



# AGGIE BULLETIN

A Quarterly Newsletter of the College of Agriculture

April-June 2014

## In This Issue

FT students awarded KSSR grants

Study shows waste vegetable oil (WVO) can replace petroleum diesel

Calaanan and Indahag relocation sites receive business kits from FTC and JVOFI

CC4D holds World Press Freedom Day Celebration

FTC provides livelihood to Sendong women survivors

DevCom faculty members through CC4D conduct Writing Workshop for ACDO

CropSci faculty members attend conference for crop scientists

XUCA faculty member represents XU in the Phil. APEC Study Center Network Symposium

AAEF holds Proposal Development and Grant Writing Seminar

XU-UHH exchange student returns with flying colors

XU gets 54.35% passing rate for June 2014 Agriculturist Licensure Examination

AE faculty and students attend the 11th Int'l AE Conference and Exhibition

KAAD grants scholarship to 4 AgSci faculty

XUCA faculty members reap 13 Publication Awards

## Editorial Board

Dr. Ma. Theresa M. Rivera

Gyllen P. Sanchez

Rechelle Ann T. Barraquias

## Writers

Trinnah Marie M. Caracho

Aran P. Jamaca

## Contributors

Mary Ann T. Mercurio

Ivy Kristel L. Quiño

Dr. Greg M. Cubio

Terence Al L. Abaquita

## Contact Us

Ateneo Agro Ecological Forum  
A205, 2nd Floor, Agriculture Building  
Corrales Avenue, Cagayan de Oro City 9000  
Misamis Oriental, Philippines

Email: [rsoaggies@gmail.com](mailto:rsoaggies@gmail.com)

Telephone: (63 8822) 72-3116

(63 88) 858-3116

local 3100 or 3107



Xavier University  
ATENEO DE CAGAYAN



# FT students awarded KSSR grants

by Gyllen P. Sanchez

The College of Agriculture inculcates in the students the value of research in the development of agriculture and continually challenges their students to produce high quality research. Students who excel in the research they conducted are often endorsed to different research competitions and student research funding organizations.

Nine students from the College of Agriculture were awarded the Kinaadman Support for Student Research grants for S.Y. 2013-2014. Six of these come from the Food Technology Department. Product development and utilization of underutilized crops and food microbial analysis are the research areas of the awardees.

Bamboo, okra, cassava and kamias are among the crops studied by the Food Technology students. In order to add value to bamboo, an indigenous but underutilized crop in the country, Janine Louise M. Uy developed snack chips made of the edible yellow portion of bamboo shoots.

Also known as "lady fingers", okra is widely grown in our country and is a good provider of soluble fiber. Utilization of this product, however, is very limited. Thus, Krystal J. Vasallo studied "Okra (*Abelmoschus esculentus*) Mucilage as an Alternative Stabilizer for Chocolate Milk."

Iree Grace D. Bincee took on the study about utilization of cassava roots in bio-fuels production specifically from five varieties that are not fit for human consumption and are poisonous. These cassava varieties

contain fermentable sugars for generation of bio-ethanol.

*Averrhoa bilimbi*, better known as "iba" or "kamias", is another underutilized crop. Charmaine Hope D. Enterina, assessed the anti-microbial capacity of the fruit to microorganisms *Salmonella*, *Escherichia coli* and *Staphylococcus aureus* which are commonly found in street food called "Proven". The researcher confirms that *A. bilimbi* has a good inhibitory effect against *E. coli* and *Staphylococcus aureus*.

Meanwhile, Hannah Kimberly Guangco conducted a "Comparative Study on the Analysis of Fried Chicken Cooked under Fresh and Re-used Palm and Vegetable Oil." The researcher concludes that "re-using of oil for cooking deteriorates food components and releases amounts of fatty acids" which are not good for human health.

KSSR is a highly competitive award given to students doing research as required by their respective courses. The awardees were endorsed by their respective research advisers and department chairs. The awardees received Php10,000.00 to support the financial needs of their research.



Left: Dr. Cubio checks the engine and its fuel line at the Engine Lab of Texas A&M University.  
Right: Dr. Cubio operates the engine (controlling and monitoring) using a computer interfaced with LabView program for engine performance and ENERCOM software for exhaust emission.

