



FSBR Eggplant Now in Confined Trial

On December 21, 2007 the Fruit and Shoot Borer Resistant (FSBR) eggplants were advanced to confined trial in Los Baños, Laguna. Dr. Desiree M. Hautea, Regional Coordinator for ABSPII Southeast Asia and Lead Principal Investigator, and Dr. Josefina O. Narciso, Project Leader, FSBR Eggplant project, led the planting of the Bt eggplants. They were assisted by project personnel.

A total of 19 Bt positive eggplant line selections together with their Bt negative eggplant counterparts were transplanted into a 2,700 sq.m. field. The eggplant seedlings were transplanted with strict compliance to guidelines set by the government biosafety and regulatory bodies regarding handling and transport from Biological Level 2 (BL2) greenhouse to the confined trial, as well as transplanting procedures.

The confined trial of the Bt eggplants was approved by the National Committee on Biosafety of the Philippines (NCBP) in its December 8, 2007 meeting. The decision was reached by the Committee after a thorough evaluation of the proposal submitted by the project proponents.

The NCBP's approval letter dated December 17, 2007 includes recommended confinement measures necessary to properly manage the trial site in compliance with procedures and conditions set by regulatory agencies, including the Bureau of Plant Industry-Plant Quarantine Service (BPI-PQS) and the University of the Philippines Los Baños Institutional Biosafety Committee (UPLB-IBC).

The planting of the Bt eggplant was made in the presence of Dr. Adelina A. Barrion, UPLB-IBC Chair and Ms. Lorelie Agbagala



Project personnel plant FSBR eggplants in the confined trial site. (Photo by VM Cruz)

and Ms. Geronima Eusebio, BPI-PQS representatives.

The FSBR Eggplant project is a collaborative activity among Maharashtra Hybrid Seeds Co. Ltd. (Mahyco), a private Indian seed company, UP Los Baños, Cornell University, ISAAA, and other consortium partners of ABSPII. Mahyco's Bt eggplant inbred line with Bt *cryIAC* resistance gene was used as donor parent to improve four Philippine varieties - Mistisa, Mara, Dumaguete Long

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ABSPII SEA Joins National Biotechnology Week



A student views the ABSPII exhibit at BIOTECH, UPLB. (Photo by VRG Lee)

The Agricultural Biotechnology Support Project II (ABSPII) Southeast Asia joined in the celebration of the National Biotechnology Week which was held in various science and research agencies in the Philippines on November 26-30, 2007. The project participated in the exhibit held at the National Institute of Molecular Biology and Biotechnology (BIOTECH), University of the Philippines Los Baños. The project displayed banners describing ABSPII and its supported projects on PRSV resistant papaya and FSBR eggplant and distributed copies of the ABSPII Southeast Asia newsletter.

UPLB Chancellor Dr. Luis Rey I. Velasco opened the exhibit and the house tour together with BIOTECH Director Dr. Ida Dalmacio, and Ms. Alicia Ilaga, Director, Department of Agriculture Biotechnology Program Office (DA-BPO) on November 27, 2007. Guests comprising of high school and college students from UPLB and nearby State Universities and Colleges (SUCs), researchers and media personnel viewed the exhibit.

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ABSPII Management Visit PRSV Papaya and FSBR Eggplant Projects

Officers of the Agricultural Biotechnology Support Project II (ABSPII) based in Cornell University visited the University of the Philippines Institute of Plant Breeding- (UPLB-IPB) implemented Papaya Ringspot Virus-Resistant (PRSV-R) papaya and Fruit and Shoot Borer-Resistant (FSBR) eggplant projects in two different occasions.

Dr. Frank Shotkoski, Director of ABSPII visited the projects on October 25, 2007. He visited the area for the confined trial and inspected the set up of experiments in the BL2 greenhouses and laboratory. He also made a courtesy call to IPB Director Dr. Jose E. Hernandez.

Dr. Shotkoski met with Dr. Pablito M. Magdalita and Dr. Josefina O. Narciso, project leaders of PRSV papaya and FSBR eggplant, respectively who presented their projects' status and accomplishments. Dr. Hayde F. Galvez gave an account on the recently terminated ABSPII-funded MVR tomato project.

Dr. Shotkoski was pleased with the accomplishments of the projects and said that he will ensure that the hard work of the project personnel will be conveyed to the ABSPII Advisory Board who will meet in Uganda this month for the annual board meeting.

Aside from the project and study leaders and research associates, also present during the discussion with Dr. Shotkoski were Drs. Desiree M. Hautea, ABSPII Regional Coordinator for Southeast Asia, Edwin P. Alcantara, Consultant for FSBR Eggplant on Entomology and Candida B. Adalla, Dean of the College of Agriculture (CA) and Consultant of the FSBR Eggplant on insect mating behavior.

