

Multi-loc Collaborators, IBCs & Quarantine Officers Gain Skills in Biotech Comm

With the recent advancement on the fruit and shoot borer-resistant (FSBR)/Bt eggplant project in the Philippines, public acceptance of the technology is one concern that needs to be addressed. Researchers and regulators involved in the product development would likely be involved in various public debates and biotech outreach to educate and inform the general public about the issues and concerns related to the FSBR/Bt eggplant product.

To capacitate those involved in the product development and biosafety assessment, a two-day "Training Workshop on Enhancing Skills in Communicating Issues About Bt/FSBR Eggplant" was held last July 27-28, 2010 at the Splash Mountain Resort in Los Baños, Laguna, Philippines.

Forty seven participants composed of researchers and collaborators of the FSBR/Bt eggplant, Institutional Biosafety Committee (IBC) members, and plant quarantine officers from the seven trial sites— Los Baños, Pangasinan, Camarines Sur, Iloilo, Leyte, Davao and Cotabato— attended this workshop. They were trained on communicating about FSBR/Bt eggplant issues through lectures, experience sharing, study visit to the University of the Philippines Los Baños (UPLB) trial site and application of the lessons learned through exercises. They were also briefed on the status of product development and were provided detailed information on the biosafety and regulatory concerns and compliance. Lectures and exercises on media article rebuttals, letter inquiries and the media interview were also undertaken. Afterwards, a workshop on formulating a communication plan to address different stakeholders' communication needs in each of the seven locations was conducted.

This training-workshop was co-organized by the Agricultural Biotechnology Support Project (ABSP), the International Service for the Acquisition of Agri-biotech Applications (ISAAA) and the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) Biotechnology Information Center. The Department of Agriculture Biotechnology Program Office (DABPO) and the United States Agency for International Development (USAID) also provided support to the activity. (JAPanopio)



Participants write media article rebuttals and responses to letter inquiries.

Stakeholders Visit FSBR/Bt Eggplant Field Trial Site



Farmers, media practitioners, and local government officials from different parts of the country witnessed the harvesting of the fruit and shoot borer resistant (FSBR)/Bt eggplant in its field trial site at Los Baños. The study visits, organized by ISAAA, ABSP and SEARCA BIC, was held last September 11 and 19, 2010.

The participants from Bicol, Pangasinan, Isabela, and Quezon, as well as reporters for national dailies, local newspapers and radio stations were granted access by the Bureau of Plant Industry of the Department of

Agriculture (DA BPI) inside the field trial site. They observed and were briefed about the harvesting and data gathering of the promising transgenic pest resistant eggplant.

Mr. Isidro Acosta, farmer and Regional Agriculture and Fishery Council Chairman of Region 2, said that the insect resistant Bt eggplant would be of great help to farmers as it would cut pesticide costs and labor. Similarly, farmer Renato Maza from Quezon was impressed with the Bt eggplant and said he looked forward to cultivating its seeds once commercialized. Both farmers narrated about the rampant pesticide spraying on eggplant farms in their areas.

Regulators from the BPI were also present during the visits. Ms. Geronima Eusebio, BPI regulator, assured the media, farmers, and academe in the September 19 visit that the DA is implementing strict regulations on the trial site.

During the visits of reporters and local government officials from Bicol last October 29, Dr. Emiliana Bernardo, a member of the UPLB Institutional Biosafety Committee attested to the long history of safe use of the Bt, as well as the strict regulatory process in the Philippines. ABSP Director, Dr. Frank Shotkoski and ABSP SEAsia Regional Coordinator Dr. Desiree Hautea also briefed the visitors about the project. (SMMercado)

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ABSP 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, ABSP 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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Four Areas Planted for 2nd Round of FSBR/Bt Eggplant Multi-loc Trials

The multi-location trials of the fruit and shoot borer-resistant (FSBR)/Bt eggplant picked up its pace as the second season now includes four sites in the Philippines. The original sites at the University of the Philippines Los Baños (UPLB), Central Bicol State University of Agriculture in Camarines Sur, and Sta. Maria, Pangasinan, are now joined by the University of the Philippines Mindanao (UPMin) in Davao City in the implementation of the trials.

