



AVRDC
The World Vegetable Center

Newsletter

Published by the Communication and Training Office

23 March 2007



Vietnam Eyes Bigger Vegetable, Fruit Exports

Vietnam is aiming for a major increase in its vegetable, fruit and flower export revenues over the next decade. From current levels of 280 million dollars in 2006 the country aims to expand this to 700 million U.S. dollars by 2010 and one billion dollars by 2015.

The Vietnam News recently quoted Vietnamese Deputy Trade Minister Tran Duc Minh as saying that this expansion would be driven by improving production, promotion and post-harvest management.

Vietnam will boost its production of 10 kinds of fruits, including orange, grape fruit, pineapple, mango, longan and litchi. It will also intensify trade promotion, especially in its traditional markets of China, Russia and Japan, expand vegetable and fruit cultivation areas, upgrade their trademarks, and encourage factories, traders and exporters to upgrade their technologies and pay more attention to issues of quality and packaging.

Vietnam is planning to produce 550,000 hectares of vegetables, 750,000 hectares of orchards, and 10,000 hectares of flowers by 2010. These are expected to annually turn out 11 million tons of vegetables, 9 million

tons of fruits and 3.5 billion of flower sprigs, according to the country's Ministry of Agriculture and Rural Development.

Vietnam gained 45 million dollars from shipping fruits and vegetables abroad in the first two months of this year, up 28.7 percent from the same period last year.

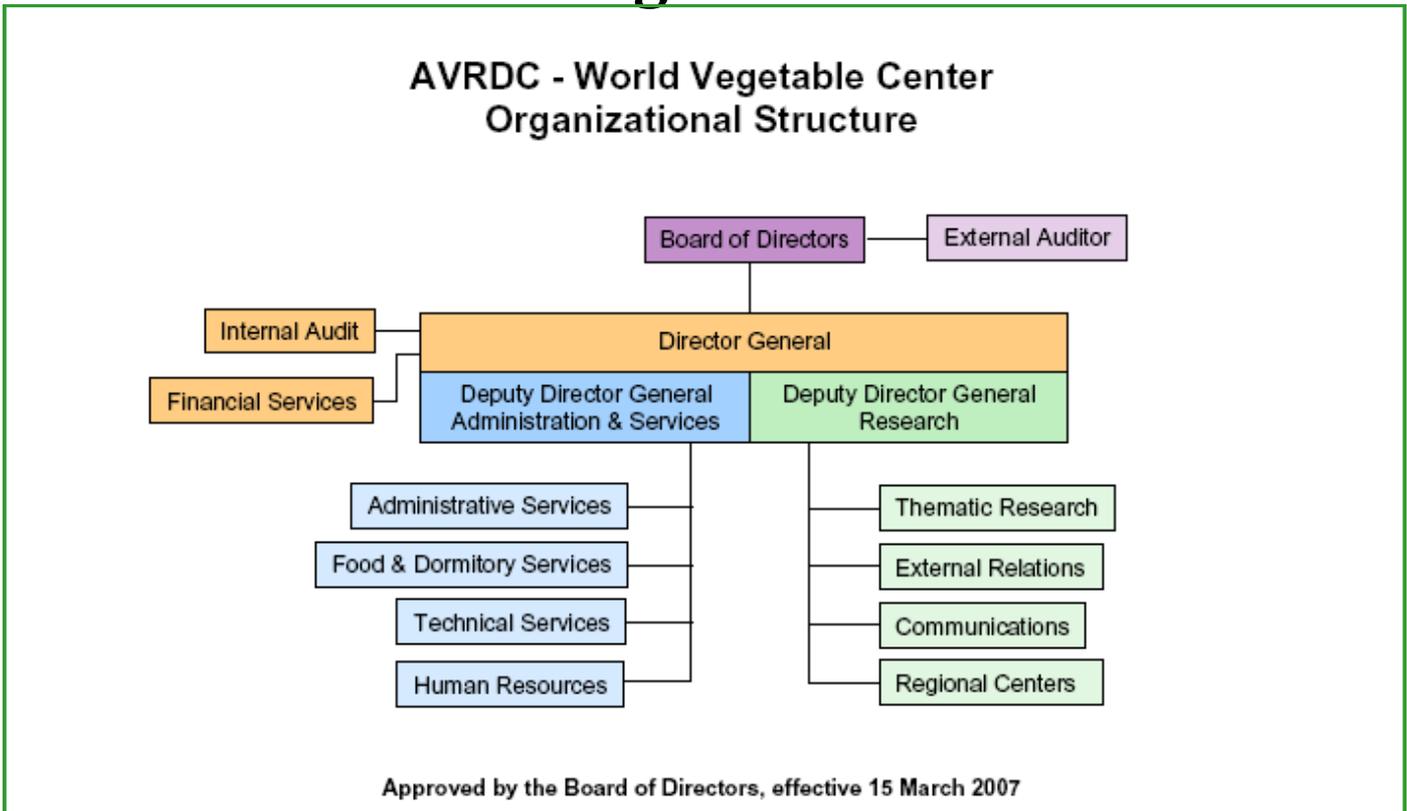
As Vietnam aims to become a much larger regional player in vegetable production, the work of AVRDC will become even more important to it. Our current post-harvest work and past studies on heavy metal contamination in vegetable production will provide useful insights to help the country achieve its ambitious goals.

