



# PHilMech

Quarterly Publication of the Philippine Center  
for Postharvest Development and Mechanization **NEWSLETTER**



*Covid-19 Response Project of PHilMech*

# MECHANICAL ONION & VEGETABLE SEEDER

**IN THIS ISSUE:**

*Making a Difference with Mechanization  
PHilMech attains IMS certification anew  
Newly conferred, upgraded scientists*



# ON THE COVER

Operation of the Multi-row Mechanical Onion Seeder by Sapang Multi-Purpose Cooperative (SMP) in Moncada, Tarlac

Photo by Don Miguel C. Capariño

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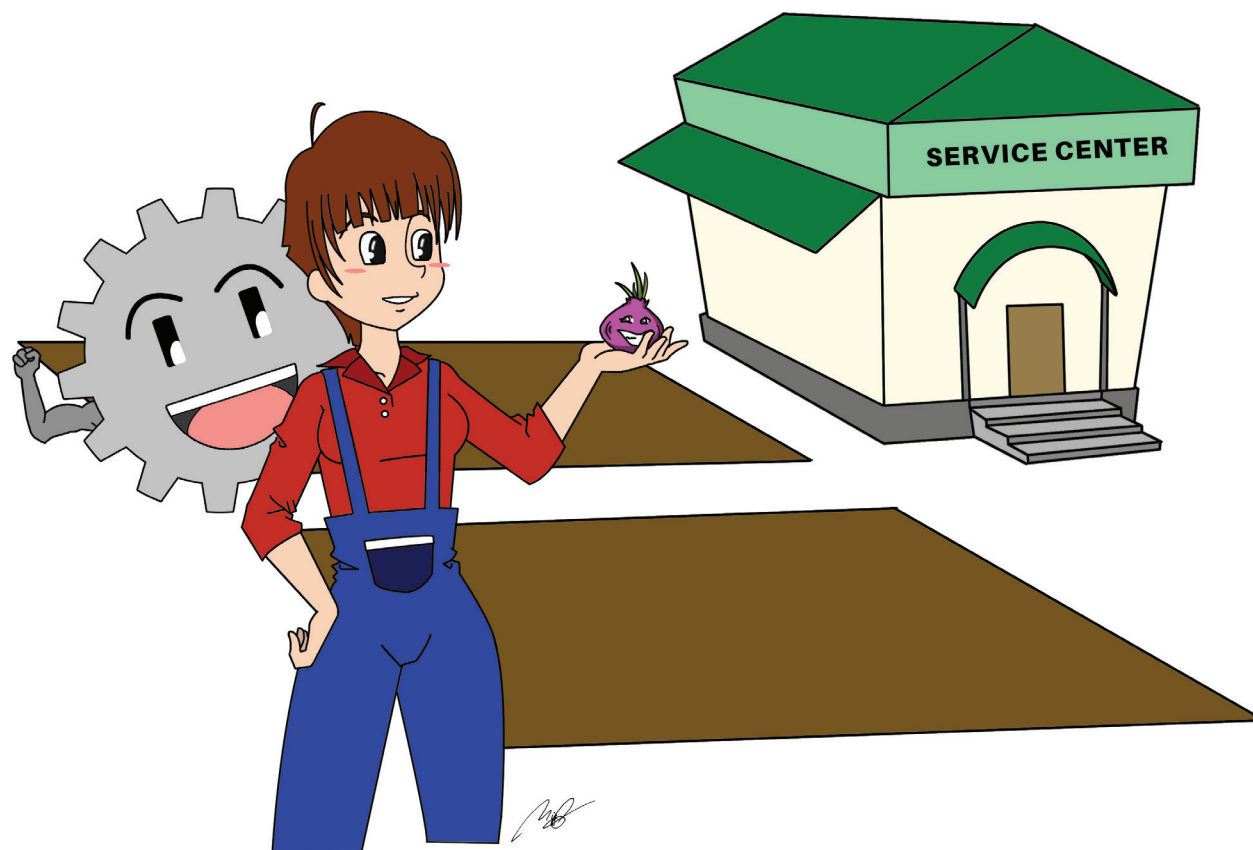
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## Onion and Vegetable Seeder

Planting of onion and vegetables is laborious, time-consuming and costly. Mechanizing the operation addresses these problems.

The Philippine Center for Postharvest Development and Mechanization (PHilMech) developed a mechanical seeder for onions (10-row and 12-row) and which can also be used for vegetables. This technology intervention is being pilot tested

under the Covid-19 response project, "Piloting of Modules for the Provision of Mechanized Planting of Onion and Other Vegetables."

The project aims to mechanize onion planting and other vegetables to farmers through the provision of a service center. This service center provides equipment for mechanized land preparation as well as mechanized planting

using the PHilMech 10 and 12-row mechanical seeders. Technology demonstration sites have also been established to create awareness and accelerate the adoption of the technology among farmers.

This issue of the newsletter gives updates on the pilot test and technology demonstration activities being conducted in the different parts of Luzon.

# PSABE familiarizes on PHilMech cacao technologies

## TWENTY-ONE MEMBERS

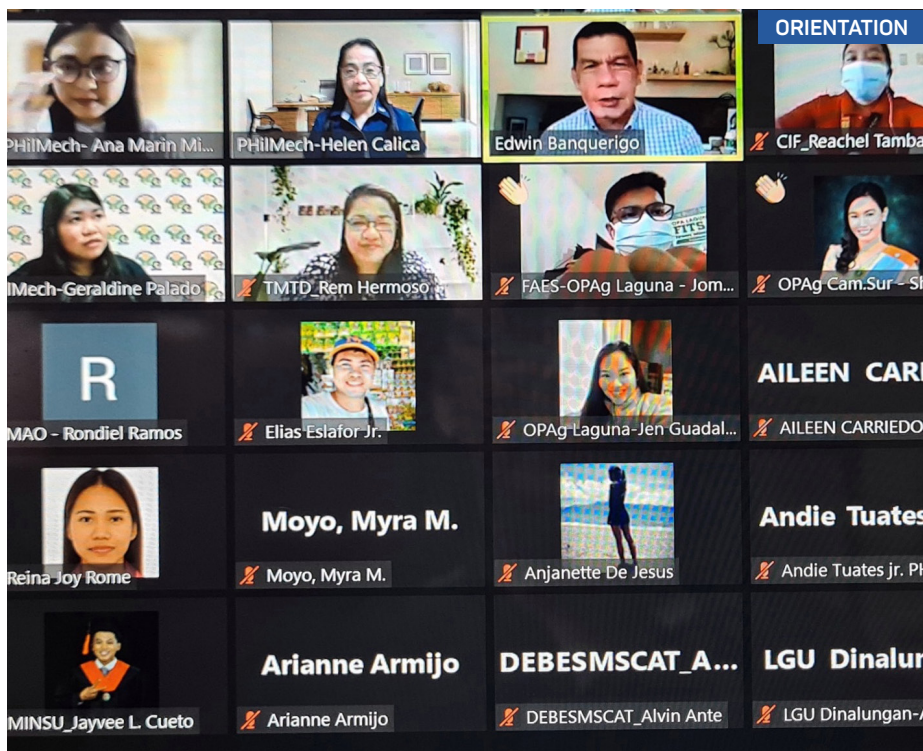
of the Philippine Society of Agricultural and Biosystems Engineers (PSABE) got oriented on the program and recent developments on cacao mechanization and postharvest technologies in a PHilMech online symposium on September 28, 2021.

