

A Pakistani 'Citrus Doctor' in Yunnan

Dialogue

By LONG Yun & BI Weizi

Citrus fruits are undeniably enjoyed worldwide for their refreshing flavors and are an excellent source of vitamin C. To ensure sustainable growth of the citrus industry, a group of scientists are doing research on citrus diseases. Dr. Shahzad Munir from Pakistan, also known as the "Citrus Doctor," is one of them.

Munir is an expert who mainly researches on the citrus Huanglongbing (HLB), also known as citrus greening, one of the most serious citrus plant diseases. His study in the field of HLB began in 2015, when he left Pakistan to pursue academic research in southwest China's Yunnan province. He was drawn to China by the reputation of his mentor, Professor He Yueqiu and his team's environmentally friendly research method.

Combating HLB will bring huge ecological and economic benefit to the citrus industry. Munir told *Science and Technology Daily* that the challenges posed by HLB are similar to the threat from a pandemic. "HLB is a citrus pandemic in the world and it impacts the citrus industry both technologically and commercially," he said.

The widespread presence of the disease across citrus planting regions worldwide has set off alarm bells for the urgent need of effective control strategies.

Munir's research team has been pioneering the use of endophyte-mediated control technology, an innovative and environmentally friendly approach, to combat HLB. "I think this



Dr. Shahzad Munir. (COURTESY PHOTO)

is a very important strategy that can be applicable both in [the] academic community and [from a] practical aspect," he said.

Now, his team has successfully isolated microbial strains in the form of native endophytes that have been successfully tested in 164 acres of citrus fields across China, demonstrating outstanding results in disease prevention and control.

"An outstanding scientist [in my field] should step out of [the] laboratory to assist farmers in preventing and managing plant diseases," said Munir.

Over the past eight years, Munir has actively shared his knowledge on HLB prevention with farmers in Binchuan county in Yunnan, China fostering a positive relationship with the local agricultural community. Farmers appreci-

ate Munir's patient explanations and consider him a welcome foreign expert who genuinely cares about farmers' challenges.

Some local farmers have even dubbed him the "Citrus Prince," and when asked about the tangible benefits of his research to local farmers, Munir highlighted the increased fruit yield resulting from effective HLB control.

However, "Patience is needed in our research," said Munir, emphasizing the long-term nature of their research and the need for sustainable solutions. Still, he remains optimistic about the potential of the endophytic approach as a safe, environmentally friendly, and effective strategy for disease control in the long run.

According to Munir, the broader im-

plications of their work are not limited to China. He hopes to collaborate with international research groups, aiming to extend their expertise to benefit farmers globally and offer solutions to combat HLB and promote the prosperity of the citrus industry.

Speaking about his academic journey in Yunnan, Munir mentioned that his academic achievements in recent years are inseparable from the support of China's talent policies.

"I don't face any difficulties in my work, and everything is very smooth," said Munir. He added that the favorable research environment and excellent laboratory conditions, as well as the friendliness of the people, make his research journey more productive. At the same time, he especially mentioned the abundant opportunities and rewards for young researchers. Munir noted that, "One of the most important help is from local farmers, who generously allow our research activities in their fields."

In addition, China is one of the top citrus-growing countries, with Yunnan province making substantial contributions to the citrus industry. Sharing statistics from 2020, Munir pointed out the vast area of citrus orchards and the impressive annual citrus fruit output all provide a promising stage for him to unleash full research potential.

Looking ahead, Munir stressed the urgency of continuously finding new and innovative approaches to control HLB and therefore ensure the sustainability of citrus production. He highlighted the collaborative efforts needed to encourage more researchers to join the cause and work together to pursue a sustainable agricultural goal in the future.

Letter to the Editor

Nigerien Student: BRI Ignites Hope for Africa

By Saibou Zakou Souleymane

I have learned that President Xi Jinping has replied to a letter from representatives of Kenyan students and alumni at the Beijing Jiaotong University, encouraging them to continue contributing to the friendship between China and Kenya and between China and Africa.

As an African studying in China, I share the same sense of inspiration. Like Kenya, my home country Niger has also participated in the joint construction of the Belt and Road Initiative (BRI).

Since the inception of the BRI, cooperation between China and African countries has further deepened, including in infrastructure and industrial collaboration, trade and cultural exchanges.

The progress has been substantial, benefiting both China and Africa. In terms of infrastructure development, China has engaged in various projects across African countries, including ports, railways and roads, significantly improving Africa's transportation network and promoting its economic development.

I have been a beneficiary of cultural and educational exchanges between our two countries and will seize the opportunity provided by the BRI to act as a messenger for mutual cultural exchange.

In my opinion, the BRI is a crucial international cooperation plan to foster development in such areas as connectivity, trade cooperation and people-to-people exchanges with partner countries. Sino-African cooperation has been a vivid example of this initiative.

Through the BRI, Sino-African cooperation continues to achieve breakthroughs and accomplishments, injecting fresh impetus into the development and prosperity of Africa.

Additionally, the BRI has provided more development opportunities for African countries by facilitating trade and investment cooperation, which will help strengthen economic ties between Africa and China, as well as other BRI partner countries.

In summary, the BRI brings immense hope to Africa. It not only contributes to Africa's economic growth, but also fosters friendship and cooperation between China and Africa.

