AVRDC
The World Vegetable Center
Newsletter
Published by Communications
31 August 2007

A Policy Swing to Make Pests Falter

India is getting ready to set new standards when it comes to the question of who is leading the next Green Revolution. The country's Genetic Engineering Approval Committee (GEAC) has recently approved large-scale field trials of genetically modified food crops with certain restrictions. Four hybrid varieties of Bt Brinjal, (eggplant) expected to bring better yields with less use of pesticides, will be tested across several locations in the country until April 2008. The large-scale field trials will be the first ones ever allowed for GM food crops in India, as Indian government officials recently disclosed.

The trials will tackle issues of socio-economic impacts and evaluate the taste and nutritional value of Bt eggplants. Another essential component will be bio-safety studies. The new trials are will be conducted on farms managed by the Indian Council for Agricultural Research and will be supervised by the Indian Institute of Vegetable Research (IIVR). Furthermore, the trials will have a minimum isolation distance of 300 meters to prevent any contamination from transgenic crops. The Bt brinjal development is significant because its success would open doors for large-scale tests on genetically modified tomato and okra, the other two food crops for which the ministry has allowed bio-safety studies two weeks ago.

The swing in policy indirectly benefits the work of CIMBAA, the project on Collaboration on Insect Management for Brassicas in Asia and Africa. CIMBAA's strategy is to develop and assess transgenic cabbage and cauliflower that produce two different insecticidal proteins derived from *Bacillus thuringiensis* (Bt) and thus combat the Diamondback moth, that causes losses of 30 to 80% of cauliflower and cabbage production annually. "In order for us to thoroughly evaluate the potential of Bt cabbage and cauliflower a functioning regulatory system is required. These field trial approvals pave the way for the comprehensive testing of our CIMBAA cauliflower and cabbage events", says Dr Kathryn Hamilton, one of the Center's contact persons for the public/private sector project. "We hope to be able to select our lead cabbage and cauliflower events in 2008 after applying for and conducting our own GEAC approved field trials".

Further reading: http://www.cimbaa.org

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New Publications (Articles & Books) Received by the Library

Bonnet, J., Danan, S., Boudet, C., Barchi, L., Sage-Palloix, A.M., Caromel, B., Palloix, A., Lefebvre, V. (2007). Are the polygenic architectures of resistance to *Phytophthora capsici* and *P. parasitica* independent in pepper? THEORETICAL AND APPLIED GENETICS. v.115(2):253-264.

Kim, S., Yoo, K.S., Pike, L.M. (2007). Production of doubled haploid onions (*Allium cepa*) and evaluation of their field performance. HORTICULTURE, ENVIRONMENT, AND BIOTECHNOLOGY. v.48 (3):143-147.

Kim, Y.H., Hwang, B.H., Kim, J.K. (2007). Changes in soluble and transported sugars content and activity of their hydrolytic enzymes in muskmelon (*Cucumis melo* L.) fruit during development and senescence. KOREAN JOURNAL OF HORTICULTURAL SCIENCE & TECHNOLOGY. v.25(2):89-96.

Makeen, K., Abrahim, G., Jan, A., Singh, A.K. (2007). Genetic variability and correlations studies on yield and its components in mungbean (*Vigna radiata* (L.) Wilezek). JOURNAL OF AGRONOMY. v.6(1):216-218.

Walters, D., Newton, A., Lyon, G.. (2007). Induced resistance for plant defense: a sustainable approach to crop protection. Oxford, OX: Blackwell Publishing. 272 pp.

Zhu, Y.G., Lepp, N., Naidu, R. (2007). Biogeochemistry of trace elements: environmental protection, remediation and human health. Beijing: Tsinghua University Press. 1036 pp.

Li, C.J., Zhang, F.S., Dobermann, A., Hinsinger, P., Lambers, H., Li, X.L., Marschner, P., Maene, L., McGrath, S., Oenema, O., Peng, S.B., Rengel, Z., Shen, Q.R., Welch, R., von Wiren, N., Yan, X.L., Zhu, Y.G.. (2005). Plant nutrition for food security, human health and environmental protection; Fifteenth International Plant Nutrition Colloquium. Beijing: Tsinghua University Press. li, 1207 pp..

Schulze, H., Scherbaum, E., Anastassiades, M., Vorlova, S., Schmid, R.D., Bachmann, T.T. (2002). Development, validation, and application of an acetylcholinesterase-biosensor test for the direct detection of insecticide residues in infant food. BIOSENSORS AND BIOELECTRONICS. v.17:1095-1105.

