



AVRDC
The World Vegetable Center

Newsletter

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Short shelf life: in Eastern Africa indigenous vegetables sell quickly and are popular with affluent urban consumers

Out of the Niche: Going Back to the Roots Pays Off

The benefit of indigenous vegetables to help combat micronutrient malnutrition is widely known and confirmed by nutritional studies. Indigenous crops are easier to grow, more resistant to pests and acceptable to local tastes. The rising attention being given to indigenous vegetables and their contribution to improving the health of the poor in developing countries is an encouraging signal. Indigenous vegetables are becoming more popular and due to successful promotion, increasingly enjoy a status as an important food source. However, new data shows that they are a treasure that also can pay off financially.

This month, the United Nations nominated the T'ikapapa initiative, which markets specially selected and packaged native Peruvian potatoes under the special trademark, as one of the ten finalists for the Supporting Entrepreneurs for Environment and Development (SEED) Award 2007 from 230 proposals from 70 countries.

T'ikapapa is one of several marketing projects in recent years that have helped to reevaluate indigenous crops and position them in national and international markets. The initiative links small-scale farmers with new urban markets, helps improve local farmers livelihoods and utilizes environmentally friendly technologies to conserve local biodiversity. It also pulls in the private sector.

This success story from the Andes is only the most recent internationally acclaimed example proving that traditional indigenous vegetables indeed can have a

future in modern economies. In Kenya indigenous vegetables already sell out early from supermarket shelves to eager affluent urban consumers, providing the producers who are overwhelmingly poor farming households with a lucrative source of income. This has particularly benefited poor women who account for 60% of producers and 75% of the traders.

Supermarkets are willing to pay a premium for indigenous vegetables reveals a recent case study report of the work done by AVRDC's Regional Center for Africa (RCA) in Arusha, Tanzania in conjunction with Farm Concern International. The report observed that Nairobi supermarket supplies of indigenous vegetables run out by 1pm – much earlier than other vegetables, and that producers are only meeting an estimated 40% of consumer demand. Indigenous vegetables are becoming an established commodity.

Thanks to close cooperation with RCA, indigenous vegetables are becoming a more important business for many local seed companies. Between 2004 and early 2006 over 9000 tonnes of indigenous vegetables were supplied to the Nairobi market alone. One grass-roots supplier is the Mugima self-help group involving 40 farmers living near Nairobi. In a two year period they sold 500,000 bundles of indigenous vegetables worth US\$ 75,000 in supermarkets. Indigenous vegetables have become their main source of income, a strong component in their diets and the means to pay for school fees and essential farm equipment.

Oliver Hanschke, Communications

New Publications (Articles & Books) Received by the Library

Agrawal, S.B., Rathore, D. (2007). Changes in oxidative stress defense system in wheat (*Triticum aestivum* L.) and mung bean (*Vigna radiata* L.) cultivars grown with and without mineral nutrients and irradiated by supplemental ultraviolet-B. ENVIRONMENTAL AND EXPERIMENTAL BOTANY. v.59(1):21-33.

Anderson, J.A. (2007). Additive effects of alcohols and polyols on thermostability of pepper leaf extracts. AMERICAN SOCIETY FOR HORTICULTURAL SCIENCE, JOURNAL. v.132(1):67-72.

Candresse, T., Marais, A., Ollivier, F., Verdin, E., Blancard, D. (2007). First report of the presence of tomato apical stunt viroid on tomato in Senegal. PLANT DISEASE. v.91(3):330.

Dayteg, C., Tuvesson, S., Merker, A., Jahoor, A., Kolodinska-Brantestam, A. (2007). Automation of DNA marker analysis for molecular breeding in crops: practical experience of a plant breeding company. PLANT BREEDING. v.126:1-6.

de Pascale, S, Martino, A., Raimondi, G., Maggio, A. (2007). Comparative analysis of water and salt stress-induced modifications of quality parameters in cherry

tomatoes. JOURNAL OF HORTICULTURAL SCIENCE & BIOTECHNOLOGY. v.82(2):283-289.

Kassem, M.A., Sempere, R.N., Juarez, M., Aranda, M.A., Truniger, V. (2007). Cucurbit aphid-borne yellows virus is prevalent in field-grown cucurbit crops of southeastern Spain. PLANT DISEASE. v.91(3):232-238.

