



PHilMech

Quarterly Publication of the Philippine Center for Postharvest Development and Mechanization



COVER STORY

MULTI-MILLION DREAM TURNS INTO REALITY THROUGH MECHANIZATION

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Feature: Reaping the Benefits from
the Iloilo Rice Processing Complex

S&T Section: Minimizing Milling Deficiency
through PHilMech Impeller Rice Mill

Tech Feature: Grain Probe
Moisture Meter (Buriki)



The Talabutab Norte Primary Multi-Purpose Cooperative in Gen. Natividad, Nueva Ecija. They are the recipient of the RPC II, a state-of-the-art rice processing center.

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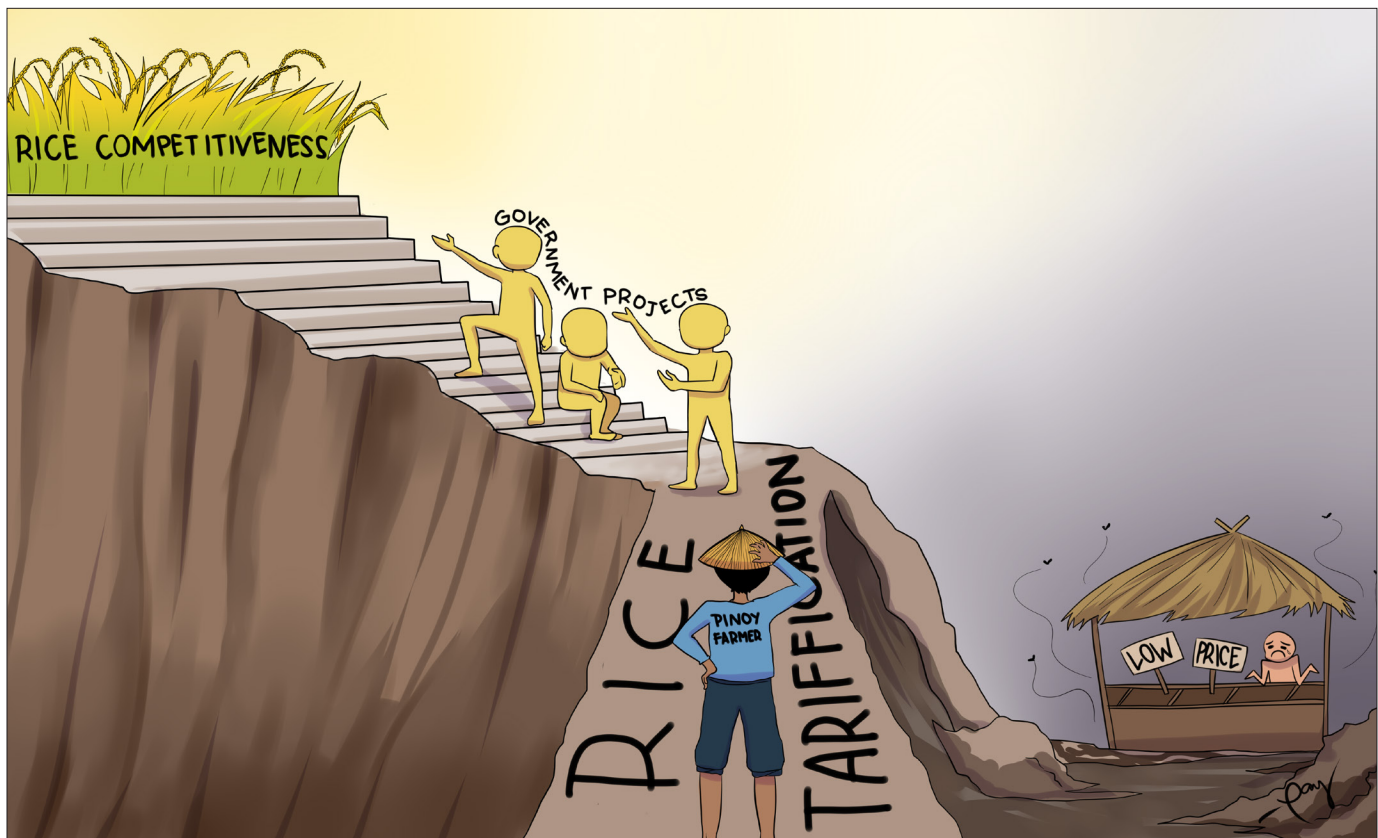
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Finding Positive Ways

Negativity is in the air. Farmers cry over the low price of palay. Farmers complain about the high price of rice in the market. They blame the Rice Tarrification Law.

Other farmers, however, refuse to be victims of this circumstance. Using available resources, they are searching for positive ways to address and minimize the impact of the rice tarrification law.

The Rice Processing Center (RPC), a program of the Department of

Agriculture which PHilMech has been helping, seemed to be a breath of fresh air. Farmers who are members of RPC in selected provinces of the country, have found refuge.

As members of cooperative engaged in rice processing, they find hope in this value-adding activity. They do not have to beg for a market for their produce. They just have to bring their produce to their cooperative and the management takes care of the rest. The entrepreneurial ability of the

management and their cooperative spirit to market their produce determine their fate.

But all is not lost. The farmers' cooperatives just have to find positive ways of dealing with the problem just like those featured in the stories of hope and success in this issue of our newsletter.



Jallorina joins PH delegation to 75th UNESCAP

DIRECTOR BALDWIN G.

JALLORINA and Engr. Don David T. Julian of PHilMech joined the Philippine delegation to the 75th UN-Economic and Social Commission for Asia and the Pacific (UNESCAP) held last May 27-31 at the UN Conference Center in Bangkok, Thailand.

Being elected as Vice Chairman of the Governing Council (GC) of the Center for Sustainable Agricultural Mechanization (CSAM) in 2018, Dr. Jallorina was requested and endorsed again this year to attend the first council meeting alongside the UNESCAP session.

UNESCAP serves as the United Nations' regional hub promoting cooperation among countries in the Asia and the Pacific to achieve inclusive and sustainable development. This has been the largest regional intergovernmental platform with 53 member states and 9 associate members including the Philippines since 1947.

The participation of the Philippines



A session during the 75th UNESCAP in Bangkok, Thailand which Dr. Jallorina and Engr. Julian attended.

particularly PHilMech could provide great venue to foster partnership with international organizations and academic researchers for future collaborative undertakings.

