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Supreme Leader Kim Jong Un oversees live-fire mortar competition

Kim Jong Un, chairman of the Workers' Party of Korea, chairman of the State Affairs Commission of the DPRK and supreme commander of the armed forces of the DPRK, guided a firing drill of mortar sub-units of the corps of the Korean People's Army.

The drill was aimed at learning about the power of the KPA's light guns and heavy weapons while appraising the firepower combat capabilities of mortar-men of each KPA corps by way of a contest, arousing enthusiasm for bringing about a radical turn in military training and expanding achievements.

In the drill, according to the firing order decided by drawing lots, the mortar sub-units selected from different corps took firing positions and shot at a target. The standings were set by synthesizing the number of their hits and the time taken to carry out the firepower mission.

The KPA corps commanders commanded the firing by their mortar sub-units, according to the firing method they chose.

In the shelling drill, the mortarmen gave full play to their firing

skills, demonstrating the combat efficiency of a-match-for-a-hundred artillerymen who are ready to carry out any fire support mission.

The Supreme Leader expressed great satisfaction over the fact that all the corps of the KPA have prepared well the firepower sub-units for modern warfare in the flames of the movement to win the title of Crackshots by ideologically accepting the Party's idea of attaching importance to the artillery. He said that he had never seen such a drill of that day in which all the sub-units fired guns so well, that he organized the drill by surprise by

optionally designating sub-units from the corps and assembling them in the training ground, that the result of the drill was so amazing and that he was really pleased to see shells hitting the target just as if they had eyes.

He repeatedly spoke highly of the amazing marksmanship of the mortar companies of all the army corps who got very high points, including the 2nd and 10th corps which accurately hit the target with all the 60 shells fired, before extending his thanks to the firepower positions at the observation post.

Greatly excited to receive the thanks from the Supreme Commander, the

gunners raised cheers of stormy hurrah in a rapture of delight.

The certificate, medals and badges of crack artillerymen were awarded to the mortar company under the 2nd Corps which won the first place in the drill, and the diploma and badges of crack artillery sub-unit to all the sub-units which obtained spectacular results in the contest.

The Supreme Leader specified important tasks to be tackled in artillery training and the modernization of artillery pieces. As he referred to the importance of

intensifying training to make good use of light guns and heavy weapons like mortars in operations and battles, he said it is needed to further step up the preparations for artillery combat under the slogan of attaching importance to and strengthening the artillery as the artillery forces are the most important factor in modern warfare since they play the decisive role in operations, battles and a war as well.

The drill was watched by officials of the Central Committee of the WPK.

KCNA-THE PYONGYANG TIMES



VIEW

Kim Il Sung hailed as the sun of Korea and humankind

The 20th century knew many famous personages who made contributions to the progressive development of the world and humankind.

But the greatest man of them all is President Kim Il Sung. Born on April 15 1912 in a poor peasant's straw-thatched house at Mangyongdae, he became the greatest man not only of his native Korea but also of humankind.

He is the sun of the Korean nation. When he was born, Korea was a colony of the Japanese imperialists and the Korean people were subjected to brutal slavery.

His birth opened a brilliant era of the liberation of Korea and brought hope and fighting spirit to the Koreans.

He founded the great Juche idea which illuminated the way to freedom and independence.

Guided by the immortal revolutionary idea, Kim Il Sung initiated the anti-Japanese armed struggle for national liberation. He founded the Korean People's Revolutionary Army on April 25 1932.

With this first revolutionary armed force of Juche type, he liberated Korea on August 15 1945 after a fierce struggle full of hardships.

President Kim Il Sung is the glorious liberator and benefactor of the Korean nation and people. He gave them a free, independent and democratic state.

In the liberated fatherland he founded the Workers' Party of Korea on October 10 1945 as the general staff of the Korean revolution. On September 9 1948 he proclaimed the

founding of the Democratic People's Republic of Korea as the first free and independent state of the Korean nation.

But at this historic moment, Korea was divided by the US imperialists who occupied its southern half. The US wanted to occupy the entire Korean peninsula with the counterrevolutionary aim to make it a bridgehead for the encirclement of China and the Soviet Union from the east side.

For that, they started the Korean war on June 25 1950 by attacking the young DPRK.

But the heroic Korean people and the Korean People's Army were guided by Kim Il Sung. He proclaimed the Fatherland Liberation War against the US imperialist aggressors and their 15 satellite countries which fought under the false and illegal signboard of "UN forces".

Generalissimo Kim Il Sung was an iron-willed and invincible supreme commander and military strategist of Mt Paektu. Under his brilliant Songun supreme command the heroic KPA forced the US imperialists to their knees on July 27 1953.

He was the first military commander in history who won a victory over the United States! In only one generation he vanquished two imperialist powers, Japan and the US. This is unique in history!

The historic victory of the Korean people in the Fatherland Liberation War encouraged all peoples who still fought for their own national liberation.

President Kim Il Sung became the revered and esteemed leader of progressive mankind.

The immortal Juche and Songun ideas created by the President illuminate the way to

a free and independent world. These great ideas are the banner of global independence.

After the victory in the war President Kim Il Sung whose life-long credo was *The people are my God* built a real people's paradise in socialist Korea, where health care, education and housing are free and the taxes abolished.

During nearly five decades, from the division of the nation in 1945 until his demise in 1994, he also led the Korean people's just struggle for national reunification, proclaiming the Three Charters for National Reunification as the banner-bearer.

After the tragic demise of President Kim Il Sung on July 8 1994, Chairman Kim Jong Il continued loyally the President's revolutionary cause.

With his Songun policy and leadership he developed and strengthened the DPRK into the invincible bulwark of world socialism.

Now it is Supreme Leader Kim Jong Un who is continuing the great leaders' glorious and immortal revolutionary work by opening the way to build a thriving socialist nation and to achieve national reunification.

Really, President Kim Il Sung is the sun of Korea and the sun of humankind, a great man and a benevolent father of the people unparalleled in history. He is the heaven-sent great saint who remains immortal forever!

Eternal glory to the great leader President Kim Il Sung, the ever-shining bright sun!

Martin Lotscher, president of the Swiss Korea Committee (KFA Switzerland)

surroundings and rose beds built in different places.

