



Philrootcrops Director, Dr. Julieta R. Roa and NARC Director Dr. Ruben m. Gapasin pose with ASCOT president Dr. Eusebio V. Angara and some Philrootcrops staff during visit to Aurora State College of Technology.

PhilRootcrops tapped in VSU-ASCOT R&D collaboration

PhilRootcrops is one of the two research centers in the Visayas State University (VSU) which are involved in the on-going collaboration in research and development between the university and the Aurora State College of Technology (ASCOT) based in Baler, Aurora province. This partnership was made possible through the initiative of Sen. Edgardo J. Angara who requested Dr. Paciencia P. Milan, former VSU President and Dr. Jose L. Bacusmo, VSU President to visit Baler, his hometown sometime in January 2008. VSU through PhilRootcrops and the National Abaca Research Center (NARC) was requested to provide technical assistance to Aurora Province by helping develop the RDE capability of ASCOT in rootcrops and abaca.

As a preliminary activity; PhilRootcrops Director, Dr. Julieta R. Roa and NARC Director, Dr. Ruben M. Gapasin visited ASCOT to assess its existing research facilities and RDE activities.

After the trip, eight research staff of ASCOT (four for each crop) came to VSU for a training on rootcrops and abaca R and D on December 2-6, 2008. The 5-day training equipped the ASCOT staff with knowledge and skills on various

PhilRootcrops bags CHED's reg'l & nat'l awards

The Philippine Root Crop Research and Training Center (PhilRootcrops) based in the Visayas State University (VSU) received awards for presenting the Best Regional HEI Research Program and the Outstanding Regional HEI Extension Program. The Center won the two awards in the 2008 Search for Outstanding Higher Education Institution (HEI) Research and Extension Programs in Region 8 (Eastern Visayas) sponsored by the Commission on Higher Education (CHED). After garnering the regional awards, the Center was recognized again by CHED to have the 2nd Best HEI Research Program in the country.

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PhilRootcrops researcher wins PCARRD Pantas Award

Dr. Edgardo E. Tulin, professor of the Philippine Root Crop Research and Training Center (PhilRootcrops) is this year's recipient of the PCARRD Pantas Award (Researcher/Scientist Category). Dr. Tulin was recognized "for his outstanding contributions to the advancement of agriculture, forestry and natural resources research and development in the Philippines". He received a cash prize of P100,000.00, a P1-million research grant and a trophy. The award was conferred during the 36th PCARRD Anniversary on

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JRRoa named UPLB distinguished alumna

Dr. Julieta R. Roa is one of the recipients of the University of the Philippines at Los Baños Alumni Association (UPLBAA) Distinguished Alumni Award. She was endorsed by the College of Public Affairs Alumni Association and was presented the award for exhibiting the very characteristics demanded of an outstanding UPLB alumnus. She finished her Master in Public Affairs with specialization in Strategic Planning and Public Policy from UPLB in 2000; and her Ph.D. in Social Sciences from the Wageningen University Research Center, The Netherlands in 2007.

The award was given on October 9, 2008 at the UPLB Baker Hall as one of the highlights of the 90th Loyalty Day and Alumni Homecoming.

BIO+ 2009 Symposium

Dr. Julie D. Tan presented a fields of biotechnology and paper entitled "Utilization of biochemical engineering. The Rootcrops in the Production activity was participated in by of Sweet Balinese Wine" 43 Korean scientists and a during the BIO+ 2009 number of researchers, Symposium organized by professors and students from the Department of Chemical the Philippines.

Engineering, University of After the symposium, a San Carlos and the Korean short meeting was held to Society of Biotechnology discuss possible collaborative and Bioengineering. projects on biotechnology

The symposium was between the Philippines and held at the CAFA Theater, Korea. A follow-up meeting University of San Carlos, will be conducted during the Cebu City on January 16-17, Koreans'next visit to 2009. It aimed to explore Philippines in the first quarter the possibilities for of 2009. A tentative plan to cooperation among Filipino visit PhilRootcrops early this and the Korean year for the rootcrop wine researchers/educators in the project was also discussed.

