

PHiMech

NEWSLETTER OF THE PHILIPPINE CENTER FOR POSTHARVEST DEVELOPMENT AND MECHANIZATION



ON COVER:

***BEHIND THE CASSAVA GROWER'S SUCCESS:
TLC AND RIGHT TECHNOLOGY***

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About the Cover

Mr. Cyril Cattiling, a cassava farmer in Alfonso Lista, Ifugao, gives his sign of approval for the PHilMech-developed cassava digger.

Photo by: DTEstevos

Editorial Board

Editorial Consultant:
Rodolfo P. Estigoy, PhD

Editor-in-Chief:
Mila B. Gonzalez, PhD

**Associate Editor
and Layout/Graphic Artist:**
Jett Molech G. Subaba

Photographer:
Danilo T. Esteves

Circulation:
Jemmalyne R. Aguilar

Contributors to this Issue

Andy M. Tuates, Allan Jake Agoyaoy, Modesto L. Jose, Jett Molech G. Subaba, Rodolfo P. Estigoy, Pia Sarina Fukasawa, Gladys May Z. Carganilla, Mila B. Gonzalez, Vicky M. Barlis, and Jane Foronda

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Jerry James M. De La Torre... p.3
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EDD... p. 4
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Engr. Genaro M. Tolentino, outgoing president of PSAE, delivers his speech during the 66th PSAE convention

won third best paper under the Agricultural Processing, Structure and Electrification category.

Engr. Andres M. Tuates Jr. and Dr. Ofero A. Caparino's "Development of Biodegradable Plastic as Mango Fruit Bag" bagged the third best poster award under the Agricultural Power, Energy and Waste Utilization category.

PHilMech engineers win PSAE Awards

ENGINEERS of PHilMech won numerous awards for best paper and best poster during the 13th International Agricultural Engineering Conference and Exhibition, 66th Philippine Society of Agricultural Engineers (PSAE) Annual National Convention and the 27th Philippine Agricultural Engineering Week. The three-in-one event was held on April 24-30, 2016 at the Teatro Ilocandia, Mariano Marcos State University (MMSU), City of Batac, Ilocos Norte.

The paper, "Design, Testing and Evaluation of Compact Rice Mill with Impeller Huller" of Dr. Michael A. Gragasin, Engr. Jayvee P. Ilustrisimo and

Dr. Romualdo C. Martinez won first place in both best paper and poster awards under the Agricultural Machinery and Mechanization category. The "Fluidized Bed Drying System for Complete Drying of Paddy: Phase III – Development of Fully-Automated Commercial Scale System" of Engr. Nestor T. Asuncion, Engr. Reagan J. Pontawe, Engr. Roselyn B. Villacorte and Dr. Romualdo C. Martinez garnered second place for both best paper and poster under the Agricultural Machinery and Mechanization category. Meanwhile, "Development of Grain Probe Buriki Moisture Meter of Paddy" of Engr. Arlene C. Joaquin, Dr. Romualdo C. Martinez, Ma. Elizabeth V. Ramos and Elvin B. Santos

Meanwhile, Engr. Genaro M. Tolentino, Chief of Enterprise Development Division (EDD) and Engr. Aldrin E. Badua, Chief of Agri-Infra Coordinating Unit (AICU) were recognized as the outgoing President and Public Information Officer of PSAE, respectively.

The weeklong celebration included exhibits, technology demonstrations, plenary and technical paper and poster presentations on the development and trends in Agricultural Engineering and Allied Fields. This year's convention was spearheaded by the PSAE National in partnership with the local host chapter, PSAE Region I chapter and the MMSU with the theme "Agricultural Engineers in the Realm of Sustainable Green Technology". *AMTuates*

Coffee stakeholders participate in project launch, consultation

NATIONAL AND LOCAL government agencies and coffee farmer's organizations joined PHilMech in its national coffee project launching and stakeholders' consultation. The twin-event was held at the Hotel Veniz, Baguio City on April 26-30, 2016.

The activity was conducted to formally launch the three year project, "Utilization and Promotion of Developed Postharvest Technologies for Sustainable Community-Based Coffee Processing Enterprise". The Bureau of Agricultural Research (BAR) of the Department of Agriculture funded the project.

Director Jennifer Remoquillo, the national High Value Crop Development Program (HVCDP) coordinator and concurrent Bureau of Plant Industry (BPI) assistant director served as the guest of honor. She emphasized that the project needs the merging of efforts of farmers and participating agencies until it proves its significance of ultimately benefiting the coffee farmers.

