



Republic of the Philippines  
**Department of Education**  
 REGION X  
**DIVISION OF CAGAYAN DE ORO CITY**

Division Memorandum  
 No. 133 s. 2020

ED-DIVISION OF CAGAYAN DE ORO  
 CAGAYAN DE ORO  
 February 24, 2020  
**RELEASED**  
 DATE: FEB 26 2020  
 BY: [Signature]

**AGGIE RESEARCH AND SOCIAL DEVELOPMENT (R&SD) FORUM**

**TO:** Cagayan de Oro National High School      Lumbia National High School  
 Mambuaya National High School              Pagatpat National High School  
 San Simon National High School  
 This Division

- Attached is a communication from Maria Rosario P. Mosqueda, PhD., Dean College of Agriculture, Xavier University, inviting on its Annual Aggie Research and Social Development (R&SD) Forum on February 26-27, 2020.
- School Heads are advised to send teachers and students to this activity with the number of participants listed below:

SCHOOL	NUMBER OF PARTICIPANTS	
	Teachers	Students
1. CDONHS	2	10
2. Lumbia NHS	1	4
3. Mambuaya	2	10
4. Pagatpat NHS	1	3
5. San Simon NHS	1	3

- For information, guidance and compliance.

**CHERRY MAE L. LIMBACO**  
 Schools Division Superintendent [Signature]

To be indicated in the Perpetual Index under the following subjects:  
 SHS Program-AFA-Organic Farming Research and Social Development



Address: Fr. William F. Masterson Avenue, Upper Balulang, Cagayan de Oro City  
 Telephone: (08822) – 8550048



**Xavier University**

ATENEO DE CAGAYAN

In Consortium with  
ATENEO DE DAVAO UNIVERSITY and  
ATENEO DE ZAMBOANGA UNIVERSITY

**COLLEGE OF AGRICULTURE**

18 February 2020

**Dr Cherry Mae L. Limbaco**  
**Schools Division Superintendent**  
**Department of Education**  
**Division of Cagayan de Oro**

**Through: Dr Jean S Macasero**  
**Division SHS Coordinator**

**Dear Dr Limbaco**

The College of Agriculture of Xavier University will hold its annual Aggie Research and Social Development (R&SD) Forum on February 26-27, 2020, where faculty, staff and students present and share their R&SD work to the University community and its development partners.

On February 26, our faculty and staff will share the output of their various R&SD engagements while our students will present their research work on the next day, February 27.

Thus, may we invite two (2) of your science teachers from Cagayan de Oro National High School and Mambuaya National High School to attend these presentations? We also invite 20 senior high school students from these schools to attend any of the parallel student research presentations on Animal Production, Natural Resource Management and Postharvest/Bioprocess Engineering/Food Processing?

Please let us know if there would be other interested schools who would like to attend these presentations. Because of limited space, we can only accommodate 2 additional schools.

Please see attached our program of activities as well as the list of plenary and parallel presentations for your consideration. The corresponding presentation venues are also reflected.

If you need more information or have queries, please do not hesitate to contact us at (088) 8539800 local 9301, [aggies@xu.edu.ph](mailto:aggies@xu.edu.ph), or at 0950 5250784 (please look for Caryl Apaap).

Our staff, Ms Caryl Mae A Apaap, will also follow up your office on this invitation.

We look forward to your favorable response.

Sincerely,

**Maria Rosario P Mosqueda, PhD**  
Dean, College of Agriculture

## **AGGIE RESEARCH AND SOCIAL DEVELOPMENT FORUM**

Xavier University College of Agriculture

Corrales Avenue, Cagayan de Oro City

Feb 26 – 27, 2020

### **PROGRAM OF ACTIVITIES**

#### **Feb 26, 2020**

8:30 – 9:00 AM	Registration
9:00 – 9:30 AM	Opening Program
9:30 – 11:00AM	Plenary Faculty Presentations
11:00 – 12:00 PM	Opening of Exhibits and Poster Presentation
1:30 – 4:00 PM	Parallel Faculty and Staff Presentations
	A. ICT-aided Extension Tools for Vegetable Farming Communities
	B. Communication and Social Development
	C. Manresa Projects and Product Demo
	D. Sharing of Faculty and Staff Industry Immersion Experiences