In the history of PHilMech, Jallorina was the first director to be elected in the said GC. ■ **JMGSUBABA**



DR. BALDWIN G. JALLORINA

ABOUT UNESCAP



Established in 1947 in Shanghai, China, as the Economic Commission for Asia and the Far East (ECAFE) to assist in post-war economic reconstruction, the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) moved its headquarters to Bangkok in January 1949.

It has emerged as a strong regional think-tank offering countries sound analytical products that shed insight into the evolving economic, social and environmental dynamics of the region. (Source: <https://www.unescap.org>)



KAMICO, Kukje turnover machinery to PHilMech

PARTICIPANTS AND VISITORS

from different agencies gathered at PHilMech on May 20, 2019 to witness the turnover ceremony of machinery from Korea Agriculture Machinery Industry Cooperative or KAMICO and Kukje Machinery. Dr. Baldwin G. Jallorina, Executive Director of PHilMech, Mr. Si Min Yi, Director of Export and Exhibition team of KAMICO led the turn-over.

Mr. Si Min Yi gave his warmest congratulatory message and acknowledged the close cooperation between Philippines and Korea in agriculture through the active collaboration of KAMICO and PHilMech.

"The best result of this cooperation is the development of localized cornmill", Yi said. But he promised that KAMICO will still cooperate to develop localized agricultural machinery. KAMICO has been working with the Department of Agriculture on the establishment of agricultural machinery products complex in the Philippines and wishes to commend PHilMech for its invaluable assistance.

Mr. Bumseok Seo of the Kukje Machinery also gave his speech during the program and made constant dedications to the modernization and mechanization of agricultural industry. Kukje Machinery or the so-called Branson Tractors will make firm foundation of development in the agriculture sector of the Philippines said Mr. Seo. He looks forward to strengthening the good relationship between PHilMech and Kukje Machinery.

Dr. Baldwin G. Jallorina accepted



KEY OF TURN-OVER

PHilMech directors Dr. Baldwin G. Jallorina and Arnel Ramir M. Apaga receive the key of turn-over from Mr. Bumseok Seo and Mr. Si Min Yi

the farm machinery products and expressed his sincere appreciation for KAMICO and Kukje Machinery for supporting the development of agricultural sector in the country. He also informed that these farm machines are primarily intended for the conduct of technical training courses and demonstrations. PHilMech in collaboration with other agencies shall be implementing training programs on tractor operation and servicing farmers and machine operators. Through these training programs, Dr. Jallorina hopes to establish a more compact and competent agricultural services. A plaque of appreciation was awarded to Kukje Machinery.

■ PSMFukasawa

BRANSON TRACTOR



Branson Tractor was founded in the US in 1998 as a tractor distribution company. Kukje Machinery in South Korea is their parent company and has been in business since 1968. Branson Tractor now has 165 dealerships in the United States and Canada.

(Source: <https://www.bransontractors.com>)



PREPAREDNESS ASSESSMENT

(from left) Ms. Ma. Resurreccion L. Altamera, Dr. Normita A. Pasalo, Dr. Baldwin G. Jallorina and Ms. Victoriana M. Barlis during the AfMechRDEN meeting in Batanes.

AS THE CHAIR OF AGRICULTURE AND FISHERIES MECHANIZATION,

Research, Development and Extension Network (AfMechRDEN), Philippine Center for Postharvest Development and Mechanization (PHilMech) organized its regular executive committee meeting at DA-RFO II – Batanes Experiment Station in Basco, Batanes last March 8-9, 2019.

“The municipality of Batanes is focused on food protection, however they are well aware that there is much needed development in terms of agriculture mechanization,” Atty. Eva Marie Gutierrez, Provincial Legal Officer of Batanes, was asked to deliver the message of their Provincial Governor, Hon. Marilou Cayco.

PHilMech Director, Dr. Baldwin G. Jallorina presided the meeting as the

AfMechRDEN execom convenes in Batanes

member of the network discussed matters regarding the AfMechRDEN and the crucial topics that will lead to the successful implementation of the program: (1) Updates on the conducted 4th Organizational Meeting and Consultation Workshop of the AFMechRDEN; (2) Updates of the National Organizational Meeting and Consultation Workshop of the AFMechRDEN from Higher Education Institutions; (3) Brief overview of RA 11203 or the Rice Liberalization Law and its IRR; (4) Updating of the National AFMechRDE Agenda on mechanization and gathering of data from member

agencies; and (5) the 2019 plan of activities.

In addition, AFMechRDEN was established in accordance to the Agriculture and Fisheries Modernization Act (AFMA) of 1997, the Agriculture and Fisheries Mechanization (AFMech) Law or RA 10601 and PHilMech are responsible for enacting the RDE programs and projects concerning the national government agencies, Local Government Units (LGUs), and state universities and colleges.

■ **JJCDuria**



Training the *farmillennials* on Mechanization

SEVEN MILLENNIAL FARMERS OR FARMILLENNIALS

from the different regions in Luzon participated in the training of trainers on inbred rice seed production and mechanization conducted by the Philippine Rice Research Institute (PhilRice), Philippine Center for Postharvest Development and Mechanization (PHilMech) and the Villar SIPAG on June 16–21 in Science City of Muñoz, Nueva Ecija.

Alongside the other 24 farmer leader trainees, these farmillennials were trained so they can impart their gained knowledge to other farmers in their cooperatives when they go back to their areas. Complete training materials were provided to them as their reference in teaching their fellow farmers. Topics include land and seedling preparation; transplanting, harvesting and threshing; hands-on exercises; grain drying; grain storage; and technical and financial analysis.

Senator Cynthia A. Villar, chairperson of the senate committee on agriculture and food, emphasized to the participants during her closing program speech, “You were chosen to participate in this training because we hope that you will teach farmers in your areas what you have learned here in the training so we can help increase the production of rice in the Philippines.”

Bicolanos, Daryl M. Siares of Panala Farmers Association in Albay and Roy I. Lupango of Tigbac Farmers Association in Masbate were both farm leaders at age 33. The former is a college graduate while the latter is a high school graduate.



Farmillennials who finish the training on inbred rice seed production and mechanization

Marco L. Carag, a college graduate and farm owner is also a farm leader of the Ubong Multi-Purpose Cooperative in Solana, Cagayan. He is 32 years old. Another younger farmillennial is Mr. Franklin C. Magalay, 31 years old from the San Jose Rice Producers Association in Occidental Mindoro. He is also a college graduate.