Meanwhile, Mr. Joy Gabasa of the Asian Center for Leadership Education and Development (ACLEAD) delivered a short lecture on Business Success through People Development. This was followed by a planning workshop in the afternoon.

A total of 70 participants coming from the DA-Regional Field Offices (RFOs) of CAR, IV-A, NIR and VI attended the four day activity.

They included regional HVCDP coordinators and staff, Municipal Agricultural Officers, representatives from PLGU of Benguet, and Negros Occidental, Department of Trade and Industry, selected PHilMech staff and coffee farmer groups. Fifteen coffee farmers representing the project cooperators of 1) Bobok Bisal Organic Arabica Coffee Producers and Growers Association Inc. (BBOACPGAI) of Bical, Benguet; 2) Casile Guinting Upland Marketing Cooperative (CGUMC) of Cabuyao, Laguna, and 3) Cabacungan Integrated Social Forestry Association (CISFA), of La Castellana, Negros Occidental were present. Also in attendance were coffee farmers of Dipaculao, Aurora and Tuba, Benguet.

Participants visited two successful farmer-based coffee processing enterprises,



Stakeholders during their visit to TuBengCoGa in Tuba, Benguet

continued on page 23...

Vis-Min technical staff attend PHilMech training

FORTY-FOUR TECHNICAL staff from the Department of Agriculture - Regional Field Offices (RFOs) and the Provincial Local Government Units (PLGUs) in Visayas and Mindanao attended the “Specialized Training Course on the Operation and Maintenance of Harvesting and Threshing Machineries”. The training was held on April 11-15, 2016 in Tagum City, Davao del Norte.

The Philippine Center for Postharvest Development and Mechanization (PHilMech) through the Technology Management and Training Division (TMTD) conducted the training.

The training course aimed to develop, equip and enhance the technical capability of the participants in the delivery of technical services specifically on the operation and maintenance of harvesting and threshing machineries.

Dr. Anastacia Notarte, Provincial Agriculturist of Davao del Norte welcomed and challenged the participants. “Do your part, using what you will learn in this training; replicate the knowledge and share it to others.”

The lecture-discussion focused on the principles of operation, construction and features,



Participants and the operator during the presentation and trouble shooting of combine harvester.

application, maintenance and trouble shooting, precautions and safety of the thresher, reaper and combine harvester. For two days, participants had hands-on exercises. They experienced actual operation of the machines at Barangay Mabaos, Panabo, Davao del Norte.

The Davao Multi-purpose Seed Producers Cooperative (DAMSEPCO) provided the machinery that were used during the hands-on exercises. Meanwhile, the Kubota Philippine Incorporated and Super Trade Enterprises assisted during the hands-on activities.

Engrs. Guillermo Duran, Bon Jay Paano and Lynden Roque gave impressions about the four-day activity during the closing ceremony. They expressed gratitude to PHilMech

for the training opportunity. They said that they learned a lot on the operation and maintenance of the selected machinery for harvesting and threshing.

Likewise, Dr. Eduardo T. Cayabyab, Chief of Technology Management and Training Division (TMTD) responded, “I am confident that the level of confidence of all the participants was enhanced when it comes to the operation and maintenance..”

The resource persons of the training included Engr. Ray Adarna, PHilMech Regional Field Coordinator of Region XII; Engr. Brenda Dimas, PHilMech Regional Field Coordinator of Region XI; and Ms. Mayville Castro, Science Research Assistant of PHilMech. **AJS Agoyaoy**

THE PHILIPPINE Center for Postharvest Development and Mechanization (PHilMech) stepped-up to maturity level II in four Human Resource (HR) systems. The Civil Service Commission- Region III recognized PHilMech for this feat on June 20, 2016 at the PHilMech Auditorium, Science City of Muñoz, Nueva Ecija. Engr. Rex L. Bingabing, PHilMech director, and Ms. Jane A. Foronda, chief of the HRM Section of PHilMech, received the award.

PHilMech obtained maturity level II or the Process-Defined Human Resource Management (HRM) in (1)recruitment, selection and placement; (2)learning and development; (3)performance management; and(4)rewards and recognition. The determination and invaluable efforts of PHilMech to promote people excellence for efficient and effective public service delivery has been recognized by CSC under its Program to Institutionalize Meritocracy and Excellence in Human Resource Management (PRIME-HRM).

