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CONGRATULATION

Xi Jinping answers message from Chairman Kim Jong Un

President Xi Jinping, who is also general secretary of the Central Committee of the Communist Party of China, sent a verbal message to Kim Jong Un, chairman of the Workers' Party of Korea and chairman of the DPRK State Affairs Commission, in reply to his verbal message to him over the achievements made by the Chinese Party and people in their fight against the pandemic.

Saying that he received with great pleasure the warm and friendly verbal message from

the Chairman of the WPK, General Secretary Xi Jinping, in the message, noted that it fully showed the warm feelings of Chairman Kim Jong Un and the Korean Party, government and people towards him and the Party, government and people of China and amply demonstrated the solid foundation of the traditional China-DPRK friendship and its tremendous vitality.

He expressed his willingness to propel the steady advance and development of China-

DPRK relations in the new era and actively contribute to regional peace, development and prosperity by thoroughly honouring important agreements, enhancing strategic communications and intensifying exchange and cooperation between the two Parties and the two countries, and wished the Chairman of the WPK would achieve fresh success in socialist construction by leading the Korean Party and people.

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ECONOMY

Different sectors register boost in production

Innovative achievements are being made in different economic sectors.

Hydropower stations in Jagang Province have concentrated on technical modernization to improve the efficiency of generating facilities, thereby increasing power production over 1.3 times more than the same period of last year.

The Huichon Power Station has maintained and reinforced production processes and facilities and speeded up the technical upgrading to overfulfil its daily plan by over 50 percent and double power production as compared to last year. It has also made effective use of water by commanding production in an integrated way under the water management system.

The Kanggye Youth Power Station developed and introduced a digital temperature measuring device for the main transformer and a current measuring device for generator rotators.

Coal mines across the country increase production of coal to be supplied for thermal power stations.

The Inpho Youth Coal Mine of the Pukchang Area Youth Coal-mining Complex has secured lots of reserve coalfields by applying to all pits a blasting method which makes it possible to speed up tunnelling while lowering the consumption of explosives.

The Sinrip Coal Mine of the Kaechon Area Coal-mining

Complex has made and used a fume neutralizer, and the Kaechon Coal Mine has introduced a heat treatment method for hard alloys to prolong the service life of drill bits.

The Tukjang Youth Coal Mine of the Tukjang Area Coal-mining Complex and the Namyang Coal Mine of the Tokchon Area Coal-mining Complex have introduced an automatic temperature controller into coal ash analytical ovens so as to ensure promptness and accuracy in the analysis of coal quality.

The Puryong Ferroalloy Factory increased production 1.2 times as much as that in the same period of last year.

The factory has made up deficiency in electrodes by upgrading technical processes and correctly ensured particle size of crushed raw materials to overfulfil its daily plan by over 20 percent. It has also ensured accuracy in the mixing ratio of raw materials and fuel and reduced electrode replacing and smelting time to increase the output of molten iron per charge, while enhancing the quality and productivity of molten iron by improving the grade of ferroalloy.

The Haeju Steel Works has newly built a hot-blast cupola process and applied an oxygen blowing method to increase the production capacity over three times.

Light-industry factories have

developed well over a thousand kinds of new products this year.

The Pyongyang Kim Jong Suk Textile Mill has developed a new type of Tetron rayon cloth, printed cotton and gauze fabric.

The Songyo Knitwear Factory has developed and produced blankets, quilts and children's vests which preserve the softness and warmth of artificial fur, while the Hamhung Woollen Textile Mill has established a cloth-making process based on wool fibre to manufacture the material for overcoats.

The Pyongyang Hosiery Factory has also developed highly durable socks with sterilizing, antithrombotic and other effects.

Footwear factories across the country have developed over 280 kinds of shoes.

The Wonsan Leather Shoes Factory improved the shape and quality of various products by introducing a band decoration method based on laser cutter and solving technical problems arising in improving the flexibility and elasticity of shoe soles using locally available raw and other materials.

The Pothonggang and Ryuwon footwear factories have made a pneumatic foaming device and applied direct injection and various other methods to turn out dozens of kinds of spring and autumn trainers that are light, beautiful and convenient.

By Chae Hyang Ok PT

MESSAGE

WPK Central Committee sends greetings to Russian political parties

The Central Committee of the Workers' Party of Korea on May 9 sent messages of congratulation to ruling and major political parties of the Russian Federation on the 75th anniversary of Russia's victory in the Great Patriotic War.

They included the General Council of the United Russia Party, the Central Committee of the Communist Party of the Russian Federation, the Supreme Council of the Liberal Democratic Party of Russia and the Central Council of "A Just Russia".

The messages said that the heroic feats of the Red Army and the Russian people, who destroyed fascism overcoming the trials of the grim war to defend the sovereignty and dignity of the country and made a contribution to protecting global peace and security,

would go down in history and the attempts of the dishonest forces to distort and deny them would surely be frustrated.

Expressing the belief that the relationship between the WPK and the ruling and major political parties of the Russian Federation would grow stronger in conformity with the atmosphere of development of the DPRK-Russia friendly relations which have been lifted to a new stage since the historic DPRK-Russia summit meeting held in April 2019, the WPK Central Committee, in the messages, wished them success in their responsible activities to tackle the spread of the pandemic as early as possible, defend public safety and the country's economy and build a powerful Russia.

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APPLAUSE

Media outlets laud Kim Jong Un as outstanding statesman

World media have splashed the exploits performed by DPRK Supreme Leader Kim Jong Un who is building up the Workers' Party of Korea as a steel-strong and great motherly party.

The Workers' Party of Hungary said in an article posted on its website:

"Kim Jong Un was elected chairman of the Workers' Party of Korea on May 9 2016.

"Under his leadership the WPK has led all the Korean people to steadily advance along the road of socialism they chose, while defending the country's sovereignty in the face of complicated international situations.

"Under the wise leadership of the WPK, the DPRK has achieved significant successes."

Cambodian newspaper *Nokor Thom Daily* said that Chairman Kim Jong Un is building up the WPK as the powerful vanguard that follows Kimilsungism-Kimjongilism as its guiding ideology and advances on the strength of ideology and unity.

