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Supreme Leader Kim Jong Un cuts ribbon to inaugurate Suncheon Phosphate Fertilizer Factory

Kim Jong Un, chairman of the Workers' Party of Korea, chairman of the State Affairs Commission of the DPRK and supreme commander of the armed forces of the DPRK, attended the inaugural ceremony for the Suncheon Phosphate Fertilizer Factory held on May Day.

The factory is a model and standard establishment in the sector of the chemical industry which fully embodies the requirements of Juche-orientation and modernization and which is perfect in terms of production, architecture and protection of ecological environment.

The establishment of the Juche-based phosphate fertilizer industry relying on domestic efforts, technology and raw materials under the wise leadership of Supreme Leader Kim Jong Un constitutes a breakthrough in adding eternal brilliance to the immortal exploits performed by President Kim Il Sung and Chairman Kim Jong Il and in drastically increasing grain production.

Amid the playing of welcome music, Kim Jong Un appeared at the venue of the ceremony.



and the tremendous might of the DPRK state and brought great delight to all the agricultural workers and other Korean people.

He referred to the fact that the Supreme Leader had set forth the militant task of building the factory, which mass-produces high-concentration ammonium phosphate fertilizer urgently needed in agricultural production, in a modern and big way and provided energetic guidance so that it could be built as a model factory in the chemical industry sector and as a

Pak Pong Ju, member of the Presidium of the Political Bureau of the WPK Central Committee, vice-chairman of the State Affairs Commission of the DPRK and vice-chairman of the WPK Central Committee, attended the ceremony.

Also present at the event were Premier Kim Jae Ryong, member of the Political Bureau of the WPK Central Committee and member of the State Affairs Commission of the DPRK, Kim Tok Hun and Pak Thae Song, vice-chairmen of the WPK Central Committee, Kim Yo Jong and Jo Yong Won, first deputy department directors of the WPK

Central Committee, other officials of the WPK Central Committee, army and civilian officials and builders who took part in the construction and working people of South Phyongan Province.

Pak Pong Ju in an inaugural speech described the completion of the fertilizer factory as a great auspicious event which has powerfully demonstrated the revolutionary spirit of the heroic Korean working class who are determined to win a fresh victory in socialist construction through a courageous frontal offensive to achieve a breakthrough under the leadership of the great Party

labour-saving enterprise whose all production processes are automated and put on lines.

He said that the builders, scientists and soldier builders, who made the spirit of devotedly implementing Party policies as part of their mental qualities, devotedly strived to hasten the day of completion as they waged a drive of loyalty and a fierce 24-7 struggle and settled in an original way lots of scientific and technological problems arising in putting the phosphate fertilizer industry on a Juche basis.

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Ceremony: Kim Jong Un attends inauguration of fertilizer factory

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He called for getting rallied close around the Supreme Leader and giving fuller play to the fighting zeal for the frontal offensive to make a breakthrough so as to continue to register notable achievements of self-reliance, while making a dynamic advance full of confidence in victory for the prosperity of the socialist country.

Kim Jong Un cut the ribbon to inaugurate the factory.

All the participants burst into thunderous cheers as they looked up to the Supreme Leader.

Kim Jong Un warmly waved back to the cheering builders and other people.

As he was briefed about the production processes of the factory he looked round several places including the raw material processing process, yellow phosphorus production process, ammonium phosphate fertilizer production process and packaging process.

Feasting his eyes on the overall view of the wonderfully built factory, he said with deep emotion that President Kim Il Sung and Chairman Kim Jong Il, who had worked heart and soul to solve the food problem for the people, would have greatly been pleased if they had received the report that the modern phosphate fertilizer factory has been built.

Now our agricultural workers have become able to concentrate on achieving the grain production target set by the Party without worry, he said, describing the factory as the proud fruition that those who absolutely follow Party policies brought about on the strength of army-people unity. And he highly appreciated the feats performed by all the builders, scientists and technicians.

He expressed satisfaction with the fact that the lecturers and researchers of Kim Chaek University of Technology established an efficient integrated manufacturing system of the factory in cooperation with relevant units, and repeatedly emphasized that talents are a great resource of a country and a motive force for its development and that the

training of talents is a political issue to which the Party gives top priority.

The completion of the Sunchon Phosphate Fertilizer Factory is the first success made after the Fifth Plenary Meeting of the Seventh Central Committee of the WPK and an important occasion for making the chemical industry of the country leap a stage further, he said, stressing the need to more fiercely raise the flame of achieving prosperity by dint of self-reliance in all fields of building a powerful country with the valuable success as a spark.

He specified tasks to be tackled in the management and operation of the factory including the matter of taking thoroughgoing measures for the provision of raw materials for putting phosphate fertilizer production on a normal footing, that of further rounding off the integrated manufacturing system and ensuring the stable operation of production processes and that of paying special attention to environmental protection.

He set forth the tasks and ways for developing the country's chemical industry in the correct direction as required by the new century including the rebuilding and updating of fertilizer factories as a whole and the building of more chemical industry bases.

He expressed expectation and conviction that the officials, scientists, technicians and builders would wage a courageous offensive for opening up a new avenue of socialist construction in the spirit and stamina they displayed as they created the new industry relying on domestic raw materials and technology and thus more powerfully demonstrate the might of the Party's great idea of waging a frontal offensive to achieve a breakthrough.

KCNA-THE PYONGYANG TIMES



PROFILE

Daughter of slash-and-burn farmer basks in care of great leaders

On April 19, Supreme Leader Kim Jong Un sent a birthday spread to Ri Sin Ja, former adviser to the Pyongyang Municipal Rural Economy Committee, on her 80th birthday.

"I was born to a poor slash-and-burn farmer, but I grew to be a leading agricultural official well-known to all under the warm care of President Kim Il Sung. Though I'm an ordinary pensioner, warm fatherly care continues to be granted to me and so I'm overwhelmed by deep gratitude," said Ri that day.