On November 8, 2007, Dr. Ronnie Coffman, Director of the International Programs of the College of Agriculture and Life Science (CALs), Cornell University and Co-Director, ABSPII also visited both projects. He went to the project sites and met the project teams at the IPB Conference Room.

Like Dr. Shotkoski, Dr. Coffman was pleased with the way ABSPII projects are going and congratulated the staff for a job well done. Both scientists were looking forward to having the PRSV



Dr. Frank Shotkoski (second from left) with project staff and BPI-PQS representative inside the BL2 Greenhouse. (Photo by ZB Juliano)



Dr. Ronnie Coffman (leftmost) with project staff and BPI-PQS representatives inside the fenced area of papaya trial site 1. (Photo by ZB Juliano)

resistant papaya and FSBR eggplant at confined trials before the year ends.

Before leaving the Institute, Dr. Hautea thanked both Drs. Shotkoski and Coffman for the continued support of the ABSPII and Cornell University to the projects. Both scientists were instrumental in providing additional financial assistance to the projects when super typhoon 'Milenyo' damaged the Institute on September 28, 2006 and when the 2nd floor of Module A, which housed the offices of Drs. Magdalita and Narciso, was razed by fire on August 8, 2007. (VRG Lee)

FSBR Eggplant Now in...

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Dr. Desiree Hautea at the confined trial site that meets NCBP recommended confinement measure. (Photo by ZB Juliano)

Purple (DLP) and Casino. The project aims to help Filipino eggplant farmers by minimizing losses from FSB, thereby, contributing to their enhanced livelihood.

After the confined trial, the project will seek permission from DA-AO8 to establish the multi-location trial. The Bt eggplants are expected to be released commercially towards the end of 2009.

The FSBR eggplant project is funded by ABSPII with several partners such as the Economic Modernization through Efficient Reforms and Governance Enhancement (EMERGE), the United States Agency for International Development (USAID), the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA), the International Service for the Acquisition of Agri-biotech Applications (ISAAA), and the Program for Biosafety Systems (PBS). (VRG Lee and JO Narciso)

FSBR Eggplant Project Leader Reports in ASFARNET

Dr. Josefina O. Narciso, Project Leader of the Fruit and Shoot Borer Resistant (FSBR) eggplant served as resource speaker during the Seminar on Developments in Philippine Biofuels and Biotechnology in Crops last December 7, 2007 at the Pearlmont Inn, Cagayan de Oro City.

The one-day seminar was organized by the Asian Farmers Regional Network (ASFARNET)-Philippines, the Department of Agriculture-Regional Field Unit (DA-RFU 10) in cooperation with SEARCA Biotechnology Information Center (BIC). Dr. Narciso shared with the 28 participants, comprising of farmers' groups, private sector/industry stakeholders, local government units, government agencies and international development agency, her presentation entitled "Eggplant and FSB: Relevant Facts for GM Development and Updates". As the leading vegetable crop in the Philippines, Dr. Narciso discussed that eggplants are planted in more than 20,000 hectares, with volume of production estimated at 191,000 metric tons in 2006. She pointed out that eggplant is good for the body because it is high in fiber and has high anthocyanin which helps reduce cancer and prevent urinary tract infection. It also contains phytonutrients acting as anti-oxidants.

Many farmers in Pangasinan, Nueva Ecija, Cebu, Iloilo, Agusan de Sur and Davao rely on eggplant as their source of income. Thus, when fruit and shoot borer (FSB) attack the crop, farmers are forced to spray insecticides up to 72 times in one cropping season to prevent losses that could be as high as 50%.

Dr. Narciso reported that the University of the Philippines Los Baños Institute of Plant Breeding (UPLB-IPB)-implemented project on FSBR eggplant aiming to develop new varieties that would prevent such losses and help increase the income of many Filipino farmers. The Bt eggplant is a collaborative effort among the Maharashtra Hybrid Seeds Co. Ltd. (Mahyco) based in India, UPLB-IPB and other ABSPII consortium partners. Mahyco's Bt eggplant inbred line Bt *cryIAC* gene was used as donor parent line to improve several Philippine eggplant varieties. Among these local varieties are Mistisa, Dumaguete Long Purple (DLP), Casino and Mara.

The development of Bt eggplant in the Philippines started in 2004 when the first backcrossed generation (BC_1F_1) of

Philippine Bt eggplant line was produced in India. The BC_1F_1 was produced by Dr. Narciso and Dr. Lourdes D. Taylo, FSBR Eggplant Study Leader. The second backcross generation (BC_2F_1) was produced in IPB and showed high resistance to FSB. Bioefficacy tests of the backcrossed varieties revealed 98% mortality of FSB on the first day of leaf feeding and 100% mortality on the second day. Dr. Narciso revealed that presence of Bt gene in backcrossed generation can easily be detected using a genestrip test.