An arena for various riding events is now under construction at the club.

Nano-antibiotic mask developed

DPRK researchers have developed a new nano-antibiotic mask.

The new development conforms to the technical specifications of WHO-recognized masks, said Ri Jae Dok, deputy director of the medical appliances institute.

"It filters fine dust while sterilizing and removing various kinds of germs and viruses in the air so that users can breathe in clean air. It is made of domestic materials, including Kumgang medicinal stone which contains dozens of kinds of essential microelements."

It is now produced at

the Pyongyang Medical Appliances Factory.

Tideland reclamation pushed



The reclaimers of tideland across the country have rezoned more than 2 000 hectares of fields, built structures in hundreds of places and carried out over 10 million cubic metres of earth piling so far this year in their efforts to construct the networks of facilities on tidelands.

The General Tideland Reclamation Enterprise of North Phyongan Province completed over 1 600 hectares of exterior network at the first section of second stage of

Kwaksan County is speeding

LEAD

Road of self-reliance leads to victory

Supreme Leader Kim Jong Un declared in 2012 that the permanent strategy of the Korean revolution and its final victory lie in marching straight along the road of independence, the road of Songun and the road of socialism.

He always underlined self-reliance and self-development in major meetings and new year addresses during the eight years of his guidance over the revolution and construction.

He confirmed the validity and vitality of self-reliance through his gigantic revolutionary practices.

Under his leadership, edifices for the people mushroomed across the country despite heinous and persistent sanctions of hostile forces and manifold difficulties and hardships.

Among them are the Rungna People's Recreation Ground, Unha Scientists Street, Munsu Water Park, Mirim Riding Club, Okryu Children's Hospital, Masikryong Ski Resort, Yonphung Scientists Holiday Camp, Sci-Tech Complex, Mirae Scientists Street, Paektusan Hero Youth Power Station, beautiful villages in the northern part of the Korea that had once been afflicted by a natural disaster and the Songdowon International Children's Camp and Mangyongdae Schoolchildren's Palace that underwent complete facelifts.

As he declared the groundbreaking of Ryomyong Street in March 2016, the Supreme Leader said it was not just the formation of a street but a political occasion for demonstrating the spirit of the DPRK which advances vigorously towards the world by redoubling courage in the face of any kinds of sanctions and pressure of the hostile forces and the appearance of the DPRK which is realizing the lofty ideal of the people and which can do anything it is determined to do and can become proudly well-off in its own way.

According to his determination and will, a new miracle of construction was performed in the Ryomyong Street project—the concrete work of the 70-storey apartment building was

completed in some 70 days and the tile-fixing on the building whose surface area is as large as several football pitches was finished in a little over ten days.

Last year, Samjiyon was renovated into a modern mountain city and the Jungphyong Vegetable Greenhouse Farm, tree nursery and Yangdok Hot Spring Resort were built in a splendid way.

The story of self-reliance and self-development is not confined to the construction field.

Everywhere he went, the Supreme Leader requested and persuaded people not to envy others but to create their own with better quality and rejoiced to hear that something made by Korean efforts overpowered world-famous ones.

Driven by his resolute will, the DPRK-made products favoured by the people constantly grew in kind and number.

Foodstuffs, footwear, cosmetics and notebooks with Korean brands are mass-produced, and metro car, tractor, tram car, trolley bus and light aircraft were manufactured with local efforts.

The people's loyalty to the leadership of the Supreme Leader grew more intense in the path of self-reliance, further consolidating the harmonious whole of the leader and the people.

The leader sacrifices everything for the people, treasures their creations more than anything else in the world and trains them to become creators of miracles and strong men in self-reliance. That is why the Koreans find the biggest honour and happiness of life in upholding his leadership.

All the structures rising up on this land vying with the time amid eye-opening miracles are the fruition of the harmonious whole of the leader and his people.

Having engaged in the frontal offensive of self-reliance to achieve a breakthrough, the Korean people will, as ever, vigorously advance along the road of self-reliance and victory under the guidance of Kim Jong Un.

By Kim Rye Yong PT

Nationwide

Riding club improves service conditions



The indoor training ground, fatigue-relieving centre and other facilities have been given a facelift at the Mirim Riding Club.

And the qualitative condition of the grass course has been improved, while the moisture preserving ability and sterilizing effects of the earth course have been enhanced.

Over 4 000 trees and flowering shrubs of good species like magnolia, *Pinus strobus* and maple have been planted to go well with the

up the rezoning of fields, expansion of waterways and the building of structures at the final stage.

Kangnyong County dealt with more than 15 000 cubic metres of earth in the tideland-turned paddy fields in Sigo-ri which is short of water and repaired hundreds of metres of embankments in a month and constructed sluices.

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BUSINESS

Towards an economy-oriented business

The Pyongyang Mechanization Station in the suburbs of Pyongyang specializes in making metal pipes to be supplied to construction sites across the country.

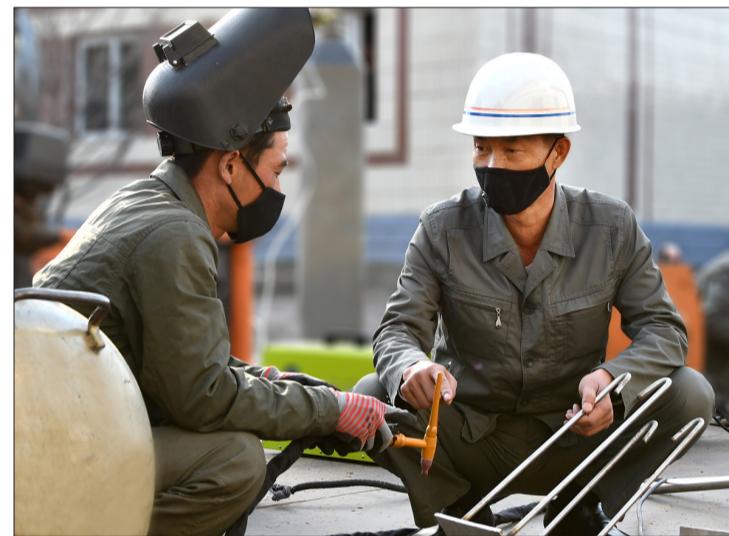
"We've found the way of development of our station in converting all of its management activities into saving everything," said Choe Chol Hwa, manager of the station.