The Technology Management and Training Division (TMTD) of PHilMech organized the activity to encourage PSABE members to become PHilMech's partners in cacao training programs.

Engr. Remellie Hermoso, supervising science research specialist of TMTD said, the technical symposium is the first step to develop participants into resource persons. Interested participants could proceed to undergo specialized courses and higher level of training courses for resource person development.

Hermoso added that interested engineers could become part of the PHilMech Postharvest Specialists Network who would provide technical assistance to postharvest technology users.

A participant, Engr. Alvin M. Ante said, "The cacao industry is looking bright since a lot of partner agencies are working



PHilMech online symposium via zoom

together on it, getting good results. I hope we do achieve our goals for the industry in due time. Thank you PHilMech for this activity in which we have been given awareness regarding the advances in technology and milestones in the cacao industry."

Engr. Ante is an instructor from Dr. Emilio B. Espinosa Sr. Memorial State College of Agriculture and Technology.

Among the invited speakers in the symposium include Engr.

Edwin O. Banquerigo, Independent Consultant in Davao City. He presented the situation of the cacao industry. For the cacao mechanization and postharvest technologies and system PHilMech experts, Dr. Romualdo Martinez, Elijah Davalos, Engr. Andres Tuates, Aileen Carriedo, Engr. Jeszel Suligan, Dr. Gigi Calica, and Dr. Emelie Ablaza shared their know-how.

The TMTD also presented the PHilMech Technology Licensing Protocol in the symposium.

■ **NSMariano Jr.**



*PHilMech ITSO technical team*

## PHilMech conducts Foundation Course on Intellectual Property (IP)

The Philippine Center for Postharvest Development and Mechanization conducted the first batch of the training entitled “Foundation Course on Intellectual Property (IP)” at the PHilMech Training Hall on August 9, 2021. The Technology Management and Training Division of PHilMech spearheaded the activity.

As member of the IPOPHL-Innovation and Technology Support Office (ITSO) network, PHilMech-ITSO will conduct six batches of the Foundation Course on Intellectual Property on Aug 9, 16, 23, September 6, 13, and 20, 2021.

The training activity aims to raise awareness on the basic information about Intellectual Property among PHilMech employees.

Ms. Helen Calica, TMTD Division Chief and Innovation and Technology Support Office (ITSO) manager of PHilMech, said on her opening

remarks, “This kind of activity is important to the agency to impart knowledge among employees on Intellectual Property Rights so that they will increase their awareness, understanding and appreciation of the IPR...In line with this, we have a project at TMTD which gives technical support services to Research, Development and Extension (RD&E) staff on the protection of their materials and PHilMech IPRs.

Meanwhile, Ms. Ma. Leidy C. Gatuz, IPRS I of IPOPHL and SMS of the training course said, “One of the main purpose of IPOPHIL is to establish a network of patent libraries.”

Ms. Gatuz considers PHilMech still on the “infancy stage” since the agency became an ITSO member only in 2019. Thus, she emphasized the need for PHilMech employees to participate in this kind of activity so that they will be aware on the

different roles ITSO play in the agency.

Dr. Emelie C. Ablaza, SRS II of TMTD discussed the overview of the IP System. Ms. Ma. Leidy C. Gatuz, on the other hand, discussed the topics on Patents, Utility Models, Industrial Design, Copyrights and Trademarks.

The first batch of the training course had 18 participants, all employees of PHilMech. There were 13 (72.2%) female participants and five (27.8%) male participants.

“Thank you for conducting this kind of training. We have learned a lot from the topic. Also, I finally learned the meaning of the unfamiliar words I encountered about Intellectual Property Rights,” said one of the participants, Ms. Rosalie Feliciano, SRA of the Enterprise Development Division of PHilMech. (With report of Leo Jay Sarmiento) ■ **JTPaolo**

# 41<sup>st</sup> agency in-house RDE review conducted amidst pandemic

## THE PHILIPPINE CENTER FOR

Postharvest Development and Mechanization (PHilMech) conducted its 41st Agency In-House Research, Development and Extension Review on August 24-25, 2021 via on-line. This annual activity is being done to ensure objective and systematic assessment of completed RDE projects, review its design, appropriateness and performance vying to resolve issues and concerns that the agency wants to address.

Last year, the agency wasn't able to conduct the annual review due to Covid-19 restrictions. For this year, the activity was originally arranged on August 11-12 but was rescheduled due to covid cases in the office.

Despite the challenges brought about by the pandemic, the Evaluation Management Services Section of the Planning Management and Information Technology Division was able to manage three simultaneous sessions and review of 23 projects from five divisions.

Six completed projects were hailed best papers for this year. Development and Field Testing of Greenhouse Solar Dryer for Food Safe Cassava and Development of Mungbean Sheller with Drudgery Reduction for Rural Women tied as best papers for Agricultural Mechanization Division (AMD). These were presented by Dr. Romualdo C. Martinez and Engr. Reynaldo P. Gregorio, respectively. For Bioprocess Engineering Division (BPED), Banana (Cavendish var.) Powder Derived from Vacuum Microwave Drying Method presented by Dr. Ofero A. Capariño. For Food Protection Division (FPD), Augmentation Releases of

Predator *Xylocoris flavipes* (Reuter) (hemipteran: Anthocoridae) for the Control of Residual Infestation of Insect Pests in Storage presented by Ms. Mia V. Dela Cruz. For Socio-economic and Policy Research Division (SEPRD), Pilot Testing of Coconut Water Processing Enterprise on Selected Areas in the Philippines presented by Dr. Gigi B. Calica. And for Enterprise Development Division (EDD), Corn Grits Processing Enterprise Showcasing PHilMech Corn Mill Technologies presented by Dr. Michael A. Gragasin.