Selvaraj, N., Vasudevan, A., Manickavasagam, M., Kasthuriangan, S., Ganapathi, A. (2007). High frequency shoot regeneration from cotyledon explants of cucumber via organogenesis. SCIENTIA HORTICULTURAE. v.112(1):2-8.

Obuobie, E., Keraita, B., Danso, G., Amoah, P., Cofie, O.O., Raschid-Sally, L., Drechsel, P. (2006). Irrigated urban vegetable production in Ghana: characteristics, benefits and risks. Accra: IWMI. vii, 150 pp.

Sun, B.J., Cao, J.S., Huang, X.S., Yu, X.L. (2006). cDNA-AFLP analysis on genes associated with vernalization in vitro in *Brassica campestris* ssp. *chinensis*. ACTA HORTICULTURAE SINICA. v.33(6):1341-1344.

Yeoh, H.H., Wang, P.F.M. (1993). Food value of lesser utilized tropical plants. FOOD CHEMISTRY. v.46:239-241.

New Popular Magazines Now Available in the Library

The Economist: Israel's wasted victory – 26th May – 1st June 2007

Time: Singapore's new look – 4 June 2007

Scientific American (Chinese): June 2007



Recommended Web Link of the Week:

AANRO – Australian Agriculture and Natural Resources Online

AANRO – is a knowledge base of bibliographic and research information designed as a national decision support system and single access point for knowledge on Australian agriculture and natural resource management (ANR). The online resources contain about 200,000 detailed descriptions of research projects and publications on Australian agriculture and

natural resources. About 1,500 new research projects and 5,000 documents are added to the knowledge base each year.

Please visit

<http://www.aanro.net/page/basicsearch.htm>

- Source: Fang-chin Chen/Library Services Unit

Travel

Dr. Rémi Kahane, 3-8 June, Nairobi, Kenya, to attend the CP-HVC meeting; 9-16 June, to Johannesburg, South Africa, to attend the FARA 4th General Assembly; 17-18 June, to Arusha, Tanzania, to visit AVRDC-RCA to set up the GlobHort office; 19-26 June, to Brussels, Belgium, for the Expert Consultation Meeting for Development (CTA/ACP), and to organize and attend Awareness Raising Conference on Horticulture; 27-29 June, Montpellier, France, to report to CIRAD upon completing appointment as GlobalHort Interim Executive Secretary.

Dr. Warwick Easdown, 4-9 June, to Nairobi, Kenya, to prepare the Pre-Proposal for a Challenge Programme on High Value crops at ICRAF, Nairobi, Kenya; to meet with consultants regarding the Center's web, branding and story development; 10-15 June, to Arusha, Tanzania, to discuss training with RCA staff, to meet IV producers, seed company representatives and scientists to develop promotional stories; 16-19 June, to Kenya, meeting with RCA project partners to develop promotional stories; meetings with consultant writers, IT specialists and photographers to provide support for RCA; 20-22 June, to Wageningen, The Netherlands, to attend CTA Expert Consultation meeting and present GHA findings; 23-27 June, to Brussels, Belgium to attend Awareness Raising Conference on Horticulture.

Mr. Vincent Lu, 6-12 June, to Bangkok, Thailand, 13-22 June, to Arusha, Tanzania, to perform the first overseas audit in 2007. The work fields involve operational review, financial reporting and management of cash and fixed assets.

Drs. Robert de la Peña and Kathryn Hamilton, 10 June-11 July, on annual leave.

- Source: Yvonne Ting/ASU

Dr. Peter A. C. Ooi, 30 May-1 June, to Phnom Penh, Cambodia, to finalize Impact Assessment Report of HRDP IV and possible development of a project on safe and off-season vegetable product for Sihanoukville; 4-7 June, to Ho Chi Minh, Vietnam, to for the Inception meeting of the IFAD Project.

- Source: Dr. Peter Ooi/Director/AVRDC-ARC

Change of Thai Mobile Phone Number

All cell phone numbers in Thailand have been upgraded as a part of expanding the system. All cell phone numbers should have a prefix of 8 after the country

Dr. Shilpi Saxena, 28-29 May, to Dar-es-Salaam, to attended the East Africa Organic Conference on different organic certification systems for small-holders (PGS, ICS, 3rd Party Certification) and "Developing Local and Regional Organic Markets: Organizing smallholder supply chains for local markets." This is the largest organic conference in East Africa, organized by IFOAM (International Federation of Organic Agriculture Movements), UNEP-UNCTAD CBTF Capacity Building Task Force for Trade and Development, EPOPA (Export Promotion of Organic Products from Africa), TOAM (Tanzanian Organic Agriculture Movement) and in cooperation with FAO and the Ministry of Agriculture.

