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RESPONSE

World community keeps supporting inter-Korean summit in Pyongyang

Political parties in different countries released statements to welcome the historic inter-Korean summit meeting and the September Pyongyang Joint Declaration.

The Syrian Arab Socialist Union, in a statement, warmly congratulated the Korean people on the successful holding of another inter-Korean summit meeting thanks to the warm love for the nation and bold decision of Supreme Leader Kim Jong Un.

Extending militant greetings to the friendly Workers' Party of Korea which is working hard for the common prosperity and reunification of the nation under his leadership, it wished the WPK greater success in the future.

The Regional Leadership of the Arab Baath Socialist Party hailed the inter-Korean summit meeting and the publication of the September Pyongyang Joint Declaration as a great contribution to ensuring peace and security in the region and beyond as well as on the Korean peninsula in its statement. It also described them as another

landmark event made by the Party, government and people of the DPRK in their efforts to achieve their noble purpose.

Expressing full support to the unshakeable will of Kim Jong Un to remove the danger of war on the Korean peninsula and bring earlier the peaceful and prosperous future, the Palestine Popular Struggle Front called on all the world peace-loving forces to extend solidarity with the stand of the WPK for defending peace in its statement.

The Czechoslovak Communist Party said the September inter-Korean summit meeting opened up a bright prospect for reunifying the country free from foreign interference and providing happy life to the Korean people. And it hoped that the Korean people would realize their desire without fail.

The All-Union Communist Party of Bolsheviks in a statement said it was pleased to see that the September Pyongyang Joint Declaration was adopted and both sides of Korea reached an agreement on mutual cooperation at the

Pyongyang inter-Korean summit.

Paying tribute to Chairman Kim Jong Un who laid precious foundations for national reconciliation and unity, the Spanish People's Communist Party in its statement expressed the belief that the September Pyongyang Joint Declaration would positively contribute to achieving peace and reunification of Korea. It also extended support to and solidarity with the struggle of the WPK for implementation of the declaration.

Warmly welcoming the inter-Korean summit, the vice-chairman of the Filipino-DPRK solidarity and friendship association said the north-south summit meeting and the adoption of the September Pyongyang Joint Declaration are another development stage to accelerate inter-Korean relations as is specified in the Panmunjom Declaration.

The chairman of the Cyprus-DPRK cultural and friendship association said that the world's revolutionary people know

well about Supreme Leader Kim Jong Un's firm will for peace and reunification of Korea and are supporting all his initiatives and practical measures.

The chairman of the Finnish Communists' League described the summit as a great political event provided by Chairman Kim Jong Un and the leadership of the Workers' Party of Korea, while the honorary chairman of the Bulgarian Communists' League said that Kim Jong Un brought successful and beneficial results during the summit, expressing the belief that the Korean nation would reunify the country in the near future.

Expressing his full support to the September Pyongyang Joint Declaration, the chairman of the Rostov association for the study of Kimilsungism-Kimjongilism in Russia said that the north and south of Korea would remove all the obstacles in the way of reunification and put an end to foreign intervention in the cause of national reunification.

Compiled from KCNA

hinder the struggle for regional independence and peace.

They stressed the importance of great Kimilsungism-Kimjongilism whose core is the Juche idea in making progress and changes of Latin America and expressed their resolve to briskly conduct activities so as to embody it on a wider scale.

They also highly praised the immortal exploits of Supreme Leader Kim Jong Un who provided an environment favourable for peace and prosperity on the Korean peninsula through energetic external activities and renders distinguished services to the cause of building an independent new society.

The meeting discussed the issue of forming a regional youth Juche idea study organization to enhance the role of young people in giving impetus to the independent development of Latin American countries.

A letter to the Supreme Leader was adopted at the meeting.

Compiled from KCNA

officials to dynamically organize the economic work and carry out national economic plan for this year ahead of schedule by dint of self-reliance and self-development based on science and technology.

At a field consultative meeting, measures were taken to prioritize the supply of materials, boost the ties between the processes and rev up the production by stepping up the technical updating.

Visiting the cooperative farms in Paechon and Chongdan counties of South Hwanghae Province, the premier

called for harvesting crops well and employing new farming methods.

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INSPECTION

Premier inspects different units

Premier Pak Pong Ju, member of the Presidium of the Political Bureau of the Central Committee of the Workers' Party of Korea and vice-chairman of the DPRK State Affairs Commission, made survey trips to the Ryongrim Cooperative Farm in Mundok County and Yoltusamchon and Kwangchon farms in Sukchon County, South Phyongan Province.

Making the rounds of the Ryongrim Cooperative Farm, he encouraged its farmers who have turned out in

harvesting in high spirits to exceed its peak-yield year level and stressed the need to increase the ranks of active harvesters and high-yielding sub-workteams and workteams and raise the proportion of work done by machines in farming.

At the Yoltusamchon and Kwangchon farms, he referred to the need to thoroughly implement the Party's agricultural policies and proactively introduce advanced farming methods that suit the characteristics

of regions, varieties and seasons.

At on-site consultative meetings, he stressed the importance the agricultural sector assumes in attaining the goals of the five-year strategy for national economic development. Measures were also taken to make relevant units render full support to the countryside.

He inspected the Taean Heavy Machine Complex and co-op farms in South Hwanghae Province.

Looking round different places of the complex, the premier instructed its



Premier Pak Pong Ju (middle) visits the Taean Heavy Machine Complex.

LEADING ARTICLE

Juche-orientation of metal industry spurs nation's economic growth

In September when the DPRK celebrated its 70th anniversary in splendour, Juche-orientation projects were completed one after another in the Kim Chaek and Hwanghae iron and steel complexes, leading metal producers of the country.

Oxygen-blown blast furnaces and oxygen electric furnaces were erected and other construction projects of crucial importance in upgrading production processes were successfully finished at the large iron and steel production bases, putting an end to the centuries-long coke-based iron making and solidifying the foundations of the independent metallurgical industry.

The industry assumes a significant position and role in the present time when the general onward march for directing all efforts to socialist economic construction is at its height.

It is the intention of the DPRK government to make the industry flourish so as to reenergize all economic sectors and vigorously advance the economic front as a whole.

It put primary efforts to the Juche-orientation of the industry to this end.