Mr. Jose G. Gea, chief human resources specialist of the Policies and Systems and Evaluation Division (PSED) in CSC-Region III, discussed during the program that the maturity level indicates how well the behaviors,



Director Bingabing receives the CSC III award for PHilMech with HR team led by Ms. Jane Foronda

CSC-III recognizes PHilMech for HR achievement

practices and processes of an organization can reliably and sustainably produce required outcomes.

“We are very grateful to our Directors, Sir Rex L. Bingabing and Sir Raul R. Paz for the support and for believing in us. It is a big reward for all our efforts to improve the HR Management of PHilMech,” she shared.

“I would like also to share the recognition to everyone in the organization, from the top management to all employees and support staff. Big thanks also to the Information, Communication and Technology Section of

PHilMech for developing online information systems which enable us to work easier and faster,” she added. Ms. Foronda and the HR team look forward to achieve the HR seal of excellence three to five years from now. “We are challenged to achieve the seal of excellence. It will be a big task for us but definitely we will work hard for it, the best way we can,” she said.

MLJose

Piñol visits PHilMech, dialogues with onion farmers

DEPARTMENT of Agriculture Secretary Emmanuel F. Piñol dialogued with the onion farmers of Nueva Ecija last June 10, 2016 at the Philippine Center for Postharvest Development and Mechanization (PHilMech). The dialogue centered on their production and postproduction problems and needs.

“Alam ko yung damdamin ninyo, alam ko yung problema. But I would like to see for myself what’s going on in the countryside,” opens the DA secretary and former North Cotabato governor.

He expressed his desire to improve the farmer’s productivity and to sufficiently provide for the onion demand in the country. He also emphasized that smuggling of onions and other commodities will be stopped under the new administration.

Farmers from the different onion cooperatives raised their issues and concerns to the secretary. They identified concerns like the need for price equilibrium level related to overproduction of onions in some areas; useful irrigation system; availability of cold storage facilities; and other

production and postproduction concerns.

Piñol, on the other hand, addressed the farmers’ concerns through his proposed three major agenda: fast and effective technology transfer, easy access to financing and efficient marketing.

He promised 40 units of PHilMech-developed onion seeders as part of his technology transfer agenda.

For the financial aspect, he revealed that one billion peso is allotted by the new administration to the department for an easy-access financing for small farmers’ livelihood. Farmers can avail of this through cooperatives.

For marketing, he mentioned the Regional Food Terminals that will be put up in different areas of production where farmers can market their produce. Meanwhile, the government will do the positioning of goods to the different areas in the country.

Piñol emphasized that his priority is “to make food available and affordable to the people”.

He assured the farmers of government’s support. He left them with a challenge as well. “Nandito ang gobyerno para tulungan kayo. Iba ang gobyerno ni Duterte, pag si Duterte nangako ginagawa niya. Yan ang gobyerno ng pagbabago. Wag nyo lang lolokohin ang pera ng gobyerno, kasi may pananagutan kayo.”

More than 100 hundred onion farmers from Nueva Ecija attended the dialogue.
JMGSubaba



DA Sec. Emmanuel F. Piñol



ALL ABOUT

Root Crops!

@ **TREATS** Section

There is one thing in common about cassava and carrots. Both are root crops. They are edible roots of the plant. They are also called underground vegetables.

Tips

Cassava: What not to buy?

When buying cassava in the market, avoid old stocks. They are out of flavor. Also, avoid cassava with cuts, molds, soft spots and blemishes.

Source: www.nutrition-and-you.com/cassava.html

Recipe

Sweet Baby Carrots

Ingredients:

- 1 (16 oz) package baby carrots
- 1/2 cup butter
- 3 tablespoons honey
- 1/2 cup brown sugar

Procedure:

- Bring to boil carrots in salted water until tender for 15 minutes.
- Drain carrots and allow steaming dry for a minute or two. Set aside.
- Melt butter in the pot in medium low heat.
- Add honey and brown sugar.
- Stir in carrots until evenly coated. Cook for five minutes.

Source: Lisa Altmiller, allrecipes.com

Equipment

Root crop washer

It can wash 1 to 2 tons per hour of carrots. It can wash 3 tons/hr of potatoes. Yes, this mechanized root crop washer developed by PHilMech not only reduces drudgery in traditional washing. It also reduces the labor needed and water consumed. Most important, it reduces postharvest losses.