Cassava development project launches

Through the concerted efforts and commitments of the Department of Agrarian Reform-Province of Leyte (DAR-Leyte), San Miguel Corporation (SMC), Early Seven Marketing, Inc. (ESMI), and PhilRootcrops; the Community Cassava Development Project in Western Leyte was formally launched on November 13, 2008 during the annual general assembly of sugar growers, Occidental Leyte Farmers' Cooperative (OLFAMCO) in Ormoc City. In the same affair, the memorandum of agreement (MOA) among the agencies involved was signed. The signatories in the MOA were Dr. Jose L. Bacusmo, VSU President representing PhilRootcrops; Dir. Homer Tobias, DAR-8 Regional Director; Mr. Leopoldo Titular, SMC Assistant Vice President; and Mr. Agapito Pongos, ESMI (an assembler for SMC) proprietor-manager. The MOA signing was witnessed by former President Joseph E. Estrada; Dr. Julieta R. Roa, PhilRootcrops Director; Mr. Climaco Evangelista, OLFAMCO Chairman; Mr. Raul Romarate, Landbank VP for Eastern Visayas; and Mr. Enrique Granados III, DAR-Leyte Provincial Officer.

The joint efforts of the four agencies involved will facilitate the utilization and dissemination of PhilRootcrops packaged cassava technologies with the necessary



JRRoa signs the MOA of the cassava production program in Ormoc City on Nov 13, 2008.

support system for the benefit of farmers, industry and related sectors.

DAR-Leyte would like to uplift the livelihood opportunities of the various Agrarian Reform Communities (ARC) beneficiaries through the cassava program. This prompted the agency to tap PhilRootcrops' experts. DAR will identify and select ARC production areas in Leyte, provide or secure funds for capability enhancement trainings, and socially prepare identified ARCs for cassava growing and processing for ESMI and SMC.

For its part, PhilRootcrops will extend technical assistance to ESMI and ARC beneficiaries in determining the land potential of ARC communities under DAR-

Leyte, conduct capability enhancement training, identify sites suitable for cassava production, provide healthy planting materials and conduct trainings on cassava technologies.

On the other hand, ESMI will provide production support, postharvest facilities, transportation services for the collection of the cassava chips from the different ARC communities to the potential adopters of the program; and purchase the cassava chips produced from the project.

SMC's role in the project is to buy the cassava products either in dried chips or granulated forms.

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topics like germplasm and varietal improvement, production, integrated crop or pest management, postharvest handling and storage, processing and machinery systems, product development and livelihood enterprise, and tissue culture.

The topics were delivered through lecture-discussions, actual hands-on activities and field practicum.

During the training, plans to visit Aurora to assess the current situation of the rootcrop market, production and utilization as well as industry potentials were discussed. Thus, a team of PhilRootcrops researchers composed of Dr. Julieta

R. Roa, Dr. Rolinda T. Sanico, Dr. Erlinda A. Vasquez, Dr. Nestor L. Pido, Prof. Algerico M. Mariscal and Prof. Villaluz Z. Acedo went to ASCOT on January 23-26, 2009.

The activities conducted by the group included market reconnaissance surveys and interviews in the town markets of Baler and Maria Aurora, group discussions with farmers and local officials of rootcrop-growing barangays, establishment of a nursery for rootcrop germplasm collection and multiplication in the ASCOT Basal Campus, and assessment of ACOT's tissue

culture laboratory.

Using the information gathered in these activities, the PhilRootcrops researchers had a planning meeting with the ASCOT rootcrop team led by Dr. Shirley San Pedro. They also had a debriefing meeting with ASCOT President, Dr. Eusebio V. Angara. The 2009 workplan for the establishment of rootcrop germplasm at ASCOT and the identification of the college as part of the National Rootcrop Collaborative Testing (NCT) Network was also presented and validated.

Gawad Kalinga is PhilRootcrops' partner in technology dissemination

The Gawad Kalinga Community Development Foundation, Inc. (GK); a non-stock, non-profit organization based in Maasin City, Southern Leyte has answered the call of PhilRootcrops for a partner agency to provide financial support in the dissemination of its numerous developed rootcrop-based technologies.

Gawad Kalinga is interested in this endeavor for the Livelihood Productivity Program of its GK housing areas in Brgys. Manlico and Libas, Hinunangan. These are interior barangays but are readily accessible from both St. Bernard and Hinunangan. The areas are suited to cassava and sweetpotato production such that the housing site in Brgy. Manlico is already planted with different rootcrops. This site becomes more appropriate for the project because it is a recipient of the Global Kusina project of the Department of Trade and Industry (DTI) of Maasin. The processing facilities which include the building and cooking facilities with good manufacturing practices standards are already there.

In a consultation-meeting of GK, DTI and PhilRootcrops, cassava grates and products were identified as a potential livelihood opportunity for the area. This venture is quite feasible because vast areas are available for raw material production. Moreover, the facilities of the Global Kusina could be utilized for cassava grates processing. Thus, in an initial focus group discussion and benchmarking activity; the GK recipients expressed support to the



The Gawad Kalinga Village in Brgy. Manlico, Hinunangan, Leyte

project.

