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Welcome to the Inaugural Issue of the UNAPCAEM e-Newsletter

United Nations Asian and Pacific Centre for Agricultural Engineering and Machinery (APCAEM) is a regional institution of United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), based in Beijing, P.R.China. Following the host country headquarters agreement signed between the Government of China and the United Nations in November 2003, APCAEM began its operations in 2004. The revised Statute of APCAEM was endorsed by the Governing Council of APCAEM in December 2004 and adopted by the Commission at its sixty-first session in May 2005.

In accordance with the work programmes approved by the Governing Council at its first session in November 2005, APCAEM is mandated to implement three cluster programmes, namely: Agricultural Engineering, Food Chain Management, and Agro-Enterprise Development and Trade. In addition, APCAEM is committed to fulfilling the United Nations Millennium Development Goals (MDGs).



Goal 1: Eradicate extreme poverty and hunger

Goal 2: Achieve universal primary education

Goal 3: Promote gender equality and empower women

Goal 4: Reduce child mortality

Goal 5: Improve maternal health

Goal 6: Combat HIV/AIDS, malaria and other diseases

Goal 7: Ensure environmental sustainability

Goal 8: Develop a global partnership for development

In particular, APCAEM is committed to making contributions to achieving MDGs 1, 3, 7 and 8 for the Asian and Pacific region through the implementation of its mandated functions.

After the first issue, APCAEM plans to issue the e-Newsletter twice a year (biannual basis) starting in 2007. (Both the hard and soft copies of this inaugural issue are available; however, subsequent e-Newsletter issues will be on-line versions, available on our website.)

APCAEM sincerely hopes that the e-Newsletter will provide the readership with useful information and an important means of communications for all stakeholders in the region.

– Chief Editor –

News Highlights

New Director / SEAO Reported for Duty



APCAEM is pleased to announce that Dr. Joong-Wan CHO has been appointed as Director / Senior Economic Affairs Officer in the APCAEM Office. Dr. Cho's new appointment became effective from 1 September 2006; he reported for duty at APCAEM in Beijing on 19 September 2006.

Dr. Cho, a citizen of the Republic of Korea (ROK), holds a Ph.D. in Economics from the University of Connecticut, USA. He started his UN career in January 1998 as Senior Programme Officer of the United Nations Development Programme (UNDP) in Seoul, ROK. Since December 2000, he has been working with UNESCAP as Economic Affairs Officer and was promoted to Senior Economic Affairs Officer (SEAO) in August 2006. Before joining the UN System, Dr. Cho worked with the First Finance Research Institute in Seoul as Research Fellow / Director of the International Economics and Development Division from 1994 -1997; Yonsei University as Visiting Lecturer of International Finance and East Asian Economic Development from 1996 -1997; and the University of Connecticut as Instructor of International Macroeconomics and Development Economics from 1992-1994. He also worked with the Transnational Corporation, Samsung Co., Ltd and Samsung Electronics Co. as Assistant Manager in the Planning Division for three years from 1983-1986.

APCAEM looks forward to fulfilling its mandated functions with the new Director / SEAO on board, in close cooperation with the relevant stakeholders in the host country of China and the Member States of UNESCAP in the Asian and Pacific region.

Second Technical Committee (TC) / Governing Council (GC) sessions to be held in November 2006 in Suwon, Republic of Korea (ROK)

The second TC/GC sessions of APCAEM will take place in Suwon, ROK. The TC session will be held from 20-21 November and the GC session from 23-24 November. There will be one full day (22 November) between the TC and GC sessions to prepare the report of the TC to the Council, and to visit the *Seoul International Exhibition of Machinery, Science and Technology for Agriculture* (SIEMSTA). As a side event, APCAEM will hold a *Roundtable Forum for Regional Agricultural Machinery Manufacturers/Distributors Associations* on 22

November, in collaboration with Korea Agricultural Machinery Industry Cooperative (KAMICO) and the Ministry of Agriculture and Forestry (MOAF) of ROK.

New Governing Council Members of APCAEM Elected

The new GC member countries were elected at the sixty-second annual session of UNESCAP. In addition to the host country, China, the following eight countries have been elected to serve the GC of the Centre for a three-year term from 2006-2009.