Chairman Kim Jong Un is building the WPK as a genuine motherly party that makes selfless, devoted efforts for the good of the people and all his

activities are consistent with love for the people, it noted.

Greatly impressed by the infinite love of the leader for them, the Korean people entrust their fate and future to him, calling the WPK their mother, it said.

Tanzanian newspaper *Uhuru* said that the international community finds the secret of the DPRK's continued rise in the face of growing sanctions and pressure moves of the hostile forces in the political mode of the WPK.

"The eye-opening achievements the DPRK is making in succession today are the brilliant results of the WPK's seasoned leadership."

Brazilian newspaper *Agua Verde* said that Supreme Leader Kim Jong Un is an ideal state leader possessed of wonderful personality traits and qualifications.

Kim Jong Un leads the WPK to apply the people-first principle to all its activities, it noted.

Therefore, the Korean people hold him in high esteem as their father and teacher, rather than a state leader, it added.

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LEAD

Military-civilian integrity goes on pushing Korean revolution

Some days ago, a modern phosphate fertilizer factory was inaugurated in Sunchon, South Phyongan Province in the middle part of the DPRK. The completion of the large-scale fertilizer production base equivalent to creation of a new industry is the fruition of wise guidance of the Workers' Party of Korea and great army-people unity.

In different parts of the country, such major construction projects as the Pyongyang General Hospital, Wonsan Kalma coast resort, Tanchon Power Station and Orangchon Power Station Unit 3 are making



A bird's eye view of the Sunchon Phosphate Fertilizer Factory built on the strength of military-civilian integrity.

Upgraded sightseeing battery cars turned out



The Pyongyang Municipal General Passenger Service Enterprise has manufactured dozens of battery cars for sightseeing.

The factory developed a new screen touch in order to improve the modernization level of the sightseeing battery car.

And it contrived and introduced a speed regulator based on an acceleration pedal and made and installed more convenient armchairs.

The battery cars are said to be sent to the Wonsan Kalma coast resort.

Over 50 tree species chosen for this year's reforestation

"We have chosen over 50 tree species of high economic value which are favourable for improving the ecological environment for this year's forest restoration campaign and planted a large number of them," said Kim Myong Chol, a general bureau director of the Ministry of Land and Environment Protection.

Among them are double-flowering green chrysanthemum "Bunga" and yellow tulip "Strong Gold" which is considered to be useful for flower gardens in spring. They attract particular attention of the viewers.

Rosa hybrida "Black Lady" and *Helichrysum bracteatum* "Rose Beauty" have high ornamental effects and can widely be used for decorating flower gardens and making dried flowers.

Lilium hybridum "Algarve", *Gladiolus hybridus* "Priscilla" and *Calceolaria herbeohybrida* "Naine Daintt" are very effective for street and interior decoration as they flower fast and it is easy to cultivate them in natural conditions.

progress on the strength of the joint operation of the army and people.

The brilliant tradition of great army-people unity in the DPRK has been handed down witnessing the turn of a century.

During the anti-Japanese armed struggle, President Kim Il Sung set forth the idea that as fish cannot live without water, so guerrillas cannot live without the people, and thus opened up a new history of the army-people unity. Thanks to the devoted support of the people, the Korean People's Revolutionary Army could

defeat the Japanese imperialists even under the worst conditions of having neither state backing nor assistance by a regular army.

The victory in the Fatherland Liberation War and the epoch-making progress in the postwar rehabilitation and socialist construction, too, would have been unthinkable apart from the unity.

Having set forth the great army-people unity as a mainstay of the Songun revolution, Chairman Kim Jong Il led all the people and servicepersons towards brilliant victories in defending socialism and provided a firm springboard for building a powerful nation.

Supreme Leader Kim Jong Un has held fast to the great army-people unity and joint operation as a powerful fighting mode of the Korean revolution and brought about drastic changes and miracles in the last eight years by providing a new historic turning point in the building of a powerful socialist country.

Grand monumental edifices built by the joint efforts of service personnel and the people tell about the glorious history of the great army-people unity.

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According to him, 24 species of fruit-bearing trees, 19 species of trees for the production of timber and 11 tree species for scenic beauty have been planted throughout the country to meet geographical and biological characteristics.

These tree species reportedly account for over 90 percent in this year's afforestation.

A project is underway across the country to rationally build mixed forests with these trees.

Fruit- and oil-bearing trees include pine-nut tree, *Evodia daniellii*, black walnut, Korean pepper bush, chestnut tree, wild pear tree, wild vine, tara vine, *Aronia melanocarpa* and seabuckthorn tree.

Korean poplar and Sangwon poplar, which are used as raw materials for paper making, and larch, birch and Maengsan black pine suitable for building materials are planted as the main species for timber production.

Meanwhile, national tree of pine, "Kumya Black Pine", magnolia, Pyongyang maple and clammy locust are also planted in great numbers to further improve the natural scenery.

Fruit farm works to put production on more

INSPECTION

Premier inspects waterway project in South Hwanghae



Premier Kim Jae Ryong (centre) is briefed on the completed second-stage waterway in South Hwanghae Province.

Premier Kim Jae Ryong, member of the Political Bureau of the Central Committee of the Workers' Party of Korea and member of the State Affairs Commission of the DPRK, on May 10 inspected the completed second-stage waterway in South Hwanghae Province.

The successful completion of the second-stage project has made it possible for the province to fully irrigate the farmland in Chongdan, Pongchon, Kangnyong and Ongjin counties and the Ryongmaedo tideland under reclamation and provided a solid foundation for increasing grain production.

He was accompanied by Ko In Ho, vice-premier and minister of Agriculture, officials of the province and the central headquarters for the waterway

project and other relevant officials.

Making the rounds of the Pongchonho Dam, Judap Tunnel, Hanchon Inverted Siphon No. 1 and other places of the waterway, he learned about the completion of the project and congratulated its builders. And he called on them to successfully carry out new projects by drawing on the achievements and experience gained in the course of the waterway project.

During his field inspection, measures were taken to put the overall management and operation of the waterway on a scientific and technological basis so that it would substantially contribute to the agricultural production in the province.

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scientific and intensive basis



A sea of apple flowers rare to be seen has unfolded on the land of Wonhung in Pyongyang.