#### **Feb 27, 2020**

8:00 – 8:30 AM	Registration
8:30 – 9:00 AM	Plenary Session for Student Presentations
9:00 – 12:00 PM	Parallel Student Research Presentations
	A. Natural Resource Management
	B. Animal Production and Support Services
	C. Animal Production and Natural Resource Management
	D. Postharvest, Bioprocess Engineering and Food Processing
1:00 – 3:00 PM	Closing Program

## **AGGIE RESEARCH AND SOCIAL DEVELOPMENT FORUM**

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### **Opening Program**

**Feb 26, 2020, 8:30 AM – 12:00 PM**

**AVR-1, G/F Old Library Building**

- |                  |  |  |
|------------------|--|--|
| 8:30 – 9:00 AM   | Registration   |  |
| 9:00 – 9:30 AM   | Invocation<br>National Anthem  |  |
|                  | Welcome Remarks  | Maria Rosario P Mosqueda<br>XUCA Dean  |
|                  | Messages   | Roel R Ravanera<br>VP Social Development   |
|                  |  | Fr Mars P Tan SJ<br>Director, McKeough Marine Center<br>President-elect, Xavier University |
| 9:30 – 11:00 AM  | <b>Plenary Presentations</b>   |  |
| 9:30 – 9:45 AM   | Establishing a Soil Reference System for Agricultural Highlands of Northern Mindanao, The Philippines<br>Dr Guadalupe D Calalang, Professor, Agri and Biosystems Engineering Dept                                      |  |
| 9:45 – 10:00 AM  | Hydrogeology component of the BIMWAM Project<br>Mark Alexis O Sabines, PhD Researcher, BIMWAM Project  |  |
| 10:00 -10:15 AM  | Understanding household choice of drinking water: evidence from Opol and Medina, Misamis Oriental, Philippines<br>Adrian Boyet Agbon, PhD Researcher, BIMWAM Project   |  |
| 10:15 – 10:30 AM | ICT-aided vegetable farming needs assessment in selected IMTASULA barangays<br>Presenter: Maria Rosario P Mosqueda   |  |
| 10:30 – 10:45 AM | Improving the Abaca Value Chains for Selected Municipalities in Lanao del Sur to Enhance Agri-based Livelihoods of Internally Displaced Farmers Affected by the Marawi Conflict<br>Presenter: Maria Rosario P Mosqueda |  |
| 10:45 – 11:00 AM | Open Forum   |  |
| 11:00 – 12:00 PM | <b>Opening of Exhibits and Student Poster Presentation</b>   |  |

## AGGIE RESEARCH AND SOCIAL DEVELOPMENT FORUM

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Feb 26 – 27, 2020

### Student Poster Presentations

- 1 Performance Evaluation of the hand tractor in Manresa  
Art Isaac Evans Nacalaban, BS Agricultural Engineering
- 2 Design, fabrication, and evaluation of an efficient closed-type continuous process biomass carbonizer with waste heat recovery  
Renato Pahente Jr, BS Agricultural Engineering
- 3 Soil infiltration rates at different slope in Monigue, Dansolihon, Cagayan de Oro City  
Josefina Maurice Balbon, BS Agricultural Engineering
- 4 Acceptability of Duck Meat Crackers Among Students of Xavier University, Ateneo de Cagayan  
Ralph Bentuzal, John Paul L Cornillo, John Philip Flores, and Ben Kailon Lagbas, BS Agribusiness
- 5 Proximate Analysis and Shelf-life Study of Carrot-Kropek in Food Technology Center, Manresa  
Miguel Fenton Neri, BS Food Technology
- 6 Growth Performance of Broiler Chicken (*Gallus gallus*) as Affected by Processed Jackfruit Seeds (*Arthocarpus heterophylus*) at Different Feed Inclusion Levels  
Paul Rommie Semaña, BS Agriculture
- 7 Nutrient Value of House Crickets (*Acheta domesticus*) Meal as Affected by Different Substrates (Cabbage, Fish Entrails and Their Combination)  
Joah Joloyohoy, BS Agriculture

