

## First-stage remodelling of Kumsong Tractor Factory completed

KCNA

The first-stage goal of the Kumsong Tractor Factory remodelling project

was attained under the plan of the Party Central Committee to dynamically propel the rural revolution in the new era by turning the

factory into an all-purpose factory producing various kinds of efficient farm machines including high-horsepower tractors and

a treasured factory which directs the development of the country's agricultural machine industry.

The completion of

the production building covering tens of thousands of square meters and housing modern equipment and advanced production processes and the completion of construction and modernization of 10-odd objects including foundry, cast steel shop, sheet metal shop and forging shop have laid a reliable foundation for mass-producing high-performance tractors and farm machines and provided an important base for vigorously pushing ahead with the development of the country's vehicle industry.

An inaugural ceremony took place on the spot on November 2.

Present at the ceremony was Kim Tok Hun, member of the Presidium of the Political Bureau of the

Central Committee of the Workers' Party of Korea, vice-president of the State Affairs Commission of the DPRK and premier of the Cabinet.

Also present were Jon Hyon Chol, secretary of the Central Committee of the Workers' Party of Korea, Yang Sung Ho, vice-premier of the Cabinet, Ri Jae Nam, chief secretary of the Nampho City Committee of the WPK, Song Sung Chol, chairman of the Nampho City People's Committee, officials concerned, officials of Nampho City and the factory, working people, officials of construction and relevant units and builders.

Kim Tok Hun made an inaugural address.

After the ceremony, the participants looked round the factory.



A ceremony takes place on November 2 for the completion of the first-stage reconstruction and modernization project of the Kumsong Tractor Factory.



## WPK's blueprint for rural development in new era

By Jong Hwa Sun PT

Based on the inherent requirements of socialist rural development, specific conditions of the DPRK, desire of the people and scientific analysis of the potentiality and foundation of its own, the Fourth Plenary Meeting of the Eighth Central Committee of the Workers' Party of Korea set forth a new programme for rural construction to open up a new era of effecting drastic development of socialist countryside by pushing forward with the rural development.

It also put up the targets to be attained in the Korean-style rural development: enhancing the level of ideological awareness of agricultural workers, achieving a

rapid development of agricultural workforce and bringing about a fundamental change in the living environment of the countryside.

The agricultural workers are the motive force of the rural development, and it is the most crucial task in socialist rural construction and a key factor for its victory to make them main players and masters of the rural development.

To this end, educational efforts are dynamically conducted to make collectivism predominant in their ideological consciousness and life under the slogan of "One for all and all for one!" and to make them follow the examples of hero farmers and patriotic farmers of former generations. In that

course, the agricultural workers' enthusiasm for contributing to the prosperity of the socialist country with agricultural production is growing stronger.

It is a firm guarantee for rural development to upgrade the agricultural production environment.

At present, the agricultural sector pushes ahead with the works to adjust, reinforce and further complete irrigation systems, to produce and supply agricultural materials such as various kinds of modern and efficient agricultural machines, fertilizers and agrochemicals, to diffuse advanced agricultural technologies and to increase its own technical forces.

In September, 5 500 pieces of new agricultural machinery made in the

munitions industry sector were delivered to South Hwanghae Province, the biggest agricultural province of the country.

It is the most important task of socialist rural construction to bring about fundamental changes in the aspects and living environment of the countryside.

It is the rural construction policy of the WPK to turn all rural villages across the country into rich and cultured socialist ideal villages in the near future, and its main requirement in the construction is to modernize mountainous, plain and coastal areas in accordance with their own characteristics.

Therefore, efforts are directed towards mobilization of powerful

state support, activation of a powerful state guidance system and enhancement of the roles of cities and counties directly responsible for the local construction, while the construction of rural dwelling houses are underway with vigour in all parts of the country.

The rural dwelling house construction headquarters were organized and cement is preferentially supplied to those construction projects. Designs for rural dwellings are produced at a high level and measures are taken to send necessary workforce and materials to the construction sites.

Finishing materials production bases have been established in provinces, cities and counties for the rural dwelling construction projects and they are striving

to develop high-quality building materials that rely on local resources.

On October 10, the Ryonpho Greenhouse Farm was inaugurated in South Hamgyong Province. Over 850 hydroponic and soil greenhouses have been built in a modern, intensive and industrial way in a vast area of 280 hectares, unfolding a sea of greenhouses. The vast farm area presents a spectacular view with the remarkable harmony of over 1 000 dwelling houses, schools, a hall of culture and complex service facilities that retain local characteristics.

The significant changes for rural development being made in the country clearly show the vitality of the WPK's rural construction programme.

# Premier Kim inspects North, South Phyongan provinces



Premier Kim Tok Hun (third from right) visits the Oryong Farm in Mundok County, South Phyongan Province.

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Premier Kim Tok Hun, who is also member of the Presidium of the Political Bureau of the Central Committee of the Workers' Party of Korea and vice-president of the State Affairs Commission of the DPRK, made field survey of the agricultural and food administration sectors in South and North Phyongan provinces.

Inspecting several farms in Anju City and Sukchon and Mundok counties of South Phyongan Province and Pakchon County of North Phyongan Province, he gave a pep talk to the agricultural workers striving to successfully conclude this year's farming.

He learned in detail about this year's grain production and the immediate threshing, urging the officials to scrupulously direct all the farm work step by step with redoubled efforts and a high sense of responsibility at the important time of concluding a year's farming.

At the Jongju Chicken Institute under the Academy of Poultry, he underlined the need to keep in mind the Party's noble intention to supply the people with greater amount of tasty and nutritious meat and eggs, to set and carry out a realistic stepwise goal of breeding chicken in line with the trend of the development of poultry farming and to direct efforts to raising various breeds.

At some food supply stations and grain stores in South Phyongan Province, he called for steadily improving the supply of food and the sale of grain in keeping with the requirements of the state cereals policy.

Field consultative meetings discussed the issues of stepping up the threshing in a qualitative way in time by mobilizing manpower and means in a rational way and making preparations for next year's farming in a substantial way, intensifying the research into a better system of keeping pure breeds in poultry farming and making the most of the successes made in food administration and generalizing good experience and took relevant steps.

# National sci-tech exhibitions held

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## In sports science sector

The 24th National Exhibition of Achievements in Sports Science and Technology took place from October 3 to 31 under the sponsorship of the Ministry of Physical Culture and Sports.

The exhibition, held in a virtual exhibition mode through the technical trade service system *Jagangryok* website, was aimed to give wide publicity to, exchange and disseminate the successes made this year and promote the development of sports science and technology of the country.

The exhibition was divided into panels of program, measuring instruments,

athletic apparatuses, medicine and nutritive materials, science and technology books, papers and sci-tech videos.

On display there were more than 540 excellent sports sci-tech achievements made by 200-odd units, including the Academy of Sports Science, Korea University of Physical Education, Phongsong University of Physical Education, and Pyongyang University of Medical Sciences.

## In nanotechnology sector

The National Nano Sci-Tech Exhibition-2022 started on November 1 under the sponsorship of the Korean Nano Technology Association of the Central Committee of the General

Federation of Science and Technology of Korea.

Participating in the exhibition were officials, lecturers, researchers and graduate students from Kim Il Sung University, Kim Chaek University of Technology, the Nano Engineering Branch of the State Academy of Sciences and Pyongyang University of Medical Sciences.

The exhibition, divided into a virtual sci-tech exhibition and a sci-tech presentation through video conferencing, is a collection of over 20 exhibits and data on more than 40 achievements.

On the sidelines of the exhibition there was a lecture on the global trend of the nanotechnology development.

# Schoolchildren's palace renovated

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The Paecumui Chollilil (250-mile Journey for Learning) Schoolchildren's Palace has newly been renovated and inaugurated.

The inaugural ceremony was held on October 30, attended by Kim Jang Won, secretary of the Jagang Provincial Party Committee, relevant officials, builders and the teaching staffs of

the palace and its hobby group members.

A speech was made at the ceremony. After the ceremony, the participants looked round the palace.

A front view of the renovated Paecumui Chollilil Schoolchildren's Palace in Jagang Province.



# Machine-building giant employs new sand sintering prevention, iron melting techniques

By Kim Il Jin PT

The development of the sand sintering prevention technology provided a scientific and technical guarantee for producing quality parts of large machinery, said So Sung Gwan, deputy chief engineer of the Taean Heavy Machine Complex.

Since the complex and many other units were relying on a moulding method based on silica coating, they generally failed to get rid of sand sintering of large steel castings.

Consequently, much labour and time were wasted in desanding and processing and the casting success rate and productivity of large castings were not improved.

