



## The Big Picture: A Growing World

Campaigns to promote a higher consumption of fruit and vegetables are seen as a key to healthier lifestyles and a means of helping to reduce the risk of heart disease, some varieties of cancer and other health constraints. This week, news from the UK challenges this optimism. Healthier school meals are being shunned by many pupils, with figures showing that 20% fewer meals are being served in secondary school. Worldwide, more than 1.3 billion people are overweight, whereas about 800 million are underweight – and these statistics are diverging rapidly. No country has yet been able to reverse the growing obesity problem among its citizens.

For many developing countries, obesity has emerged as a



more serious health threat than hunger, and the obesity levels in many developing countries rival those in the U.S. In countries such as Mexico, Egypt and South Africa, more than half of the adults are

either overweight (possessing a body mass index/BMI of 25 or higher) or obese (possessing a body mass index/BMI of 30 or higher). And although under-nutrition and hunger remain significant problems in sub-Saharan Africa and South Asia, even desperately poor countries such as Nigeria or Uganda are struggling with the dilemma of obesity.

This development is linked with both lifestyle and dietary changes and is having a profound impact. In recent years, the consumption of energy-dense vegetable oils has

skyrocketed in developing countries. In China, for example, the average daily intake of vegetable oils rose from 14.8 grams per person in 1989 to 35.1 grams per person in 2004, adding an extra 183 kcal to the daily diet.



Another factor is the growing presence of supermarkets in developing countries, as it has greatly increased the availability of sweetened beverages and processed foods, often with added sugar to enhance flavor. In Latin America the proportion of all food expenditures spent in supermarkets jumped from 15 percent in 1990 to 60 percent in 2000, and is still rising. In Mexico, with almost 70 percent of the adult population being overweight or obese, one seventh of the population already suffers from type 2 (=adult-onset) diabetes. And in China, the booming economy has increased average incomes, but at the same enabled a growing percentage of the population to boost their intake of calorie-rich foods while shifting to a more sedentary life.

The third major change in the developing world's diet is the surge in consumption of animal-sourced foods. In addition to raising the obesity rate, the intake of this energy-dense animal-sourced food threatens to boost the prevalence of heart disease and other severe health constraints. China already spends more than six percent of its GDP on nutrition-related chronic diseases.

Extracted and compiled from:

The World is Fat, in: Scientific American. Special Issue: Diet, Health, and the Food Supply. September 2007  
Read more on this issue on our intranet.

## Latest Publication from the Center's Staff



Congratulations to Dr Germaine Pichop for his latest publication, recently received by the library. Over the last seven years our Center's scientists have published over 130 journals articles. If we haven't received your latest one, please send it to the library.

Pichop, G.N., Kemegue, F.M. (2005/2006). International coffee agreement: incomplete membership and instability of the cooperative game. *SOUTHWEST BUSINESS AND ECONOMICS JOURNAL*. v.14:25-38.

## New Publications (Articles & Books) Received by the Library

Ananieva, K., Ananiev, E.D., Mishev, K., Georgieva, K., Malbeck, J., Kaminek, M., van Staden, J. (2007). Methyl jasmonate is a more effective senescence-promoting factor in *Cucurbita pepo* (zucchini) cotyledons when compared with darkness at the early stage of senescence. *JOURNAL OF PLANT PHYSIOLOGY*. v.164(9):1179-1187.

Garipey, T.D., Kuhlmann, U., Gillott, C., Erlands, M. (2007). Parasitoids, predators and PCR: the use of diagnostic molecular markers in biological control of arthropods. *JOURNAL OF APPLIED ENTOMOLOGY*. v.131(4):225-240.

Oskoie, P.A., Sirus, Sh. B. (2007). The effect of VA mycorrhiza on vitamin C content of tomato in the presence of Cd and different levels of P. In: *Biogeochemistry of trace elements: environmental*

protection, remediation and human health. Beijing: Tsinghua University Press. p.512-513.

Scholten, O.E., van Heusden, A.W., Khrustaleva, L.I., Burger-Meijer, K., Mank, R.A., Antonise, R.G.C., Harrewijn, J.L., Haecke, W.V., Oost, E.H., Peters, R.J., Kik, C. (2007). The long and winding road leading to the successful introgression of downy mildew resistance into onion. *EUPHYTICA*. v.156(3):345-353.

Han, Y.Q., Duan, H.Y., Xu, F.S., Wang, Y.H., Meng, J.L., Ye, X.S. (2005). Identification of phosphorus high efficiency germplasm and QTL mapping in *Brassica napus*. In: *Plant nutrition for food security, human health and environmental protection; Fifteenth International Plant Nutrition Colloquium*. Beijing: Tsinghua University Press. p.82-84.

## New Popular Magazines Now Available in the Library

*The Economist*: Who's afraid of Google? – 1st–7th September 2007

*Scientific American* (Chinese): September 2007

*Scientific American* (English): September 2007

*Time*: Mekong Moment –10 September 2007



## Recommended Web Link of the Week: The South African Agricultural Research Council

“Agricultural Research Council” This South African organization is a premier science institution and conducts fundamental and applied research including extensive work in vegetable production at the Vegetable and Ornamental Plant Institute. Their work includes research on African Indigenous Vegetables, drought

resistance, biotechnology, plant breeding and crop protection—much of it relevant to the livelihoods of smallholder farmers and the work of AVRDC.

