



Ilocos S & T Trends



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ILOCOS FARMERS SAY CARRAGEENAN IS EFFECTIVE

By: **Florde Liza L. Alida**, DOST 1

Despite the continuous monsoon rains that flooded the ricefields and strong winds brought by typhoon Ompong during the testing of Carrageenan Plant Growth Promoter (CPGP) for wet season in Ilocos Norte and Ilocos Sur, it was able to record positive impacts on the yield of rice as presented during the Carrageenan Field Day at the Ilocos Norte Experimental Center of the Department of Agriculture (DA) in Dingras, Ilocos Norte recently.

One of the impacts echoed during the event is the increase in plant height, panicle length, and the number of filled grains, thus eventually increase the grain yield from 5.13 to 5.39 tons per hectare.

There were four treatments during the wet season testing. First treatment is the application of full granular fertilizer, a farmers practice based on soil analysis; second is the application of half recommended rate of granular fertilizer; third is the application of full granular fertilizer with nine liters of CPGP per hectare; and finally the application of half recommended rate of granular fertilizer with 9 li/ha of CPGP.

Most of the favorable impacts were gathered from the applied cluster of full granular fertilizer plus nine liters per hectare of CPGP. It has been recalled that a total of 1,059 hectares were planted by 1,735 farmers in Ilocos Norte and Ilocos Sur for the testing of CPGP.

(continued in page 3...)



A DOST Region 1 cooperator in the testing of Carrageenan PGP showed off her harvest during the Farmer's Field Day in Dingras, Ilocos Norte last December.

Photo taken by DA-R1



Farmers show rice applied with Carrageenan PGP to Ms. Felicidad M. Gan (Center), Project Leader of DOST Region 1 during the on-site demo of the technology in Dingras, Ilocos Norte last December.

Photo taken by DA-R1

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Community



In Science Biology, community is defined as a group of organisms that live together and interact with one another within their habitat. It is formed by different group of species which unite and partake from each other in order to have a dynamic and ecologically sound environment.

That “CommUnity” scenario has been relative to the 2018 Regional Science and Technology Week (RSTW) celebration cum S&T Caravan held in Alaminos City, Pangasinan last September 18-21. This region-wide event became the avenue of the Department of Science and Technology (DOST) researchers to showcase more than 80 newly developed technologies through technology fora, technology training, exhibits, and interactive exhibits. The event also served as one-stop-shop of DOST programs and services including its partner institutions such as State Universities and Colleges (SUCs) and various private institutions within and outside the region.

In line with the three pillars of AmBisyon Natin 2040- malasakit, pagbabago, and patuloy na pag-unlad, this 4-day 2018 RSTW celebration has crossed a mile to provide opportunities and address S&T issues in the community. This remarkable event benefitted by more than 16,000 individuals from the whole of Region 1 was able to share innovative ideas and technologies in enhancing agricultural and industrial productivity, advancement of health and nutrition, business, waste management, and other priority sectors.

Moreover, adaption and application of those innovations may be the most challenging, thus the DOST Region 1 and the local government of Alaminos City created the Alaminos City Science and Technology Coordinating Council (ASTCC) to strengthen connections between S&T and the community.

Kudos to Hon. Arturo F. Celeste, Mayor of Alaminos City, for his strong dedication and coordination for this 2018 RSTW. DOST Region 1 also extends its gratitude and appreciation to everyone who participated in the event. Indeed, this endeavor has shown our unity as one community through S&T. With the theme, “Science for the People: Innovation for Collective Prosperity”, the DOST 1 looks forward for a prosperous Alaminos, and Region 1 as a whole.


Florde Liza L. Alida
Editor-in-Chief



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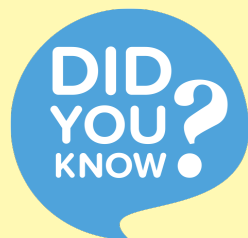
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S&T Trivia



..... “You are more bacteria than you are you! The average human body is made up of 90% bacteria and only 10% human cells. Because of their small size, however, microorganisms make up only about 1 to 3 percent of the body’s mass. (In a 200-pound adult, that’s 2 to 6 pounds of bacteria.)”