Technicians of the complex came up with the idea that a locally available material could be used as the main fireproof coating material in the casting process while developing the sand sintering prevention technology.

They scientifically confirmed the practicability

of the material through several rounds of experiments, decided on the rational mixing ratio of the fireproof coating material and selected the thickness of the coating layer and the number of coating according to the properties of the moulds and mould cores.

The profitable sand sintering prevention technology was registered as a national sci-tech achievement and has been introduced to dozens of factories and enterprises across the country and contributed to improving the quality and productivity of large castings.

The complex also developed and introduced a new electric furnace melting method into the casting production process.

The method proved effective in casting production as it can greatly increase the feeding proportion of pig iron produced at oxygen blasting furnaces, reduce the content of impurities in molten iron down to the standard and



The Taean Heavy Machine Complex steps up the production of custom-built equipment.

O JIN IL / RODONG SINMUN

shorten the melting time. The introduction of the new melting method reduced the melting time by 20-25 percent and ensured

proper desulphuration of molten iron with a strong deoxidizing effect and completely eliminated blowholes in castings, even

though five times more light scrap iron was fed than the standard feeding amount. It also helped reduce the consumption of

ferromanganese, ferrosilicon and aluminium by ten percent while feeding three times more pig iron with high sulfur content.

# Power output rises across country



The Pyongyang Thermal Power Station puts electricity production on normal track.

RI TONG MYONG / RODONG SINMUN

By Chae Hyang Ok PT

The electric power industry sector increases electricity production.

The Pyongyang Thermal Power Station increases the effectiveness of insulating bricks to minimize the heat loss of boilers.

The East Pyongyang Thermal Power Station boosts the thermal efficiency of boilers by introducing water treatment technology based on electric field so as to produce much more electricity than before.

The Chongchongang Thermal Power Station has channelled efforts into technical innovation to steadily increase power production, for example, replacing the blades of blower and exhaustor and remodelling the blades of feed pump.

"In recent years, different thermal power stations have introduced useful water treatment technologies into boilers to reduce the consumption of coal and remarkably boost the output of steam. And they have applied different advanced technologies to lower the norm of consumption per unit and laid scientific and technical foundations for boosting power production," said Paek Kwang Hak, section chief of the Electric Power Informatics Institute of the Ministry of Electric Power Industry.

The Jangjigang, Thaechon, Huichon and other power stations rationalize load dispatch while pushing technical innovation to increase the power output per generator.

The Mirim Barrage Power Station overfulfills its daily plan while always keeping watch on the water level as the amount of flowing water is large and frequently changes and taking timely and proper measures.

The power distribution stations in different parts of the country introduce an advanced measuring system to reduce the loss of power in transmission and contrive and introduce technical innovation plans to help raise power-factor.

are expanding power production successes by ensuring the high-efficiency operation of generating facilities.

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# Technical innovation helps plant boost iron production

By Yun Kyong Il PT

The Posan Iron Works has solved the problems arising in normalizing production by dint of several technical innovations, including the invention and introduction of distinct roll of belt conveyor and plastic sliding bearing, on the principle of ensuring self-sufficiency, profitability and quality improvement.

The secret of success was to encourage a mass technical innovation drive. "Let us all speculate and invent, this is what the factory suggests to all employees" says the manager of the factory.

While helping employees raise the level of their knowledge and their ability to conceive, the factory pays special attention to putting up pillars with those who will play a pacesetter role at workteams.

Last year, it began to find out and appoint competent and highly enterprising persons as leaders of the workteams responsible for important processes, and this has proved effective.

Several persons, who played an important role in refashioning a rail straightener and the main parts of the crane of the raw material workshop to

suit the actual conditions in the first half of this year, were recently appointed as workteam leaders. Among them is Ro Chun Il, a workteam leader of the pulverized coal workshop, who contributed to raising the relevant productivity nearly two times by inventing and introducing a simple-structure weight valve for the pulverized coal catcher.

"Sometime ago, when I was reading technical data, an idea hit me. I translated it into practice by pooling the wisdom of my workteam members. Their zeal for technical innovation is quite strong," he says.

Such a zeal can be felt at another production site. What is noteworthy in technical innovation at the workplace is that all workers there conceive any idea together and carry through the relevant project.

The refractory workshop produces quality fire bricks by using the waste products from coal mines. "The heart of the iron works is the rotary kiln and fire bricks can be regarded as the lifeline in ensuring the lifetime of the kiln," senior engineer Son Myong Chon says.

As it had been proved that waste products from coal mines are refractory

raw material strong in resistance to heat and erosiveness, technicians further intensified research to discover that the waste products can substitute for clay because of their strong viscosity. They established the technology of producing fire bricks by using both the waste products from coal mines and the broken bricks from periodical repair of the kiln.

As a result, they are now able to produce quality fire bricks without worry about the materials so as to help increase the lifetime of the kiln.

The most successful technical innovation in the factory in the first half of this year is the introduction of a reformat-based ignition for firing the rotary kiln.

Ignition is an important process for ensuring the normal operation of the kiln. It is said that ignition consumed much fuel previously.

It was done not once or twice a year, and there the iron works consumed a large quantity of the relevant fuel.

Then the factory introduced the ignition using reformat made from waste vinyl for firing the rotary kiln, thus remarkably reducing the cost of production.

# HOME NEWS

## 2021-2022 DPRK Women's Premier League finished

The 2021-2022 DPRK Women's Premier League was finished.

The Naegohyang team won the event, with the April 25 and Amnonggang coming second and third respectively.

An award ceremony of the 2021-2022 DPRK Women's Premier League took place at Kim Il Sung Stadium on October 30.

Trophies and medals were awarded to the winning teams and players who registered good results and displayed high skills, sportsmanship and fair play.

## National Exhibition of IT Achievements-2022 closes

The National Exhibition of IT Achievements-2022 closed on October 31.

IT model units, the best IT enterprises and the best IT products were selected there.

The 2022 top ten IT model unit certificates and signboards were awarded to the Jungphyong Greenhouse Farm, the Tachongdan County Potato Processing Factory, the Sinuiju Cosmetics Factory and others assessed to be most advanced in putting production and management on an IT basis.

The Samhung Economic IT Centre and the Achim

Computer Joint Venture Company were among those appreciated as the top ten IT enterprises in 2022.

The certificates, cups and medals were awarded to the top ten IT products in 2022.

## National sports contest of students of schools for orphans-2022 held

The National Sports Contest of Students of Schools for Orphans-2022 took place in Phongsong City of South Phyongan Province from October 28 to 31.

Watching the contest were Kim Sung Du, chairman of the Education Commission, Pak Chol Ho, vice-chairman of the South Phyongan

Provincial Committee, People's officials concerned and students of schools for orphans.

More than 300 children from schools for orphans across the country competed in basketball, volleyball, high jump, long jump and other sporting events.

In the total standings, Kangwon Province came first, followed by South Phyongan Province and Pyongyang Municipality.

## Fragrance of roast chestnut, sweet potato fills the capital city in autumn

The appetizing smell of roast chestnut and sweet potato served at the different parts of Pyongyang and the

laughter of citizens add to the beauty of its autumn scenery.

The roast chestnut and sweet potato stalls along streets are always crowded with people.

Many units of the Guidance Bureau of Public Catering Service pay due attention to the storage of chestnut and sweet potato to serve the citizens with fresh and tasty ones.

The fragrance of roast chestnut and sweet potato pervading the city adds to its autumnal scene every year.

## Women's clothes exhibition-2022 goes on

The Women's Clothes Exhibition-2022 is drawing many visitors every day.

The Three-Revolution Exhibition House, the venue of the exhibition, is crowded with people coming to feel Korean-style flavour, aroma and fashion.

Visitors said in unison that public interest in and aesthetic demand for the women's dress culture are growing stronger with the exhibition as an occasion.

Witnessed at the exhibition are brisk technical exchanges among garment processing units, consultation between customers and technicians and officials of garment production units and order and sale of products.

Foreign diplomats and other guests in Pyongyang also visited the exhibition.



JO MYONG IL / RODONG SINMUN

The branch farm of the Hungsang Milch Cow Farm in South Hamgyong Province solves the problem of cattle feed by introducing hydroponic cultivation of barley sprout.

## Branch farm increases milk production

By Han Jong Ho PT

The branch farm of the Hungsang Milch Cow Farm in South Hamgyong Province is increasing the amount of milk production.

Built in June this year, the branch farm has ensured hydroponic cultivation of barley sprouts to feed dairy cows.

According to experts on livestock farming, barley sprout has richer coarse protein content than barley and maize. Therefore,

barley sprout has become an ideal feed for grass-eating domestic animals like cow and goat and for this reason there is a growing trend towards mass-producing barley sprouts by means of hydroponic cultivation in the world.