It has been a long time since the DPRK began to build and run the metallurgical industry by thoroughly relying on domestic raw and other materials and technology.

The country has a rich iron ore deposit and enough technical

personnel. The problem was to solve the fuel problem—that is, to produce iron without using coke.

Korean scientists and technicians had long undertaken scientific research to complete the coke-free iron making method which relies on locally abundant fuel.

In the course of this, a new iron production method based on local raw materials and fuel was established in the 1970s. President Kim Il Sung was so happy that he named it Juche iron and said the followers of the Juche idea should make Juche iron. The Juche iron made at the time was a raw material for steelmaking, so there were many scientific and technological problems to be solved to produce steel from it.

In the 1990s, coke-free steel production was one of the most pressing problems facing the country.

The workers, scientists and technicians in the metallurgical industry sector intensified research to throw off the shackles of coke completely.

The Hwanghae Iron and Steel Complex succeeded in the industrialization of pig iron production based on oxygen-blown blast furnace and got down to the building of a 20-ton oxygen electric furnace last year. The first tapping of the electric furnace was successfully carried out in April this year. The oxygen electric furnace has a short melting time and does

not need electrodes and scrap iron. As molten iron from the oxygen blast furnace is directly charged into the electric furnace to make steel by using oxygen, the steel quality is very high.

The Kim Chaek Iron and Steel Complex erected the largest oxygen blast furnace in the country and built a large oxygen plant, fluidized-bed gas generator and others to complete the mammoth Juche-orientation project.

Many other achievements were made in the Juche-orientation of the country's metallurgical industry.

The high-temperature air combustion technology based on gasification of anthracite was introduced into heating furnaces of many metal factories across the country to rid themselves of the dependence on imported heavy oil. And scientific and technological guarantees were provided for the production of manganese ferroalloy from wad, baric ferroalloy, micro-alloy steel from boron and electrodes for UHP electric arc furnace from natural graphite phosphate.

The establishment of Juche iron production processes relying on local fuel, raw materials and technology 100 percent at the largest metal producers in the country has opened a bright prospect for the sustainable development of the country's steel industry.

By Ri Myong Jun PT

CELEBRATION

WPK's anniversary celebrated worldwide

The Chinese embassy in Pyongyang hosted a friendly gathering on October 16 in celebration of the 73rd founding anniversary of the Workers' Party of Korea.

Invited to the event were Ri Su Yong, member of the Political Bureau and vice-chairman of the WPK Central Committee, and officials of the WPK Central Committee.

Present were Li Jinjun, Chinese ambassador to the DPRK, his embassy officials and Chinese guests staying in the DPRK.

A performance was given by the Shenzhen City Art Troupe.

Performers put colorful numbers such as Korean and Chinese songs on the stage.

Ri Su Yong and Li Jinjun congratulated the successful performance.

The participants in the event emphasized the need to expand and develop bilateral relations at a new high stage.

An Indian national seminar was held on October 9 in New Delhi in celebration of the 73rd anniversary of the Workers' Party of Korea.

Speeches were made at the seminar which brought together personages of all social strata, local people and the director general of the Asian Regional Institute of the Juche Idea.

Harish Gupta, director general of the Asian Regional Institute of the Juche Idea, and other speakers highly praised President Kim Il Sung and Chairman Kim Jong Il for having built and

developed the WPK into a mass political party deeply rooted in the masses of the people and an ever-victorious, invincible one.

They referred to the surprising achievements the Korean people have made in their efforts to carry out the new strategic line of the WPK, saying the DPRK is advancing towards prosperity under the guidance of WPK Chairman Kim Jong Un.

They also talked about the fact that a new era of peace and prosperity has been ushered in on the Korean peninsula thanks to the noble patriotism and will to safeguard peace of the Supreme Leader.

A letter to the DPRK Supreme Leader was adopted at the seminar.

Supreme Leader Kim Jong Un's work *The Cause of the Great Party of Comrades Kim Il Sung and Kim Jong Il Is Ever-Victorious* was published in booklet with due ceremony at the Zaraba Publishing House of Bulgaria on October 2 to mark the 73rd founding anniversary of the Workers' Party of Korea.

The work, authored by the Supreme Leader on October 4 2015, clarifies the idea that the 70-year-long history of the Workers' Party of Korea is a history of victory in which the validity and invincibility of the cause of the Party of Comrades Kim Il Sung and Kim Jong Il have been displayed and that the cause of the Party is invincible.

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ECONOMY

Production drive results in tangible achievements

Various economic sectors bring about an upsurge in production.

The Kim Chaek Iron and Steel Complex started the operation of Juche-oriented oxygen blast

furnace, large oxygen plant and fluidized-bed gas generator on September 25 and is making innovations every day in iron and steel production.

The oxygen blast furnace workshop produced tens of thousands of tons of molten Juche iron and steel after its inauguration by applying scientific furnace operating and rational working methods. The branch oxygen separator factory and the gas generator workshop ensure normal production as they introduce technical innovation plans



RI TONG GYU / RODONG SINMUN

A 100 000-cubic-metre blasting takes place at the Taehung Youth Hero Mine.

conducive to increasing output and make necessary fittings with their own efforts.

The Hyesan Branch Steel Factory has implemented its yearly economic plan. While building a highly-efficient heater by mobilizing its technological development force and production potentiality, it organized the production and cooperation between processes scrupulously to maximize the capacity of all production facilities.

The February 8 Jiktong Youth Coal Mine under the Sunchon Area Youth Coal-mining Complex boosts production. Upholding the slogan of self-reliance, it overfulfills the production plan every day by producing a great deal of materials, accessories and machinery and equipment with its own efforts and introducing new tunnelling and mining methods.

The Sunchon Thermal Power Station carried out its production plan at 103 percent as of October 10. It introduced new equipment for recycling desalinated water and other

valuable technical innovation plans as it increased the output of each generating facility and tapped and used coal reserves to the maximum.

The Sodusu Power Station has so far generated tens of millions of kWh of more electricity than the plan since last May. It installed water turbines with high generating efficiency and ensured the technical management of digital generating facilities in a scientific way, registering good results every day.

The Taehung Youth Hero Mine carried out a 100 000-cubic-metre blasting on October 9. It provided a sure guarantee of increasing the output more than before by securing a several-million-ton-capacity ore field and ensuring mass mining and ore-cutting.

