

# Skills training helping residents boost wages

By YUAN SHENGGAO

Many residents in Shanxi are being offered the chance to escape poverty and make better money thanks to job-skills training provided by the government and social entities.

Yang Wenwen, from Linxian county, Lyuliang city, in the west of Shanxi, said she is proud to be able to serve clients not only in China but in Japan.

But she was not so confident three years ago. She had been trying to find a job in Lyuliang and was turned down by several employers.

Yang, in her 30s, was then told by friends that there are a number of vocational schools in Lyuliang training nurses. Graduates from these schools are especially welcome in the job market.

Yang entered one of the schools in 2018 and got a nurse's certificate several months later. Later, she attended a local language school to study Japanese. After obtaining a Japanese-language certificate, she became one of the first batch of Lyuliang residents to go and work in Japan.

Yang is one of the beneficiaries of Shanxi's recent campaign to help residents find better jobs by providing them with training.

According to Chen Jie, an official at the Shanxi Department of Human Resources and Social Security, the province launched the campaign in February 2017. It aims to support Shanxi's growth with better human resources and help residents with better career development.

"Our research found that a lack of sufficient, high-quality human resources was one of the major reasons hindering Shanxi's development."

"In 2017, the number of employees with skill certificates only accounted for about 15 percent of the total payroll in Shanxi, nearly 7 percentage points lower than the national average."



Trainees from a vocational school in Xinjiang county compete in a local cooking contest. GAO JIANHUA / FOR CHINA DAILY

"Three years after the campaign began, the ratio increased to 22.4 percent," Chen said.

Chen added that there is training targeting impoverished residents from the countryside, helping them find new jobs to make more money.

During almost four years, Shanxi's organizations have offered training to more than 708,000 rural laborers. Around 474,000 of them have earned various skills certificates.

Even university students are eager to take part.

Li Fuchun, a graduate from a university in Shanxi, found his first job in Guangdong province, South China. He returned to Shanxi to study in a vocational school for agricultural technologies three years ago. Li then established a plantation for tropical fruits in his hometown in Shanxi.

"To many of my friends and neighbors, it was beyond their understanding how a university graduate with a well-paid job in the developed province of Guangdong could return to become a farmer again," Li said.

Li is not a traditional farmer by any means. At the training school, he learned the knowledge and skills to operate a modern farm.

Li said it was his dream to run a modern "tropical orchard" on the Loess Plateau in North China. By using greenhouses and intelligent technologies, it has been possible for him to realize this.

"The adjustment of temperature, moisture and light, and even the movement of greenhouse roof covers — everything can be controlled automatically, just through touching a smartphone screen," Li said.

He said more residents are coming to learn from him as they are aware that farming can also make fortunes.

Li has also run a training school, giving lectures about modern farming.

Wang Pei contributed to this story.



Farmers in Xinjiang county dry corn in the sunlight after a harvest. GAO XINSHENG / FOR CHINA DAILY

# Growth remains strong despite virus outbreak

Province's 2020 economic performance surpasses expectations amid challenges

By YUAN SHENGGAO

Despite the outbreak of the COVID-19 pandemic, North China's Shanxi province maintained steady growth in almost all economic sectors in 2020, according to recent figures from the Shanxi Statistics Bureau.

The province's GDP increased 3.6 percent year-on-year to 1.76 trillion yuan (\$273.2 billion), while the grain output rose 4.6 percent to 14.34 million metric tons and the per capita disposable income of urban residents grew 4.6 percent to 34,793 yuan, the bureau's deputy chief and spokesman Wei Yongjie said at a news conference on Jan 22.

The official added that the price of local consumer goods increased only 2.9 percent on average, well below the expected inflation rate of 3.5 percent.

"The GDP growth is especially encouraging considering the novel coronavirus pandemic," Wei said. "The outbreak dragged the first quarter GDP growth to minus 4.6 percent but the local economy began to recover and gain momentum in the second quarter."

The official said another exciting figure was grain production, with per-unit output reaching a historical high last year.

Wei attributed the local economic resilience to the governments' effective measures to prevent and control the pandemic and to resume production and operations.