Equipment



Tips

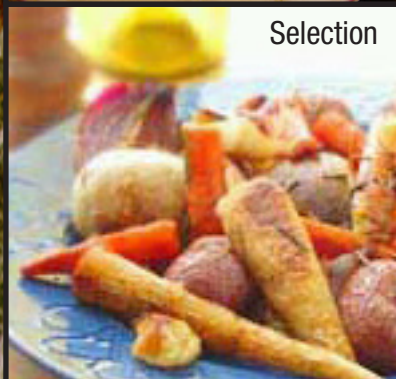


Recipe



Trivia

Selection



Advisory



Advisory

Cassava may be sweet or bitter depending on the variety. The sweet variety is for food, the bitter variety for feeds.

But cassava should never be eaten raw. Its root contains natural toxic cyanogenic glycoside compounds. Consumption of raw cassava may result in cyanide poisoning. Soak and boil cassava in salt-vinegar to evaporate the toxic compounds. This will make cassava safe for consumption.

Source: www.nutritional-yr.com/cassava.html

Trivia

Carrot's Colors

- Although usually orange, there are also purple, red, white and yellow carrots.
- Ever heard of celery root? It is called celeriac.

Selection

Grain Replacement

In search of rice and corn alternatives? Root crops are good grain replacements. They contain complex carbohydrates and starch with little sugar. Lower in calories, high in fiber and good source of vitamins A and C (e.g. sweet potatoes), they also contain high antioxidants which fight cancer (e.g. carrots).

An illustration featuring several carrots and potatoes scattered around a central black-bordered box. The box contains the title and author information. Dashed white lines radiate from the box, and blue vertical lines with horizontal caps extend upwards and downwards from the box, suggesting the structure of a mechanical washer. The background is a light green and yellow watercolor wash.

PHILMECH DEVELOPS MECHANICAL ROOT CROP WASHER

by Rodolfo P. Estigoy, PhD

THE PHILIPPINE Center for Postharvest Development and Mechanization (PHilMech) has developed a prototype machine that washes carrots and other root crops.

Tests conducted so far on the mechanized carrot washer showed an output of 2000 kg/hr of de-topped carrots and 3000 kg/hr of potatoes.

“The cleaning action was through tumbler rotation and spraying of water into the tubers inside the tumbler,” said PHilMech Executive Director Rex L. Bingabing.

“Also compared to traditional manual washing of carrots which requires big volume of water, the mechanized washer reduced water consumption because of the control mechanism in the spray nozzles secured along the pressure pipes,” adds Bingabing.

“The washer is comprised of frame, tumbler, cover and washer and gear motor assembly... It is also capable of washing any size whether with or without stem of different root crops like carrots, potatoes and other rootcrops,” said Engr. Donald Mateo of PHilMech, designer of the machine.

Based on a study by PHilmech, it is estimated that losses from upland vegetables range from 15 to 30%. Losses result from poor postharvest handling like washing of root crops before the retail market.

“With the intervention of a technology like the root crop washer, it is expected that postharvest losses can be reduced by 20%,” said Director Bingabing.

The current practice of washing carrots is done manually by first soaking, then washing these in a basin full of water. Ten to twelve laborers are needed to wash 2,000 to 3,000 kg of carrots per day. Manual washing of carrots may also damage the root crop and reduce the shelf life of the commodity while at the retail market.

The mechanized washer can solve the slow, tedious and laborious operation often done manually by traders at the trading posts.

The washer was launched during the occasion of the Highland Vegetable Investment Forum cum Trade Fair at the Benguet Agripinoy Trading Center (BAPTC) at the Benguet State University, La Trinidad, Benguet on May 16-17, 2016. It was attended by the Department of Agriculture Secretary Proceso J. Alcala.



The PHilMech-developed and improved root crop washer launched at the Benguet Agripinoy Trading Center (BAPTC).



The actual operation of rootcrop washer as the carrots move forward inside the rotating tumbler with high-pressure water continuously sprayed.



After the washing inside the tumbler, the cleaned potatoes pass through the conveyors and drops directly to the crates of the farmers.

Southeast Asian Agribusiness Show 2016

SIMA ASEAN Thailand 2016, one of the biggest agribusiness show in the ASEAN Region, will be held at the Impact Exhibition Center, BanAgkok, Thailand on September 8-10, 2016 to be attended by 350 companies involved in the wide gamut of production and postproduction operations in agribusiness and allied fields. It will showcase a comprehensive range of products to meet all the needs of farm operations and food processing professionals.

