CACCI

Food & Agriculture Newsletter

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Chairman's Message

Several reports and researchers indicate that by 2030 the demand for food will increase by 50 percent and the food sector currently accounts for around 30 percent of the world's total energy consumption. Meanwhile it is expected that population expansion and economic growth will increase the global demand for energy and water as well.

With the 'Green revolution' in 1960s, the world food production had increased along with the population growth which solved pressing food shortage. This was made possible by improved plant breeding and by an abundant supply of inexpensive fossil fuels. Energy from fossil fuels used increasingly in farm mechanization, and to boost fertilizer production, food processing & transportation. Future food and agriculture industries will encounter excessive productivity limitation with the fossil fuel shortage with supply of food in line with population growth.

World energy price fluctuation impacted the food price negatively due to high dependency on fossil fuel in food production and supply chain. The prices of fossil fuels have become more volatile and are expected to rise. Modernizing food and agriculture systems by increasing the use of fossil fuels as was done in the past may not be an affordable option in future. Countries need to reconsider the role of energy in improving food systems.

Usage of fossil fuel continues to be primary option available for countries for many years from now. However most viable and smart move is to make a gradual shift to more energy-efficient food systems that make greater use of renewable energy technologies whilst reducing fossil fuel dependency. A food sector that is less dependent on fossil fuels could help stabilize food prices for consumers and reduce the financial risks for food producers and others involved in the food supply chain.

The chamber will play a role in developing initiatives to become 'energy-smart' to meet future food and energy challenges by helping to improve energy efficiency in agrifood systems and increase the use of renewable energy.

My Best Wishes

Mr. Samantha Ranatunga
Chairman, Asian Council on Food and Agriculture

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Breakout Session in KL Explores Methods to Ensure Food Security and Sustainability

The Breakout Session on Ensuring Food Security and Sustainable Use of Natural Resources was held on September 19, 2014 in Kuala Lumpur, Malaysia, in conjunction with the 28th CACCI Conference.

Jointly chaired by Mr. Gyanendra Lal Pradhan, Chairman, Asian Council on Water, Energy and Environment and Mr. John Leahy, President, Papua New Guinea Chamber of Commerce and Industry, this Session identified the challenges to assuring food security and sustainable use of energy resources, how these challenges can be overcome, what are the priority actions to be taken by relevant parties (individuals, households, local communities, civil society, private sector, national governments and the international community) in terms of changing behaviour, priorities and policies. Invited as panelists were: Professor Lynn J. Frewer, Professor, Food and Society, CRE, SAFRD, Newcastle University; Dr. Mehdi Fakheri, Director-General, Islamic Chamber Research and Information Center; Prof. Paul Teng, Senior Fellow and Advisor to the Food Security Programme, Center for Non-Traditional Security Studies, Nanyang Technological University; Dean, Graduate Programmes and Research, National Institute of Education; and Mr. Mohamed Abdus Salam, President, Bangladesh Organic Products Manufacturers Association.

The panelists agreed that food security is achieved "when all people, at all times, have physical and economic access to sufficient and safe nutritious food to meet their dietary needs and food preferences for an active healthy life." They noted that many Asian countries suffer from lack of food security, and food availability is the main issue in many African countries. Several factors were identified to influence food security, including geopolitical factors, consumer behavior, available technology, climate change, and trade liberalization policies, among others. The speakers also identified several measures to ensure food security and sustainability using natural resources (e.g. organic agriculture, crop diversification, green tilling, utilization of fallow lands, etc.). The session concluded that despite the global effort from government and private sectors, there is still a long way to go in finding measures to ensure food security.

During the Q & A Session, the panelists exchanged views on a wide range of issues with the audience, such as how to stop food-wasting and how to achieve sustainable development. ■

Mr. John Leahy, President of PNG CCI (2nd from right) and Mr. Gyanendra Lal Pradhan (3rd from left) from Nepal co-chair the Session on Ensuring Food Security and the Sustainable Use of Natural Resources.

Professor Lynn J. Frewer identifies the challenges to assuring food security.

