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ANNIVERSARY

Greater victory in store for DPRK led by brilliant commander

On July 17 2012, the Korean people held Supreme Leader Kim Jong Un in the highest esteem as Marshal of the DPRK.

The conferment of the DPRK marshalship on the Supreme Leader was a landmark event of great significance in firmly maintaining the lifeline of the revolutionary cause of Juche and hastening the final victory of the Korean revolution.

Over the past eight years the Supreme Leader has been at the forefront of the campaign to defend socialism for the country and people as the DPRK Marshal, providing a powerful military guarantee and demonstrating the country's dignity and might to the world.

He guided the artillery live firing drills of service personnel on the front line and visited island-defending army units and dangerous frontline army posts to instil peerless valour in the soldiers.

Under his outstanding and meticulous care, the Korean People's Army could exalt its might as an invincible army

which is possessed of almighty Juche-based war tactics and rich experience and equipped with means of both offensive and defence that are capable of fully coping with modern warfare.

While inspecting the major sectors of a powerful socialist country building, the Supreme Leader wisely led the efforts of the Korean people and KPA service members to create a new spirit of the times in the van.

The seasoned leadership of the Supreme Leader, who made sure that the KPA was armed with the revolutionary spirit of Paektu, the spirit of the blizzards of Paektu, and set an example of the times as the pacesetter and standard-bearer of the general offensive, was the major source of strength that ushered in the heyday of construction and a new history of "gold seas" and made the flames of leap forward flare up throughout the country.

His determination to make everything for the people's joy and happiness flawless even in the distant future enabled

monumental structures, such as Ryomyong Street, the Sci-Tech Complex, Paektusan Hero Youth Power Station and Yangdok Hot Spring Resort, to spring up on this land like mushrooms after rain.

By dint of outstanding political ability and through energetic external activities, he firmly safeguarded peace and stability on the Korean peninsula and the rest of the world and put the dignity and external prestige of the DPRK on the highest level.

Indeed, the days and months of the past eight years were a proud period when great victory and epochal changes were effected under the leadership of the great, brilliant commander in the drive to defend socialism and the building of a powerful nation.

Greater victory and glory are in store for the Korean people who are advancing in high spirits by redoubling efforts under the wise guidance of the Supreme Leader.

By Pang Un Ju PT

MESSAGE

Kim Jong Un sends greetings to President of Montenegro

Kim Jong Un, chairman of the DPRK State Affairs Commission, on Monday sent a message of greeting to Milo Djukanovic, president of Montenegro, on the occasion of its national day.

The DPRK Supreme Leader in his message expressed the belief that bilateral friendly

relations would develop in conformity with the desire and aspirations of the peoples of the two countries, and wished the president and the people of Montenegro greater success in their work for the prosperity of the country.

KCNA

CONGRATULATION

Blessings come from foreign personages

Supreme Leader Kim Jong Un received baskets of flowers from Jin Xian, director of the Board of Directors of the Kim Il Sung-Kim Jong Il Foundation, and Zhan Xueyan, member of the foundation, on Tuesday on the occasion of the 8th anniversary of the conferment of the title of the DPRK Marshal on him.

Atul Malhari Gotsurve, Indian ambassador to the DPRK, presented a basket of flowers and a congratulatory

letter to Supreme Leader Kim Jong Un on the same occasion.

They were handed over to an official concerned on Thursday.

Jin Fengyi, Lin Yan and Tang Yiming, members of the China Dandong branch of the Kim Il Sung-Kim Jong Il Foundation, also sent flower baskets to the Supreme Leader on the same day.

KCNA

STATEMENT

Abe regime set to perish like tiger moth

"The main purpose of Japan's finding fault with us in the recent white paper is to legitimize its move towards becoming a military power and wresting others' territories on the pretext of threat' from us," a spokesman for the DPRK Ministry of Foreign Affairs told KCNA on Wednesday.

As to the fact that Japan has completely thrown off the veneer of "exclusive defence" and is openly clamouring for the possession of "capability to attack enemy base" aimed at preemptive strike, against the backdrop of its expanded military strength, he said the countries in the vicinity of Japan are following this move with stern eyes and keeping a close watch with due vigilance.

The reckless and extremely dangerous military moves of the Abe regime will light the fuse of undermining regional peace and stability and invite a miserable consequence of hastening the fall of the regime itself like a foolish tiger moth flying into the flame only to perish, he noted.

the DPRK, so as to abuse it for achieving their sinister political and military purposes, he said.

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STATEMENT

Pompeo slammed for China bashing

"We sternly condemn Pompeo's extremely dangerous remarks against China," a spokesman for the DPRK Ministry of Foreign Affairs told KCNA on Wednesday.

The statement came after US Secretary of State Pompeo insisted on July 13 that China's claim to the South China Sea is totally illegal and the US and its allies and partners share a common interest in countering the unprecedented threats from the Communist Party of China.

According to the spokesman, Pompeo insulted the CPC as he labelled the Chinese media as its "propaganda machines", COVID-19 spread as a "crisis caused by" it and a 5G telecommunications business as its "tool". Worse still, he

asserted, the American top diplomat revealed his deep-seated prejudice against the CPC to such an extent as to spread the wild rumour that the CPC abuses the anti-racist demonstrations now at its height in the US in a bid to justify its system.

As to the reason why Pompeo is recklessly maligning the CPC, linking every occurrence to it, the spokesman said it is aimed at undermining the confidence of the Chinese people in the CPC, tarnishing its international image and checking China by dint of ceaseless harassment from within and without.

He also decried Pompeo's anti-China remarks, saying "No new China without the Communist Party" is the faith and truth embedded

in the minds of the Chinese people.

We have already grasped on several occasions that Pompeo approaches our socialist system led by the Workers' Party of Korea from the morbid and upside-down viewpoint he holds towards China, he said.

The more maliciously Pompeo slanders the CPC and the socialist system led by the party, the more clearly it will highlight the invincibility of the CPC and the superiority of the socialist system, he noted.

"Pompeo should not meddle in other's affairs regardless of time only to muddle up public opinion and cause noise pollution," he demanded.