- Democratic People's Republic of Korea
- Fiji
- India
- Indonesia
- Islamic Republic of Iran
- Republic of Korea
- Thailand
- Viet Nam

The Commission session was successfully held in Jakarta, Indonesia from 6-12 April 2006. Ministers and senior officials from over 50 countries attended the annual event. During the session, the work of the four regional institutions (APCAEM, APCTT, CAPSA, SIAP) was reviewed. Voluntary contributions to the regional institutions were also pledged for 2006 by the member countries of UNESCAP.

Roundtable Forum for Regional Agricultural Machinery Manufacturers / Distributors Associations

APCAEM will hold a *Roundtable Forum for Regional Agricultural Machinery Manufacturers / Distributors Associations* on 22 November 2006, in collaboration with KAMICO and MOAF of ROK. The Forum will provide a venue for the representatives of these associations to discuss issues of common interest, especially regional networking through promoting manufacture and distribution of agricultural machinery, in an effort to boost agricultural productivity and modernization of the agricultural production methods for the region.

National Designated Institutes (NDI) / Nodal Points Identified

At the first TC/GC sessions of APCAEM on 21-24 November 2005 in New Delhi, the GC members acknowledged the importance of a closer interaction with UNESCAP / APCAEM member countries and recommended that this interaction be strengthened and deepened. In February 2006, Dr. KIM Hak-Su, Under-Secretary-General of the United Nations and Executive Secretary of UNESCAP, invited the member country governments to assign an

NDI to communicate directly with APCAEM on the technical aspects of the Centre's programme and coordinate with other relevant NDIs.

Restructuring and Strengthening Research and Development (R&D) for Agricultural Engineering

Studies on *Restructuring and Strengthening R&D for Agricultural Engineering* have recently been conducted. The objective of the commissioned studies is to raise awareness of the inherent weakness in publicly-funded R&D institutions for agricultural engineering and the possibilities of making R&D institutions more cost-efficient and effective with a commercial orientation. The research project will involve analysis of policy reforms in China and their impact on R&D with respect to agricultural sector contributions to rural poverty reduction. Good practices, successful experiences and lessons learned will be introduced in the study reports. A workshop will be organized to present major findings during the AgriChina 2007 Exhibition in Beijing, April 2007.

Work Programme for 2006

A. Agricultural Engineering

New Development for Biogas Technology



Biogas is a proven and widely used source of energy in Asia. There has been a renewed interest in biogas due to increasing concern for climate change, air pollution and rising oil prices. Such concerns, particularly for climate change, link with opportunities for the use of the Clean Development Mechanism (CDM) in the promotion of biogas.



An *International Seminar on Biogas Technology for Poverty Reduction and Sustainable Development* was organized by APCAEM, in collaboration with the Ministry of Agriculture of China from 17-20 October 2005. One of the objectives of this Seminar was to identify innovative developments in biogas technology and the application of CDM.

As a follow-up activity, the study report on *Recent Developments in Biogas Technology for Poverty Reduction and Sustainable Development* will be published in November 2006. The publication summarizes the technical contents and institutional issues involved in the application of the CDM for the Asian and Pacific region.

B. Food Chain Management

International Seminar on Enhancing Export Competitiveness of Asian Fruits



Asian fruits have a high commercial potential for export to the EU and developed Asian countries such as Japan. However, inferior and inadequate post-harvest technology and management systems are the major constraint to the expansion of Asian fruit trade in the region. In order to strengthen export competitiveness, it is essential to provide effective government policies, adopt advanced post-harvest technology, and establish efficient food chain and marketing systems.



An *International Seminar on Enhancing Export Competitiveness of Asian Fruits* was held in Bangkok, Thailand from 18-19 May 2006, with the support of the Department of Agriculture, Ministry of Agriculture and Cooperatives of Thailand, as well as the Trade and Investment Division of UNESCAP. Latest knowledge / information was shared by more than 100 participants regarding emerging issues, perspectives, and ideas about state-of-the-art technology in supply chain management of Asian fruits.

As a sequel to the above International Seminar, a strategy-oriented research project is being formulated for donor's funding.

C. Agro-Enterprise Development

Enhancing the Access of Agro-SMEs to Regional Markets through Trade Fair Promotion



Trade fair promotion for SMEs is one of the major activities outlined in the Operational Work Plan for 2006-2007 of APCAEM. The proposed project will focus on one type of regional trade fair: the 8th and 9th International Fruit / Vegetable / Food Exposition (F/V/F Expo) in Yantai, Shandong Province, P.R.China. The project would also advise and assist the organizers and provincial / municipal government officials on how to enhance their capacity to provide internationally standardized facilities and offer a more appealing environment for SMEs from the region to encourage trade fair participation. The project will also provide training seminars to train potential exporters / importers about the procedures and issues involved in commercial dealings, and assist with establishing initial contacts with trading partners.