To follow this trend, the province added a 300-square-metre barley sprout cultivation ground to the branch farm when it was built.

Technicians say that barley sprouts that are grown by hydroponic cultivation are

very sensitive to temperature, humidity, brightness, ventilation and others.

"We were complete beginner to this work. So we made some mistakes at the beginning. For example, barley seeds did not sprout well in the cultivating bed. We solved sci-tech problems arising in the cultivation of barley sprouts one by one by running the sci-tech diffusion room effectively and improving the technical knowledge and skills of employees," said an official of the branch farm.

Now three employees harvest about 20cm tall fresh green barley sprouts every five or seven days in the cultivation ground. It is the same amount of feed to be produced in dozens of hectares of land.

The cultivation ground is equipped with a heating system as well as the light control system favourable for the growth of barley sprouts, thereby providing conditions for producing sprouts uninterruptedly even in midwinter to properly feed milch cows highly nutritious

barley sprouts in all four seasons.

The employees say that since the milch cows were fed on barley sprouts, their fattening and breeding rates have shot up and milk production has increased.

The produced milk is processed into tasty and fragrant dairy products in the milk processing room equipped with spray drying milk powder production facilities.

The hydroponic cultivation of barley sprout attracts the growing interest of livestock

farming units as it enables them to secure as much feed as it can be produced in hundreds of times larger area with a small manpower and area, meets the actual conditions of the country whose cultivated land is limited and is a good way of solving the problem of domestic animal feed.

On the basis of this success the farm steps up the work to increase the output of dairy products by building more barley sprout cultivation grounds and securing more milch cows of good breeds.

materials including brass and cobalt, and solved sci-tech problems arising in translating it into practice. After succeeding in making a highly-effective metal binder with domestic raw materials, they used it to make a diamond grinding and cutting blade to process stone materials and tiles.

According to Choe Hyon Chol, head of the condensed state physics institute, the quality of the new diamond grinding blade is guaranteed since it is hard and highly resistant to abrasion with the superior property of holding diamond particles.

And the blade is recognized as a high-tech product of great economic value since it costs low and is superior to imported ones in terms of performance and lifetime index.

This research success is paying off greatly at the Chollima Tile Factory, the Pyongyang Building Stone Factory and other units.

"Using the diamond

grinding blade developed by lecturers and researchers at Kim Il Sung University, we have found that it is more resistant to abrasion than imported ones. And it never

breaks during work and its lifespan is 1.2 times longer than the imported," said Pak Kyong Chol, workshop manager of the Chollima Tile Factory.

Researchers discuss ways to prolong the lifetime of diamond grinding blades at the Physics Faculty of Kim Il Sung University.

performance and started the relevant research. The core technology in the production of diamond grinding blade is the selection of metal binder as metal binder plays the role of helping raise the intensity and resistance to abrasion of grinding blades.

In the course of analyzing the global application of metal binders, the researchers came to pay attention to the fact that expensive metals are used as main components of them. They conducted research to substitute locally-available raw materials for those of such binders.

In the course of this, they came to the conclusion that they can successfully produce a quality binder with locally-abundant iron and nickel as basic materials instead of expensive

Section chief Cha Sang Jun and other researchers of the research group set a goal of reducing dependence on imported grinding tools and drastically raising their

fatigue-relieving garment that they can successfully produce a quality binder with locally-abundant iron and nickel as basic materials instead of expensive

and does not depend on medicines. Especially, far infrared therapy raises the human body's ability to control physiological activity and its activity and is very effective in treating diseases of the circulatory system, especially removing waste matter.

In the course of trying to find the way to constantly ensure a far infrared environment which is good for health and recovery from fatigue, the research group, including lecturer Kim Si Ung, conceived an idea of making a functional garment that can perform this function and conducted relevant research.

After selecting different materials which have high far infrared radiation coefficients and show the function of sending out anions, they applied nanotechnology to all of them to stick to cloth and processed the cloth into the nano functional one.

To make the cloth show well the function of relieving fatigue, they designed relevant garments to cling to the body.

## New diamond grinding blade proves cost-effective

It is hard and highly resistant to abrasion with superior property of holding diamond particles.

By Pang Un Ju PT

Diamond grinding blade, which was developed recently by a research group of the Physics Faculty of Kim Il Sung University, are favorably commented upon by tool producers and their users.

In general, diamond tools or superhard alloy tools are used in processing hard materials such as stone or metallic materials.

Among such tools there are many grinding tools including diamond grindstone and their efficiency depends on their blades.

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PAK KWANG HUN / THE PYONGYANG TIMES

Researchers discuss ways to prolong the lifetime of diamond grinding blades at the Physics Faculty of Kim Il Sung University.

## Production of spore powder for acidophilus milk industrialized



KIM IL JIN / THE PYONGYANG TIMES

Researchers perform experiments on lactic acid powder for the production of yogurt at the fermentation research institute of the academy of foodstuff industry.

By Ko Kwang Yon PT

The fermentation research institute of the academy of foodstuff industry has succeeded in putting the production of lactic acid spore powder for acidophilus milk on an industrial basis.

"If applied microorganisms are made in a powder form like lactic acid spore powder, it can be used directly for the production of milk products and its storage stability can also be enhanced," said Ryu Kum Byol, section chief of the institute.

Researchers of the institute ensured the microbe number per gram, a basic qualitative index of the spore, and introduced a method of storing cultures by freeze-drying to improve its storage stability. They used natural raw

materials to make nutrient sources needed for high-concentration cultivation of bacteria and solved technical problems arising in fixing the mixture ratio of various additives scientifically.

They then established a spore production process and set up an analytical laboratory, a culture room and a freeze-drying room, thus succeeded in test production.

According to an expert, the lactic acid spore powder developed by applying the spore activation, high-concentration liquid culture and vacuum freeze-drying technologies is high in activity and is good for storage.

The researchers added the spore powder to goat and cow milk to make highly nutritious acidophilus milk that conforms completely to

the national standard in terms of qualitative indexes such as taste, fragrance, acidity, viscosity and digestibility. The acidophilus milk is quite good for children and it has a longer shelf life of about a week than raw goat and cow milk that can be kept for merely several hours.

The successful application of industrial method to the spore powder production has made it possible to sufficiently produce and supply the spore for the mass-production of quality acidophilus milk.

The institute sends the spore powder to such producers across the country while striving to solve sci-tech problems arising in further raising the quality of milk products and boosting the activity of the powder.

## Suitable dairy production processes established

By Kil Chung Il PT

Jagang Province has established production processes of dairy products to meet the actual conditions.

The Kanggye Goat Farm and Huichon City Goat Farm automatically control the temperature and time of sterilization, fermentation and storage processes by establishing yogurt production processes

based on computers on a chip. The Jangjasan General Foodstuff Factory established a yogurt boiling method based on active electric boiler to save large amounts of electricity and shorten the time of milk boiling by half, while the Jonchon County Foodstuff Factory prevents the degeneration of products and increases productivity by conducting

sterilization and cooling simultaneously. The Kanggye City Children's Foodstuff Factory newly built a fermentation room with the capacity of one ton, which can regularly ensure the temperature of 40-42°C, and installed an automatic temperature controller so that lactic acid can be fermented in optimal temperature.

The Junggang County Foodstuff Factory ensures the accuracy of feeding materials and analyzes the acidity of processed products rapidly and accurately by putting the measuring process of materials on a scientific and automatic footing.

The Songwon County Foodstuff Factory shortens the cooling time by two hours while using no electricity with the help of a natural cooling device.

Production units are furnished with yogurt production equipment and spray milk powder production facilities which were practically made to meet the amount needed by relevant areas and units in the province.

Meanwhile, the province is building a large-capacity goat farm and milk powder production base on Sadok tableland with a vast stretch of natural grassland.

## Fatigue-relieving garment invented

The new fabric has a far infrared radiation coefficient of 0.96 and sends out 300 anions per cubic centimetre.



The fatigue-relieving T-shirt invented at Pyongyang Han Tok Su University of Light Industry.

By Jong Chol PT

Recently, a research group of Pyongyang Han Tok Su University of Light Industry invented a fatigue-relieving garment using far infrared nano compound materials.

Infrared rays extend capillaries and accelerate

blood flow and metabolism with special thermic effect.

They also promote anagenesis and adjust peripheral nerve, thus alleviating tension and stopping pain.

Infrared therapy is of great clinical significance as it is simple in operation

and does not depend on medicines. Especially, far infrared therapy raises the human body's ability to control physiological activity and its activity and is very effective in treating diseases of the circulatory system, especially removing waste matter.