Three of the youngest delegates of the training course were all professionals and farmers at the same time. John Aron Buendia, 23, has finished BS Agriculture and serves as an agricultural technician in Laguna. Karl John B. Santos of Bataan, 23, is member of the Eagle Farmers Association and finished Agricultural Engineering. And the youngest and the only woman among the farmillennials is Magdalena Galicia of Oriental Mindoro, 22 years old. She

is a farm owner and member of the Roxas Rice Farmers Organization. She finished BS in Secondary Education.

The future and hope of the agriculture industry lies on these new breed of farmers who are not just continuing the traditional farming but well equipped of the farming innovations that can help increase yield and profit, maximize land use, decrease losses and can eventually alleviate the quality of their lives.

■ **JMGSubaba**



PRTMDC INAUGURATION



(left) Engr. Raul R. Paz gives his opening remarks during the launching of the PRTMDC in Visayas. (right) Dr. Rodolfo P. Estigoy facilitates the orientation of the farmers during the launching.

PRTMDC Leyte offers easy-to-access agricultural technologies

TO ALLOW EASY ACCESS TO INFORMATION AND TECHNOLOGY SERVICES,

Philippine Center for Postharvest Development and Mechanization (PHilMech) launched a Regional Technology Management and Demonstration Center (PRTMDC) inside the complex of the Department of Agriculture in Abuyog Experiment Station last May 29, 2019.

"We want to be more aggressive in the provinces to bring our technology closer to the people. Through modernization, we can mitigate the impact of climate change and produce more food," said Engr. Raul R. Paz, PHilMech Deputy Director.

PRTMDC is a one-stop-shop that brings the PHilMech's generated technologies and services to the community through actual technology display and demonstration, information

dissemination, training and learning support and business and farm advisory.

"This is like a library for farmers and investors in the farming sector. We will give demonstration technology as it houses some machines needed for livelihood in Eastern Visayas. We brought machinery here for farmers to see how it works and they can test it," Dir. Paz added.

After the ribbon cutting of the building, tour in the center demonstrating the PHilMech generated technologies, hands-on demonstration of the rice transplanter in the field and open forum followed.

Last February 21, PHilMech had launched the same center in Pili, Camarines Sur.

Also, in celebration of Grand Farmer's



"We want to be more aggressive in provinces to bring our technology closer to the people. Through modernization, we can mitigate the impact of climate change and produce more food."

—Engr. Raul R. Paz,
PHilMech Deputy Director

Fiesta last May 17, a groundbreaking ceremony of PRTMDC in Manambulan, Davao City was held in collaboration with DA-RFO XI Executive Director, Ricardo M. Oñate, Jr. The establishment of the building is targeted to finish this year. ■ **AMGDeVera**



MMP technical cooperation launched in Iloilo

TO ADDRESS THE INACCESSIBILITY OF RELIABLE

and competent after-sales services for agricultural machinery right at the farm, PHilMech, together with the DA-RFO VI launched the Technical Cooperation in the Implementation Magsasakang Mekaniko Program (MMP) on April 25, 2019 at Buntatala, Jaro, Iloilo City.

Another aim of the MMP is to address the inadequate livelihood opportunities for rural labors, thus it empowers and capacitate the small farmers and other rural farm laborers with the skills that they can use to make a living within their areas.

Under this program, farmers will be trained on the repair and maintenance of small farm engines. Their skills will then be assessed by TESDA. Should they pass the assessment, they will be given with certificate of competency.



TECHNICAL COOPERATION

(from left) Ma. Ofelia L. Dela Cruz of TESDA; Dir. Cyril L. Ticao, Regional Director-DOLE Regional Office VI; Dir. Remelyn R. Recoter, Regional Executive Director-DA RFO VI; Dir. Arnel Ramir M. Apaga, Director I-PHilMech; Engr. Vianney Ojero, AFMech Focal Person-ATI RTC VI; Engr. Virsus L. Galdonez, Service Engineer-Super Trade MGI; (at the back) Farmer participants of Skills Training on Repair and Maintenance of Small Farm Engines

This program is a convergence project of the different agencies—their mandates, experts and resources—towards a sustainable farm level mechanization in the country. Mr. Arnel Ramir M. Apaga and Ms. Mary

Ann A. Bucsit were the program implementers. Cooperating agencies were Department of Agriculture, Agricultural Training Institute, TESDA, Department of Labor and Employment and AMMDA. ■ **MAABucsit/JMGSubaba**

PHilMech, CMU launch Rice Mech SOA

TO INCREASE FARMERS' KNOWLEDGE

and information access on Rice Mechanization, Philippine Center for Postharvest Development and Mechanization (PHilMech) collaborated with Central Mindanao University (CMU) to launch the School-on-the-Air (SOA) on Rice Mechanization last April 3.

The said activity is under the project entitled "Communication Support for the Rice Mechanization Program" that aims to reach the grassroots level of the country through a collaborative

information dissemination with universities, LGUs and DA-RFUs.

The program, which has 66 enrollees from three farmer associations in Maramag, Bukidnon, will air on DXMU FM 88.9 for two months, during Mondays, Wednesdays and Fridays. It started broadcast last May 20.

It is hosted by staff from the radio station, along with resource persons from the College of Engineering of CMU. PHilMech has provided the radio station with two SOA modules, for Rice

Production and Postproduction, that contain eleven and seven lessons each, respectively.

The enrollees were given kits to be used during the course of the program. It contained notebooks, pens, and reading materials regarding Rice Mechanization that will help farmers better understand the subject matter. PHilMech and CMU will conduct a graduation ceremony at the end of the broadcast to recognize the students' efforts and award outstanding listeners.

■ **PMCGabato**



PSABE holds annual confab, PHilMech ABEs win awards

THE PHILIPPINE SOCIETY OF AGRICULTURAL AND BIOSYSTEMS ENGINEERS

(PSABE) held its 30th Agricultural Engineering Week on April 21 to 27 in Bacolod City, with approximately 1,700 individual

The theme for the 30th Agricultural Engineering Week is "Agricultural and Biosystems Engineers: Catalysts of Infrastructure Modernization in Agriculture and Fisheries."

"What we are witnesses right now in the agriculture sectors of the Philippines and parts of Asia is 'technologization' where infrastructure modernization are among the components. So the 30th Agricultural Engineering Week also highlighted the technologies needed for the modernization of agriculture and fisheries, and the need for agricultural

and biosystems engineers to intensify their roles for increased and efficient food and crop production," said PSABE President and Asean Engineer Aldrin Badua.