..... “The average cumulus cloud contains about 500,000,000 grams of water which equals approximately 1.1 million pounds. That nice, white fluffy cloud floating over your head weighs as much as 100 elephants!”

.... “The average person has about 5 liters of blood, and the average heart pumps about 70 ml of blood with each beat. If your heart rate is 70 beats per minute, it will pump about 4.9 liters of blood (70 beats X 70 ml) in one minute, which is roughly your entire blood supply. So an individual blood cell should make a complete circuit of the body at least once every 60 seconds.”

21ST CENTURY MODEL CLASSROOM, A DREAM FOR NEW SCIENCE HIGH SCHOOL IN LAOAG

By: Florde Liza L. Alida, DOST 1



The RCGFJ NSHS benchmarking team undergoes orientation at PSHS Main Campus in Quezon City, Manila.

“The 21st Century Model Classroom of the Department of Science and Technology-Science Education Institute’s (DOST-SEI) is possible for the Rodolfo CG Fariñas Jr. National Science High School (RCGFJ NSHS),” said Dr. Edmund Edison A. Esteban, Director of the Ilocos Norte Science Community (INSC) after a benchmarking activity was held recently at the three campuses of Philippine Science High School (PSHS) and various research institutions of DOST.

The benchmarking activity, which was spearheaded by the DOST Region 1 through its Provincial Science and Technology Center in Ilocos Norte (PSTC-IN) was held in preparation for the establishment of the RCGFJ NSHS in Laoag City. The benchmarking team was composed of representatives from the Department of Education (DepEd), teachers, representatives from the local government unit of Laoag City, and Ilocos Norte Science Community (INSC).

The PSHS campuses visited were PSHS- Ilocos Region Campus in San Ildefonso, Ilocos Sur; PSHS- Central Luzon Campus in Clark, Pampanga, and PSHS- Main Campus in Quezon City, Metro Manila. Laboratories of DOST research institutions were also visited such as DOST- Food and Nutrition Research Institute (DOST-FNRI), DOST- Science Education Institute (DOST-SEI), DOST- Metals Industry Research and Development Center (DOST- MIRDC), and DOST- Philippine Textile Research Institute (DOST- PTRI). Among the discussions to the participants are the PSHS system being currently followed, laboratory standards and operations and its facilities and equipment, building set-up, and the 21st Century Model Classroom in DOST-SEI.

After the visit, the benchmarking team from the different stakeholders will push for the crafting of proposals based from the sites they have visited and will be presented during the meetings of the different government agencies involved.

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Meanwhile, the same group of farmers has already established their farms for testing of CPGP this upcoming dry season, where no typhoons are expected to possibly disturb the testing process.

The piloting of Carrageenan Plant Growth Promoter is a joint project of the Department of Science and Technology (DOST) and Department of Agriculture (DA) in Region 1 that aims to enhance farmer’s productivity on rice.



ICIEERD RECOGNIZES RESEARCHERS IN REGION 1

As it stands firmly to its agenda in pushing science, technology, and innovation for community advancement, the Ilocos Consortium for Industry, Energy, and Emerging Technology Research and Development (ICIEERD) honored outstanding researchers from the different State Universities and Colleges (SUCs) in Region 1. This was highlighted during the recently held ICIEERD Regional Symposium at the Agro-forestry Complex of the Don Mariano Marcos Memorial State University (DMMMSU), Bacnotan, La Union.

During the symposium, three winning research papers were selected. The research papers were focused on the sustainability of energy and health advancement. Dr. Emie Salamangkit- Mirasol and Dr. Andrew C. Doño from MMSU presented the "Solid State Synthesis of Bulk Lithium Lanthanum Titanate Lithium Ion Conducting Solid Electrolyte" and "Development of Fe-Doped Amorphous Nanosilica from Philippine Waste Rice Hull as Anode Material for Lithium Battery," respectively while the "NUTRIVISION: A mobile-based application for Nutrition Awareness using Photo recognition" was also presented by Mr. Arnel Oday from the Urdaneta City University.