Modified from a recent article on Xinhuanet

Related AVRDC post-harvest activities

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

The Center's New Organizational Structure



At our recent Board of Directors meeting in Bangkok (13-15 March 2007), the Board strongly supported and approved a new, streamlined structure for our Center.

In the Organizational Structure some of the constraints which have become apparent as our Center has expanded rapidly have been addressed:

The Director General (DG) will be responsible, as previously, to the Board of Directors. Four 'units' will report directly to the DG, in addition to the Global Horticulture Initiative. These are:

- Deputy Director General - Administration and Services
- Deputy Director General – Research
- Financial Services (currently named 'Comptroller's Office')
- Internal Audit

The Deputy Director General - Administration and Services (DDG-A&S) will be responsible for Host Country Liaison for the Center. In addition, the DDG-A&S will have oversight of

- *Administrative Services*
- *Human Resources*

As well as Headquarters support services, specifically

- *Food and Dormitory Services* and
- *Technical Services*

Host Country Liaison is a critical role for the DDG-A&S who works closely with the Chairman of the Board of Directors to facilitate the Center's relationship with our host government.

Human Resources will ensure transparency and equity in personnel issues and streamline, rationalize and facilitate the needs, processes and procedures related to the Center's national and international staff in all of our global locations. Administrative Services and Human Resources will now be better able to respond to the needs of our regional staff and those at Headquarters.

Food and Dormitory Services, as well as Technical Services, play a very important role at Headquarters, supporting the research, visitors, training and conference activities as well as the needs of our regional scientists when visiting headquarters.

The Deputy Director General - Research (DDG-R) will be responsible for the research and global activities of the Center under the Director General. The DDG-R will be responsible for four main areas:

- Thematic research
- External Relations
- Communications
- Regional Centers

Thematic research

The current oversight of the research activities will continue, however this process will become streamlined as the Center implements thematic research. The five themes each have a theme coordinator and a deputy who together have oversight of the research activities within that theme. In time the current Research and Research Support 'units' at headquarters will be integrated into the global research themes. Statistics will continue to report directly to the DDG-R while providing support to researchers and themes.

External Relations

The current ICO will continue to report to the DG until the Director of this office retires in 5 July 2007, after which the previous International Cooperation Office will be re-focused. As *External Relations* it will provide oversight of some of the Center's international activities. In conjunction with the Grant Development Office it will support the DG, DDG-A&S and DDG-R in interactions with partners and collaborators, and support the development of multi-country networks and other activities. The Grant Development Office will continue to report directly to the DDG-R until the new arrangements for External Relations are in place.

Communications

Communications will continue to work closely with the Center's management to ensure the vision of the center is portrayed accurately and that the products and impact of the Center are widely known. Information Technology, Library and Training services report directly to Communications, which ensures these are closely inter-linked with thematic research and the needs of the regional centers.