Dolan, C., Humphrey, J. (2000). Governance and trade in fresh vegetables: the impact of UK supermarkets on the African horticulture industry. JOURNAL OF DEVELOPMENT STUDIES. v.37(2):147-176.

New Popular Magazines Now Available in the Library

The Economist: Putin's people – 25th–31st August 2007

Time: The secret life of Mother Teresa – 3 September 2007

Recommended Web Link of the Week: Bioversity International

"Bioversity International", is the world's largest international research organization dedicated solely to the conservation and use of agricultural biodiversity. As one of the centers supported by the CGIAR the research of Bioversity International aims to foster sustainable development; helping people living in poverty secure dignified and sustainable livelihoods through food and agricultural production, and helping to raise nutrition levels in areas where hunger is widespread. The center is a key partner along with ICRISAT in supporting the proposed CGIAR Challenge programme on High Value Crops initiated by AVRDC.

Please visit:
http://www.bioversityinternational.org/

- Source: Fang-chin Chen/Communications

New Staff—Albert Rouamba, vBSS Project Onion Breeder

Dr. Albert Rouamba has been appointed as Vegetable (Onion) Breeder based in the National Breeding Unit in Bamako, Mali for the Project "Vegetable Breeding and Seed Systems for Poverty Reduction in Africa" (in short: vBSS Project Vegetable (Onion) Breeder), for an initial period of two years, effective 15 September 2007.

Albert received his PhD in vegetable breeding and genetic resources from University of Pierre et Marie Curie, Paris VI, France in 1993. He has more than twenty five years of professional experience in vegetable breeding and seed system research, research management, and technology transfer at the I*nstitut de l'Environment et de Recherches Agricoles (INERA)*. In the last four years, his main activities on vegetable crops research focused on the management of onion; selection and breeding of local onions for increasing quality and quantity and also improving storage; selection and breeding of tomatoes in the rainy season; collection and screening of traditional vegetables; and training farmers on seed production in partnership with NGOs. He holds a unique gene bank of local onions from West Africa. He has working experience in West Africa (Cape Verde, Côte-d'Ivoire, Guinea, Guinea-Bissau, Mali, Mauritania, Niger, and Senegal) and Central Africa (Chad). Albert will report directly to Jan Helsen, vBSS Project Administrative Manager.

Albert's major responsibilities as vBSS Project Vegetable (Onion) Breeder are (1) With the vBSS Project Research Manager and the Project Administrative Manager, prioritize onion varieties and breeding objectives and design efficient breeding strategies; (2) Establish infrastructure, procure equipment and supplies, conduct staff training, and design plant breeding protocols in consultation with the Research Manager and Project Administrative Manager and in accordance with AVRDC's policies and regulations; (3) Develop new onion lines and varieties; (4) Coordinate the Project's onion breeding operations, and support the outreach in Sub-Saharan Africa; (5) Work with the vBSS Project NBU Liaison Officer for Mali in coordinating activities with NARES, regulatory agencies (including variety release, seed health and quarantine) and the private sector in the country to facilitate and accelerate the variety release process of new onion varieties; (6) Mentor and support the vegetable breeders in the project's NBUs; (7) Collaborate closely with staff of the NBUs in Mali, Madagascar, Tanzania, and Cameroon, the project support unit in South Africa, AVRDC staff at the Sub-Regional Office in Mali, the Regional Center for Africa in Tanzania, and AVRDC's headquarters; (8) Work with the vBSS Project NBU Liaison Officer for Mali in establishing the links with vBSS Project's Mali NBU and AVRDC, to the other NBUs and the other stakeholders working directly with the NBU (e.g. advanced breeding institutes, international seed companies); (9) Develop cooperative linkages with contract seed producers in Sub-Saharan Africa; (10) Assist the vBSS Project NBU Liaison Officer for Mali in demand creation activities, which will be conducted mainly through the relevant NARES agencies and in partnership with NGOs and the private seed sector; (11) Ensure timely production of necessary documentation of the vBSS Project related activities; and (12) Any other duties required by the vBSS Project Administrative Manager or the Director of AVRDC's Regional Center for Africa.

We wish Albert every success in his appointment with AVRDC.

- Source: Lilia Tan Habacon, Human Resources Manager

Highlights of Monthly Meeting of A-team AVRDC-ARC , Thailand, 27 August 2007

At its monthly meeting at ARC office in Bangkhen, Bangkok, the staff discussed arrangements for the visit of the EPMR in early November and it was clear that all necessary preparations have already been made. Moreover, arrangements for the 26th Regional Training Course are underway and the brochure has been finalized and printed. On the other hand, while facilitating the arrival of the first installment from IFAD, the RD reported positive developments on the final arrangements being made with the national partners during his visit to Vietnam.