Further, 11 researchers competed for the search for Best Research Papers for the professional and student categories. The research titled, "Rope out of Snake Plants" of Patrick S. Gasmen and Henedina D. Barayuga from Ilocos Sur Polytechnic State College (ISPSC) bagged the Best Research Paper for Professional Category, while the research on "Design, Construction and Performance Evaluation of a three-row hand tractor drawn corn seeder" of Mark Chan A. Ganaden from Pangasinan State University (PSU) bested the other entries under the student category.

Among the 18 competing researchers, Mr. Melben C. Rimando, and his team from Don Mariano Marcos Memorial State University – MLU Campus garnered the Best Poster award with their Dual-Powered, Dual-Chamber Dehydrator.

ICIEERD is a regional consortium composed of various government and private institutions supported by the Philippine Council for Industry, Energy and Emerging Technology Research Development (PCIEERD). It is mandated to lead the development of regional competence in research and development in strategic areas of industry, energy and emerging technology sectors in the region towards a sustainable, socio-economic development.

TV, COMPUTER SET REACH OUT PRIMARY SCHOOL IN IS

Teachers and students of Aguiwas Primary School in Barangay Kiat in Alilem, Ilocos Sur lit up their smiles after receiving the free set of Smart Tv, computer, and printer from the Department of Science and Technology- Community Empowerment through Science and Technology (DOST-CEST) program last December 6, 2018.

The facilities were provided as interventions in upgrading science, technology, and mathematics literacy in the school.

These were installed with upgraded science and mathematics modules, including 4D images that enables students to view the actual movement and characteristics of an object.



The photos show teachers and students of Aguiwas Primary School in Kiat, Alilem, Ilocos Sur during the turn-over and demo of Smart TV, computer Set, and S&T Modules.

A DOST SCHOLAR, BOARD TOPNOTCHER SHARES HER STORIES

By: **Florde Liza L. Alida**, DOST 1

Once there was a girl who dreamt of becoming a successful engineer someday. Her attention and adoration were envious to every woman who tops the licensure exams for engineers, and whose tarps were carefully mounted with honour and pride, admired and praised by everyone who passes by.

"Count Me In!"

"Destiny is not a matter of chance. It's a matter of choice," said Engr. Ferren M. Velasco, whose wish was fulfilled when she bagged the 8th place in this year's Electronics and Communications Engineering (ECE) Licensure Examination in October 2018.

Engr. Velasco was raised in Lingayen Pangasinan with the guidance and support of her parents, Mr. Fernando Velasco and Anita Velasco. She is a scholar of the Department of Science and Technology (DOST) under Republic Act 10612 and graduated as Magna Cum Laude in BS ECE at the Colegio De Dagupan.

"Persevere. Nothing is impossible to a willing heart infused with continued effort and determination," added by the able engineer. This inspiring quote from her may lead everyone to realize the importance of pouring countless effort to achieve ones goals. Her success was supported by joining organizations like being an active member of the Institute of Electronics Engineers of the Philippines (IECEP). She also championed the 2017 IECEP Regional Quiz Show held at Lyceum-Northwestern University, Dagupan City, a 3rd placer of the Titus Dagupan Doodle Competition, and more.

Moreover, Engr. Velasco is also a winner from stress and deadlines in school. She said that being BS ECE student is stressful due to challenging tasks like reviewing for exam and doing projects at the same time. But she did not procrastinate things, instead she always ensures that all tasks were get done before the deadline.



Photo Credits: Colegio de Dagupan



Photo Credits: Colegio de Dagupan

Her Best Shots!