The 29th Philippine Agricultural Engineering Week held in Davao City from April 22 to 29 last year was attended by more than 1,700 delegates, or a 42-percent increase over the 1,200 delegates that attended the conference of the Philippine Society of Agricultural Engineers (PSAE) in 2017 in Legazpi City.

The week-long celebration in Bacolod City included, among others, the conference, exhibits, technology demonstrations, plenary, and technical papers presentations on the development and trends in renewable energy and rural electrification;

environmental and waste management; agricultural machinery; irrigation and drainage; soil and water conservation; postharvest and processing; fishery and aquaculture resources engineering; forest product resource engineering; and related fields.

Meanwhile, Philmech researchers garnered prime awards during the convention. Engr. Arlene Coloma, of the Agricultural was awarded the best paper award in the agricultural machinery mechanization category for her paper entitled Development of Computer Vision System for Mango Sorting and Grading under the Farm machineries category. Dr. Romualdo Martinez on the other hand, garnered second prize under the postharvest and processing category for his paper entitled "Simulation model for drying and cooling of rough rice in deep bed."

■ **RPEstigoy**



(from left) (1) Dr. William D. Dar delivers his speech during the PSABE convention. (2) Ribbon cutting ceremony of the PSABE exhibit.



MACHINERY ROADSHOW



Some of the agricultural machinery showcased during the roadshow held in PHilMech

New agri-machines showcased at PHilMech Anniversary

MANUFACTURERS, FARMERS AND GOVERNMENT OFFICIALS

were treated to a different kind of show during the Philippine Center for Postharvest Mechanization and Development's (PHilMech) 41st Anniversary on May 20 to 21.

It was a deviation from the common fashion show that most people usually see. Instead of a regular pageant show set-up, farm machines took to the runway to showcase the advancements in agricultural machinery.

Companies came from all over Luzon but it was the Korea Agricultural Machinery Industry Cooperative (KAMICO), represented by FIT Korea Trading Phils., Inc who headlined the roadshow as they turned over new

farming machines to PHilMech as part of a Memorandum of Agreement with PHilMech.

The roadshow showcased a variety of farm machinery for the public to see. From tractors of different sizes and power outputs, riding-type mechanical rice transplanter, tractor attachments for land preparation, reapers, combine harvesters and more. One particular standout was a combine harvester that sported a steering wheel instead of the traditional lever handles for steering.

Apart from the roadshow, there was also an exhibit that showcased various machinery from Mariñas Technologies Inc., All Certified Equipment Trading Corporation, ACT Machineries & Metalcraft Corp.,

Metalworking Industries Association of the Philippines, Filholland Corporation, Ada Manufacturing Corporation, One Renewable Energy Enterprise Incorporate, P.I. Farm Products Incorporated and Super Trade Machinery Global Incorporated.

In line with the launching of the Rice Competitiveness Enhancement Program, it is without a doubt that the Philippines is really gearing up to be competitive in the global market. With the advancements of such machines helping farmers to become more efficient, there's a big upside for the future of the Filipino farmers.

■ **GATBarroga**



PHilMech shares farming to livestock sector

TO PROMOTE THE SIGNIFICANCE OF FARMING,

the Philippine Center for Postharvest Development and Mechanization (PHilMech) shared the modern postharvest and mechanization technologies through the 2nd Goat FIESTA and 2nd Meat Festival in Baler, Aurora last April 25 to 26.

Through the two-day program, PHilMech exhibited its existing and newly developed technologies and processing systems that goat raisers can use to resort to farming as an additional source of income.

"The FIESTA we have now is not the typical fiesta. Our event is for you to learn the goat technologies we have developed. This event is certain to open opportunities and should inspire you to strive more," emphasized Aurora Governor Jerry Noveras in his keynote address.

With the theme, "Paglinang sa Kakayahan at Kaalaman Daan Tungo sa Maunlad na Kabuhayan", the event convened goat raisers and meat processors to achieve a more productive, competitive, and sustainable goat production system in Central Luzon.

PHilMech showcased post production system for cacao, fuel briquettes making procedure and other commercially



Farmers visit and inquire at the PHilMech booth during the Goat Fiesta and Meat Festival.

available technologies like cassava digger, multi-commodity solar tunnel dryer (MCSTD) and agricultural tramline system (ATS) that can be adopted in the area.

PHilMech also offered advisory and assistance to interested participants and information, education and communication (IEC) materials that they can use for references.

Central Luzon Agriculture, Aquatic and Resources Research and Development Consortium (CLAARRDEC) together

with the Provincial Government of Aurora organized the two-day festival.

CLAARRDEC invited its member-agencies to highlight their developed technologies on goat production, techno forum/pitching, cook fest, goat show and exhibit of other technologies.

■ CVAng



PHilMech exhibitors with (from left) Kabisig Chairman Daniel Guillen and Hon. Roberto B. Tan, President of PDIC

PHilMech supports Kabisig Expo

THE KABISIG PEOPLES

MOVEMENT continually finds an ally in PHilMech, on its endeavor to provide a one-stop government information exhibit throughout the nation with a theme of "Pamahalaan at Mamamayan: Kapit-bisig sa Pagbabago at Kaunlaran". The Luzon event conducted in the first quarter of the year proved successful which prompted both parties to push through with the Mindanao expo held last April 17-19, 2019 at the Abreeza Mall, Davao City.

Kabisig Chairman Daniel Guillen, stated that this fair will serve as a venue for the public to be aware of where their taxes go and as such all government agencies who participated in the event featured their respective profiles, service facilities, programs, projects, and accomplishments.

Mr. Lemuel Ortonio, Acting Chief of the Davao City Investment Promotion Center, delivered his opening remarks and acted as the representative of the Hon. Mayor Sara Duterte, who was scheduled to be the Kabisig Expo's Guest Speaker. Mr. Ortonio read the mayor's message of encouragement to Dabawenyos to support the event as she reassures the participants that the government is a viable partner, aside from the private sectors, in achieving sustainable development in the city, the region, and the entire nation. The Hon. Roberto B. Tan, President of PDIC, also attended the exhibit.

The majority of inquiries during the three-day activity focused on cacao and coffee postharvest technologies. Freebies were handed out to interested clients and a raffle was also held to uplift spirits. ■ **IDCDavalos**



26th International Agribusiness Exhibition Seminars



20th International Food Processing, Packaging & Products Exhibition



15th National Fisheries Exhibition & Seminars

October 3-5, 2019
World Trade Center
Manila, Philippines



Visit the
PHILMECH BOOTH
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 postharvest and
 mechanization!