KCNA

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DISEASE CONTROL

Nation intensifies fight against COVID-19

The DPRK is now intensifying its efforts to prevent the outbreak of the worldwide epidemic.

The emergency anti-epidemic headquarters at all levels have critically analysed and reviewed the faults revealed in the past anti-epidemic efforts and are taking practical measures to maintain the national emergency anti-epidemic system more strictly and increase the intensity of their grasp, control and fight without slackening the anti-epidemic measures even a little.

More elaborate and appropriate steps have been taken for the blockade of borders, airspace and territorial waters of the country, the

central core of the emergency anti-epidemic measures.

Under the unified command of the central anti-epidemic headquarters the local ones in the areas with borders and coasts are tightening the supervision and control to maintain the rigid blocking and ensure that the cargoes that are brought in are thoroughly inspected, quarantined and handled at the approaches of border bridges, ports and railway stations in line with the requirements of the emergency anti-epidemic regulations.

With the rainy season approaching, the emergency anti-epidemic headquarters at all levels are keeping closer

observation of the coasts and rivers as part of the anti-epidemic efforts, while paying close attention to the movements of birds and other animals. At the same time, they continue to promote education and tighten up the grasp and control to ensure the working people, youth and students strictly observe the anti-epidemic rules.

They also closely work together with public health institutions to carry out medical examinations and observation of all residents and students who are now on summer vacations in a planned way and responsibly.

By Kwon Hyo Song PT

Nationwide

New youth open-air theatre built in Haeju

The Haeju Youth Open-air Theatre has newly been built in South Hwanghae Province.

Located at the foot of beautiful Mt Suyang, it is equipped with a 5 000-seat auditorium, a conference room, rooms for hobby group activities, a dressing room, a large electronic board, sound and lighting facilities and others.

The builders planted turfs and trees in a large area at the same time to add beauty to the surrounding landscape.

Wonsan Youth Power Station boosts power production

Power production has more than doubled as against the same period of last year at the Wonsan Youth Power Station in Kangwon Province.

The development and introduction of technical innovation plans remarkably shortened the period of maintenance of generators at power station unit 1, improved the level of deposition and precision processing and thereby increased the efficiency of water turbine by over 5% more than previously.

It also made a general digital measuring and protective device to ensure the stability of power generation and a new type of error prevention device to maximize the operating rate of generators.

It is now pressing on with the introduction of a device for measuring the water level of spillways and a digital pressure gauge.

Scores of units certified for good quality management

According to information

available from the Administration of Quality Management, nearly 100 production processes of over 40 units in different sectors, including light industry, electronics industry and public health, were certified for the quality management system, food safety management system and quality and GMP-certified as well in the first half of this year. In addition, well over a hundred products of nearly 30 units were registered as February 2 Products.

Series of Complete Book on Korean Linguistics published



Books "Korean Phraseology" and "Korean Sentence Self-interpretation", series of "Complete Book on Korean Linguistics", have been brought out.

The complete book, embracing all the achievements made in research into Korean linguistics, began to be published in 2006.

"Korean Phraseology" explains the essence and general and linguistic characteristics of idioms, branches of idioms, linguistic practice and idiom, while "Korean Sentence Self-interpretation" deals with the basic grammar for self-interpretation of Korean sentence, principle of self-interpretation of Korean sentence according to the structural and typological characters of Korean sentence, method of self-interpretation of Korean sentence and others.

The new strain of potato, whose per-hectare yield is 1.2 times and which is highly resistant to blights, contains dry substances 12 percent more than before and has shorter growing period. Therefore, it is estimated as a variety that can ensure the safe farming of later crops under the climate condition of the northern alpine area.

Studio produces over 1 700 science films in 50 years

The Korean Documentary and Science Film Studio has produced over 1 700 science films over the past five decades.

The science films contributed to showing the advantages and validity of Juche-based farming methods and increasing agricultural production and played an important role in stepping up the programme of putting the national economy on a Juche, modern and scientific basis, improving the technical skills of working people and increasing production.

The studio also brought out lots of science films which helped improve public health and showed the features of socialist civilization and fine traits of the Korean nation.

This year alone, it has made a series of science films which explain scientific and technological problems in plain language so that everyone can easily understand them.

New variety of potato bred

The institute of agricultural science in Ryanggang Province has bred a new variety of potato with high productivity which is suitable for the features of alpine area and solved sci-tech problems arising in its cultivation.

He inspected the Hwanghae Iron and Steel Complex.

Looking round the site where a large oxygen plant is being installed, he stressed once again the

FRUIT SUPPLY

First harvest of peaches supplied to Pyongyang citizens

The citizens of Pyongyang are being supplied with the first peaches harvested in Kwail County of South Hwanghae Province, a leading fruit production base.

On July 12 the fruit supply convoy arrived in Pyongyang and filled everywhere with the aroma of peaches.

Commercial service units are scrupulously organizing the work for transport and service in order to make the fruit immediately reach schools for orphans, baby homes, orphanages, old people's homes and all families.

KCNA



Lorries carrying the first harvest of peaches arrive in Pyongyang.

INSPECTION

Premier visits steel complexes

Premier Kim Jae Ryong, member of the Political Bureau of the Central Committee of the Workers' Party of Korea and member of the DPRK State Affairs Commission, inspected the Chollima Steel Complex.

Making the rounds of the steel workshop, he gave a pep talk to the smelters engaged in a drive for increased production and referred to the need to strictly meet technical requirements in ensuring the normal operation of electric furnaces and production.

As he underlined the need to pay primary attention to ensuring the quality of iron and steel at the 6 000-ton press workshop, he took measures for managing and operating all production processes as required by technical regulations.

In the meantime, the Premier visited the Biomedicine Institute of the Academy of Medical Sciences and the Bioengineering Branch of the State Academy of Sciences.

He inspected the Hwanghae Iron and Steel Complex.

Looking round the site where a large oxygen plant is being installed, he stressed once again the

importance of the project in perfecting its foundation for production.