The Ryongyang Mine has secured hundreds of thousands of tons of ores by giving priority to tunnelling.

It secured a huge amount of ores and several large-scale stopes by carrying out the

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TRADE

Great efforts exerted to develop processing trade

The DPRK channels big efforts into the construction, upgrading and expansion of the production bases of manufactures for processing trade that have international competitive edge by relying on the solid economic foundations and production potentials.

Metallurgical, mining and building-materials industries strive to build large-scale producers for processing trade based on rich local resources and increase and expand the production of such processed goods as electrolytic zinc and copper and other nonferrous and rare metals, magnesia clinker and light burned magnesia.

They also work to establish bases for producing processed goods made of such natural building materials as granite, marble and gem stones and to produce a variety of building materials.

Major efforts are put into tapping new sources of trade and increasing the variety of processed goods that are in great demand in the international market.

Economy: Production sees growth

FROM PAGE 2

heading excavation for over three years and the prospecting tunnelling for 16 years. Newly-developed mining units produce hundreds of tons of more ores every month.

Similar achievements have been made by the factories and enterprises in the light industry sector. The Pyongyang, Sariwon and Songchongang bag factories hit their yearly production goal by producing hundreds of thousands of schoolbags. The factories of the Pyongyang Municipal Foodstuff Complex continue to increase production in October after fulfilling the September economic plan on all indices by making innovations in production.

By Ri Sang II PT



Silk thread production picks up at the Pyongyang Kim Jong Suk Silk Mill.

Prospecting is conducted briskly to exploit natural resources in order to search for rich veins of rare metals and nonmetals like graphite, ferrotitanium and silicon and rare earths, thereby opening up good prospects of the establishment of new trade bases and expansion of the variety of processed goods.

Different economic sectors push ahead with the projects to put production and management on a scientific, IT and modern basis so as to increase the production of processed goods and fully guarantee their quality.

Efforts are also made under a long-range plan to introduce such cutting-edge technologies as nanotechnology and bioengineering into the production of manufactured goods.

Technical exchanges and collaboration are conducted briskly through the annual national sci-tech festival, inventions exhibition and sci-tech show of the nanotechnology sector and, in the course of this,

new products are developed in large numbers.

Special attention is paid to upgrading the bases that process and trade domestic specialities.

Positive activities are conducted to increase the trade volume by developing new products made of world-famous Kaesong Koryo insam including wine, steamed and dried insam and extract.

Modern bases have been built to process such local agricultural products as songi mushroom, bracken, aralia shoots, platycodon, blueberry and peppermint. Long-term plans are being carried on to trade on a large scale world-famous health foods and other Korean specialities like the bark of *Eleutherococcus senticosus* in Mt Paektu, fruits of matrimony vine and *Schizandra chinensis*, kimchi, peppered bean paste, silk thread and Koryo celadon.

Measures have been taken to introduce incentives to expand and develop processing trade.

Steps are taken to simplify procedures so as to involve scientific research institutions

and processed goods producers across the country in processing trade as well as trading companies.

Manpower and material resources such as raw materials, electricity and fuel are provided preferentially for the building of processed goods factories. Other favourable conditions and environment are also created including the provision of ready access to such infrastructures as rail and sea transport, ports and international communications.

Banks provide loans preferentially to the companies, factories and enterprises that have foreign markets for processed goods or produce processed goods by applying high technology.

The DPRK makes endeavours to step up economic construction and improve the people's livelihood and to expand trade relations with different countries of the world by boosting processing trade.

Jo Chang Jun,
professor and PhD at the
University of National
Economy

TECHNOLOGY

Energy-saving techniques developed

Solar heating system

by over 70 percent on average.

Solar cooking equipment

It processes various kinds of food by using solar heat. It is innovative in that it increases heat energy transformation effect while decreasing the size of reflection panel and focal distance as much as possible. A unit can save 20 tons of fossil fuel a year when it prepares meals for 70 people.

Tidal-powered boat-lifting device

It is a piece of energy-saving ship lifting equipment which can lift several ships up and down at the same time by using tidal power in the West Sea of Korea. It does not need any hoist or winch, wire rope and electric power. It can save lifting manpower and helps repair vessels on the shore.

Fuel economizer based on oil activator

It is an energy-saving gadget

which can save fuel and protect environment by increasing combustion efficiency and reducing the amount of waste gas in various kinds of internal combustion engines. It saves 20 to 30 per cent of fuel in all internal combustion engines, doubles their lifetime and reduces waste gas exhausts to 40 percent.

Battery restoring device

It can remove trouble in batteries caused by their use for a long time and lengthen their working hours more than three times. If it is installed in old batteries whose efficiency fell to less than 40 per cent, their efficiency more than doubles after 3 months and they preserve over 90 percent efficiency for several years.

Water heater

It is an active water heater which can produce hot water without regeneration according to the load and adjust the temperature and volume of water at will. If it boils 50 cubic metres of water a day, it can save 600 000kWh electricity a year.

Electric heating bar

It is a new type of electric heater whose efficiency has been increased by over 30 percent over the previous

Cement gets further resistant to seawater

The Sangwon Cement Complex has developed Portland cement which is highly resistant to the corrosion by seawater.

The existing Portland cement failed to be used in the construction of ports, tideland reclamation and other coastal construction projects as it contains much aluminate which corrodes concrete through reaction with sulphate in seawater.

The complex intensified research to develop a cement highly resistant to seawater.

The important thing was to set a proper content of aluminate and ferrite which ensure the initial intensity and bending strength of cement.

Technicians established rational methods of raw materials selection, mixture and production, which limit the contents of main factors that weaken the resistance to seawater and add such raw materials as gypsum and activated additives to production process.

They decreased the contents of aluminate, but increased those of ferrite by using high-grade iron ore and added gypsum to mixed raw materials to reduce concrete corrosion by sulphate. And they inhibited the formation of gypsum, which results from the reaction with sulphate in seawater, by making the effective use of activated additives during the crushing of clinker.

The contents of aluminate and ferrite of the seawater-resistant Portland cement are below 5 percent and above 15 percent respectively and the coefficient of corrosion is 1.013.

The cement can widely be used in port construction, tideland reclamation and other construction projects as it is highly resistant to corrosion by sulphate.