## **AGGIE RESEARCH AND SOCIAL DEVELOPMENT FORUM**

Xavier University College of Agriculture

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Feb 26 – 27, 2020

### **Day 1 PM: Parallel Sessions**

#### **A. ICT-aided Extension Tools for Vegetable Farming Communities      Venue: AVR-1, G/F Old Library**

- 1:30 – 1:45 PM      Overview of the I-CHIVES Project
- 1:45 – 2:00 PM      Para-Technician Training Program
- 2:00 – 3:00 PM      Agri-Technician's High Value Vegetables Extension and Information Apps (ATHEina)
- a. Pest ICA
  - b. Aboknow
  - c. Farm Bill
  - d. LAPS
  - e. Food Lives
  - f. PrAMIS
- 3:00 – 3:15 PM      Break
- 3:15 – 3:30 PM      Veggie Likes: A web-based resource information system for vegetable farmers and stakeholders in Northern Mindanao
- 3:30 – 3:45 PM      Open Forum

#### **B. Communication and Social Development      Venue: AVR-4, G/F SBM Building**

- 1:30 – 1:45 PM      Words, images, narratives: the social representations of migratory experiences and multidimensional identities of Filipino youth migrants in Rome  
Shiella C Balbutin, Development Communication Department
- 1:45 – 2:00 PM      Framing War: Analyzing the News Coverage of Mindanao Gold Star Daily on the Marawi Siege  
Rechelle Ann T Barraquias, Development Communication Department
- 2:00 – 2:15 PM      Information and Communication Needs of Selected High Value Vegetable Farming Communities in Bukidnon  
Gyllen P Sanchez, I-CHIVES Project Staff
- 2:15 – 2:30 PM      Open Forum
- 2:30 – 2:45 PM      Break

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- 2:45 – 3:00 PM Promotion of Sustainable Adoption of Agricultural Technologies (Black Soldier Fly and Self-Circulating Hydroponics) to Students of Balulang Elementary School, Cagayan de Oro City  
PAA Jrs.
- 3:00 – 3:15 PM Soil Morphological and Physical Characterization of Irrigated Agricultural Areas (A Service Learning Program with LGU Talakag)  
Regem Jose Marie Panal, BS Agricultural Engineering
- 3:15 – 3:30 PM Community assessment on the existing farming management practices in Indahag, Cagayan de Oro City (A Service Learning Program with Barangay Indahag)  
Joah Joloyohoy, BS Agriculture
- 3:30 – 3:45 PM I am Mindanao  
Joshua Delos Reyes, BS Development Communication
- 3:45 – 4:00 PM Open Forum

### **C. Manresa Projects and Product Demo**

**Venue: AVR-6, G/F SBM Building**

- 1:30 – 1:50 PM BIGMO Complementary Food Products  
Sylvia T Aguhob and Josie L Igloria, Food Technology Department
- 1:50 – 2:10 PM Establishing Herbal and Butterfly Gardens  
Judith T Pit, Agricultural Sciences Department
- 2:10 – 2:30 PM Village-level biocontrol laboratory  
Judith T Pit, Agricultural Sciences Department
- 2:30 – 3:00 PM Open Forum
- 3:00 – 3:10 PM Snacks

### **D. Faculty and Staff Industry Immersion Experiences**

**Venue: AVR-7, G/F Old Library Building**

- 1:30 – 1:45 PM Global Mindanaw Agri-Ventures Corporation: Broiler and Macapuno Enterprises  
Alexis G Maristaza, Agricultural and Biosystems Engineering Department
- 1:45 – 2:00 PM Global Mindanaw Agri-Ventures Corporation: Coco sugar production

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Veneranda T Larroza, Agribusiness Program

2:00 – 2:15 PM

Bangko sa Balay Foundation, Inc.  
Jerelyn B Medalla, Agribusiness Program

2:15 – 2:30 PM

Open Forum

2:30 – 2:45 PM

Break

2:45 – 3:00 PM

Harbest Agribusiness Corporation  
Elenito B Duran, Agribusiness Program

3:00 – 3:15 PM

Northern Mindanao Federation of Dairy Cooperatives (Milk Processing Plant)  
Josie L Igloria and Belinda R Bonita, Food Technology Department

