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SPECIAL ISSUES

Staff Training for African Countries

An international training seminar for S&T park planning, construction, and management, sponsored by the Chinese Ministry of Science and Technology for African countries, opened on December 3, 2007 in Shanghai. With a theme of S&T park planning, construction, and management, the seminar was designed to promote the construction and development of S&T parks in African countries, through sharing experience with African trainees in the area, and enhance cooperation and exchanges between China and Africa in the area of science and technology. 26 management personnel in the area of incubator management, S&T park management, technological innovation consultation, and innovation system management, including Nigeria, South Africa, Uganda, Ghana, Senegal, Eritrea, Mozambique, Rwanda, and Egypt, attended the seminar.

The seminar had both theoretical course and practice, allowing trainees to discuss with experts through theme lectures and panel discussion, sharing the proven experience in the area of the construction and management of industrial incubators, and associated service and international cooperation. Trainees were also invited to visit a number of high tech parks, including Zhangjiang High Tech Park, Caohejing High Tech Park, Fudan S&T Park, and Hangzhou High Tech Park, deepening their understanding of planning, construction, and management of S&T parks.

50 National Ecological Function Zones

The State Environmental Protection Administration announced on December 7, 2007 that China would, in the coming 15 years, build 50 national zones to protect ecological functions in the south of Gansu, and east of Sichuan. The conservation zones will impose restrictions on development activities. One the same day, an outline for protecting and utilizing China' s biological species resources, and an outline for key ecological function conservation zone planning, were published.

WU Xiaoqing, Deputy Head of State Environmental Protection Administration said that ecological function conservation zone would be mainly built around the nature conservation parks, in an attempt to restore ecological functions of the protected areas. In the future, ecological function conservation zones will work on the rational development of industries, focusing on ecoagriculture, forestry, and tourism. They will impose caps on developing the socalled "three high" industries, protecting and restoring ecological functions, improving regional environment quality, and enhancing the management of ecological environment.

The outline for key ecological function conservation zone planning stresses that ecological function conservation zone are restricted for development, operating under the principle of putting protection first, with restricted and circled development. Efforts will be made to work out a range of socioeconomic policies concerning finance, industry, investment, population, and accountability for the ecological function conservation zones. Efforts will also be made to enhance the legal protection of ecological environment, strengthening the protection and recovery of ecological functions, developing special industries friendly to both resources and environment, restricting the expansion that will harm ecological functions, and taking a development road that benefits both ecological environment and economy.

INTERNATIONAL COOPERATION

China-France Joint S&T Meeting

The 12th China-France joint S&T committee meeting was held on November 26, 2007 in Beijing. Both sides briefed the other side of the latest S&T development and policies in their respective country, and reviewed collaborating activities in the past few years. Both sides agreed that S&T cooperation has played an important role in cooperation between the two countries, and it is becoming more and more important in the strategic partnerships of the two countries. Both sides hoped to

important in the strategic partnerships of the two countries. Both sides hoped to foster a common development of technology, personnel, and capital, through the combined efforts of industry, universities and research institutes, making industry a key player. Both sides also agreed to encourage regional cooperation between the two countries.

The Chinese delegation, headed by MA Linying, Deputy Director of MOST Department of International Cooperation, is made up of representatives from MOST Department of Social Development, Department of Basic Research, and Department of Rural Science and Technology, CAS Bureau of International Cooperation, and NNSF Department of International Cooperation. The French delegation, led by Antoine GRASSIN, Directeur de la coopération scientifique et universitaire au Ministère des Affaires Etrangères, is membered with chairman of French National Research Center, president of French National Academy Of Engineering, and representatives from other French government agencies and research institutes.

China-Australia Stem Cells Center

Under the joint financing of the Chinese Ministry of Science and Technology, and Australian Ministry for Education, Science and Training, Peking University Stem Cell Research Center and Monash University Institute of Stem Cells jointly inked on November 28,2007 an accord at Peking University to establish a China-Australia stem cells center. After the signing ceremony, a China-Australia stem cell seminar was held to discuss the latest findings on the subject among 14 Chinese and Australian researchers. Participants also discussed management and cooperation issues of the joint center. They agreed that the new center would make a fine platform for the research and development of stem cells, promoting the development of stem cells and regenerative medicine in both nations.

New Wheat Species

The Chinese Academy of Agricultural Sciences and International Maize and Wheat Improvement Center (CIMMYT) inked on December 4, 2007 a USD 3 million worth contract to screen up several thousand wheat species produced in Africa, in an attempt to get prepared technically for preventing Ug99, a new wheat disease. At the signing ceremony, SHI Yanquan, Deputy Director of Ministry of Agriculture Dept. of Science and Education said that the contract was the result of firm support of the program to introduce advanced agricultural technologies from abroad initiated by the Department. With an annual investment of USD 1 million from both parities for three consecutive years, the project will work on diseases resistant species, under the principle of equality and mutual benefit, joint investment, and benefits sharing.
China has been working with CIMMYT for some 30 years. In the last decade, the bilateral cooperation has witnessed noticeable progresses with the support of the program to introduce advanced agricultural technologies from abroad. China has introduced more than 10,000 fine wheat species from abroad, and CIMMYT wheat has been grown over 4 million hectares of wheat land in the country, directly or indirectly.