Hailing from a mountainous village in Yonthan County, North Hwanghae Province, during Japanese military rule over Korea, she moved to Rihyon-ri in suburban Pyongyang with her parents after national liberation (1945).

At the time when the whole country was bubbling with the efforts to embody the Chongsan-ri spirit and Chongsan-ri method created by President Kim Il Sung, Ri worked hard to rally all farmers as an information worker of a workteam at the Rihyon Cooperative Farm.

The Chongsan-ri spirit is an idea embodying the requirements of the Juche idea for considering everything with man as the main subject of attention and serving man, while the Chongsan-ri method is a method of work to solve all problems by positively mobilizing the creativity of the masses of the people as masters of the revolution and construction.

True to the intention of the President, Ri showed sincere devotion to the workteam



Ri Sin Ja (second from right) sees the list of the presents from Supreme Leader Kim Jong Un with her family members.

members as she motivated them to join efforts and do farming with zeal.

On his visit to Rihyon-ri on January 23 1961, the President listened to Ri's simple and honest speech in a meeting and highly appreciated her as he called her a "Red motivator" in the Chollima era.

Her commendable deeds were publicized all across the country and there was a campaign to follow her example.

Although she was busier than others as she took part in national and local conferences and experience-sharing meetings, she fulfilled her duty as a farmer, while tending farm fields until late at night and weaving straw-bags.

In the course of this, she grew to be a steady and competent farmer and the chairwoman of a farm management board.

As she skilfully managed the farm she ensured that farmers did farming well and increased their income while bringing benefits to the state. Later, she worked as the chairwoman

of the Hyongjesan District Cooperative Farm Management Committee in Pyongyang and then the head of the Pyongyang Municipal Rural Economy Committee.

In those years, the President showed deep concern for her work and guided her at each step and when she produced good results in work he saw to it that official commendations were given to her.

Ri served as a deputy to the Supreme People's Assembly for five terms.

"As I met President Kim Il Sung on over 80 occasions and received precious instructions, I keenly realized the unlimited benevolence of the great leader who valued, gave prominence to and led whoever worked faithfully for the good of the people," recalled Ri.

Despite her advanced years, she is still deeply concerned about farming at Pyongyang farms and gives them useful advice.

By Kim Rye Yong PT

RECOLLECTION

'We will keep singing the song of worker couple'

Every May Day, the holiday of all working people around the world, our couple are filled with special happiness.

My wife and I working at the Hungnam Fertilizer Complex were lucky to sing a song at the concert in celebration of May Day which was held at the People's Theatre in Pyongyang in 2012 in the presence of Supreme Leader Kim Jong Un.

I felt as if I were in a dream as we were to perform at the concert given at such a wonderful new theatre.

As if she read my feeling, the compere asked me if I got nervous on the enrapturing stage. "What would make this worker nervous in this world of the working class?" I asked back to her unawares as I looked up to Supreme Leader Kim Jong Un who was smiling at us.

Then the entire audience broke into laughter and applause and the Supreme Leader gave me a thumbs-up and a big hand.

At that time our couple sang *We Are a Worker Couple*.

The song is the sheer reflection of the feeling of our couple who came to love each other at work and built a beautiful life through fulfilling labour full of joy and optimism. So we had sung it many times as we conducted mass-based cultural and artistic activities and on other occasions like congratulatory performances and radio shows held at theatres in our province and Pyongyang. This time, too, we sang it merrily in good concord.

Our singing was greeted with deafening applause and the Supreme Leader clapped his hands first and longest as well.

We were moved to tears overwhelmed by ecstasy as we saw the Supreme Leader who reminded me of President Kim Il Sung and Chairman Kim Jong Il.

The great leaders had visited our complex time and again to indicate the way ahead of it and show warm affection for our workers' health and living.

I cannot yet remember how I left the stage as I was in the grip of great excitement.

After the performance all congratulations of the world seemed to be poured on us.

Other performers including big stars from central art groups lavished praise on us though they were very successful in play, and during our stay in Pyongyang for performance many strangers welcomed us, affectionately calling us a "worker couple from Hungnam".

And the entire complex offered us warm congratulations.

Everyone was pleased to say that we finely sang of the happiness of Hungnam workers and congratulatory phone calls came from my comrades-in-arms during military service and many other people in my wife's native village.

We swelled with pride in living in the world of workers.

Our song which became a favourite of all the employees of our complex is now sung by my two daughters who also work at the complex.

As we sing the song, the fertilizer output of the complex rises and our family of workers feel greater pride and happiness.

Ri Jong Son, staffer at the Hungnam Fertilizer Complex

Nationwide

Broad-spectrum sterilizer widely used in combat against COVID-19

The home-made chlorine dioxide stable solution is widely used in anti-epidemic work in the DPRK.

The solution can kill viruses, bacteria, true fungi and other kinds of pathogens.

It is applicable to any objects in various ways under any conditions and is higher in concentration and can be stored three times longer than the previous chlorine dioxide.

Many units across the country have used it in the fight against COVID-19 since the national emergency anti-epidemic measures were taken.

The demand for the solution is now growing not only in the hygienic, anti-epidemic

and medical fields, but also in the food processing, public catering, livestock and fish farming sectors.

Flowers cultivated for eco-friendly greening



DPRK horticulturists raised flowering plants to be applied for eco-friendly greening.

They grew thousands of rose bushes with nine different colours and sent them to the construction site of the Wonsan Kalma coast resort and other units, and discovered new properties of deep pink carnation and acclimatized it.

They also cultivated by way of tissue culture 68

varieties of cactuses including *Echinocactus grusonii* and *Aporocactus flagelliformis* which have an indoor air purification effect.

