



19 September 2008

Published by Public Awareness and Information

Breaking customs with traditional vegetables

Producing enough vegetables is an essential prerequisite for safeguarding food security. However, assured availability of fresh produce is one thing, but consumption patterns often follow other rules. Micronutrient deficiencies are one of the most important health constraints in sub-Saharan Africa. To analyze vegetable consumption patterns and develop strategies that lead to higher vegetable consumption rates, AVRDC – The World Vegetable Center, the Nairobi-based NGO Farm Concern International and the Centro Internacional de la Papa (CIP) have joined forces in a promising project in Eastern Africa.

The “Traditional Foods Project” running from 2007 until 2010 aims to promote and market key vegetables that are often underutilized but typically have a high micronutrient content. With the exception of orange-fleshed sweet potato, the selected crops are all indigenous vegetables: sweet potato leaves, nightshade, amaranths, cowpea leaves and spider plant. “It is all about traditional food and its potential to create wealth and health,” says Anna Herforth, a Ph.D. candidate

in nutrition at Cornell University who is working with the project. Growing and consuming globally important vegetables such as tomatoes or peppers can lead to higher incomes and better health, and the same can be true for traditional or indigenous vegetables.



The East African region chosen for the project includes both rural and peri-urban environments. Dietary diversity is low and access to vegetables is limited either due to high costs or distances to markets. The region is not amongst the poorest and most undernourished places in Africa. Childhood obesity is still among the lowest in the world, but it is increasing just as fast as in any other region.

If rising incomes coincide with the rising availability of vegetables, both local diets and incomes could benefit. “As vegetables become more accessible, it is more likely that they will be consumed, in addition to other components of a diverse diet when incomes start to

grow”, the Cornell scientist says. However, she also knows that behavioral patterns and lifestyles rarely change and adjust on their own.

Another major constraint is the lack of knowledge. “If farmers and consumers knew more about indigenous vegetables, it would be relatively easy to convince them.” she says. Starting October 2008, Anna Herforth hopes to start collecting extensive data among 360 smallholder families (250 of them have children), in order to compare diet and nutritional changes among program participants compared to non-participants.



Farm Concern International will implement the project, while CIP will be responsible for monitoring and evaluation. AVRDC – The World Vegetable Center will take on the role of capacity building through agronomic training and the supportive marketing of indigenous vegetables to consumers through its information services and public awareness activities.

The LIBRARY

...from the Cucurbits SDI Bulletin

Adkins, S., Webb, S.E., Baker, C.A., Kousik, C.S. (2008). Squash vein yellowing virus detection using nested polymerase chain reaction demonstrates that the cucurbit weed *Momordica charantia* in a reservoir host. *PLANT DISEASE*. v.92(7):1119-1123.

Bettiol, W., Silva, H.S.A., Reis, R.C. (2008). Effectiveness of whey against zucchini squash and cucumber powdery mildew. *SCIENTIA HORTICULTURAE*. v.117(1):82-84.

Cline, G.R., Sedlacek, J.D., Hillman, S.L., Parker, S.K., Silvernail, A.F. (2008). Organic management of cucumber beetles in watermelon and muskmelon production. *HORTECHNOLOGY*. v.18(3):436-444.

Gao, W., Li, B.J., Sun, J.D. (2008). Antagonism of *Trichoderma viride* against *Fusarium oxysporum* and *Rhizoctonia solani* on cucumber.

CHINA VEGETABLES. no.6:9-12.

Gosalvez-Bernal, B., Genoves, A., Navarro, J.A., Pallas, V., Sanchez-Pina, M.A. (2008). Distribution and pathway for phloem-dependent movement of Melon necrotic spot virus in melon plants. *MOLECULAR PLANT PATHOLOGY*. v.9(4):447-461.

Hovi-Pekkanen, T., Tahvonen, R. (2008). Effects of interlighting on yield and external fruit quality in year-round cultivated cucumber. *SCIENTIA HORTICULTURAE*. v.116(2):152-191.

Kobori, M., Nakayama, H., Fukushima, K., Ohnishi-Kameyama, M., Ono, H., Fukushima, T., Akimoto, Y., Masumoto, S., Yukizaki, C., Hoshi, Y., Deguchi, T., Yoshida, M. (2008). Bitter gourd suppresses lipopolysaccharide-induced inflammatory responses. *JOURNAL OF AGRICULTURAL*

AND FOOD CHEMISTRY. v.56 (11):4004-4011.

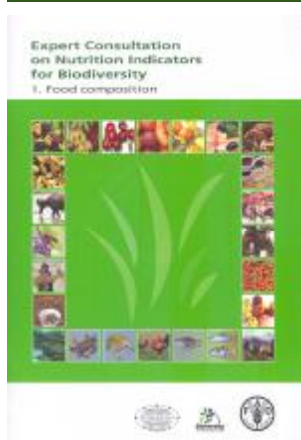
Lin, S.H., Do, Y.Y. (2008). Studies on delaying fruit ripening by transforming sense ACC synthase gene into *Momordica charantia* L. *TAIWAN SOCIETY FOR HORTICULTURAL SCIENCE, JOURNAL*. v.54(2):115-125.