"We press on with the project to put fruit production on a scientific and intensive basis," said the chief engineer of the Taedonggang Combined Fruit Farm.

The farm has perfected the fruit farming command system based on e-map and worked to raise the scientific level of manuring and cultivation according to each farming process.

As they put big efforts into pruning, the farmers bent and thinned branches in time in keeping with the characteristics of varieties, with the result that lots of flower buds have appeared on each tree.

The farm developed a new program for determining the amount of fertilizer applied to each plot and made the most of the production cycle combining fruit farming and animal husbandry to produce

more than 1 800 tons of organic fertilizer and over 4 300 tons of hukposan fertilizer and spread at least 30 tons per hectare this year, thereby increasing the rate of differentiation of flower buds.

It also estimated the period when harmful insects would appear using field sounding balloons and sprayed efficient biological pesticides in time, thus minimizing blight damage.

University introduces new education methods

Pyongyang University of Mechanical Engineering is directing much effort to the introduction of the CDIO (conception, design, implementation and operation) education.

It conducted researches into relevant teaching methods and students' ability assessment methods and applied them to teaching practice.

In the course of this, it added a few subjects related to economics to the curricula and created a new engineering education course.

Presently, it is widely adopting the engineering education method combining education, scientific research and production practice.

THE PYONGYANG TIMES

ANNIVERSARY

Youth shock brigade members help build monumental structures

This year marks the 45th anniversary of the High-Speed Youth Shock Brigade.

Its first assignments were the electrification projects for the Pyongyang-Madong and Huchon-Koin railway lines and the laying of the Kujang-Phalwon railway in the 1970s.

The construction projects were aimed at relieving the strains on transport, a major link in the chain of carrying out the six-year plan at the time. The members of the shock brigade fully demonstrated the spirit of youth to finish the tasks in a matter of a few months though they were thought to take several years. In particular, those in charge of the electrification of the Pyongyang-Madong line removed 12 000 cubic metres of earth in a month and laid the railway bed, thus completing the job in 55 days.

The young builders also created a heroic epic in the construction of Northern Railways in the 1980s.

The laying of the line linking the eastern and western parts of the northern inland region was an uphill task which would take at least 20 years in the light of the then construction speed.

As they hewed dozens-of-metre-high cliffs and lifted bulldozers to the top of a high mountain to ensure construction speed, the builders drilled dozens of tunnels and built over 100 iron bridges, thereby laying the 252km-long track in only five years.

Afterwards, they constructed new railways and electrified railway lines extending for thousands of kilometres in different parts of the country.

"Their creations are not confined to railway lines. The shock brigade members devoted their blood and sweat also to the building of the Grand People's Study House, International Friendship Exhibition House, Kwangbok Street, May Day Stadium, Mangyongdae Schoolchildren's Palace, Taekwon-Do Hall, ore dressing plant No. 3 of the Komdok Mining Complex, East Pyongyang Thermal Power Station, Youth Hero Road and other structures," said Rim Chol Su, deputy chief of staff of the High-Speed Youth Shock Brigade Management Bureau.

According to him, the shock brigade has built more than 340 structures over the past 45 years.

In recent years alone, it took part in lots of construction projects such as Mirae Scientists Street, Ryomyong Street, the Sci-Tech Complex, Youth Movement Museum, Paektusan Hero Youth Power Station, Yangdok Hot Spring Resort and the Sunchon Phosphate Fertilizer Factory.

In the course of that, its members introduced many inventions and technical innovations to ensure both quality and speed in construction.

As it built structures of lasting value across the country, the

construction group received Order of Kim Il Sung and Order of the National Flag 1st Class and produced over 20 Labour Heroes, many other winners of official decorations, innovators and inventors.

Monuments to their distinguished services are found in different places of the country and there are feature films and documentaries showing their feats including feature "The Uniform of Youth".

"The monument to the feats of heroic youth of Mt Paektu, which represents the Medal of the DPRK Hero, also shows the services of our shock brigade members. The medal encourages us to continue to create the legend of heroic youth of Mt Paektu," said Ri Chong Su, a shock brigade member.

The High-Speed Youth Shock Brigade was organized at the proposal of Chairman Kim Jong Il and it was named by him as well.

The director of its management bureau said that youth is a precious period in everyone's life and the members of the construction group devote this prime of life to the country as they build monumental structures.

The flag of the High-Speed Youth Shock Brigade, which fluttered in the past to add youthful vigour to the vibrant country, continues to flap in all parts of the country.

By Jong Hwa Sun PT

RECYCLING

Wholesale store turns out consumer goods using waste

The textile wholesale store of the Pyongyang municipal wholesale business management office wins popularity for its variety of consumer goods made with waste.

Over a decade ago, Kwon Won

Man, director of the wholesale store, went to a garment factory with store staff to receive commodities. Seeing the cloth scraps from a production process, he conceived an idea of making various products

including cotton and quilts by recycling them.

At his suggestion, the store brought a broken carding machine, which was kept idle at a factory, and repaired it and made a cotton gin with the help of such plants as the Pyongyang Textile Machine Factory.

As they produced cotton with these machines, they turned out various quilts, and then the director thought of using all the cotton waste from the production process.

Once when he looked round the slate production process of a unit on his business trip, he learned that it was relying on import for some raw materials. So he acquainted himself with the mixing ratio of the materials for slate before returning to his store, and became convinced that cotton waste can be used for making slates after a constant search and intense



A woman works on a quilt at the textile store of the Pyongyang municipal wholesale business management office.

KIM YONG CHAN

BUILDING STONE

Technical upgrading gives impetus to granite production



PT THE PYONGYANG TIMES
YUN KYONG IL

A worker operates a machine to process plate granite at the Ryonggang Granite Mine.

Ryonggang County in Nampho has several granite mines as it has rich deposits of granite.

The Ryonggang Granite Mine which was developed in 1977 is especially famous among them.

"The mining district in the area where our mine is located has favourable conditions for exploiting and processing huge stones. The granite we mine is harder than that of neighbouring mines, and it is hardly discoloured as it contains 0.65-1 percent of iron oxide. The minimum processing thickness of granite products is 10 mm," said Jon Yong Gun, manager of the mine.