Three simultaneous and co-located conferences will be held during the event namely, Sustainable Value Chain conference organized by the Agricultural and Food Marketing Association for Asia and the Pacific (AFMA) and Food and Agriculture Organization of the United Nations (FAO); the Science Research International Conference and Future Farming International Conference. It is expected that 15,000 professional trade visitors will attend this big event.

For more information about this event, please browse www.sima-asean.com. *RPEstigoy*

MR. CYRIL CATTILING, who owns a six hectare cassava farm, smiles when talking about the way he produces cassava. One secret, he agreed to share, is giving his TLC or tender loving care. He believes that with TLC, he and his fellow farmers can harvest bountiful cassava in Alfonso Lista, Ifugao.

A proud father and husband, Mr. Cattiling is a hands-on cassava grower. He is also the president of Ifugao Tapioca Growers Association (ITGA) and farm manager of YAO JIA XI Corporation which deals cassava granules to the San Miguel Corporation (SMC).

The ITGA started in 2015 to organize all cassava growers in the municipality. It is composed of 75 members. Meanwhile, the YAO JIA XI, a farming corporation, gives planting materials and shares technology to farmers who are members of ITGA.

The ITGA sells dried and granulated cassava to YAO JIA XI Corporation which then sells to SMC, a consistent buyer of the corporation.

Using solar dryer and granulator for their cassava, the ITGA produces 250 to 300 granulated bags which SMC buys for P970 per kilo.

Cassava granules bought by SMC are transferred to their feed processing center in BMEG Isabela. SMC sees to it that their protocols are followed. Cassava must not be fibrous and with only 3% dust. Unlike corn, granulated

cassavas are not easily rotten if watered because cassava doesn't have oil content.

There are two kinds of cassava varieties grown by ITGA: the KU50 variety and the Golden Yellow variety. Both varieties are for industrial purposes. The KU50 is for feeds while Golden Yellow is for human food. According to

BEHIND THE CASSAVA GROWER'S SUCCESS:

TLC AND RIGHT TECHNOLOGY

by Pia Sarina Fukasawa



Mr. Cattiling, it takes one year to plant a KU50 variety while it only takes seven months for the Golden Yellow variety to be fully grown for food consumption.

Cassava as a profitable business

Farming has always been Mr. Cattiling's main source of income. He started cassava production in 2012 when he shifted from corn farming to cassava production.

Just like him, Ifugao farmers were once corn growers. But because of the high production cost of corn, some of them diversified to cassava production. Cassava has better economic benefits.

"Cassava offers better income compared to corn" said Mr. Cattiling, even though cassava is harvested once a year. One hectare of corn earns him P25,000 while cassava gives P130,000 per hectare with P30,000 capital. With good land preparation and available market, cassava can be profitable.

A big change

Before, manual harvesting of cassava requires 30 laborers

to harvest one hectare. It is a major problem because of labor shortage in the municipality. People have their own farms to tend. There is difficulty to find laborers who are willing to be paid P200 to do the work. With labor shortage in their municipality, the cassava digger is such a huge help in the farm and to the laborers as well.

The ACT (Machineries and MetalCraft) Corporation is the partner of the Philippine Center for Postharvest Development and Mechanization (PHilMech) in the development of the cassava digger. In 2014, Mr. Cattiling was in a Corn Congress in Tagaytay when he saw the digger. He liked the performance of the machine. The ACT introduced the machine to him and set a date for a demo. According to Mr. Cattiling, his partnership with ACT started even before he became a member of the YAO XIA JIZ Corporation. Mr. Cattiling recalled when he was still managing his own farm, he bought machine parts from ACT.

Mr. Cattiling admitted that a lot has changed since he



used the digger. It lessened the number of labor as well as the days of harvesting cassava. Before it takes 30 laborers to harvest cassava. It also takes two to three days to harvest a one hectare farm of cassava. With the cassava digger, it only takes four hours of harvest.

"..With cassava digger, 15 laborers pwede na in one hectare. Tsaka hindi na tulad

continued on page 22



Benchmark Study on the Postharvest Handling of Sweet Potato

Edgar D. Flores, Renita SM. Dela Cruz, Ma. Cecilia R. Antolin,
Daisy O. Tesorero, Gerbert F. Aninipot



This project aimed to establish baseline information on sweet potato as basis for developing and providing appropriate and viable technologies. The industry situationer and supply chain for sweet potato were identified based on secondary data obtained through desk research and primary data from 350 sweet potato farmer-respondents. Commodity flows and actual loss assessment in major routes of sweet potato (i.e. the Bataan-Divisoria and Tarlac-Tanauan City) from farm to retail market levels were conducted. Major postharvest problems for sweet potato were noted with their potential technological interventions.