MULTI-MILLION FACILITY

Newly built processing center invested by the TNPMPC to cater bigger market

COVER STORY

MULTI-MILLION DREAM TURNS INTO REALITY THROUGH MECHANIZATION

Jett Molech G. Subaba

WHO WOULD SAY THAT FARMERS WILL NEVER GET RICH when this organization of farmers from Nueva Ecija has accumulated a total asset of more than 270 million pesos directly from agriculture?

The Talabutab Norte Primary Multi-Purpose Cooperative (TNPMPC) in General Natividad, Nueva Ecija

has been a good steward of the government programs and provisions since 1991. Much more when they were granted the Rice Processing Center (RPC) II in 2015 by the Department of Agriculture. This facility has increased their capacity and widened their reach, making them a name in the rice marketing industry.

The 16-million RPC facility is equipped with two mechanical dryers with a capacity of 15 tons each and rice processing equipment with a capacity of 1.9 tons per hour. It also has an office and a warehouse. Inclusive of the project is a two million working capital for the cooperative. Their operation started in February 2016.



TEOFILO S. NATIVIDAD



CRISOSTOMO VALDEZ

Boosting income, minimizing losses through RPC

The cooperative prides itself as the first recipient of the RPC in the province. This state-of-the-art facility has allowed them to process their rice produce according to the preferences of their clients. It is equipped with color sorter, whitener, polisher and grader. This has boosted the income of the cooperative from their practice of trading palay with a profit of cents per kilo to trading rice with Php3-4 profit per kilo.

"Before, we buy palay and sell it directly to traders. But now that we have the RPC, we process the palay to rice. This has increased our income by more than 50 percent because the centavos per kilo we get from palay before can now be Php3-4/kg with rice. This facility has helped us produce quality-milled rice and do custom-milling based on our clients' preferences," said Crisostomo Valdez, general manager of the RPC.

Moreover, the RPC can also produce by-products of rice

like bran (darak), germ/embryo (binlid) and hull (ipa) which provides an additional income to the cooperative aside from the processed rice. Rice hull for example has a market among i-power companies or rice-hull generated power plants in the province. They buy it for 80 cents per kilo, but if delivered to the power plant it becomes Php2.50 per kilo.

"With the RPC, we can get by-products like feeds, broken grains and rice hull which are marketable too other than rice. This facility is indeed of great help," said Teofilo S. Natividad, chairman of the TNPMP.

Aside from the financial boost of the RPC the cooperative has also enjoyed the benefits of mechanical drying. According to Valdez, it has minimized losses and removed their worries from manual sun drying.

"Since mechanical dryers are indoor, then we won't worry about the rain. Unlike before, when we see heavy clouds, we are opting not to do the sundrying. But with the RPC,

even at night, we can continue with our drying. Moreover, we only need to indicate in the machine the moisture content level then it will stop when achieved. This has minimized the losses, preserved grain quality and can even pass the NFA's standards of clean and dry palay," explained the 55-year-old manager.

In line with the said benefits of the RPC, the cooperative was also able to employ more than 50 laborers in the processing center. They have increased income of more than 50 percent. They also tripled their market volume capacity from 30,000 cavans to 100,000 cavans per year from the same area of production.

PHilMech's role in their success

Initially, PHilMech provided them the necessary seminars and training courses in the operation and maintenance of the RPC. Moreover, under the project on the development of RPC into model agribusiness enterprises the cooperative has learned a lot on enterprise development. This project aimed to strengthen the capacities of selected RPC recipients to manage their resources more effectively for them to be able to operate the RPC viably and sustainably.

Last year, the TNPMP, together with other three selected RPCs has finished two batches of learning sessions. This was conducted by the Enterprise Development Division of PHilMech in collaboration with the Agricultural Training Institute (ATI).

► next page



► *Multi-Million Dream Turns / previous page*

First learning session was the on actual operation and management of RPC. Second was on product packaging and labeling, basic costing and market linking.

"We really improved with the help of seminars and training PHILMech has provided. Through those training courses, we learned how to do packaging, labeling, marketing and on how to improve the quality of our products," said Chairman Natividad.

"Another important thing we've learned is on how to do costing of our products specifically on computing a breakeven price where we can add a little more to make a profit. In the organization aspect, we learned how to make policies for the organization and even in the operation of RPC," Valdez added.

Additional Income as Farm Service Provider

The TNPMPC has fully embraced mechanization in their farm operations. Aside from the RPC, they were also granted with combine harvesters, tractors and transplanters which they use in their farms and as farm service provider. They offer services from land and seedling preparation, rice planting and up to harvesting. For the complete transplanting services, they are paid with Php10,000 per hectare. Services include seedling preparation and transplanting. On the other hand, the cost of harvesting services is not monetary but in goods. The

cooperative collects eight cavans for every 100 cavans of harvested palay as payment. That is why the cooperative has a sure profit for their farm service enterprise.

These services were not just beneficial to the organization but also to their farmer-clients as they will no longer need to do the work and suffer from the heat of the sun. This is how mechanization eases the tedious work of traditional farming. Farming has been easier now than ever.

"As service provider, we benefit a lot from it especially in terms of profit. Even the farmers who avail of our services find ease in farming as we do the planting up to harvesting for them. They only need to relax and wait for their produce," brags the chairman.

Overcoming the pains of RTL

However, the cooperative has also felt the effect of the Rice Tariffication Law (RTL) in the country due to the importation of rice. But they rose from these issues and have come up on with a solution to at least defy its effect among the member-farmers. The management asked them to plant aromatic rice, a variety not included among the imported rice (i.e. premium, milled and well-milled only).

"We instructed them to plant aromatic rice instead because it is not included in the government's importation. This is how we



mitigate the effect of rice tariffication law in our area. At least, we can address the sentiments of the farmers on this issue," explained the Chairman.

Competence brings expansion

Because of the lack of competitiveness of their produce before, the cooperative only markets their rice within their members. However, as they shifted to mechanized farming and with the provision of the RPC, their market expanded. It has reached other cities and provinces then in Metro Manila. Recently, they supply the rice requirements of the Makati Business Corporation and the Ayala Land Inc. with more than 20,000 bags of 25-kilo rice.

Valdez emphasized, "RPC has become the key to our expansion. It taught us how we can maximize our potential and how we can be competent in the industry."



