

fresh

News from AVRDC – The World Vegetable Center



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AVRDC's Disaster
Seed Kits
produced and
distributed in
southern Thailand

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Gulayan sa Paaralan: Vegetables go to school in the Philippines

Implementing an ambitious program to establish vegetable gardens at all 42,000 public schools in the country



Robert Holmer (center) and conference participants.

Robert Holmer, AVRDC East and Southeast Asia Regional Director, recently attended a conference on the **Philippine National Greening Program** organized by the Health and Nutrition Center of the Department of Education in Cebu City, Philippines.

Robert delivered a keynote speech on the topic "The Classroom of Health: Using School and Home Gardens to Improve Community Nutrition and National Food Security." Unit heads and nutritionist-dietitians from the Regional Health and Nutrition Units and other key personnel from

the Department of Education attended.

The participants worked to develop implementation guidelines for the National Greening Program, which includes vegetable school gardens (*Gulayan sa Paaralan*), waste management, and climate change

mitigation and adaptation components. The program will be conducted in each of the country's 42,000 public schools through 2016.

Robert, Reynaldo D. Laguda, Assistant Secretary and Chief of Staff of the Department of Education, and **Juan Araojo,** Chief of the Nutrition Division, discussed strategies on how the Center can assist the Philippines in implementing the nationwide vegetable school garden program.

Hunger and malnutrition affect 19% or 3,268,000 families out of

the 17,400,000 households in the country. Children from poor families often fail to complete their education because hunger and malnutrition force them to drop out from school to help their parents earn a living.

The *Gulayan sa Paaralan* initiative seeks to raise public awareness about health and nutrition, and promote the economic benefits of establishing school, household and community gardens. As they acquire hands-on experience at school, students will serve as program multipliers, sharing their new knowledge about vegetable

gardening with their families and communities.

The program will provide garden tools, certified vegetable seeds, and training on food production. The vegetable varieties selected for school garden production aim to address deficiencies in protein (legumes), energy (root crops), and vitamins and iron (vegetables). Some likely candidates: Moringa (*malunggay*), jute mallow (*saluyot*), taro leaves (*gabi*), water convolvulus (*kangkong*), amaranth (*kulitis*), Malabar spinach (*alugbati*), and Chinese cabbage (*pechay*).

Indigenous vegetables at the head of the class

Nutritious and easy to grow, these indigenous vegetables may soon be sprouting in the *Gulayan sa Paaralan* school gardens:



Malunggay: The tender leaves, shoot tips, flowers, and pods of *Moringa oleifera*, a fast-growing tree, are local favorites in the Philippine diet.



Kulitis: Amaranth (*Amaranthus spp.*) With many leaf colors and shapes, amaranth appeals to young appetites.



Saluyot: Boiled, stewed, or stir-fried, the leaves and stems of jute mallow (*Cochlearia olitorius*) will add vitamins and minerals to school cafeteria food.



Alugbati: High in beta-carotene and folic acid, the leaves and tender stems of Malabar spinach (*Basella spp.*) can be eaten fresh or cooked.



Kangkong: Water convolvulus (*Ipomoea aquatica*) grows rapidly and will give students a boost of early success in their gardening efforts.

seeds



(l to r): Malunggay, Saluyot, Kangkong, Kulitis, and Alugbati

Crops for the Future – Beyond Food Security



AVRDC – The World Vegetable Center was represented strongly at the 2nd International Symposium on Underutilised Plant Species held at the Royale Chulan Hotel in Kuala Lumpur, Malaysia from 27 June – 1 July 2011. **Jackie Hughes**, Deputy Director General – Research, delivered the keynote address on the role of vegetables in assuring food and nutritional security and highlighted the need for partnerships, the opportunities inherent in home gardens and making sure the message is heard globally through targeted public relations. Genebank Manager **Andreas Ebert** discussed variety trials and seed conservation of indigenous vegetables while **Ravza Mavlyanova**, Regional Coordinator based in Tashkent, Uzbekistan, presented a paper on the promotion of underutilised crops in Central Asia and the Caucasus.

The symposium was opened by the Prime Minister of Malaysia, YAB **Dato' Sri Mohd Najib bin Tun Haji Abdul Razak**, who shared the podium with senior members of the Malaysian government and the University of Nottingham as well as World Food Prize laureate **Professor M. S. Swaminathan**.