Actual field loss assessment of sweet potato showed that harvesting loss due to uncollected and mechanically damaged roots during harvesting ranged from 15.96 to 17.94 % of marketable harvest. Preharvest loss due to immature roots and insect infestation ranged from 6.17 to 35.22 %. Moisture loss and disease infection contributed 15.03 to 15.25 % postharvest loss from farm to retail

level. In terms of quality, sweet potato marketed produce from the farmer to the retailer was reduced from 4.89 to 3.85 % or from a scale of 4.93 to 4.41 (5 as the highest and 1 as the lowest). The sweet potato farmer has the highest income share followed by the retailer. Considering the risk in production (farmer) and the high cost of postharvest losses (retailer level), the income distribution is apparently equitable.

The introduction of mechanical root crop harvester to reduce losses and labor cost in harvesting sweet potato roots is a potential technology intervention. Technical and financial performance indicated that mechanical root crop harvester can reduce harvesting loss due to uncollected roots. It can also increase the income of sweet potato farmers.

Agricultural Profile

Agriculture is the principal economic activity of the province. Rice, coconut and sugarcane are the province's principal crops while abaca and corn are the secondary crops.

Postharvest Situationer

Postharvest losses in the different operations is among the major problems of the agriculture sector of the province. High postproduction losses in rice and corn (quantity and quality), lack of knowledge on banana, mango and other processing technologies, hesitancy of farmers to process products, inaccessibility of growers to financing institution, inadequacy of processing equipment for abaca, lack of cold storage and processing plant are some of the problems identified during the consultative and planning workshop with the different stakeholders in coming up with the province postharvest development plan.

Proposed Postharvest Projects

- ▶ Farm-level grain center,
- ▶ Provincial level rice seed processing center;
- ▶ Community-based drying service center,
- ▶ Corn processing center (feed mill),
- ▶ Village- level processing plant for jackfruit,
- ▶ Village-level mango processing center,
- ▶ Trading post (Bagsakan center),
- ▶ Integrated abaca processing center,
- ▶ Fish ports/ice plant and cold storage; and
- ▶ Sea weeds dehydration center

Source: Leyte Postharvest development Plan (2008-2018) by the Provincial Government of Leyte and DA-BPRE



Leyte

Leyte is part of the eastern Visayas region. It is considered today as a first class province with two cities and 41 municipalities. Tacloban City is the provincial capital.

PHilMech celebrates 38th anniversary

THE PHILIPPINE Center for Postharvest Development and Mechanization (PHilMech) celebrated its 38th anniversary on May 23-27, 2016 at its main headquarters in the Science City of Munoz, Nueva Ecija.

With the theme, “Addressing Global Challenges in Agricultural Mechanization,” the agency highlighted the PHilMech-generated technologies and systems to create awareness among the stakeholders present during the said event.

Amidst the challenges faced by the agricultural sector due to urbanization and globalization, Department of Agriculture Sec. Proceso Alcala sent his message to the stakeholders through Dir. Rex L. Bingabing. He said, “Kayang-kaya ninyong makisabay sa mabilis na takbo ng teknolohiya upang tuluy-tuloy na maisulong ang modernisasyon ng ating sakahan.” He stressed that without mechanization, Filipino farmers can never be competitive.

The secretary commended PHilMech researchers and stakeholders for responding to the challenges of agricultural mechanization and for introducing innovations to the Philippine agriculture for the past five years.



Sec. Proceso J. Alcala during the anniversary exhibit with Dr. Ofero Capariño and Eng'r Andres Tuates, introducing PHilMech-developed cacao briquettes

In support to Sec. Alcala's message, Dir. Bingabing said that PHilMech researchers should think global to advance the technologies and to address issues such as climate change.

Another highlight of the event was the “Technotalakayan” which featured Dr. William Dar's lecture on the global trends in agri-fishery mechanization and the presentation of Mr. Kim Bo-Suk on the experiences of Republic of Korea on agricultural mechanization. Dr. William Dar is the President of Inang Lupa Movement, Inc. while Mr. Kim Bo-Suk is the Philippine Representative, Korea Agricultural Machinery Industry Cooperative (KAMICO).

The different technologies developed by PHilMech were

also exhibited during the event. Some of the machines displayed were mini-combine harvester, tractor-mounted rice transplanter, brown rice huller, cassava digger, impeller rice mill, compact corn mill, coco water pasteurizer/chiller and ylang-ylang oil extractor, among others.