It is said that the granite extracted and processed by the mine was supplied to major construction projects including the Tower of the Juche Idea and the Arch of Triumph which sprang up in the 1980s as the monumental structures in the era of the Workers' Party.

In recent years alone, the mine sent monoliths and many processed stones to major construction sites across the country, namely May Day Stadium, Sci-Tech Complex, Ryomyong Street, Samjiyon and Wonsan Kalma coast resort.

The mine doubles its economic plan every month.

According to technical staffer

speculation. Shortly after, the slate production base was built at the store and slates as good as those made by specialized building-materials factories were turned out.

The store also produces ropes with plastic waste, and they are said to be in great demand from construction and fishery sectors across the country.

According to deputy director Ryu Jac Man, the store is now intensifying research into producing compressed cotton using cloth scraps as well as lagging needed for the building of houses.

At present, the store annually turns out more than 30 kinds of consumer goods with the scraps and plastic waste, including more than 40 tons of cotton, tens

By Yun Kyong Il PT

of thousands of quilts, over 10 000 slates and tens of thousands of metres of ropes.

Its Kumjandi-brand products have highly been appreciated at different shows.

It has hundreds of square metres of animal barn and vegetable greenhouse at the outskirts of Pyongyang. It has also hundreds of fruit trees.

"Resources are nothing special. If you rack your brains and make efforts, you can turn the soil under your feet and discarded waste into wealth," said director Kwon Won Man who is also a Meritorious Person of Socialist Patriotism and deputy to the Pyongyang municipal people's assembly.

FISHERY

Manager behind goldmine for mixed cultivation

"The units in coastal regions will have to make good use of the sea," said Pae Jong Guk, manager of the Chongam fishery station for feed of offshore salmon.

The fishery station is situated in a coast village, which is over 50 km away from Chongjin in North Hamgyong Province.

"Our small station is well-known as a unit which is good at shallow-sea mixed culture of seaweed, mussel, sea urchin, trepang and scallop. It is unthinkable apart from the devotion of our manager," said Ri Yong Un, senior engineer of the fishery station.

According to him, Pae Jong Guk turned the good-quality waters off the station in the Ssangpho Bay into a place favourable for offshore culture.

Pae broke the established idea that it is impossible to cultivate kelp in the place with good water quality and made it possible to grow kelp by solving the problems of seed and nutrient needed for growth. Since breed and feed provision are fundamental to breeding sea urchin and trepang, he made sure that many artificial fishing reefs were created while making effective use of a natural breeding ground. And wire-net stone bags were put into the sea in a concentrated way.

"Surprisingly, every creature and seaweed provided favourable growing conditions for each other. Kelp absorbs



Pae Jong Guk (centre), manager of the Chongam fishery station for feed of offshore salmon, talks with employees.

carbonic acid gas and emits oxygen during photosynthetic process, while mussel does conversely. Kelp leaves from stalk are good feed for trepang and scallop and their excrement serves as fertilizer for the growth of kelp," said An Myong Chol, leader of the culture workteam.

A method of fixing floats, one of the important issues in the cultivation of kelp and mussel, also draws attention.

It is customary to use iron anchors in shallow-sea culture, but the fishery station substituted concrete ones for them.

It was also initiated by the manager.

The station scattered millions of scallops to the sea and is now raising their survival rate with low cost. This new breeding

method was also developed by the manager.

Several technical innovations and original ideas he had come up with contributed to increasing productivity and the "pocket-type tool and scallop breeding method based on it" won a national patent.

Amid the brisk activities of mass technical innovation drive, the station newly built ten fishing boats including an 80hp multi-purpose ship and the station was able to advance to oceans, free from the passive fishing method of clinging only to inshore fishing.

In recent years, it won several rotating pennants at the socialist emulation drive for the fishery sector in the eastern area.

By Chae Hyang Ok PT

DEVICE

Efficient fuel saver developed

The Pyongyang disabled soldiers' automobile parts factory developed an efficient fuel saver.

The fuel saver consists of a fuel saving device based on a magnetic treatment method and a fuel activator.

The research efforts for developing fuel magnetizing devices have been going on for decades worldwide in order to save fuels and protect the environment, said manager Pak In Chol.

The fuel saver based on magnetic treatment increases the combustion efficiency by converting the fuel components into smaller molecules by dint of permanent magnets and fuel activator in all types of internal-combustion engines so as to decrease the fuel consumption and the amount of incompletely combusted materials in exhaust gas, thus effectively saving fuel oil and protecting the environment.

The factory's fuel saver, which



Fuel saver produced by the Pyongyang disabled soldiers' automobile parts factory.

is for use in diesel engines, has two models with the diameters of oil pipes being 8 and 10 millimetres respectively.

According to a technician of the factory, the fuel saving device is installed after cutting the fuel pipe between the fuel tank and high-pressure fuel pump and the fuel activator is put into the fuel tank.

An evaluation test by the national quality test and certification agency proved it raised the diesel fuel combustion efficiency to 98.4 percent and

its economic effectiveness was demonstrated through trial introductions.

Since they introduced the fuel saver, drivers at the automobile transport management bureau of the Ministry of Land and Maritime Transport have continuously recorded good results in freight transportation, while saving hundreds of tons of fuel oil every year.

According to driver Jong Hyo Jin, the device helped save 15 to 17 percent of diesel fuel, increase the combustion efficiency and remove the carbon deposit inside the engine and also improve the performance of the engine.

At present, many visitors are coming to the factory to purchase the device.

"We will bring out a fuel saver for petrol engine in the near future," said the manager.

By Jong Hwa Sun PT

DECORATION

Company finds niche in finishing design, execution

"We provide technical service in architectural decoration design and execution with the main emphasis put on the three elements of construction, namely design, execution and building material," said Hong Il Phy, director of the international trust trading company located in Songyo District, Pyongyang.

The company develops designs for ornamental execution including those for the interior, furniture and steel structures and produces several kinds of furniture, insulating windows, plastic window frames and embossed ornamental furniture.

Especially, the insulating window is a green building material that has a high heat insulation capacity and completely blocks humidity and wind. It also preserves its original colour and lustre for a long time.

The door made of aluminum



By Kim Il Jin PT

Designers engaging in the architectural interior designing at the international trust trading company.