The symposium also served as the venue for the launch of the new Crops for the Future Research Centre (CFFRC) which will target both food and non-food uses of underutilised species. CFFRC is co-hosted by the University of Nottingham Malaysia Campus in partnership with the Government of Malaysia. With 18,000 indigenous species in its region and funding of nearly \$40m from the Malaysian government, CFFRC has been given the mandate to carry out research on a whole range of underutilised crops.

In his speech, the Prime Minister explained that the CFFRC is incorporated under the Malaysia Companies Act and is guaranteed by the Government of Malaysia and the University of Nottingham but it is an independent entity with the freedom to drive forward innovative and imaginative methods of research while fulfilling its responsibilities to its wider stakeholders. **Professor Sayed Azam-Ali** will be the first Chief Executive Officer of CFFRC and will lead the research center as part of the global Crops for the Future organisation, an international alliance hosted in Malaysia by Bioversity International and the

University of Nottingham.

There was continuity from the first International Symposium

“Underutilised Plant Species for Food, Nutrition, Income and Sustainable Development” with more than 30 of the participants from the 2008 symposium again contributing, and taking the discussion further—beyond food security. The discussions were broad-ranging, covering topics that included 1) nutritional, processing and end-user values, 2) economic and marketing potential – building value chains, 3) physiology, agronomy and agroecological potential, 4) biotechnology, breeding and seed systems, and 5) strategic approaches for research and development.

In addition to the main symposium, which had 107 papers presented and 73 posters, and a well-attended field visit, Drs. Hughes and Ebert participated in side events which included identifying opportunities and needs for capacity-building and training as well as identifying targets and strategies for the CFFRC. **Michael Hermann**, the Global Coordinator of Crops for the Future and Dr. Hughes also discussed potential opportunities and synergies between AVRDC and Crops for the Future and both Professor Azam-Ali and Dr. Hermann hope to work more closely with AVRDC in the future.

-- Jackie Hughes
Deputy Director General - Research

DG at WIEF



Top: Participants in the panel discussion on food security; DG Keatinge and Herbert Oberhansli are on the far right. **Left:** DG Keatinge outlines the need for improving nutrition in Central & West Asia and North Africa.



The 7th World Islamic Economic Forum (WIEF) convened 8-9 June 2011 in Astana, Kazakhstan, and AVRDC Director General **Dyno Keatinge** was on hand to participate in a panel discussion on “Food Security: Balancing Trade and Social Needs.” The forum, launched in 2005, promotes business activities in Muslim countries through awareness of global issues and trends in finance, energy, agriculture, infrastructure, technology and other sectors. During the forum the DG met with **Herbert Oberhansli**, Economics and International Relations, Nestle SA Switzerland to discuss nutrition and other areas of interest.

Visitors...from Australia



(l to r): **Jessica Chang**, Principal Research Assistant, AVRDC GRSU staff helps **Merrill Ryan** (center) and **William Martin** of the **Australian Mungbean Association** conduct mungbean seed characterization.

Six members of the **Australian Mungbean Association** met with South Asia Regional Director Warwick Easdown, Genebank Manager Andreas Ebert and the staff of Genetic Resources and Seed from 11-15 July 2011 at

headquarters to learn more about respective mungbean breeding objectives and discuss opportunities to host workshops and conferences. During their stay in Taiwan, the group visited Hwa Yi Foods Industrial and Longkow

Foods, which produce mungbean threads (noodles), and Huankuan Fruit and Vegetable Production Cooperative, producers of mungbean sprouts.

...from Hong Kong

Chan Sui-lun, Mok Che-ki, and Dora Chan, officers with the Hong Kong Agriculture, Fisheries, and Conservation Department, visited the Center on 14 July 2011 to discuss disease management, IPM, and soil management with researchers Chin-hua Ma, Meiyang Lin, and Chih-hung Lin, and tour the Demonstration Garden with Deng-lin Wu. The 2600 farms in the territory produce about 44 tonnes of vegetables daily; local production accounts for about 2.5% of fresh vegetables consumed in Hong Kong.



...from Taiwan

Yin-Fu Chang, Deputy Director General for Administration and Services (right) was interviewed recently by members of the Taiwan Institute of Economic Research, the Biotechnology Industry Study Centre, and the Intellectual Property Valuation Service Centre for an article to be published in an upcoming issue of the *Agricultural Biotechnology Industry Quarterly*.

Seminars



Jhonly Chin Hing Wong gives his report on "SSR Market Development in Pepper." Every summer the Center welcomes students from around the world to train with AVRDC researchers and gain hands-on lab and field experience.