At the steel workshop he discussed technical issues arising in operating the blast furnace as required by standard regulations and fully ensuring the tapping temperature.

In the field consultative meeting he took measures to speed up the installation of the large oxygen plant, increase the operation rate of the electric furnace and boost steel production.

As he visited the Songnim Port, he referred to need to guard against inattention, indifference and chronic attitude to the fight against the epidemic and intensify anti-epidemic work.

KCNA



Premier Kim Jae Ryong (second from left) looks round the Chollima Steel Complex.

LIGHT INDUSTRY

To improve people's living standards

Projects underway to upgrade foodstuff industry

"Recently, the projects for the construction and reconstruction in the foodstuff industry sector are being pushed dynamically," said Phyo Jong Gum, chief of an office at the Ministry of Light Industry.

According to her, each province goes on with the construction of spring water and kimchi factories.

The Taesongsan Spring Water Factory in Pyongyang, the Maebongsan Spring Water Factory in Kangwon Province, the Hwangchoryong Spring Water Factory in South Hamgyong Province and others have been built at the places with quality water in every province to provide locals with quality spring water.

Kimchi factories have also been built in all provinces to produce full bok choy kimchi, sliced kimchi, pickled sliced radishes seasoned with pepper and other kinds of seasonal kimchi so that people can have an affluent diet.

According to the chief engineer of the Sinuiju Kimchi Factory in North Phyongan Province, the factory has been

producing a dozen kinds of winter and summer kimchi though it is not so long since its inauguration.

Phyo Jong Gum said that efforts are also being made to modernize an exemplary locally-run factory in each county, city and province.

The condiments factories in every province are working hard to improve the hygienic safety of products and speed up the repair, reconstruction and modernization of equipment and production

processes.

The Yangdok Wild Fruit Processing Factory in South Phyongan Province leads others in producing a variety of processed wild fruits.

Notable achievements have been made in renovating the Paeksong and Amnokgang general foodstuff factories in South and North Phyongan provinces and the Susongchon General Foodstuff Factory in North Hamgyong Province.

By Yun Kyong II PT



Fried potatoes roll off the production line at the Unha Daesong Foodstuff Factory in Pyongyang.

New types of shoes turned out

Footwear factories in all parts of the country direct much effort to the production of new types of shoes.

"We put primary efforts into the production of designs. The annual number of designs created by the management bureau amounts to over one thousand," said chief engineer Kim Chol Myong of the footwear industry management bureau of the Ministry of Light Industry.

According to him, since

2016 they have compiled a collection of hundreds of footwear designs that have been appreciated among those created in a year and introduced them into factories across the country.

In the course of this, new products that have been completed in the engineering aspect and whose colour matching, ornamental effect and commodity value have been improved are being produced.

The Ryuwon Footwear Factory has developed some 670 kinds of designs and 440-odd sorts of shoes and introduced more than 210 of them into production since 2015.

Among them, the trainer for adults whose sole resistance to wear and cold has been promoted with the application of thermoplastic elastomer and the one for children which ensures the stereoscopic decoration by applying multicolour screen printing won the medal of top quality in 2018.

The footwear show that has been held every year since 2018 gives a strong impetus to the development of new products. The enthusiasm of footwear production units to conceive and design distinctive shoes and constantly update production processes is growing high with the passage of time, said Chae Chol Min, head of an office at the footwear industry management bureau of the Ministry of Light Industry.

In the autumn national footwear show held in October 2019, nearly 50 units presented over 182 500 products of about



Various types of shoes are produced in the Wonsan Leather Shoes Factory.

Factories in high gear to produce school things

of products.

Meanwhile, the Pyongyang Kim Jong Suk Textile Mill, Mangyongdae Revolutionary Site Souvenir Factory, Phyongsong Rubber String Factory, Phyongsong Artificial Leather Factory and many relevant units are turning out such materials as canvas, zipper, tape and synthetic leather needed for the production of school bags.

"Preparations for producing various kinds of school things are also being pressed on," said Jo Chung Il, a staffer of the Ministry of Light Industry.

According to him, dozens of kinds of school things have already been chosen for educational institutions ranging from primary schools to universities on the basis of in-depth survey of the demand for school supplies according to classes, and their quality will be as good as Haearagi-brand school things which were supplied to all the preschoolers across the country last February.

In Pyongyang alone, the Pyongyang School Supplies Factory and some other factories have set up various processes to produce hundreds of thousands of clipboards, pencil-cases, crayons, watercolours and erasers.

By Jong Hwa Sun PT



A technician discusses how to improve the quality of satchels with workers at the Pyongyang Bag Factory.

1 300 kinds.

The Wonsan Leather Shoes Factory presented over 10 000 products in 150 kinds, 80 kinds out of which were newly developed.

The women's footwear show was held last May and the children's footwear exhibition has been running since June 28.

Many products presented to the shows won popularity as they improved the appearance quality and the wearing

stability by applying the form of outer rim convenient to wear.

Progress has also been made thanks to the positive acceleration of various projects in many factories to ensure the domestic production of and recycle raw and other materials for footwear production and to remodel equipment and processes into labour- and electricity-saving ones.

By Kim Il Jin PT

MINING

Ore dressing plant undergoes facelift

The lead and zinc ore-dressing processes based on air mechanical flotation machines have been set up at ore dressing plant No. 3 of the Komdok Mining Complex, a leading non-ferrous minerals producer in the DPRK.

"The dressing plant was established in the 1980s with long rows of machines," said an official of the complex.

According to him, lead and zinc ores were dressed mainly by mechanical flotation machines in the past.

However, the machines could not be made large-sized as there was a limit in its output of air needed for flotation process.

"Following the world trend of making flotation machines large-sized by adding extra air externally, we buckled down to the project for installing air mechanical flotation machines three years ago," said the chief engineer of the complex.

The complex carried out the project whose workload was as huge as that for the construction of a large factory, in collaboration with the scientists of the Central Mining Research Institute.

According to Jong Chol, director of the institute, the

technology of the air mechanical flotation machine had already been developed and introduced in a small way, but it was the first time for them to apply it to such a big mining complex.