“We stayed true to our vision to work hand in hand with our members toward development. We believe that when the cooperative rises, it can help the members to rise too, vice-versa. It should always go together so we both can be successful.”

Teofilo S. Natividad

(left) Combine harvesters granted by the government for and personally acquired by the cooperative. (right) Some of the SUVs of the members of the cooperative

As the demand of their clients increased, they expanded their processing center and invested in new technologies and facilities. They built a brand new processing center worth Php56 million with the capacity of 300,000 cavan. It is equipped with four new mechanical dryers (30 tons per batch each) and rice mill with a capacity of 70-80 cavans per hour. Alongside are six delivery trucks, one forward, three elf and two 10-wheeler trucks. This is to meet the clients' demand and keep their deliveries on time.

The secret to a multi-million asset

The TNPMPC recognized that God is the head of their organization overseeing all their plans, activities and ventures as a cooperative. Alongside this principle are their vision and mission. Their mission is to uplift the quality of life of its

members in the countryside. And their vision is to see their members succeed along with the cooperative (kaagapay sa pag-unlad).

“We stayed true to our vision to work hand in hand with our members toward development. We believe that when the cooperative rises, it can help the members to rise too, vice-versa. It should always go together so we both can be successful,” said Mr. Natividad.

Above all, they make sure to keep their members intact, treating them as families for they believe that a good relationship within the organization is the foundation of their lasting success.

Today, with the help of the cooperative, most of their members have their own SUV vehicles, house and lot and have sent their children to school. With these, they wanted

to show the next generation that there is profit in agriculture. That in agriculture there is a bright future. In fact, TNPMPC plans to offer full scholarship to students who will pursue agriculture in college. Not just that, they will absorb them immediately after they finished their degree.

This is the story of the TNPMPC who started with Php7,500 business capital 29 years ago. Now, it is earning millions. They are living testaments that farmers can truly become rich and successful.



REAPING THE BENEFITS FROM THE ILOILO RICE PROCESSING COMPLEX

.....
Gio Anton T. Barroga

WHEN FARMERS BECOME POWERLESS against the forces of traders who set the price for buying palay, most farmers would unwillingly choose to sell cheap just so they could sell their produce.

Fortunately, with the help of the South Korean government through the Korean International Cooperation Agency (KOICA), there's a foreseeable end to the unfair practices of traders with their state-of-the-art technology that's tipped to favor our farmers.

It's not the newest but it's certainly promising. The Iloilo Rice Processing Complex (IRPC), one of four in the country, is a KOICA-funded RPC. The RPC aims to reduce postharvest losses while increasing the income of the farmers.

Operating since 2012, the Iloilo RPC (IRPC) has been managed by the Pototan Farmers Multipurpose

Cooperative (PFMPC) since 2015. Led by their chairman, Andrei Celiz, the Iloilo RPC caters to the postharvest needs of the farmers in their area.

Remelyn Recoter, Department of Agriculture (DA) Region 6's Executive Director, said that the Department of Agriculture (DA) and the Philippine Center for Postharvest Development and Mechanization (PHILMech) have trained members of the PFMPC before the coop took over in 2015.

The IRPC comes with five mechanical dryers and a multi-pass state-of-the-art milling facility with color sorter, length grader and bagger. It also has two trucks (6-wheeler and 10-wheeler) that they use to haul palay from the harvesting site all the way to the RPC. Good thing is, they're always just a call away.



Rice processing is also easier with the facility, especially during rainy season, as the IRPC is complete from drying to milling. The state-of-the-art facility also has a warehouse for storing rice.

In terms of milling recovery, the IRPC also recorded a 66.4% milling recovery rate on April 2019, although Recoter mentioned that it had reached 68% in the past.

Farmers are at ease knowing that their products are being sold directly to the market. With the



“

When the RPC came to Iloilo, the price of rice rose. Before [the RPC], rice was bought at Php14-15/kg. Now, the price ranges from Php16-18/kg, which is why there are big benefits. The farmers can be sure that they have a place to sell their palay at a competitive price.

Engr. Gler Pelaez



middleman eliminated, their high quality milled rice can go directly to the market to be sold or to other retailers at a more competitive price.

“Ngayon, ang pag dating ng RPC dito sa amin, medyo tumaas yung presyo. Dati yung bilihan nasa 14 to 15 (pesos per kg), ngayon, tumatakbo tayong nasa 16-18 (pesos per kg) ang presyo ngayon dito. Kaya malaki ang benefits. Makasiguro yung farmers na may pagbentahan sila ng palay nila na maganda yung presyo. (When the

RPC came to Iloilo, the price of rice rose. Before [the RPC], rice was bought at 14-15 (pesos per kg). Now, the price ranges from 16-18 pesos per kg), which is why there are big benefits. The farmers can be sure that they have a place to sell their palay at a competitive price),” OIC Plant Manager and Plant Engineer Gler Pelaez said.

To date, many farmers have benefitted from the services of the IRPC, with more farmers to be helped in the future a certainty.

The facility, operations and the staff of the Rice Processing Complex in Iloilo.



THE ALL NEW GRAIN PROBE MOISTURE METER

.....

The prototype unit grain probe moisture meter was developed by PHILMECH for rapid and accurate moisture content measurement of paddy and corn grains while doing the customary sampling.

MAIN COMPONENTS:

- standard grain probe
- 100-gram capacity test chamber
- menu panel for control and measurement
- handle for ease of sampling

FEATURES:

- ✓ microcontroller-based
- ✓ with 7-segment, 3-digit LED display
- ✓ adopted a capacitive sensor oscillator circuit
- ✓ with 3.7 Lithium-ion rechargeable battery
- ✓ sliding plastic bottom cover for quick and easy discharge of grains
- ✓ power and grain selector switches



Minimizing Milling Deficiency through PHilMech Impeller Rice Mill

FILIPINO FARMERS CONTINUOUSLY FACE

different problems in the field from the land preparation up to postproduction. What does it take to be upland farmers who can produce rice but having difficulty milling their palay? How can rice mills be brought to their place with limited source of power? And what kind of rice mill can produce both white rice and brown rice at the same time?

The PHilMech impeller rice mill was developed by Dr. Michael A. Gragasín, Scientist I and an award-winning researcher. This technology was developed to address the deficit number of rice mill units across the country. There are only 21,000 units of rice mills with 400kg/h capacity. Moreover, it was designed to cater upland farms and those in the far-flung areas.