Five summer students from the University of Malaysia – Sabah gave presentations to report on the work they conducted during their training courses at headquarters. In Biotechnology/Molecular Breeding, **Jhonly Chin Hing Wong** discussed “SSR Market Development in Pepper” and **Pui Lai Chong** reviewed “Trait Introgression into Tomato Cultivars

by Wide Crosses and Genetic Engineering.” **Ting Ting Hong** presented an “Inheritance Study of Heat Tolerance in Sweet Pepper” under the auspices of Pepper Breeding, and in Nutrition, **Wei Ting Neoh** reviewed “Antioxidant Activity of the Most Consumed Vegetables in Taiwan.” **Pei Ning Chuah** in Global Technology Dissemination discussed her

“Evaluation of Grafted Tomato Combinations to Improve Off-season Tomato Production in the Lowlands.” The students received certificates acknowledging their research, good wishes for successful scientific careers from AVRDC staff—and AVRDC bush hats to keep them cool out in their future fields.



(l to r): Jhonly Chin Hing Wong, Jackie Hughes, Deputy Director General for Research, Pui Lai Chong, Wei Ting Neoh, Pei Ning Chuah and Ting Ting Huong

Philippine researchers visit Kamphaeng Saen



(Top): HARRDEC visitors at the AVRDC office.

(Right-top, l to r): Steve Kebasen, Gilda Jacalan, Venus Maddul, Sonwright Maddul and Carlito Laurean.

(Right-bottom): Narinder Dhillon (wearing hat) guided the group to the demonstration garden, where AVRDC's advanced lines and mature technologies are exhibited.



Officers from the **Philippines Highland Agriculture and Resources Research & Development Consortium** (HARRDEC) visited AVRDC's East and Southeast Asia Research and Training Station located on Kasetsart University's Kamphaeng Saen campus in Thailand from 29 June to 1 July 2011. **Sonwright Maddul**, Consortium Director, **Carlito Laurean**, Deputy Director, and **Gilda Jacalan**, Coordinator of HARRDEC's Applied Communication Group, explored opportunities for joint research and development initiatives to benefit farmers in the Philippines with **Narinder Dhillon**, AVRDC Cucurbit Breeder.

Based at Benguet State University, Benguet Province, Philippines, HARRDEC is one of 14 regional R&D consortia organized and substantially supported by the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD). PCARRD established the consortia as regional venues for planning, evaluating and sharing resources among R&D agencies to develop agriculture, forestry and natural resources in the highlands and benefit the region's farming communities.

HARRDEC

www.pcarrd.dost.gov.ph/regional_consortia/harrdec

NEWS FROM THE REGIONS

KU Krabi distributes AVRDC seed kits in southern Thailand



Assoc. Prof. Dr. Sombat

Chinawong, Vice President of Kasetsart University's Kamphaeng Saen campus and representative of the KU President on AVRDC's Board of Directors, invited **Robert Holmer**, AVRDC East and Southeast Asia Regional Director, to join about 30 KU officials and staff members on a trip to Krabi province in southern Thailand from 9-10 June 2011. The tour aimed to familiarize participants with the local KU Krabi campus, headed by Dr. Sombat.

KU Krabi has implemented different sustainable farming systems based on the "zero waste" concept. These systems are extended to numerous marginal and vulnerable communities of Krabi. Some of those communities were seriously affected by the March 2011 floods, including an entire village of about 100 households in Krabi's Khao Phanom district, which was washed away by a landslide; 10 residents were reported dead and many more missing. KU is assisting these communities by establishing community-based farming systems with livestock, aquaculture, and vegetable components.

Robert and Dr. Sombat handed over several hundred vegetable



seed kits that were produced by AVRDC with the financial support of Taiwan's Ministry of Foreign Affairs. In one of the resettlement villages, different vegetables are already growing in containers and contributing to the daily diet of the villagers. In another village, Robert assisted Dr. Sombat in releasing young crabs and fingerlings as part of a community integrated coastal resources management project.



(Clockwise from left):

Floating vegetable garden in Krabi's pier area.

Kangkong from AVRDC seed kits planted in containers in front of emergency houses.

Seeds with planting instructions in Thai.

Robert Holmer (center in blue shirt) with school kids: Hooray!

Seed kit distribution in another Krabi community.