Dr. Drissa Silué, 28 May-29 June, on annual leave.

Mr. Stefan Pletziger, will work for several weeks starting 11 June as the Visiting Scientist for the International Potato Center (CIP) in Nairobi. Beside other tasks, he will closely work with CIP economists to prepare the baseline survey for the Kilimo Trust Project.

Dr. Detlef Virchow, 6-8 June, to Nairobi, Kenya, to participate in a workshop to develop the Pre-Proposal for the Challenge Program: High Value Crops - Fruits and Vegetables; 12-16 June, to Johannesburg, South Africa, to attend the Africa Agriculture Science Week and FARA General Assembly.

- Source: Dr. Shilpi Saxena/AVRDC-RCA

code. **Dr. Peter Ooi's** new mobile no. will be:
+66 819322579.

- Source: Communications

News from Africa

Training

AVRDC-RCA conducted a two-day training course from 31 May to 1 June on Vegetable Production, Processing and Preservation for farmers from Bomangombe, Hai District, Kilimanjaro Region.

Visitors

Ms. Daphne Jochnick, Program Coordinator, Tanzania, Mr. Evans Javason, Mr. Andrew Brunton, Horticulturist, Mr. Sommy Issangya, Sustainable Agriculture Instructor, and Mr. Joshua Machinga, Common Ground Programme, Kenya of Global Service Corps visited AVRDC-RCA on 16 May. The aim of their visit was to develop collaboration on Sustainable Agriculture Training for Tanzanian Farmers.

Mr. Bernhard Van Dyk and Mrs. Brenda Van Dyk from Qualitas Seed Company in Chimoio, Mozambique visited AVRDC-RCA on 17 May. The aim of their visit was to link up with AVRDC as a partner in commercializing AVRDC vegetable varieties in Southern and East Africa.

Volunteers from Peace Corps visited AVRDC-ICRISAT Vegetable Breeding Project Site on 17 and 18 May. The

Peace Corps volunteers living in the villages of different regions of Niger visited the ICRISAT Sahelian Centre, Sadore, Niamey. Besides visiting crop diversification system sites, two groups consisting of 15 volunteers each also visited the vegetable breeding field. They were briefed about the available open pollinated varieties of vegetable crops like tomato (ICRI-Xina), hot pepper (Safi), lettuce (Maya), melon (Ein Dor) and about the new research initiatives under the umbrella of AVRDC and ICRISAT. The breeding unit is planning to provide the volunteers with small seed samples of identified vegetable varieties like the ICRI-Xina tomato to enable them to grow it in their villages.

Dr. Jim Lorenzen, IITA Banana Breeder based in Kampala, Uganda visited RCA on 24 May. The aim of his visit was to develop collaboration with RCA in regard to Banana-based vegetable production systems in East Africa.

- Source: Dr. Shilpi Saxena

Disease Screening Training Course, Headquarters, 4-15 June

Based on the request of APSA members, the Center is going to hold a training course on vegetable disease screening technique from 4 to 15 June at headquarters.

We would like to welcome 9 participants from Korea, India, Taiwan and Thailand.

- Source: Dr. Jaw-Fen Wang/Course Coordinator

Undergraduate Seminars from UPLB Students

In concluding their two month studies at AVRDC headquarters this week, four undergraduate students from the University of the Philippines, Los Baños presented seminars to discuss the results of their thesis research work. For those who weren't able to attend, the presentations can be found on the intranet. The projects reported on were:

Ms. Rachel Ann M. Alba "Effect of acylsugars from *Solanum pennellii* accessions on tomato fruitworm and whitefly and molecular mapping of QTLs associated with acylsugar production (Supervised by S Ramasamy, Entomology Unit)

Ms. Pauline Andrea M. Muyco "Association of allelic diversity in Lycopene Cyclase with variation in Lycopene and β -carotene concentrations in tomato", (Supervised by R. de le Peña, Molecular Marker Laboratory)

Mr. Leonardo T. Platon "Association of allelic diversity in Capsanthin-Capsorubin Synthase with variation in Capsanthin and Zeaxanthin concentrations in pepper." Supervised by R. de le Peña, Molecular Marker Laboratory)

Ms. Pamella Marie DV Sendon "Regeneration and callus formation in hot pepper (*Capsicum annuum*) tissue cultures." (Supervised by JG Woo, Pepper Unit)

- Source: Communications

Position Announcement—Research Assistant, Tomato Unit

AVRDC – The World Vegetable Center is a nonprofit, autonomous international agricultural research center with headquarters in Taiwan and regional offices around the globe. AVRDC conducts research and development programs that contribute to improved incomes and diets in the developing world. The Center is seeking a Research Assistant of Taiwanese nationality who will be working at the Tomato Breeding Unit, AVRDC, Shanhua, Tainan, Taiwan.