R&D

Sci-tech committees play their part in recycling

Local committees of science and technology across the country take the lead in introducing new research findings on recycling into practice.

Those in South Phyongan Province, especially Phyongsong and Mundok and Songchon counties, completed the substitute fuel production technology based on plastic waste to increase productivity while making sure that there is no negative effect on environment. The scientists in Sunchon developed a new fuel additive with plastic waste.

Those in Hamhung and Kowon County of South Hamgyong Province have pressed on with a project for introducing the technology of producing substitute fuel to increase the operational rate of vehicles.

alloy is light and very hard.

Its normal serviceable life is 50 to 100 years and it is impervious to oxidation, alkalinity and ozone.

The company manufactures furnishings and furniture in different colours and designs that suit the characteristics of office, interview room, dwelling, shop and other buildings and that go well with the interiors, said designer Kim Kum Hyang.

In addition, it has received contracts for exterior execution such as installation of glass skylights and establishment of power distribution networks based on solar panels.

Recently, it provided technical assistance to construction works at the Pyongyang Kim Jong Suk Textile Mill, Ryomyong Street, Yangdok Hot Spring Resort and others.

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SONG YONG SOK

The North Phyongan provincial sci-tech committee completed the technology of producing methane gas and organic manure from the waste water and kitchen garbage so that dozens of units and many families in the province could apply it.

The South Hwanghae provincial committee turns out farming materials by using idle materials in keeping with the specific features of the province.

The committee in North Hwanghae Province works hard to solve scientific and technological problems arising in the production of plastic pipes of all sizes, paper and brick by recycling different sorts of waste.

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SRH

Reproductive health awareness raised among young people

"Last year, 1.21 million people were positively informed about sexual and reproductive health (SRH) and the service offered to young people increased further," said So Hyon Chol, executive director of the Korean Family Planning & Maternal Child Health Association (KFP & MCHA).

KFP & MCHA, which strives to render quality SRH services to people in close cooperation with the government, has recently channelled efforts into defending the people's sexual and reproductive health rights (SRHR) and raising the awareness of reproductive health among adolescents.

To this end, the association made a significant contribution to raising social awareness of SRHR and bringing about fresh turns in SRHR-related behaviour and practices of people by joining in the development of national IEC / BCC strategy for SRH 2019-2021.

While intensifying activities in the areas with regional limitations, especially mountainous and coastal villages, in offering medical assistance, it conducted brisk IEC activities in such project areas as Hyesan in Ryanggang Province, Maengsan County in North Phyongan Province and Thongchon County in Kangwon Province in diverse forms by

relying on mass media and provided modern FP services through AHFs.

Among the clinics in rural and mountainous areas under the Ministry of Public Health, 240 AHFs are in the training, technical and material support programme of the association in terms of SRH service.

The association has conducted a variety of activities including lecture and photo exhibition related to reproductive health upon deliberation with relevant organizations on such occasions as Youth Day, anniversary of the promulgation of the Law on Sex Equality and World Population Day to achieve satisfactory results.

Meanwhile, several FP clinics run by the association provided youth-friendly service environment and improved

infrastructures, resulting in the increased number of services for young people.

Such endeavours and achievements made by the association won due appraisal in the third phase in-country accreditation review of the International Planned Parenthood Federation.

"We face big challenges despite great successes."

"Last year, IPPF set up an MA-centric new working system by adopting the innovative reform plan related to governance structure and resource allocation system."

"The reality demands the association put spurs to its upbuilding with a high sense of responsibility toward its work," said So Hyon Chol.

By Ri Sung Ik PT



KFP & MCHA officials hold a group discussion for its capacity building.

LIVESTOCK FARMING

Farm puts deer out to pasture to increase their numbers

Ryonphung-ri is in a deep mountain area of Rinsan County, North Hwanghae Province.

There is the Rinsan Deer Farm.

The scene of deer grazing and drinking water in valleys, with only birdcalls coming into hearing in quiet and dense forests with flowing brooks, produces a pastoral mood.

"Our farm's pastures cover more than 4 500 hectares, and we have provided better ecological environment including natural grassland so

that deer can widely be bred in natural conditions," said Hong Yong Jun, chief engineer of the farm.

According to him, the farm was set up in 1974 according to the state measure of making effective use of mountains in the places with barren land. In its incipiency, it had only dozens of deer, but their number has now increased to over 700.

Pasturers break the morning air of the farm with clear voice as they call and coax deer that fall apart from the group on

their way to grazing grounds.

Lovely grass fields spread in valleys surrounded by high mountains and hills, with clear water flowing down thickly-wooded valleys all year round.

The farm puts deer out to pasture by grouping them into male, female and the young, and each group consists of more than 70 to 80.

There are 13 grazing groups at the farm and each group goes round grazing districts in turn.

What is surprising is that every deer has its own name and they are familiar with pasturers.

"At first glance, all the deer look alike, but they differ when they are observed carefully. We named each of them, and when we call them by name they stop grazing and look at us," said pasturer Ri Hyang.

Pasturers begin their career with familiarizing themselves with deer. After that they learn the method of breeding the deer, and they are required to know well about the characteristics of each deer.



A flock of deer bred by the Rinsan Deer Farm throng to a stream to drink water.

PROFILE

Woman gains intl prestige with linguistic mind



"In order to informatize Korean language which has consonants, vowels and special consonants subjoined at the end of orthographic syllables, an original information processing method was required—modelling," said Pae.

By adopting the method of modelling each Korean letter as a whole, she presented such study papers as "Theoretical basis of machine translation based on mapping models", "Several matters arising in the establishment of a natural language fact database based on intelligent information processing", "Role of Korean language in defining the international standards on word segmentation" and "Corpus and development of linguistics".

She has many certificates of registration for programs including the Korean grammar checking program, national standards including that for the Korean letter high-speed input system, online books and achievements in social science as well as a patent right and a copyright, and authored many textbooks and reference books.

The winner of the title of October 8 model teacher has trained several MScs and is now in charge of the post-doctorate course.

"All my academic achievements are inseparable from the superiority of Korean language. Since it can mark any sound of all the other languages of the world, the Korean language has rationality and universality incomparably superior to other languages. I, as a linguist, feel very proud of having Korean as my native language and this inspires fervent spirit of inquiry and enthusiasm in me," said Pae.