Regional Centers

The important role of the Regional Directors in coordinating the thematic research in the regions through the Regional Centers and in performing their administrative functions will be strengthened as they coordinate sub-regional office activities and begin to integrate project offices into their regional visions.

The streamlined structure of AVRDC — The World Vegetable Center will assist the leadership of the Center. It will facilitate decision-making through delegation of responsibility and authority. The Center will thus be responsive, vibrant and adaptable, and it will be able to take advantage of opportunities as it strives to meet the growing needs of rural and urban populations in developing countries.

- Source: Dr. Thomas Lumpkin/Director General

Welcome



Ms. Franziska Beran, Graduate Student from Humboldt University Berlin, Germany, arrived at AVRDC on 16 March 2007. Ms. Beran will work on the chemical ecology of striped flea beetle in vegetable brassicas under the supervision of Dr. Srinivasan Ramasamy. She will

work at AVRDC until 27 July 2007. She can be contacted at 420 (office) and 872 (dormitory), <franzi.beran@gmx.de>.

- Source: Rose Chan

New Publications (Articles & Books) Received by the Library

Analia, C., Maria, C.A., Alicia, R.C. (2007). Effect of low temperature storage on physical and physiological characteristics of eggplant fruit (*Solanum melongena* L.). *LWT - FOOD SCIENCE AND TECHNOLOGY*. v.40 (3):389-396.

Kahlon, T.S., Chapman, M.H., Smith, G.E. (2007). In vitro binding of bile acids by okra, beets, asparagus, eggplant, turnips, green beans, carrots, and cauliflower. *FOOD CHEMISTRY*. v.103(2):676-680.

Ando, S., Tsushima, S., Tagiri, A., Kamachi, S., Konagaya, K.I., Hagio, T., Tabei, Y. (2006). Increase in BrAO1 gene expression and aldehyde oxidase activity during clubroot development in Chinese cabbage (*Brassica rapa* L.). *MOLECULAR PLANT PATHOLOGY*. v.7(4):223-234.

Chellemi, D.O. (2006). Effect of urban plant debris and soil management practices on plant parasitic nematodes, Phytophthora blight and Pythium root rot of bell pepper. *CROP PROTECTION*. v.25(10):1109-1116.

Cui, X., Harling, R. (2006). Evaluation of bacterial antagonists for biological control of broccoli head rot caused by *Pseudomonas fluorescens*. *PHYTOPATHOLOGY*. v.96(4):408-416.

Shoresh, M., Gal-On, A., Leibman, D., Chet, I. (2006). Characterization of a mitogen-activated protein kinase gene from cucumber required for Trichoderma-conferred plant resistance. *PLANT PHYSIOLOGY*. v.142 (2):1169-1179.

Toor, R.K., Savage, G.P., Heeb, A. (2006). Influence of different types of fertilisers on the major antioxidant components of tomatoes. *JOURNAL OF FOOD COMPOSITION AND ANALYSIS*. v.19(1):20-27.

Hvoslef-Eide, A.K. (2005). Liquid culture systems for in vitro plant propagation. Dordrecht: Springer. xviii, 588 pp.

Murai, T., Loomans, A.J.M. (2001). Evaluation of an improved method for mass-rearing of thrips and a thrips parasitoid. *ENTOMOLOGIA EXPERIMENTALIS ET APPLICATA*. v.101(3):281-289.

Hawthorne, D.J., Shaprio, J.A., Tingey, W.M., Mutschler, M.A. (1992). Trichome-borne and artificially applied acylsugars of wild tomato deter feeding and oviposition of the leafminer *Liriomyza trifolii*. *ENTOMOLOGIA EXPERIMENTALIS ET APPLICATA*. v.65(1):65-73.

New Popular Magazines Now Available in the Library

The Economist: Europe's mid-life crisis – 17th – 23rd March 2007

National Geographic: Saving the sea's bounty – April 2007

PC World: Windows tips for everyone – April 2007

Time: A vision for Hong Kong – 26th March 2007



Recommended Web Link of the Week: WAICENT Portal

WAICENT Portal – is part of FAO's commitment to improve access to timely and relevant technical information on agriculture and food security. It also incorporates the WAICENT Information Finder.