The project was carried out in two stages.

An important matter in the project was to maximize the quality of ore concentration and the actual extraction rate with less investment under the actual conditions of the dressing plant.

After the design for the technical renovation of the flotation process was made, necessary equipment was manufactured and installed by the complex and the Tanchon Mining Machine Factory in a three-dimensional way.

Over ten kinds of jigs and equipment pieces were devised and introduced and lots of technical innovation plans and construction methods were applied in order to manufacture, assemble and install steel pipes and other articles weighing hundreds of tons and lots of machines.

The trial run for the first-stage project of the new lead and zinc ore-dressing processes based on air mechanical flotation

machines was successfully carried out in a matter of a few months.

While operating the processes, they confirmed the indices for ore dressing and set up an optimal flotation reagent system in line with the features of a new type of flotation machines, thus completing the second-stage project on a more advanced sci-tech basis.

As a result, the huge renovation project which was believed to take some years was carried out in a short period.

"The establishment of the new processes has made it possible to increase the actual concentration rate by over 2 per cent as compared to before while reducing the area for equipment installation and the consumption of electricity and labour by half and remarkably lowering the reagent consumption. In particular, many motors have become needless to save tens of millions of kilowatts of electricity a year," said the chief engineer.

The air mechanical flotation machine has been introduced into the Yongyu, Hyesan Youth and many other mines.

By Yun Kyong II PT

RECYCLING

PET waste recycling technology established

The architectural materials institute of the State Academy of Sciences has recently developed a technique that helps produce several kinds of basic organic chemical products from waste plastic bottles.

Today, when PET plastic waste is increasing at a fast pace, the environmental pollution by PET plastic waste is arising as a serious problem worldwide.

That is why different recycling methods have been developed to process waste.

The technique developed by the institute is to recycle PET plastic waste by a chemical method.

"An important thing in recycling PET plastic waste is the plastic dissolution process. Caustic soda, an alkaline catalyst with resolving property, is generally used here. But we have selected another substance instead of caustic soda," said Jo Jong Gil, section chief and lead developer.

His research team developed a catalyst and reagent that can substitute locally-abundant raw material for caustic soda and designed an original plastic dissolution process suitable for

it.

According to years of research results, it is said that the indices for recycling process, which has been optimized in the midterm examination, have successfully been confirmed.

In this process, high-purity ethylene glycol, benzene and others can be obtained from waste plastic bottles.

An additive that is used to make building materials can be developed from ethylene glycol.

The advantage of our technique is that it does not cause secondary pollution as even the waste from the recycling of PET plastic waste can be used as a material for heat insulation, said researcher Jon Kum Chol.

The recycling method of PET plastic waste was awarded a national patent and the product based on it was registered as a high-tech product.

By Chae Hyang Ok PT



Researchers work on a study of plastic bottle materials at the architectural materials institute under the State Academy of Sciences.

KIM HYOK CHOL

R&D

IT-based film editing system established

"We have made steady efforts in our research to ensure the precision and promptness of film editing, thus establishing a comprehensive film editing informatization system," said Choe Chun Hwa (pictured), a department chief of the information science faculty of Kim Il Sung University.

Films are edited with the help of special equipment or tools. However, there are some tasks that cannot be carried out with those editing tools.

"In the past, such tasks were done by the manual operation. As it required much labour, it brought troubles in film editing," said a film-maker.

Ten years ago, a special unit asked the department to resolve the issue of controlling the digital colour interpretation in film editing.

At that time, movies were shot using films and colour interpretation was controlled by relying on imported electric analogue equipment. Therefore, editing time was decided according to the operation and specifications of the device.

Choe Chun Hwa, together with lecturers of her department and other researchers, conceived an idea of controlling colour interpretation by digital means, rather than by the conventional device, and completed a mathematical model involving all functions of the imported ones in a few months. And they developed a new-type digital colour interpretation control system by adding a preview



function to it.

Choe buckled down to research for markedly improving film editing in terms of speed and quality.

In the course of this, she developed an audio and image synchronized incoordination retrieval program of high degree of difficulty, dynamic image database retrieval program and system of converting black-and-white film data into colour ones to shorten the time in film editing while ensuring precision.

She also came up with an original idea for shortening the time of rendering that required much work in film editing and established computer network security and website management systems.

She has been leading her department for nearly 20 years as a competent research group in the visual information processing field.

By Jong Hwa Sun PT

RESEARCH

Students find new materials for solar cells

International academic journals, *Physical Review Materials* and *Journal of Physical Chemistry*, carried study papers of Ko Un Hyok and Hwang Suk Gyong, students of the Faculty of Materials Science at Kim Il Sung University, in their recent editions respectively.

Ko and Hwang, co-authors, in their paper explained their first-principles study on material properties and stability of the inorganic halide perovskite solid solutions that change according to the content of iodine and bromine.

The silicon solar panel produced by the traditional method costs high, but it is not high in solar cell conversion efficiency.

The paper explained a method of finding ideal materials for inorganic halide perovskite solar panel which cost low and have high efficiency.

Hwang, in her paper titled "Influence of Ti/V Cation-Exchange in $\text{Na}_2\text{Ti}_3\text{O}_7$ on Na-Ion Negative Electrode Performance: an Insight from First-Principles Study", explained the first-principles study on how the properties of cathode material get better in case Ti cations are replaced with V cations in sodium titanium oxide, or NTO, a cathode material for Na-ion battery.

Many research projects are now under way across the world to develop battery using sodium instead of lithium.

The paper focuses on selecting cathode materials suitable in case Na is used.

Hwang made a model in which Ti is exchanged with V in sodium titanium oxide and designed the electrode voltage and electronic structure.

By Kim Il Jin PT

ARCHITECTURE

Energy-saving green street

As the dog days of the summer set in, the temperature reaches around 30°C.

But they do not feel the heat of the day in the shops, nurseries, kindergartens, schools and other public buildings and apartment houses on Ryomyong Street in Pyongyang.

The energy-saving and green architectural technologies introduced into the structures protect them from the boiling heat.