The official said the crucial period of plowing and sowing in the spring of 2020 was in concurrence with the widespread COVID-19 virus in China.

To overcome the difficulties, governments at various levels in Shanxi arranged more than 3,000 officials and experts to go to the countryside, helping farmers with pandemic prevention and offering them services relating to farming technologies and production, according to Wei.

The good harvest of crops throughout Shanxi can also be attributed to the efforts of local agronomists and agricultural researchers.

In the village of Dongguan in Yicheng county, for instance, a group of agricultural experts from research institutions and universities in Shanxi developed a crop seedling base to cultivate high-quality and high-yield varieties. As a result, the village's officials announced on June 14, 2020 that per hectare output of wheat was 11,853 kilograms, setting a record for winter-sowed wheat in Shanxi.

A similar piece of good news was also reported in the village of Qingdui in Fenyang city.

Zhang Zhiguan, a farmer in the village, operates a sorghum plantation of 60 hectares.

"Per hectare output of sorghum

reached a historical high of 12,600 kg," Zhang said on Nov 13, 2020. "One piece of land even had a per hectare output of 14,409 kg, a record in Shanxi province."

The farmer added that the net income from the plantation was about 2 million yuan last year.

In the industrial sector, an even more satisfactory performance was reported in Shanxi for 2020.

The industrial added value of enterprises above designated scale — companies with annual business income exceeding 20 million yuan — increased 5.7 percent year-on-year in 2020. The rate was 2.9 percentage points higher than the national average, according to the Shanxi Statistics Bureau.

High-tech industries reported an especially brilliant performance in 2020, with a year-on-year growth rate of 9.6 percent. Among these, the electronic and information technology equipment manufacturing sector increased by 13.4 percent and the new-generation IT sector grew by 12.8 percent from a year earlier.

One reason behind the impressive growth was Shanxi's recent strategy to transform its growth model from a coal-reliant economy to one featuring diversified sectors and driven



by high technology, said Zhang Zhanxiang, deputy chief of the Shanxi Department of Industry and Information Technology.

A successful example demonstrating such a transformation is Xinyuan Coal Mine, a subsidiary of Huayang Group based in Yangquan city in the east of Shanxi.

An intelligent operational center, featuring huge displays showing gas levels, temperature, humidity and general working conditions in underground shafts, as well as computers and control devices, is the brain of the coal mine company.

It is connected with in-shaft monitoring devices and mining machines via a 5G network, not only increasing efficiency but also greatly improving safety for workers.

Company executives said Xinyuan is China's first 5G-connected coal mine, with a special 5G network reaching a depth of 534 meters below the ground. Telecom giants China Mobile and Huawei supplied and installed the network system.

"We have realized a full 5G coverage in all our shafts with underground base stations," said Cui Maosheng, a Xinyuan executive in charge of intelligent operations.

"In the past, all the tasks of monitoring, surveillance, drilling and mining were conducted by manpower," Cui said. "But today all the operations are done by an intelligent and automatic system."

Wang Haigang, deputy general manager of Xinyuan, said the company's ultimate objective is to realize fully intelligent management featuring unmanned operations under the ground and automated control at the intelligent operational center.

"Thanks to the use of intelligent technologies, the number of workers working underground has been reduced by 321 over the past five years," Wang said.

Yao Weixi contributed to this story.

# Hydrogen hybrid train rolls off production line

By YUAN SHENGGAO

The first hydrogen fuel-cell hybrid locomotive manufactured in Shanxi rolled off the production line at CRRC Datong Electric Locomotive based in the northern Shanxi city of Datong on Jan 27, marking the latest breakthrough in the province's efforts to achieve environmentally friendly and sustainable growth.

"This is the first hydrogen fuel-cell hybrid locomotive independently developed in China, producing zero emissions," said Huang Qichao, board chairman of CRRC Datong.

The locomotive was jointly developed by Southwest Jiaotong University based in Chengdu, Sichuan province and CRRC Datong.

When talking about sustainability, Zhai Wanming, professor at Southwest Jiaotong University and chief developer of the project, said hydrogen is one of the cleanest energy sources in the world and also has the largest reserves among all chemical fuels.