To this end, the station sharply cut down the total power consumption by reducing the capacity of electric motors of all equipment.

At the station all the management staff members hold more than two posts concurrently.

"Our station found the way to solve the shortage of manpower in the training of skilled workers and concentrated efforts on it. Officials and experienced skilled workers give lectures at the weekly technical study session and highly skilled workers are assigned the tasks of helping new employees improve their technical skills in a short time," said Cha Tong Ho, a management staffer.

New technical innovation



PAK KWANG HUN / THE PYONGYANG TIMES
Choe Chol Hwa (right), manager of the Pyongyang Mechanization Station, talks with a welder.

POULTRY

Farms adopt new veterinary medicine and cut grain feed

The Sopho Chicken Farm is using earthworm poison to exterminate chicken ticks.

Technicians of the farm came up with an idea that a major ingredient of a veterinary medicine can be obtained from earthworms that are artificially bred for protein feed.

It has long been recognized that feeding five earthworms every day is enough to meet the nutrient needs of one chicken.

However, since it was discovered that one autolysed earthworm can give the same amount of nutrients to a chicken as five raw ones, the farm adopted this method to suffice its need for protein feed.

"In order for an earthworm to autolyse, it is necessary to extract its poison, which was regarded as useless and wasted in the past," said lead developer Kim Chung Il. "But we recently found that earthworm poison contains a component that kills vermin."

When they diluted the new veterinary medicine with water in the proportion of one to 40 or

50 and sprayed it on chickens, the extermination ratio of chicken ticks and the production of meat and eggs were raised conspicuously.

The Mangyongdae Chicken Farm established a substitute feed production base to save cereal feed.

According to a technician of the farm, the production base is capable of turning out thousands of tons of feed a year.

The farm also built an

earthworm production ground capable of producing over ten tons a year.

It also established a compound microbial fermented feed production process based on a new microbial fermentation method, which makes it possible to raise the protein content and digestibility of feed and reduce the consumption of bean cake by 20 percent.

By Chae Hyang Ok PT



RYU KWANG HYOK / THE PYONGYANG TIMES
Meat and egg production is on the rise at the Sopho Chicken Farm in Pyongyang.

DESIGN

Women designers lay out new styles



SONG TAE HYOK / THE PYONGYANG TIMES
Choe Hyang Mi (left) and Kim Ryu Gyong (right) work on a new project at the Korean Industrial Design Studio.

Among the talented designers at the Korean Industrial Design Studio are Choe Hyang Mi and Kim Ryu Gyong.

According to deputy director Kim Su Il, Choe is very good at producing distinctive calligraphic styles, whereas Kim has the wit to discover the seeds, or core, of artworks.

It is not so long since Hyang Mi entered the art studio after graduating from Pyongyang College of Information Technology at the time.

She liked drawing from her childhood, so she had special attachment to the production of designs and read lots of information about it.

"In the course of it, I've come to know that letters make up 80% of the designs. So, I've put time and energy into mastering various calligraphic styles from the beginning," said Hyang Mi.

With the help of her seniors she practised handwriting regularly every day and took an active part in the artistry presentation every Thursday.

Her untiring efforts bore fruit: she created a fine design for the trademark of smoked rainbow trout as her first product and designed trademarks of various foodstuffs skilfully and non-repetitively in succession.

Last year she created various designs for noticeboards at the Yangdok Hot Spring Resort.

For example, she designed the introductory board of Sokthang Hot Spring in a calligraphic style which combines national

By Jong Hwa Sun PT

Workteam fulfils yearly plan

The Ko Kyong Chan-led Hero Workteam of the April 5 Pit at the Kumgol Mine under the Komdok Mining Complex in South Hamgyong Province fulfilled the annual production plan by Mar 30.

They continuously introduced new mining methods with high efficiency so that they could increase the blasting efficiency and tunnelling speed, while reducing the number of drilling by 7-8 as compared to the

past.

They also made several working faces in a pit at 650 metres underground and operated them at the same time to increase output.

The workteam had received a congratulatory message from Supreme Leader Kim Jong Un as it fulfilled the yearly plan before the Day of the Sun (Apr 15) three years ago.

KNITWEAR

Dozens of kinds of knitwear products turned out

The Aeguk Knitwear Factory in Central District, Pyongyang, gives primary attention to the development of new products.

"Our factory is simultaneously pushing ahead with the improvement of the quality of knitwear and development of new products," said Han Yong Bom, chief engineer of the factory.

The factory management opened a new products development office staffed with technicians and skilled workers and regularly organizes the work to provide the sci-tech learning space with additional technical data related to knitwear and the visits to commercial service facilities to widen their horizons.

It also holds a factory-wide prize contest and show every week to select the quality of cloth according to designs produced there and decide the technical specifications for designs, clothes-making and wearing test. In the course of it, various styles of knitwear have been developed.

The newly developed elastic knitwear product is convenient

to use as elasticity is added to it and unlike the previous ones made in a single colour or striped patterns, functional sweaters are produced in various styles to meet the needs of all ages.

In particular, knitted fabrics are wholly or partially printed for several kinds of children's knitwear unlike the previous single-coloured ones to catch the consumers' eyes.

"The factory's new products are popular at public service networks including the Yangdok Hot Spring Resort as

they are of good quality and stylish," said Ryom Hyang Suk, a staffer at the factory management.

The factory has recently developed and produced dozens of kinds of new knitted goods including ten kinds of elastic knitwear, six kinds of sportswear for students, seven kinds of sweaters for children and adults, various kinds of children's knitwear and a new style of undershirt and delivers customers' orders.

By Kim Il Jin PT



A worker operates the circular knitting machine at the Aeguk Knitwear Factory in Pyongyang.

R&D

Sci-tech achievements

Afforestation research hits

The institute of forest of economic value under the Academy of Forest Science produces 150 000-200 000 dwarf chestnut saplings per hectare and sends them to relevant units after establishing a method conducive to putting their production on a scientific and intensive basis.

The chestnut tree bears bigger fruits than existing species and the sugar content and fruit yield are more than 1.5 and 1.3 times respectively, and it is highly resistant to cold and blights.