The memorandum of agreement (MOA) which sealed the involvement of GK, PhilRootcrops, DTI, Department of Science and Technology (DOST) and Technical Education Skilled Development Authority (TESDA) in this project called "Rootcrop-based Technology Commercialization for GK Village Productivity" was officially signed on May 3, 2008 during its project launching in Brgy. Manlico, Hinunangan, So. Leyte.

The MOA stipulated that after collaborative assessments with the stakeholders, PhilRootcrops will provide the appropriate rootcrop-based livelihood and business enterprises, trainings and participating community engagements; take the lead in the GK community process in laying down the foundation for the establishment of rootcrop-

based livelihoods; and document the technology transfer support. On the other hand, DTI will provide technical support in the marketing aspect of business plan and products, DOST for technology assistance, TESDA for monitoring and evaluation of the training programs and in-charge of the accreditation of the production center, and GK Maasin as the overall in-charge in the supervision and overseeing the day-to-day activities in relation to the project of the GK recipients.

Cassava grates can be made into an array of local Filipino food products such as budbud, suman, pitsi-pitsi, etc. which are favorites of Filipinos all over the world. With the active participation and commitment of all the agencies involved in this project, Brgy. Manlico can someday be an exporter of cassava grates.

More PhilRootcrops awards during VSU anniversary



Philrootcrops award-winning booth during the 2008 VSU anniversary

2 new projects under DA-GMA Program approved

To address the problem of inavailability of planting materials of high yielding cassava varieties (HYVs) for mass production, PhilRootcrops submitted a research proposal for the establishment of the National Cassava Seed System Project to the Department of Agriculture - Ginintuang Masaganang Ani (DA-GMA) Corn Program. The proposal was approved in 2006 with research funds amounting to P519,200.

The project funds were used to establish nurseries planted to cassava variety NSIC CV-22 (JU-50) in Ilagan, Isabela;

Bohol Experiment Station (BES), Ubay, Bohol.; Dalwangan, Bukidnon; Tupi, South Cotabato; and PhilRootcrops, VSU, Baybay, Leyte. The former PhilRootcrops Director, Prof. Algerico M. Mariscal serves as the overall project coordinator with the assistance of the different RIARC's staff in the nurseries established.

Since the planting materials produced in the nurseries already established through the previous project were insufficient to meet the high demand, PhilRootcrops decided to prepare two other proposals.

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During the VSU anniversary last August, Philrootcrops maintained its multi-awardee record. The Center's booth which depicted several rootcrop livelihood opportunities to alleviate poverty, was adjudged as the Booth of the Year, and the Most Environment-Friendly Booth, Most Symbolic Booth and Best Booth for the research category. Along with these awards were cash prizes with a total of P4,500.

Aside from the above awards, Dr. Erlinda A. Vasquez, a PhilRootcrops researcher was also accorded the Exemplary Researcher Award during the Anniversary Convocation. Dr. Vasquez was recognized for exemplary performance in rootcrop pest management research as shown by her scientific articles published in national and international journals. Her research output on the synthesis of sweetpotato weevil pheromone and biological control of pesticide-resistant cassava spider mites have been utilized by semi-commercial and commercial rootcrop growers for their practical and ecological benefits.

To the hardworking men and women of PhilRootcrops, we did it again. Kudos to everyone.

con't 2 new projects . . .

The first is a two-year project entitled "Mass Propagation of Cassava Planting Materials through Tissue Culture".

It aims to produce thousands of plantlets to be turned over to DA to serve as starting propagation materials for commercial production. The memorandum of agreement (MOA) for this project was executed by Dr. Wolfreda T. Alesna, Executive Director of the Visca Foundation for Agricultural and Rural Development (ViFARD, Inc.) and Hon. Arthur C. Yap, DA Secretary with Dr. Jose L. Bacusmo, VSU President, Dr. Julieta R. Roa, PhilRootcrops Director, Prof. Villaluz Z. Acedo, Project Leader and Hon. Dennis B. Araullo, Assistant Secretary for Field Operations and National Coordinator of the GMA-Corn Program as witnesses. The project was started in November 2008

upon the release of its first year budget of P1.9M. It is expected that around 20,000 plantlets will be available for delivery to DA come August 2009.