In the afternoon, Sec. Alcala attended the special program and visited the exhibits. “Whatever we are doing here is for the Filipino farmers. Tulong natin ito sa pamayanan at sa ekonomiya ng ating bansa,” Sec. Alcala said during his afternoon message. He also asked PHilMech researchers to continue innovating for agricultural modernization and to support the programs that will be implemented by the next department secretary.

GMZCarganilla

PHilMech leads postharvest loss prevention campaign

The Philippine Center for Postharvest Development and Mechanization (PHilMech) led the DA-Regional Information Officers in drum beating for the Postharvest Loss Prevention campaign from May 1 to 31, 2016.

With the tagline, “Mas masaya kung walang maaaksaya,” the Applied Communication Division Chief Dr. Rodolfo P. Estigoy served as resource person for advocacy campaign in Regions 7, 10, 11 and 12 to create awareness on the importance of postharvest loss prevention and to provide tips on how to reduce postharvest losses in grains and high value crops.

Radio interviews, radio plugs and radio spots were aired at DZMM Teleradyo, DYHP and DZAS in Luzon, DYLA, Brigada Radio in Cebu City, Region 7, Radio Singko, and DXMU in Region 10 and DXMD in Gen.Santos City, Region 12. Television interviews were conducted by Catholic Community Television Network (CCTN) in Cebu City, program of DA-RFO 12 and TV-Agri Tayo SOCCSKSARGEN. Press briefings for media, both for



Engr. Donald Mateo, the designer of the root crop washer, during an interview with the media

print and radio, about PHilMech-generated projects were also part of the campaign.

Another highlight of the campaign was the launching of the mechanized root crop washer at the Benguet Agri–Pinoy Trading Center (BAPTC) with DA Secretary Proceso Alcala, PHilMech Dir. Rex L. Bingabing, La Trinidad Mayor Edna Tabanda and the media in attendance.

The mechanized root crop washer was designed by Engr. Donald Mateo of PHilMech to solve the slow, tedious and

laborious operation of washing root crops, which aggravate postharvest losses.

Also, PHilMech distributed advocacy campaign materials among partner agencies and organizations to remind everyone on the importance of postharvest loss prevention. The campaign was organized in support to the observance of the 17th Postharvest Loss Prevention Week. In May 2000, through Proclamation No. 298, the fourth week of May had been declared as Postharvest Loss Prevention Week.

GMZCarganilla

37th in-house RD&E review held

AS PART of its anniversary activities, PHilMech conducted its 37th in-house Research, Development and Extension (RD&E) review. The activity evaluated the agency projects as to their achievement of objectives and application of the proper methodologies. The review also determined issues that need to be addressed in order to improve the delivery of project results.



PHilMech researchers answering questions of the evaluators and judges

The Evaluation and Management Services Section (EMSS) of the Planning, Management and Information Technology Division (PMITD) organized and conducted the RD&E review. It was held on May 23 and 24, 2016 at the PHilMech Auditorium, Science City of Munoz, Nueva Ecija.

Nineteen project papers were presented. The winning papers were the “Development of Village Level Rice Mill with Impeller Huller” (first place) by Dr. Michael A. Gragasin; “Development of Commercial Scale Fluidized Bed Drying System for High Moisture Paddy” (second place) by Engr. Nestor T. Asuncion; and “Design and Development of Probe Meter for Moisture Detection of Selected Grains” by Engr. Arlene C. Joaquin (third place). All winning papers

were from the Agricultural Machinery Division. Plaques and cash awards were given to the winners.

For this year’s “Early Bird Award”, Ms. Kristina Luz B. Sebastian of the Enterprise Development Division garnered the award with the paper, “Establishment of GIS-based Decision Support System for Postharvest Development and Mechanization”.

Meanwhile, three best posters were adjudged winners from the 13 poster entries. These were “Establishment of GIS-based Decision Support System for Postharvest Development and Mechanization” (first place) by Ms. Kristina Luz B. Sebastian of the Enterprise Development Division, “Development of Commercial Scale Fluidized Bed Drying System for High

Moisture Paddy” (second place) by Engr. Nestor T. Asuncion and “Design and Development of Probe Meter for Moisture Detection of Selected Grains” by Engr. Arlene C. Joaquin (third place). Plaques and cash awards were also given to the winning posters.