Joint Venture for Agrobiological Technology

Beijing Weiming Kaituo Agriculture Biotechnology Co., Ltd. (BWK) and DuPont announced on December 7, 2007 the formation of a joint venture, or Beijing Kaituodien Biotech R&D Center, the first of its kind in the country for agricultural biotechnologies, to accelerate the development of China' s high end agricultural biotechnologies.
The new center will mainly work on functional genes that make corn, rice, and rape be resistant to droughts, salinity and alkaline, coldness, nutrient deficiencies, and diseases, and produce a high yield, in an attempt to address a range of related issues, including limited per capital cultivating land, shortage of water resources, droughts, and salinity and alkaline. Researchers will use high tech means to raise the properties of crops, rendering contributions to food security and sustainable agricultural development. The center will operate under an industrial mechanism, making money mainly from outsourcing projects, and transferring R&D findings and patented technologies.

RESEARCH AND DEVELOPMENT

Lunar Data Open to Public

Official of China National Space Administration (CNSA) said on December 9, 2007 that Chang' e I satellite has been working smoothly since its launch on November 26. The satellite made an orbit maintenance on both December 2 and 3, allowing it working at a perilune of 193 km and an apolune 194 km. So far the satellite has put all its effective payloads into operation, and has been continuously sending sounding data back to the earth. Some scientific findings have been derived from the lunar data. China National Space Administration published on December 9, 2007 a number of lunar pictures based on the data sent back.

Researchers have produced flat, 3-D, and height lunar maps based on the CCD data. Preliminary processing of the sounding data sent back from the onboard laser altimeter has rendered the height data that agree well with the data collected by the CCD imaging device. Researchers will further improve the precision of the maps, with more data coming in. Other onboard payloads are also working on their respective missions. CNSA official said CNSA would make more sounding results available to the public in the future.

Proprietary AIDS Vaccine into Clinical Trials

DNA-Tiantan AIDS vaccine, jointly developed by China CDC and National Vaccine and Serum Institute, has been planted on December 1, 2007 in the first group of volunteers in the Beijing Union Hospital. The development marks an AIDS vaccine developed using a brand new method entering phase I clinical trials. The project is financed by both China's National 863 Program and EU's fifth framework INCO project.

The new live vaccine is made up of DNA vaccine and recombined viruscarrier. The vaccine is originated from 4 HIV genes prevailed inChina. The carrier is the Tiantan recombinant vaccinia virus whichused to be a popular carrier for smallpox vaccination safely appliedin several hundred million people in the country.

The live vaccine applied in the clinical trials can be duplicated toproduce strong immunity. Animal tests show that the vaccine can induceimmune response of both body liquids and cells in rats and monkeys,keeping them from being infected by the virus.

Controlled Fertilization Good for High Yield

Thanks to its many-year efforts, CAS Key Lab of Ion Beam Bioengineering rolled out a controlled chemical fertilization technique that is able to raise the efficiency of fertilization and reduce environmental pollution. The technique makes changes to the physical and biological properties of macromolecular nanomaterials produced from Anhui Province, allowing it to be both adhesive and gluesome. Working with other compound materials, the macromolecular nanomaterials form a large 'net' to increase the capture of nutrients.

The novel technique has been tested in Chaohu Huishui region for some two years with fine results. Comparing with traditional chemical fertilizers, the controlled fertilization is able to raise nitrogen efficiency by at least 20%. The test plots have enjoyed an increase of yield by 14.2%. The controlled fertilization has worked well in heavy rain tests, with a reduced nitrogen and phosphorus loss by 47.8%, compared with regular fertilization, allowing nitrogen in the soil to rise from 60% to 90%.

According to a briefing, the novel fertilizer has numerous merits, including easy production, low cost, simple application, soil moisture keeping, long term effects, raised yield, and resistance to both pests and lodging. It is not only desirable for field crops, but also for middle and high end cash crops, and for flowers, trees, grass, and golf course as well.

NEWS BRIEFS

Navigation Satellite Works for Olympic Game

Possessing a regional navigation capability, Compass navigation satellite system, independently developed by China, will find its first application in the Beijing Olympic Game in 2008. RAN Chengqi, Deputy Head of China Satellite Navigation Engineering Center, said that the Compass system has 5 satellites working under it, and will be used to provide traffic dispatch and venue control services for the Beijing Olympic Game. It will send monitoring results to Beijing traffic authorities, allowing drivers the shortest cuts to the destination, and time efficiency outlets. The Compass system will be officially put into operation around 2010 in Shanghai.

Award for China Digital S&T Museum

07' World Information Summit conferred its World Summit Awards on November 6, 2007 in Venice. China Digital Science and Technology Museum was honored with the World Summit Award in electronic science. As a national infrastructure platform for science and technology, China Digital Science and Technology Museum has an array of stockholders, including China Association for Science and Technology, Ministry of Education, and Chinese Academy of Sciences. The event indicates that China Digital Science and Technology Museum has made achievements recognized by the international community, marking a new starting point for the museum. Encouraged by all walks of life, and thanks to the concerted efforts of participating institutions, the Museum will learn more from the proven experience of other countries, and further raise its service level and quality, in an effort to implement *China's Scientific Literacy Action Plan* (Outline), and render greater contributions to building a moderately prosperous society, and realizing the UN's millennium development goals.

New Hepatitis B Drug

China's proprietary new hepatitis B drug Adefovir Dipivoxil Tablets became available in the market of Guangzhou on December 6, 2007. With a commercial name "Jiu Le", the new drug is able to inhibit the DNA polymerase activity of hepatitis B viruses, which in turn inhibits the duplication and reproduction of the viruses. The new drug has been proved effective reducing the duplication of the viruses and improving liver functions in a significant manner. A 48-week treatment has produced no resistance to the drug. It has also been proved effective to both hepatitis B and C patients. The project is financed by the small and medium-sized enterprises venture capital fund established by Ministry of Science and Technology, and Guangzhou Municipal S&T program.

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