40 years of service to tropical agriculture



Four decades ago, a research and development institute dedicated to alleviating poverty and malnutrition in Asia by increasing the supply and quality of vegetables was established in Taiwan. Today, AVRDC – The World Vegetable Center operates on a global scale across Asia, Africa, and Oceania. In future issues of Fresh we will track the Center's long and fruitful history through photos.



C.L. Luh

July is mango season in Taiwan – an event that never may have occurred without the assistance of **C.L. Luh**, who served as AVRDC’s first Associate Director. In the early 1960s Luh was Director of the Plant Industry Department of the Sino American Joint Commission on Rural Reconstruction; he had extensive knowledge of fruit and vegetable production in Taiwan and throughout Southeast Asia—and a special interest in mangoes (and mushrooms, Taiwan’s #1 agricultural export at that time). Few mangoes were grown commercially in the country until Luh introduced the Irwin (known

in Taiwan as Aiwen) variety from Florida USA and encouraged farmer Cheng Han-chih to plant 100 seedlings in Yujing Township, about 20 km northeast of the Center. Today Yujing is at the heart of Taiwan’s mango production industry, which exports about 5000 metric tons annually to Asia, North America, Australia, and Europe. The palm-sized, red-skinned Irwin is Taiwan’s most popular mango, accounting for 40% of the country’s total mango area.



The Irwin mango, a delicious tribute to C.L. Luh’s dedication to Taiwan’s horticultural progress.



inside insight

*An epidemic of noncommunicable diseases (NCDs) is compromising global health and developmental initiatives and impeding achievement of the United Nations Millennium Development Goals. The **United Nations NCD Summit 2011** will focus on galvanizing action at global and national levels to address the health and socioeconomic impact of NCDs through multisectoral approaches. The summit, to be held 20-22 September 2011 in New York, will convene with the participation of heads of state and governments.*



What are non-communicable diseases?

Four types of non-communicable diseases (NCDs)—cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes—make the largest contribution to mortality in the majority of developing countries and economies in transition. These diseases are largely preventable through interventions that tackle four common modifiable risk factors, namely: tobacco use, unhealthy diet, physical inactivity and the harmful use of alcohol.

Why are non-communicable diseases a development issue?

NCDs and their risk factors are closely linked to poverty and

contribute to underdevelopment and poverty. Approximately 60% of all deaths in the world are due to NCDs, and more than 80% of these deaths occur in developing countries and economies in transition. People living in these countries die much younger from NCDs than in developed economies.

NCDs create a poverty trap for people with low incomes: Studies show that poor households face catastrophic health care expenditures for treatment of NCDs, which lock a substantial proportion of families into poverty. Loss of household income from poor physical status (e.g. limb amputations in diabetics) sinks poor households into even deeper

poverty. And when money is tight, healthy foods like fruits, vegetables, and lean sources of protein, which are nearly always more expensive, are usually the first items dropped from the diet.

Among women, NCDs are the second cause of death in low-income countries, and the first cause of death in middle-income countries. Twice as many women die from NCDs in Africa (per 1,000 adults) than in high-income countries alone. The rise of NCDs places an enormous burden on health systems.

Why is a global summit needed for a health issue?

Gains can be achieved much more readily by influencing public

inside insight

policies in sectors like agriculture, education, food production, pharmaceutical production, taxation, trade and urban development than by making changes in health policy alone.

What will happen at the summit?

The plenary meetings and round-table sessions will aim to raise the priority accorded to NCDs in

development work at global and national levels. Participants will address challenges faced by developing countries, identify opportunities for synergy with the MDGs, and build innovative mechanisms for sustainable financing to widen and strengthen collaborative efforts and alliances.

NCD Alliance

<http://www.ncdalliance.org/>

Tea time



Having an appropriate vessel from which to sip tea has been a human preoccupation ever since people began drinking the first infusions of *Camellia sinensis* about 4700 years ago in China. Over the centuries tea has been drunk from bowls, mugs, and glasses, yet the simple ceramic cup remains the container of choice. The latest offering in the AVRDC – The World Vegetable Center gift line links tea and vegetables—two natural products acknowledged for their health-promoting qualities. These attractive **porcelain tea cups**, hand-painted with vegetable motifs by members of the Yingge Farmers Association, are packed in silk-lined boxes and come with matching saucers and lids. Choose from tomato, bitter gourd, pumpkin, eggplant, and cabbage & chili. Price: **NT\$860/set**. Please contact Kathy Chen <kathy.chen@worldveg.org> to order.