The author is an international student at Tianjin University.



Saibou Zakou Souleymane. (COURTESY PHOTO)

Traditional Eastern Wisdom

Oracle Bone Script: Signature of Ancient Chinese



A piece of oracle bone inscription is displayed at the Henan Provincial Museum. (PHOTO: VCG)

By BI Weizi

Oracle bone inscriptions are the oldest form of Chinese characters engraved on turtle shells or animal bones. They were used for divination and recording events in the late Shang Dynasty (1400-1100 B.C.) They are the earliest known systematic and mature writing in China and even East Asia.

More than 100,000 pieces of oracle bone inscriptions have been found

mainly in Anyang and Zhengzhou, Henan province. They are records of divination and prayers to the gods related to a wide range of issues such as the king's affairs, the weather, harvest and military matters.

The oracle bone characters were carved with a knife on hard turtle shells or animal bones. The characters are therefore mainly straight and thick, showing a 3D visual effect. Although the inscriptions vary in size,

they have shown a stable pattern, with relatively balanced and symmetrical structures.

Oracle bone inscriptions have both their linguistic communication and calligraphic artistry. They are not only the earliest and most systematic data for studying the origin of Chinese characters, but also a valuable asset for studying oracle bone calligraphy. In October 2017, they were included in UNESCO's Memory of the World Register.

Service Info

NHC Deals with Seasonal Influenza Concerns

By Staff Reporters

On January 14, the National Health Commission (NHC) held a press conference to disseminate information on how to prevent winter respiratory diseases, give health advice and answer questions from the media.

According to the Chinese Center for Disease Control and Prevention (CDC), seasonal influenza is an acute respiratory illness caused by influenza viruses. It tends to be more common in most of China from January to March/April.

Three types of seasonal influenza viruses are recognized to cause human infection, namely A, B and C. Since the immunity generated after having influenza A does not provide effective immunity against influenza B, one still has a good chance of catching the latter.

The CDC recommended getting

vaccinated each fall. Approximately two weeks after vaccination, the body develops a sufficient level of protective antibodies against the influenza viruses.

COVID-19 may resurface

Wang Dayan, director of the National Influenza Center of the CDC's Institute of Viral Diseases, said that recent data from the multi-channel surveillance system show that COVID-19 is still present at a low level after the New Year holiday.

It's estimated that alternating or co-epidemic trends of multiple respiratory pathogens will occur with the Spring Festival around the corner. Due to multiple factors, such as continued importation of the foreign JN.1 mutant strain, gradual decrease in domestic influenza, and the decline in population immunity, COVID-19 may spread this month, and the JN.1 mutant strain will most likely become a dominant strain in China.

Getting medical help

Wang Guiqiang, director of the Department of Infectious Diseases at Peking University First Hospital, said in winter respiratory diseases are more common, including influenza A, influenza B, novel coronavirus, respiratory syncytial virus, adenovirus and mycoplasma. The immunity established after being infected with these pathogens does not last long.

At the same time, there is no cross-protective immunity and these pathogens can infect people simultaneously or alternately.

Repeated infections within a short period often result in a milder condition because the immunity established by the previous infection is still in force. However, simultaneous infection with different pathogens may worsen the condition, especially in the elderly, children, and patients with underlying medical

conditions.

Getting prompt medical attention is recommended as well as taking prescribed medication to shorten the course of the disease and reduce the risk of severe illness and hospitalization.

The number of visits to fever clinics shows a fluctuating downward trend.

Mi Feng, NHC spokesperson, said since the New Year holiday, tourism has been booming across the country. As more and more tourists travel from the south to the north to enjoy the exotic natural and cultural atmosphere, the huge temperature difference poses a challenge to their immune systems, and the influenza virus may sneak in.

Practicing good hygiene habits is advised, such as wearing a mask, frequent hand washing, frequent airing, and social distancing, as well as recognizing respiratory symptoms promptly and seeking medical care if necessary.

Expats Activity

By DENG Zhuoyuan

More than 40 foreign experts had a taste of Spring Festival celebrations at an event hosted by the Foreign Experts Bureau of Guangxi Zhuang autonomous region in Nanning on January 20.

The 2024 Chinese New Year Celebration for Foreign Experts in Guangxi was attended by expats from Canada, the UK, Italy, Malaysia, Vietnam, Thailand and 11 other countries.

The guests participated in traditional folk games such as throwing the pot and tossing the ring. They also immersed themselves in the unique charm of Chinese traditional culture through writing auspicious characters, and making paper-cuttings.

Pauciullo Alfredo, a researcher

from Italy working at the Buffalo Research Institute in Guangxi, expressed great interest in ethnic clothes. He participated in the carnival in resplendent traditional attire.

Khotphat Tanaporn from Thailand, deputy director of the China-ASEAN Research Institute at Guangxi University, said the rich festive atmosphere in China made him miss his hometown.

British expert Alex Short said the traditional folk activities have deepened his understanding of Chinese New Year customs and culture.

The organizers thanked the foreign experts for their contributions to the economic and social development of Guangxi and welcomed more foreigners to work and live in Guangxi.

This article is an edited version of the original Chinese article contributed by the Foreign Experts Bureau of Guangxi.



Foreign experts in Guangxi Zhuang autonomous region celebrate the 2024 Chinese New Year. (COURTESY PHOTO)