It has been introduced into the Wonsan-Kalma coastal tourist area and other construction sites.

It was highly appreciated at the 16th national inventions exhibition this year.

By Yun Kyong II PT

ones. A direct transfer electric heater, it shortens the thermal conduction time over two times more than nichrome wire electric heater. It can also concentrate or disperse electric heat for different purposes and increase heat efficiency as much as possible as its heat generation area is dozens of times larger than nichrome wire.

By Choe Kwang Jin PT

EDUCATION

Online education gains traction



PAK KWANG HUN / THE PYONGYANG TIMES
A lecturer performs at Kim Chaek University of Technology Online.

Online education system has seen marked progress at universities.

Kim Chaek University of Technology has established an artificial intelligence teaching management system to keep up with the developing reality. The system, designed to examine students' knowledge and provide them with necessary materials for study automatically by computer, has newly been developed in Korean way by using modern mathematical methods.

The service of sharing experience of studying online is very popular with students on the online course. The university is now working to further expand its online lecture system based on Wi-Fi.

Most noticeable in online education at Pyongyang Han Tok Su University of Light Industry is that it has upgraded its intensive science and technology course so that students can discuss problems that arise in the production and modernization of related units. For instance, light industry factories and enterprises select scientific and technological problems which need urgent solution in themselves and submit them to the university. On the basis of them, the university runs the intensive course every week for officials in the light industry sector and online students.

Competent lecturers and researchers give lectures on scientific and technological problems arising in upgrading production processes and improving quality of products and information about latest science and technology, and sci-tech achievements at local industrial establishments are widely introduced, contributing greatly to integrating education, scientific research and production.

Pyongyang Jang Chol Gu University of Commerce is raising the effectiveness of practical education in its

online course. It made new videos for online education by applying advanced pedagogic technologies and put forward a new teaching method, by which students can receive guidance from the university's lecturers at practice rooms built on the campus and in relevant establishments through the two-way online education system.

The university also encourages lecturers and researchers to help students bring into reality their new ideas conceived during working practice.

Online education helps many workers become inventors, developers of new products and intelligent workers well-versed in the latest science and technology.

By Kim Kum Myong PT

PHARMACY

Improved liver therapy available

The Sosong Koryo Medicine Pharmaceutical Factory produces various medicines with notable

HONOUR

Researchers honoured with WIPO prizes twice

The annual national invention exhibition climaxes with an awards ceremony of WIPO medal of inventors and certificate, attracting the great attention of visitors.

Standing on the podium of the recent 16th exhibition for this year were a lecturer and researchers of Kim Il Sung University who have developed the bone absorption inhibitor, under the admiring gazes of participants. They are Kim Song Un, official of the Jihung Science & Technology Company, Jang Yong Man, researcher at the natural science institute, and Jang Kum Ju, section chief of the Chemistry Department.

Kim Song Un and Jang Yong Man already won the WIPO prize for developing risedronate two years ago.

Their double WIPO prizes were all for preventive medical treatment of bone calcium metabolism disorders.

Over the past 10 and more years since their development of risedronate capsule, it had proved effective through enough clinical practice and become popular especially with women and the aged.

But they did not rest on their laurels.

They set a higher goal and set out on the development of a more efficacious medicine, a bone absorption inhibitor, in collaboration with Jang Kum Ju. The preparation technology of this medicine was a more advanced and difficult one

as compared with that of risedronate.

They conducted repeated experiments to find a synthesizing method which is easy to control with domestic catalysts and solutions, simple and advantageous. And they shed light on new effective methods for the treatment of various diseases including bone cancer and transfer of cancer to bone. Despite repeated failures, they finally succeeded in making a bone absorption inhibitor that meets the international standard in purity.

An IV injection, the medicine is high in absorption in bone and long in the time of medical effect. Particularly, it can prevent the transfer of cancer of all kinds to bone including breast cancer by controlling the growth and division of cancer cells spread to the bone

and recovering the damaged bone area to which cancer is metastasized.

Clinical application of the medicine to the treatment of incurable bone diseases showed a marked advantage of it over the previous medicines.

When using risedronate, one capsule is taken one time a day for months. But this injection showed a strong physiological action though it was administered one or two times in 6-12 months. Therefore, it is convenient to use and saves much treatment cost. And its treatment efficiency of osteoporosis and thigh aseptic necrosis rose by 10-15 percent and 15-20 percent respectively.

The inventors continue to devote time and energy to scientific research.

By Jong Hwa Sun PT



PAK CHANG BOK / THE PYONGYANG TIMES

Two-time WIPO prize winners at Kim Il Sung University.
(From left: Jang Kum Ju, Jang Yong Man and Kim Song Un)

popular with consumers for its remarkable liver protection effect.

According to documents, silymarin is known as the best liver protection medicine.

Silymarin prevents incidence of liver cirrhosis and promotes liver and detoxification functions.

The combined use of *Hovenia dulcis* fruit stem, which is used to clear away alcohol poisoning, and *Artemisia messerschmiditiana* which is good for ensuring bile secretion together with silymarin go well with each other, proving effective in the treatment of hepatitis and fatty liver.

Hovenia dulcis fruit stem is known to be good at detoxifying alcohol, while *Artemisia messerschmiditiana* is effective for curing swollen liver.

The application of *Hovenia dulcis* fruit-stem extract to eight healthy adults (aged 24-41) showed a reduction of alcoholic and acetaldehyde concentration in saliva and the alcoholic concentration in breath was markedly decreased in five

of eight men after an hour of alcohol dosage.

After years of research chief developer Paek Won Suk succeeded in developing a medicine with high treatment effects by compounding the extracts of *Hovenia dulcis* fruit stem and *Artemisia messerschmiditiana* together with silymarin.

According to a clinical test, the silymarin and *Artemisia messerschmiditiana* anti-hepatitis dragee is more effective than silymarin pill even in little dose, shortens the treatment period and is good for detoxifying alcohol.

It also has no side effects and is convenient to use as it takes the form of pill.

A liver cirrhosis patient recovered his health after dosing himself with the medicine for two months.

The technology of making the medicine won a national patent this year as it relies on locally abundant materials, is cost-effective and has high treatment efficacy.



CHOE MI GYONG / THE PYONGYANG TIMES
Silymarin and *Artemisia messerschmiditiana* anti-hepatitis dragee proves to be effective in treatment of fatty liver.