Despite pressures due to high expectation of people around her for being a scholar and a Magna Cum Laude, Engr. Velasco still gave her best to prepare for her licensure exam. She learned to wake up every day with a goal that she has to achieve- there shouldn't be wasted time in learning, read more, watch a lot of educational videos, conduct mock up exams, and more. She continued the routine with the help and guidance of the review center, where she's been longing to enrol in.

For her, aiming the top is the right thing, and giving your best will make it happen. However, she advised that everyone should be prepared with disappointments and failures.

"Dapat prepared din sa mga disappointments na maaaring dumating. Expect less and you'll be surprised," the engineer said. She added that praying is also one of the most significant contributory factors of her achievements.

Being a DOST Scholar

"Always remember that the price of greatness is responsibility. Study smart and inspire others. Don't let a day pass without learning," the Engineer's advice to current DOST scholars.

Engr. Velasco failed once, but was able to get on the track again. Despite failures in one of her exams before, she found ways to avail the DOST's scholarship program. She said that the scholarship has been a huge help in defraying her expenses in school. Aside from this, she was able to buy gadgets where she can make her school requirements easily. She also managed to save money from her monthly stipend for her review in Manila.

"Thank you for the trust and for investing on me. I hope that one day I can give back to the Filipino people by serving the country," added Engineer Velasco.

As she said, "Great scholarship comes with great responsibilities." The engineer will be working as educator in a Junior High School as part of her service obligation. She is also preparing to her next step- to become a technological innovator in the future.



Farmers get Multi Commodity Solar Tunnel Dryer

Two groups of farmers in Barangay Licungan and Danac of Sugpon, Ilocos Sur now ensure safe and clean drying of products like ube and coffee after receiving the Multi Commodity Solar Tunnel Dryer (MCSTD shown in the photo above) from the Department of Science and Technology Region 1 (DOST 1) through its Community Empowerment through Science and Technology (CEST) Program in December 2018.

The 2 units of MCSTD were awarded to Licungan Coffee Growers Association (LCGA) in Barangay Licungan and Danac Ube Processors Association (DUPA) in Barangay Danac, both from the Municipality of Sugpon, province of Ilocos Sur, having 23 and 15 members, respectively.

The two associations have undergone several livelihood trainings on ube and coffee growing and processing. Thus, the facilities were provided for continuous development of their ube and coffee products. Additionally, the facility will serve as an Income Generating Project (IGP), which will offer drying facilities to non-members.

The Municipality of Sugpon is one of the assisted communities of DOST 1- CEST program. CEST program focuses on the development of communities in the countryside using science and technology based solutions. It basically eyes five areas for intervention namely, education, disaster risk reduction, livelihood, health, and food safety.

IMBENSIYON DAGITI PINOY NAIPAKITA SADIAY ILOCOS

Naiparang iti publiko dagiti naduma-duma nga klase ti imbensyon ti Pilipino manipud nadumaduma a rehiyon kas passet ti panakaangay ti National Inventors Week (NIW) sadiay Teatro Ilocandia, Mariano Marcos State University (MMSU), Siyudad ti Batac, sadiay probinsya ti Ilocos Norte idi Nobyembre 20 inggana 23, 2018 babaen iti tema, "Inventorpinoy para iti naan-anay a panagdur-as."

Daytoy nga aktibidad ket indauluan ti Filipino Inventors Society Producer Cooperative (FISPC) iti panakibinnulig ti Department of Science and Technology – Region 1 (DOST 1), Technology Application and Promotion Institute (TAPI), ken ti Gobyerno Provincial ti Ilocos Norte, ken ti Siyudad ti Batac.

Malaksid ti exhibits, napagsasaritaan met idi taripnong ti intellectual property rights, dagiti programa ti gobyerno panggep iti panag negosyo, ken naimballigian nga aramid iti akademya ken negosyante. Naiparang met dagiti magatgatang nga produkto nga inaramid dagiti Micro Small Medium Enterprises (MSMEs) nga inasistaran ti DOST ken MMSU.