"During the development of the rice mill, my purpose is to address the need of farmers with limited access to rice mills specifically the farmers in upland and remote areas. I focused on the design that is anchored in their field condition since this is designed for them" said Dr. Gragasín.

This rice mill uses an impeller instead of rubber roll for its hulling mechanism. Impeller is more convenient to use because its smaller than the traditional miller.

"The rubber roll hullers were huge so I explored the impeller type. According to literatures, the quality of the impeller is inferior compared to the rubber roll but we did some innovations and then we came up with the impeller that is smaller which can be used by the upland farmers", Gragasín explained.

Rice mills are imported from other countries. "What's good about the impeller rice mill is that it can be attached to single phase electrical lines which are available in barrios and far flung areas compared to the



PHilMech Impeller Rice Mill

imported rice mills which require three face electrical lines" said to Dr. Gragasín.

Studies showed that the single pass rubber-roll "cono" rice mill provides milling recovery of 60-63% and the multi-pass rubber-roll's milling recovery is 63-65%.

On the other hand, Impeller Rice Mill offers 63-66% milling recovery for white rice depending on the quality of palay and 72-78% milling recovery and head rice recovery or the percentage of head rice (excluding broken) obtained from a sample paddy of 83-91% for brown rice. This also incurs a milling cost of only Php1.20 compared to Php1.30-1.50 for existing rice mills.

The design is suitable for village level of operation which only requires minimal working space of 16 square meters. It is compact yet powerful with input capacity of 300 kg/h or six bags/cavan per hour.

Furthermore, it is gender-friendly. It is easy to operate that anyone can handle it without hassle.

■ MCCordova



RCEF mechanization program launching

AIMING TO INCREASE AWARENESS

on the Rice Competitiveness Enhancement Fund (RCEF) – Mechanization component, the Philippine Center for Postharvest Development and Mechanization (PHilMech) in celebration of its 41st Founding Anniversary launched the RCEF last May 20.

Director Baldwin Jallorina marked the launching by introducing the agency's major role in promoting agriculture mechanization to the Filipino farmers.

"Filipino farmers can be competitive if we can educate and promote the efficient use of postharvest and mechanization technologies", Jallorina said in his speech.

Highlights of the launching was the RCEF video showcasing the benefits of the program in the agriculture industry – the reduced production cost by Php 2 to 3 per kilogram and 3 to 5% reduction on postharvest losses by using precise, effective and complete system of mechanized production and postproduction technologies.

In addition, Senator Cynthia Villar keynoted the celebration. She said that the Rice Tariffication Law will benefit the Filipino farmers from the tax excised on rice importations. This will come in the form of rice machinery, seed production, financial/loan assistance, and extension services.

The six-year implementation of RCEF program aims to raise the productivity, profitability and global competitiveness of Filipino farmers.

Specifically, it aims to make accessible the appropriate rice production and postharvest machinery and equipment, promote among Filipino rice farmers the use of efficient and cost reducing rice mechanization interventions, and strengthen local agricultural manufacturers. ■ **JKBSantiago**



PH heads for mechanization

BECAUSE OF THE PERCEIVED DROP IN THE BUYING PRICE OF PALAY

due to the liberalization of rice imports, the government is now campaigning to amplify the level of rice mechanization in the country to help farmers increase their competitiveness in rice production.

This campaign is supported by the Rice Competitiveness Enhancement Fund (RCEF), which allocated 50% or P5 billion of the Rice Fund per year, for the next six years. This budget will be used for the provision of farm machinery and equipment to eligible farmer associations and cooperatives.

In the media briefing held during the 41st Anniversary of the Philippine Center for Postharvest Development and Mechanization (PHilMech), Director IV Baldwin G. Jallorina stated that the Philippines is among the least mechanized countries in Southeast Asia.

"Mas mataas pa ang mechanization rate ng Vietnam at Thailand kaysa sa atin," Jallorina said.

Aside from mechanization rate, the country also has a high cost of rice production, which the government hopes to lower down.

"Based on studies by the Department of Agriculture, the cost of producing one kilo of palay (unmilled rice) in the Philippines is P12.72 per kilo while it is P6.22 in Vietnam and P8.86 in Thailand," he stated during his welcome speech at the opening ceremony.

Rice Mechanization is one of the components of the RCEF created by the Rice Tariffication Law. It is among four components namely: Mechanization Component, Seed Component, Credit Component and Extension Component.

PHilMech is also collaborating with the Philippine Rice Research Institute (PhilRice), Agricultural Training Institute (ATI), Technical Education and Skills Development Authority (TESDA), Land Bank of the Philippines (BLP) and Development Bank of the Philippines (DBP) to attain their objective of raising the competitiveness of the local farmers.

"PHilMech believes with the successful implementation of the different components under RCEF, the cost of producing palay in the Philippines can be reduced by P2 to P3 per kilo," he added. ■ **PMCGabato**



MEDIA BRIEFING

Dr. Rodolfo Estigoy (extreme right) serves as the moderator of the media briefing held on the 41st anniversary of PHilMech



PHilMech passes anew IMS surveillance audit

AFTER PASSING THE CERTIFICATION AUDIT and First Surveillance Audit in 2018, PHilMech again, proved its conformance with the Integrated Management System International Standards and thus passed the Second Surveillance Audit conducted last June 27-28.

The PHilMech Management Committee headed by Director Baldwin G. Jallorina, together with IMS Core Team headed by Dr. Normita A. Pasalo, the Integrated Management Representative (IMR) welcomed Dr. Shahid Mushtaq, the Third Party Auditor from the Russian Register. Mr.

Joel V. Dator, PHilMech Lead Internal Auditor presented the results of the First Cycle Internal Audit of 2019 during the opening meeting.

In view of PHilMech Integrated Management System (IMS) namely ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007, Dr. Shahid Mushtaq, conducted the Second Surveillance Audit. His audit focused on different areas that greatly affect the quality of PHilMech products and services, the emergency preparedness on different emergency situations, and the agency's contribution on environment protection. Together with the IMS Core

Team, he process-audited to all the Divisions with the assistance of the Division Chief, Division Process Owners, Division Safety Officers, Division Environment Officer and Division Document Controllers.

The comprehensive audit had its closing meeting on the second day and Dr. Shahid concluded that PHilMech has maintained its integrated management system in line with the requirements of the three standards.

■ **ZJBarza**

IMS champion finishes 28 years in service

MS. OLIVIA L. CANCER, the PHilMech Integrated Management System (IMS) champion, has reached the finish line of her 28-year race in public service as she retires from office in June 30. And yes, she finished literally as a champion!