The second project is "Integrated Training on Cassava Nursery Establishment and Management". It will undertake nationwide trainings across 16 DA regions on the cassava mass propagation technologies developed by PhilRootcrops. The training aims to improve the knowledge and understanding of technical personnel directly involved in the implementation of the project particularly the technologies on cassava rapid propagation and tissue culture preparation, handling and management. It also intends to improve management skills and capacities in cassava seed

propagation through adequate understanding of the cassava industry context as well as to establish a workable and effective monitoring system. This project is likewise expected to produce 6,500 copies of Growing Cassava, a brochure on the proper cultural management practices for cassava. This brochure will be used for the conduct of trainings of all technical personnel of the 16 DA-RFUs directly involved in the propagation of cassava planting materials.

The two proposals were approved with a combined budget of over P4M i.e, P3M for the first project and P1.3M for the second project.

EE Tulin returns after research fellowship in US

Dr. Edgardo E. Tulin, professor of PhilRootcrops returned from the United States on December 22, 2008 after working as a research fellow for one month. He was granted a Norman Borlaug International Agricultural Science and Technology Fellowship which is administered by the United States Department of Agriculture-Foreign Agricultural Services (USDA-FAS).

The fellowship enabled Dr. Tulin to work with a US scientist, Dr. Benildo de los Reyes of the School of Biology and Ecology at the University of Maine. Through the grant, he learned new and recent

paradigms in plant genetics and molecular biology research using Arabidopsis and rice as model plants. It also enabled him to learn new research techniques, develop research partnership, and learn more about graduate curricula in agricultural research.

During his one-month stint in the US, Dr. Tulin enumerated his activities as follow: a) hands-on laboratory analysis of OsbZIP T-DNA insertional mutant lines of Arabidopsis in response to cold stress, b) learning recent techniques of Agrobacterium-mediated transformation of Arabidopsis, c) rice microarray analysis including methods of dye coupling and hybridization, d)

research discussions and mutation (T-DNA insertion) on the transcriptome of rice and Arabidopsis, and e) attending lectures on genetic engineering technology, modern paradigms on post-transcriptional genes silencing, and micro RNA.

Dr. Tulin claimed that through the fellowship, he gained many research ideas related to transcriptional regulation in plants. Together with Dr. de los Reyes, he was able to prepare research project proposals for possible funding by the Department of Science and Technology (DOST) and USDA.

PhilRootcrops caters to voluminous orders of SP planting materials



PhilRootcrops laborer preparing the sweetpotato planting materials for Moalboal, Cebu

As the national center for rootcrops R and D, PhilRootcrops is responsible for the distribution of certified planting materials of rootcrops including sweetpotato (SP). However, it is now deluged with voluminous orders of SP planting materials due to the decision of many local government units (LGUs) in the country to plant sweetpotato and use it as the alternative staple food for their constituents to possibly offset the rice crisis experienced in the country.

The Center has so far catered to the big volumes of SP planting materials ordered by different LGUs. For instance, the province of Cebu through the Department of Agriculture ordered 105,000 pieces of planting materials for distribution in the province. The provincial government launched the so called "SAKSAK Program" in which every Cebuano household is encouraged to eat sweetpotato by incorporating its

roots in cooking rice. This will minimize dependence on rice and at the same time enrich the diet because sweetpotato roots are rich in vitamins and minerals. The municipality of Moalboal, in Cebu likewise answered the call of the provincial government by ordering 120,000 sweetpotato cuttings for distribution to the different barangays in the municipality.

In September alone, standing orders from the provinces of Leyte and Southern Leyte was over 100,000 pieces of SP cuttings.

This situation has helped the Center in promoting and disseminating its high yielding SP varieties. Due to the limited land area for propagation of planting materials, PhilRootcrops sometimes cannot supply the demand. Thus, the laborers who have produced certified planting materials in their backyards, serve as supplemental suppliers of planting materials to the Center.

2 PhilRootcrops staff attend int'l cassava workshop

PhilRootcrops was represented by Prof. Algerico M. Mariscal and Mr. Dioscoro M. Bolatete, Jr. in the 8th Regional Cassava Workshop held in Vientiane, Lao PDR on October 20-24, 2008. Prof. Mariscal presented a paper entitled "Cassava Research and Development in the Philippines."

The workshop was participated in by more than 100 cassava researchers from Asia, Africa and Latin America which are the biggest cassava producers in the world. Conducted once every 3 years, the conference aims to share experiences and research results among participants about the development of the cassava sector in each country.