Over 70 kinds of flowers and 14 species of rare flowering plants cultivated by them are holding visitors spellbound at the exhibition hall of the floricultural wholesale store.

Functional decorative material developed for green architecture

Researchers of the DPRK have developed a new functional decoration material for green architecture.

The building material has a good effect on human health by emitting far infrared rays and anions.

It is convenient for the execution of construction, has high relief decoration effect and is superior in technical specification indexes.

Developed by Kim Il Sung University, the material won the best appreciation at the 2019 national exhibition of sci-tech achievements in the field of finishing building materials.

Over 37 000 ha farmland secured throughout country



According to information available, over 37 000 hectares of new land have been secured across the country last year and activities are being conducted briskly to apply them to agricultural production.

Jagang Province acquired over 1 500 hectares of farmland through the embankment of rivers, rearrangement of

ridges between farm fields, straightening of waterways and filling up of puddles, and wound up the preparations for their utilization in farming.

Kumgang County in Kangwon Province reclaimed some 20 hectares of land in the water area by arranging rivers in Kumsaem-ri. More than 1 300 hectares of new farmland were secured in the province.

Anju of South Phyongan Province is making preparations for farming in some 200 hectares of newly-acquired farmland.

Hochon County in South Hamgyong Province also obtained a dozen hectares of new land near the rivers in Suui-ri and Jangpha-ri areas.

North Phyongan, North Hamgyong, South Hwanghae and other provinces are striving to use new land secured last year in this year's farming.

THE PYONGYANG TIMES

RECYCLING

Wastes processed into production materials

Government measures add vitality

“At present recycling is widely encouraged in our country and the DPRK law on recycling resources was adopted at the recent Third Session of the 14th Supreme People’s Assembly,” said an official of the Cabinet.

According to him, factories and enterprises across the country are now eager to collect, process and recycle industrial and household wastes, leftovers and scrapped materials.

To this end, government measures have been taken to build a nationwide recycling system to provide favourable conditions for the collection of idle materials like procurement and organize extended production based on it.

Procurement agencies have been organized to meet the economic and geographical features of administrative districts and an integral procurement system has been established to employ a variety of forms and methods including exchange, mobile, field, contract, consignment and intensive procurements in order to arouse the public desire and will for procurement and tap new sources of procurement.

Measures have also been taken to promptly fix prices, set and approve standards and license the production of recycled products, pay premiums for such products and give preferential treatment to their production units.

They have proved their great vitality in practice.

The State Academy of Sciences introduced a method of recycling leftovers of feed and excrement into the Samchon Catfish Farm to reduce the production costs.

The Hamhung Railway Bureau produces plastic brake shoe by itself by making thermosetting resin and impregnated insulation varnish from plastic waste, opening a prospect for supplying insulating materials needed for the repair of electric motors and transformers.

The employees of the bureau say that they have keenly realized how important the recycling of resources is as they collected plastic wastes by classifying them according to their qualities and saw it was very helpful in solving the problems arising in reality.

The Suncheon City Drink

Factory in South Phyongan Province has developed a well-organized plastic waste collecting system to produce fuel oil on a regular basis.

“There is nothing to throw away in the fuel oil production process. We produce fuel oil and use the dregs as a material for road paving,” said manager Kim Kwang Song.

The Sariwon Textile Mill in North Hwanghae Province has applied a high count cotton yarn production technology by short fibre to recycle a large quantity of waste fibre so far thrown away, as raw materials for the production of various kinds of cloth.

According to an official of the mill, waste fibre from the factory amounts to nearly 2.5 tons a month.

The Pohang district fuel service station in Chongjin, North Hamgyong Province, produces quick-ignition briquettes that can catch fire from only a piece of paper with sawdust, fly-ash and waste from paper production and supplies them to the residents.

By Yun Kyong Il PT

Farm makes fish feed with organic waste

The Unha Fish Farm in Pothonggang District, Pyongyang, produces fish foods from organic leftovers.

According to Kim Myong Jin, a member of the managing staff in charge of production, the farm raises many chickens and uses the excrement to culture helminth, earthworm and other fish foods.

They also ferment the chicken excrement using compound lactobacilli.

“The fermented excrement contains amino acids and many other nutrients. When it was added to the protein assorted feed for fry in the proportion of 10 to 15 percent, the feeding coefficient was lowered and the production cost decreased to one third as compared to the past when grain feed was used,” said technical instructor Ri Hyo Jin.

They use an insect belonging to *Stratiomyidae* as an early feed for fish.

According to technical instructor Pak Chol Hwan, since the insect mainly feeds on lees and other by-products from food processing and excrement of poultry, it is high in protein content and widely applied as an essential protein-rich feed.

The farm has developed and introduced a technology for raising the temperature of the breeding ground in keeping with the insect’s physiological characteristic of having little resistance to low temperature, thus increasing the output.

The fish feeds produced at the farm are supplied to several other fish farming units including the Suncheon Catfish Farm.

By Kim Il Jin PT



Employees sort out fries to move them into outside ponds on the Unha Fish Farm.

KIM IL JIN

Sewage turns into feed, fertilizer

The Pyongyang Meat Production and Processing Complex has established an organic sewage treatment process.

“The quantity of sewage is on the rise day by day due to the continuous population growth, rapid economic development and increased rate of urbanization,” said an official of the complex. “Among the sewage, the proportion of kitchen garbage from public catering facilities and households rose up from 37 percent to 62 percent, giving rise to a serious social problem.”

In collaboration with the Life Science Faculty of Kim Il Sung University, the complex buckled down to the research on producing quality fodder, which does no harm to

the environment and domestic animals, and organic fertilizer by fermenting various kinds of organic sewage at high speed.

In the course of this, they separated and selected microbial strains which are indispensable for fermentation and degradation of sewage, found out their cultural characteristics and, accordingly, manufactured the equipment and set up the process.

