

Help for small overseas farmers

China Agriculture University team receives Youth Day medal, recognition from President Xi

By ZHAO YIMENG

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A grassroots agricultural education program pioneered by China is helping smallholder farmers in African nations and other countries improve food production through hands-on science and international collaboration.

Ahead of this year's Youth Day on May 4, the Science and Technology Backyard (STB) team from China Agricultural University was awarded the China Youth May Fourth Medal, the nation's top honor for young Chinese people ages 14 to 40.

Established in 2009 in Quzhou county, Hebei province, the team has been stepping up efforts to bring scientific knowledge directly to agricultural fields and find practical solutions for farmers.

The results are now spreading overseas through the university's Sino-African STB project, which

was launched in 2019.

The project has allowed African students to enhance their knowledge and practical skills in modern agricultural practices in China and implement back home what they learned.

For over a decade, the university has been operating its science and technology backyard program, sending postgraduate students specializing in agriculture to rural areas to help farmers solve problems.

Ahead of Youth Day in 2023, President Xi Jinping wrote a reply letter to the students at the university.

In the letter, Xi expressed the hope that the students can closely integrate textbook knowledge with practices in rural areas and devote their youth and strength to speeding up rural and agricultural modernization.

Jiao Xiaoqiang, who is in charge of the project, said that African students spend the first year in China, studying theories in the classroom

and practicing core crop techniques in the field. They spend the second year in their home countries, conducting experiments and demonstrations. After that, they return to China to complete their theses based on their experiences in both countries.

"The training mode is adaptable in African countries because, like China, their agriculture also relies on smallholder farmers," said Jiao, who is also an associate professor at China Agricultural University's College of Resources and Environmental Sciences.

So far, over 90 students from 13 African countries have joined the program, and nearly 40 have graduated. Many have returned home to establish programs that are based on the Quzhou model, bringing new techniques to smallholder farmers and dramatically boosting corn yields, Jiao said.

Francina Lerato Kuwali, a former agricultural extension officer in Malawi, joined the program in 2023. After training in Quzhou on

soil nutrient management, greenhouse cultivation and machinery use, she returned to Malawi to teach farmers how to improve crop yields and test maize and soybean intercropping.

"In northern Malawi, we face challenges of poor soil quality and pest infestation," she said, adding that local farmers also have limited agricultural resources such as fertilizers.

At the Mzuzu science and technology backyard that she established in her home country, Kuwali introduced fertilizer optimization she learned in China and trained farmers in vermicomposting, a composting process that greatly improves the efficiency of fertilization.

Some of the 30 farmers involved in her backyard program increased their maize yields from 2 to 8 metric tons per hectare, and their incomes tripled, she said.

"Because of the bumper harvest, more farmers became interested in the technology ... It is very good

for smallholder farmers in my country, as it helped them achieve high yields and improve their livelihood," she added.

Chileleko Madubeko, an agroforestry student from Zambia who has spent three months in Quzhou, said that when he returns home, he hopes to introduce affordable drones and tractors to help Zambian farmers increase agricultural efficiency.

So far, China has built 14 overseas science and technology backyards, including eight in Africa and others in Brazil, Thailand, Cambodia, Belarus, and Kyrgyzstan.

Jiao said the university plans to launch its first science and technology backyard in Kenya later this year, as three Kenyan students currently studying in Quzhou will return to their home country in October.

"We want to help raise local maize yields to 8 tons per hectare, and promote regional growth through farmer-to-farmer training and digital outreach," he added.

Xizang's celebrated 'Swiss Alps'

Nyingchi's unique landscape offers enchanting natural beauty and distinctive cultural appeal

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Nyingchi's alpine conjure an enchanting terrain that shapes its distinctive cultural landscape. The region is celebrated as "Xizang's little Switzerland".

Indeed, you would be forgiven for thinking you were gazing upon the European nation's Alps, except the landscape is speckled with yaks, draped with prayer flags, and studded with buildings constructed in ethnic Tibetan, Lhoba and Monba vernaculars. The Yarlung Zangbo River, the world's highest waterway at around 4,800 meters, slices through the surrounding highlands to carve one of our planet's longest and deepest canyons.

Nyingchi's relatively clement weather compared with most of the Xizang autonomous region, which is otherwise hailed as the "planet's third pole", and its moderate altitude of around 3,000 meters, forge an eave of "the roof of the world".

These conditions have nurtured peculiar coniferous and pastoral biomes that host a unique taxonomy of wildlife, including myriad rare species.

The Yarlung Zangbo Grand Canyon zigzags over 500 kilometers



Nyingchi's pine-fleeced snowcapped mountains are said to resemble the Swiss Alps. ERIK NILSSON / CHINA DAILY

southward from Daduka village in Manling county to Baxika village in Metog county, slicing about 2,300 meters deep on average and over 6,000 meters at its most extreme plunge.

Many travelers flock to the Water Terrace scenic area by the Negega Bridge in Manling's Paizhen town to experience the river's thunderous rapids while quietly sipping tea. Much of the yawning chasm is

encrusted by glaciers, lacerated by torrential rivers, and traced by jutting precipices that frequently shake off their stony hides, detonating avalanches of rock, slush, and muck.

Swathes of the ravine are so treacherous that sections of it linger among Earth's last unexplored locales. But this unknown is exactly what lures researchers eager to unlock this geological treasure trove's final mysteries.

Nyingchi's highest summit, Mount Namjagbarwa, soars 7,782 meters into a lingering shroud of mist where the Hengduan, Himalaya and Nyainqentanglha mountain ranges smash into each other.

One of the best places to view this fang-shaped behemoth is the Forest Viewing Platform. It overlooks meadows glittered with wildflowers, woodlands prickled with evergreens and crests crowned by snowcaps above Lunang Forest.

Over 1,000 yaks and horses graze in Lunang's 130-hectare pastureland, which hosts a crisp vertical demarcation among its vegetation. Broadleaf species like birch, poplar, rhododendron, willow, and alpine oak cling to the lower altitudes, while evergreens like sequoias, cypresses, spruces, and firs bristle

across the horizons of higher elevations.

The prairies serve as arenas for traditional festivals featuring horseback archery and strongman contests, especially in August and September.

Visitors to Nyingchi can also explore folk customs at the Experience Hall of Ethnic Cultural Heritage. They can learn about the legacies of such traditional arts as thangka paintings, lanterns, and pest-resistant paper that can last well over a century with minimal aging. They can also witness the production of local incense crafted from over 30 medicinal ingredients harvested from the plateau. The joss smoke is believed to alleviate anxiety, deepen sleep and repel bugs.

Nyingchi is a place where an extreme river and canyon shape life among relatively moderate elevations and weather in Xizang to generate a destination unlike anywhere else on Earth. These natural conditions have fostered a mystique that has, in turn, shaped its culture.

From the highest point of Mount Namjagbarwa to the lowest depth of Yarlung Zangbo Grand Canyon, it is worth exploring from top to bottom — and everywhere in between.