Qu, S.P., Wang, L.L., Cui, C.S. (2008). Studies on resistance of pumpkin seedlings to *Phytophthora capsici* by exogenous 24-Epibrassinolide treatment. *CHINA VEGETABLES*. no.5:13-16.

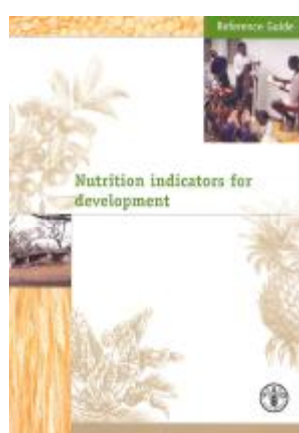
Tsai, H.C., Do, Y.Y. (2008). Cloning and analysis of Ethylene Insensitive 3 homologous cDNA from *Momordica charantia* L. *TAIWAN SOCIETY FOR HORTICULTURAL SCIENCE, JOURNAL*. v.54(2):103-113.

— Fang-chin Chen, Editorial and Library

... New books available



Food and Agriculture Organization of the United Nations. (2008). *Expert consultation on nutrition indicators for biodiversity: 1. Food composition*. Rome: FAO. xi, 35 pp.



Maire, B., Delpeuch, F. (2005). *Nutrition indicators for development: Reference guide*. Rome: FAO. ix, 85 pp.

FOCUS: AFRICA

Workshop

The first ever Priority Setting Workshop for Vegetable Research and Development in Burundi, jointly organized by Burundi Agricultural Research Institute (ISABU) and AVRDC-The World Vegetable Center was held in Bujumbura between 21-22 August. Participants were drawn from the University of Burundi, ISABU, FAO, Ministry of Agriculture, AVRDC-RCA and NGOs. Papers were presented on ‘The role of ISABU in research and development in Burundi’, ‘The role of the family in vegetable production and consumption,’ ‘Importance of vegetable in human nutrition’ and ‘The contribution of Extension Services to vegetable production in Burundi.’

The second day of the workshop featured working group sessions, discussing vegetable production and research, capacity building and technology transfer. The closing ceremony of the workshop was chaired by the Chief Cabinet of the Ministry of Agriculture in which he acknowledged the diversity of the participants and their contributions. He promised to expedite actions on the recommendations made during the

workshop related to the strategic plan for vegetable production and development as a viable tool for food security.

Visitors

Ms. Anna Herforth, PhD student in International Nutrition from Cornell University, New York has returned to AVRDC-RCA to prepare for a three month follow-up survey to assess the impact of a nutrition project a year after its start. Her research on ‘Impact of traditional leafy vegetable production and marketing on diet and nutrition of smallholder farmers in Kenya and Tanzania’ is part of the TF-Project being run jointly with CIP Nairobi and Farm Concern International. Anna has an MSc in food policy from Tufts University (Boston, MA) and a BSc in plant science from Cornell University.

Several visitors from HQ came to AVRDC-RCA between September 03 to 12; among them DDG-R Dr Jackie Hughes, Oliver Hanschke and Dr Edwin Javier. Seminars were also given to the students attending the 4-month training course.



PhD student Mr. Severin Polreich (photo 1) and his wife, AVRDC-ARC intern Marcella Dionisio (photo 2), departed for Germany on September 7 after two years on campus. They received certificates presented by DDG-R Dr Jackie Hughes on September 5.

Mr. Wachira Kaguongo, Agricultural Economist from CIP Nairobi, is having meetings at AVRDC-RCA from September 15–19 to discuss the progress of the TF-Project.

PEOPLE

New staff — Dr. Lawrence Kenyon, Plant Virologist



Dr. Lawrence Kenyon has been appointed as the Center’s Plant Virologist.

Lawrence is a British Citizen and

has 17 years of practical experience working on a diverse range of

pathogens and crops for the Natural Resources Institute (NRI) at the University of Greenwich. He has broad experience working with fungal plant pathogens, bacteria, phytoplasmas, nematodes and virus vectors and has conducted field work in Africa, Central America and the Pacific Islands. Lawrence will

be based at headquarters in Taiwan and report to Jackie Hughes, DDG-Research. He will report to work January 19, 2009 after the arrival of his second child expected at the end of November.

(Lawrence.kenyon@worldveg.org)

— Kathryn Hamilton, Interim HR Manager

STRENGTHENED PARTNERSHIPS IN THE PHILIPPINES



Many thanks to Ms Terre Tanquezon Technical Training Specialist (East-West Seeds) for the photographs.