The equipment is only one third in volume as compared to the foreign-made one but has six times higher processing capacity. The process is also very simple as it does not involve such pre-treatment steps as sterilization and storage.

“When the materials and bacteria are injected, the whole course of crushing, mixing, fermenting and drying

takes place simultaneously or successively in the single closed machine,” said a technician of the complex.

According to him, it has an output per run of 0.8-1 ton and power consumption of 7kW.

The product

of this process has dark brown colour and a pleasant smell.

According to analysis data, it contains enough nutritive and biological stability indices including crude protein, free amino acid, crude fat and carbohydrate. Especially, its crude protein content is over 15 percent.

Many fish and livestock farms are now adopting it as quality feed.

Consequently, a breed fish farm has increased the survival rate of loaches by 20 to 25 percent and saved assorted feed by dozens of percent, while a pig farm adopted it as a substitute for bean cake and discovered that it prevents diarrhoea among pigs.

According to the developers, it is also very effective as an organic fertilizer as it can activate the land in a few years without using chemical fertilizers.

The organic sewage treatment device obtained a national patent.

“We are now working to standardize the process in order to introduce it into fish and livestock farms and urban management sectors across the country,” said an official of the complex.

By Jong Hwa Sun PT



SONG TAE HYOK

Equipment made by the Pyongyang Meat Production and Processing Complex to process organic sewage.

Urban rubbish reused as building materials

Brisk activities are conducted across the country to recycle municipal waste into building materials.

“Ash of coal and plastic waste take a large proportion in city rubbish. At present different units in the city recycle them to make various kinds of building parts needed for sprucing up streets and villages,” said an official in the sector of urban management in Pyongyang.

The urban beautification companies in Central and Moranbong districts annually turn out tens of thousands of blocks with ash of coal and waste from cement factories, while the Pyongyang municipal floricultural farm makes flowerpots from slag from boilers and ash of coal.

The water supply and sewage management station in Taedonggang District and the

Tongdaewon District Committee of Science and Technology produce drainpipes of all sizes, door-knob, furniture ornament, linoleum, large shuttering and naphtha.

Technicians in Taedong County of South Phyongan Province developed cement by adding different materials to ash of coal, a mixed heat-insulating wainscot with good insulating and soundproof characteristics from waste polystyrene foam resin, and a flash-setting agent by mixing different substances with waste aluminium and slag.

Many provinces, cities and counties produce non-calcined cement, wainscots for insulation and finishing decoration, construction blocks, ceiling boards and paints with city waste.

By Chae Hyang Ok PT

ANNIVERSARY

Institute plays key role in standardizing metrological units

It has been 70 years since the establishment of the central metrological science institute in the DPRK.

During the past decades the institute has developed into the hub of metrological research and examination of the country.

According to its director, the institute established a unified metrological verification system throughout the country from the central to local factories, enterprises and farms, and has examined the standard gauges of all sectors every year in a qualitative way so as to accurately settle standard values.

In the meantime, it developed and introduced lots of prototypes, standards and gauges for industrial use, giving impetus to the development of science and technology and economic growth.

In recent years alone, it has installed electronic automobile weighing machines, conveyor

scales and quantitative feeders in dozens of factories and enterprises throughout the country to make a contribution to optimizing production and business activities.

A new kind of electronic dynamic wagon balance, among others, helps ensure the accuracy of coal supply between thermal power stations and coal mines.

The institute also developed a device of measuring grain moisture to meet international standards after quantitatively confirming the moisture measuring scale of cereals. It is said that the evaluation, procurement and supply of nationwide grain yields are carried on more scientifically thanks to the measuring device.

"The non-electric ohmmeter of electrode and noise measuring system developed by the researchers of the institute prove effective in the production of large electrodes and new-type tractors," said an official of the

State Commission of Science and Technology.

In addition, the researchers brought out iron bar torsion controllers which are designed to reduce consumption by enhancing the tensile strength of iron bar to send them to Samjiyon and other construction sites.

They also set up an examination system for fixing precise standard values of such typical analysing means as photoelectric colorimeter and spectrophotometer so as to ensure the scientific accuracy of experiments and analyses in different sectors.

"We will further develop the country's metrological science and technology by developing new prototypes and standards and adjusting and reinforcing the system of transferring metrological units," said the director of the institute.

By Ri Myong Jun PT

ENERGY

Wind-driven power system wins popularity among residents

A power supply system based on wind turbine has been introduced into a new high-rise apartment building in Phohang District of Chongjin, North Hamgyong Province.

"It is unavoidable in the solar-powered system that the efficiency of power generation drops in cloudy days or at night, but our coastal city has favourable conditions for setting up a wind-driven power generation system as the wind constantly blows from the sea," said Kim Kwang Hyok, initiator and director of the Yoram building parts company of the material supply store for schools for orphans in North Hamgyong Province.

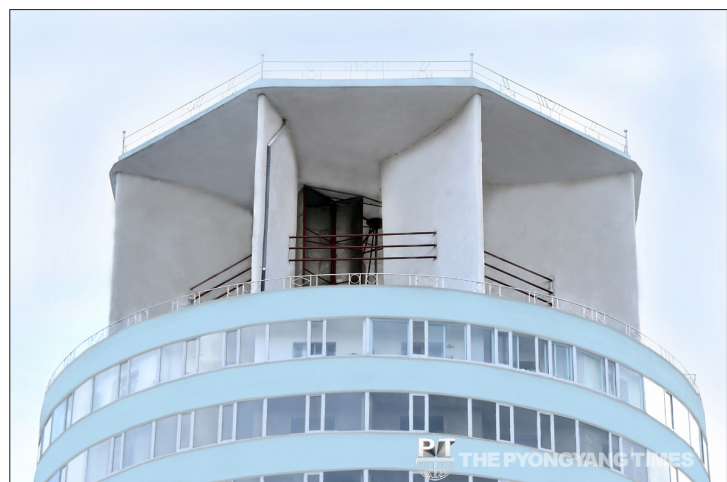
Wind turbine is installed on the rooftop, and it easily rotates in slight wind, though its turbine blades weigh heavy.