Dr. Mehdi Fakheri urges a public-private partnership to ensure food security and sustainability.

Prof. Paul Teng believes that modern biotechnology can address the challenges and needs for natural resources.

Mr. Mohammed Abdus Salam from Bangladesh sees from his own example the advantages of organic farming.

Climate Change Drives Korea to Develop Jicama As Alternative Plant

By Lina Jang

Global warming and climate change have not just resulted in the world-wide rush to develop alternative energy or eco-friendly vehicles.

The seemingly inescapable phenomenon has impacted on a huge chunk of arable lands across the globe. Climate change can affect both crop yield and the land area suitable for agriculture.

A study published in Science suggests that, due to climate change, "southern Africa could lose more than 30% of its main crop, maize, by 2030. In South Asia losses of many regional staples, such as rice, millet and maize could top 10%".

Korea is no exception: Overall landscape of cultivable lands in the nation has gone through a significant change. In response to climate change, farmers had to come up with much suitable plants optimized for 'changed weather' that are alternative plants.

Jicama falls on such categories. Damyang County in Jeollanam-do, South Korea, selected Jicama as one of its main alternative plants in response to climate change, has generated meaningful results for their efforts to that end.

Damyang Agricultural Technology Center, announced on October 22 that, it succeeded in cultivating Jicama in four areas — each with different soils and their weathering profiles — including mountainous territories, plains and a lab in the center in Damyang-gun.

Jicama, also known as Mexican yam or Mexican turnip, one of "20 More of the Healthiest Foods in the world" selected by the Huffington Post, is famous for its effectiveness to relieve diabetes, high blood pressure, colorectal cancer, skin problems, constipation and diet.

Jicama is an edible root that resembles a turnip. It has thin brown skin and crisp, juicy, white flesh that's mild in flavor and is a very low calorie root vegetables making it among the best candidates for healthy recipes, lucrative food area for increasingly health-conscious Korean consumers.

When it comes to Damyang, bamboo goods and strawberries are well-known local products of this highly touristy area. So, successful commercialization of Jicama might bring about another important revenue stream to this scenic land.

Source: Korea Bizwire, October 23, 2014 ■

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Pakistani mango growers slice into Indian market

By Khurram Shahzad

Pakistani mango growers are hoping to take a slice out of rival India's export market thanks to tough new European regulations.

The sweet yellow fruit is a contentious matter regionally, with both countries proclaiming it a national treasure and fighting over whose specimens are superior.

Economically, at least, mango exports are one area where Pakistan appears to have a slight edge.

According to respective official figures, Pakistan last year exported around 100,000 tonnes for a revenue of US$48.6 million over India's 56,000 tonnes for US$44.6 million.

But a European Union (EU) ban on India's prized Alphonsos, known as the "King of Fruits," has presented Pakistan with a chance to widen the gap.

The embargo came into force on May 1 after many shipments were found to contain fruit flies and also affected four types of vegetable.

For Raja Ijaz Ahmed Noon, parliamentary secretary for Pakistan's breadbasket Punjab province, improving farming standards and learning where India went wrong is critical to cashing in.

"We are taking this development as positive. We are trying to learn from the mistake which India has made," he said.

Noon was speaking after a seminar of 50 landowner-farmers at a fruit-farm 40 kilometers northeast of the central city of Multan to learn new methods of protecting mangoes from hazardous insects.

"We have a potential to export 40 percent of our total production of mangoes and this year we will try to improve our exports up to 16 percent," he told AFP.

Sex-traps and Hot Baths

Syed Ismat Hussain, a senior pest control official, said his department was visiting farms and orchards to spread the word about the lucrative profits available if Pakistan can continue to meet EU standards.

"Fruit fly hasn't only affected India but has threatened our orchards also. So we have devised simple but scientific methods to control it," he said.

Experts are busy hanging plastic bowls on mango trees that are laced with chemicals that mimic female-fly pheromones to attract males.

"The holes are for the flies to enter, but they never fly out," said Hussain. The so-called sex-trap is fast becoming an industry standard.

Meanwhile, a special awareness campaign on fighting the insect has also been initiated in newspapers and on television and social media.