Engr. Edgar D. Flores garnered the Early Bird Award for the project Adaptability of Multi-Row Onion Mechanical Seeder in Iloilo Province.

Experts from University of the Philippines Los Baños (UPLB), Central Luzon State University (CLSU) and former Director III of PHilMech composed the panel of evaluators. They include Engr. Raul R. Paz, Dr. Sylvester A. Badua and Dr. Jessie C. Elauria for the Agricultural and Mechanization Division (AMD); Dr.

Kevin F. Yaptenco, Dr. Jeffrey A. Lavarias and Dr. Victorino Taylan for the Bio-process Engineering Division (BPED); Dr. Barbara L. Caoili and Dr. Ireneo L. Lit, Jr. for the Food Protection Division (FPD); and Dr. Marilyn M. Elauria, Dr. Cesar B. Quicoy and Dr. Matilde Melicent F. Santos-Recto for the Socio Economic and Policy Research Division (SEPRD) and the Enterprise Development Division (EDD).

At the end of the review, Dir. Apaga said "It is worthwhile to look back to our experiences in this conference which is due to the constraints imposed to us by the covid-19 pandemic. We missed the excitement and anxiety that go with face-to-face interaction."

"Observably the virtual platform reduced the stress and worries that normally accompany the review workshops but definitely, the virtual platform did not reduce the effectiveness if not made it better for the review process", he added.

■ **MACCORDOVA**

Agency In-House R&D Review via zoom



IMS certificates ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

# PHilMech attains IMS certification anew

**THE PHILIPPINE CENTER** for Postharvest Development and Mechanization (PHilMech) got anew its certification for its Integrated Management Systems for ISO 9001:2015 Quality Management System, ISO 14001:2015 Environmental Management System and ISO 45001:2018 Occupational Health and Safety Management System.

Certification Association Russian Register granted the certification to PHilMech for another three years. This will

be valid for the period August 30, 2021 to August 30, 2024. PHilMech was first IMS certified on May 15, 2018.

PHilMech Director IV Dr. Baldwin G. Jallorina continues to recognize the benefits of being ISO certified as this would improve the agency's performance in providing quality products and services.

Dr. Shahid Mushtaq, external auditor and representative from Certification Association

Russian Register based in Dubai, made the review or audit of the processes. In a series of audits through a virtual platform, he met with PHilMech's top management, management committee members, and IMS and division core teams on February 22-23 and April 26-29, 2021.

Dr. Mushtaq gave his observations and recommended improvements to PHilMech IMS processes. He congratulated the agency for passing the certification audit once again.

**ZJBarza**

# PHilMech highlights cacao technologies in symposium

**TO HEIGHTEN AWARENESS ON THE** program and recent developments on cacao mechanization and postharvest technologies, the Philippine Center for Postharvest Development and Mechanization (PHilMech) conducted a technical symposium on August 31, 2021.

For this batch, 42 faculty and staff from State Universities and Colleges participated via Zoom.

“The new technologies presented are very helpful and informative

especially the starter culture part, which would help hasten the fermentation of cacao beans in a very hygienic way together with the stainless steel box. We are looking forward for its commercialization as it would really help us improve our University Cacao Center. We are very grateful that PHilMech organized a symposium like this”, said one of the participants, Christine Flores, faculty staff of Isabela State University.

May Cabral, instructor in Bataan

Peninsula State University also said that through the activity, she could now share to her students the knowledge she gained in their cacao processing subject. She also said that the information she has gathered would help in conceptualizing future researches on cacao processing.

The Technology Management and Training Division (TMTD) of PHilMech facilitated the activity, and invited resource persons, namely Engr. Edwin Banquerigo, Elijah Davalos, Dr. Romualdo Martinez, Engr. Andres Tuates, Aileen Carriedo, Engr. Jeszel Suligan, Dr. Gigi Calica, and Dr. Emelie Ablaza.

Topics covered include Status of the Cacao Industry, Use of Microbial Control Agents in Managing Pod Rots VSD Disease of Cacao, Enhancing Fermentation of Cacao with Microbial Starter, Drying Technologies for Fermented Cacao Beans, Cacao Processing System and By-Product Utilization, and Economics of Cacao Processing System.

All participants received digital certificates.



*Technical symposium via zoom*

 NSMariano Jr.



# Training on onion postharvest technology and mechanization goes online

**THE PHILIPPINE CENTER FOR** Postharvest Development and Mechanization (PHilMech) trained 35 participants in its Online Training Course on Postharvest Technology and Mechanization for Onion last August 18-19, 2021.

The training activity allowed participants from different LGUs, Farmers' Cooperatives and Associations (FCAs), and private sectors in Nueva Ecija, Pampanga, Bataan, Tarlac, and Pangasinan to enhance their technical knowledge and skills on onion production and postproduction. The training likewise aimed to increase the adoption level for PHilMech-developed Multiple Row Onion Seeder in relation to addressing high labor demand and high onion production cost.

Ms. Helen Calica, chief of the Training and Technology Management Division (TMTD), in her opening remarks acknowledged interested technology end-users in the online training. She assured participants of hands-on activity to showcase the operation and maintenance of PHilMech Multi-Row Onion Seeder in the field setting.

The first day session of the training covered topics on the Onion Industry in the Philippines, Physical Characteristics of Onion, Land Preparation and Seedling Establishment, and Postharvest Practices. On the second day, Crop Management, Farmers' Practices, PHilMech Multi-Row Onion Seeder,

and Business Planning and Management were discussed.

Resource speakers during the training included Dr. Ma. Cecilia Antolin, Mr. Arturo Manipon, Ms. Jeanny de Guzman, Ms. Marietta Agregado, Mr. Francisco Alvarez, Engr. Marvin Estimada, and Ms. Kristina Luz Sebastian.