One of the most popular teachers at the university, she has been working energetically as a member of the International Standards Organization since 2007 and as a senior fellow of the Chaheer society of China since 2019.

By Kim Rye Yong PT

"We have to walk well over a dozen kilometres on a daily average, or over several thousand kilometres a year, rain or snow. Sometimes, we search mountains for lost deer or carry injured deer on a stretcher for a dozen kilometres," said pasturer Jo Kwang Chun.

"Since pastures of our farm are located in deep valleys, medicinal plants are plentiful. All the deer are healthy like one

as they graze on rare medicinal herbs. The deer's young antlers, placentas and tails produced by our farm are widely known for their distinctive medicinal efficacy," said Pyon Song Nam, a staffer of the farm.

The farm continues to multiply deer while carrying out the production plans of venison and tonics every year.

By Kwon Hyo Song PT

GOSHAWK

Survey of national bird produces tangible result

Ornithologists have achieved successes in their study of distribution and ecology of goshawk, national bird of the DPRK, and its protection and multiplication.

After expounding the biological features of goshawk, a sedentary bird that inhabits the country, the Zoology Institute of the State Academy of Sciences established the Toksong goshawk reserve and Toksong scientific research forest in the Toksong area of South Hamgyong Province

and succeeded in the artificial raising of five young goshawks by completing the artificial goshawk rearing technology.

The institute also found out that goshawk, which was known to live only in the northern highlands of the country, also inhabits its central part, spotted four pairs of goshawks nesting in the area of Toksong County, South Hamgyong Province, and conducted a more detailed survey of its breeding and ecological characters.

Videos filmed by its researchers to show the images of parent and young goshawks and their life in the nests were broadcast as a special programme, attracting a lot of interest of TV viewers.

According to Kim Kyong Jun, deputy director of the institute, they work on the establishment of an artificial breeding technology, a challenging task of the academic circles.

By Ri Sung Ik PT



BY COURTESY OF THE ZOOLOGY INSTITUTE OF THE STATE ACADEMY OF SCIENCES

Goshawk catching a pheasant and a young goshawk in a nest.

ENERGY

Potential utility of hydrogen energy sparks interest

Researchers have completed the design and manufacture of mobile split control system for hydrogen-oxygen cutter and introduced it into different economic sectors in the DPRK.

They newly threw light on the backfire preventing principle and designed the control circuit, security operating circuit and outer box of mobile split control device.

The hydrogen-oxygen mixed gas cutter, which was registered as a patent technology, generates six to seven cubic metres of hydro-oxygen gas per hour and its maximum cutting thickness of billets is 100mm.

According to Ri Kwang Nam, section chief of the hydrogen energy institute of the State Academy of Sciences, the cutter can easily cut thick billets and its economic effectiveness is very high.

There is no need to equip itself with a gas storage container since it is designed to be run in any place by generating gas at any time, and its cutting speed is 1.6 times faster than that of oxygen cutter as the temperature rises to 2 800 °C in two seconds.

And its cutting flames are so focused that they make little heat loss and cause little metal deformation, property change

and soot, and the consumption of electricity and operating costs are over 40 percent lower than when cutting with oxygen or liquefied natural gas and 20 percent lower than when cutting with plasma.

The most important problem in the utilization of hydrogen energy is stability, said Ri Kwang Nam.

It takes a 10 000th second for explosive hydrogen to catch fire, while the switching time of electronic valve is only a hundredth second.

In order to ensure the stability of the cutter, the researchers developed and manufactured a terminal backfire preventing device based on ceramics porous material by using the principle of flame-intercepting effect in tiny pores, as well as a high-speed gas pipeline breaker based on light sensor.

A fuel oil saving and engine washing device developed by the institute also offers a good prospect for its introduction.

According to its trial introduction into the tractors of cooperative farms, their engines recovered their original outputs and passed the exhaust gas test.

The institute aims to mass-produce hydrogen by relying on renewables.



Researchers measure the rate and concentration of hydrogen gas with a general gas analyser.

PAK KWANG HUN PT

HIGH-TECH

Centre eyes integration of education with research, production

Kim Il Sung University has set it as one of the major goals to integrate education with research and production.

The High-Tech Research & Development Centre of Kim Il Sung University which was organized last year serves as a base for attaining it.

The centre in a building area of over 18 000 square metres is largely divided into eight development sections for machine and electronic products, bioengineering products, electronic materials and products, experimental apparatuses, radio engineering technology, chemical products, communications technical products and IT products, and internet exchange section.

It is equipped with well over a thousand pieces of equipment in hundreds of kinds including four-axis CNC lathe, automatic culture device, spectrum analyser and centrifuge, providing researchers with full research conditions.

"Today, the introduction into education of achievements made in the course of developing advanced technologies and establishing high-tech industries based on the former is a very important undertaking in developing education and the economy," said Kang Un Hyok, director of the centre.

The centre has recently made remarkable achievements in the research and development of such core basic technologies



KIM RYE YONG

The High-Tech Research & Development Centre at Kim Il Sung University.

Sanctuaries built in Nampho

Useful animal sanctuaries have been set up in Nampho and many pheasants and roe deer released in them.

Over 60 000 trees of good species were planted, feed grass fields created and places of water built in the sanctuaries.

A nearly four-kilometre-long ring road was built and tens of thousands of trees were planted in the 90-hectare sanctuary in Ryonggang County. It is enclosed by a

wire-net fence.

The sanctuary in the Kochang-ri area of Chollima District sprawls over 100 hectares. Culverts were built in different places, pools were created and feeding conditions were provided for favourable animal inhabitation. The city of Nampho directs constant attention to increasing the number of pheasants, roe deer and other animals.

KCNA

ANNIVERSARY

Kwangju Popular Uprising a milestone in democracy movement

It has been 40 years since the popular uprising was staged in Kwangju, south Korea.

On May 18 1980, students and other young people and citizens of Kwangju rose up against the outrages of the Chun Doo Hwan military junta that tried to nip the democracy, which was brought forth in the wake of the overthrow of the Yushin dictatorship, in the bud by force of arms and maintain and prolong despotism.