In the course of trying to find the way to constantly ensure a far infrared environment which is good for health and recovery from fatigue, the research group, including lecturer Kim Si Ung, conceived an idea of making a functional garment that can perform this function and conducted relevant research.

After selecting different materials which have high far infrared radiation coefficients and show the function of sending out anions, they applied nanotechnology to all of them to stick to cloth and processed the cloth into the nano functional one.

To make the cloth show well the function of relieving fatigue, they designed relevant garments to cling to the body.

They established the technology of producing the garments with the amazing function of relieving fatigue.

The garments are to be worn during a rest after exercise or in bed.

Wearing such clothes not only helps people manage their health but also is effective in easing quickly fatigue of athletes who undergo great physical exhaustion.

"Case studies showed that among the players who wore such garments, whose far infrared radiation coefficient is 0.96 and which sends out 300 anions per cubic centimetre, after exercise, the stabilization speed of pulse and that of recovery from fatigue grew two times and over 10 times higher than before respectively," said Choe Yong Il, researcher of the April 25 Sports Club.

Players who have worn such a garment say, "If I wear this garment in bed, I sleep well."

The method of producing fatigue-relieving cloth was registered as a national invention.

The U.A. Pharmaceutical Factory has recently developed the starfish liver protection capsule which is remarkably effective in improving liver function.

According to information, starfish contains life-active substances which are equivalent to trepang.

But it has not widely been used as edible or medicine as it contains a kind of toxic substance.

Ho Kwang Wol and other technicians of the factory clearly removed the toxic substance in starfish by applying the traditional manufacturing method which had been used by Korean ancestors and advanced processing technology and established a processing technology which can extract and separate useful ingredients with high collection rate. And they made the starfish liver protection capsule which is good for the recovery of liver function.

The treatment efficacy of starfish liver protection capsule registered as a patented technical product has fully been verified by years-long clinical introduction.

The capsule draws public interest as it is helpful for the prevention and treatment of various liver diseases.

## Liver-protecting medicine made from starfish

By Ri Sang Il PT

The U.A. Pharmaceutical Factory has recently developed the starfish liver protection capsule which is remarkably effective in improving liver function.

According to information, starfish contains life-active substances which are equivalent to trepang.

But it has not widely been used as edible or medicine as it contains a kind of toxic substance.

Ho Kwang Wol and other technicians of the factory clearly removed the toxic substance in starfish by applying the traditional manufacturing method which had been used by Korean ancestors and advanced processing technology and established a processing technology which can extract and separate useful ingredients with high collection rate. And they made the starfish liver protection capsule which is good for the recovery of liver function.

The treatment efficacy of starfish liver protection capsule registered as a patented technical product has fully been verified by years-long clinical introduction.

The capsule draws public interest as it is helpful for the prevention and treatment of various liver diseases.

ingredients including nucleic acid, taurine and choline. According to Ho Kwang Wol, such ingredients play the role of regenerating and reviving damaged hepatic cells while making close cooperative actions with each other inside the body, detoxifying liver poisoning by alcohol, medicine and heavy metal and eliminating lipid from fatty liver tissue.

Case studies show that the introduction of the capsule into patients who suffer from poisonous liver functional disorder, acute and chronic hepatitis, fatty liver and hepatic cirrhosis helped relieve such subjective symptoms as feebleness, fatigue, anorexia, digestive disorder, flatulence, pain in liver and others in one or three months.

They also say that all liver function indices have returned to normalcy three months later after getting rid of dark skin, red spots and itch of skin.

The treatment efficacy of starfish liver protection capsule registered as a patented technical product has fully been verified by years-long clinical introduction.

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# Fish farm built on rooftop



RYU KWANG HYOK / THE PYONGYANG TIMES

A pond teeming with fish on the roof of the Mirae-dong Weekly Nursery on Mirae Scientists Street.

By Kim Hak Chol PT

The Mirae-dong Weekly Nursery on Mirae Scientists Street in Phyongchon District, Pyongyang, built a fish farm on its rooftop.

A little over 1 000 square metres in area, the roof as a whole is decorated with green colour, thanks to the perimeter and field-like greening of it. Notable in particular are artificial ponds where many fishes are cultivated.

The artificial ponds are teeming with catfish,

Ryongjong fish, carp and other fishes.

"In the course of greening the roof of the building three years ago, we came to think how to make effective use of radiation heat from the roof. So, we discussed it repeatedly and finally built the fish farm," says Kim Hye Suk, head of the nursery.

According to her, the fish farm breeds fish from May to September, early October at maximum, and they ensure enough temperature for the growth of fish without having to supply hot water.

The waste water from the wading pool of the nursery is filtered and raised with a pump to be used for the operation of the fish farm.

And the water from the fish farm is sent to the greenhouse and vegetable plots on the rooftop to be used as quality fertilizer.

The nursery produces fries by undertaking artificial spawning and incubation by itself to increase the rate of their survival and their weight.

And it uses *Hermetia illucens* as protein feed by raising the insects a lot using

the excrement of domestic animals from its livestock farming base and different kinds of by-products from the operation of the nursery as the source of their feed.

Besides, it also decreases the proportion of grain feed by using natural feed, assorted feed and feed additives.

The nursery built an underground fish farm where they can raise cold- and hot-water fishes so as to do fish farming uninterruptedly even in winter.

As a result, it breeds fish all the year round.

# Fish bred under water park

By Kim Kum Myong PT

The Munsu Water Park Management Station built an underground fish farm to suit its characteristics and is benefiting from it.

The underground fish farm with six tanks for fry and ten for full-grown fish breeds Ryongjong fish, carp, catfish, tilapia and sturgeon.

"Until some years ago, it was a place storing hot water needed for the showers and pools of the water park. After technical innovations were made by the management station, water tanks there were no longer needed," said Kim Kwan Il, deputy manager of the water park.

If fish was bred in the water tanks under the water park, there would be no need to build a fish farm separately and it would ensure effective supply of water to be used for fish farming.

The management station worked out a plan to breed fish in the water tanks remaining out of use and obtained equipment necessary for fish farming in collaboration with a relevant unit.

It installed an oxygen infuser at every water tank, made it possible to supply water for

fish breeding by means of water filtering apparatuses and to purify the air in the underground fish farm with the help of ventilators. It bred *Hermetia illucens* by itself to use it as protein feed for fish and used assorted feed made with grain feed from various supply service bases of the water park.

The deputy manager of the water park said that the underground fish farm is really profitable, adding that the supply of geotherm-based hot water to the fish farm without water shortage gives help to the growth of fish.

At present, different restaurants in the water park offer service with Ryongjong fish, catfish and sturgeons bred at the underground fish farm and the dishes are popular with diners.

"Though it is not so long since the beginning of fish farming, employees of the water park have begun to benefit from it. In the near future, the management station will direct more efforts to the production of fries and the raising of *Hermetia illucens* conducted on a small scale to double the output of fish," said Ri Yong Bok, chief of the fish farm.

# Restaurant makes effective use of empty space

## The Sosong Loach Soup House serves over 30 kinds of dishes with loach which they farm in the fish ponds.

By Ri Jang Chol PT

The Sosong Loach Soup House of the Sosong District Restaurant Group in Pyongyang serves customers using distinctively-designed fish ponds.

"A few years ago, most of our employees thought it was impossible to do fish farming in a small area. But after seeing other units benefiting from fish farming everywhere, we built a fish farm which is highly profitable as compared to the area in cooperation with experts of different units," said chief of the cattery Kang Un Ha.

They mainly farm loach and raise carp, red carp and goldfish as well.

It is noteworthy that they use the surrounding unoccupied ground

effectively as fish ponds.

The spaces on both sides of the building are roofed with plastic sheets and there are five fish ponds covered with double sheets inside.

They say this enables them to ensure necessary water temperature for fish farming all the year round.

Around the ponds there are over 200 flower pots for purifying air, which supply enough oxygen for fish farming.

They pump up underground water from the depth of 30 metres to constantly fill the water tank in the outside.

They increase the fattening rate of fish with assorted feeds made of different kinds of by-products from catering service and rice bran, shell, chrysalis and particularly use *Azolla filiculoides* to feed

loach. The survival rate of loach grown in the spawning pond is over 80 percent.

The house normally keeps dozens of kilograms of loach every day.

It serves over 30 kinds of dishes with the fish.

Especially popular ones are loach soup, fried loach with broiled mushroom, broiled loach and *Lentinus edodes* and broiled loach and green pepper. Women and children particularly like fried loach covered with crumbs which is prepared

by frying seasoned loach covered with flour, beaten egg and crumbs. According to employee Kang Chun Hyang, the house monthly supplies its employees with the loach produced by itself and sends it to several catering service

facilities in Sosong District. The loach soup made at the Sosong Loach Soup House was registered as national intangible cultural heritage element of the DPRK No. 79 and received many certificates at different loach cooking contests.