What should be mentioned above all is the geothermal heating and cooling system.

An air-conditioner sometimes removes moisture or decreases temperature too much to dry up people's nasal cavities or have them catch a cold, said Ri Chang Hui, a resident in Ryomyong Street. But the geothermal heating and cooling system controls the temperature and humidity appropriately.

A primary school on the street is very noticeable for its special south-facing windows which have shading devices to screen the direct rays of sunlight in summer.

The device is based on the cooling load reduction technology using light shelf. It screens the sunlight when it is too bright in summer to prevent the glare of direct rays and lowers the indoor temperature and lets

in much more sunlight in winter to raise the temperature.

The roof greening technique adopted in Ryomyong Street also met with public approval.

The roof greening which is favourable to environmental protection can also raise the indoor temperature by 2.5°C in winter and decrease it by 4.5°C in summer.

On the platform storeys of skyscraping apartment houses and the roofs of commercial service buildings, *Thuja orientalis*, *Sabina chinensis* and other evergreen trees and different flowering shrubs like azaleas grow to add characteristic beauty in each season, said Ri Hye Jong, a senior citizen living in the street.

The hydroponic roof

greenhouses called an "urban vegetable factory" are drawing special attention.

Built on the roofs of public buildings, kindergartens and nurseries, they not only produce vegetables but also add scenic beauty to the street and that is why they are enjoying popularity as "places profitable inside and outside".

Besides, many green architectural technologies and materials were introduced into the construction of Ryomyong Street including the sunlight-induced illumination system, sound and light sensing illumination technology and geothermal ventilation technology.

By Ri Sung Ik PT



Ryomyong Street in Pyongyang to which energy-saving and green technologies have been applied.

LEISURE

Golf training course good for rest plus exercise

"It is so exciting to hear the sound of hitting the golf ball. No one will be able to enjoy such a thrill without experiencing it," said a customer at the Pyongyang golf training ground.

The golf training ground is located in the vicinity of Sports Village on Chongchun Street in Pyongyang, presenting a sharp contrast to the surrounding environment.

The ground covers an area of over 20 000 square metres surrounded by thick forests.

At the request of customers,

instructors provide them training, while telling them general knowledge about the game.

Kim Chol Ryok, technical service provider and also a good golfer at the training ground, tells customers interesting stories about golf. Although golf is known to have originated in Europe, he said, the game of *thagu* similar to golf came into being in Korea earlier than golf, that is, before the 14th century. The club was about one metre long and the ball was as big as

an egg with each hole being as big and deep as a bowl, and the game was all the rage at the time.

"Golf clears our mind and body like the clean environment of this training place. Abandon your desire to get scores and concentrate all your mind on correct posture and movement, then you will make it. This is also essential in work," said a veteran golfer in his middle age.

"In golf, hitting the small ball in a standing position is not everything. It is an exercise that requires the movement of all pelvises. I found it hard physically in the first month, but I am now full of vim and vigour," said a young patroness.

The training ground seems to be covered with a green carpet. There are targets and target areas at the distances of 50m, 100m and 200m and it is said even those who have undergone training for a certain period find it hard to hit all the targets every time.

Therefore, through the training, customers are said to cultivate perseverance and willpower as well.

After training they enjoy various services at such public service facilities as pine sauna, foot and body massage rooms and indoor and outdoor restaurants that serve special foods.

By Kim Rye Yong PT



Visitors practise golfing at the Pyongyang golf training ground.

SONG YONG SOK

EDUCATION

Honour prize winning movement in full swing

According to information available, over 3 300 middle school graduates have won the July 15 Honour Student Prize this year.

The honour prize is awarded to the students of graduating class at senior middle schools who have won top honours throughout their school days.

Students regard it as a great honour to win the prize, and therefore the movement to win the prize is gaining speed at each school.

"The zeal for winning the July 15 Honour Student Prize is very high among students. They work hard not only to improve their scholarly performance but also to have noble spiritual and moral traits and strong physical strength. They also perform lots of laudable deeds of helping and leading one another forward to study well all together," said Ri Myong Jin, section chief of the Central Committee of the Kimilsungist-Kimjongilist Youth League.

Students at Pyongyang Middle School No. 1 take the lead in this effort.

New teaching methods have

been created in succession and students prepare themselves as proactive learners and searchers to improve their knowledge day by day.

With primary attention being focused on further improving the scholarly performance and the atmosphere for study, lots of prize winners have been produced this year at many schools.

Schools organize work scrupulously to generalize the successes and experiences gained in the course of conducting the movement for winning the July 15 Honour Students Prize among the secondary educational units across the country.

Segori Senior Middle School in Pothonggang District, Pyongyang, which has produced many prize winners every year, organizes meetings to congratulate top students and present their experiences on a regular basis, so as to heighten the will and enthusiasm of students to study and kindle the flames of collective competition.

By Kwon Hyo Song PT

Priority given to higher education in chemistry

With activities to make the structure of the chemical industry Juche-oriented and modern and put it on a sustainable development track gaining momentum, universities are directing big efforts to the training of talents needed for the chemical sector.

The faculty of chemistry of Kim Il Sung University is working out curricula after integrating and arranging the courses of study afresh.

What is noticeable is that the curricula have been mapped out to increase the proportion of experiments and practical training so that students can develop abilities for designing chemical processes, manufacturing equipment and applying information technology by themselves, and to reflect cross-disciplinary subjects in the pedagogical order.

Especially, they have been drawn up to make sure that experiments and practical training are done for several months at industrial establishments.

"The practical training which students do in production sites for a certain period of time in succession is an effective method that helps them participate in education, research and production alike," said an official of the faculty.

Meanwhile, the faculty

demands freshmen acquire the methods of studying and researching documents and the computer simulation process according to relevant research tasks so that they can successfully carry out research tasks in higher grade.

The faculty of chemistry in the University of Sciences is updating curricula to make all the students have comprehensive practical abilities for the chemical industry sector.

To this end, it selects the subjects for equipping students with practical abilities to design the chemical process of a pilot plant needed for process development and research during their university days, so as to reflect them on new curricula.