## Study shows waste vegetable oil (WVO) can replace petroleum diesel

by Aran P. Jamaca

A study was conducted by Dr. Greg Cubio, faculty of the Agricultural Engineering Department, entitled "ASTM Characterization, Refining and Biodiesel Conversion of Waste Oil Biodiesel: Impact on Engine Performance and Emissions." It analysed the power and emission rate of an engine using waste vegetable oil (WVO) extracted from

vegetable oils and animal fat.

In the Philippines, there are existing laws that seek to someday replace petroleum diesel with biodiesel. The Philippine Clean Air Act of 1999 (RA 8749) was passed to protect the environment and establish fuel and emission standards. The Biofuels Act of 2006 (RA 9637) was also passed to impose the mandatory blending of biofuels to gasoline and diesel.

WVO is seriously being considered as a substitute to biodiesel because it is renewable, biodegradable, and it reduces engine exhaust smoke. WVO also has little to no sulfur content. This means that it is friendly to the environment as sulfur is part of the chemical make-up of diesel and gasoline. When emitted to the atmosphere through the exhaust, it comes back to earth as 'acid rain'. Additionally, the corrosive nature of sulfur also wears out the engine faster.

The results of the study showed that an engine running on refined WVO is actually comparable to the ordinary petroleum used today. The researchers recommend the "use of biodiesel fuel from WVO because it could significantly reduce the problem on waste disposal and environmental pollutions."

The study is published in the Journal of Energy Resources Technology for September 2013 Volume 136 Issue 3 entitled "Real-Time Analysis of Engine Power, Thermal Efficiency, and Emission Characteristics Using Refined and Transesterified Waste Vegetable Oil." The paper is co-authored by Sergio Capareda of Texas A&M University's Biological and Engineering Department and by Feliciano Alagao of Mindanao State University-Iligan Institute of Technology's Mechanical Engineering Department.

# Calaanan and Indahag relocation sites receive business kits from FTC and JVOFI

by Trinnah Marie M. Caracho



The beneficiaries during the official turn-over ceremony together with the (lower right photo, first from the left) AAEF Director, Dr. Ma. Theresa M. Rivera, XSF OIC, Ms. Casandra Hilary B. Emata, and (rightmost) FTC Head, Ms. Sylvia T. Aguohob.

The Food Technology Center (FTC) conducted a turn-over of business kits to the beneficiaries from Calaan and Indahag Relocation Sites at the Food Technology Center, Manresa Farm last April 11.

The event was made possible through the sponsorship of Jaime V. Ongpin Foundation, Inc. (JVOFI) together with the Xavier Science Foundation (XSF). The JVOFI supports the microenterprises in the city especially among livelihood groups of Sendong survivors.

Prior to the actual turn-over of business kits, the Food Technology Department, through FTC, held a series of trainings to the mothers from these sites. These include: 1) Overview of the Training, 2) Food Safety and Sanitation Orientation, 3) Demo on Food Preparation (Snack Foods), 4) Container Gardening, 5) Meat Processing, and 6) Fruits Processing (Juices, Jams and Marmalades). A medical mission was also conducted by FTC. A total of eight meetings were conducted in the span of four months.

Ms. Reizl Berin, 42 years old from Calaan Relocation Site, broke in tears in recalling the horrifying experience her family went through when Sendong happened almost two years ago and how this turn-over activity changed their lives. She shared, *"Isa sad mi sa na blessed tungod ani nga opportunity. Atong Sendong kay halos nawad-an na gyud mi ug hope sa kalisud. Chance na ni namo nga maka-bangon sa among naagian. Thank you gyud kaayo sa tanan."* (We are one of those blessed because of this opportunity. During Sendong, we almost lost hope because of the hardships we encountered. This is our chance to recover from what we have gone through. Thank you so much to everyone.)

Representatives from various organizations who contributed to the success of the turn-over activity graced the event. It was also attended by representatives of Xavier Science Foundation, Ateneo Agro Ecological Forum, the city officials from Cagayan de Oro Estate Management Division and Oro Integrated Cooperative.