The Education Commission grasps and guides every detail, from the selection of units, planning and execution, to ensure universities can promote technical cooperation with businesses effectively.

"Ever since the Seventh Session of the 14th Supreme People's Assembly, determined efforts have been made by the education sector and relevant units to turn the overall educational work into a course of making students acquire practical knowledge," said Hwang Chol Myong, department director of the commission.

Kim Il Sung University solves scientific and technical problems arising in the normalization of production, improvement of quality of products, domestic production of raw and other materials and development of new products by encouraging close cooperation with field technicians and workers.

Research findings made by the university are widely introduced into not only



AN YONG CHOL / THE PYONGYANG TIMES

The Sosong Loach Soup House of the Sosong District Restaurant Group keeps a daily stock of dozens of kilograms of loach by making the most of its own fish farm.

# Future of country depends on education

By Pak Song Min PT

The DPRK government puts education for the training of talents first as an important affair deciding the future of the country and nation and public attention is being directed to it.

At the Fifth Plenary Meeting of the Eighth Central Committee of the Workers' Party of Korea held in June, General

Secretary Kim Jong Un said that the development of education to which our future has been entrusted is inconceivable apart from all-people efforts, adding we should ensure that all people become devoted parents of students and enthusiastic supporters to concentrate their energies on rapidly improving the country's education to the world level and work together in close

cooperation. The prospects of the revolution and future development of the state hinge on education and the viewpoint to and stand on the support for education are just the yardstick by which to evaluate the attitude to the revolution and patriotism.

Kim Il Sung University, which plays an important role in the revolution and construction, was also

built thanks to the patriotic devotion and labour feats of large numbers of supporters including Korean peasants, workers of different factories across the country, Pyongyang citizens and people in South Phyongan Province.

It has become a dominant social trait that everyone regards education as part of their work and throw themselves into resolving problems arising in it.

With the national investment in and social support for education growing, projects have been undertaken to narrow the gap in the education level between the central and local areas and between cities and the countryside and to improve the quality of education.

Supporter organizations offer positive material and moral assistance to educational institutions. This

year alone, they provided many schools with modern educational facilities and school fixtures.

And lots of units voluntarily take charge of more educational institutions and give sincere assistance to them.

The unstinting support for education from the people across the country serves as a powerful engine that accelerates the advance of the country.



Schools are reconstructed and provided with many educational facilities and school fixtures.

# Education keeps in close contact with production

By To Kyong Chol PT

With the building of research-oriented university going full steam ahead across the country, research groups comprising lecturers, researchers, postgraduates and students make positive contributions to the integration of scientific research with production at different universities and colleges.

The Education Commission grasps and guides every detail, from the selection of units, planning and execution, to ensure universities can promote technical cooperation with businesses effectively.

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Kim Il Sung University solves scientific and technical problems arising in the normalization of production, improvement of quality of products, domestic production of raw and other materials and development of new products by encouraging close cooperation with field technicians and workers.

Research findings made by the university are widely introduced into not only

industry but also agriculture. It is very popular at many farms across the country as it proves highly effective while saving much labour.

Kim Chaek University of Technology also inducts its excellent scientific research forces into research projects to solve scientific, theoretical and practical problems in the production and business activities of factories and enterprises with which it has maintained relations of technical cooperation.

In addition, it holds field technical classes for officials, technicians and skilled workers of those factories regularly every week and pays heed to building up the database of their sci-tech diffusion rooms to help them strengthen their technical forces.

"It has become a matter of course to visit the university first and discuss the solutions with its research group when we face any problems in the operation of production processes and development of new technologies," said Kim Sung Hyok, senior engineer of the Pyongyang General Electric Cable Factory 326.

Phyongsong University of Coal Mining Industry and many other universities and colleges also strive to train more talents with practical ability by bringing about the integration of education with scientific research and production while fostering the expansion of production and technical development of businesses.

# Supporter organizations give powerful assistance to education

By Ryom Un Gyong PT

October is the school-supporting month in the DPRK.

With this month as an occasion, supporter organizations throughout the country are conducting vigorous activities to help educational institutions.

According to Hong Tac Yong, deputy department director of the Education Commission, ministries, national agencies and industrial establishments sent educational facilities, educational equipment and materials to universities and colleges.

The Agricultural Commission and ministries of Information Industry, and Railways sent over a dozen kinds of educational facilities and materials to Kim Chaek University of Technology, Sariwon Kye Ung Sang University of Agriculture, Pyongyang University of Transport and so on.

The Kungang Trading Guidance Bureau, which puts forward educational support as an important affair, has prepared materials needed for improving educational environment and conditions and sent them to Chongjin University of Mining and Metallurgical Engineering, while the Rason Exchange Company, South Hwanghae Provincial Posts and Telecommunications Management Bureau and other supporter

organizations in local areas provided universities and colleges in their provinces with necessary educational equipment.

Every province also encourages support to spruce up teachers training colleges, pedigree establishments for the training of teachers, into model ones where education is put on a scientific, IT and modern basis. Officials of the Chongjin Fishery Station for the Supply of Feed for the Central Zoo, which takes the lead in the support for education, provided large quantities of building materials and fund to Kim Jong Suk Teachers Training College on several occasions so that its reconstruction and modernization project could progress at a fast



AN YONG CHOL / THE PYONGYANG TIMES

Officials of the Hwanghae Iron and Steel Complex visit Tongsong Technical Senior Middle School in Songnim City, North Hwanghae Province with many practice facilities.

pace. The Chonnaeri Cement Factory preferentially provides excavator, crane and other heavy machines as well as manpower and building materials for the construction of Wonsan Ri Su Dok Teachers Training College, and the Ryanggang Provincial Public Prosecutors Office sent dozens of educational facilities and a large number of notebooks to Hyesan Teachers Training College.

Meanwhile, schools in the general education sector have made successes in the work for improving educational conditions and environment on the occasion of the month.

"The Hwanghae Iron and Steel Complex built a basic metal practice room with

many necessary facilities for Tongsong Technical Senior Middle School in Songnim City so that students can prepare themselves into practical talents through extracurricular practice and puts in great efforts to consolidate the material and technical foundations of technical senior middle schools in the city," said Kim Won Hui, deputy director of the general education department.

Thanks to the sincere assistance of supporter organizations, many schools have newly been provided with educational facilities and school fixtures and the work to put education on a scientific, IT and modern footing has been pushed ahead to increase the number of multifunctional classrooms.



# Leading field of ophthalmology



JON KWANG HUN / THE PYONGYANG TIMES

Patients get treatment at the Ryugyong General Ophthalmic Hospital.

By **Kwon Hyo Song** PT

A serious case was admitted to the retina department of the Ryugyong General Ophthalmic Hospital in April last year. The patient had lost the sight of both eyes due to long-lasting serious diabetic retinopathy. The hospital had never treated such a case until then.

The medical workers of

the hospital, however, held rounds of consultations and intensified relevant research. At last they drew up a rational operation plan. Almost all ophthalmological operations were comprehensively done by many times. At last, they succeeded in restoring sight to the patient.

"I had regarded the loss of my eyesight as a fate, but I regained my eyesight at the Ryugyong General

Ophthalmic Hospital," said the patient living in neighbourhood unit No. 38 of Kangan-dong No. 1 in Songyo District, Pyongyang. Medical workers of the hospital say that when patients say they've come to the hospital after being told that they could have their eye diseases cured there, they take encouragement from their words and feel an unusual zeal for research.

The vitreoretinal operation which is regarded as a technique with a high degree of difficulties in the field of ophthalmology requires highly-precise optical devices and different advanced operation apparatus, operation materials and high skills.

The retina department has so far restored eyesight of over 1 800 patients by pioneering the operation

courageously.

Many other treatment departments, including the glaucoma, cataract and traumatic plastic surgery departments, restore sight to patients by dint of their high skills and with utmost sincerity.

Doctors and nurses of the hospital used a method of excimer operation to restore to health a patient in his sixties who stayed at

the hospital due to corneal ruptures and restored the eyes of a patient who got burnt in them to their original state by means of an artificial corneal grafting operation without performing ophthalmectomy.

Thanks to such achievements, the hospital is regarded as a prestigious medical treatment institution in the field of ophthalmology.

# Ryugyong Dental Hospital equipped with modern facilities

By **Kim Kang Ju** PT

The Ryugyong Dental Hospital is equipped with well over a hundred treatment facilities in over 20 kinds including universal dentist's chair, dental grinder and prosthetic microscope.