By Chae Hyang Ok PT

PROFILE

Child prodigy sets higher goal for his country

The 27th national senior middle school students' quiz contest took place in Pyongyang last August.

The contest is popular with students, their parents and teachers across the country as it helps students widen their horizons and common sense in the fields of mathematics, physics, chemistry, biology, history and geography.

The first prize of the recent contest went to Choe Kwon Song (pictured), a third-year student from Sungni Senior Middle School in Rangnang District, Pyongyang.

Looking at him who readily solved all the problems related to mathematics, the Juche iron production process, worldwide environmental protection, historical master-hands and angling and the composing of impromptu poem, the participants and TV viewers throughout the country lavished praise on him, calling him a "walking dictionary".

Choe rounded off the first stage, which drew over 30 contestants, with top honour. Some ten students competed in the second stage and only six winners advanced to the final.

At the final stage deciding the winner of this year's contest, Choe correctly solved



PAK CHANG BOK / THE PYONGYANG TIMES

all the problems including the operating principle of spaceship and took the first place in the contest.

When the contest was over, many students asked him the knack of studying method as they presented him with bouquets and put garlands around his neck. At the time he said it is imperative to find a studying time and method suitable for each one, winning another big hand for his answer.

As he had a marvellous memory from his childhood, he would almost remember the content he had once read or learned at school.

As soon as he entered the senior middle school he

distinguished himself as he had always taken the lead in studying during his primary and junior middle school days.

"Kwon Song's memory is really good. He excels in understanding ability and has a strong desire to acquire ten if he learns one thing", said his class teacher Choe Myong Hwa.

A passionate student, he did not go to bed before understanding the principle of problems and considering all matters in correlation with other subjects in a systematic and all-round way.

According to his mother, he read so many reference and other books of common sense they would be higher than his height when piled up.

He is specially interested in history, geography and physics.

He often spends his after-school hours visiting the Sci-Tech Complex and the Natural History Museum to broaden his knowledge related to the origin of mankind, history and astronomy.

When asked about his dream, he answered that he wanted to become a competent scientist who would exalt the honour of the country.

By Jong Sun Bok PT

NANOTECHNOLOGY

Nano silver solution draws growing attention

Silver, an essential microelement for human body, has a strong sterilizing effect. Experts have found out that nano silver increases the sterilizing power hundreds of times and has a strong anti-cancer, immunity restoring and detoxifying effect.

Nano silver surpasses other nano materials in terms of utility in various domains and it is widely used as food additives and packaging materials in the foodstuff industry.

The recent presentation of an international patent that uses nano silver as an additive for making antibiotic flour has given a fresh impetus to the research into making new types of nano silver.

Scientific research into it has also been intensified in the DPRK. Most innovative is the method of making nano silver solution free from biological poison and environmental pollution, which was recently

developed by Pyongyang College of Food and Consumer Goods Technology.

The researchers of the college tried to find a new nano silver making method as a research result was released that the preceding technology for making nano silver with silver nitrate as a basic material cannot prevent the discharge of carcinogenic substances.

In the course of intensive research they conceived a novel idea of making a new nano silver solution by obtaining silver sulphate from silver nitrate and adding animal protein to it.

They optimized the reaction conditions for turning the animal sample into protein and solved scientific problems arising in the protein making process, finally succeeding in synthesizing 30-70 nm nano silver with which to completely overcome environmental pollution while reducing the cost by far.

By Kil Chung II PT

SHOWS

IT achievements highlighted

The 2018 national exhibition of IT achievements took place at the Three-Revolution Exhibition House in Pyongyang.

Put on show were more than 500 IT achievements and products presented by commissions, ministries, national agencies, institutions of science and learning, industrial establishments and IT units.

Most noticeable were artificial intelligence and big data technology in the cutting-edge IT field, achievements in the development of operating system and applications, and standardized teaching and study support programs developed by universities and senior middle

schools.

Typical IT products were an intelligent house model showing automatic control of household goods by an intelligent loudspeaker, the software product propagation and protection system for registration, sale and protection of software, video conferencing system, national integrated power control system and others.

During the exhibition there were an introduction of new products, presentation of new technologies and IT exchange and service.

By Ri Sang Il PT



JANG KYONG NAM / THE PYONGYANG TIMES

The 2018 national IT exhibition held at the Three-Revolution Exhibition House in Pyongyang.

Finishing building materials on show

A national exhibition of sci-tech achievements in the field of finishing building materials was held at the Sci-Tech Complex on the theme of "Domestic production of green, energy-saving and intelligent building materials and Korean-style architectural lighting and decorative illuminations".

On display there were 350-odd research hits and products presented by over 130 units including scientific research and educational institutions and production units.

During the exhibition green,

energy-saving and intelligent building materials were widely introduced in the form of actual things, charts and multimedia presentations and services were provided for the sharing of new technologies and new products.

Presentations were also made on sci-tech hits in the field of finishing building materials including "Colour concrete floor laying method based on polymerized material" and "Usefulness of cement paste, a high-strength adhesive".

By Jong Chol PT



HAM YONG SOK / THE PYONGYANG TIMES

Visitors look on at the national sci-tech exhibition of finishing building materials.

SCENIC ATTRACTION

Majestic peaks and spectacular scenery stunning draw for Mt Myohyang

Mt Myohyang in the central part of the Myohyang Mountains northwest of Korea has long been known as a scenic attraction as it presents a magnificent view with the combination of graceful carving beauty and majesty.

Though its exploration history was time immemorial, the mountain was named Myohyang in the early 11th

century from the meaning that it has singular and beautiful geographical features and emits fragrance all the year round thanks to innumerable trees of all species.

Consisting of a lots of peaks including Chilsong, Wonman and Pobwang with Piro Peak (1,909 metres) as the main peak, the mountain is well over a hundred kilometres in

circumference and covers an area of 375 square kilometres.

Most of its peaks are global and stand one upon another.

There are scores of rocks in the mountain, especially Inho, Paegun and Kangson rocks, and they are located at the places favourable to commanding a view of the mountains.

At Inho Rock one can have a simultaneous view of three



RI KWANG SONG / PICTORIAL KOREA

A panoramic view of Mt Myohyang, a scenic attraction in Korea.