Ti National Inventors Week ket tinawen nga maisaysayangkat tapno mapadayawan ti kinasirib dagiti Pilipino iti benneg ti siyensya, imbensyon, ken teknolohiya. Gundaway met daytoy a mangtulong ken mangawis kadagiti indibidwal nga adaan abilidad iti panag imbento babaen iti panangipaay ti ideya ken panangidanon kadagiti programa ken serbisyo ti gobyerno a makatulong kadakuada.



Filipino inventions wow DOST officials and Local Government officials led by Secretary Fortunato T. de la Peña and Hon. Matthew Manotoc during the National Inventions Week in Ilocos Norte last November.

DOST-SEI SCHOLAR-GRADS NOW LICENSED TEACHERS

By: Nialle Loui Mar Alcantara

In the waning hours of a Friday afternoon, the Professional Regulation Commission (PRC) became bearers of good (and bad) news to a staggering 90,750 elementary level and 126,582 secondary level examinees of the Licensure Examination for Teachers (LET) held last September 30, 2018 at different PRC testing centers located at key cities in the Philippines.

On the 7th day of December 2018, fifty two (52) long days after the exam, the growing pool of teachers in the country welcomed a much needed addition to their ranks – 18,409 elementary and 60,803 secondary teachers. And among those who passed the said exam, the Department of Science and Technology – Science Education Institute (DOST-SEI) boasts a total of seventy (70) new scholar-graduate teachers from Region 1.

Out of the 70 scholar-graduates, a remarkable thirty three (33) passers from the Pangasinan State University; fifteen (15) from the Don Mariano Marcos Memorial State University; seven (7) hailed from Mariano Marcos State University; five (5) from the University of Northern Philippines; four (4) coming from Saint Louis College; another four (4) from the Colegio de Dagupan; and one (1) apiece from the Ilocos Sur Polytechnic State College and the Panpacific University North Philippines.

While DOST-SEI continuously supports deserving students enrolled under S&T courses by extending financial assistance to them in terms of their different scholarship programs, it also helps scholar-graduates to be employed immediately as teachers of science and mathematics in private or public secondary schools as response to its mandate of “accelerating the pace of knowledge-driven development in accordance with the S&T human resource growth potential in the country.”



Scholar-graduates of the Department of Science and Technology (DOST) in Region 1 proudly show their best pose after receiving the Seal of Academic Excellence during the recognition of DOST scholars themed, "In Touch with Excellence" held at Rose Bowl Restaurant in Bauang, La Union.

Overall, this marks as an achievement, not just to the scholar-graduates who passed the licensure exam, but also to DOST-SEI as they have, slowly but surely, been filling up the pool of qualified S&T human resources who, one day, can steer the country towards national progress. And surely, these newly passed scholar-graduates turned teachers may end up encouraging some of their future students to pursue S&T related courses – making it a cycle that will certainly continue through the succeeding years.

RESEARCHERS RAISE 17 PROPOSALS TO ENHANCE PRODUCTIVITY OF MSMES

A total of 17 research proposals were raised recently through the Ilocos Consortium for Industry, Energy, and Emerging Technology Research and Development (ICIEERD) after researchers, local executives, policy makers, and micro, small, and medium enterprises gathered to discuss and address concerns that hamper productivity of the different industrial sectors in the region.

The 17 proposals covered three thematic areas namely, Food, Creative Industries and Textile Industries; Furniture Industry, Materials and Equipment for the Construction Industry; and Environment, and Renewable Energy Technologies, and Disaster Risk Reduction and Management with 7, 3, and 7 proposals, respectively.

The proponents are composed of researchers from the different member-agencies of ICIEERD, namely, the Don Mariano Marcos Memorial State University, Mariano Marcos State University, Urdaneta City University, LGU City of San Fernando, La Union, Mines and Geosciences Bureau- Region I, Pangasinan State University, Northwestern University, University of Northern Philippines, and Ilocos Sur Polytechnic State College.

The papers will undergo evaluation and will be endorsed to the Department of Science and Technology- Philippine Council for Industry, Energy and Emerging Technology Research and Development for possible funding.



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