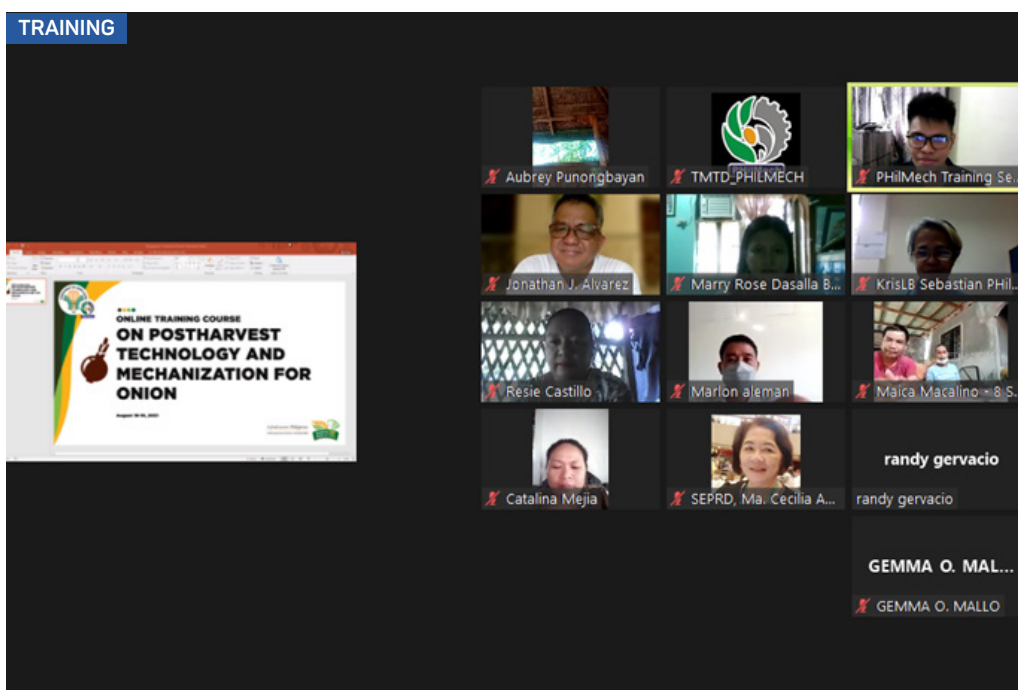
"We thank PHilMech for conducting this activity. As a new player in the onion industry, the topics laid out to us are really helpful to jumpstart our onion farming. Also, we really look forward to the hands-on training before the planting season starts," said one of the participants, Mr. Jerry Guese, Chairman of Paroba Matamo Agriculture

Association – Pampanga.

At the end of the training, Dr. Emelie Ablaza, SRS II – TMTD, commended the active participation of the trainees. She also reiterated physical conduct of hands-on and demo activities to respective areas of partner cooperators, and assured them of PHilMech's continuous support of their farming endeavors.

This training course is part of the COVID-19 project of PHilMech entitled "Piloting of Modules for the Provision of Mechanized Planting of Onion and Other Vegetables". This project is headed by Dr. Ma. Cecilia Antolin of the Socio-Economic and Policy Research Division.

■ LJSarmiento



Online trainees on postharvest technology and mechanization for onion

## PHilMech, Japanese government-owned firm ink MOU

**JAPAN IS LOOKING TO BRING** Philippine coconut products to its shelves as the Global Trade Venture Co., Ltd. (GTV) and the Philippine Center for Postharvest Development and Mechanization (PHilMech) inked a Memorandum of Understanding (MOU) last July 29, 2021.

PHilMech's Research, Development and Extension cluster head, Director I Arnel Ramir M. Apaga explained that

the MOU will allow GTV (an arm of the Japanese government-owned Tokushima Auction Market [TAM]), and PHilMech to train identified coconut farmers in the country to produce coconut products that meet Japanese qualifications, while also keeping in mind the improvement of the country's coconut industry.

The GTV will provide the technology, procedure and hardware on how to develop

quality coconut products while PHilMech will also be providing technical support to GTV on how the technology can become locally applicable to achieve the desired outcome.

Once settled, the processed coconut products will be exported to Japan for selling through the TAM.

A PHilMech research conducted by Bioprocess Engineering Division Chief Dr. Ofero A.



MOU SIGNING

*PHilMech Director Baldwin Jallorina and Director I, Arnel Ramir Apaga during the MOU signing*

Capariño outlined how large volumes of coconut water are often wasted when processing products such as virgin coconut oil and copra.

However, with proper processing techniques, PHilMech believes that the earnings generated from wasted coconut water could potentially be higher than what coconut farmers would usually earn from copra.

Fortunately, GTV has been interested in the development of coconut water and will be looking to train farmers of the Philippine coconut industry to create products that qualify for the Japanese market. With the Philippines being the second largest producers of coconut in the world, GTV can absorb as much processed coconut water as the Philippines can export since it has the technology to store and transform this commodity into a higher-value product.

However, the MOU, as explained by Dir. Apaga, will not be limited to coconut water. Other coconut products will



*Mr. Yoshihisa Arai opening remarks via Zoom*

also be included in this project. He also said that the MOU does not have any commitment with the Coco Levy Fund Program.

Present during the MOU signing (via Zoom) were PHilMech's Director IV, Baldwin G. Jallorina, Ph.D., Director I Arnel Ramir M. Apaga, and Bioprocess Engineering Division chief, Dr. Ofero A. Capariño. GTV, on the other hand, were represented by President and CEO, Mr. Yoshihisa Arai

and Senior Consultant Engr. Antonio Bernardo. With them as well were the Japanese Ambassador to the Philippines, his Excellency Koshikawa Kazuhiko and the Honorable Nobuhiro Miura from the House of Councilors.

PHilMech has high hopes that this project will serve as a model for other coconut industries in the country as it aims to showcase another potential link to a big market.

■ **GATBarroga**

**EP.23** TOPIC PHilMech and S

**TALAKAYANG PANGSAKAHAN NG CALABARZON SEASON 5**

Abangan ngayong ika-23 ng Agosto (Lunes), 2021 Sabayang mapapakinggan at mapapanood sa

12:00N-1:00PM

Engr. Niño D. Bengosta  
PHilMech Luzon C Cluster Head

RADIO INTERVIEW

*Talakayang Pangsakahan ng CALABARZON season 5*

## PHilMech engineers guest on radio program

### ENGINEERS FROM THE

Philippine Center for Postharvest Development and Mechanization, Niño Bengosta and Glenn Furigay, took part in the radio program “Talakayang Pangsakahan ng CALABARZON” of the Department of Agriculture Regional Field Office No. IV-A on Sunday, August 23, 2021. They discussed the mandate, functions and services of the agency as well as the programs available for farmers of CALABARZON.

“Ang PHilMech ay isang institusyon na binigyan ng mandato na manaliksik at ipalaganap ang mga teknolohiya

at mga bagong kaalaman, sistema, na maaaring gamitin ng ating mga magsasaka at mga mangingisda.” Engr. Bengosta explained during the interview about the mandate of PHilMech. “Nadagdagan din tayo ng isa pang mandato at responsibilidad alinsunod sa RA 11203 o Rice Tariffication Law. Ang pagpapatupad ng programang RCEF under the mechanization program” he also added followed by the explanation about rice tarrification law and mechanization program of RCEF.