In the course of acclimatizing seabuckthorn, researchers bred and introduced new varieties suitable for specific local conditions to ensure their rooting rate at over 90 percent.

The nutrition active solution and rooting accelerator developed by dendrologists are winning favour as they help promote the growth of roots, improve the sprouting rate of seeds 1.5 times and ensure the 100 percent rate of rooting when tall trees are transplanted.

A research team of the forest science and information institute developed Companion of Forest, a browser for the diffusion of forest-related science and technology.

Green Forest 4.0, an e-botanical dictionary that can be downloaded on smart phones and tablet PCs, also gives big help to planting, protecting and tending forests.

The forest thremmatology and forest machine institutes play their part in creating forests for seed collection and introducing home-made machines for the prevention and extermination of blights in forests.

Feed dregs, excreta of fish recycled

The microbiology institute of the State Academy of Sciences has developed a method of recycling fish feed by processing feed dregs and fish excreta with a composite micro eco-medicine.

The micro eco-medicine is recognized to be effective in improving water quality of ponds and recycling feed dregs and excreta into fish feed.

According to section chief Ri Yong Jin, the Samchon Catfish Farm is increasing fish production with lower feed unit after introducing the method.

Researchers proved the efficiency of the processing method relying on the bacterial strain of the composite micro eco-medicine.

They also found out the

nutritive content of the fish food produced by processing feed dregs and excreta with the eco-medicine and its efficacy on the growth of catfish.

The Samchon Catfish Farm adopted this method to recycle feed dregs and excreta from the water circulation process, with the result that well over a hundred tons of cereal feed is saved every year.

New grafting method developed

The forest thremmatology institute of the Academy of Forest Science has developed a new method of grafting a bud of pine-nut tree onto pine.

The new method helps raise the rooting rate of trees as it is applicable without cutting the original trunk of pine.

Researchers carry on research into preservation and breeding of progenitor of Kumya black pine along with the work of elucidating its biological characteristics and genetic variation.

The afforestation science institute studied and completed a process of producing growth promoter needed for increasing the rate of rooting of planted trees.

By Kil Chung Il PT

IRRIGATION

Water secured for farming

According to information available, over 31 700 underground water facilities have so far been built or repaired, more than 20 000 km waterways extended and cleared, and dredging of some 100 km middle and small rivers carried out thanks to the brisk nationwide effort for securing water.

South Hwanghae Province built or repaired over 13 400 underground water facilities.

It is simultaneously pushing a downstream construction project of Lake Yonback.

Kangryong and Ongjin counties removed over 11 900 cubic metres of earth and carried out an embankment project for Lake Kangryong.

Kangwon Province cleared nearly 2 000 km waterways, built hundreds of wells and rounded off the construction of many water securing facilities.

South Hamgyong Province is pressing on with the construction of structures in the wake of

building dozens of kilometres of waterway by removing over 123 000 cubic metres of earth.

North Hwanghae Province built over 30 underground reservoirs, providing a guarantee for supplying enough water to paddy fields. Sariwon and Unpha County repaired or put in good order dozens of water pumps to ensure the normal operation of water supply facilities and finished waterway clearing in a short time.

After installing over 70 pieces of large water pumping and power equipment by late January, Nampho cleared well over a thousand kilometres of waterway, removed tens of thousands of cubic metres of earth and carried out thousands of square metres of stone covering to enhance water flow capacity 1.5 times and expanded the capacity of reservoirs and secured sufficient water.

By Chae Hyang Ok PT

LIVESTOCK

Family raises 1 500 rabbits a year

The family of Kim Hye Yong in neighbourhood unit No. 3, Ryuun-ri, Unpha County, North Hwanghae Province, is widely known for breeding rabbits well.

"We have been raising rabbits for a long time, but it was only a few years ago that we began rabbit rearing on a large scale," said Kim Hye Yong.

She used to breed pigs in the past, but gave it up following the advice of her father Kim To Song.

"As compared with pig rearing in terms of profitability, ten breeding rabbits enable us to produce 400 head a year. They are equal to 200 kg of pigs and almost two times higher in price," he said.

The family's rabbit rearing has some special features.

Firstly, they breed them in groups by classifying them from leverets to breeding stock.

It makes rabbits eat food competitively, which eliminates waste of food, raises the weight increment rate and makes it easy to disinfect hutches.

Secondly, they breed them with guinea pigs.

According to Kim To Song who lives with his daughter, guinea pigs are easy to breed as they naturally reproduce and bring up their young when the temperature is maintained at around 10 degrees Celsius. The meat, skin and fur of the omnivorous animal are used as

medicinal materials.

Since rabbits eat excreta of guinea pigs and the latter eat the leftovers of rabbit feed, the former did not contract diseases and the death rate decreased so the rabbit rearing got much easier and interesting, he said.

The family feeds fresh grass to the rabbits in summer and pulverized rice straw, cornstalk, bean pod and dry grass mixed with corn flour or hominy at a rate of 5-10 percent in winter.

"After all, bean pod is the best. To get bean pods, I planted bean in most of the fields in my charge and I should pay attention to science in order to produce higher yield. It seems to me that I am naturally becoming an expert in rabbit rearing and agriculture," said Kim Hye Yong.

She improves the variety of rabbits by interbreeding excellent breeds with native breeds. That is why her family's leverets are bigger and more productive than others.

"Our family raises more than 1 500 rabbits a year. It improved our dietary life as we can make different dishes with the meat and also made us well-off as it gives us extra income," she said.

Today, many people come from all parts of the country to learn their experience in rabbit rearing.

By Kim Kum Myong PT

HEALTHCARE

Four decades under the benefits of public health law

The law on public health of the DPRK was adopted at the Fourth Session of the Sixth Supreme People's Assembly on April 3 1980.

President Kim Il Sung, in his speech *Let Us Implement the Public Health Law to the Letter* he delivered the following day, said that the country adopted the public health law neither because it was rich nor because its medical skills were developed, adding that the sole aim of the adoption was to provide the people with a happier life.