Hamhung University of Chemical Industry and Sunchon Ri Su Bok College of Chemical Industry make constant efforts to create new teaching methods conducive to enhancing students' conceiving and application abilities and encourage lecturers to get familiar with the reality in detail in production sites and seek ways for further increasing the proportion and effectiveness of the education of practical training to apply them to practical teaching.

By Chae Hyang Ok PT

INFORMATION

Agency works to diffuse latest sci-tech information

The Central Information Agency for Science and Technology assumes the mission to promptly and accurately disseminate the latest data on scientific and technological successes achieved at home and abroad for the scientists and technicians in industrial establishments and the agricultural sector and leading officials of different economic sectors across the country.

It deals with a wide range of sci-tech data including those on such core, basic technologies as IT, nanotechnology and bioengineering and those on the trend of development of technology.

It maintains a well-knit database by analysing and processing an enormous amount of information so that users can have access anytime.

"In recent years we have added new analytical data on the latest sci-tech hits and their development trend to the databanks of hundreds of units across the country, and they are favoured by users," said Han Tong Su, director of the agency.

"Our complex owes a great deal to the Central Information Agency for Science and Technology in its technical upgrading and regular production," said Kim Yong Chol, deputy manager of the Namhung Youth Chemical Complex.

In addition, the agency has

updated its homepage for an information retrieval and management system to help users increase creative power.

"The sci-tech data order service system which has recently been added to the homepage provides information seekers and owners with the site for satisfying their needs through discussion. It is now a favourite haunt of many visitors," said Ko Nam Su, section chief of the agency.

The users of this homepage are on the increase with each passing day as more than 400 000 pieces of data conducive to promoting production and developing technologies have been added.

The agency also publishes over 10 kinds of sci-tech journals



Scientists work to establish a database for the diffusion of sci-tech information at the Central Information Agency for Science and Technology.

MUD THERAPY

Highly efficacious balneotherapy at sanatorium

The Songchon Onjong Sanatorium of the Pyongyang University of Medical Sciences Hospital nestles at the sunny foot of Mt Sunga in Songchon County, South Phyongan Province.

The hot spring there contains high contents of radon, sodium, calcium and 24 other mineral

substances. Its daily gush is 53 cubic metres and temperature is 45.5 degrees centigrade, which is very suitable for spa bath.

Also called radon spring, the hot spring is very effective for the treatment of nervous, skin and joint disorders, circulatory and digestive troubles, women's diseases and postoperative and

traumatic sequelae.

At the medical facility fully provided with treatment conditions and living environment, the patients mainly bathe in the spring water, have showers of the water, drink it and receive underwater massage and they also undergo such functional therapies as manual technique, correction, massage and exercise therapies and receive such medical treatment as lavage of the colon, stomach and vagina with the mineral water.

"The main ingredients of the hot spring stimulate the skin and get into blood through the skin, mucous membranes in gastrointestinal tracts and alveoli to act on the whole body," said director Ri In Chol.

"A treatment period is 30 days, divided into the terms of adaptation to the water, manual correction and rest. The improvement rate is nearly 90 percent."

"In this hot season doctors



Doctor gives a patient a massage at the Songchon Onjong Sanatorium.

LINGUISTICS

Some excellent features of Korean language

Language is one of major criteria characterizing each nation.

The Koreans have developed their own brilliant culture on their land for a long historical period along with their language.

For its advantageous features, Korean language can be boasted of to the world.

It is very rich and diverse in vocabulary and expressions.

For instance, words and expressions indicating laugh alone number more than 800 according to the sound, appearance and other features of laugh, while even one colour can be expressed in many ways by dint of different expressions and fortis letters.

Korean is also highly developed in verb, idiom and proverb. In particular, no other languages are comparable to it in the abundance of symbolic adverbs.

Its sound is fluent and gentle and its pronunciations can express any complex and delicate feelings accurately and abundantly and even tongue

twisters freely.

It is a fluent language in that the accent, pitch and length in intonation go so well with each other to produce smooth tone, and it sounds gentle since the ratio of consonants to vowels in the makeup of the sound of words is nearly half-and-half.

It is also well-organized in grammatical structure. The categories of vocabulary is clearly distinct, *tho*, or Korean language suffixes added to aid the reading of Chinese texts, is used precisely, word-formation is vivacious and grammatical categories are systematically differentiated.

In addition, the order of words in sentences is smooth and the style is polished.

Korean alphabet is simple to learn and very expressive.

The Korean people are proud of such an excellent language and always use it in their everyday life.

Standard Korean is the Pyongyang dialect.

By Kwon Hyo Song PT

HARMONY

Good neighbours

"I think the whole country can be harmonious when families and neighbourhood units are harmonious. Our neighbourhood unit has developed into a harmonious whole, which owes much to the strenuous effort of its chief," said Hwang Myong Bok, a resident of neighbourhood unit No. 86, Jangsan-dong, Sosong District, Pyongyang.

Kim Ok Hwa, who has been working as head of the neighbourhood unit for a dozen years, takes good care of every neighbour as her own.

When a newly-wed couple had a baby, she prepared clothes for it and gave pep-talks to those who joined the army or entered universities after graduating from middle schools while presenting souvenirs to them.

"When I was taken to hospital due to acute appendicitis, I was very uneasy with the thought of my daughter as my husband was on a business trip. At that time, Kim Ok Hwa took good care of my daughter and housekeeping," said Kim Jong Hui, a resident of

the same neighbourhood unit.

Kim leads all her neighbours to live harmoniously.

Today, all the members of her neighbourhood unit share weal and woe, promoting harmony between them.

When a resident of the neighbourhood unit was suddenly hospitalized, doctors were moved as they saw the patient's neighbours often visit her and take good care of her.

With warm feelings interflowing between them, the harmony of the neighbourhood unit has further been fostered and all the residents share the same intention in the work for their unit. They set an example in the village as every household takes an active part in the work for sprucing up their village and doing good things for the country.

"All the residents of our neighbourhood unit are living on good terms like family members. I take great delight in it," said Kim Ok Hwa.