Engineer Furigay then pointed out the minimum

requirements to qualify on the RCEF mechanization program implemented by PHilMech including the letter of intent, board resolution, list of farmer members and list of existing machinery.

The interview went further about RCEF and postharvest technologies of PHilMech that can be requested to be part of the program implementation. Engr. Bengosta then discussed the technicalities and necessary actions to be performed in these matters. He also ensured that the programs implemented by PHilMech are highly monitored.

Engr. Bengosta is the current Luzon Cluster Head and Senior Science Research Specialist while Engr. Furigay is a Science Research Analyst working under the Facility Management and Field Operations Division (FMFOD) of PHilMech.

The program went live on DA RFO 4-A official facebook page and aired simultaneously over DWPB 107.3 D’AniKita Radio, Radyo Natin 106.3 FM Laguna and KISS FM 95.1. During the interview, the program was hosted by Jayvee Ergino and Reina Peralta.

The radio program was made for farmers, fisherfolks or even the CALABARZON residents who are part of the agricultural industry. It aims to provide information and inspiration among farmers and fishers in the country.

■ **DMCCapariño**

**THE PHILIPPINE CENTER** for Postharvest Development and Mechanization (PHilMech) honed 25 participants at the Training of Trainers (TOT) on the Operation and Maintenance of Rice Machinery. The Technology Management and Training Division of PHilMech conducted the training course on June 21-25 in Baliuag, Bulacan.

The TOT aimed to develop a core subject matter specialists to serve as resource speakers for the training courses on rice mechanization to be conducted by PHilMech.

Several resource persons discussed various topics like seedling preparation, direct seeding, transplanting, land preparation, and hands-on of farm machinery. There were six participants from the local government units, eight from the farmers' cooperatives and associations and seven from the farm schools.

Senator Cynthia A. Villar, in a recorded video message said, "Isang malaking bagay na patuloy ang pagsasanay ng ating mga magsasaka upang higit pa nilang mapabuti ang kanilang ani at lumaki ang kanilang kita...Sa tulong tulong na pagkilos ng gobyerno at mga idibidwal na katulad



*Awarding of certificates to the TOT participants*

## 25 trainers honed in Bulacan TOT

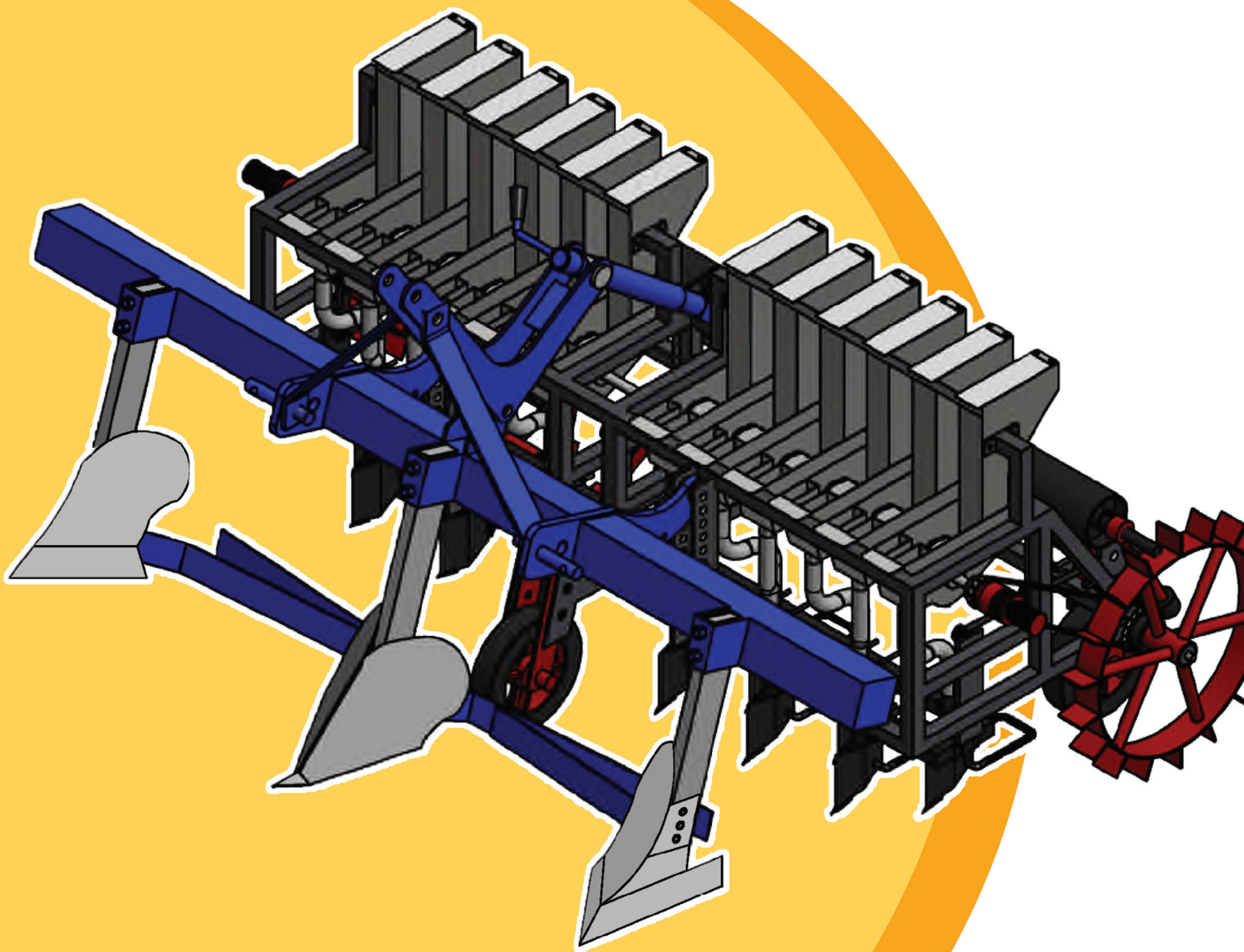
ninyo, magiging food secure ang ating bansa kahit sa harap ng pagsubok gaya ng Covid-19 ... lalo na at patuloy ang PHilMech sa pamamahagi ng mga makabagong makinarya para mapadali ang pagsasaka."

Meanwhile, Antonio Sabangan, one of the participants from Zambales, expressed his gratitude, "I was a little hesitant about taking this

training of trainers because I'm not an engineer. But I bravely took the chance because I know many farmers are depending on me in Zambales...Whether you're an engineer, agriculturist, LGU member, or regular farmer, we all came for one purpose... learn and acquire new skills from the training."