The room of converter underground is furnished with batteries and converter set.

"In the converter room, the direct current from batteries is converted into alternating current to be supplied to households and for the operation of a lift. Batteries are mainly charged with electricity generated by a wind turbine and that from solar panels as well," said technician An Il Mu.

According to him, wind-powered generating facilities including turbine have been made in a new form.

The semi-circular vertical axial wind turbine blades stretching for over seven metres and the roof structure in the form of fixed structure guiding wind are enough to accelerate the speed of wind.



A wind turbine installed on the rooftop of an apartment house in Chongjin, North Hamgyong Province.

SONG YONG SOK

PT THE PYONGYANG TIMES

BUS

Upgraded trolley buses run along Chongjin streets



PAK KWANG HUN

Trolley buses manufactured at the Chongjin Bus Factory.

A new type of trolley buses recently started service in the route between Sinam and Songphuyong districts in Chongjin, North Hamgyong Province.

"The running of trolley buses made by our province in streets, which are as fashionable and convenient as the new-type ones in Pyongyang, makes our city look much brighter," said Ri Pok Sun living in Songphuyong District.

These trolley buses facilitating the traffic of citizens are produced at the Chongjin Bus Factory.

"We have set an ambitious goal to produce dozens of new-type trolley buses this year on the basis of achievements and experience of having manufactured several trolley buses last year," said manager Hwang Kwang Il.

The local bus producer makes imported parts with its own effort by introducing new technologies.

A sliding door mechanism, for example, is designed to

remove the major axis of door without using plastic brush for seal and to fix the sliding door separately at ceiling and floor.

The factory invented and made a moulding machine to produce different sizes of square-shape beam which could be claimed to be fundamental in the production of trolley bus.

It also remodelled the scrapped electric motors into induction motors, and reduced noise in the mode of electric-power control based on control board and decreased power consumption by 40 percent as compared to before.

"We increased the power of traction 1.2 times even with the same output as previously by improving framework and structure of chassis frame to reduce the curb weight," said senior engineer Kim Kuk Song.

The trolley bus is a 25-seater with no trailer.

By Chae Hyang Ok PT

LIVESTOCK

Family good at raising domestic animals

Many people visit the family of Kim Myong Hun who works at the Songha Industrial Crop Cooperative Farm under the Jagang Provincial Rural Economy Committee in Manpho, Jagang Province.

Because his house bears a striking resemblance to a livestock farm.

There are 11 breed pigs in a two-storey pigsty of a vinyl-sheet greenhouse style and the sows already gave birth to 58 piglets this year.

His target is to produce more than 120 piglets this year.

He keeps 30 breed goats, four medium-size ones and 28 kids and is going to increase their number to 100 this year.

There are also 24 breed geese,

27 breed chickens and seven dogs in the family.

His family also keep honey bees every year. They have produced a maximum of 170 kilograms of honey a year.

"People think that we have any special secret in raising different species of animals so well, but they are wrong," said Kim's wife Kyong Myong Hui.

According to her, her family found the way to solve the growing feed problem in making the most of green feed.

They gradually increase the proportion of green feed for animals from the outset and attach importance to grazing by taking advantage of the mountainous area.

In winter, they feed goats

the straw of bean plants and maize and the by-products of vegetables they gather in autumn and leave animals free when they run out of the feed.

They grow bok choy, mallow and pumpkin around their house and potato and other vegetables as intercrops among maize to get the non-cereal feed for pigs and geese and widely use silage as feed.

The fermented silage is said to be well-liked by domestic animals and highly efficient.

In raising pigs, the silage helps considerably reduce the consumption of grain feed and fuel for processing feed.

In April, they gather various plants like evening primrose to make silage and feed animals.

"By doing so, we have been able to ensure the reproduction and raising of animals without a hitch while decreasing the amount of dry feed in the whole period," said Kyong.

By Kim Kum Myong PT

ZOO

Central Zoo captivates millions of visitors after reconstruction



More than 3.5 million people have visited the Central Zoo since its reconstruction four years ago.

It will take over a day to look round all the places in the Central Zoo.

The zoo is located at the western foot of Mt Taesong in the suburbs of Pyongyang. The mountain was named thus in the meaning that it is a mountain with a big fortress which was built in the period of Koryo to repulse foreign invasion.

According to the employees of the zoo, the mountain achieved more fame along with the discovery of revolutionary slogans written on barked trees during the anti-Japanese war, the construction of the Revolutionary Martyrs Cemetery on Mt Taesong and the renovation of the Central Zoo.

Chon Chol, director of the Central Zoo, said that more than 60 million people visited the zoo in the past six decades, including over a million foreigners.

The zoo was given a

total facelift through the reconstruction in 2016.

All animal houses were built distinctively in terms of formative arts while preserving the characteristics of relevant animals, including the entrance of the zoo representing a Korean tiger with its mouth wide open, and the interior of buildings has natural effects thanks to the introduction of modern architectural techniques.

Since large water tanks stand on each wall of the aquarium, they make visitors feel as if they are under water.

The reptile hall keeps relief murals of dinosaurs, sculptured figures and natural rocks, as well as dozens of species of tropical plants forming a tropical forest.

The main hall involving the sci-tech learning space, e-reading room and scientific knowledge exhibition hall was newly added to the zoo so that

visitors could get access to data showing the ecological characteristics and ways of life of animals in a systematic and taxonomic way.