The second season started last November 2010, when the materials were transported and transplanted in the four sites. The movement of the FSBR/Bt Eggplants were done under the supervision of representatives of the Bureau of Plant Industry's (BPI) Quarantine Services and the sites' respective Institutional Biosafety Committees (IBC).

The newest addition to the trial sites is UPMin, with Dr. Eufemio T. Rasco, a plant breeder, as trial site project co-leader. The UPMin has a long history of implementing multi-location trials, as it has been involved in several Bt corn trials in the past.

The second season will run for four months, enabling the FSBR/Bt eggplant to complete its plant cycle thereby allowing the researchers to gather enough data and information to assess its performance in the field in different parts of the country, where agro-climatic conditions may vary.

The first season multi-location trials for the three sites in Luzon were all successfully completed in July 2010. Ratooned FSBR/Bt eggplants in UPLB were continuously observed until its termination in September. The first season of the multi-location trials is an avenue for the researchers to assess the performance of the Bt eggplant under various field and agro-climatic conditions. Results of the first season are being analyzed and still to be verified as new data will be gathered from the second season.

The permits to undertake the multi-location trials for each site were granted by BPI after thorough biosafety risk assessment were completed in accordance to the Department of Agriculture Administrative Order No. 8 (DAO 8), series of 2002.

The ongoing field testing and research in several sites are strictly being monitored by the BPI and IBC. All activities in relation to the trial such as transport of materials, transplanting, termination and other biosafety-related activities must be done with the supervision of at least one member from the IBC, and a representative from BPI's Plant Quarantine Services. After the termination, the trial site must remain unused for at least 30 days and will be under observation for any volunteer plants that will arise from the terminated FSBR/Bt eggplants. (ZJ Bugnosen)

Although BPI Assures Biosafety Compliance, FSBR/Bt Eggplant UPMin Trial Pre-terminated

The ongoing multi-location trial at the University of the Philippines Mindanao (UPMin) was prematurely terminated after the Davao City Mayor Sara Z. Duterte issued a cease and desist order. The mayor's order was partly based on inaccurate information provided by City Agriculturist Leonardo R. Avila III, implying non-compliance to all biosafety permit conditions which contradicts the official certification issued by the national regulatory body, the Bureau of Plant Industry (BPI).

Based on the official letter forwarded by the BPI to the City Agriculturist, the UPMin has substantially been complying with all the technical and regulatory conditions listed in its biosafety permit for the field trial. The BPI emphasized that the confined field trial is just a component of a series of studies to ensure that the plant and its products are as safe as conventional counterparts and that they do not pose any significant risks to humans, animals and the environment.

The FSBR/Bt eggplant project implementers carefully followed the guidelines

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Ratoon FSBR/Bt Eggplant Trial Completed in UPLB



The ratooned fruit and shoot borer resistant (FSBR)/Bt eggplant planted in UP Los Baños (UPLB) for open pollinated variety (OPV) trial was completed on September 28, 2010. Ratooning involves cutting the plant about 1 foot above the ground to encourage new shoots to develop and bear fruits once the plants are irrigated and fertilized. Since ratooning is practiced by farmers in eggplant growing areas like Batangas and Mindanao, the Bureau of Plant Industry required that the amount of Cry protein on different plant parts of ratoon eggplants should also be examined.

In addition to Bt protein quantification, data on bioefficacy monitoring of non target arthropods were conducted. Weekly shoot damage assessment started 22 days after ratooning (DAR) and completed at 77DAR. Sampling by direct count of different arthropods that included chewing insects, sucking insects and mites, pollinators, parasitoids, predators were also done weekly from 7DAR to 70DAR.