Please visit <http://www.arc.agric.za>

- Source: Fang-chin Chen/Communications

## News from Africa

### vBSS off to a Good Start with Its Inception Planning Workshop, 29-30 August



Vegetable Breeding and Seed Systems (vBSS) successfully organized its inception planning workshop from 29 to 30 August 2007. There were 23 participants representing AVRDC-HQ, AVRDC-RCA, the vBSS team, and the private and public sector from Tanzania, Mali, Madagascar and South Africa. Regional Research for Development organizations (such as CORAF/WECARD, ASARECA and AFSTA) were also present and took part

in very constructive and lively discussions regarding the program. In brief, vBSS was launched successfully and has been able to count on the active and very constructive participation of all the key players in the program. We hope that the success of this workshop is indeed a promise of many more successes that will permanently change livelihoods through vegetable breeding and adoption of improved varieties.

### Training Farmers in Vegetable Production, Processing and Preservations

Over the last seven years more than 2100 farmers, extension workers and researchers have been trained in short courses at AVRDC-RCA. The latest two-day training course from 23 to 24 August on Vegetable Production, Processing and Preservation trained 13 farmers affiliated with the Liana and Traditional

Irrigation and Environmental Development Organization from Himo and Moshi, Moshi Rural District, Kilimanjaro Region. Another course is being held at RCA for 20 farmers from Baraa, Arumeru District, Arusha Region on 6-7 September.

### 6th EU IndigenoVeg Workshop Coming up in Mid September

AVRDC-RCA will host the 6th EU IndigenoVeg Project Meeting from 17 to 21 September at the MS TCDC Training Center in Arusha, Tanzania. The Workshop, which comprises three separate sessions, will bring together scientists from all institutions who are partners

in the project, and provide the platform to present the results of the urban and peri-urban indigenous vegetables baseline supply chain survey .

### Tanzanian Seed Certification Visitors Learn from RCA

A group of 27 Field Crop Inspectors from different districts of the Tanzanian Ministry of Agriculture visited AVRDC-RCA on 5 September. They are affiliated with the Tanzania Official Seed Certification Institute and help ensure that seeds produced in Tanzania adhere to Declared Quality Declared. The aim of their visit was

to understand the seed production and quality systems of AVRDC-RCA.

- Source: Dr. Shilpi Saxena/AVRDC-RCA

## Mind the GAP: Thailand Looks for New Agricultural Standards

The Regional Director (RD) of the Asian Regional Center – Thailand had the unique experience of joining discussions with three different Good Agriculture Practice (GAP) programs in Thailand. On 4 September 2007, the RD was invited to join the ASEAN Australian Development Cooperation Program (AADCP)-Regional Partnership Scheme (RPS) to share his views about training in ASEAN GAP. This was approved by ASEAN and ARC has been asked to organize a 5 day training workshop in February 2008. This was discussed at the AADCP RPS–ASEAN GAP project Inception meeting. While the meeting agreed that it was important to initiate a Training of Trainers, the AADCP-RPS ASEAN GAP project management decided that they will not participate in the 26<sup>th</sup> RTC and preferred to organize a separate workshop instead. ASEAN GAP in Thailand is under the Ministry of Agriculture and Cooperatives.

On 6 September 2007, the RD joined the 8th EUREPGAP Conference 2007 at a prestigious hotel in Bangkok. EUREPGAP is promoted in Thailand by GTZ Thailand as GTZ EUREPGAP Option 2 Project. One of the conference sponsors is ThaiGAP, which seeks to create standards for agricultural production in Thailand compatible with world standards and to develop the capacity of small growers to compete in international markets. ThaiGAP is under the responsibility of the Thai Chamber of Commerce.

All three GAPs share the same vision of enhancing food quality and food safety and ARC looks towards supporting these activities in Thailand.

- Source: Dr. Peter A.C. Ooi/Regional Director/AVRDC-ARC

## Travel

**Dr. Antonio L. Acedo Jr.**, 9-13 September, to Hanoi, Vietnam, to supervise and support the Vietnam team's RETA 6376 Enumerators' training on the survey of leafy vegetable value chains and market opportunities in poverty-stricken upland areas; to coordinate the necessary arrangements for the workshop on best practices in postharvest management of leafy vegetables in GMS countries and training on postharvest experimental design and data management; and to discuss other project concerns.

**Dr. Tien-chen Wang and Mr. Zong-ming Sheu**, 16-22 September, to Seoul, Korea, to attend the First International Symposium of Chili Anthracnose and present papers; to visit RDA, Seminis Seed Company and Syngenta Seed Company for exchange of techniques as well as discussing future cooperation.

**Dr. Paul Gniffke**, 15-19 September, to Seoul, Korea, to attend the First International Symposium on Chili Anthracnose; 20-22 September, to Phnom Penh,

Cambodia, to attend the planning workshop for the ACIAR-Cambodia-PH project.