EVENTS

Global Handwashing Day observed

An event took place on October 16 in Ragwon County, South Hamgyong Province, to observe Global Handwashing Day 2018 on the theme of "Clean hand—a recipe for health".

Opening remarks were made by a department director of the Ministry of Urban Management and Odile Anthony, deputy representative of UNICEF office in the DPRK.

They said handwashing with soap is not only the meaning of washing hands simply, but it is directly linked to the health of people and it is the activity to be done altogether.

A lecturer of the Grand People's Study House made a presentation titled "Handwashing and health".

After a handwashing demonstration, there was a



KCNA

An event takes place in Ragwon County, South Hamgyong Province to observe Global Handwashing Day 2018.

Korean animation show.

The event was followed by an inauguration ceremony of a gravity-fed water supply system built with assistance from the UNICEF.

The chairman of the Ragwon County People's Committee expressed his thanks to the UNICEF mission in the DPRK for providing great assistance.

The participants looked round newly built head of water and filter bed and water distribution stand and other places in the county.

By Pang Un Ju PT

World Food Day marked

An event took place on October 16 at the Taedonggang Diplomatic Club in Pyongyang to observe World Food Day 2018.

It brought together Ko Myong Hui, vice-minister of Agriculture, officials from ministries, national agencies and relevant units, Bir Chandra Mandal, deputy FAO representative in the DPRK, Nadya Frank, WFP officer in chief, and other members of the resident missions of international organizations and

distinctive Sanju, Ryongyon and Chonsin waterfalls, and such an observation platform is uncommon in the world.

Seeing waterfalls on Inho Rock has been known as one of the eight scenic spots in Hyangsan since olden times.

Sangwon, Manphok and big and small valleys nestle between queer peaks and steep cliffs of Mt Myohyang, with the scenery of Isonnam, Kumgang, Taeha, Ryongyon and myriads of waterfalls unfolded on high and sheer cliffs of the valleys.

As a vertical scenic beauty showing both natural rocks and natural beauty of mountains, the falls give unusual sightseeing effects as compared to other kinds of scenery. As numerous falls, big or small, work wonders, it seems that the mountain is a collection of all scenic attractions related to water in the world.

Though the mountain is rainy, it is featured by clear and clean water. Since it has good quality and is as cold as ice in midsummer, the water cools the sweat of mountain climbers.

The mountain is ever changeable like a wonder done by God, alluring tourists. In summer, it is often cloudy and showery, but it becomes fine soon and is sunny. This is the general characteristics of the weather around the mountain.

It presents different views according to season and in late autumn when the maples are at their best climbers can enjoy the view of the four seasons on the same day and at the same time.

The mountain sightseeing has three routes leading to Sangwon and Manphok valleys and Piro Peak.

In the Manphok Valley, tourists are to see diverse waterfalls while following the valley in which clear water flows down and, in the route to Piro Peak, they will go along a mountain path to see a variety of animals and plants. The route to the Sangwon Valley is a comprehensive mountain-climbing course through which sightseers can see many falls, mount high observation platforms and peaks, and look round lots of historical remains.

The International Friendship Exhibition House, in which gifts presented by heads of state and government and prominent public figures in various countries around the world to President Kim Il Sung and Chairman Kim Jong Il are on display, built elegantly to blend in well with beautiful natural scenery, Hyangsan Hotel and lots of historical and cultural relics and remains showing national intelligence make the mountain an unprecedented place of superb view in terms of its superiority and density, wealth of tour content or its diversity.

In the area of Mt Myohyang, there are such old buildings like the Taeung Hall of Pohyon Temple that represents Korea's architecture in the early 11th century, pagodas and dozens of monuments, as well as the 80,000 Blocks of the Complete Collection of Buddhist Scriptures and their printed copies and other remains of printing culture.

Mt Myohyang was registered as international biosphere reserve in April 2009.

By Pak Song Min PT



CHAE MYONG RIM / THE PYONGYANG TIMES

An event is held at the Taedonggang Diplomatic Club in Pyongyang to mark World Food Day.

the titles of "WFP nutrition assistance in the DPRK" and "Agricultural development and FAO cooperation in the DPRK".

They explained about the sustainable development of agricultural production, intake of necessary nutrition for human body and cooperation activities between the DPRK and international organizations.

Members of the FAO, WFP, UNDP and UNFPA country offices planted trees on October 15 to mark WFD 2018.

Presentations were made on

By Kim Ryong Jin PT

MONGOLIA

Steady efforts made to achieve economic growth

Mongolia is an inland country, most of whose territory is covered with over 1 000-metre high mountains and plateaus.

It has the most distinctive continental climate characters in the world.

It has a long spell of cold winter, a sharp contrast in temperature between summer and winter, day and night, and a high annual sunshine. Such natural and climatic conditions can be claimed to be an important factor in making the country known as that of animal husbandry.

The Mongolian livestock farming has a long tradition.

Most parts of the country's territory are covered by grassland for putting animals out to pasture and most of the residents are engaged in livestock farming. The country takes the lead in the number of domestic animals per head of its population in the world.

The main domestic animals are sheep, goat, horse, cattle and camel that are grazed in pasture.

Endless flocks of sheep grazing on the vast stretch of grassland like a mass of white

clouds and local people on horseback driving the sheep to pasture—this is the unique scene which can be seen only in Mongolia.

According to its customs authorities on September 27, this year it exported 28 123 tons of meat until August, 2.4 times more than in the same period of last year. And the government plans to increase the export of meat 10 times.

Mongolia, whose economy largely depended on livestock farming in the past, now concentrates on developing a diversified economy.

At the moment mining industry has surpassed livestock farming to become the number one industry of the country.

There are over 300 coal mines in it and the coal deposit amounts to about 173.3 billion tons. It produces over 30 million tons of coal and exports over 20 million tons of them every year.

It also pays attention to making effective use of various energy resources and developing wind power and renewable energies in order to satisfy the growing demand for electric power.

It has undertaken projects to increase power output based on renewable energies in close cooperation with international organizations.

The government plans to build a 41 000 kW power generation capacity by using geothermal and other renewables by 2023.

The project will provide electricity to over 285 000 people and contribute to promoting the country's economic growth and reducing air pollution and emission of carbon dioxide.