# CC4D holds World Press Freedom Day Celebration

by Rechelle Ann T. Barraquias



Upper left: Registration outside XU AVR 5  
Lower left: Panelists for the roundtable discussion  
Right: One of the participants during the roundtable discussion

A free and responsible media aids in promoting a country's economic and human development. It paves for an informed discussion and action among its citizens. It is for this reason that Press Freedom Day is celebrated throughout the world every May.

Joining the world celebration, Xavier University's Center of Communication for Development (CC4D) partnered with Mindanao University of Science and Technology (MUST) and Mindanews to hold the joint World Press Freedom day forums on May 3 at the MUST ICT AVR (Building 9) from 8:00-12:00nn and XU AVR 5 from 1:00-5:00pm.

The forums highlighted the Freedom of Information (FOI) Bill, which was discussed by Mr. Red Batario of the Center for Community Media and Development (CCMD), Manila. It was followed by a roundtable discussion which was participated by local heads of media outfits in the city, including regional media networks, ABS-CBN and GMA.

The roundtable discussion focused on the media landscape in Cagayan de Oro and Northern Mindanao on the safety of journalists especially during conflict and disasters and on ethical standards of journalism. The panelists also discussed the importance of the Freedom of Information (FOI) Bill in linking data and resources so that citizens are aware about critical and important information. It ended with a discussion on the need for a citizen and media council which can pave the way for a more engaged collaboration towards the city's development.

Faculty and students from communication schools in the city, some members of the Regional Communication Officers Council (RAGCOM), and journalists from all media in Cagayan de Oro were among the participants of the forum.



When the city was hit by Typhoon Washi (Sendong), displaced families were moved to the different relocation sites in the city. Livelihood was affected. Many organizations offered help to the families by providing different income generating programs.

One of these organizations is the Jaime V. Ongpin Foundation, Inc. (JVOFI) which implemented the Assistance for Micro-Enterprises in CDO in partnership with the Food Technology Center (FTC). The objective of the program was to promote income generating or livelihood projects by providing financial and technical assistance and institutional development to selected beneficiaries.

Although the program was not meant exclusively for women, the women saw it as an opportunity to earn an income of their own so they can help their husbands in providing for their respective families. Mrs. Fe Virtudazo, 48, said *"maayo nalang ni kaysa magpuyoay rami sa balay way gabuhaton* (this is way better than just staying at home doing nothing)." Mrs. Lolita Papaya, 41, added that *"maningkamot mi nga mahimo syang pamaagi para muasenso mi* (we will do our best to make this as our ticket towards a better life)," referring to the project.

The program introduced food processing of Spanish sardines and peanut butter and now the participants have become producers of these products. Moreover, FTC also hired women for the production of complementary food for infants called BIGMO. BIGMO is a ready-to-cook baby food from rice (**bigas**), mungbean (**mongo**) added with sesame seeds. It is initiative of the Department of Science and Technology and the LGU of the city. FTC is the production site of the project.

## FTC provides livelihood to Sendong women survivors

by Aran P. Jamaca

"This is our chance to earn some income of our own so we don't have to rely solely on our husbands," said Mrs. Helen Corton, 38. She is one of the women workers of the Food Technology Department of the Xavier University College of Agriculture.

## DevCom faculty members through CC4D conduct writing workshop for ACDO

by Rechelle Ann T. Barraquias

Responding to the need to strengthen information dissemination in parishes under the Archdiocese of Cagayan de Oro (ACDO), faculty members of the Development Communication (DevCom) Department through the Center of Communication for Development (CC4D) conducted a workshop on news and feature writing at the Patrick Cronin Formation Center on May 10, 2014. The faculty members were Mary Louise Dumas, who spoke on writing news stories, and Rechelle Ann Toliner-Barraquias, who discussed on writing features.

Sr. Tess Espina, fsp, ACDO's Social Communication Apostolate head said the workshop looks forward into forming a pool of writers among the laities to address their parishes' information needs. It is also an offshoot of the ACDO Study Days in January which was participated by all the priests in the Archdiocese and had DevCom and AAEF's Dr. Ma. Theresa Rivera as one of the speakers.