Please visit <http://www.fao.org/waicent/>

The Tasty Side of Weed Control: Vinegar Application in Organic Vegetable Soybean Cultivation

To the skeptical, the longevity of old household remedies is more due to imagination and habit than a sound scientific basis. But preliminary research at AVRDC is showing that at least one traditional practice may be effective and that vinegar is not only a tasty addition to one's salad but may also be a valuable tool for weed control under specific conditions.

This observation is one of the outcomes of the Center's project 'Integration of production technologies for the cultivation of organic vegetable soybeans', that includes inputs from Entomology, Legumes, Mycology, Nutrition, and Crop and Ecosystem Management Units. Under the project manager Dr. Chin-hua Ma, Research Assistant Ms. Hsing-hua Tsai and Dr. Peter Juroszek from the Organic Vegetable Program conducted research in weed management in Autumn 2006 with help from Field Assistant Mr. Li-hui Chen.



Effect of vinegar at 28 days after sowing and two vinegar applications. Broadleaf weeds such as *Amaranthus* species (*A. spinosus* and *A. viridis*) have been almost eliminated.

The main objective of this study was to evaluate the efficacy of vinegar to control weeds when used as a directed spray. Commercially available vinegar with 6 % acetic acid concentration was used. The vinegar was applied twice—15 and 22 days after sowing— in the mornings using a hand-sprayer.

The tests showed that vinegar was effective in reducing the ground cover of broadleaf weeds by up to 70%. Grasses were less responsive to the vinegar application, and *Cyperus* species were not susceptible at all.

Nevertheless, the total weed fresh biomass was reduced by 95% in the vinegar treatment compared to the untreated control and the graded pod yield of organic soybeans was increased by almost 13%. The sprays were targeted to avoid damaging the crop canopy and there was no apparent effect on crop growth and yield compared to the treatment where hand weeding was performed.



Untreated control plot (without any weed management) at 27 days after sowing. Broadleaf weeds such as *Amaranthus* species are abundant and vigorous.

Further field trials will be necessary to improve the efficacy of vinegar for weed control in organic farming. During vinegar spraying care must be taken that the vinegar doesn't come in contact with the crop canopy because like the broadleaf weeds it can be severely injured by vinegar.

In February 2007 a follow up trial was sown in the AVRDC organic fields. The long-term goal is to deliver an improved vinegar application technology to farmers in tropical and sub-tropical countries to manage economically important broadleaf weed species.

So in the not-too-distant future growing the ingredients for one's salad may start with vinegar – and will certainly end with it on the salad plate.

- Source: Dr. Peter Juroszek/Crop and Ecosystem Management Unit

Travel

Dr. Thomas A. Lumpkin, 23-25 March, to India to attend CIMBAA project meetings in New Delhi; 26-30 March, to ICRISAT Hyderabad for the Seventh Meeting of the CGIAR Science Council; 27 March, to visit Tata Foundation in Mumbai; 1-3 April and 10-13 April, to visit AVRDC-RCA and to interview the Gates Project Manager position candidates; 5-8 April, to Accra, Ghana to attend the GHI Executive Committee Meeting and to interview the GHI Executive Secretary position candidates; 14-17 April, to California, USA to visit Seminis Woodland Research Station; 18-25 April, some leave in Seattle.

Ms. Fang-I Ho, 31 March-31 May, to Toulouse, France, to conduct microarray experiments for the collaborative project on "Screening and studies on aggressiveness and host specificity related factors and genes in *Ralstonia solanacearum*" at Dr. C. Boucher's lab.

- Source: Yvonne Ting/ASU

Dr. Peter A.C. Ooi and Ms. Doreen Canillas, 27-29 March, to Phnom Penh, Cambodia, to monitor and discuss the final activities of the AVRDC/SDC HRDP IV in Cambodia and to meet the Cambodian RTC alumni.