The resistance involving a total of over one million people from all walks of life, including youth and students, workers, farmers, religionists and entrepreneurs in and around the city, rapidly spread to the vast areas of North and South Jolla provinces.

Much astonished by this, the Chun Doo Hwan fascist clique issued an order to "clamp down on the revolt with an iron fist" and committed more than 70 000 troops and lots of tanks, other armoured vehicles, cannons and even aircraft and missiles to the crackdown.

At that time, the Chun clan blockaded the city, branded the uprising as a "riot of impure elements" and the citizens as "rioters" and administered hallucinogens to paratroopers to get them to slaughter more than 5 000 resisters and wound over 14 000, saying they "may kill 70 percent of Kwangju citizens".

The Kwangju uprising marked a historic landmark representing a milestone in south Korean people's struggle against dictatorship and for independence, democracy and reunification.

At present, however, derogatory remarks distorting the history and spirit of the May 18 democracy movement are still being uttered in south Korea.

Ultra-rightists denigrate the popular uprising as a "riot" and the victims as "monsters created by north-following leftists". Chun Doo Hwan who is the true culprit of the Kwangju massacre impudently denied the heinous crime once again at the Kwangju district court on April 27 this year.

Therefore, south Koreans of all social standings are now expanding the struggle to reveal the truth behind the massacre and bring to justice those who distort history.

They have decided to form a May 18 fact-finding committee and launch into a probe into the bloodbath on the occasion of the 40th anniversary of the May 18 democracy movement this year.

Meanwhile, relevant and other

organizations have determined to undertake intense activities for a probe into the truth about the May 18 uprising in all parts of south Korea including Kwangju.

Political as well as public figures are raising voices against Chun, asserting that "he will go down in history forever as a criminal".

By Choe Yong Nam PT



A file photo shows people in Kwangju, south Korea, turning to streets against the Chun Doo Hwan junta.

PALESTINE

Israel's territorial scheme bombarded with criticism from across world

Anti-Israeli sentiment is running high in the international arena over its moves to seize the Palestinian territory.

Israel has recently decided to confiscate the land of the Palestinians in the West Bank.

As to this, Palestine stated that the deals concluded with Israel and the US would become null and void, if Israel seized any part of its territory.

The Palestinian President in a televised speech informed Israel, the US and all other related countries that Palestine would not sit back and watch, if Israel annexed any part of its territory.

He stressed that political and legislative organizations in the world champion the entity of

Palestine against the Israeli attempt at territorial seizure as they oppose all sorts of unjustifiable schemes against Palestine's rights, especially the US' "epoch-making deal" and Israel's annexation plan.

Israel's reckless moves are arousing the wrath of the international community as well as Palestine. Many countries and international organizations urge Israel to immediately stop the action detrimental to the Mideast peace, expressing serious concern over its bid.

Shortly ago, the UN secretary-general expressed apprehension about the Israeli plan for annexing part of the West Bank in a letter sent to the secretary general of the League of Arab States.

The letter revealed that Israel,

by availing itself of the hectic worldwide combat against COVID-19, is attempting to seize part of the occupied Palestinian territory and claim its sovereignty over that so as to establish its new position.

Warning of such Israeli tendency, it emphasized that in order to ensure stability and peace in the region, each country should be keenly aware of the danger of Israel's aim and maintain vigilance against it.

The League of Arab States in a statement branded Israel's recent decision on confiscating some Palestinian land in the West Bank as a flagrant violation of international law. Describing its moves as a blatant act of aggression, the league asserted they would render the regional

situation uncontrollable.

The European Union also made a stand against Israel's annexation plan, stating that the EU would strongly react to its moves if it finally took such a unilateral measure.

It is the fervent wish of the Palestinian people and the demand of the international community to put an end to Israeli rule over all the occupied Palestinian and other Arab territories and establish an independent and sovereign state of Palestine with East al-Quds as its capital.

The international community hopes that Palestine would win back its occupied territories and national rights and peace would settle in the Middle East as early as possible. Israel will be faced with stronger protests and denunciations of the international community, if it stubbornly persists in territorial seizure moves and wrecks Mideast peace while resisting the international demand.

By Song Jong Ho PT

the face of hardships.

His speech was followed by a military parade by an honour guard.

There was an air parade in the sky above Red Square in Moscow to mark the day.

A variety of celebratory events including parade of aircraft, ceremony to pay floral tribute and concert took place in all parts of the country that day, as well as a display of fireworks.

RUSSIA

VE-Day celebrated in Russia

Russian President Vladimir Putin laid a bunch of flowers at the Tomb of the Unknown Soldier in Moscow and paid a moment's silence to mark the 75th anniversary of the victory in the Great Patriotic War on May 9.

In his speech sent to

the Russian people, Putin congratulated war veterans and other Russians on war victory day and said that the spiritual and moral significance of the V-Day is always great and the sacred attitude of the Russian people to it remains unchanged.

What the generation of great victors achieved for

the motherland can never be measured nor compensated for, he said, adding Russia would always follow their cohesion and tenacity and celebrate the day of war victory with splendour without fail in the future, too, by cherishing the duty it assumes for the former generations who won victory in

Briefly

Russia

History distortion not to be justified, says Putin

"Any attempt to distort history and shift the responsibility for WWII on to the Soviet Union is intolerable," said Russian President Putin on May 8 in an interview with a Russian TV broadcasting corporation.

The Soviet Union won victory at the cost of its 27 million lives and the acts of those who try to distort history can never be justified, he noted.

Cuba

Washington-based Cuban embassy come under shooting

Cuban President Miguel Diaz-Canel Bermudez censured the US for the recent shooting targeting the Cuban embassy in Washington DC.

He branded the happening as a continuation of the US administration's traditional policy hostile towards his country and the offspring of enmity.

Palestine

US backing of Israel branded as war crime

"It is needed to call to account the US which is committing a war crime against the Palestinians in league with Israel," said the Palestinian Minister of Justice on May 6.

Decrying the US' shielding of Israel that tries to seize part of the Palestinian territory, he asserted that the recognition of the occupationer's sovereignty over occupied territory itself constitutes a war crime.