Before the workshop, Mr. Bolatete attended the "Regional Cassava Training Course" held on October 6-19, 2008 at Rayong Field Crops Research Center in Thailand. The 2-week training course involved lectures and field practicum on different aspects of cassava production, processing and animal feeding. Other training participants came from Cambodia, China, East Timor, India, Myanmar, Indonesia, Laos, Malaysia, Thailand and Vietnam.

The Centro Internacional de Agricultura Tropical (CIAT) Regional Cassava Office for Asia, the National Agriculture and Forestry Research Institute (NAFRI) and the Nippon Foundation in Tokyo, Japan jointly organized and conducted both the workshop and the training course.

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The first prize winner was Central Luzon State University (CLSU) and the third prize winner was Benguet State University (BSU).

The search was conducted by CHED to recognize and reward both implementers and HEIs for their outstanding research and extension programs. It also aimed to encourage the conduct of relevant research and extension activities which are responsive to the needs of its clientele as well as to promote appreciation of the importance of the extension function of the HEIs.

During the awarding ceremony on December 17, 2008 at the SEAMEO-INNOTECH, Diliman, Quezon City; CHED Chairman, Dr. Emmanuel Y. Angeles presented the plaques of recognition and cash awards to Dr. Julieta R. Roa, PhilRootcrops Director. Dr. Angela S. Almendras-Ferraren, CHED-ZRC Director and Dr. Rita Ortiz, CHED Region 8 Director were also there to witness the affair.

PhilRootcrops received a total of P1.1 M in cash prizes i.e. P300,000 each for research and extension programs as regional winner and P500,000 as 2nd Best HEI for research in the country in addition to the three plaques of appreciation.

con't Philrootcrops researcher . . .

November 7, 2008 at the Intercontinental Hotel, Makati City.

During the 11th National Symposium on Agriculture Resources Research and Development (NSARRD) which coincided with the 36th PCARRD anniversary celebration, Dr. Tulin also garnered the first place in the research category. His study was on the "Isolation and Functional Characterization of Mimetic Protein (PRP-1) from Yam". PRP-1 is a naturally-derived angiotension-converting enzyme inhibitor from yam tubers which can be used safely as a potential antihypertensive drug without producing an allergic response. The award carries with it a P50,000 cash prize.

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Awards/Recognitions received by PhilRootcrops and staff in 2008

PhilRootcrops	CHED Best Regional HEI Research Program CHED Outstanding Regional HEI Extension Program CHED 2ND Best HEI Research program in the Philippines Booth of the Year* Most Environment-Friendly Booth* Most Symbolic Booth* Best Booth*
	<i>*during the VSU Anniversary</i>
Staff	
Dr. Edgardo E. Tulin	PCARRD Pantas Award (Researcher/Scientist Category) Norman Borlaug International Agricultural Technology Fellow
Dr. Erlinda A. Vasquez	VSU Exemplary Research Award
Dr. Julieta R. Roa	UPLB Distinguished Alumnus Award
Dr. Julie D. Tan	Visiting Scientist, Obihiro University of Agriculture and Veterinary Medicine

Award	Research Project/Paper/Poster	Staff
<i>AFMA Best R and D Paper Award for Basic Category</i>	"Genetic Approach and Phenotype -based Complementation Screening for Selection of Yam Resistant to Anthracnose"	E.E. Tulin and Z.T. Ecleo
<i>2nd runner-up AFMA Best R and D Paper Award</i>	"New Cassava Varieties for Industrial Use"	A.M. Mariscal, R.V. Bergantin and A.D. Troy
<i>2nd Prize Winner, Regional Competition Outstanding R and D in Industry 2008 (Visayas-Mindanao Cluster)</i>	"Technical Improvement of the Dried Cassava Grates Processing System"	D. L S. Tan
<i>1st Prize Winner, Applied Research Category, Search for Regional Outstanding R and D Projects</i>	"Development of Graphic –Rich Sweetpotato Germplasm Database"	by A.B. Loreto, D.P. Loreto and E.B. Abogadie
<i>1st Prize Winner, Development Project Category, Search for Regional Outstanding R and D Projects</i>	"Community-based Participatory Action Research on Gabi Chips Processing in Liloan, So. Leyte"	J.R. Roa, F.J. Amestoso, and A.B. Loreto
<i>1st Prize Winner, Basic Research Category, Search for Regional Outstanding R and D Projects</i>	"Isolation and Functional Characterization of Mimetic Protein from Yam"	E.E. Tulin
<i>1st Prize Winner, Search for Regional Best R and D Poster</i>	"Sweetpotato Weevil Pheromone Synthesis, Formulation and Field Evaluation"	E.A. Vasquez and D. Schmidt