In retrospect, health care for the people had been set as an important undertaking in the country since liberation from Japanese military rule and the twenty-point platform that would be put into effect by a democratic government to be set up in liberated Korea specified the institution of life insurance for factory and office workers, the increase of the number of state-run hospitals, the eradication of epidemics and the provision of free medical care for the poor.

Even during the arduous period of Fatherland Liberation War, the state expenditure on public health in the DPRK in

1952 increased by 1.6 times as against the year before the war and the universal free medical service was put in force in all parts of northern half of Korea for the first time in history in January 1953.

After the war, the DPRK Cabinet adopted decisions on strengthening medical assistance for workers, technicians and office employees and improving public health. And the Seventh Session of the Second Supreme People's Assembly declared the enforcement of the complete and universal free medical care, which provides people with all forms of medical service free, in February 1960.

During the First Seven-Year Plan between 1961 and 1967 the section doctor system was introduced on a nationwide scale, the village clinics were transformed into hospitals and people's hospitals in cities and counties developed into general hospitals by the end of 1974.

After the adoption of the law on public health, the DPRK enacted laws on medical service and medicine control and others, built the Pyongyang Maternity Hospital as a comprehensive medical service base for women

and set up special hospitals in every province and city, thereby improving the specialization level of medical service.

Today, a new heyday is being ushered in in public healthcare.

Modern and comprehensive medical service bases and medical appliances factories have been built across the country and public health work constitutes a major characteristic feature of the image of socialism through which the people directly enjoy the advantage of the socialist system.

At the ground-breaking ceremony of the Pyongyang General Hospital on March 17, Supreme Leader Kim Jong Un said it is a source of the greatest happiness and encouragement for the Workers' Party of Korea that the Korean people, the younger generations in particular, should be leading a healthy and cultured life by benefitting from the most advanced medical services provided under the socialist public health system.

The Korean people feel great pride and happiness as they have such an advantageous public health law.

By Kim Rye Yong PT

SURGERY

Surgeon spends dozens of years completing osteosynthesis

"To rejoin the fractured cervical region of femur, operation based on artificial capitula is much used. However, the application of new osteosynthesis can ensure 95 percent treatment effectiveness," said Kim Mun Son, vice-director of the Hamhung Orthopaedic Hospital.

In general, the cervical region of femur is easily broken due to accident or fall, so many patients suffer from the fracture.

"I was afraid of having an operation as I was old and it might incur sequela, but I was recovered thanks to the osteosynthesis. We were so grateful to surgeons that I and all my family members sent a letter of thanks to them," said Ku Ja Gwan, 75-year-old resident in Chongjin, North Hamgyong Province.

Kang Yong Gyong and his research team conceived a new surgical method of re-linking broken capitula, rather than using artificial one.

The new method ensures the agglutination rate of bones and prevents capital aseptic necrosis, and the cost-effective simple surgery gives little physical

burden to patients and develops no complications and sequela after operation, said Kang.

"Kang Yong Gyong spent 28 years to complete the osteosynthesis. He fully restored thousands of patients to health," said Kim In Son, a fellow surgeon of Kang.

Born as a son of an ordinary farmer in Riwon County, South Hamgyong Province, Kang majored in surgery at the department of clinical medicine of Hamhung College of Medical Sciences and buckled down to research into the conjugation of cervical region of femur, which had been believed as a knotty problem in surgery, during his postgraduate course.

In those days, osteosynthesis in other countries necessitated the fixation of broken bones by imported three-winged nails, but it damaged capitula during operation and it was hard to correctly fix them inside. The operation took three to four hours, giving heavy physical burden to patients. And the rate of success was only 50 percent.

"At that time, I determined to delve into an operational method of our style. After a

dozen-year-long quest since my postgraduate days, I developed a new surgery using patients' bones and conducted the first operation in 1994," Kang recalled.

The operation proved successful.

Inspired by this, he devoted another decade to completing the operational method and, in the course of this, invented new medical appliances which are effective for the surgery.

Typical examples included

APPLIANCE

Medical appliances developed



RYANG KUM CHOL / THE PYONGYANG TIMES

Researchers work to develop a medical appliance at the bioengineering medical faculty of Kim Chaek University of Technology.

Lecturers and researchers of the bioengineering medical faculty of Kim Chaek University of Technology have recently come up with an aeroplethysmograph, high-frequency jet ventilator and facial nerve probe.

The research group conceived and designed everything afresh.

According to Ri Kum Chol, head of the equipment department of the Okryu Children's Hospital, the researchers and doctors had dozens of rounds of consultative meetings and

an ilium cancellous bone nail picking tool, which helps correctly gather bone chips needed for bone grafting, and an introducer which is used to precisely fix intra fixation nails.

"When I was diagnosed with serious fracture of cnemis, femur and collum due to a car accident, I was near dead with a thought that I had to live my remaining life as a disabled.

"However, I left hospital on my legs after receiving operation from Kang Yong Gyong. I'd like to give my sincere thanks to the doctors who brought a miracle to me," said Ri Nam Hyok living in Songchongang District, Hamhung.

By Kwon Hyo Song PT



SONG YONG SOK / THE PYONGYANG TIMES
Lecturers hold a consultative meeting prior to an operation at the orthopedic department of Hamhung College of Medical Sciences in South Hamgyong Province.

simulation tests to perfect the designs of the surgical system and aeroplethysmograph.

They completed the apparatus by solving lots of scientific and technological problems.

This device is now used at the children's hospital for the diagnosis of respiratory diseases, winning favour with doctors.

The high-frequency jet ventilator ensures the visual field of the surgeon during the delicate operation on the larynx, prevents the obstruction of the patient's airways and enables the patient to breathe smoothly.

According to developer Rim Jong Ho, air was injected manually in the past in order to prevent the contraction of the airways and ensure the field of vision.

The research team found out the ways to display the signals from high-precision sensors, to ensure the opening and closing frequency of electronic valves according to the set pressure (the airways' internal pressure limit) and the number of breathing and to adjust the inhaling volume, the number of breathing per minute and the internal pressure of the airways at certain values under general anesthesia and in case of acute respiratory insufficiency.

The device was registered as a best product at the 2019 sci-tech exhibition in the public health sector held in November last year.

The facial nerve probe helps prevent medical accident as a warning alarm sounds if a scalpel comes near the nerve tissue of the patient during operation, and it is said to be highly accurate.