8th International Fruit / Vegetable / Food Exposition



The 8th International F/V/F Expo was held in Yantai, Shandong Province, P.R.China from 23-26 September. The event was jointly sponsored by UNESCAP, APCAEM, the Chinese Academy of Engineering, and the Municipal Government of Yantai, China. The annual flagship event of Yantai represents the symbolic cooperation between UNESCAP and the Government of China. At this Expo, APCAEM set up an exhibition booth to introduce its activities to the Expo participants. APCAEM will also par-

ticipate in the 9th F/V/F Expo in September 2007.

4th China Agricultural (AG) Trade Fair Held in Beijing



The 4th China AG Trade Fair was recently held on 18-20 October 2006. This event attracted some 250,000 visitors from more than 31 countries. APCAEM participated by setting up an exhibition booth to introduce its recent achievements and promote public awareness of its cluster work programmes to the international visitors and local participants. APCAEM is also expected to participate in the 5th China AG Trade Fair tentatively scheduled for October 2007.

Agro-Biotechnology-Based (Green) Enterprise Development for Sustainable Rural Livelihoods and Economic Growth



Biotechnology and bio-energy production can revolutionize economic activities in agriculture and can help developing countries to tackle rural poverty/hunger and promote green (environment-friendly) growth more effectively.

This project's commissioned study addresses differing regional / country-level situations and analyzes the trend in agro-biotechnology-based enterprise development, emphasizing sustainable rural economic growth and improved livelihoods of the rural communities in the region. The findings will be presented at the second TC session of APCAEM and further discuss on policy and strategy development in mobilizing resources for "green" enterprise development in the region.

D. Information Networking

Launching of Member Country Information on the Current Status of Agricultural Development

The compilation of specific member country information on APCAEM's website (http://www.unapcaem.org/cp_index.htm) would provide pertinent information on the current status of agricultural development in the member countries. Our goal is to assist in information sharing, technology exchange and trade promotion among APCAEM member countries by providing easy access to information about technical and commercial resources on agricultural engineering and economics. To date, three countries (Bangladesh, China and India) have been

posted on the website. Other member countries are encouraged to provide relevant information to APCAEM for the expansion of our member countries' webpages.

Worldwide Agricultural Machinery and Farm Equipment Directory (WAMED)



Under APCAEM's initiation, a list of more than 1000 manufacturers from member countries is now available on the WAMED website (<http://www.agmachine.com/apcaem>). The Directory received more than 25,000 visits per month; it is intended to assist farmers, dealerships, governments and research institutions in locating information on agricultural machinery manufacturers / distributors. The WAMED Directory is expected to enhance the exposure of agricultural machinery manufacturers and distributors to the global market. Please refer to the *Roundtable Forum for Regional Agricultural Machinery Manufacturers / Distributors Associations* for more information on the regional network initiatives.

Publications and Study Reviews

Publication on Recent Developments in Biogas Technology for Poverty Reduction and Sustainable Development

One of the major outcomes of the *International Seminar on Biogas Technology for Poverty Reduction and Sustainable Development*, held on 18-20 October 2005 in Beijing, is a publication, entitled *Recent Developments in Biogas Technology for Poverty Reduction and Sustainable Development*, expected to be published in November 2006. The publication also looks at the potential applications of the CDM from large-scale industrial biogas plants to small household-type digesters. The study also contains a summary on the technical, political, and institutional issues involved in the application of CDM in the Asian and Pacific region. APCAEM hopes that this study report will contribute to the use of biogas technology for rural poverty reduction and sustainable development.

Publication on Enhancing Export Competitiveness of Asian Fruits

An *International Seminar on Enhancing Export Competitiveness of Asian Fruits* was organized on 18-19 May 2006. The expert participants' study reports are being compiled for this publication by the end of 2006.

Study reports on Conservation Agriculture (CA)

Two background study reports have been produced to

address CA research and application methods in Asia and the Pacific.

(1) *The Clean Development Mechanism for Conservation Agriculture*

This paper provides convincing evidence of CA developments. It attempts to evaluate the comparative greenhouse impact of traditional agriculture and CA cropping systems in China, and speculates on their impact elsewhere. The paper concludes with a brief discussion of the measures necessary to reduce greenhouse gas (GHG) production and other forms of environmental degradation by encouraging the adoption of CA.