The director said that the zoo has over 6 000 gift animals in some 640 rare species presented by heads of state, personages and organizations of different countries to President Kim Il Sung, Chairman Kim Jong Il and Supreme Leader Kim Jong Un, adding that their numbers are on the increase year after year thanks to the sincerity of technicians and breeders.

Over 3 566 280 people have visited the zoo since its reconstruction.

Supreme Leader Kim Jong Un provided field guidance at the zoo in May 2016 and on other occasions for its reconstruction.

By Ri Sang Il PT

NATIONAL FLOWER

Magnolia widespread in Pyongyang

The national flower of magnolia is widely spread in the capital city of Pyongyang.

"Citizens have planted many magnolias in different places of the city in this tree-planting season. Especially, those in Mangyongdae District planted hundreds of magnolias," said Rim Chol Ju, chief engineer of the landscaping and greening management bureau under the Pyongyang Municipal People's Committee.

He said that the residents have ensured the rooting rate of newly-planted magnolias at 100 percent.

The residents in Chilgol-dong No. 3 of Mangyongdae District planted some 40 magnolias in their villages and tend them with utmost care.

"Magnolia is a flowering tree mainly growing in valleys or hillsides. However, our residents ask their relatives in local areas or the botanical garden to get the flowering tree," said Choe Son Mi, chief of the dong office.

She added that residents are so anxious to plant magnolias that they choose the right soil and plant them like horticulturists do by acquiring detailed information about their

ecological features.

According to her, magnolia grows in damp soil with high atmospheric humidity and sunshine, as well as in a slightly shady place. So, residents plant magnolias in streets and water them every morning, she said.

The nameplates hanging on each flowering tree and white fences put up neatly around each of them clearly show the sincerity of the residents.

"Many families grow beautiful flowers in rooms or on balconies, and flower trees are seen growing in the resting places of our village. Therefore, other villagers call our village a 'flower village', but now it will be named a village of magnolias, I think," said Jo Yong Gum, head of neighbourhood unit No. 41.

By Kim Kum Myong PT

CONTINUING EDUCATION

College instrumental in keeping doctors up-to-date

Pyongyang doctors' in-service training college is focusing on developing clinical expertise of medical practitioners in its educational efforts.

It puts main stress on specially organized lectures to suit the characteristics of in-service training, said vice-rector Ri Yong Ae.

According to her, since the students received professional education at universities and are doctors in active service with certain degrees of clinical expertise, the three-year in-service training course focuses on giving them lectures on the recent achievements and development trend of medical science, different physical constitutions and causes of diseases and unusual symptoms developing in various forms according to environment and conditions and experiences in treating them.

It invites prominent doctors with rich clinical experience and professors in biochemistry to give lectures and encourages optional lectures.

In order to raise the efficiency of education, it introduced 3D multimedia presentations and videos of actual operations into lectures.

It informs the students of the themes of lectures beforehand

and makes them find more than two troubles they encountered in clinical practice so as to solve them during the lectures.

Kim Ryong Bom, lecturer at the tuberculosis department, said that the students have more experience with newly developed medicines, diagnosing equipment and currently widespread diseases, so the lecturers have to put much effort in order to give adequate answers to their unpredictable and hard questions.

The mode of lecture which involves telling the students the constitutions of patients and the results of blood tests and examinations through several diagnosing devices and comparing the diagnoses pronounced by the students and the actual cases is very popular among students.

According to rector O Song Hwan, when the development of the online education system and education support software is completed, the college will be able to properly utilize achievements made and cases found at hospitals, which might bring about a bigger innovation in doctors' in-service training.

By Ri Sung Ik PT



Lectures are given for medical workers at Pyongyang doctors' in-service training college.

EDUCATION

Preparations under way for new teaching programme

Universities of education are accelerating preparations for the fulfilment of a new teaching programme.

The Education Commission scientifically defined a general goal of universities of education on a new height and worked out a new education programme.

Kim Chol Ju University of Education worked out over 10 000 new teaching plans for hundreds of subjects, invented and made new multimedia

presentations, experimental apparatuses and teaching tools, and compiled some 120 e-textbooks.

Lecturers at Sinuiju Cha Kwang Su University of Education No. 1 worked out rational teaching plans for different subjects and developed new simulated programs for experiments and practical training.

KCNA

JAPAN

True motive behind missile unit deployment on Miyako

Shortly ago, Japan deployed a new ground-to-air and ground-to-vessel missile unit of the Ground Self-Defence Force on Miyako Island of Okinawa.

At present, the construction of an ammunition chamber for storing multi-purpose ballistic missiles, mortar shells and missiles is in full swing with an eye to completion until March next year.

The deployment of the missile unit was carried out on the pretext of the strengthening of defence posture, but its real intention is too obvious.

Miyako is an island of

Okinawa adjoining Diaoyu Islands in the sensitive water area over which China and Japan are in dispute.

According to the “plan to cope with a potential clash with China over Senkaku Islands (its Chinese name is Diaoyu Islands) at an early stage by committing missile units”, the Japanese government pressed on with the formation and stationing of security and missile units and units for restoring landing strips of fighters. As a result, a 160-strong coast guard unit was stationed in Okinawa in 2016 and 500-strong missile and security units in Kagoshima

in 2019. And since March this year Japan has pushed the construction for the deployment of 500- to 600-strong missile and security units in Okinawa.

Japan incessantly strains the situation in disputed water areas in a bid to create objective conditions favourable for becoming a military power, ensure military operations in any places of the world beyond the boundary of the archipelago and put the SDF on a real war format and modernize it, thereby realizing its wild ambition for reinvasion. This is just its real aim.

It should not go unnoticed

that its defence expenditure has recently reached a record high.

However, it must bear in mind that the more it is hell-bent on risky military build-up, the more the neighbouring countries will grow wary of it and the faster it will face self-ruin.