Syed Zahid Hussain Gardezi, President of the Mango Growers Association of Pakistan (MGAP), described the taste of Pakistani mangoes as "mesmerizing" and said he was hopeful about the chances for global growth in markets such as the EU, America and Canada if the campaign was a success.

"We have to work very meticulously, very scientifically to capture those markets," he said.

The experts had also being extolling the benefits of so-called "hot water treatment" which involves immersing the fruit in water at 52 degrees Celsius (126 degrees Fahrenheit) to kill larvae within the mango pulp. The practice has become a common substitute for fumigation that is seen as harmful to human health.

Habib Agha, an exporter who sends his fruit to Scandinavia, told AFP his mangoes were already of top quality and he hoped to increase his shipments four-fold this year.

"There is a demand from the European Union that there should be no fruit fly in our fruits, it should be hot water treated, it should be anti-fungus, it should be washed properly. We (have) got these facilities in Multan now," he said.

Sensitive Fruit

Despite a growing sense of optimism, there are several factors holding back the export market.

The fruit is most abundant in the southern Punjab, but the regional airport in Multan lacks direct flights to many major international capitals, meaning the mangoes must travel for hours by road to either Lahore or Karachi.

The mango is a sensitive fruit and needs plenty of irrigation, while long periods in cold-storage can negatively impact fruit quality.

Pakistan's chronic energy crisis means farmers are at times unable to use their water pumps to irrigate fields, while the increasing irregularity of the traditional monsoon season has exacerbated the issue.

"We are facing a shortage of water, simultaneously we have power cuts," said grower Muhammad Ali.

"We can't produce good quality mangoes unless we have a proper watering system."

Source: Agence France-Presse, May 19, 2014 ■

Safe Agriculture & Foods

By: Mr. Abdus Salam

Bangladesh was recognized as the granary of the world. Our agriculture was purely organic from the very beginning, but some multinational companies seduced and derailed us in the 60th in the name of "Green Revolution" with the keen supports of some so called agricultural scientists. Therefore, they replaced their synthetic, hazardous, harmful and toxic chemical fertilizers and pesticides on our world famous fertile lands. Our soil became toxic which brought us toxic crops and toxic foods. As a result, about 200,000 people, including young children, in Bangladesh are being attacked by cancer every year, and more than 20 millions people are being attacked by heart diseases, diabetes, liver and kidney diseases, as well as skin diseases.

Bangladesh Organic Products Manufacturers Association

In order to re-establish safe agriculture, safe foods and a healthy environment, the manufacturers of organic fertilizer, pesticides, foods, products and organic farmers founded the Bangladesh Organic Products Manufacturers Association (BOPMA) in 2008.

The Association has been working on the following fields: (1) safe / organic agriculture; (2) sustainability; (3) alternative / safe foods; and (4) resumption of domestic animals. BOPMA also follows its own methods for organic agriculture, weed management, soil improvement, nutrients management and pest management, among others.

Soy Bread

Soy Milk

Soy Meat

Buckwheat

Sweet Potato

Potato

To improve poverty, local farmers in Bangladesh have been encouraged to produce aromatic rice, buckwheat, millets, vegetables, soybeans, aloevera, yam and sweet potato.

BOPMA believes that it can remove poverty, hunger and malnutrition through huge production and consumption of alternative safe foods, such as sweet potato, potato, all cereal crops and vegetables, as all of which are affordable in Bangladesh and India.

About the Author: Mr. Abdus Salam is the President of Bangladesh Organic Products Manufacturers Association (BOPMA) and Bangladesh Soybean & Soyfoods Producers Association (BSSPA). ■

"WTO/STDF 354" Project to Improve Safety and Quality of Sri Lankan Fruits and Vegetables

The Ceylon Chamber of Commerce (CCC) and the International Trade Centre (ITC) are partnering with the Department of Agriculture (DOA), The National Agribusiness Council (NAC) and the Lanka Fruit and Vegetables Producers, Processors and Exporters Association (LFVPPEA) and relevant private and public stakeholders in Sri Lanka to contribute to the "Improve the safety and quality of the Sri Lankan Fruits and Vegetables" (STDF 354) Project.