The country has set the second Saturdays of May and October as national tree planting days and provides various preferential treatments to people who have planted many trees to enlist all population in tree planting in a bid to step up the afforestation.

It also tries in every way to develop friendly and cooperative relations with many other countries in the world as well as neighbouring countries.

October 15 marked the 70th anniversary of the establishment of diplomatic ties between the DPRK and Mongolia.

By Song Jong Ho PT

ENVIRONMENT

Global warming issue comes to a head

An official of the World Meteorological Organization said 2018 would be one of the hottest years in history and highest temperature in history has been recorded in many countries.

As he said, an unusual heat in the history of the world meteorological observation was observed this summer. High temperature was seen in Asia, Europe and North America at the same time, with a heat wave sweeping the northern hemisphere.

Even in some parts of the Arctic Circle on the boundary line of temperate and arctic zones the mercury rose to over 30 degrees centigrade. Forest fire frequently occurred due to high temperature in the forest areas in the Arctic Circle.

In a recent estimate report the UN inter-governmental committee on climate change admitted that it is most likely that the warming of world climate since the mid-20th century may be caused by human activities.

An environmentalist said that high temperature and global warming are closely connected with each other, the super high temperature seen in some regions should not be considered an individual phenomenon,

unless the world takes effective measures to decrease the greenhouse gas emission more similar phenomena would happen, making the situation more serious and global warming has a great adverse effect on humanity.

Many experts also sound an alarm against global warming, saying the world public should join efforts to take measures against climate change.

It takes over 50 years for carbon dioxide to completely disappear once it accumulates in the air, so the amount continuously increases so far as its emission is not completely stopped.

The reality tells global warming is a pressing issue which should be settled on a worldwide scale.

Therefore, the development of renewable energies including the construction of solar thermal power stations and tree planting are encouraged, strict inspection of exhaust gas from automobiles is in force and the production of fertilizer from sewage is promoted worldwide. Projects are under way to make effective use of carbon dioxide in the air for economic growth, facilities built in dumping grounds to

use carbon dioxide and new methods employed to promote photosynthesis by increasing the density of carbon dioxide in vegetable greenhouses.

The DPRK has also taken a series of proactive steps to keep pace with the progressive trend of the international community towards the prevention of abnormal weather phenomena.

It concentrates all efforts and potentials on restoring damaged forests before anything else.

Tree nurseries have been built and millions of tree saplings are planted in provinces and counties every year.

Efforts are being directed to the development of green technology and renewable energies are widely exploited. It has become a trend to set up a power supply system based on solar panels in public institutions and houses in Pyongyang and provinces and new buildings are designed to make the most of natural energy.

The number of vehicles using electricity is also increasing day by day.

No country is exception in reducing greenhouse gas emission and preventing global warming.

By Choe Yong Nam PT

comments

Risky scheme

Japan's militaristic ambition is becoming more undisguised.

Prime Minister Abe who was re-elected as president of the Liberal Democratic Party on September 20 and his close associates are putting fresh spurs to constitutional amendment with a goal to "amend the constitution within next year and enforce a new constitution in 2020".

Abe said in a press conference held after general election that he would make Japan a safe country and that he would strive for the amendment together with the LDP dietmen.

On October 2, he reorganized the Cabinet and ruling party with ultra-right conservatives who stand for constitutional amendment and deny past wrongdoings and urged them to present a draft bill for amendment to the Diet.

Accordingly, the LDP decided to submit its independent amendment bill, which envisaged the inclusion

of reasons to set up the Self-Defence Forces and emergency provisions during the extraordinary parliamentary session which is slated for October 24 in disregard of practices of having consulted with the ruling coalition New Komeito Party before the presentation of draft bills.

The constitutional amendment is a risky scheme to return Japan to a "normal state" with the right of belligerency and realize the old dream of the "Greater East Asia Co-Prosperity Sphere" in the past century.

As to this, not only opposition parties and people of all social strata but also the ruling coalition party are voicing concern and criticism over the LDP's independent propulsion of constitutional amendment. The Abe regime's constitutional amendment aimed at the revival of militarism prompts strong public accusations even in south Korea.

SDF notorious for sexual abuses

Sexual abuses occur in succession in the Japanese Self-Defence Forces, arousing social criticism.

According to the report of Japan's Jiji News Agency on February 2, a serviceman of the Maritime SDF was arrested by police on a charge of improper conduct with a teenage girl in a mini-bus.

During investigation the police found that a nearly 400-member prostitution group is behind the criminal, causing a stir in the country. Investigation results showed that about 50 of them are SDF members who indulge in lewdness and the rest are women in their 10s to 30s. The Kanagawa prefectural police authorities said after the investigation that the arrested two SDF servicemen confessed to their crime and that the group is supposed to be a professional prostitution band. The public

were dumbfounded by the critical state of the SDF which has been reduced to a group of libertines.

On March 20, an officer of the Ground SDF was detained by police as he openly committed a sexual assault on a woman who sat beside him in a trolley bus. After the news report, articles were posted on local websites one after another that it is only the tip of the iceberg and the Japanese people do not need protection from the SDF.

It is not surprising as the SDF's inveterate sexual crimes

have long historical roots.

Disorderly sexual outrages in Japan date back to 1193 when the Kamakura shogunate established the state-regulated prostitution called a house of prostitutes and it developed into a place satisfying the sexual desire of samurai belonging to feudal lords after the Edo (Tokugawa) shogunate inaugurated the Yoshiwara brothel in 1617.

With brothels enjoying growing prosperity in the period of the military Kamakura shogunate, the Japanese commonly regarded it as a matter of course to wield swords and violate women's human rights for nearly 700 years, and the disorderly and decadent way of life was prevalent in Japan. Though the licensed prostitution was abolished in 1958, the sexual outrages committed by the Japanese military are becoming more rampant.

In the early 20th century, militaristic Japan occupied Asian countries and forcibly took hundreds of thousands of women in Korea, China and other Asian nations to battlefields as "comfort women" for its imperial army. This notwithstanding, it has not yet made sincere soul-searching and apology, but is scheming to deceive the world.

Therefore, the SDF's sexual abuses are a cancer caused by the deep-rooted Japanese history.

By Om Ryong PT

GAMES

National Championships go with a swing

The DPRK National Championships, which kicked off on October 3, are in full swing in all sports events at the stadiums and gymnasiums across the country.