It is the aim of the Social Comm to expand the scope of the workshop



sessions from the parishes in Cagayan de Oro to Misamis Oriental and Camiguin.

The DevCom Department recognizes the importance of raising consciousness and sharing knowledge on communication media for development to the different sectors in the society. DevCom, through CC4D, will continually provide capacity building programs to its development partners and other communities in the region.

# CropSci faculty members attend conference for crop scientists

by Mary Ann T. Mercurio

Three Crop Science faculty members attended the 44th Scientific Conference on May 12-16, 2014 at the Cebu Parklane International Hotel, Cebu City. The conference was organized by the Crop Science Society of the Philippines (CSSP) with the theme "Harnessing Biodiversity and Biotechnology for Climate Change Adaptation". The faculty members who attended the event were Professors Floro V. Dalapag, Mary Ann T. Mercurio and Judith T. Pit, who are also life time members of the said society. Last year, the conference was successfully held in Cagayan de Oro City where the College, through the Agricultural Sciences Department, served as one of the local organizing committees.

# XUCA faculty member represents XU in the Phil. APEC Study Center Network Symposium

by Mary Ann T. Mercurio

Prof. Judith T. Pit of the College of Agriculture Agricultural Sciences Department represented Xavier University during the Philippine APEC (Asia-Pacific Economic Cooperation) Study Center Network (PASCN) Symposium and 18th General Assembly in Central Luzon, State University (CLSU), Science City of Muñoz, Nueva Ecija on June 5, 2014.

The theme is "Attaining Inclusive Growth through Science and Technology ." It is the aim of the symposium to foster exchange of research ideas and technologies among its member institutions.

The PASCN was established in 1996 through an administrative order as the Philippines' response to the APEC Leaders Education Initiative which is geared towards developing regional cooperation and research among higher education institutions. It is composed of 10 member institutions, namely: the Asian Institute of Management (AIM), Ateneo De Manila University (ADMU), Central Luzon State University (CLSU), De La Salle University (DLSU), Mindanao State University (MSU), Silliman University (SU), University of Asia and the Pacific (UA&P), University of San Carlos (USC), University of the Philippines (UP), and Xavier University (XU).

XU hosted last year's PASCN Symposium and General Assembly.

# AAEF holds Proposal Development and Grant Writing Seminar

by Gyllen P. Sanchez



The participants during the Proposal Development and Grant Writing Seminar.

Aiming to define priority research projects and increasing the number of researches in the College of Agriculture, the Ateneo Agro Ecological Forum (AAEF) conducts a Proposal Development and Grant Writing Seminar last May 13-14 at Pearlmont Inn Hotel, Cagayan de Oro City. Representatives from the different centers of the Forum joined the event. Among the centers represented were the Center of Communication for Development (CC4D), Center for Agriculture and Biosystems Engineering (CABE), Food Technology Center (FTC) and GIS and Precision Agriculture Center (GPAC). The coordinator of the Agribusiness Department also joined the activity.

The resource speaker, Dr. Magdalena C. Cabaraban, Senior Research Associate of the Research Institute for Mindanao Culture (RIMCU) cited the current practices and policies of the different international, national and local funding agencies. She also gave practical tips on composing the research proposal and identifying the best approach.

The principles of agro ecology was presented by Roel R. Ravanera, former Dean of the College of Agriculture and current Executive Director of the Xavier Science Foundation. The college has been known for pushing Sustainable Agriculture. Recently, the college through the former dean adopted agro ecology as a way of attaining sustainable agriculture. The dean discussed about the emerging terms, assumptions, principles and approaches of agro ecology.

The current Dean, Dr. Maria Rosario P. Mosqueda, presented her view of how the college research thrusts and direction should be in the next two years. She challenged the participants to come up with a systems approach (agro food systems) that is sustainable and attainable.

The two-day event is a combination of lecture, workshop and writeshop. Research concept notes that can be developed to research proposals were produced at the end of the activity.