By Pang Un Ju PT

spend several hours a day in bath sections treating patients. We are often deeply moved by their scrupulous care and sincere devotion," said an inmate called Han Yong Suk. "They take warm care of us like their own kith and kin."

"I had walking trouble due to severe back pain and I could hardly move, so I came to this

sanatorium. A fortnight after, I have become able to stand on my feet and walk alone, thanks to the incredible effects of the hot spring and devotion of medical workers," said 33-year-old Kim Sung Il living in Pukchang County, South Phyongan Province.

By Kim Kum Myong PT

ANNIVERSARY

Declaration gives impetus to developing DPRK-Russia ties

July 19 marks the 20th anniversary of the publication of the DPRK-Russia Joint Declaration.

In July 2000, Russian President Vladimir Putin visited Pyongyang for the first time as Russian head of state at the invitation of Chairman Kim Jong Il. The top leaders of the two countries had a historic meeting and talks and signed the joint declaration on July 19.

Its adoption marked an important occasion which laid a solid foundation for developing

relations of friendship and cooperation between the two countries in an all-round way in keeping with the changed situation and the requirements of the new century.

The friendly ties of the two countries have been developed on a constant basis since the adoption of the joint declaration.

It is the consistent stand of the DPRK government to further expand and develop the bilateral strategic and traditional friendship to meet the demand of the new century and in the

best interests of the peoples of the two countries.

At present, the bilateral relationship is progressing favourably in line with the common aspirations and interests of the peoples of the two countries.

Supreme Leader Kim Jong Un had a historic meeting with Russian President Putin for the first time in April last year and forged good fellowship with him, bolstering up the bond of bilateral friendship a step higher.

To steadily strengthen and

develop the bilateral relations of friendship and cooperation is of great importance in ensuring peace and security of Northeast Asia and the rest of the world and achieving common prosperity. The two countries are working together to reject foreign interference and oppose high-handedness and arbitrariness in the international arena.

Today, the DPRK-Russia friendly relationship is giving impetus to the common prosperity of the two countries.

By Choe Yong Nam PT

independent state and preventing the refugees from returning home, and called on their compatriots to unite and fight against Israel's moves.

The secretary general of the League of Arab States branded Israel's plan for annexing the occupied Palestinian territory as an infringement of the Palestinians' sovereignty and international law.

Cuban Foreign Minister Bruno Rodriguez Parrilla recently said in his Twitter account that the only way to politically resolve the Palestine-Israel dispute is to establish an independent state of Palestine with the boundary line drawn before the June War in 1967 as the border.

By Om Ryong PT

strong opposition and military counteractions by neighbouring countries for doing so.

The US pressurizes Japan into bearing more expense for the upkeep of its forces in Japan, opening the farm products market, purchasing its weapons and others continuously. But it wants more and more from Japan and Japan has earned nothing but humiliation, insult and maltreatment for its decades-long subservience to the US.

If Japan continues to pursue subservience to the US, it will always remain a poor stooge for the US and bring self-ruin.

KCNA



Briefly

China

Xi stresses need to heed disaster prevention

Recently, Chinese President Xi Jinping issued an important directive on properly conducting flood prevention and disaster relief activities.

Today, when the country has entered an important period for the prevention of flood damage, Party committees at all levels and government organs should organize and mobilize broad sections of officials and people and take more effective measures to protect people's lives and property, he said.

Cuba

President denounces neoliberalism and capitalism

Cuban President Miguel Mario Diaz-Canel Bermudez in an international video conference on July 8 said that the present global economic and health crisis is being caused by neoliberalism and capitalism.

Asserting that the terrible and catastrophic consequences caused by the world-sweeping pandemic are not attributed to this deadly virus alone, he said that they originate from the policy of neoliberalism that has been maintained by the law governing market for a long time, as well as corrupt capitalism.

Russia

Senior diplomat expresses mistrust toward US

Russian Deputy Foreign Minister Sergey Ryavkov said on a TV programme on July 6 that the US has followed the path of dissolving several existing organizations and institutional mechanisms between Russia and the US one after another for seven to eight years.

Criticizing the US for breaking up many treaties and agreements recently, he said that Russia has not yet seen any partner with negotiating ability in the US and lost trust in the US as a partner.

Germany

US censured for sanctions threat

Germany has recently criticized the US which is threatening to apply sanctions to the European companies that are involved in the construction project of gas pipeline Nord Stream-2.

German Chancellor Angela Merkel said that the pipeline project is a matter related to the economy and the sanctions threat of the US does not coincide with the law enforced in Germany.

The German foreign ministry said that it is the stand of the government that the US' sanctions are an act of interference in the EU.

RARE BIRD

Winter bird found breeding in Mundok

Recently, breeding activities of shelduck known as a winter bird were observed for the first time on Yo Islet belonging to the Mundok Migratory Bird Reserve in the DPRK. The bird reserve was registered as a Ramsar Site, the first of its kind in the country, and in the Network Site of the East Asian-Australasian Flyway.

Twenty-two adult shelducks were found foraging for food and resting their bodies during an intensive survey of avifauna at the reserve on the west coast of Korea last June, said Ri Chung Song, section chief of the Biodiversity Institute under the State Academy of Sciences.

According to him, two female shelducks were taking care of five and six babies respectively, which were believed to have been hatched out early in May. This fact proves that the bird lives on the Korean peninsula in

summer, too, and offers a good possibility that the number of the bird might increase in future.

Shelduck is distributed in the vast areas from West Europe to central and northeastern regions of China. It had been known as a winter bird staying in groups on the Korean peninsula from late September to the end of April.

The observation of its breeding activities in summer is of academic significance in studying the change of water birds' habitats and taking measures for protecting migratory birds and wetland reserves.

The Mundok Migratory Bird Reserve is considered to be an ideal nesting place for birds as it has rich biodiversity and favourable physiographical position and conditions for bird inhabitation.

KCNA



Shelduck known as a winter bird is observed for the first time in the DPRK in summer.