(2) *The Impact of CA on Emissions of Nitrous Oxide from Soil*

Another literature-based report has been produced, this time focusing on the impact of CA on emissions of nitrous oxide (N₂O) from soil. The report specifically considers the relationship between N₂O production and the interaction between nitrogenous fertilizer, organic matter, and soil moisture, and how these could be affected by shifting from traditional tillage-based cropping to reduced / zero tillage or permanent bed minimum tillage.

Study report on Agro-Biotechnology-Based (Green) Enterprise Development for Sustainable Rural Livelihoods and Economic Growth

APCAEM commissioned a study report looking at differing regional / country-level situations, and analyzing the trends in "green" enterprise development, in connection with sustainable rural economic growth and improved livelihoods of rural communities in the region. The study report will be presented at the second TC session of APCAEM in Suwon, ROK on 20-21 November 2006.

Reviews of Study Reports

Brief reviews of the above study reports will be provided in the next issue of the e-Newsletter.

Project Profiles in the Pipeline

The Kyoto Protocol: Potential Contributions from Agricultural Engineering



The Kyoto Protocol specifies the commitments that most industrialized countries must make to reduce their GHG emissions and includes the flexible CDM. This mechanism

allows developed countries to indirectly invest in GHG emission reduction projects of developing countries through the purchase of certified emission reductions (CERs), and contributes to sustainable development in sponsored developing countries by providing additional funds and advanced technology.



This proposed APCAEM project will introduce the CDM applied to agriculture. The proposed project will also identify the issues involved in the application of CDM in

the agricultural / rural sector and present opportunities for the sectoral application of CDM on biogas, CA and diesel engine technology.

Regional Seminar on Policy and Strategy Formulation for Enhancing Export Competitiveness of Asian Fruits



As a sequel to an *International Seminar on Enhancing Export Competitiveness of Asian Fruits* on 18-19 May 2006, APCAEM plans to organize a Regional Seminar for the

policy makers and government officials, international and regional organizations, and the private sector representatives to improve their capacity for formulating effective policies and strategies regarding post-harvest handling and marketing of Asian fruits. The Seminar participants will have an opportunity to present and discuss policies and strategies of Asian fruit production and export among UNESCAP / APCAEM member countries, and key producers and exporters from other regions.

Expansion of CA Techniques in Asia and the Pacific



CA is meant to achieve sustainable and profitable agriculture through the application of minimal soil disturbance, permanent

soil cover and crop rotations. Practices of CA techniques have shown significant economic and environmental benefits around the world. CA has been adopted in more than 70 countries mainly in North America, South America, Australia and Europe. India and China are planning to expand the techniques while other countries in Asia are lagging behind.

The objective of the proposed project is to extend CA techniques in Asia and the Pacific by enhancing awareness of its benefits among policy makers, researchers, leading organizations and cooperatives of farmers / women

in the region. During the first phase of the project, an International Seminar will be held in Beijing in October 2007, in close collaboration with the Ministry of Agriculture of China. Field tours to demonstration bases will also be arranged.



Training Course on Mushroom Cultivation Technology in the Asian and Pacific Region

Mushroom farming can generate many tangible benefits nutritionally, medicinally, economically, and environmentally. Many mushroom species are edible, high in protein, rich in vitamins and fibres and low in cholesterol. Mushrooms can be cultivated on a wide spectrum of organic wastes. The recycled substrates can be used as livestock feed supplements or organic fertilizers; as fast growing organisms, they can generate quick investment returns. Mushroom is a promising resource for enhancing food security and generating income for poor rural farmers and marginalized groups of population in rural areas.

The proposed project will disseminate the existing mushroom cultivation technology by conducting training courses. Basic technical procedures for cultivation will be demonstrated and technical bases will be introduced to the participants. The training course will be incorporated as one of the activities in the "Love Project" being formulated as below.

Training Project

A joint training project proposal named "Love Project" is under preparation in close collaboration with Korea Northeast Asia Sci.-Tech. Co-Action Consortium and China United College for Continuous Education under Chinese Association of Science and Technology. The objective of the proposed project is to disseminate appropriate technology in rural areas of the region through training courses; contribute to income generation of farmers for rural poverty reduction; and promote the development of agro-based SMEs. Specific farming technologies of major crops / vegetables (e.g., mushroom cultivation) would be identified for training courses.