"The electricity of the locomotive is generated from a hydrogen-oxygen reaction, with water being the only emissions. This is why the locomotive is regarded as the most environmentally friendly," Zhai said.

Hydrogen has some of the richest reserves on Earth, so it is a kind of resource that can never be depleted, Zhai said.

The scientist noted that hydrogen is becoming more used as a fuel due to recent breakthroughs in hydrogen fuel-cells. The cells are used in automobiles, railway locomotives and telecommunications equipment.

With a sustained power output of 700 kilowatts, a train using a hydrogen fuel-cell hybrid can run 24.5 hours at 80 kilometers per hour, carrying a maximum load of 5,000 metric tons, according to Zhao Ming, engineer-in-chief at CRRC Datong.

Zhao added that the locomotive is much quieter compared with the traditional ones. "The noise can be as much as 18 decibels lower in environments like tunnels."



China's first independently developed hydrogen fuel-cell hybrid locomotive rolls off the production line at CRRC Datong. WANG PEI / FOR CHINA DAILY

CRRC Datong will announce its plans for market delivery of the locomotives in the first half of this year, company executives said, adding that it will target China and Europe as its major markets.

Hydrogen will be supplied by local companies that produce the gas from coal resources in Datong.

Xionghao Holding is one of the suppliers. Zhou Qiang, an executive of the company, said turning coal into hydrogen represents a new, environmentally friendly transformation of the coal industry in Datong, which has coal reserves of 31.2 billion tons.

Zhou said the company is building the largest coal-to-hydrogen industrial park in North China, designed to supply hydrogen for 50,000 fuel-cells a year.

Yao Weixi contributed to this story.

# Shows give joy to rural communities

By YUAN SHENGGAO

Dramas are no longer exclusive to big-city audiences in Shanxi, as troupes like the Shanxi Drama Theater arrange frequent tours of the countryside to entertain rural residents.

On Aug 19, residents in Xiaohe village in Yangquan city were excited by the news that there would be a free performance by the troupe at the square in their village.

Despite the evening drizzle, they waited an hour before the classic show called *Beginning of Autumn*.

In less than a month, Taiyuan-based Shanxi Drama Theater performed a score of shows in rural areas throughout the province.

"The trips were tiring but our artists thought it was worthwhile when they were greeted by smiles, applause and cheers from the villagers," said Zhang Kai, head of the troupe.

The troupe's performances are part of a provincial campaign, which started in 2017. It requires Shanxi's troupes of drama, opera, singing and dancing, as well as movie theaters, to "send 10,000 shows to the countryside." The aim is to enrich the cultural life and spiritual well-being of rural residents.

The Root of China Singing and Dancing Troupe from Taiyuan, for instance, has staged a total of 164 shows throughout rural areas of Shanxi.

"We have enjoyed great popularity among rural residents and their enthusiasm always impressed us a lot," said Wang Jingrong, head of the



Artists from Taiyuan perform the local Jin Opera for residents in Houcun township in Qiuyang county. CHAI JIELIANG / FOR CHINA DAILY

troupe and a renowned musician in Shanxi.

A show in Xiaojingyu village in the suburbs of Taiyuan in September attracted about 10,000 people, with many of them coming from neighboring villages and townships, according to Wang.

"A total of 1 million rural residents have watched our shows over the past three years," Wang said.

Open-air movie shows in public squares are among the most attractive activities for rural residents. This is because "these can evoke nostalgia among people," according to an audience member.

"Open-air movie shows were a popular form of entertainment for country folks when I was a child four decades ago," said Zhang Guohua, a resident in Ruicheng village

in Jiancaoping district of Taiyuan. "But, later, the shows became fewer and disappeared gradually. We had to travel a dozen miles to see a movie in the city."

"We are happy to have the traditional entertainment back again."

Zhang Kai of Shanxi Drama Theater said the campaign is significant. It can enrich local cultural life while helping performance entities tap the market potential of the countryside.

"With the popularity of our shows in the countryside, we realized there is big market potential in rural Shanxi. The rural residents' demand for modern arts, like drama, is beyond our expectation," Zhang Kai said.

Li Shu contributed to this story.