3:15 – 3:30 PM

Anakciano Inc. Feedmill Division  
Elynor S Supremo, Agricultural Sciences Department

3:30 – 3:45 PM

CSU Tissue Culture Laboratory  
Lorena G Jubilan, Agricultural Sciences Department

3:45 – 4:00 PM

Open Forum



**AGGIE RESEARCH AND SOCIAL DEVELOPMENT FORUM**

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**Day 2 AM – Student Research Plenary Session**

**Feb 27, 2020, 8:00 AM – 9:00 AM**

**Venue: AVR-1, G/F Old Library Building**

8:00 – 8:30 AM

Registration

8:30 – 9:00 AM

Invocation  
National Anthem

Welcome Remarks

Veneranda T Larroza  
XUCA Assistant Dean

Message

Heide R Rabanes, PhD  
Dean for Research

Overview and Mechanics of Student  
Research Presentations

Alexis G Maristaza  
XUCA Research Coordinator

Break

## AGGIE RESEARCH AND SOCIAL DEVELOPMENT FORUM

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### Day 2 AM – Student Research Parallel Presentations

#### A. Natural Resource Management

Venue: AVR-1, G/F Old Library Building

Time	Presentation Title
9:00 – 9:15 AM	Design and Development of Vertical Gravity-Type Drip Irrigation System using Locally Available Materials in Cagayan de Oro City, Misamis Oriental Aliyah Cabilin, BS Agricultural Engineering
9:15 – 9:30 AM	Design and evaluation of a small-scale vertical aquaponic system Regem Jose Marie Panal, BS Agricultural Engineering
9:30 – 9:45 AM	Design, installation, and assessment of hand-tractor powered irrigation pump in Manresa Alvin Tamse, BS Agricultural Engineering
9:45 – 10:00 AM	Open Forum
10:00 – 10:10 AM	Break
10:10 – 10:25 AM	Planform change of Agus River in Balo-I, Lanao del Norte in Year 2004 - 2019 using high resolution Google Earth Images Cleo Andrea Piloton, BS Agricultural Engineering
10:25 – 10:40 AM	Design and development of filtering system for drinking water in Manresa using locally available material Maria Regina Cabarubias, BS Agricultural Engineering
10:40 – 10:50 AM	Open Forum
10:50 – 11:05 AM	Physico-chemical characterization of soil under semi-cultivated land in Damilag, Manolo Fortich, Bukidnon Paula Dedumo, BS Agricultural Engineering
11:05 – 11:20 AM	Quantitative soil erosion measurement using mesh bag method in Manresa Farm Jesse Kyle Apepe, BS Agricultural Engineering
11:20 – 11:35 AM	Soil infiltration rates in upland areas of Brgy Mananum, Medina, Misamis Oriental Homer Abaday Jr, BS Agricultural Engineering
11:35 – 11:50 AM	Open Forum

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### **B. Animal Production and Support Services**

**Venue: AVR-4, G/F SBM Building**

<b>Time</b>	<b>Presentation Title</b>
9:15 – 9:30 AM	Performance Evaluation of the Micro Feed Mixer in Manresa Ivan Clyde Sulay, BS Agricultural Engineering
9:30 – 9:45 AM	Nutrient Value of House Crickets ( <i>Acheta domesticus</i> ) Meal as Affected by Different Substrates (Cabbage, Fish Entrails and Their Combination) Joan Joloyohoy, BS Agriculture
9:45 – 10:00 AM	Nutrient Value of Super Worm ( <i>Zophoba morio</i> ) Meal Feed with Different Combinations of Dried Fish Entrails and Vegetable Waste (Cabbage, Carrots and Squash) Kate Nicole Yamaro, BS Agriculture
10:00 – 10:15 AM	Open Forum
10:15 – 10:25 AM	Break
10:25 – 10:40 AM	Design, Fabrication, and Assessment of Arduino-Based Automated Switching System for Egg Incubator with Dual Heat Source April Rose Gador, BS Agricultural Engineering
10:40 – 10:55AM	Comparative Study on the Egg Laying Efficiency of Itik Pinas and Local Mixed Breed of Ducks in Selected Areas in Misamis Oriental Christian Jan Aguilar, BS Agriculture
10:55 – 11:10 AM	A Comparative Study on the Microflora in Table Eggs of Caged and Free Range Layer Chickens in Manresa Farm Patrick Raphael Cornilla, BS Agriculture
11:10 – 11:20 AM	Open Forum