It is natural for the islanders to raise their voices of protest against the deployment of the missile unit on Miyako, saying the militarization of the island will only hasten a war crisis and urging the government to stop the readjustment of the island for war.

By Choe Yong Nam PT

CLIMATE CHANGE

Extreme weather poses threats to global security landscape

According to the definition of a foreign weather station, abnormal climatic phenomenon occurs only once in 30 years.

However, as if to deny it, the present climate of the earth displays unusual symptoms every year and people suffer from destructive disasters caused by extreme weather conditions like typhoon, flood, drought and boiling heat. They even change the taste of foods. The content of carbohydrates in crops is constantly increasing and their nutritive components are being changed due to the pollution of underground water and soil.

The present situation requires

the people of the world to have a more correct understanding of extreme weather conditions and their aftereffects.

Australia has been afflicted by unprecedented forest fires since last year. According to information made available last January, a total of some 170 000 square kilometres of forests were burned away and over 1.2 billion animals including koala bears and kangaroos died in the fires.

Although the cause of the fires is still unclear, many people remember that last year was the driest one in Australia with the highest temperature in history, which gives them a good reason to think that they are related to

global warming.

In recent days alone, heavy rains and landslides occurred in succession in many countries including Afghanistan and Kenya, causing many casualties.

The UN in a report noted that it is impossible to explain the destructive climatic change in the past 50 years with only natural factors and that over 90 percent of global warming is attributable to human activities.

It can be illustrated by the fact that over 10 000 scientists warned of a climatic crisis. The study paper jointly signed by some 11 000 scientists of 153 countries demanded humankind

should switch from the use of fossil fuel to that of renewables in economic activities.

Extreme weather conditions are aggravating serious social crises of hunger and water shortage.

It is estimated that in some African countries the output of crops would decrease by about 50 percent and 75 to 250 million people would be faced with severe water shortages.

It forewarns a flood of environmental refugees in the near future. If such refugees move to different countries and regions, the world security landscape will be badly shaken.

By Om Ryong PT

RUSSIA

Efforts put in to boost regional economy and improve people's livelihood

Russia is making endeavours to develop regional economies and improve residents' living standards.

Shortly ago, the Russian Prime Minister stressed the need to help regions experiencing economic difficulties in the face of COVID-19 spreading throughout the world. Referring to the government's decision to support underdeveloped regions with their 2020-2024 development plans, he said it would take all necessary measures to assist local residents and provide them with jobs.

It is particularly important for these regions to find out new economic indices with growth potentials and this is the major

target of the development plans, he added.

At present the government spares no investment in construction as it set it as a major sector for boosting regional economies and stabilizing and improving the residents' life.

President Vladimir Putin said in a consultative meeting on the development of the construction sector that it is a driving force behind the revitalization of the economy.

The government is pressing on with a large-scale infrastructure construction programme which involves projects for expanding the traffic capacity of the Baikal-Amur trunk line and trans-Siberian railway, modernizing airports in Khabarovsk,

Norilsk, Chelyabinsk and Perm and building modern harbours in the Russian Far East.

It has also buckled down to regional community projects involving construction and repair according to the social development programme for economic growth centre.

In the Far East alone, 2 283 construction projects are underway backed by the government. It is said that 300 buildings have already been constructed and additional 200 renovated.

Construction projects are also going on in Buryatia and Trans-Baikal region, which were integrated into the Far East Federal District.

Buryatia carries on renovation projects including three

hospitals, a midwifery clinic, a dozen fitness centres and sports fields and 70 other facilities.

Trans-Baikal plans to undertake more than a hundred renovation projects including 40 midwifery clinics, two schools, three kindergartens and eight cultural facilities.

The government's effort to spur regional growth is not confined to construction.

In accordance with the “Far Eastern hectare” programme, nearly 80 000 residents have been given land and become able to start agricultural activities.

In Khabarovsk Territory, five complexes producing meat and milk are reportedly to start operation.

By Min Chol PT

Briefly

China

President Xi Jinping stresses need to build space power

Chinese President Xi Jinping emphasized the need to realize the dream of space power as early as possible in his letter sent on Apr 23 to the scientists of older generation who launched the country's first satellite to mark the 50th anniversary of the launch.

The successful launch 50 years ago demonstrated the great spirit of Chinese nation, he said, calling on officials of younger generation in the aerospace sector to overcome all difficulties and scale the high peak of space science and technology.

Cuba

US' drug-related argument dismissed as frame

Cuban President Miguel Mario Diaz-Canel Bermudez in his Twitter account denounced as sham the US' argument that Cuba might be implicated in the drug trafficking by Venezuela.

Cuban Foreign Minister Bruno Rodriguez Parrilla rejected the US claim as unilateral and groundless, while the Cuban Foreign Ministry sent a note of protest to the US embassy in Havana to dismiss the allegation as frame.

Russia

Russian FM rejects US report on arms control

The Russian foreign ministry in a recent official statement rejected the US State Department's report on arms control, non-proliferation and disarmament.

The annual report the State Department submitted to Congress shows that the US' standpoint on discharging its obligation in these fields is intolerant, utilitarian and imprudent, the statement said.

Arab

Arab league decries Israel's seizure of lands

The League of Arab States in a statement on Apr 23 branded Israel's decision on confiscating the lands belonging to some Palestinian people in Hebron city in the West Bank a violation of international law.

US

US bid to deploy satellite jamming weapons

According to Bloomberg, the US forces are now working to build a ground base to jam satellites.

The space force, which was organized in December last year, would possess 48 satellite jamming weapon systems in seven years, it said, adding that they would be used to disturb the signals from Russian and Chinese satellites in case of emergency.

THE PYONGYANG TIMES

CLUB

Jangsan makes its name in wrestling event

The Jangsan Sports Club in Sosong District of Pyongyang is well known at home and abroad for its good performance in training reserve wrestlers. It produced lots of star wrestlers who got fame in international and national games.