What draws attention among its equipment is the multi-purpose dental roentgen camera.

With the help of this facility, dentists can correctly see the tissue around teeth, the shape of roots of teeth and inflammation state which are invisible with the naked eye. According to radiography, they will make a treatment plan and give

relevant treatment.

It can x-ray not only teeth but also all bone tissues of face and hands.

Dentist Sin Yong Nam said that the hospital has made innovative progress in treating patients with the help of this equipment.

The universal dentist's chair is the major equipment of the hospital.

All departments of the hospital are furnished with such equipment which can ensure all sorts of dental treatment.

Odontorthisis takes a large proportion in the field of beauty art.

The department corrects not only unbalanced teeth but also jaw with the universal dentist's chair

and other kinds of modern facilities.

"With the people's demand for beauty increasing day after day, not only women but also men often visit the hospital to receive correction treatment," said Kim Yu Sim, doctor of the department.

The multi-functional treatment facilities of the pediatric dentistry department help children get treatment without feeling any pain.

During his another visit to the Ryugyong Dental Hospital in March 2014, the respected Comrade Kim Jong Un acquainted himself with its work as he made the rounds of it. People who met him unexpectedly there thanked him for having built such a wonderful hospital.

After looking round the hospital, he stressed the need for doctors and nurses of the hospital to spare no pains for the promotion of the people's health.

Many people frequent the hospital as it is provided with civilized environment and modern treatment facilities including treatment rooms and sickrooms and its medical workers make selfless, devoted efforts for patients.

# Key player in paediatrics



JO RYONG / THE PYONGYANG TIMES

A child gets X-rayed at the Okryu Children's Hospital.

By **Ri Sung Ik** PT

It has been nearly ten years since the inauguration of Okryu Children's Hospital in October 2013. Over the period, the hospital has played a pivotal role in the medical service for children.

According to statistics, the hospital has so far provided medical service for a total of over 679 000 children and students as it is responsible for comprehensive medical service activities for children and students from new-born babies to 16-year-olds.

"The names of diseases of patients were different, but they all left the hospital in good health," the head of the preventive and curative department said. Innumerable are the

hospital's achievements made in medical treatment in the past.

Among the achievements, there are the success in restoring many patients of congenital heart diseases to health by establishing a new method of heart operation recognized as an excellent technique with a high degree of difficulties by the world health circles and that in using a method of granulation curettage to restore to health a patient with chronic otitis media which could not be cured even with ten years of painstaking efforts.

The hospital improved the quality of medical service by making and introducing many medical appliances and supplies, including a peripheral nerve stimulator and atraumatic needle, for

the treatment and prevention of children's diseases and the improvement of their health.

The hospital was chosen as one of the top ten IT model units of the country in 2018 by developing an information system which can ensure exchanges of clinical information

data with any medical treatment units and the February 16 Science and Technology Prize and Sci-tech Innovation Prize were awarded to the method of heart operation based on right chest wall incision approach and the hospital information system based on standardized health information invented by the hospital.

Besides, the sci-tech successes achieved by the hospital were highly rated over ten times at national exhibitions.

The hospital that plays a pivotal role in the medical treatment of children has conducted over 14 600 rounds of online consultations with and lectures for medical workers across the country through a telemedicine system.

# Branded mineral water, mineral water bath

By **Sin Pyol** PT

Kangso Mineral Water is common in soft-drink stands in the DPRK.

It is favoured by locals as it has strong pharmacological action and is superior in taste and quality.

The people, who acquired a taste for the mineral water, say in unison that they feel refreshed to see only the cups of the mineral water and "thanks to" the Kangso Mineral Water which is sharp in taste and makes them feel relieved of the pain in the stomach, they could cure chronic digestive disorders.

As it contains calcium, sodium, magnesium, iron, silicic acid, chlorine, sulphuric acid ions, carbonic acid gas and other useful substances for human health, the mineral water is good for patients suffering from chronic gastritis, gastric and duodenal ulcers, chronic enteritis,

colitis and hepatitis, arteriosclerosis, obesity, diabetes, nephrolithiasis, skin diseases and others.

Particularly, it is very effective for the treatment of chronic heart failure and autonomic neuropathy.

Kangso Mineral Water was listed as a national natural monument in 1982 and obtained the certificates of registration of the appellation of origin of the DPRK and the World Intellectual Property Organization, to be recognized as a genuine and clean natural drink.

Now the local people, who have long been satisfied with only drinking, enjoy mineral water bath, soaking their bodies in the Kangso Mineral Water.

Many people come to the mineral water bathhouse contiguous with the Kangso Mineral Water Factory and experience its significant therapeutic effect. And more people visit it again because of the unforgettable experience of

the jaunty and refreshing mineral water bath.

In the bathhouse a doctor informs visitors of the method of having a mineral water bath and observes the treatment period according to the symptoms of their diseases.

Their blood pressure and pulse are measured before having mineral water treatment and the temperatures and treatment time vary according to the measurements.

After having a bath, visitors receive full mineral water treatment according to the set temperatures and time at the hot water bathroom.

Those who received foot treatment at the treatment hall soak their feet only in the mineral water tank according to the purposes of treatment to have a foot bath treatment.

After having mineral water treatment, their blood pressure and pulse are measured again to know treatment effect

immediately. And at the recommendation of the doctor they can set the treatment period and make their next treatment plan.

There are bedrooms and a dining room in the mineral water bathhouse for visitors who will have mineral water treatment for a few days.

Only a mineral water bath can reduce blood pressure, said Kim Yong Sun, who is charge of the bathhouse. "Many visitors who suffered from high blood pressure and internal diseases have been healed by mineral water bath."

Drinking mineral water while having medical treatment proves more effective in medical treatment, she added.

"Kangso Mineral Water is the best of all medicines for patients with digestive troubles," said Ri Jong Sim living in Tongdaewon District, Pyongyang, who was cured of her chronic gastritis with mineral water treatment here.



RYU KWANG HYOK / THE PYONGYANG TIMES

The working people are under treatment while drinking mineral water and having a bath with mineral water at the bathhouse.



JO RYONG / THE PYONGYANG TIMES

Dentists are engrossed in the treatment of patients at the Ryugyong Dental Hospital.

# Historic turning point in development of DPRK-Cuba friendship

PROVIDED TO THE PYONGYANG TIMES

Four years have passed since the respected Comrade Kim Jong Un, president of the State Affairs of the Democratic People's Republic of Korea, had a historic meeting and talks with Comrade Miguel Mario Díaz-Canel Bermúdez, president of the Republic of Cuba, who visited the DPRK.

At the kind invitation of the respected Comrade Kim Jong Un, Comrade Miguel Mario Díaz-Canel Bermúdez, president of the Council of State and president of the Council of Ministers of the Republic of Cuba (at that time), visited the country from November 4 to 6 2018, leading the delegation of the Republic of Cuba.

Comrade Kim Jong Un personally went to the airport and warmly welcomed Comrade Miguel Mario Díaz-Canel Bermúdez and his entourage—the goodwill envoys of the Cuban people who came to Pyongyang over the continents and oceans,

and gave them the red carpet treatment during their visit.

At the meeting and talks overflowing with friendly feelings, leaders of the two countries shared with each other the successes and experiences gained in the works of their Parties and states which strive to build socialism suited to each of their countries, and extended full support and solidarity to each other's work. They also clarified steadfast stand and will of the Parties and governments of the two countries to further expand and develop the strategic and comradely relations of friendship and cooperation in line with the demands of the new era.

These meaningful meeting and talks between Comrade Kim Jong Un and Comrade Miguel Mario Díaz-Canel Bermúdez have become a turning point of great significance in continuing to carry forward and develop the fraternal and traditional relations of friendship and cooperation between the DPRK and Cuba generation after generation and beyond century, and in firmly

consolidating the militant solidarity between the two Parties and two peoples in their struggle for the common cause under the uplifted banner of socialism.

Thanks to the special bond of friendship and meticulous care of Comrade Kim Jong Un, president of the State Affairs of the DPRK, and Comrade Miguel Mario Díaz-Canel Bermúdez, president of the Republic of Cuba, the two countries are closely supporting and collaborating with each other, invariably holding aloft the banner of independence against imperialism and the banner of socialism even in the face of the complicated international situation.

Through close and concerted actions in the international arena and active cooperation in all fields of politics, the economy and culture, the DPRK-Cuba friendship has been proven once again and further consolidated as a true comradely and brother-in-arms relationship and become a global example in the relationship between socialist

countries.

The revolutions in the two countries that have been pioneered by and advanced victoriously under the leadership of the leaders of elder generations are now entering a new historic stage of achieving the victory of socialism by overcoming the manifold challenges and ordeals.