Researchers analysed the response characteristics of stimulation signals coming from the nerve stimulator and controller and nerve tract and solved other technical problems.

They are now working on the development of MRI.

By Ri Sung Ik PT

ANIMATION

Artists focus on truthfully reflecting historical facts

Historical animation "Ko Jumong" is winning growing popularity among viewers.

The animation is based on the historical fact about Ko Jumong who founded Koguryo, the first feudal state of Korea which exalted its honour as a powerful state in the East.

Twenty-seven parts have so far been produced out of the planned 50. Whenever sequels were brought out, they got a high audience rating.

The animation is produced by production unit 6 of the Korean April 26 Animation Studio.

The studio is widely known at home and abroad.

The production unit in charge of the animation is concentrating all efforts on improving the quality of the animation series by making dramatic arrangement scrupulously and positively introducing new editing techniques.

"We get several phone calls every day from people asking us when the next sequel is released. Then we get more conscious of our responsibility and harden our resolve to make animation more properly to live up to their expectations," said Hong Yon

Su, head of the production unit.

Directors and creative artists engaging in the script are redoubling their efforts to bring about an innovation in the dramatic arrangement as they widen the scope of dramatic relations by promoting the individuality of characters, while putting main focus on truthfully reflecting the historical facts of society in those days, and to diversify the characters and mental states of characters in the dramatic antagonism between positive and negative characters.

They also hold mass

discussions on a regular basis to share views so as to raise the artistic effect of the animation.

Original drawing artists gave special touches to the costume of characters and enhanced the three-dimensional effect of the animation by applying the motion capture to the manual animation.

Thanks to their endeavours, the sequels will continue to bring pleasure to viewers in the future.

By Song Jong Ho PT



Artists are engrossed in the creation of animation "Ko Jumong".

EATERY

Restaurant rises to fame with corn dishes

"The restaurant's dishes have unique tastes and decorations. They make our mouth water at a glance and we cannot help wondering if they are really made of corn," said Ri Sol Mi, a visitor to the Tongdaewon Special Corn Food Restaurant from Taedonggang District, Pyongyang.

The restaurant serves nearly 30 varieties of corn dishes including noodles, pastry and pancake, and they are very popular with diners.

"Those who have once had corn dishes at our restaurant come again, saying the dishes have left favourable impression on them," said Kim Mi Ran, chief of the restaurant. "In particular, many regular diners visit our restaurant together with their family members on holidays."

According to her, the most

favourite dishes of the visitors are noodles, and the eatery serves a dozen kinds of corn noodles, especially noodles with sliced and seasoned raw pollack, hot noodles with meat dumplings and chopped noodles garnished with rape.

At present this small restaurant, which had been quiet until three years ago, has become well-known for its dishes and is always crowded with diners.

Its good reputation is associated with the painstaking efforts of its cooks.

In order to distinctively and admirably prepare corn dishes, the traditional food of the Korean nation, the cooks devised and introduced diverse cookery so that they could promote savoury, sweet and attractive tastes well.

Head chef Ri Yong Hui prepares spaghetti and hot noodles by using degenerated corn flour.

"As degenerated corn dough easily becomes solid and its viscosity grows weak soon, special attention should be paid to properly observing the processing temperature and time and to the ratio of combination with subsidiary materials during cooking. Good artistic representation should be added to each dish accordingly so that they can maintain their shape," she added.

Corn food is said to be very good for retarding ageing and curing diabetes and dementia.

"Corn noodles and pastry make everybody crave for them and they have original tastes. I often come to this restaurant as I cannot escape from the memory of the sleek and sourish yet sweet corn noodles with sliced and seasoned raw pollack," said Ri Yong Min living in Jongbaek-dong on Thongil Street, Rangnang District, Pyongyang.

The corn dishes of the restaurant won top prizes on four occasions at the Pyongyang municipal national dish contest.

By Kwon Hyo Song PT



Corn spaghetti.



Corn noodles garnished with sliced raw pollack.

PHOTOS BY PAK KWANG HUN / THE PYONGYANG TIMES

APP

Housewives lured into culinary world

The Sojae Culinary IT Exchange Centre is engaged in the publicity and promotion of the food culture of the Korean nation at home and abroad.

It has established a large database of national food heritage and world-famous foreign dishes containing their varieties, nutritious value, cooking methods and ingredients.

It makes multimedia on cooking on a regular basis to spread knowledge of cooking while giving wide publicity to the national food culture.

Food information browsing program for smart phone Ryorisegye (culinary world) 1.0 was launched in 2018 and got popular with women soon after.

"I earned the title of 'master cook' from my children thanks to Ryorisegye 1.0. It's really a close companion of us, housewives," said Kim Hye Yong living in Haecun-dong No. 1, Phyongchon District, Pyongyang.

Ri Son Hui in Yokjon-dong, Central District, Pyongyang,

By Pang Un Ju PT

RESOURCE

Awash with curative resources in the sea

Korea abounds in marine curative resources as it is surrounded by the sea on three sides. The DPRK has many sanatoriums on beaches, which use seawater and mud as major means of treatment.

Seawater is near-ionized water containing almost all the chemical elements, especially magnesium ion.

Such chemical elements are easily absorbed in the human body.

According to medical workers, seawater can be applied to the treatment of disorders of nervous, cardiovascular and respiratory systems, women's diseases, metabolic troubles and the like.

The relative density of seawater in general is far higher than general mineral springs, which is very favourable for the treatment of the sequelae of muscular and joint diseases, ankylosis and contracture in particular, and for the rehabilitation of bodily functions as well.

Seawater therapies include rubbing, application and poultice, cool or warm seawater bath and warm seawater gas bath.

In addition, mud contains all kinds of inorganic and organic

is also one of women who greatly benefited from the app.

According to her, when she went on holiday to Mt Chilbo with her friends in 2018, she won the first place in a cooking contest at the resort thanks to the program.

Since then, she became a regular customer of the Sojae Culinary IT Exchange Centre, she said, adding: "Good culinary skill is one of essential qualities women should have. Ryorisegye 1.0 is very helpful as it tells us recipes of foods irrespective of place and time."

To meet the growing demand of women, the centre has recently unveiled its updated version Ryorisegye 2.0.