China

US interference in HK issue rejected

"US politicians are interfering in the internal affairs of the other country and threatening to impose sanctions according to their domestic law," said a spokesman for the foreign ministry mission to the Hong Kong Special Administrative Region of China.

His remarks came after US congressmen sent a letter to the State Department to demand enforcement of the so-called "bill on human rights and democracy in Hong Kong".

Venezuela

Terrorists arrested

The Venezuelan military announced on May 10 that it arrested 11 terrorists in the northern area, who intruded into the country in an attempt to overthrow the government.

Earlier on May 3, the government revealed that terrorists had attempted to infiltrate into the country in order to assassinate the leaders of the revolutionary government.

As of May 10, at least 40 terrorists have been captured.

BIODIVERSITY

Migrant protection and biodiversity

There are more than 1 600 species of migratory birds in the world, and over 200 out of them are endangered or on the verge of extinction.

The extinction of a species is often said to lead to that of over a hundred biological groups. So, the protection of migrant birds is very important for the conservation of biodiversity.

However, natural wetlands constituting the major habitats of the migrants have recently been damaged around the world due to the expansion of farmland, urbanization, water pollution and the like, thereby rapidly decreasing the number of their species and individuals.

The international community has paid primary attention to the protection of migratory birds and adopted a convention on the protection of wetlands in Iran's Ramsar in 1971 and a convention on the conservation of migratory species of wild animals in 1985.

Having designated the second Saturday of May and October every year as World Migratory Birds Day, it has marked the day since 2006.

The DPRK has also conducted positive activities for the protection of migrants.

Located at the centre of the East Asian-Australasian Flyway, it has so far surveyed and recorded over 420 species of birds. Among them, summer birds account for 28.6 percent, winter visitants 27.6 percent, transients 17 percent and stray

birds 9.4 percent, and therefore migrants make up 82.6 percent of the total bird species.

The DPRK designated more than ten migratory bird and wetland sanctuaries according to Cabinet Decision No. 20 adopted on April 11 2003. At present, it has more than 30 reserves on the east and west coasts, including those in Mundok County of South Phyongan Province, Sindo County of North Phyongan Province, Kumya County of South Hamgyong Province and Anbyon County of Kangwon Province and conducts the survey of migrants and protection activities on a scientific and regular basis. The number of their species and individuals are ascertained correctly and protection measures are taken in an efficient way. The country also promotes international exchanges and cooperation in

the field of their protection.

The Mundok migratory bird reserve was listed as an internationally important Ramsar wetland site in January 2018 as it functions like a bridge in the East Asian-Australasian Flyway.

More than 180 species of birds have been observed in the sanctuary with their number reaching 45 000 to over 50 000 at maximum. And some 30 species of them are endangered and rare species.

The DPRK is now working to add to the Ramsar list the Sindo migrants sanctuary in North Phyongan Province and others.

The theme for this year's World Migratory Birds Day is "Birds connect our world".

Kim Un Ha, researcher at the Central Committee of the DPRK Nature Conservation Union



Migratory birds fly at the Mundok migratory bird reserve.

SPECIALITY

Kaesong Koryo insam known as elixir of life

Kaesong Koryo insam (ginseng) has been known as an excellent medicine in the world since olden times.

The name "insam" is derived

from the meaning that its roots look like a human. Naturally growing wild insam is called "sansam" and the cultivated one is simply called "insam".

It has been called "sincho", or miraculous herb, for its miraculous medicinal efficacy and "hyolsam" in the meaning that it gives blood to humans.

At present, insam is cultivated in many countries and regions, but Kaesong in the middle part of Korea is rated best as insam-growing district.

Kaesong is not only the home of insam but also a famous insam-processing base.

As demand for wild insam grew, the locals gathered its seeds and began to cultivate the herb artificially, and hence the history of its cultivation started.

Kaesong Koryo insam is renowned for helping people enjoy longevity and eternal youth, invigorating them and lightening their bodies.

It is said that the essays on



A variety of insam products.

medicinal efficacy of Kaesong Koryo insam so far presented number over 5 000 worldwide.

RELIC

Hermitage boasts unique architectural style



Pobun Hermitage on Mt Ryongak in Mangyongdae District, Pyongyang.

The Pobun Hermitage on Mt Ryongak in Mangyongdae District, Pyongyang, was built in the period of the Koguryo Kingdom and rebuilt in the middle period of the feudal Joson dynasty.

Encircled by curious-looking rocks, the hermitage has clear spring water flowing down from a rock crack all the year round.

Comprised of five buildings including the main hall and living quarters, the hermitage takes full advantage of the topographical features of Mt Ryongak.

The main hall has 10.27 metres of facade and 6.2 metres of flank on a high platform and its gabled roof is supported by fourteen pillars.

A Buddhist sculpture depicting Amitabha is seated inside the hall with a Buddhist painting behind it.

The Toksong Pavilion, an accessory building of the hermitage, has a sculpture

of Buddha's disciples with another Buddhist painting in the background.

Buddhist paintings are also hung at the Sansin and Chilsong pavilions.

The Pobun Hermitage is built in a distinctive architectural style.

The front side has double eaves and double wingspace inferior purlins and the back side has single eaves.

So the front side has boards put on top of the first cornice on pillars, while the back side does not.

All the *tanchongs* (red and blue painting) are formed in the style of *morutanchong*, and there are paintings of dragons flying through clouds on both sides of the hermitage.

The Pobun Hermitage is under good preservation as a valuable element of national cultural heritage.

By Om Ryong PT

steamed rice cake, sprouts, salad and jam.

Kaesong Koryo insam tea, insam syrup and insam liquor are typical health drinks made with insam.

Kaesong Koryo insam nutritive taffy, Kaesong Koryo *hongsam* (steamed red insam) *tasik* (patterned savoury cake) and Kaesong Koryo insam powdered milk are good for children's growth and health and canned insam is also well-liked.

Foreign tourists can savour the taste of various insam foods such as sweet rice dish, thick chicken soup and white kimchi.

The aromatic material in insam has a unique fragrance and is good for the protection of your skin and beauty. Therefore, it is widely used in the production of cosmetics and those made with Kaesong Koryo insam like cream, lotion and foundation are sought-after among women.

By Choe Yong Nam PT