The Korean people are now pushing ahead with the campaign for overall development of socialism under the leadership of the ever-victorious Workers' Party of Korea. The Cuban people are making strenuous efforts to safeguard their gains of revolution and build a prosperous socialist state braving obstacles created by all the reactionaries.

The Korean people rejoice as their own at the good results made by the Cuban people in their endeavours to oppose imperialism and build socialism in the Western Hemisphere. They will, in future, too, give full support and solidarity to the latter's righteous cause.

## OPINION

### American-style democracy on its last legs

PROVIDED TO THE PYONGYANG TIMES

There exists a country on this globe that advertises their "democracy" as an "example" in the world and never loses the chance to beautify and "globalize" it. That country is none other than the United States.

No matter how they trumpet their "epitome of democracy", it is impossible to hide the true colours of American-style democracy fraught with hypocrisy and lies.

A few days ago, the AP carried the results of public opinion poll on the upcoming US mid-term elections. According to it, many Americans feel pessimistic about their country's democracy and election methods and 52% of the American adult population said that democracy is not being properly promoted.

In the meantime, Japanese newspaper Mainichi Shimbun reported that about 70% of Americans think American-style democracy is at risk of collapse.

This should be seen as a well-deserved evaluation of the reactionary and anti-popular American-style democracy and of the unfair election system which lies at its very foundation.

No wonder even the American media deplored the US presidential elections, commenting that American-style democracy has shown to the whole world an example of what shouldn't be done.

As far as the US election system is concerned, it is a three-ring circus where a handful of fat cats pour in stupendous costs fighting against each other, to speak nothing of equal voting rights of the people. Like this, it is an extremely reactionary and anti-popular system where democracy is nowhere to be seen.

It goes without saying that the rich who won the elections backed by money cannot adopt laws or policies for the people.

Today, the US death toll caused by the malignant infectious disease has reached an all-time record, while the majority of the US population is forced to live in fear of poverty and crimes owing to gun-related violence, racial discrimination, energy crisis, human trafficking, and the like. This is the reality of the US.

It is the truth of history that those who turn their back on public sentiment are bound to perish.

The US newspaper Workers' World previously emphasized that the "all-people-equal society" of the US which the "goddess of liberty" commands, is now awaiting its miserable funeral and capitalism is well on its way to the grave due to its incurable chronic disease.

As can be seen, the American-style democracy is a reactionary democracy where a handful of power-holders and fat cats oppress and exploit the majority of people who are indigent and deprived of all rights, and an aggressive democracy that suppresses and dominates various countries around the world as it pleases.

The American-style democracy—the hotbed of social inequality and class antagonism—is on its last legs.

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# Chinese media criticize US, West for distorting fighting spirit of Chinese diplomacy

PROVIDED TO THE PYONGYANG TIMES

Chinese newspaper *Global Times* recently carried a commentary exposing the ulterior purpose of the US and the West distorting the fighting spirit maintained by Chinese diplomacy.

Since the 18th Congress of the Communist Party of China, the word "fighting" has emerged as an important term often used in Chinese diplomacy. At the same time, it has become a subject of considerable misconception

and misjudgment by the outside world.

Having labelled Chinese diplomacy "wolf warrior", the public media of the US and the West used it as an annotative note for "Chinese threat" propaganda.

By deliberately distorting the fighting spirit of Chinese diplomacy and changing its concept, they are scheming to degrade the just acts of China striving to defend the national dignity and interests, and international regulations and principles into a diplomatic tag of aggressive and destructive hue.

Washington, in particular, is in its bid to accuse China on a charge that, in actuality, the US deserves.

Then why does Chinese diplomacy put its emphasis on fighting spirit? The reason is clear. It is because the forces that try to tarnish Chinese diplomacy by labelling it "wolf warrior" are indeed "evil wolves" themselves.

China is undoubtedly fighting against the words and deeds which undermine the interests of the state and dignity of the nation, and against hegemony and high-handed politics.

It is the mass media and certain

politicians of the US and the West that show the strongest response to the fighting spirit of Chinese diplomacy.

This speaks that only those with ulterior motives get the pangs of unease.

In conclusion, the commentary emphasized that Chinese diplomacy will never get wicked with the mention of its fighting spirit. On the contrary, it noted, the American-style diplomacy of "offensive realism" will betray its own wicked look before the world, making it impossible to be covered up with all sorts of embellishment.

# Dangerous military provocation brings latent nuclear holocaust

By An Jong Chol

Against a backdrop of escalated military aid to Ukraine, the US and NATO have recently staged a nuclear war exercise targeting Russia. This has been through the whole world, to say nothing of Europe, into uneasiness and panic.

From October 17 to 30, 14 member states of NATO with the US as the ringleader conducted a nuclear bombing exercise codenamed "Steadfast Noon" in the region of northern Europe by mobilizing scores of fighters of the latest model including "B-52" strategic bombers.

Besides, the US got down to discussing a bill on allocating an enormous fund of US\$ 50 billion to the military aid for Ukraine next year. In tandem with this, the EU member states have decided to train more than 15 000 Ukraine soldiers at local military bases and provide Ukraine with modern anti-aircraft

weapon systems.

Moreover, high-ranking officers of the 101st Airborne Division of the US army deployed in Romania this summer are awaiting their turns to show their frenzied stands of military confrontation in rapid succession, making reckless remarks that they are ready to enter the territory of Ukraine and fight against the Russian forces if it starts its raid on NATO. Given all these developments, there is a strong feeling that the military threat of the US and the West against Russia is reaching its "red line".

We are still in a great surprise to find that the US and the West's mindset for global supremacy has gone so far as to be unable to see the danger of head-on nuclear clash with Russia which will, in turn, lead to an unimaginably terrible nuclear holocaust.

Russian official figures including the press secretary of the Russian President and vice-foreign minister are now strongly warning that the

nuclear war exercise by the US with NATO and their reckless racket of military aid to Ukraine are driving the world closer to a war and that it can lead to a direct clash between nuclear powers.

Russia, having already defined the Ukrainian crisis as an extremely tense political and military confrontation with the US and the West which gravely infringes upon its sovereignty and security, made clear its stand to face, to the end, the reckless military threats of hostile forces by mobilizing nuclear weapons and other possible means.

It has recently conducted a large-scale field exercise by mobilizing the triad of its strategic nuclear forces. Through this, it has proved that its hardest tit-for-tat stance is not an empty word.

Not content with defensive weapons, the US and NATO are now gradually dispatching offensive weapons with a range of dozens of kilometers to Ukraine.

By Kim Jin Hyang PT

UNESCO is a UN special agency for realizing international cooperation in the fields of education, science and culture. The UNESCO Charter was adopted in a meeting of the preparatory committee for founding UNESCO, which was held in London from November 1 to 16 1945, and it has become a special agency of the UN according to an agreement concluded with the UN in December 1946.

It puts it forward as the goal of its activity to contribute to global peace and security by strengthening international cooperation in the fields of education, science, culture and information. Main objects of its work

are national committees of UNESCO, the UN and UN special agencies and international and regional organizations.

UNESCO is conducting joint activities with many organizations, institutions and bodies with the same purpose as its own in the world while working independently in its field and has contributed to ensuring global peace and security as it bolsters up cooperation with special agencies of the UN in the fields of education, environment, development and peace.

Thanks to the positive effort of UNESCO, exchanges have briskly been conducted in such fields as education, science, culture and information and, especially, global attention

And they are massing tens of thousands of combat-ready elite troops in the vicinity of the Russian border so as to pose a serious threat to the security of Russia. Such being the situation, it is only natural that Russia is showing such a strong reaction as this.

If the US and its vassal forces cross the "red line" of Russia in blatant disregard of the security interests of the nuclear power which are vital to its very existence, a disastrous nuclear showdown between Russia and the US will turn from a hypothesis into a reality. It is always too late to regret.

If the US and the West still have a shred of reason, it would be a wise step for them, though belatedly, to wake up from their anachronistic paranoia of supremacy, look clearly at the reality and think twice.

*The author is member of the Korea-Russia Association for Promotion of Exchange and Cooperation.*

has been paid to attaching importance to educational and cultural work in developing countries.

The DPRK joined UNESCO on October 18 1974. It has taken active part in the activities of the organization while attaching importance to its role.

The country has conducted strenuous activities to develop education, science, culture and other fields onto a higher stage as required by the new century.

It pays due attention to cooperation with UNESCO, registering excellent cultural heritage and folk traditions of the nation in the world cultural heritage list and inscribing its famous mountains like Mt Paektu and Mt Kumgang as world biosphere reserves.