Ten pickings of market-sized fruits were done every 4 days from 37-73 DAR. As in the regular cropping season, plot fruit yield was determined every harvest period by counting the total number of undamaged and damaged fruits due to eggplant FSB (EFSB) damage. Damage assessment on fruits was made by recording the total number of fruits with holes per plot which is also equivalent to total number of fruits with EFSB feeding tunnel and/or larvae as well as the number and age of larvae. The actual length of feeding tunnel per fruit was also measured.

Similar trends obtained during the regular cropping season at UPLB were observed in ratooned FSBR/Bt eggplant. The five lines of FSBR/Bt eggplant with EE-1 showed high resistance against the EFSB. (LDTaylo)

Although BPI Assures Biosafety Compliance... Front p.1

set by the BPI regarding the parameters of a confined trial, which include among others, a 200 meter isolation distance from the experimental site. The trial was conducted under the strict supervision of the BPI pursuant to the provisions of DAAO No. 8. Similarly, the project also complied with the requirements for supervised transport, planting, replanting, regulated access to experimental area, and prevention of unauthorized release of the regulated plant. The project and its collaborators have also been active in biotech and project outreach, and public information and dissemination.

Although the UPMIn also requested for additional time to explain and provide additional information, the local government order was still carried out, destroying the entire experiment which is officially permitted by the national government. (JAPanopio)

LGUs Get Updates on FSBR/Bt Eggplant Field Trials

The local government units (LGUs) from different multi-location trial sites get updates on the FSBR/Bt eggplant project, particularly on the multi-location trial compliance and assessment. The project presentation and briefing in Sta. Maria, Pangasinan was led by Dr. Desiree M. Hautea, Project Leader and ABSPII SEAsia Regional Coordinator last October 5. In the October 12 briefing with the Pili council members, Dr. Lourdes D. Taylo, study leader of the project reported the development and status of the Bt eggplant project, while Dr. Maria Dulce Mostoles of the Central Bicol State University of Agriculture (CBSUA), discussed the mitigating measures implemented in the trial site, in compliance with the DA Administrative Order 8. Dr. Mostoles also clarified that CBSUA signed a Memorandum of Understanding with UPLB and that their study will contribute to the independent assessment on the safety and efficacy of the FSBR/Bt eggplant.

Similar information were presented in the council briefings in Baybay, Leyte where Dr. Taylo served as one of the resource persons. Dr. Emiliana Bernardo, UPLB IBC member and head of the Insect Resistant Management Advisory Team (IRMAT); and Ms. Thelma Soriano, regulator and head of the Biotech Core Team Secretariat, also provided insights on the biosafety and compliance being undertaken by the project. Both experts ensured the safety of Bt eggplant. Dr. Bernardo, from her experience with Bt corn and monitoring insect resistance to the crop, explained the safety of Bt crops. Ms. Soriano, meanwhile, attested the strict regulatory process of the Philippines and mentioned that the country is considered as a model in successfully implementing its regulatory framework. The Visayas State University is the project's collaborator in the trial that will be conducted in its campus in Baybay.

Davao City Council member, and chair of the Council's Agriculture Committee Councilor Conrado Baluran, and Kabacan Agriculture Committee Chair Councilor Jonathan Tabara, paid a visit to the ongoing field trial in UPLB last November 24. Dr. Hautea together with other members of the project's technical team, as well as some IBC members, also gave the necessary briefing on project's updates and existing biosafety studies being undertaken in the trial site.

The trial site in UP Mindanao was also visited by members of Davao City Council last December 9 while council members from Kabacan, North Cotabato made a similar visit last December 10. The council members were also informed about the strict regulation in the site, and the measures implemented such as the 200-meter isolation and wired fence to prevent entry of unauthorized persons. (JAPanopio and SMMercado)

First Season Combining Ability Study for FSBR/Bt Eggplant Completed

The fruit and shoot-borer resistant (FSBR) eggplant project recently completed the field evaluation of 25 experimental eggplant hybrid lines in UP Los Baños as part of a combining ability study. The trial ran from July 19 to November 15, 2010. It also included the evaluation of parental lines used in making the experimental hybrids, along with check varieties of eggplant.