■ JLP Mina

# MULTI-ROW MECHANICAL ONION SEEDER



The **PHilMech MROMS** eases direct seeding of onions with its efficient seed distribution mechanisms. It makes seed sowing faster and it increases yield at a lower cost of production. It comes with two models the hand tractor trailed 10-ROMS and 12-ROMS mounted to a four-wheel tractor.

## FEATURES

- Sows seeds at desired rate and row spacing
- Has higher planting capacity
- Works as an attachment/implement to handtractor and four-wheel tractor
- Performs bed preparation and seed sowing in single operation (12-ROMS)
- Eliminates hard labor in planting
- Increases effective plant density
- Can be used also in planting pechay, mustard, radish and upland kangkong

## 12-Row Onion Mechanical Seeder

### SPECIFICATIONS

Capacity	0.31 ha/h
Power requirement	Any 4-wheel tractor
Labor requirement	1-2 person
Fuel cost	4-5 L/ha
Seeding rate	16-18 cans/ha
Pattern operation	Headland pattern
Distance bet. rows	10m (adjustable)
Bed width	0.5m
Equipped with furrowers	3

# Making A Difference with **MECHANIZATION**

*by Pia Sarina M. Fukasawa*



Praised as the “Kamote King”, Engr. Cesario L. Tabago finds the recognition ironic since he cannot imagine himself in the field of agriculture. But this perception changed when he started to manage the Sapang Multi-Purpose Cooperation (MPC).



**THE ENGINEER**

From a family of farmers, Engr. Cesario or “engineer”, as he is known by many, didn’t dream to become a farmer. As a Civil Engineer, he has a negative impression about farming and agriculture. After some time, however, he realized that this is his passion.

Engineer chose agriculture instead of pursuing his field. “Hindi ako naging focused sa pagiging Civil Engineer ko kaya naging passion ko na ang agriculture” (I didn’t really focus on being a civil engineer that’s why agriculture became my passion now) he said.

The MPC was first built in 1998 in Sapang, Moncada Tarlac. Engineer attended the first meeting in 1998 and he was appointed as the chairman of the cooperative.

“I didn’t plan to operate the whole cooperative but I was chosen to be the chairman since it started” he recalls. Chairman for six years, engineer is now the general manager of the Sapang MPC from 2004 up to the present. Asked how he manages being the general manager for over 18 years now, engineer said that helping other farmers in the field of agriculture is fulfilling. Agriculture is a calling, he added.

**THE COOPERATIVE**

Awarded as the Most Outstanding Cooperative in the Regional Search of Gawad Parangal medium scale category from 2014-2019, Sapang MPC has only 35 members when it started in 1998. Over the years, members of the cooperative have

grown to over 1,009 members. Borrowing money from the bank is their first source of investment. From 15 million to 20 million, they are now granted with 100 million worth of investments. They started with a sharing capital worth Php 700 each member. At first, engineer admitted that it’s difficult to get members because people tend to see that there is no earning from the cooperative. They also had a hard time in planting crops because of bad land preparation in their place.

This is why in 2013, they decided to build their huge office in Tarlac as their main office using the money of the cooperative and improve the land preparation in the area.

“Unti-unti lumaki kita ng coop over the years and I’m really thankful for that” (Income of the cooperative increases gradually over the years and I’m really thankful for that) engineer said. Sweet corn or kamote, corn, singkamas, onion, palay and vegetables are the major crops in the 6,000 hectare land of the cooperative.

“In Sapang MPC is known for Kamote. That’s why they call me the Kamote King”, Engineer said.

Different government agencies come to their growing cooperative. The Philippine Center for Postharvest Development and Mechanization (PHilMech) is one of them. It introduced the Multi-Row Onion Seeder.

**THE PHILMECH MULTI-ROW ONION SEEDER**

Sapang MPC started planting onion in 2007. PHilMech encouraged

them in their growing onion crops. In 2013, PHilMech conducted seminars in the cooperative.

“We are really thankful for Ma’am Cecil Antolin for being generous with us and kind-hearted. She really encouraged us when it comes to our onion crops” Engineer said.

Dr. Cecil Antolin of the Socio-Economic and Policy Research



Engineer Cesario L. Tabago

Division (SEPRD) is one of the project leaders of the PHilMech Multi-Row Onion Seeder. Aside from the seeder, PHilMech also lent Corn Mill for their corn crops.

When asked about the changes of the technology to their cooperative, engineer said “Isang kagaanan sa magsasaka” (It’s an ease to the farmers).

Broadcasting is their practice before in onion. Engineer admitted that scattering seeds manually really takes time. Before, they used 24 cans and hired 30-35 people to do the seeding that covers only half a hectare of their onion crops.

The cooperative’s onion crops cover 1,920 hectares of land. “There’s a 50% difference in using the seeder to transplant compared to broadcasting. We transplant our seeds with only 11 to 12 cans now using it” he said. There’s a huge difference also in the labor cost because since the seeder

came, they only need two to three persons to use the seeder in crop establishment.

Engineer and the whole cooperative really saw the advantages of using the PHilMech Multi-Row Onion Seeder. Faster direct seeding is mostly the reason in using the direct seeding technology. It is also gender-friendly because according to engineer, the wives of the farmers are using the technology to help their husbands in the field. The only downside of the technology is that they are having a hard time to plant crops during rainy season.

### THE GROWING CHANGES

There are on-going projects in Sapang MPC at present. There are other different projects for different crops.

“As of the moment we have existing tunnel vent in Pangasinan and

on-going six tunnel vent in other places”, Engineer said.

The cooperative is now Luzon wide except Batanes. They plan to expand their cooperative and hope that in 25 years, the cooperative will be successful in various regions of the country. Their main office is in Tarlac and has a satellite office in Urdaneta, Pangasinan. From regular farmers to millionaires, the cooperative started from the bottom and succeeded through hard work. They are also thankful to PHilMech for guiding and cooperating with them for almost nine years now.

“Malaki talaga ang naging tulong ng PHilMech sa amin. I think hindi naman kami magiging ganito ka-successful kung wala yung technology.” (PHilMech is a big help to the cooperative. I think we wouldn’t be successful without the technology) he added.

Despite the pandemic, the Sapang MPC still continue their operations. Engineer admitted that there are changes especially in their income but didn’t fall into bankruptcy. Expanding of members is still possible because of the success of the cooperative. Engineer believes that with hard work, good assistance and reliable technology from PHilMech, the cooperative will be more successful.