## Briefly

### Russia

**President: West's domination over world will not be achieved**

Russian President Vladimir Putin said that the West's establishment of domination over the world will not be achieved at the general meeting of the Valdai international seminar club on October 27.

Saying that the West's establishment of domination over the world is dangerous and bloody, he noted that it is denying the sovereignty, identity and uniformity of other countries and peoples.

### Cuba

**President stresses need to correct social problems**

Cuban President Miguel Mario Díaz-Canel Bermúdez at a Cabinet meeting on October 26 stressed the need to remedy social problems.

They could not neglect crimes, corruption, illegal acts and undisciplined practices, he said, adding that the Communist Party of Cuba and the government could not merely look on with folded arms but should correct such practices.

He called for fighting against crimes, corruption, illegal acts and undisciplined practices.

### China

**Satellite launched**

China launched satellite No. 20C for test by using Long March-2D carrier rocket at the Jiuquan satellite launch centre on October 29.

The satellite will reportedly be used to monitor and measure the space environment.

### OANA

**General meeting held**

The 18th general meeting of the Organization of Asia-Pacific News Agencies (OANA) was held in Tehran, Iran, on October 24-25.

It was attended by delegations and delegates of news agencies of OANA member nations and international organizations.

The meeting discussed the issues of continuing cooperation and experience sharing in news coverage and report to cope with such crisis as COVID-19, enhancing the reliability of news or articles and combating false reports and overcoming all obstacles that have negative effects on cooperation between news agencies.

During the meeting, a photo exhibition took place on the theme of "Life free from infectious diseases".

### COVID-19

**Global casualties**

According to a foreign media report, 636 209 670 persons contracted the novel coronavirus worldwide, 6 596 825 died of it and 13 896 771 were undergoing treatment as of 24:00 on November 2.

## Morality is basis of society

In his policy speech delivered at the Seventh Session of the 14th Supreme People's Assembly of the Democratic People's Republic of Korea, the respected Comrade Kim Jong Un said that the might of single-hearted unity—the invincible might of our style of socialism and the most powerful weapon of our state—should be further consolidated in ideology, purpose and moral obligation.

The development of society, that of a country, is brought about by the masses of the people who are responsible for it and the masses can display greater might only when they are united of their own accord and in moral obligation, not under any external coercion or from a sense of duty.

Morality is of importance in assessing personality.

Whoever is always courteous in work and life and faithful to his or her collective and comrades and values obligation is held in respect and affection anywhere.

But whoever is morally unsound cannot be respected no matter how high his or her position is and no matter how much he or she knows.

The same is the case with a country and a nation.

A country and a nation that have established sound moral traits and are courteous

are sure to be praised by the world people but those that are morally base and corrupt can hardly avoid denunciation and criticism by history.

A country with a sound moral basis is a powerful one. Moral traits cannot be substituted or supplemented even by huge economic or military power.

A country that is morally unsound is as good as a tree with rotten roots.

Now the DPRK boasts countless people who support the country with practice, not by words, those of noble

personality who have been faithful to their occupations, sparing no pains, for decades if it were for the Party and the revolution and for the country and the people and have their children work at the labour-consuming workplaces to which they have dedicated themselves all their life.

And it is commonplace in the country to take great pride in taking sincere care of war veterans, marry honoured disabled soldiers, care more for others than oneself and dedicate oneself to the happiness of others.

Kim Ju Hyok

Chairman of the Pyongyang Municipal Youth League Committee



## Devotion

the people, regarding every minute and every second as precious as gold.

Devotion means dedicating oneself self-sacrificingly without seeking one's own interests.

Conscious that if he has a rest even for a moment, the

advance of the country will slow down as much and that the more he devotes himself, the more the people's wealth increases and the happier they become, the General Secretary exerts himself around the clock, sometimes forgetting even mealtime.

Thanks to his such devotion, the national power of the DPRK has been remarkably raised and lots of eye-opening events have taken place with the people's dream and ideal coming true over the past 10 years.

## BYWORD

Everyone values time.

That's why there came into being such phrases as "Time is money" and "Time is life" related to the value of time long ago.

General Secretary Kim Jong Un devotes himself to the country and

# MARRIED WOMEN WIN BASKETBALL MATCH WITH CAN-DO ATTITUDE

By Yun Ki Song PT

The women's basketball team of the Phyongchon District general food store is comprised of married women.

It was nearly 10 years ago that they, beloved wives in families and kind servants in working places, started to learn basketball.

At that time, the district organized a basketball competition between units.

Although most of its employees were married women, they were neither afraid of nor gave up playing at the competition. Saying that though married they could play basketball and they had to train hard to win at any cost and bring honour to their unit, they encouraged themselves and did intensive basketball training in their leisure hours.

When their basketball team made their debut and defeated other teams in the competition, all the employees felt growing enthusiasm for basketball.

The team members who played matches and cheering employees were of like mind that they could win.

Greeted with the strong encouragement and rousing cheers of the employees, the team increased successes and its members



Women's basketball team members discuss effective tactics at the Phyongchon District general food store.

redoubled efforts to improve their basketball techniques.

Their determined and concerted effort bore fruit. Finally, their team cut a conspicuous figure in the district and their store won the honour of a model sports unit.

In the course of it, the store employees have become united more closely and positively displayed admirable traits of helping and leading one another forward.

As they work harder to perform their jobs, considerable achievements have been made in

the supply of goods to residents.

"When I crack a long-distance shot in the match, I do not merely feel joy at scoring a point. Earning enthusiastic cheers and congratulatory applause is another joy. Each time, I have come to place greater trust in the collective and feel deeper attachment to my working place," said an employee, Paek Sol Gyong.

On holidays or rest days the store employees play various sports games including volleyball, table tennis and tug of war as well as basketball.

# Kang Hui An, painter in literary artist's style in 15th century

By Han Kwi Hun PT

Kang Hui An (1417-1464) was not a professional painter, but served as a government official. He was so good at painting and handwriting that he was known as a typical painter in the literary artist's style in Korea.

Born into a family of an aristocratic scholar in 1417, he passed the civil service examination in 1441 when he was 24 years old. He was involved in creating *Hunminjongum* (Korean Alphabet) as a government official in an academic research institution called *jiphyonjon*.

At that time, qualifications that should be possessed by government officials of aristocracy included poetry, writing and drawing, and Kang Hui An was a figure possessed of such qualities and skills.

An old record said that Kang acquired the gist in terms of sentence and poem. He wrote well in seal characters, ornamental seal characters, printed style and cursive writing and topped others in the painting exquisiteness, it added.

In fact, the characteristic of his painting was that he raised the close observation and power of expression of portrayal object

onto a new height.

Typical examples among his remaining works are "Deep in thought" and "Crossing the bridge" which show the leisure life of scholars.

He got fame when he went to a neighbouring country as an envoy. At that time, it is said that renowned personages of the country were surprised to see his picture and calligraphy and earnestly asked him to draw paintings.

Song Hyon, a scholar in the 15th century, said in his book *Yongjaechonghwa* that Kang was gifted with high and unusual talent and went deep into a stage that ancient people had failed to reach. His landscape or figure paintings were all prominent and the picture of a beautiful woman he had drawn earlier was really lifelike, he added.

In a word, his pictures were based on the method of boldly using single strokes of the brush to portray the objects in an intensive and three dimensional way, putting the main stress on the depiction of the hero and subordinating others to it.

His name goes down in history as he offered good experience for the development of Korean pictorial art in the early years of the feudal Joseon dynasty.



# Chongsokjong, scenic attraction on the east coast of Korea

By Choe Yong Nam PT

Situated on the seashore of Thongchon county town in Kangwon Province, Chongsokjong has long been famous as a coastal scenic spot for its cliffs and rocks of fantastic

shapes.

All the angled stone pillars standing along the seashore are of rare shapes.

The stone pillars are in different postures: the standing are called ripchong, the sitting wachong and the lying

wachong.

Wonderful are the shapes of the stone pillars standing in groups or separately in the crystal-clear seawater.

A legend has it that in ancient times competent stonemasons erected the stone pillars in bundles or

groups of a few with great efforts for a long time.

There are also Sason Peak where four spirits, it is said, enjoyed themselves once upon a time, Pubu (couple) Rock, Kobuk (turtle) Rock and other rocks of different shapes.

The sunrise on Chongsokjong and its nocturnal view are particularly enchanting.

Various kinds of birds fly to their nests on the cliffs, pines grow in thick verdure between rocks all the year round, unaffected by snow

and frost and the strong sea wind and the surging waves hit the stone pillars, sending up spectacular spray, thus adding to the landscape of Chongsokjong.

The Chongsokjong area serves as a tourist and holiday resort.