The activity is conducted in partnership with the Kinaadman Research Center. (with reports from Aran P. Jamaca)



## XU-UHH exchange student returns with flying colors

by Gyllen P. Sanchez

Xavier University College of Agriculture exchange student to the University of Hawaii in Hilo (UHH), Martin Alfonso T. Ledesma, completed his 5-month exchange program in May 17, 2014.

Ledesma is an incoming fourth year student of the Agribusiness Department of the College of Agriculture. He brought pride to the college by acing 4 out of 5 subjects he took in UHH which makes him a dean's lister. These were Intro to Aquaculture, Intro to Environmental Science, Principles of Horticulture, Tropical Plant Pathology and Hawaiian Ohana/culture.

Ledesma said that he did not have any difficulty in his studies in Hawaii as the method of teaching being employed in UHH is the same as in the college. He explained further that UHH also has an experimental farm like Manresa where students perform farm exercises. Also, since Hawaii is a tropical country like the Philippines, the crops studied are almost the same.

The exchange program is an initiative of the Office of International Cooperation and Networking (OICN) of Xavier University. He went through a selection process conducted by the College of Agriculture.

"I highly recommend the program to other XUCA students. My perspective really changed. The people in Hawaii gives importance to their land. The Philippines has a lot of potential when it comes to natural resources but we don't know how to utilize these resources," said Ledesma.

XU is highly anticipating the arrival of an exchange student from UHH who will stay for one full semester in the university.

## XU gets 54.35% passing rate for June 2014 Agriculture Licensure Examination

by Ivy Kristel L. Quiño

Xavier University (XU) got a 54.35% passing rate during the Agriculture Licensure Examination (ALE) held last June 1-3, 2014.

The College of Agriculture congratulates the passers of the board exam.

1. Abasolo, Silverio Jr. R.
2. Arca, Albert D.
3. Bacongus, Jo Ivan A.
4. Billan, Victor Jr. J.
5. Cabizon, Jose Jr. G.
6. Camaddo, Ronald Allan P.
7. Cellona, Erpe John Lee L.
8. De Gracia, Shela Mae S.
9. Halasan, Nemartch T.
10. Lofranco, Cheroll Don A.
11. Magdayao, Roderick G.
12. Maghuyop, Joel Vincent Rio G.
13. Malabo, Monica V.
14. Namoc, Sarah C.
15. Nano, Shearson Bob P.
16. Penaso, Jayson U.
17. Rebucal, John Ivan C.
18. So, Michael Eric A.
19. Teodorico, Karla Patricia Marie M.
20. Velos, Evan Jireh R.

# AE faculty and students attend the 11th Int'l AE Conference and Exhibition

by Dr. Greg M. Cubio

The faculty and students of the Agricultural Engineering Department presented four research papers during the 11th International Agricultural Engineering Conference and 64th PSAE Annual National Convention held at the Visayas State University (VSU), Baybay City, Leyte on April 21-25, 2014.

The following papers were presented in the parallel technical sessions: 1.) Biomass Energy from Agricultural Wastes: A Potential Solution to Power Crisis in Northern Mindanao by Greg M. Cubio, Arnel Chavez and Roel Ravanera, 2.) Bioethanol Yield from Simultaneous Saccharification and Fermentation of Cassava (*Manihot esculenta*) at Different Growing Conditions presented by Jan Hitchcliff Alba, 3.) Comparative Assessment of the Quality and Cost of Fish (*Sardinella fimbriata*) Drying Using Conventional Sun Dryer and Biomass-fueled Flat Bed Dryer by Roland J. Macana and Alexis Maristaza, and 4.) Bioethanol Potential and Land Suitability Mapping of Cassava (*Manihot esculenta*) Plantation in Selected Areas of Region 10 presented by Greg M Cubio.

The students also garnered different awards given by the Pre-Professional Group. Ms. Anna Marie Empeynado was crowned "Ms. PSAE 2014" while Mr. Bernie Daba was named "Mr. PSAE 2014". Likewise, among the series of competitions, a group of AE students composed of Faith Ann Ranises, Bernie Daba and Paul Barry Cornilla

(as team leader) garnered the third place in the National Tractor Rodeo Contest.