This fine, strict but courteous woman has entered PHilMech (formerly NAPHIRE) in 1991 as Computer Programmer I. She was promoted as information systems analyst II in the following year, then as project evaluation officer III and project development officer IV in 1996 and 1998 respectively. In 2016, in pursuit of PHilMech for higher quality

standards in services, Cancer was appointed head of the team who will work out the IMS certification of the center.

In her time as IMS Champion, she has diligently guided and supported the IMS key players and the PHilMech employees in the successful application, certification and implementation of the ISO 9001:2015 quality management system, ISO 14001:2015 environment management system and the OHSAS 18001:2007 occupational health and safety management system.

Cancer has been committed in conducting internal audits while

doing reminders together with the IMS team prior to actual audits to ensure favorable results for PHilMech. Indeed, it was favorable for PHilMech as it received the most coveted IMS Certificate during the celebration of its 40th Anniversary on May 22, 2018 by the Russian register.

Even after the certification, she has consistently encouraged every employee to not just memorize the policies by the head but by the heart so they can embrace it fully as she did as champion.

Academically speaking, Cancer was a champion too as she has finished



Summer daycare program '19 concludes

EIGHT YOUNG LEARNERS WERE RECOGNIZED for their active participation in PHilMech 2019 Gender and Development Summer Day Care Program last May 31, 2019 at the PHilMech Training Hall.

Aside from the agency's goal to mechanize the Philippine agriculture, its Gender and Development Program also recognized the need to promote the welfare of PHilMech employees' children through realizing their right to education. Eight parents/guardians were overjoyed to sign up their little ones for the 2019 GAD Summer Day

Care Program for free, inclusive of the learning kits utilized to encourage the development of the pupils.

The two-month Summer Day Care Program was initiated by Ms. Brenda H. Francisco, PHilMech's GAD Administrative Officer II, through the help of Ms. Ma. Medalla Maglanoc, who taught the four boys and four girls from April-May, 2019. And just before the month of May officially ended, Engr. Raul R. Paz, and Ms. Helen F. Martinez graced the recognition program for the pupils.

Ms. Martinez, GAD Focal Point System Vice-Chairperson, highlighted in her welcome remarks during the Recognition Program her high hopes for a bigger Summer Day Care Program in the years to come. Engr. Paz, Director III, also shared his support to the program, and encouraged PHilMech to enroll their children for the next batch of the Summer Day Care Program.

■ **BHFrancisco**

her degree, Bachelor of Science in Agricultural Engineering as Cumlaude at the Central Luzon State University (CLSU) in 1981. She has also finished her masters in teaching mathematics at the Nueva Ecija University of Science and Technology (NEUST) in 2002.

She is a widower to her husband who died few years ago and a mother of three excellent women too. Cancer is passionate about serving God as she serves lector-commentator at Christ the Worker Chaplaincy in CLSU since 1993 and a member of the Apostolado ng Panalangin since 2014.

In her retirement, one of her goals is to remain a champion not in public service but to her children and grandchildren while savoring the laurels of her hard work. ■ **JMGSubaba**



CANCER



PHilMech honors praiseworthy employees

PHILMECH, THROUGH ITS PROGRAM ON AWARDS and

Incentives for Service Excellence (PRAISE), confers service awards to loyal and outstanding employees in commemoration of the agency's 41st Anniversary.

On May 21, 2019, outstanding employees were bestowed with Natatanging Kawani awards for their remarkable work ethics and exceptional accomplishments in the preceding year. Senator Cynthia A. Villar, together with PHilMech Director Dr. Baldwin G. Jallorina and Engr. Raul R. Paz, led the awarding ceremonies held at the PHilMech Training Center. Awardees for each functional category include:

- (1) Natatanging Kawani for Research and Development, Junior Category: Engr. Edgar D. Flores, Science Research Specialist II of the Socioeconomic and Policy Research Division
- (2) Natatanging Kawani for Support Services, Senior Category: Ms. Remedios S. Ortiz, Accountant IV of the Finance Division
- (3) Natatanging Kawani for Support Services, Junior Category: Ms. Richelle Ann L. Morota, Administrative Officer IV of the Administrative Division
- (4) Natatanging Kawani for First Level Category, Administrative Support: Ms. Gretzen M. Miguel, Administrative Assistant II of the Finance Division and Mr. Alex Q. Aquino, Administrative Aide V of the Administrative Division

In a separate awarding rites held on May 23, 2019, 15 employees were commended for their steadfast dedication and commitment to duty.



THE AWARDEES

The recipients of the Natatanging Kawani ng PHilMech 2018

Dir. Raul R. Paz, concurrent chair of PHilMech PRAISE Committee, together with Mr. Ronaldo Sebastian R. Reyes, Chief of Administrative Division, led the ceremonies held during the conduct of PHilMech's Technical Conference and Team Building activities at Camayan Resort, Subic Zambales. PHilMech loyalty awardees celebrating their milestones with the agency in 2019 are:

- 5 Years: Ms. Ana Marin C. Miranda and Engr. May Ville B. Castro, Science Research Assistants
- 15 Years: Engr. Aldrin E. Badua, Supervising Science Research Specialist
- 25 Years: Mr. Rolando D. Mares, Administrative Aide VI; Ms. Jennifer C. Ballado, Administrative Officer II; Ms. Ma. Victoria S. Tamani, Administrative Officer V; Ms. Remedios S. Ortiz, Accountant

IV; Ms. Agnes M. Wy, Science Research Specialist II; Mr. Efren R. Regpala, Ms. Arlene C. Joaquin, Dr. Gigi B. Calica, and Dr. Ma. Cecilia R. Antolin, Senior Science Research Specialists; and Dr. Baldwin G. Jallorina, Director IV

- 30 Years: Ms. Zhalimar J. Barza, Administrative Officer II
- 35 Years: Engr. Raul R. Paz, Director III

PRAISE is a Civil Service Commission (CSC) approved reward system of the PHilMech institutionalized to encourage, recognize and reward innovative ideas, superior accomplishments, and exemplary behavior which contribute to operational efficiency, organizational improvements, and realization of institutional goals. ■ **LDRamos**



GUESTS OF HONOR



ECUMENICAL SERVICE



INDUSTRY DAY



PHILMECH DIRECTOR



TEAM BUILDING



PHILMECH GRAIN PROBE MOISTURE METER

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