Two products are expected to come out of the FSBR eggplant project: an open-pollinated variety and a hybrid. Combining ability studies are a standard protocol in hybrid development. The purpose of combining ability studies is to identify promising parents and parental combinations that will give the optimum hybrid. (RRipalda)

ASFARNET Conducts Farmers Conference

Farmers show support for FSBR/Bt Eggplant Field Trials

The Asian Farmers Regional Network (ASFARNET) recently organized the "2nd National Agri-biotech Farmers Conference: Productivity and Sustainability through Agri-biotechnology", last October 4, 2010, at the Reina Mercedes Post Harvest Facility, Reina Mercedes, Isabela. During the conference, the farmers were introduced to biotechnology, current global and Philippine biotech adoption, and ongoing research efforts on agri-biotechnology, which include the fruit and shoot borer resistant (FSBR)/Bt eggplant project.

More than a hundred farmers and agriculture representatives from 15 regions across the country, unanimously endorsed the continuation of the multi-location field trials of the FSBR/Bt eggplant. The farmers believe that this promising technology, being resistant to a major pest of the crop, would be very beneficial to them as they have personally experienced with Bt corn.

Felicito Osorio, a farmer Board Member of PhilMaize and ASFARNET Philippines, said that the multi-location trial of FSBR/Bt eggplant must be pushed as most of the farmers, are already looking forward to the FSBR/Bt eggplant seeds which is expected to raise their productivity, improve their livelihood and reduce their exposure to harmful chemical pesticides. The support for the FSBR/Bt eggplant field trials was just one in the set of resolutions that the farmers have agreed on for the improvement of the country's agricultural status. They also recognized and supported the coexistence of biotech crops, including genetically modified organisms, and organic farming.

Furthermore, the farmers pushed for the continuous information dissemination, education, and communication of biotechnology to farmers and the media, upon learning the advantages of future products of crop biotechnology. Antonio Berlan, a farmer in the Northern Philippines, said that small farmers should be reached and be informed on the science, safety, issues and benefits of this technology. He added that farmers' voice should be heard as they are the users of the technology. (JAPanopio)

News in Photos



ISAAA, University of Southern Mindanao (USM), and UPLB Foundation Inc. (UPLBFI) ink the Memorandum of Undertaking (MOU) last November 8, 2010 at UPLBFI for the multi-location field trials of FSBR/Bt Eggplant project in USM, Kabacan, North Cotabato. Dr. Randy A. Hautea, ISAAA Global Coordinator, Dr. Jesus Antonio G. Derije, USM President and Dr. Cecilio R. Arboleda, UPLBFI Executive Director signed the MOU which was witnessed by Ms. Felicitas H. Almasan, ISAAA Officer-Administrative Coordination and Dr. Desiree M. Hautea, ABSPII-SEAsia Regional Coordinator.



Dr. Kailash C. Bansal, professor and coordinator at the National Research Center on Plant Biotechnology, Indian Agricultural Research Institute, explains the safety and updates on the Bt brinjal in India during the seminar organized by the Southeast Asian Regional Center for Graduate Study and Research in Agriculture - Biotechnology Information Center and Philippine National Academy of Science and Technology last September 27, 2010.



Dr. Desiree M. Hautea, ABSPII SEA Coordinator and UPLB Professor, was named UP Scientist I and given the UP Scientific Productivity Award by UP in an awarding ceremony held in UP Diliman on September 2, 2010. The title UP Scientist is given by the University to deserving faculty members and researchers based on scientific productivity and professional standing in the international science community.



Dr. Sergio Francisco, Chief Science Research Specialist at the Philippine Rice Research Institute, presents the potential economic, environmental, poverty and nutrition impact of FSBR/Bt eggplant during the "Seminar on Biotechnology: Communication and Technology Impact" last November 23, 2010 at the SM Mall of Asia during the 6th National Biotechnology Week.