In his visit last week to the Philippines, Dr Dyno Keatinge was privileged to meet the Chairman of the East-West Seed Group Mr Simon N. Groot, Research and Development Manager Dr Conrado Balatero and Roberto Acosta Technology transfer Manager at their Philippine HQ in Bulacan which is about 2 hours drive north of Manila. AVRDC has had close relations with East-West Seeds for some years now and the Chairman

indicated his appreciation for the good quality of the AVRDC germplasm which they had incorporated into their varieties of tropical vegetables. Dr Keatinge was particularly interested in their Bitter Gourd indigenous vegetable hybrids because of the potential prophylactic health care properties of this species for people suffering from Type II diabetes as well as for their good nutritional qualities.



(Left) Dr Keatinge was privileged to meet the members of the Philippine Seed Industry Association including the Executive Director Dr. Renato Mabesa.



He also visited the Los Baños Branch of the Bureau of Plant Industry who were AVRDC's principal partners in the ADB RETA project on indigenous vegetables in the Philippines and elsewhere in SE Asia. The OIC Dr. Marina Calingasan was presented with an AVRDC hat for her distinguished services.



Dr Keatinge visited the University of the Philippines at Los Baños and was cordially welcomed by the Dean of the College of Agriculture, Professor Domingo Angeles and the Vice Chancellor for Research and Extension Professor Enrico Supango. Dr Keatinge much enjoyed the Dean's generous hospitality of fresh Durian which he has not had since he was a teenager in Singapore.

Dr Keatinge was hosted for his visit by Dr Joel Rudinas, member of our Board of Directors who is Director of the Bureau of Plant Industry of the Department of Agriculture, Government of the Philippines.



SKETCH



Name: Christian Genova II

Home: Naga City, Philippines

Position: Research Assistant,
Socioeconomics-HQ

Why do you do what you do?

I love development and social work. I have been working for nearly 10 years in the development arena, and one thing I strongly see myself pursuing for a long time is working closely with the disadvantaged, and being able to hopefully make a positive impact on their lives. I also enjoy working with people from different backgrounds as I learn about, and appreciate both our commonality and diversity.

Why do you do it at AVRDC?

The World Vegetable Center is the perfect place for me to continue my development work. Not only is it devoted to reducing poverty and malnutrition in developing countries, it has also the facility to create change. The Center is also both intellectually stimulating and

challenging, where each person's ability to work in a fast-paced setting with time-sensitive jobs is constantly being tested. It is here where I learned the very meaning of multitasking as I manage to juggle the submission of different reports, correspond constantly with our collaborating national agricultural research institutions, travel to our country partners, and analyze data from several countries in Southeast Asia and Sub-Saharan Africa. I believe these such tasks and more have given the Center a distinct character that continues to challenge me.

Research:

Since September 2004, I have worked with different projects covering production, consumption, postharvest loss, indigenous vegetables and school garden programs. The very first project I worked on was the Bangladesh project which aimed to understand the effect of increased vegetable production on rural populations beyond the direct farm level. My next project was the ADB-funded indigenous vegetables school garden project in several Southeast Asian countries. It assessed the effect of school gardens on the health, micronutrient consumption and knowledge of schoolchildren and households.

From 2005 until now I have been mainly involved in the ADB postharvest projects (RETA 6208 and RETA 6376), assisting in the needs assessment survey and analyzing the data coming from our national collaborators. My work concentrated on understanding the vegetable supply chains (needs, constraints and key strategies) in the peri-urban areas of Cambodia, Lao PDR and Vietnam. RETA 6208 formally ended in July 2008, and we are now working on RETA 6376 which is an expansion of our previous efforts; this time targeting the resource-poor leafy vegetable farmers in upland farming areas.

What's next?

Mastering Chinese. When it comes to learning a language, nothing beats living in a country that speaks it; although I must admit, this may take longer than expected.

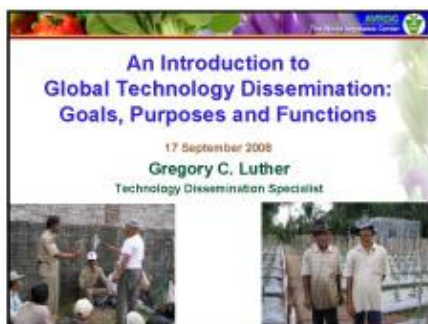
Favorite Taiwan or international experience:

When you visit Laos, do try their fresh duck's blood, steamed hornets and fried worms sprinkled with rock salt. They are each one of a kind.

Favorite vegetables:

"My favorite vegetables are cabbage (stir-fried with porchetta) and lettuce (with balsamic vinegar). Now I'm feeling hungry."

CORNUCOPIA



Starting in July 2008 AVRDC - The World Vegetable Center formed a Global Technology Dissemination (GTD) group. The team consists of 10 staff members and is led by Dr. Greg Luther, former IPM/ Development Specialist who is now acting as Technology Dissemination Specialist. To learn more about the

goals, purposes and functions of this new group, see the seminar presentation given on 17 September 2008 (http://www.avrdc.org/intranet/presentations_seminars.html)

Dr. Greg Luther can be contacted at his new extension no. 560.