Dr. Josefina O. Narciso, Project Leader of FSBR Eggplant, receives a certificate of appreciation and token from the seminar organizers. (Photo by RB Lapitan)

Dr. Narciso is hopeful that the multi-location trial of the Bt eggplant will be conducted in the last quarter of 2008. The project is funded by the Agricultural Biotechnology Support Project II (ABSPII), with support from Economic Modernization through Efficient Reforms and Governance Enhancement (EMERGE), the United States Agency for International Development (USAID), the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA), the International Service for the Acquisition of Agri-biotech Applications (ISAAA), and the Program for Biosafety Systems

ABSPII SEA Joins...

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The highlight of the celebration in UPLB was the lecture forum on Communicating Biotechnology held at the Operations Room, Administration Building. Dr. Mariechel J. Navarro, Manager, Knowledge Center, International Service for the Acquisition of Agri-biotech Applications (ISAAA) and Ms. Lourdes Molina-Fernandez, Editor-in-chief, Business Mirror served as resource speakers.

The National Biotechnology Week was organized by DA-Biotechnology Project Implementation Unit (DA-Biotech PIU) with the assistance of Biotechnology for Life Media and

Advocacy Resource Center (BMARC). Philippine President Gloria Macapagal-Arroyo declared through Proclamation No. 1414 the last week of November as National Biotechnology Week.

On another occasion, an exhibit about ABSPII and its two projects was also set up at the UP Open University, College, Laguna, on December 13-15, 2007, for the "Integration/Final Activity Session of the 12th Batch of Personal Entrepreneurial Development and New Enterprise Planning of Faculty of Management and Development Studies of the UP Open University. (VRG Lee)

Risk Management and Social Marketing Workshop for Multi-location Trial Collaborators

The third and last of the training workshop series entitled “Training-Workshop on Risk Management and Social Marketing of Public Sector Biotechnology Products” was held on October 3-4, 2007 at Hotel Stotsenberg, Clark Special Economic Zone, Angeles City, Pampanga. The two-day workshop was organized by the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) together with the Agricultural Biotechnology Support Project II (AB-SPII), the United States Agency for International Development (USAID), Philippines, the International Service for the Acquisition of Agri-biotech Applications (ISAAA), the Biotechnology Information Center (BIC) of SEARCA, the Program for Biosafety Systems (PBS), and of the Department of Science and Technology (DOST) Region III.

Forty core participants who were agriculture and information officers Pampanga, Pangasinan, Nueva Ecija, Tarlac and Ilocos; professors and researchers from the academe; R and D managers from government agencies; media and some farmer-leaders, attended the training-workshop.

The workshop aimed to enhance the participants’ understanding of biotechnology and its applications, learn about risk management and biosafety regulations, appreciate biotech crops-virus resistant papaya and Bt eggplant, learn new strategies, tools and skills in communicating biotechnology, and develop strategies for social marketing of public-sector biotech products.

For two days the participants listened to lectures and participated in fora, group discussions, practical exercises on risk communication and social marketing, and games. The first day of the workshop consisted of lecture-presentations on biotechnology concepts and applications, global perspectives on GM crops, biosafety and regulatory aspects of biotech crops, and about the PRSV Resistant Papaya and its economic impacts. On the second day, the participants heard lectures on the FSBR Eggplant project and its socioeconomic study, went through practical exercises on risk communication and social marketing and had the privilege to hear experiences



Participants of the Training-Workshop on Risk Management and Social Marketing of Public Sector Biotechnology Products held at Hotel Stotsenberg, Angeles City, Pampanga. (Photo by PDGuzman)

and insights on risk communication from a farmer-cooperator and farmer entrepreneur.

The participants agreed that there is a need to advocate and promote the responsible use of biotechnology and explain to the public the realistic delivery of the products to the market. They are all hopeful that PRSV Resistant Papaya and FSBR Eggplant will be the next products to the growing list of GM products in the market. (VRG Lee)

ABSPII SOUTHEAST ASIA NEWSLETTER

VOL. III NO. 5

December 2007

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ABSPII is a USAID-funded consortium of public and private sector institutions that supports scientists, regulators, and the general public in developing countries to make informed decisions about agricultural biotechnology. Where demand exists, ABSPII focuses on the safe and effective development and commercialization of bio-engineered crops as a complement to traditional and organic agricultural approaches. The project helps boost food security, economic growth, nutrition, and environmental quality in East and West Africa, Indonesia, India, Bangladesh, and the Philippines.

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