He also believes “Umaangat lahat sa mechanization”.

Engineer is eager to continue managing the cooperative. He is eager continuously helping the farmers.



Sapang Multi-Purpose Cooperative at Moncada, Tarlac



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## E-Talakayan season 2 continues to air live!

**A TOTAL OF 425 INDIVIDUALS** from 187 validated Farmers Cooperative and Association (FCAs) 2020 beneficiaries from Regions 5 to 8 attended the webinar of e-talakayan: Angat Ani sa Tamang Makinarya season 2. The Philippine Center for Postharvest Development and Mechanization hosted the E-talakayan from July to August 2021 via facebook live.

Four batches of webinar series were conducted by the Applied Communication Division (ACD) through its host Aldrin V. Hipolito. The RCEF Mechanization Program and the benefits of

the machine grants have been discussed followed by some questions from the participants. There were 253 males and 172 female participants.

E-tanungan at kasagutan segment followed every after webinar series. The farmers actively participated.

One of the farmer-participants, Erlinda Benitez Belchez from Tuwod 3 Irrigators Association in Region 5, expressed her gratitude to the activity, "Sa programang Radyo Eskwela, nagpapasalamat po ako sa maraming impormasyon na

natutunan para maibahagi sa aming samahan. Malaking tulong po sa aming mga magsasaka ang kaalaman sa tamang paggamit ng mga makinarya, salamat po ng marami!"

The E-talakayan is one of the webinar series of PHilMech that started last year to reach the FCAs nationwide. It is part of the information dissemination activities to encourage the farmers to continue learning despite the pandemic. It has a total running time of two hours per session.

■ RMDelacruz



*E-talakayan "Angat Ani sa Tamang Makinarya" season 2 video streamer*

# 9,097 farmer-beneficiaries graduate in PHilMech Radyo Eskwela



RADYO ESKWELA

*Radyo Eskwela graduates*

## “KAHANGA-HANGA KAYO DAHIL

ipinakita ninyo na ang lahat ay maaabot sa kabila ng ating kinahaharap na pagsubok...”

Department of Agriculture Secretary William D. Dar said to the 9,097 farmer-beneficiaries who completed the PHilMech Radyo Eskwela: Angat Ani Sa Ta-mang Makinarya Program.

In its first virtual rites, the graduates were from the 648 farmer’s cooperatives and associations (FCAs) of 2019 qualified beneficiaries for the RCEF Mechanization Program. There were 6,915 FCA graduates from Luzon, 591 graduates from Visayas, and 1,481 graduates from Mindanao. There were a total of 6,488 males and 2,609 females.

PHilMech through Radio Mindanao Network [RMN] live-streamed the event at Radyo Eskwela Facebook Page and YouTube Channel. The RMN also aired the event in all RMN AM stations-nationwide last June 30 (part 1 recognition) and July 3 (part 2 recognition-graduation), 5:30-6:00 A.M.

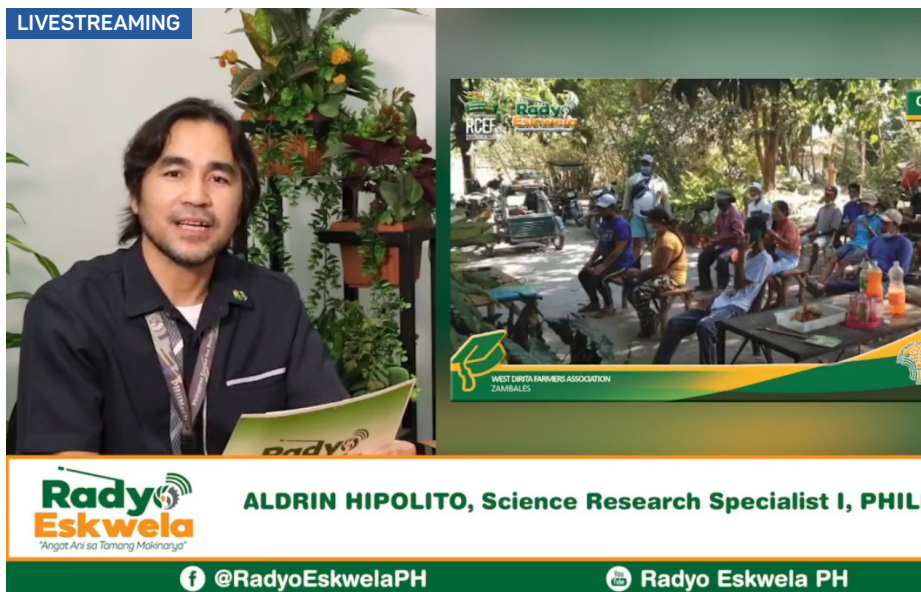
The graduates with flying colors, 15 FCAs and five FCA member received the awards for Most Active FCA members; Most Improved; Top 5 Highest Scores (individual and Group Category) and Highest Number of Enrollees in Luzon, Visayas and Mindanao.

Quintin Aveno, the ka-eskwela with the Most Improved Award from

Alitas Farmers Association shared that a lot of things could be learned in the program. He said, “Marami po kaming natutuhan mula sa guro namin sa radio... mula po sa batas na Republic Act 11203 na Rice Tarification Law, kahalagahan ng RCEF, paghahanda at makatapos - ani na paggamit ng mga tamang machine.”

Experts of PHilMech imparted lessons in mechanized farming using six modules and 18 lessons into seven regional languages such as Tagalog, Hiligaynon, Cebuano, Waray, Chavacano, Bicolano, and Iloco.

“Natutuwa po kami na dialect na ang mga aralin, mas madali na pong maunawaan ang mga aralin na itinuturo sa amin” said,



Aldrin Hipolito leading the facebook livestream

representative from Pagsabagang Farmers and Irrigators Multipurpose Cooperative.

“Nagpapasalamat po kami na kahit sa panahon ng pandemya, patuloy ang pagtulong ninyo sa aming mga magsasaka” the representative of Magcabalicatpo Irrigators Association, Inc. , also expressed.

“ ... dahil sa Radyo Eskwela natutuhan ko po na sa pagamit ng mga makinarya mas napabilis ang pagtratabaho at nakatipid sa gastos.” stated Glen Palmejar member of Agutayan-Cubay Agrarian Reform Cooperative. He is an awardee for the most active FCA Member and one of the FCAs with the highest score.

“This successful event marks a milestone in achieving the goal of RCEF in Mechanization Program, complementing the thrust of the Department of Agriculture,” Sec. William D. Dar emphasized.