Director An Song Il said the dishes of the Korean nation are best among so many foods around the world and the centre is working to provide better information service in order to widely disseminate the Korean food culture and give people more pleasure.

By Pang Un Ju PT

substances that living things have.

Organic substances have found their way into mud from the land through rivers, but many of them have accumulated in mud as microorganisms and other living things on tidal flats die through the long historical process.

Among the substances that are contained in tideland mud there are those that have various physiological and biochemical effects including parahormone, immune defence, biogen stimulating and growth and regeneration promoting effects.

As it contains lots of microelements, mud is called the "storehouse of microelements".

The microelement content of mud is incomparably higher than ordinary water and thousands of times higher than seawater.

Pelotherapy is given in combination with balneotherapy in order to enhance the thermotherapeutical, apparatusotherapeutical and chemotherapeutical effects of mud.

By Kil Chung Il PT

CUBA

Contribution to worldwide anti-epidemic effort

Cuba is in the world limelight for its cooperative medical activities against COVID-19.

A Cuban medical team of 52 doctors arrived in Lombardy in northern Italy on Mar 22 amid the residents' hearty welcome, and the country also dispatched such teams to five countries in Central and South America that are experiencing considerable hardship as they are unable to cope with the spread of the epidemic and due to the subsequent collapse of their medical systems.

British newspaper *The Independent* praised such Cuban activities as a commendable deed showing genuine international solidarity.

Since most of countries are striving to protect their medical personnel, Cuba's cooperation on other countries is drawing the admiration of all.

A 68-year-old Cuban intensive care specialist dispatched to a foreign country said that though he had been scared before leaving Havana, he overcame his fear with his revolutionary sense of duty.

Earlier on Mar 16, Cuba allowed in a British liner, which was refused entry by different countries because of the outbreak of infection among the passengers.

American weekly *The Nation* splashed the news about "Cuba's longtime humanitarian

assistance for the international community", as it enumerated its permission for the liner's port entry, dispatch of medical teams abroad and development of medicines.

Since the revolution in 1959, Cuba has concentrated efforts on the training of medical manpower and the development of medicines.

Since 2004, it has dispatched ophthalmologists to poor countries to lend free medical assistance to hundreds of thousands of people. And it took the lead in medical cooperation in 2010 when cholera swept Haiti and after 2014 when the Ebola epidemic broke out in West Africa.

The media around the world

Hwang Kyo An's pipedream



commented Cuba's selfless acts are of great significance in the current international crisis that has arisen when "international solidarity" is waning in the wave of "America First" seeking only US interests.

By Choe Yong Nam PT

VENEZUELA

'Venezuela's narcoterrorism theory' unfounded, politically charged

Venezuelan President Maduro said in his Twitter account on Mar 26 that the US infringed upon the dignity of the Venezuelan government and its people with disgusting information filled with falsehood and enmity.

The "disgusting information" indicates the arguments the US put up recently against Venezuela.

The attorney general of the US said in a recent news conference held in Washington DC that 200-250 tons of cocaine come from Venezuela, adding President Maduro and his government officials smuggled

a great deal of cocaine into the US in collusion with the FARC. And he charged Maduro and a dozen Venezuelan high-ranking officials on suspicion of narcoterrorism.

The US asserts that Maduro and his aides have maintained cooperation with the Colombian armed force for 20 years in narcoterrorism.

It put a bounty of US\$ 15 million on the offering of information for the arrest and conviction of Venezuelan President Maduro, as well as a bounty of US\$ 10 million on the information about four senior Venezuelan officials including the president of the National

Constituent Assembly.

This shows that the "theory of narcoterrorism" insisted by the US is no more than a groundless hypothesis.

The vice-president of Venezuela said that the US' repeated backbiting against his country is a mere trick for covering up its gloomy reality in which dozens or hundreds of American people die even in a day due to COVID-19 spread by the US, and for shifting its responsibility onto others.

The deputy prime minister who doubles as minister of information in a press conference said that the US' recent decision is connected

with an attempted assassination of the Venezuelan President and its high-ranking officials, a product of conspiracy between the US and Colombia which was disclosed on Mar 25, adding a lot of terrorists are receiving military training on the instructions of and funded by the US.

The Venezuelan defence minister in a TV broadcast described the recent measure taken by the US government against his country as an attempt of military aggression to topple the legally-elected Maduro government.

By Song Jong Ho PT

ENVIRONMENT

Green GDP to promote eco-friendly development

Now that extreme weather events are widespread, the interest in green GDP is growing around the globe.

The concept of green gross domestic product was first introduced in the 1990s.

Green GDP is an economic indicator which reflects the final result of production activities of a country or region in a certain period and is calculated by subtracting the value of losses in natural resources and environment from conventional GDP.

In short, it is an index that enables the fusion of environmental protection and economic development.

The human activities for creating more social wealth brought about considerable losses as well as huge gains.

Many countries exploited loads of resources and emitted vast quantities of pollutants including carbon dioxide, wreaking havoc on the global environment and giving rise to the worldwide challenge of environmental pollution.

Some scientists expressed concern that if this problem is left unattended, it would lead to the terrible catastrophe of the earth's end.

Under such circumstances, many countries got to pay much heed to environmental protection and the green

GDP originated for ensuring sustainable economic development while minimizing environmental pollution.

Such countries as Norway and Finland have already accepted the economic index as a means of promoting the fusion of environmental protection and economic growth.

Green GDP has some advantages.

First of all, it helps economic policymakers measure correctly the achievements in the sustainable economic development.

If the proportion of green GDP in the total GDP falls, it means that resources consumption and environmental pollution

are on the rise in the course of economic activities. Otherwise, the economy is oriented toward sustainable development.

It also provides specific information about the consumption and pollution during a certain year and in turn enables economic policymakers to find out solutions to problems in time, thereby facilitating the fusion of environmental protection and economic development.

However, experts are of the opinion that the study and introduction of green GDP still have to go a long way.

KCNA

Briefly

Cuba US infringes upon Cubans' human rights, Miguel says

"The US has recently set in motion the Helms-Burton Act to check the delivery of medical supplies offered to Cuba for preventing COVID-19. This is part of the US' criminal anti-Cuba blockade," said Cuban President Miguel Mario Diaz-Canel Bermudez in his Twitter account on April 1.