The event was attended by professional agricultural engineers from Germany, South Korea, Japan and from all over the Philippines. The theme for this celebration was "Agricultural Engineers: Harnessing Renewable Energy Technologies for Food Security and Climate Change Mitigation."

# KAAD grants scholarships to 4 AgSci faculty

by Terence Al L. Abaquita

The Katholischer Akademischer Ausländer-Dienst (KAAD) granted scholarships to four young Agricultural Sciences faculty members of Xavier University, to pursue their post-graduate studies in three universities in Germany.

Karl Wyne Abregana of Animal Science Unit and Anna Marie Hallasgo from Crop Science Unit will pursue Organic Agriculture and Food Systems in Hohenheim University at Stuttgart while Kevin Lloyd Cagalitan of Agricultural Economics Unit will study Agriculture and Food Economics at Bonn University.

Another faculty member of the department, Jerelyn Medalla of the Agricultural Economics Unit went back to Germany to finish her doctoral degree in Environmental Economics. She is scheduled to defend her dissertation at the Technical University of Hamburg-Harburg (TUHH) entitled "Economic and Logistical Assessment of the Different Sanitation Systems in Cagayan de Oro City."

The three left for Germany last May 29 while Medalla left last June 5, 2014.



# XUCA faculty members reap 13 Publication Awards

by Trinnah Marie M. Caracho

Thirteen Publication Awards out of 40 recipients were given to 7 faculty members of the College of Agriculture. The University President, Fr. Roberto C. Yap, S.J., officially announced the awardees in a memorandum last July 4, 2014.

The Publication Awards Committee was headed by XU Press Director, Evans Rosauo I. Yonson, with Dr. Gina S. Itchon and Dr. Ma. Theresa M. Rivera as members.

The Publication Awards were categorized according to the following:

Category 1 *Peer-reviewed research paper or literary/creative work published in a journal indexed in the Institute for Science Information (ISI) and/or Scopus.*

1. Agri-Systems variations determined through Principal Component Analysis by **Dr. Dennis Apuan** and **Mary Ann Mercurio** (published in *Advances in Agricultural and Botany-International Journal of the Bioflux Society Volume 6 No 1 ISSN 2067-6352 pp1-10*)
2. Characterization of Seawater Quality of Stressed Coastal Zone of Iligan City by **Dr. Dennis Apuan**, et al (published in *Advances in Agricultural and Botany-International Journal of the Bioflux Society Volume 6 No 1 ISSN 2067-6352 pp7-16*)
3. Measuring Magnitude of Treatment Effects in Agricultural Experiments by **Dr. Dennis Apuan** (published in *Advances in Agricultural and Botany-International Journal of the Bioflux Society Volume 6 No 1 ISSN 2067-6352 pp33-39*)
4. Real-time Analysis of Engine Power, Thermal Efficiency, and Emission Characteristics Using Refined and Transesterified Waste Vegetable Oil by **Greg Cubio**, et al (published in *Journal of Energy Resources Technology Vol 136 ISSN 0195-0738*)
5. Physico-chemical characteristics of microwave-dried wheat distillers grain with solubles by **Maria Rosario Mosqueda**, et al (published in *Journal of Microwave Power and Electromagnetic Energy Vol 47 No 3 pages 155-176 ISSN 0832-7823 2013*)

6. Effect of condensed distillers solubles and drying temperature on the physico-chemical characteristics of laboratory-prepared wheat distillers grain with solubles by **Maria Rosario Mosqueda**, et al (published in *International Journal of Agricultural and Biological Engineering Vol 6 No 2 I pages 73-86 ISSN 1934-6344 2013*)
7. Effect of drying conditions and level of condensed distillers solubles on the protein quality of wheat distillers fried grain with solubles by **Maria Rosario Mosqueda**, et al (published in *Drying Technology Vol 31 No 7 pages 811-824 ISSN 0737-3937 2013*)
8. Predicting the economics of X-ray inspection technology in sweet onion packinghouses using simulation modelling by **Maria Rosario Mosqueda**, et al (published in *Biosystems Engineering Vol 105 pages 139-147 ISSN 1537-5110 2010*)
9. Drying characteristics and lysine content of wheat distillers grain with solubles under three methods modelling by **Maria Rosario Mosqueda**, et al (published in *Drying Technology Vol 29 No 7 pages 797-807 ISSN 0737-3937 2011*)
10. Simulating onion packinghouse product flow for performance evaluation and education by **Maria Rosario Mosqueda**, et al (published in *Biosystems Engineering Vol 102 pages 135-142 ISSN 1537-5110 2009*)