ART

Artist renowned for animal paintings



A Cat on a Tree painted by Ri Am.

Ri Am, a talented artist in the 16th century, goes down in the Korean classical art history.

He painted flowers, birds and animals well, especially dogs and cats.

"A cat and a puppy", "A cat on a tree" and "A pair of wild geese" are known as his masterpieces.

"A cat on a tree" pairs up with "A cat and a puppy". It shows a cat chased by an angry puppy swiftly climbing up a tree and the puppy sitting down and looking up at the tree with its head tilting to the side as it has nothing to do after failing to catch the cat. At the moment, sparrows that alighted on the tree are startled to fly in the air and down below another puppy with a feather in its mouth goes somewhere as if it has nothing to do with it.

Though the content of the painting is polarized, animals on the picture are all so cutely and lovely depicted that it does not cause any tension, but rather brings a smile to the faces of viewers, making them feel as if

they are looking into the fairytale world.

PROFILE

Nation's first wrestling champ

Among the successful wrestlers of the DPRK, Kim Chol Hwan is the first world wrestling champion of the country.

He started learning the sport at the age of thirteen at Songyo District Juvenile Sports School and was later selected into the Pyongyang Sports Club and honed his skills.

His international debut at the Asian middle school students' wrestling championships held in Iraq in October 1977 was an occasion for him to demonstrate his outstanding ability.

He won all the matches in the 36kg category.

After seeing his matches, experts admired his amazing agility, physical preparedness and remarkable skills and rated him as a promising player.

Kim produced impressive results in several international events and cut a conspicuous figure as a wrestling star.



Kim Chol Hwan poses after winning an event at the 23rd world freestyle wrestling championships in October 1985.

He snatched golds in the 48kg category of the juvenile friendship international wrestling competition of socialist countries held in Bulgaria in August 1981, the international freestyle wrestling tournament in Hungary in March 1982 and others.

In those days, he promoted his competence as a wrestling champ possessed of various forties.

In September 1983, the 22nd world freestyle wrestling championships were held in Kiev of the then USSR.

Nobody had paid attention to Kim Chol Hwan, but he thrashed all the opponents and stood on the podium against common expectations.

He did not rest on his laurels but trained harder. He clinched another world championship in the next event in Hungary in October 1985.

Later, he worked as a coach at the Pyongyang Sports Club devoting his energy to training future wrestlers.

His eldest son Kim Kuk Song is currently working as a coach at the sports club following in his footsteps.

By Song Jong Ho PT

SCENERY

A chain of pools in Mt Kumgang boast fascinating view

In the summer rainy spell, waterfalls and pools at scenic attractions are unfolding exquisite sights to lure many.

In particular, Upper Eight Pools of Mt Kumgang offer a breathtaking view.

The pools located on Kuryong Falls of Outer Kumgang in the mountain consist of eight big pools as the name shows.

The pools that formed in a line on huge clean rocks through ages of erosion by the action of water appear to be an elaborate creation by humans and crystal-

clear water flows in and out of the pools one by one to spread out lying and wide waterfalls.

The water stream that runs out of the last pool flows along a narrow sloping groove and falls over a precipitous cliff before skirting round the bottom of the mountain reminding viewers of a precious sapphire necklace.

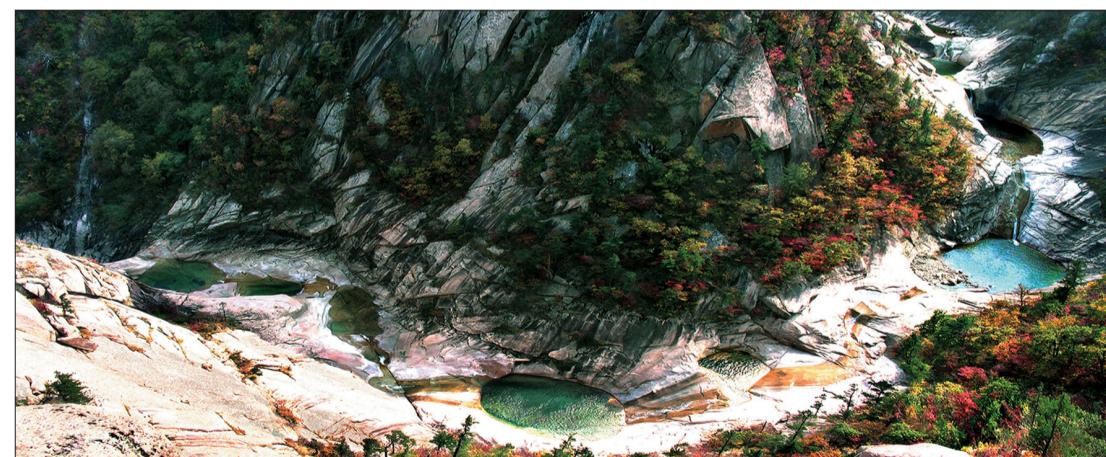
On both sides of the valley with Upper Eight Pools, there are steep precipices that are 100 metres above sea level and where pine, pine-nut and maple trees grow in crevices, and the

trees seem to be hanging in the air when seen from a distance and present a mysteriously charming view in harmony with the surrounding pools and cliffs.

The pools are associated with the legend of the "Eight fairies of Mt Kumgang" which goes that eight fairies from heaven used to have a bath in the pools.

According to a management official, the pools are under good protection as a natural monument.

By Min Chol PT



Upper Eight Pools in Mt Kumgang.

they are looking into the fairytale world.

They offer a glimpse into Ri Am's style of painting of having a good grasp of the habits and movements of animals with close observation and adding humorous touches to them.

He would draw flower trees, rocks, bamboos and wild

flowers in the background of the main theme in a concise and clear style to produce ornamental effects. This is also a technique common in his animal paintings.

Unlike the style of painting at the time when ink paintings were mostly produced, he not only liked to draw beautiful coloured

paintings full of national and local flavour, but also made each of them overflow with juvenile, cheerful and humorous tone, contributing to breaking new ground in the painting of flowers, birds and winged animals at the time.

By Kim Rye Yong PT