Such US moves are a violation of the human rights of the Cuban people, he asserted.

Venezuela Maduro determined to keep peace with arms

Venezuelan President Nicolas Maduro in a televised statement on Apr 4 said his country is preparing to deploy artillery forces in order to cope with US military threat.

Terrorist groups that are financially backed up by the US and its vassal forces are taking mean advantage of the widespread COVID-19 crisis to plot a terrorist act and coup, he said.

Iran US criticized for hindering anti-epidemic campaign

An Iranian foreign ministry spokesman on April 6 demanded the US discontinue checking the delivery of aid materials from other countries and international organizations and financial dealings for anti-epidemic work.

China Victims of pandemic mourned nationwide

Memorial services were held all at once on April 4 throughout China for the people who fell in action during the fight against COVID-19 and those who died of the infectious disease.

The Chinese flags were hoisted at half-mast at Tiananmen Square, the Standing Committee of the National People's Congress, the State Council and other places across China and the Chinese embassies and consulates in other countries.

THE PYONGYANG TIMES

SURVEY

Over 100 goshawk nests found in DPRK

More than 100 goshawk breeding places were additionally found through the survey of sanctuaries across the country conducted between May last year and mid-March this year, said Kim Kyong Jun, vice-director of the Zoology Research Institute under the State Academy of Sciences.

Goshawk, the DPRK's national bird, had so far been known to live mainly in the northern parts of the country.

But through the survey ornithologists found a female goshawk sitting on eggs, young goshawks, nests and a pair of goshawks at the Yangamsan Sanctuary in Kangwon Province

and the Hakpongsan Sanctuary in North Hwanghae Province. The facts show that goshawk lives in the whole area of the country in all seasons.

And they observed goshawk nests on high trees like pine and larch at the Ogasan Nature Reserve and the Phothaesang Sanctuary in the northern part of the country.

In particular, they found dozens of goshawk nests, including the one with five eggs to the maximum, at the Toksong Goshawk Reserve, which was arranged in Toksong County of South Hamgyong Province in 2015.

KCNA

COSTUME

Dressing custom of Korean nation

A Western figure, in an international meeting of women, described the Korean chima (skirt) and jogori (jacket) as clothes of legendary fairies.

Chima giving a significant effect of solidity and jogori which is pulled upon it gives a strong impression to viewers.

The balanced harmony of partial lines including silhouette, collar, hem of jacket and breast-tie also add natural beauty to the traditional Korean women's clothes.

Two strips of long breast-tie, a white strip attached to the collar and other decorative factors, which represent neatness and cleanliness, also bring the unique beauty of form of general attire into bold relief.

The characteristic feature of Korean clothes lies in the harmony of beautiful and soft colours.

Women would opt for clothes in such sedate and bright colours as light pink, light green and cream in spring, and jade green, light blue and other refreshing coloured dresses in summer.

By Om Ryong PT



JON KWANG HUN / THE PYONGYANG TIMES

SCENERY

Pyongyang's Moran Hill tinged with spring colours



SONG TAE HYOK / THE PYONGYANG TIMES

A pavilion on Moran Hill stands in harmony with flowering trees in spring.

Moran Hill sitting on the banks of the Taedong River which flows through Pyongyang has been widely known as a scenic spot and pride of the city from olden times.

The highest point on the hill is Choesung Pavilion with an altitude of 95 metres. With the pavilion as the centre, several peaks rise along the ridgeline stretching out to the north, south and west. A bird's eye view of these peaks resembles a peony about to come into blossom, hence the name Moran.

LEGEND

Admiral Ri Sun Sin's legacy goes down in history

"I feel sorry for Nelson if my military exploit is compared with that of the British god of war, but I will accept that excessive compliment. However, it is absolutely unreasonable to liken me to Admiral Ri Sun Sin of Korea who is a real god of war. When compared with him, I'll be nothing but his noncommissioned officer," this is part of remarks made by Japanese Admiral Togo Heihachiro who leaped suddenly into fame by defeating the Russian fleet in the Russo-Japanese war.

Admiral Ri Sun Sin (1545-1598) annihilated the strong Japanese aggressor forces in the sea by skilfully commanding Korean naval forces during the Imjin Patriotic War (1592-1598), contributing greatly to the victory in the war.

Since he passed the military service examination in 1576, he had held several government positions including the commander of the combined fleet consisting of the naval forces of three provinces.

Led by him, the Korean naval forces sank 40 enemy ships and killed or injured lots of enemies in the Okpho naval battle in

The curious and delicate landscape, thick foliage and beautiful azaleas and other blossoms—all these in various colours blend with each other to form the spring scenery on the hill, which is really a sight to behold.

Moran Hill has long been counted as best among the scenic spots of Pyongyang and, especially, the open view from Ulmil Pavilion in spring and the sight of the rising moon enjoyed at Pubyok Pavilion were the most outstanding among the

spectacles of the hill.

Around this time of the year, the hill is crowded with artists and art enthusiasts who try to create works of art. Although done on different themes and brushworks, all of them depict Moran Hill in full-blown spring.

Such time-honoured historical sites as Choesung, Chongnyu and Pubyok pavilions and Chilsong and Hyonmu gates in spring tints attract photographers and fans.

By Song Jong Ho PT



apart from the turtle-shaped armoured ship, the first of its kind in the world.

On the basis of advanced shipbuilding technology, he and marine engineers built the legendary battleship in those days. As it was solid and safe in its structure, the ship could not be destroyed or burnt with the firepower available at that time. And since it was fast, equipped with powerful weapons, it could destroy any enemy warships.

Admiral Ri led the Korean fleet to sink 59 Japanese ships out of 73 in the battle in the sea off Hansan Island and kill or wound thousands of Japanese invaders, and thus frustrated the enemy's "simultaneous advancing plan of naval and land forces".

This and other naval battles marked an important occasion in introducing a new art of war in the history of naval battles in the middle ages.

In November 1598, Admiral Ri Sun Sin fell in action as he commanded the decisive battle against the Japanese main fleet which was making a general retreat.

The name of Ri is unthinkable

By Choe Yong Nam PT