Key Responsibilities: 1) Plan, coordinate and assist in the establishment and conduct of field trials, crossing blocks, disease screening trials and other technical aspects of the breeding program; 2) assist in the development and management of databases for inbred lines, hybrids and other information generated from the program; 3) work with the other research assistant to communicate experimental plans and other instructions to unit members; 4) cooperate with other units in interdisciplinary research activities and allocation of field facilities; 5) assist the Unit head to implement headquarters activities of the Vegetable Breeding and Seed Systems project and other international projects; and 6) assist the Unit head to develop project proposals for funding. **Qualifications:** 1) BSc or MSc in plant breeding, genetics, horticulture, agronomy, plant science or related discipline; 2) proficiency with the MS Office computer software; 3) familiarity with molecular markers is desirable; 4) detail oriented and able to work with little or no supervision; 5) excellent interpersonal skills and proficiency in spoken and written English; 6) willing to work outdoors in adverse weather conditions; and 7) willing and able to travel to Africa or other countries on occasion. **Terms of Appointment:** The initial appointment is for one year with possibility of annual re-appointments. Salary and perquisites are commensurate with qualifications and experience for a national recruited staff member. **Application:** Submit a letter of application in English, Curriculum Vitae, with

names, and contact addresses (phone number and e-mail) of three referees. Send to: Ms Felisa Wang, Human Resources, AVRDC – The World Vegetable Center, P.O. Box 42, Shanhua, Tainan 74199, Taiwan; e-mail: jobapply@netra.avrdc.org.tw. **Closing Date:** The closing date for applications is 30 August 2007.

亞蔬-世界蔬菜中心係一非營利國際農業研究中心，總部位於台灣台南縣善化鎮，另在全球設置區域分部。本中心致力於蔬菜研究與發展工作，以提高開發中國家與地區人民的營養與收入為宗旨。本中心番茄育種組現將招募一位具中華民國國籍之研究助理，工作地點在台灣總部。主要負責工作：擬訂及執行番茄雜交育種，病害篩選及其他育種相關之田間試驗，協助研發及管理 **inbred lines**（自交系或固定品種）、**hybrids**（雜交一代）以及其他品種相關之資料。協同其他研究助理傳達實驗計畫及指示予給相關人員。與其他單位合作參與各學科間之研究及協調田間設施之配置。協助單位主管執行總部蔬菜育種、種子採種工作及其他國際計畫。協助單位主管撰寫計畫爭取研發經費。應徵資格：作物育種、遺傳學、園藝、農藝、植物科學或相關科系畢業之學士或碩士。熟悉 MS Office 電腦軟體。熟悉分子標誌尤佳。做事詳細，並可獨立作業。人際關係良好，英文說、寫流利。願意在不好的氣候下於戶外工作者。願意有時至非洲及其他國家出差者。聘用條件：起始聘用期限為一年，可予以續聘（以一年一聘為原則）。薪資按學歷、經歷、專長及所擔任職務性質核定。應徵方式：請將中文、英文履歷表以及三位介紹人姓名、聯絡地址（包括電話、電子郵件信箱）寄至：亞蔬-世界蔬菜中心，台南縣善化鎮郵政信箱 42 號，人事室。

電子信箱 (jobapply@netra.avrdc.org.tw)

截止收件日期：2007年8月30日

- Source: Felisa Wang/Human Resources

Mosquito Control, Headquarters, Saturday, 9 June

The mosquito insecticide spraying within the Center's campus will be scheduled next Saturday, 9 June. The contractor will begin spraying at 0900 hours starting from the residential area and completing the whole campus around 1600 hours.

6月9日（星期六）上午9點至下午4點，中心園區將進行殺蟲劑噴灑作業，請大家注意安全！

- Source: Janice Chou/TSO