PHilMech Director IV Dr. Baldwin G. Jallorina added that the knowledge

obtained from the program by the farmer-beneficiaries is valuable and cannot be taken away.

Meanwhile, Dr. Milagros B. Gonzalez, PHilMech’s Applied Communication Division (ACD) chief, encouraged everyone to continue gaining knowledge and help share these with their fellow farmers.

In the same event, PHilMech recognized the technical experts who shared their expertise on the 30-minute educational awareness activity from March 17 to June 9, 2021.

The rites can be still watched in Radyo Eskwela’s Facebook Page (<https://www.facebook.com/RadyoEskwelaPH/>) and on YouTube Channel (<https://www.youtube.com/watch?v=l66z5AnReGQ>).

For the Season II of Radyo Eskwela, PHilMech will soon invite the 2020 qualified beneficiaries of RCEF Mechanization Program.

■ **MTVCabuloy**

## FAQ

Frequently Asked Question

### How can I enroll in Radyo Eskwela Season 2?

The Radyo Eskwela Season 2 is for the FCAs who were granted FREE machinery on year 2020 from Philippine Center for Postharvest Development and Mechanization (PHilMech).

So if you are a member of one of the Farmers Cooperative Association, you may access the links below where you are currently residing.

Luzon: <https://bit.ly/RadyoEskwelaLuzon>

Visayas: <https://bit.ly/RadyoEskwelaVisayas>

Mindanao: <https://bit.ly/RadyoEskwelaMindanao>



## Newly conferred, upgraded scientists of PHilMech



*Dr. Dionisio G. Alvindia, Scientist IV*



*Dr. Gigi B. Calica, Scientist I*

### PHILMECH CONGRATULATES

its newly conferred and upgraded career scientists as they took their oaths in an online virtual ceremony led by the Scientific Career System (SCS) of the Department of Science and Technology (DOST) and the Civil Service Commission (CSC) on September 22, 2021.

Dr. Gigi B. Calica of the Socio-Economic and Policy Research Division was conferred with a Scientist I rank on February 19, 2021 for her active involvement in the generation of benchmark information of several high value commodities such as

mango, banana, bulb onions, shallots, corn and cassava.

Her work on mango allowed PHilMech technology generators to design and develop a reusable and biodegradable fruit bag that would reduce the level of pest incidence in mango production areas. Although these projects are still on-going, her research works on cassava and cardava banana have also prompted PHilMech technology generators to develop an appropriate granulation facility for the country's cassava industry and a hole digger for planting banana.

The conferment of Dr. Calica makes her the sixth career scientist of the agency.

Dr. Dionisio G. Alvindia of the Food Protection Division was upgraded to a rank of Scientist IV on May 21, 2021 for his innovative research work in agriculture and fishery on organic biostimulants.

Products developed from his research work serve as an alternative to synthetic chemical pesticides that help reduce the selection pressure for the evolution of resistance in pest and diseases populations, while also helping to revive soil microorganisms that biostimulates plant growth, increase crop yield and improve plant health.

These products are also sustainable, low-risk for human health and environment and are already commercially produced by several companies.

The agency lauds the efforts of its newly conferred and upgraded scientists. The significant outputs of their research work have been and will continue to be a valuable contribution to the betterment of the country's agricultural sector. ■ **GATBarroga**



## New PHilMech Deputy Director takes oath

The former chief of Finance Division, Ronaldo Sebastian R. Reyes, took his oath of office as DA-PHilMech Director III before Department of Agriculture Secretary William D. Dar, on July 12, 2021 at the DA central office.

Reyes was officially appointed by the President of the Philippines, Rodrigo R. Duterte in July 8.

The new Director aspires to improve the administration of the agency. He expressed optimism for the fulfilment of this plan during his term.

The previous Director III was Enr. Raul R. Paz who took his mandatory retirement last February 2021. He has been in government service for more than 35 years.



■ DMCCapariño

OATH TAKING

*Deputy Director Ronaldo Reyes takes his oath of office before DA Secretary William Dar*

# Covid-19 Response Project Leader Dr. Ma. Cecilia Antolin *by Mila B. Gonzalez*

This woman always extend a helping hand to her cooperators, mostly farmers and small-scale entrepreneurs. No wonder, she has often received their fullest gratitude, not just for the technology intervention of her agency, the Philippine Center for Postharvest Development and Mechanization (PHilMech) but also for her own kind and sincere way of helping others.

She has been a recipient of numerous agency, regional and national awards. From being a Natatanging Kawani ng PHilMech in 2016, she also garnered Best Paper Awards in R & D

at PHilMech, both in 2018 and 2019. She also emerged as winner in the Best Paper Award (Development Category) at the Central Luzon Agriculture and Aquatic Resources Research and Development Consortium (CLAAARDEC). In 2018, she received the AFMA Best R & D Paper Award (Gold) from the Bureau of Agricultural Research.

But beyond these awards is her fulfillment as project leader who has handled projects which have provided added income to farmers, processors and cooperatives especially during the hard times.

Dr. Ma. Cecilia Antolin, Senior Science Research Specialist at the Socio-economic and Policy Research Division (SEPRD) of PHilMech leads the Covid 19 response project of the agency entitled, "Piloting of Modules for the Provision of Mechanized Planting of Onion and Other Vegetables." This project aims to provide Filipino farmers with mechanized planting of onion and other vegetables through a service center.

According to Dr. Cecile, "This Covid 19 response project is beneficial to farmers since they can use this technology even during pandemic... The Multi-Row Onion Seeder (MROS) lessens material and labor inputs, thus increasing the farmers' income."

PHilMech developed the MROS to address the high labor requirement in planting onion as well as the labor shortage during planting season. There is also the problem of high seeding rate of onion during direct seeding when manual method is used.

Two models of MROS were developed by PHilMech, the 10-row and the 12-row mechanical seeder. This is attached to a hand tractor or a four-wheel tractor. These MROS models were already deployed to selected producing areas of onion namely Pangasinan, Nueva Ecija, Tarlac, Bataan and Pampanga usually among cooperatives, individual farmers and local government units. Feedbacks, so far, of the technology users have been positive.

Not only are the onion farmers benefiting from the MROS. Other vegetable growers can also benefit from the technology because this MROS can be used to plant other vegetable seeds (i.e pechay, mustard, radish and upland kangkong) as well.

"I want to create more and more income-generating projects to be of more help to our farmers and other stakeholders for the glory of God...I want to give back what is due my office, in return to the salary I receive..."

Truly a public servant and God's faithful child.



DR. ANTOLIN



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