With the support of the Standards and Trade Development Facility (STDF), the Project has the following two major objectives: (1) Build and sustain the competence of public and private stakeholders to comply with quality and food safety international requirements; and (2) Improve the international, regional and national

market opportunities of selected value chains of fresh fruit and vegetables. Furthermore, the Project is aimed at addressing the following sanitary and phytosanitary issues: (1) Improper pesticide and fertilizer use; (2) Poor post-harvest practices; (3) Lack of awareness and training; (4) Lack of a proper pest risk analysis system; and (5) Poor coordination & communication among different stakeholders.

By assisting local farmers to improve quality of their produce, the Project will allow farmers to obtain better prices and increase supply of high quality, safe fruits and vegetables to meet both local and international demand.

Interested parties can access the Project web for further details: www.spssrilanka.lk .

Permanent solution on food security in WTO rules is a must: India

In a stern message, India has told the UN General Assembly that developing countries must have the freedom to use food reserves to feed the poor "without the threat of sanctions" and a permanent solution on food security with necessary changes in WTO rules is a must.

"The issue of food security is central to the pursuit of poverty eradication and sustainable development in developing countries and must be treated with the same urgency as other issues, if not more," Counsellor in the Indian Mission to the UN Amit Narang said in a UN General Assembly session on 'Macroeconomic Policy Questions: International Trade and Development'.

He termed as "paradoxical" that just as the international community is assigning a high priority to food security as part of the Post-2015 Development Agenda there seems reluctance in addressing the important issue as part of global trade rules.

"A permanent solution on food security with necessary changes in WTO rules, if required, is a must and cannot be kicked down the road," Narang said.

He said that India had participated actively and "in good faith" in the Ninth Ministerial Conference of the WTO in Bali in December 2013 and the country remains committed to the Bali decisions, including the one on trade facilitation.

"India is a signatory to all the Bali decisions and has no intention of going back on them. The concern that India has been constrained to flag, arises from the uneven progress on the Bali decisions," Narang said.

"While all focus seems to be on the agreement on trade facilitation, the same sort of commitment is not evident on other Bali decisions, in particular the agreement on food security," he said.

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"WTO/STDF 354"

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Narang stressed that the issue of food security must be taken forward in the WTO in the same time frame as other decisions taken in Bali such as trade facilitation.

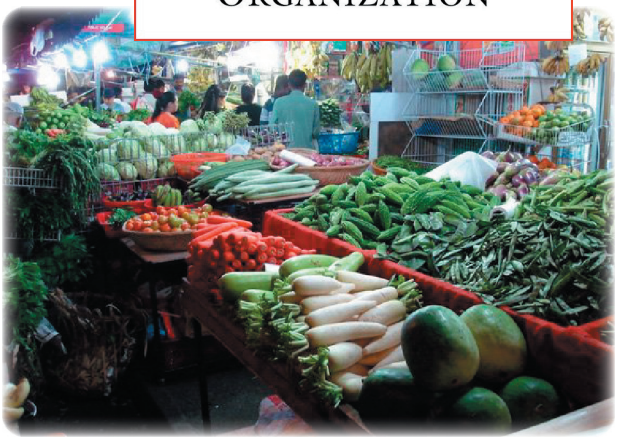
"Overall balance is important even in a limited package of outcomes. The Bali outcomes were negotiated as a package and must be concluded as such," he said, adding that "developing countries such as India must have the freedom to use food reserves to feed their poor without the threat of sanctions."

He expressed hope that the international community will join hands for the implementation of the Bali decisions in a balanced manner and as a single undertaking.

He said that India has stressed that trade and investment and an open, rules-based, transparent and non-discriminatory WTO-based trading system can play an important role in restoring global growth.

Source: The Economic Times, October 24, 2014 ■

WORLD TRADE ORGANIZATION



From chips to salad: the electronics companies making hi-tech lettuce

Panasonic, Toshiba and Fujitsu are among the electronics companies cultivating greens in indoor farms

By: Jodi Helmer

In Singapore, engineers working on factory automation technologies for Panasonic have expanded their job duties to include cultivating vegetables. The electronics manufacturer started experimenting with indoor farming in July 2014 to test the feasibility of using its technology to solve a global problem.