Wrestling group members of Sosong Juvenile Sports School were the focus of domestic wrestling front in the 1980s as they made a clean sweep of gold medals in local tournaments.

The Jangsan Sports Club was organized in 1989 with an aim

to train them into professional wrestling players, and since then it has been a destination of schoolchildren with a special taste in the sport. In the course of this, the club won over 80 medals in domestic and international games.

Among them, there is Ri Yong Sam who made his name on the Asian arena by winning three titles.

Ri Kum Chol and Pak Jin Hyang won the men's 42 kg category and the women's 44 kg event at the Asian juvenile

wrestling championships in 2014. And Pak Wi Song was triumphant in the men's 42 kg category at the Asian juvenile wrestling championships in 2015 and an international juvenile wrestling tournament held in Iran in the same year.

"Our sports club attaches importance to the extracurricular training course of reserve players on a par with the training of professionals. Especially, we give promising players a scientific and systemic training on the basis of comprehension of them," said Pak Ryong Chan, chief of the club.

Head coach Kim Hak Won and other coaches researched and introduced hundreds of training methods which prove effective in applying attack and defence techniques. They direct much effort to the teaching based on video clips showing the matches of world-famous players and training sessions, as well as to theoretical and technical lectures so that players can acquire the principle of movement performance by themselves.



CHOE YONG NAM

Wrestlers are under training session at the Jangsan Sports Club in Pyongyang.

By Choe Yong Nam PT

RELIC

Some of landmark historic sites in Pyongyang

The Taedong Gate and Ryongwang Pavilion in downtown Pyongyang are the destination of visitors throughout the year.

The Taedong Gate showcasing the typical architecture in the period of medieval Korea was the eastern entrance to the inner castle of the Walled City of Pyongyang during the Koguryo dynasty.

It was built in the mid-6th century and rebuilt in 1635. It was severely damaged by US bombing during the Fatherland Liberation War (1950-1953), but restored to its original state soon after the war.

The most important and largest of the six gates in Pyongyang, the gate consists of an embankment and imposing gatehouse built on it.

In the middle of the embankment is an arched gateway. On the plane surface its four corners gradually widen outwards so that it can bear the weight of the structure.

The gabled roof of the gatehouse is very beautiful as the ridges and roof surface form soft and graceful curves in all directions.

As it has the architectural style and structural features in the early period of the feudal Joseon dynasty, it embodies magnificence, beauty and nimbleness.

The site of the Ryongwang Pavilion was used as the eastern terrace for a general in the period of the Koguryo dynasty.

The pavilion was first called Sansu Pavilion, but later renamed thus while undergoing several repairs and reconstructions.

Over twenty kinds of roofing tiles marked with different years

were found there to prove that the pavilion had been rebuilt many times. The Ryongwang Pavilion has been known as one of the eight scenic spots in the northwestern part of Korea for its beautiful scenery since olden times. The present one was rebuilt in 1670.

Hanging on the pavilion is a calligraphic board with a poem reading "The river flows in a rush along the foot of long walls and mountains are seen here and there to the east of the vast plain". The poem was written



Spring-tinged Taedong Gate and Ryongwang Pavilion (right) in Pyongyang.

DRINK

Tea likely a good cold remedy

People often catch a cold when season changes or there is sharp temperature differences between day and night. Children and the aged who have lower immunity than young and middle-aged people are especially vulnerable to it. Patients usually choose chemicals to treat the cold, but these medicines do a certain harm to their health.

These days medical experts argue that medicinal tea and other drinks made of natural materials are more effective than chemicals to cure cold.

According to them, aspirin or paracetamol are generally taken to reduce fever and relieve pain, but as just a little overdose of them would produce such symptoms as prostration, leukopenia or enterohemorrhage, they have adverse effects on the patients.

They also say that as cold remedies for children in the form of syrup contain artificial colours, they have a high risk of developing asthma, allergy and cancer.

For these reasons, the world is now turning to the use of medicinal tea made of natural materials which are good for health. If children drink medicinal tea and have a sound sleep, it reportedly starts to take pharmacological effect soon.

Typical medicinal teas include persimmon leaf, broad bellflower, onion root and omija, or *Schizandra chinensis*, fruit teas.

As persimmon leaf contains 30 times as much vitamin C as an apple, children reportedly do not contract cold easily if they drink persimmon leaf tea regularly. The persimmon leaf tea is made by putting about 10 grams of persimmon leaves

by Kim Hwang Won, a poet of the Koryo dynasty, when he climbed Pubyok Pavilion on the banks of the Taedong River.

The Ryongwang Pavilion has a special layout. It looks as if two buildings are dovetailed at



in a litre of water and the more they are infused, the higher the content of vitamin C gets.

Broad bellflower tea contains saponin and inulin which taste uniquely hot and slightly bitter and they are very effective in relieving coughing and loosening phlegm.

Welsh onion root tea has a rich content of calcium, potassium, vitamins A and C and others. Onion roots are put into water and boiled. And the boiled water is cooled before mixing it with honey. If children often drink it, they are prevented from catching cold.

Schizandra chinensis fruit tea is well known to be very effective in the treatment of cough, asthma and bronchitis.

Other drinks can also be made in families for the treatment of cold.

For example, honey and spices are put into red wine to heat it until the alcoholic content evaporates before drinking. Ginger is also sliced and put into water at room temperature before it is boiled. It is mixed with a proper amount of sugar before drinking. It helps warm the body and excrete heat from the body.

Such teas or drinks are very good for improving health of children and adults as well if they are regularly drunk.

By Om Ryong PT

a little oblique angle to form an "L" shape. It stands on a rock near the edge of the cliff to blend in well with the surrounding natural scenery.

By Song Jong Ho PT



SONG JONG HO