They have brought together more than 6 000 players and coaches selected from over 100 sports clubs including April 25, Amnokgang and Pyongyang. They compete in over 470 events of 37 sports such as football, basketball, volleyball, athletics and figure skating.

As part of the event, table tennis tournament began on October 12 at the Table Tennis Gymnasium on Pyongyang's Chongchun Street.

It drew more than 150 men and women players from 14 clubs who proved successful in many national and international games such as the 18th Asian Games.

Divided into men's and women's team, singles, doubles and mixed doubles, the table tennis tournament of the National Championships is not only large in size and high in the level, but also very important in the decision of the annual team and individual rankings in each category.

April 25 and Amnokgang came

first in the men's and women's team event respectively.

Kigwancha left a deep impression on the audience as it reached the top three in both team events.

Most attractive is Kim Song I of Amnokgang, who came third in the women's singles of the 31st Olympic Games.

Her mysterious yet firm defence and sudden attack made the spectators believe that she would maintain her position as a defending national champion.

Unexpected results were also produced in the event.

On October 15 Ri Kwang

Myong of Kigwancha beat the odds-on favourite in the final to win the men's singles title.

"Many young players were successful in the men's singles. Among them are Ri Kwang Myong of Kigwancha, Ri Jong Sik of Amnokgang and Ham Yu Song of Hwaepul. They make positive efforts to outdo veteran players and it is an important factor in promoting the development of table tennis," said Ju Jong Chol, secretary general of the Korean Table Tennis Association.

By Jong Tang Song PT



RYU KWANG HYOK / THE PYONGYANG TIMES

A scene from a match of the men's table tennis singles as part of the National Championships.

HORSE RIDING

Amateur riders show off equestrian skills

The Autumn Amateur Riders Competition was held at the Mirim Riding Club on October 7 and 14.

Members of the DPRK Equestrian Association and fans competed in steeplechase, amusement game and amateur race.

Good horsemanship, bold and quick decision-making, strong fortitude and perseverance of riders make

the steeplechase spectacular. But this time it was more eye-catching as a lot of middle school students participated in the competition.

Many riders jumped over hurdles with ease, but some by a hairbreadth. Those who failed in the first try showed a decent jump in the second to please and impress the spectators.

Some contestants have only three months of riding

experience, said Ri Tong Jun, secretary general of the association. "Their attachment to and affection for riding brought them in the arena today."

O Song Chol, student at Pyongyang University of Architecture, took the first place in the steeplechase.

Children's riding amusement game was also a crowd-puller.

It was really laudable that the children aged between five and seven rode ponies over hurdles along a narrow course with their parents. Jon Kyong Phyong from Changjon Primary School in Central District won the event.

The amateur race was the climax of the competition.

Jockeys galloping like an arrow excited the spectators.

The first place was taken by Kim Man Chol, worker at the Okryu external construction worker training company.

"Since the establishment of the Mirim Riding Club, horse riding has become a part of my life and now I've won the race," he said on the winner's rostrum.

After the competition was over, there were a demonstration of riders of the club and a lottery on their race.

By Kim Rye Yong PT



SONG YONG SOK / THE PYONGYANG TIMES
Riders race in the Autumn Amateur Riders Competition at the Mirim Riding Club.

SPA

Nation abounds with spas

Korea is blessed with hot spring resources in all parts of the country, from the northern alpine area including Mt Paektu to flat areas.

More than 60 spas have so far been found and most of them contain sulphur, radon, salt chloride or hydrogen carbonate. Their temperatures are from 20 to 100°C and there is little seasonal change in their temperatures unlike mineral water.

Rich mineral spring resources in the country are related to hydrogeological conditions.

When effusive rocks formed in the period between the late third stage and the early fourth stage along with the formation of granite underflow before and after the Mesozoic age in Korea, a lot of small and big dislocation zones came into being and this provided a favourable condition for many spas and mineral waters to spring out following them.

A historical record says that hot springs in Korea were widely known from oiden times for their high medicinal efficacy and that even foreigners asked for their use.

Among them, the Paektu spa contains sodium bicarbonate which has a special virtue for the treatment of chronic bronchitis and neuralgia. The Ongjin spa in South Hwanghae Province is good for curing various diseases including digestive troubles as its water temperature is 103°C, the hottest one in the country, and it has got much chlorine elements. The Phyongnam (Ryonggang) spa in Nampho with its temperature measuring 45-54°C and containing much mineral contents is popular with hypertensives as it helps reduce blood pressure and ensure sedation. The Kyongsong spa in North Hamgyong Province is

also called sand spa as it passes through a thick sand layer and a hot sand bath gives a marvellous treatment effect.

Many Korean spas have legends.

The Talchon (Jongdal), Sinchon (Paekno) and Pongchon spas in South Hwanghae Province tell a story that larks, white herons and cranes healed their broken or injured legs, while the Kalsan spa in Kudang-ri, Phangyo County, Kangwon Province, has a legend that once upon a time a woodcutter found it after seeing a full-blown arrowroot flower in winter.

Today, the spas are making great contribution to promoting the people's health.

After Korea's liberation on August 15 1945, the country's mineral spring resources were surveyed and developed in an all-round way under the close concern of the state and rest homes and sanatoriums were built in large numbers throughout the country.

Nowadays, a comprehensive and modern spa tourism and culture area in which both medical treatment and tourism are available is being built in the spa area of Yangdok County, South Phyongan Province.

The county is regarded as the best spa tourist resort as it has spas with large amounts of water yield and high medicinal and curing effect, high mountains, thick forests and fresh air.

In spring, autumn and winter, visitors can mainly have a spa bath together with rest, walk, mountaineering and stroll in forests, but they can enjoy a hot-spring cure and recuperation tourism in summer to restore their energy.

Chae Jae Duk,
*PhD and dean of a faculty at
Pyongyang Tourism College*



KIM CHOL / THE PYONGYANG TIMES
Inphung Pavilion is a historical site in Kanggye City, Jagang Province, which was built in 1472 and rebuilt in 1680.

It is known as one of the eight scenic sites in the northwestern part of Korea.

The pavilion was used as a command post in wartime, and the spacious yard in front of the pavilion was used for training soldiers and inspecting them.