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### C. Animal Production and Natural Resource Management

Venue: AVR-5, G/F SBM Building

Time	Presentation Title
9:15 – 9:30 AM	Comparative Study on the Anthelmintic Activity of Ethnobotanical Atun ( <i>Areca catechu</i> ) Against Native Chicken Gastrointestinal Parasite ( <i>Ascaridia galli</i> ) in Vitro Geonara Abejero, BS Agriculture
9:30 – 9:45 AM	Growth Performance of White Leghorn Male Chicken Fed with Sprouted Corn Fodder in Limited Range System Ian Kit Paye, BS Agriculture
9:45 – 10:00 AM	Growth Performance of Broiler Chicken ( <i>Gallus gallus</i> ) as Affected by Processed Jackfruit Seeds ( <i>Artocarpus heterophyllus</i> ) at Different Feed Inclusion Levels Paul Rommie Semaña, BS Agriculture
10:00 – 10:15 AM	Production Performance of Broilers as Affected by Oregano Given as Feed Supplement Jo Francis Guinayon, BS Agriculture
10:15 – 10:35 AM	Open Forum
10:35 – 10:45 AM	Break
10:45 – 11:00 AM	Agriculture and Biosystem Engineer (ABE) Tracks: A Mobile Surveying Application for General Land Survey, Crop Production Estimates, and Project Management in Farm to Market Road Nicasio Mendija Jr, BS Agricultural Engineering
11:00 – 11:15 AM	Different Utilization of <i>Salvinia</i> ( <i>Salvinia molesta</i> ) as Soil Ameliorant Levi Pecision, BS Agriculture
11:15 – 11:30 AM	Open Forum

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**D. Postharvest, Bioprocess Engineering and Food Processing**  
**Session Moderator: Sylvia T Aguhob**

**Venue: AVR-6, G/F SBM Building**

<b>Time</b>	<b>Presentation Title</b>
9:15 – 9:30 AM	Homemade BIGMO Pancake Pre-Mix: Its Proximate, Microbial and Nutritive Value Tyra Taj Neri, BS Food Technology
9:30 – 9:45 AM	Hazard Analysis and Critical Control Points on the Production of BIGMO Kropek Lorren Rosabal, BS Food Technology
9:45 – 10:00 AM	Proximate test and nutritive value of two randomly selected brands of turmeric tea Galileo Eleseo, BS Food Technology
10:00 – 10:15 AM	Open Forum
10:15 – 10:25 AM	Break
10:25 – 10:40 AM	Design and Development of Laboratory-Scale Mechanical Dryer Trainer John Paul Jalayahay, , BS Agricultural Engineering
	Improving the Fermentation Process of Smallholder Cacao Farmers Joe Zandro Dumago, BS Agricultural Engineering
10:40 – 10:50 AM	Open Forum
10:50 – 11:05 AM	Development of Pineapple Pulp Waste for the Production of Biofuel Briquettes Antonio Tan Jr, BS Agricultural Engineering
11:05 – 11:20 AM	Potential of waste cabbage leaves for briquetting material Marc Jade Savarez, BS Agricultural Engineering
11:20 – 11:30 AM	Open Forum

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**Day 2 PM – Closing Program**

**Feb 27, 2020, 1:30 – 3:00 PM**

**Venue: AVR-1, G/F Old Library Building**

1:00 – 1:30 AM

Registration

1:30 – 3:00 PM

Invocation

Recap of Student Presentations

Alexis G Maristaza  
XUCA Research Coordinator

Recognition of Outstanding Student  
Presenters (Oral and Poster Sessions)

Alexis G Maristaza  
XUCA Research Coordinator

Veneranda T Larroza  
XUCA Asst Dean

Recognition of Faculty and Staff Involved in  
Completed Research and Social  
Development Projects

Maria Rosario P Mosqueda  
XUCA Dean

Heide R Rabanes, PhD  
Dean for Research

Impressions

Closing Remarks

Judith T Pit  
MFAD Director