Several high-tech companies are now allocating resources to agricultural applications. Photograph: Panasonic Asia Pacific.

"Utilising our expertise in engineering, manufacturing and factory automation, Panasonic is able to grow high-quality produce and stabilise food supply, fulfilling a global market need," explains Fizzah Rahman, corporate communications executive for Panasonic Asia Pacific.

The farm, which measures just 248 square metres, produces 3.6 tonnes of leafy greens, herbs and vegetables per year.

Panasonic is one of several high-tech companies allocating resources to agricultural applications. Their contributions extend beyond developing new technologies; many are also operating onsite indoor farms.

Toshiba started cultivating greens like spinach, lettuce and sprouts in an idle factory in Japan earlier this year. The indoor farm uses fluorescent lighting, temperature controls and remote monitoring systems to track growth. Vegetables will be sold through supermarkets, convenience stores and restaurants and Toshiba estimates annual sales will reach 300m yen (approximately £1.74m).

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From chips to salad ... *Continued from page 7*

In 2013, Sharp Corporation launched an indoor strawberry-growing operation in Dubai using proprietary technology to manage air quality, temperature and humidity with the goal of managing the farmer-less farm remotely from its headquarters in Japan.

After Fujitsu ceased semiconductor manufacturing at its plant in Aizu-Wakamatsu, Japan, in 2009, the international IT services provider decided to leverage its Akisai cloud platform (designed to allow remote crop monitoring) to make its first foray into vegetable production. The corporation harvests 3,500 heads of lettuce per day in the 2,000 square metre former cleanroom.

The controlled conditions improve the shelf life of the lettuce and, according to Fujitsu spokesperson Rishad Marquardt, also have a positive impact on the flavour. "The lettuce is unique in terms of flavour, not bitter like ordinary lettuce," he claims.

Despite the investments associated with launching a high-tech indoor farm (Panasonic, for example, expects to spend an estimated £1.46m by the 2016 financial year to reach its 1,000-tonne production capacity), the consumer cost of factory-grown foods is similar to farm-raised produce and there are significant environmental benefits to high-tech production methods.

With the help of efficient lighting, temperature control and computer monitoring, produce grown in indoor farms maintains its nutritional value while using up to 98% less water and 70% less fertiliser than traditional farms and no pesticides, according to the Association for Vertical Farming. (Maintaining a bacteria-free, pesticide-free atmosphere means "farmers" are often required to wear cleanroom suits and masks to minimise the risk of contamination).

"Growing lettuce in this environment … leads to an extremely clean product that can be eaten straight out of the bag without needing to be washed," Marquardt says. It also allows vegetables to grow up to two-and-a-half times faster than conventional farming.

In Japan, Mirai Inc operates an indoor farm in a former Sony semiconductor factory that uses LED lighting developed by General Electric to maximise plant growth. The farm has only been in operation a few months but already cultivates up to 10,000 heads of lettuce per day. The lighting used in the indoor farm, believed to be the largest in the world, uses 40% less energy than fluorescent lamps, according to Kimura Tomoaki, general manager of GE Lighting Japan.

Panasonic indoor vegetable farm. Photograph: Panasonic Asia Pacific.

Fujitsu indoor farm. Photograph: Fujitsu

While electronics corporations have big plans to contribute to food security in their countries and around the world – Panasonic set a goal of producing 5% of locally produced vegetables by 2017 – applying technology to farming is also proving to be good for business.

Toshiba hopes to offer retail sales of its equipment for plant factory applications and GE is partnering with Mirai to provide lighting for indoor farms in Russia and China. Panasonic plans to franchise its technology to existing conventional farms that want to experiment with indoor farming; their goal is to make the "total agricultural solution" available to the market by 2017. "From a management perspective, we foresee this business to be a potential growth portfolio," says Rahman.

Source: The Guardian, October 23, 2014 ■