mainstream attention in recent years after the late Yuan Longping, once the nation's top agricultural scientist, began researching the idea in 2012. — ***Bloomberg***

FULL STORY

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LANDBANK support to farm, fisheries industries tops P247 billion in 2021

LAND BANK of the Philippines (LANDBANK) said it provided P247.85 billion worth of loans, subsidies, and training programs to 3.2 million farmers and fishermen in 2021.

"We will continue to promote recovery and renewed growth for agri players and other development industries, as part of our expanded and holistic approach in serving the nation," LANDBANK President Cecilia C. Borromeo said in a statement.

Of the total, 2.32 million or 72% of farmers and fisherfolk were assisted through regular loan programs, including lending programs administered for the Department of Agriculture (DA) and the Department of Agrarian Reform (DAR).

As of Dec. 31, the bank had released P11.95 billion to 296,636 farmers and fisherfolk via programs administered for the DA.

In partnership with the DAR, LANDBANK released P679.92 million to support 10,170 small farmers, agrarian reform beneficiaries and other smallholders under its credit assistance programs.

The bank also assisted a combined 796,311 beneficiaries under the DA's Rice Farmer Financial Assistance and Financial Subsidy to Rice Farmers Programs, while 187,690 farmers and fisherfolk received capacity building training through the LANDBANK Countryside Development Foundation, Inc.

Loans were also allocated to small, medium, and large agribusiness enterprises, agri-aqua related projects of local government units and government-owned and -controlled corporations, and small farmers and fisherfolk, via cooperatives and farmers' associations, rural financial institutions and other conduits. — **Luisa Maria Jacinta C. Jocson**

Urban farming, community gardens touted as next step in food sustainability

By Luisa Maria Jacinta C. Jocson

COMMUNITY gardens are being put forward the best way to engage the public on issues such as food security, production efficiency, and nutrition awareness, a farming advocate said.

"Farmers need to grow efficiently, upskilling on technology and mechanization. In the meantime, home, school, and community gardens can fill an immediate gap. School gardens can provide a model for the community to emulate. But the home, school and community gardener and farmer need to know how best to grow vegetables for a good return on their capital and effort," Managing Director for East-West Seed Foundation, Inc. (EWS) Ma. Elena P. van Tooren said in an e-mail.

"Agriculture is a science, and a successful farmer is a practicing, competent scientist. We need to train, train, train if we want to plant, plant, plant," she added.

Between 2017 and 2019, the Philippines was considered the most food-insecure in Southeast Asia, Ms. Van Tooren said, citing a report by the United Nations.

"These sorry findings were reported even before the pandemic. We need to grow more food, make this accessible and affordable at the local level. All of us need to eat and food security and good nutrition are major concerns for the Philippines," she said.

"This indicates a big problem... requiring a collective effort from both the community and various stakeholders to address it," EWS added in a statement.

EWS, a vegetable seed company, founded the VeggiEskwela program, which teaches the public how to plant vegetables and hopes to increase awareness of nutrition issues.

"Our mission is to help Filipino families achieve better nutrition by empowering them with the skills and technical know-how to plant and harvest vegetables in their own gardens and make it a part of their every meal. VeggiEskwela is the main intervention program of EWS to help curb the country's food security and nutrition problem," Ms. Van Tooren said.

VeggiEskwela has trained 27,508 students and 2,849 teachers, and established partnerships with 242 barangays and 1,323 schools nationwide.

In 2020, Ms. Van Tooren said that the pandemic forced a shift towards online methods of instruction.

"With the online training model, we are able to reach any corner of the Philippines that has internet connectivity, effectively and efficiently, so this will continue even if lockdown restrictions ease," she said.

"We are moving more of our on-site training online for the many advantages the online model provides over on-site. Via the online model, we are able to spread out the training over weeks or months, so the participants experience actual grow-out of their plants and are mentored in the process. Additionally, in on-site training, not all participants may take active part in the hands-on activities," she added.

This led to the launch of the VeggiEskwela Home Gardening Webinar series, which offers online classes on vegetable production.

Ms. Van Tooren said the organization is working with the Department of Education (DepEd) to reach all 47,000 schools under the department.

"We work very closely with the DepEd departments for these programs. While every school is supposed to grow a 'Gulayan sa Paaralan' (school vegetable garden), the technical aspects of growing vegetables may not be locally known or available. East-West Seed Foundation fills in this gap, so the schools may have more productive gardens and bountiful harvests in a natural and sustainable manner. We enter into a Memorandum of Agreement at the school division level to cover all the schools within the division. There are 221 school divisions nationwide," she said.

EWS said it is planning to enter into more partnerships to expand its training.

"If more Filipinos actively learn to plant vegetables, we will be able to help address the country's food problem, one vegetable garden at a time," Ms. Van Tooren said.

The Department of Agriculture (DA) said it is planning urban agriculture partnerships to create more community gardens and promote sustainable crop production.

FULL STORY

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