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

Vietnamese Cultural Day

Time: 1600- 2145 hours, Friday, 23 March 2007

Venue: Feng Huang Shu Theater, Kuang-Fu Campus, National Cheng Kung University, Tainan, Taiwan

活動日期: 3月23日(星期五)下午4點至晚間9點45分

地點: 成大光復校區鳳凰樹劇場



Mosquito Control on Saturday, 31 March

The mosquito insecticide spraying within the Center's campus will be done next Saturday, 31 March. The contractor will begin spraying at 0900 hours starting from the residential area and completing the whole campus around 1600 hours.

3月31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

Relocation of the AVRDC Post Office

Due to the forthcoming renovation of Chandler Hall, the AVRDC Post Office will be temporarily relocated. Starting from 26 March 2007 (next Monday), it will move to the to the Shanhua Post Office, situated at No. 332, Chungcheng Road, Shanhua.

本中心行政大樓即將開始整修工程, 亞蔬郵局自3月26日(星期一)起, 暫時遷移至善化郵局(善化鎮中正路332號)營業, 造成不便, 敬請見諒。

- Source: Dr. Yin-Fu Chang/DDG-A&S

News from Recreational and Social Committee

Fun Games in March

This coming Wednesday 28 March 2007, the R&S Committee is inviting everyone to participate in a fun-filled event during the recreation time (1500-1630 hours) at the soccer field. Dubbed “Fun Games in March”, we have lined up five fun games that all of you will really enjoy— so select your favourites below:

1. Water balloon volleyball

A pair of contestants is provided with a water balloon and a towel. One team begins by placing the water balloon in the middle of their towel. The object is to toss the water balloon over the net with the opposing side catching the balloon in their towel. A team gets a point when its opponent drops the water balloon or breaks it.

2. Slow cycling

A player rides a bike to a certain distance as slow as possible without touching the ground with his/her foot. The team with the longest time wins the game.

3. Dressing-up relay

A player will put on a skirt and a shirt before running to the end of a distance. The player will then take off the clothes, give them to another player in the team before he/she runs to the other end. The first team to complete the task wins.

4. Chopstick competence race

Standing in a line of 10 people, each player will hold a chopstick in his/her mouth. A rubber band will be transferred from one chopstick to another by players in a team. When a player drops the rubber band, it needs to be moved back to the previous player, before the

team resumes the transfer process. The team with the fastest time to transfer the rubber band to the end of the line wins.

5. Sack race

A race with the runners holding sacks around their legs. The team that finishes first wins the game.

Everyone is welcome to join. Please inform the respective coordinators assigned to your Unit to register.

3月28日(星期三)下午3點的運動時間,康委會將舉辦一場全中心同仁及眷屬都可參加的趣味競賽,遊戲比賽分四組五個項目進行,請大家踴躍報名參加。競賽規則如下:

1. 水球排球賽:兩人一組,以水球當作排球,持毛巾接球/擲球,採落地或球破得分,一組四人,先得5分者為優勝隊伍。
2. 腳踏車競慢:一組四人,騎腳踏車競慢,腳不可落地,最後抵達終點為優勝隊伍。
3. 換裝接力賽跑:4人一組,參賽者在指定地點穿上一件T恤及襯衫,跑向終點,脫下T恤及襯衫交給隊友換穿接力賽跑,以此類推,最快抵達終點隊伍為優勝。
4. 筷子傳橡皮筋:一組10人,站在定點用嘴含筷子傳橡皮筋,如果橡皮筋掉地則由前一位參賽者重傳,最短時間傳回橡皮筋的隊伍為優勝。
5. 套麻袋賽跑:一組四人,套麻袋賽跑,最快回到終點的隊伍為優勝。

Group 1: Offices of the DG, Comptroller, Computer Service, FDS, Biotech, Nutrition, Socio-economics (Coordinator: Christian Genova)

Group 2: Offices of DDGAS, ICO, Library, Bacteriology, CEM, Entomology, Pepper (Coordinator: Mandy Lin)