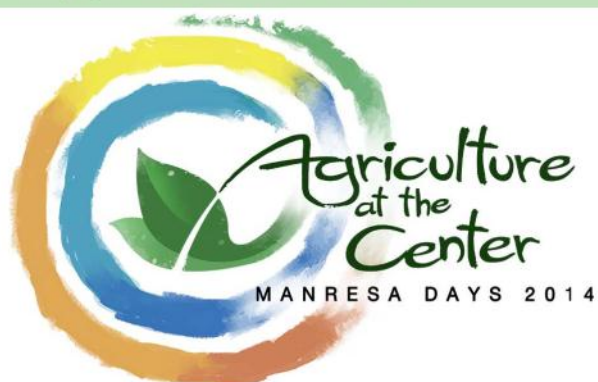
Category 2 *Peer-reviewed books, including literary/creative single-author novel or anthology published by a reputable international publisher.*

11. The Old and The New Media: Community Communication and Citizen Participation in a Tri-cultural Community in Mindanao by **Dr. Ma. Theresa Rivera** (published in *Communities in Action: Papers in Community Informatics ISBN (10) 1-4438-0959; ISBN (13) 978-1-4438-0959-7*)
12. Commercial Pressures on Land in Asia: An Overview by **Roel Ravanera** (published in *International Land Coalition (ILC), cirad, International Fund for Agricultural Development (IFAD) ISBN 978-92-95093-51-5*)

Category 5 *Peer-reviewed research paper on literary/creative work appearing in a national journal, monograph, or anthology, or as a chapter in a book.*

13. Large Scale Acquisition of Land Rights by **Roel Ravanera** (published in *Improving Land Sector Governance in the Philippines*)

The said awards included publications in the past five years (S.Y. 2008-2009 to S.Y. 2013-2014) which answered the University's call for quality research and creative writing.



## August 20 (Wednesday)

- |                    |                 |
|--------------------|-----------------|
| 12:00 nn           | Opening Mass    |
| 6:00 pm            | Opening Program |
| 5:00 pm - 10:00 pm | Food Sales      |

## August 21 (Thursday)

- |                   |  |
|-------------------|--|
| 5:30 am - 8:30 am | 5K Green Run   |
| 6:00 am - 5:00 pm | Manrazing Race - The Manresa Version of The Amazing Race |
| 6:00 am - 5:00 pm | Food Sales   |

## August 22 (Friday)

- |                    |                                 |
|--------------------|---------------------------------|
| 8:00 am - 11:00 pm | Food Sales                      |
| 8:00 am - 9:00 am  | Manresa Tours                   |
| 10:00 am - 4:00 pm | DevCom Puppet Theater           |
| 1:00 pm - 5:00 pm  | Rodeo sa Ateneo (Day 1)         |
| 2:00 pm            | High School Student Competition |
|                    | Quiz Bowl                       |
|                    | Essay Writing Contest           |
|                    | Poster Making Contest           |
| 7:00 pm - 11:00 pm | Mr. and Ms. Rodeo               |
|                    | Aggie Night                     |

## August 23 (Saturday)

- |                      |                         |
|----------------------|-------------------------|
| 8:00 am - 10:00 pm   | Food Sales              |
| 8:00 am - 5:00 pm    | Rodeo sa Ateneo (Day 2) |
| 9:00 am - 2:00 pm    | Alumni Business Meeting |
|                      | Mass and Boodle Lunch   |
| 10:00 am and 4:00 pm | DevCom Puppet Theater   |
| 5:00 pm - 6:00 pm    | Rodeo sa Ateneo         |
|                      | Awarding                |
|                      | Closing Ceremony        |
| 7:00 pm - 11:00 pm   | Alumni Fellowship Night |