The meeting also discussed at length a new layout for the website which would soon include Thai language sections and to highlight the upcoming 26th Regional Training Course on the main page.

- Source: AVRDC-ARC

Merger of Biotechnology and Molecular Marker Laboratory

With Dr. George Kuo's departure, Dr Jackie Hughes will become the interim Head of the International Cooperation Office (ICO) until the Management has been able to consider the future role of the International Cooperation Office.

In addition, effective immediately, the Molecular Marker Laboratory will be merged with Biotechnology as: **Biotechnology/ Molecular Breeding**. This will facilitate consolidation of activities, eliminate redundancies, and permit efficient use of resources. The plant physiology activities, particularly on abiotic stresses, will continue to be coordinated by Biotechnology/ Molecular Breeding.

For your guidance and information.

- Source: Dr. Jackie Hughes/Deputy Director General for Research

Successful Small Projects to Build A Career on

Undergraduate students are the largest group of trainees undertaking research work at headquarters. Over the last seven years 235 have completed short-term thesis research projects with our scientists, and this week nine students presented seminars on the outcomes of their work. Three completed projects on plant breeding (peppers, mungbean and cucurbits), two on maintaining our germplasm collection (mungbean, peppers, soybean and Chinese cabbage), two on disease management (phytophthora and bacterial blight) and one on the nutrition of African dishes. The experience is mutually beneficial as the Center is able to get small, but important projects done and the students gain valuable work experience which can help determine the future direction of their careers.

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Travel

Dr. Gregory C. Luther, 5-13 September, to India, to monitor progress with IPM CRSP—South Asia project filed trials in the Coimbatore, Bangalore and Delhi areas, conducted in Collaboration with TNAU and TERI.

Dr. Robert de la Pena, 9-20 September, to Korea, to attend the 4 th Solanaceae Genome Workshop 2007 and present a poster; to attend the first International Symposium on Chili Anthracnose and serve as a member of the scientific committee.

- Source: Yvonne Ting/ASU

Mrs. Chanida Somta, Research Assistant and **Mr. Worawit Sorajjapinun**, Vegetable Breeder from AVRDC-ARC, will visit the HQ from 2 to 8 September to discuss collaborative work on entomology and plant breeding.

- Source: Ms. Khanyakorn Eiumnoh/AVRDC-ARC

Wealth of Our Research Work Promoted in Commonwealth Magazine

AVRDC – The World Vegetable Center is featured in a double-page spread in the latest issue of Common Wealth, Taiwan's leading economic magazine. In that issue, various authors portrait important places and influential institutions on Taiwan.

"AVRDC – The World Vegetable Center is the only international center focusing on vegetables. It has set up its headquarters in Shanhua, Taiwan, and ever since its founding in 1971 it has been expanding its vegetable research globally. The Center has collected more than 56,000 accessions of vegetable germplasm which it shares with researchers from all over the world.

Mr. Tomato - Jen-tzu Chen, is like a nanny to his tomatoes. Mr. Chen showed us his fields of Hua-lien ASVEG #21 with which he has worked for more than 12 years. This tomato variety contains five times the Beta-carotene of standard tomatoes. One of these tomatoes provides a person's full daily requirement of vitamin A. This variety is also disease-resistant (tomato leaf curl virus, tomato mosaic virus, fusarium race 1 and 2, and bacterial wilt), moderately heat-tolerant and has a long shelf life. The new variety has been released to Taiwan farmers since early 2007.

In another field, this time of various varieties of sweet pepper. Miss Sweet Pepper, Jin Shieh, takes care of the peppers. The Center's scientists from all over the world work on these and other important crops from the small town of Shanhua in southern Taiwan. The Center's mission is to help the world's poor and to fight poverty through improving vegetable production and consumption."

(Brief translation from Common Wealth Magazine by Kathy Chen, Communications)

Text: Nicole Meng-chu Chen (Common Wealth), Photos: Cheng-chang Kuo (freelance)

Lots of Fun! Indoor Games Party on Wednesday Afternoon

As a part of its monthly programme of activities the Center's Recreation and Social Committee organized an indoor games afternoon in the headquarters cafeteria. Scientists, lab staff and many of the campus children joined in a couple of hours having fun playing board games and enjoying some snacks together. If you unfortunately missed out please stay tuned for the next social event. Weather permitting the next games will be outdoors.

上週三下午的康委會活動，我們舉辦了室內的遊戲，同仁們、眷屬和孩子們又吃又玩得非常愉快！如果你錯過了這回，敬請期待下次的活動，天候狀況良好的話康委會將會籌辦戶外的活動！

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