Member Country Information

NIAE / RDA

The National Institute for Agricultural Engineering of Rural Development Administration (NIAE / RDA), ROK,

is the Designated National Institutes / Nodal Point of APCAEM. NIAE / RDA focuses on many technologies including labor-saving bio-production technologies; technologies for saving energy and developing alternative energy sources; and post-harvest technologies for the production of safe, high quality agricultural products. In addition, NIAE evaluates the safety, quality and performance of agricultural machinery.

SIEMSTA

The *Seoul International Exhibition of Machinery, Science and Technology for Agriculture* (SIEMSTA), is a biennial exhibition for the leading manufacturers of agricultural machinery and major service providers worldwide to promote new technologies in agriculture. The SIEMSTA 2006 is scheduled to be opened on 22 through 25 November 2006 in Seoul, ROK. This biennial event is organized by the Ministry of Agriculture and Forestry, ROK.

Nepalese Farmers Creatively Implementing Reduced Till Methods with Bullock Drawn Disc Harrow

Some farmers in Nepal have adopted new techniques as a result of demonstrations in zero till and other reduced tillage machinery, reported by Mr. Ganesh Sah, Director of National Agricultural Implement Research Center, Birganj. Although they are not using the technologies used in demonstrations, they have implemented similar reduced tillage methods. Many farmers just spread wheat and lentil seeds, as well as basal fertilizers, on their untilled land, then use their animal drawn harrows to make single or double passes over the soil, depending on the moisture and texture. After lightly planking, they are able to produce the same results as the machinery with less money. Mr. Sah says that one village of 45 families has implemented this technique over their estimated 2000 hectares.



Dr. KIM Hak-Su, Under-Secretary-General of the United Nations and Executive Secretary of UNESCAP paid a visit to the APCAEM office on 25 September 2006.



United Nations
ESCAP

Calendar of Events

	Date	Event	Venue
2006	20-21 Nov.	2 nd TC session of APCAEM	Suwon, ROK
	22 Nov.	APCAEM Roundtable Forum for Regional Agricultural Machinery Manufacturers / Distributors Associations	Seoul, ROK
	23-24 Nov.	2 nd GC session of APCAEM	Suwon, ROK
	22-25 Nov.	Seoul International Exhibition of Machinery, Science and Technology for Agriculture (SIEMSTA)	Seoul, ROK
	20-25 Nov.	131 st session of FAO Council	Rome, Italy
	1-4 Dec.	5 th Food & Beverage Expo	Mumbai, India
	14-15 Dec.	89 th session of the Executive Board of IFAD	Rome, Italy
2007	11-14 Feb.	Agri Expo	New Delhi, India
	13-15 Feb.	30 th Session of the Governing Council of IFAD	Rome, Italy
	7-9 Mar.	VIV Asia 2007 Food Chain	Bangkok, Thailand
	13-17 Mar.	Foodex Japan	Tokyo, Japan
	23-25 Apr.	Post harvest 2007	New Delhi, India
	April	63 rd Commission Session of UNESCAP	Almaty, Kazakhstan
	26-28 Apr.	Agri-China 2007	Beijing, China
	9-12 May	FoodTech Pakistan 2007	Karachi, Pakistan
	30 May-2 Jun.	Agrofood Iran	Tehran, Iran
	4-6 Jun.	Interfood Mongolia	Ulaanbaatar, Mongolia
	20-23 Jun.	Food Processing & Packaging Technology Expo	Davao, Philippines
	4-6 Jul.	Biotech China	Shanghai, China
	1-4 Aug.	World Food Expo (WOFEX 2007)	Manila, Philippines
	8-10 Sep.	Food, Agri & Livestock Asia	Karachi, Pakistan
	23-26 Sep.	9 th International Fruit / Vegetable / Food Exposition	Yantai, China
	10-13 Oct.	Energy Asia 2007	Shanghai, China
	11-13 Oct.	International Flower Expo	Tokyo, Japan
16-20 Oct.	5 th China AG Trade Fair	Beijing, China	
5-9 Nov.	Yangling Agricultural Hi-tech Fair	Shaan xi, China	
14-16 Nov.	BioThailand	Bangkok, Thailand	
2008	15-21 Aug.	7 th China Changchun International Agriculture and Foodstuffs Expo	Changchun, China

Asian and Pacific Centre for
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e-Newsletter

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