- Source: Yvonne Ting/ASU

**Dr. Germain Pichop**, 1-7 September, to Kampala, Uganda, to conduct a workshop on survey methodology and enumerators' training as part of the BMZ/GTZ ProNIVA II Project.

**Dr. Mel Oluoch**, 17-21 September, to Capetown and Stellenbosch in South Africa, to attend the Horticulture Network Awareness Workshop, themed "Fresh Perspective on Horticulture in Southern Africa". He will give a presentation on "The role of AVRDC-The World Vegetable Center in the Development of the Fresh produce and Vegetable Seed Industry in East and Southern Africa".

- Source: Dr. Shilpi Saxena/AVRDC-RCA

## New E-mail Address

**Ms. Huang Chun-chu**, 黃春菊 Research Assistant, Entomology Unit,

<[amy.huang@netra.avrdc.org.tw](mailto:amy.huang@netra.avrdc.org.tw)>.

- Source: Shirley Chen/Communications

## Welcome to Two New Short Term Trainees at Headquarters



Ms. Aya Nishishimura, summer student from Tokyo University of Agriculture, Japan, arrived at AVRDC on 2 September 2007 for one month of training. Ms. Nishishimura will work on “The equilibrium moisture content and storability of selected species of vegetables” under the guidance of Dr. Liwayway M. Engle. She can be contacted at 533 (office) and 670 (dormitory), <[13050115@nodai.ac.jp](mailto:13050115@nodai.ac.jp)>



Mr. Sunday E. Aladele, Graduate Student Trainee from the National Centre for Genetic Resources and Biotechnology in Nigeria arrived at AVRDC on 4 September 2007 for two months of training. Mr. Aladele will work on the “Genetic Diversity of West African Okra (*Abelmoschus caillei*)” under the guidance of Dr. Robert de la Peña. He can be contacted at 361 (office) and 872 (dormitory), <[sundayaladele@yahoo.com](mailto:sundayaladele@yahoo.com)>.

- Source: Lydia Wu/Communications

## What's New on the AVRDC Websites?

GlobalHort Website: <http://www.globalhort.org>

### ∇ Upcoming events

- PROTA International Workshop and Investors' Forum, September 24-25, Nairobi, Kenya
- FAV Health 2007 – the 2<sup>nd</sup> International Symposium on Human Health Effects of Fruits and Vegetables, October 9-13, Houston, Texas
- FAO-WHO PROFEL Workshop, October 22-25, Yaounde, Cameroon
- RADHORT Technical Meeting, October 26, Yaounde, Cameroon
- International Symposium on the Socio-economic Impact of Modern Vegetable Production Technology in Tropical Asia, February 3-6, Chiang Mai, Thailand
- GlobalHort Meeting for the Preparation of a 10-year Strategic Plan for the Tropical Vegetable Sector for South, Southeast Asia, and Tropical Africa, February 7, Chiang Mai, Thailand

### Anthracnose Website:

<http://www.avrdc.org/anthracnose/>

- ∇ Program of the First International Symposium on Chili Anthracnose, September 17-19, Seoul, Korea

### Postharvest Website:

<http://www.avrdc.org/postharvest/>

- ∇ Workshop on Best Practices in Postharvest Management of Leafy Vegetables in GMS Countries, October 25-27, Hanoi, Vietnam

### Grants Development Website:

<http://www.avrdc.org/intranet/gdo.html>

- ∇ Funding News 5 September 2007 – Call for proposal: ADB's 12<sup>th</sup> RETA on ANRR, List of recently submitted and awarded AVRDC proposals
- ∇ ADB Technical Assistance Report: Eleventh Agriculture and Natural Resources Research at International

### Agricultural Research Centers

- ∇ Guidelines for the selection of the concept note for ADB

Intranet: <http://www.avrdc.org/intranet/home.html>

- ∇ Minutes: 2<sup>nd</sup> NRS Advisory Committee Meeting

### ∇ Presentations:

- Plant carotenoids and human health by Professor DellaPenna, Michigan State University
- Impressions of DPRK – a visit to North Korea by Tien-chen Wang
- The future of IPM: a global perspective by E.A. Heinrichs
- Cross-species amplification of legume SSR and EST in Mungbean by Shang-chin Li
- Carotenoids content of cooked vegetables as affected by various food preparation ways by Chee yi Leong
- Maternal effect and heterosis in sweet x hot pepper hybrids by Chun-hui Hsiao
- Genetic diversity of pepper by Hen-gin Chio
- Viability of the oldest soybean and pepper seeds stored in long-term and medium-term conditions at AVRDC by You-tsz Guo
- Viability of mungbean seeds stored in medium-term and short-term and Chinese cabbage seeds stored in long-term and medium-term conditions at AVRDC by Po-jung Wang
- Multilocus genotype characterization of *Phytophthora infestans* isolates by Chia-jung Lin
- Potential of using near infrared spectroscopy as mass screening method for high carotenoid pumpkin breeding by Tsien-jung Tseng

- ∇ Policies: Merging of the Biotechnology and Molecular Marker Laboratory

- Source: Communications