Group 3: Offices of DDGR, Administration Unit, Allium, Crucifer, TSO, Mycology, Cucurbit (Coordinator: Janice Chou)

Group 4: Grant Development, CTO, Molecular Marker, Legume, GRSU, Tomato, Virology, GHI (Coordinator: Arika Ho)

第一組:主任辦公室、財務會計室、電腦室、餐宿組、生物科技組、營養組、社會經濟組(負責協調人:希天敏)。

第二組:行政副主任辦公室、國際合作室、圖書室、植物細菌組、作物及生態系統管理組、昆蟲組、番椒組(負責協調人:林麗珠)。

第三組:研究副主任辦公室、行政室、球莖蔥組、十字花科組、技術服務室、植物真菌組、瓜類組(負責協調人:周存榮)。

第四組:募款策劃室、新聞及訓練室、分子標誌實驗室、豆科組、種原組、番茄組、植物病毒組、全球園藝倡議秘書處(負責協調人:何貞慧)。

Happenings in Taipei and Kaohsiung

Saturday Night Fever 全本音樂劇－週末夜狂熱

The classic 1970s Broadway musical show hits the stage in Taipei. The show produced a number of disco hits by the Bee Gees.

- 22-27 March, 7:30 pm, and 24-25 March, 2:30 pm
- Taipei International Convention Center
- Ticket prices NT800 - NT4,800
- Details on <http://www.ticket.com.tw>

最HIT的搖滾音樂劇，融合比吉斯兄弟經典情歌舞曲，帶來70年代百老匯的迪斯可熱潮。

- 時間：3月22-27每晚7:30以及3月24-25下午2:30
- 地點：台北國際會議中心
- 票價：NT\$800-4,800

Treasures of the World's Cultures 世界文明瑰寶－大英博物館250年收藏展

Hundreds of artifacts on loan from the British Museum go on display in this comprehensive overview of human history. It includes the famous "Unlucky Mummy" Wooden mummy-board, numerous works from Renaissance Europe and a selection of Islamic paintings.

- The National Palace Museum
- Ticket NT250 adults and NT200 students/children.
- more info on www.npm.gov.tw

來自大英博物館271件作品，從舊時器時期迄於二十世紀，可啟發我們對人類文明的新體認。展品有古埃及文化的「不幸的木乃伊」蓋板、文藝復興時代與近世歐洲之作品、伊斯蘭世界等等。

- 地點：國立故宮博物院
- 門票：全票NT\$250，學生/孩童票NT\$200
- 詳情請上網查詢www.npm.gov.tw

The 18th Concert of Kaohsiung City Chinese Orchestra 高雄市國樂團18週年團慶音樂會-高港風雲

- Sunday, 25 March, 19:30 hours
- Kaohsiung City Cultural Center, Chih-The Hall
- Ticket: NT\$300、500、800

- 時間：3月25日（星期日）晚間7點30分
- 地點：高雄市立文化中心至德堂
- 門票：300、500、800元

The Charm of Belly Dance 獨領風騷-2007肚皮舞孃

Professional belly dancers will perform their renditions based on Egyptian, Mexican, ballet and jazz moves.

- Wednesday, 28 March, 19:30 hours
- Kaohsiung City Cultural Center, Chih-The Hall
- Ticket: NT\$800, 1200, 1600, 2000

本次邀請的是集合世界級的專業肚皮舞者及手鼓演奏大師一行二十人；她們擅長在不同領域作肚皮舞的變化與詮釋，從埃及、墨西哥、拉丁、古典芭蕾到爵士等等。

- 時間：3月28日（星期三）晚間7點30分
- 地點：高雄市立文化中心至德堂
- 門票：800, 1200, 1600, 2000

Organic Sweet Potato for Sale

The Center's organic sweet potato is being harvesting now. The price is NT\$300 for one package (30kg). Interested people may register with Ms. Mary Chen, Farm Office (ext.505).

亞蔬的有機蕃薯開始採收，一袋30公斤300元，有意購買的同仁請向農場陳美蓉小姐登記〈分機505〉。

- Source: Janice Chou/TSO