The members of the Board of Judges are known specialists in their own fields. They include: Dr. Gloria P. Jimenez, dean of the Asian School of Development and Cross Cultural Studies (ASDECS) in Quezon City and manager of the Resources Employment and Community Horizons, Inc. (REACH), Quezon City; Dr. Cesar B. Quicoy, professor, College of Economics and Management, University of the Philippines at Los Baños

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DURING ITS 38th anniversary celebration, the PHilMech awarded its outstanding employees who have exemplified the corporate values and have provided a worthy example to their colleagues.

The Natatanging Kawani ng PHilMech is an annual search given to employees that stand out among others in various functional categories. This year, seven awardees were given plaques of recognition and cash incentives under the following categories: Research and Development, Training and Extension, Support Services and First Level Category. Except for the First Level Category, the three other categories have Senior and Junior levels. The awarding ceremony was done at the PHilMech Training Hall.

The following are this year's awardees: Natatanging Kawani for First Level Category (Technical Support): Ms. Daisy O. Tesorero, Science Research Assistant, SEPRD; Natatanging Kawani for First Level Category (Admin. Support), Ms. Zhalimar J. Barza, Planning Assistant, PMITD; Natatanging Kawani for Support Services (Senior Category): Ms. Victoriana M. Barlis, Supervising Administrative Officer, PMITD; Natatanging Kawani for Support Services (Junior Category): Ms. Jinky



Ms. Daisy O. Tesorero receives her award as one of the PHilMech's outstanding employees of 2015.

Outstanding, loyal PHilMech employees recognized

A. Parugrug, Accountant I, FD; Natatanging Kawani for Training and Extension (Junior Category): Mr. Cesar C. Balajadia, Science Research Specialist II, AICU; Natatanging Kawani for Research and Development (Senior Category): Dr. Ma. Cecilia R. Antolin, Senior Science Research Specialist, SEPRD; and, Natatanging Kawani for Research and Development (Junior Category): Engr. Andres M. Tuates, Jr., Science Research Specialist II, BPED. Engr. Tuates was also heralded as Dangal ng PHilMech Awardee. He stood out among the rest having demonstrated a stable character coupled with distinctive work commitment and dedication.

Meanwhile, under the PHilMech Program on Awards and Incentives for Service Excellence (PRAISE), employees who have shown dedicated service and unwavering commitment to the agency were given service awards. This is in line with the Civil Service Commission's advocacy of boosting employee morale through recognition, awards and incentives.

Twenty four employees who have been with PHilMech for years were given plaque of recognition, memorabilia and cash incentives. Among the

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Director Bingabing leaves a deep mark in the agriculture sector

BRIGHT, HUMBLE, unassuming, and oozing with youthfulness and enthusiasm. These have been the traits that characterize Engr. Rex L. Bingabing. He took his oath of office as the Director IV of PHilMech at the Office of the Department of Agriculture Secretary Proceso J. Alcala on May 7, 2012. After four years of short stint at PHilMech, he has left a lasting mark not only in the Center but generally in the agriculture sector.

Engr. Bingabing brought with him credentials and expertise in mechanical engineering that the agency needs to boost the level of farm mechanization in the country, and reduce postharvest losses. Bingabing is a licensed mechanical engineer who placed 10th in the 1998 Mechanical Engineering Licensure Exam with a rating of 84 percent. He was only 36 years old when he assumed office and one of the youngest to head a major agency under the Department of Agriculture.

Early on, he mapped out his plans to include the doubling up of efforts in the design and development of new agricultural machineries and implements which are appropriate to farmers



and end-users' needs. He also wants the agency to be closer to industry stakeholders by bringing the innovations to the end-users faster through the private manufacturing sector and through the use of innovative extension modalities that can reach far-flung clients.

True to his mandate, he aired his farewell message to officials and staff of PHilMech how he has maximized the potentials of the Center into bringing new approach in the conduct of postharvest and mechanization research, development and extension through agrinnovation.

Aginnovation is a paradigm shift in the conduct of R&D work which employs a systems approach, localizes or adapts available technologies and maximizes potentials of popular

technologies. This has resulted to the shortening of the research and development (R&D) of local farm machinery to six months to one year, from the usual three years to five years.

During his exit press conference on June 17, 2016 held at the PHilMech Liaison Office in Quezon City, he reported to media eight R&D outputs that are now ready for commercialization and adoption. These include (1) cassava digger, (2) cassava belt dryer, (3) pectin extraction system (for mango peels), (4) village-level cocowater pasteurizer, (5) compact corn mill, (6) brown rice huller (impeller type), (7) root crop washer, and (8) mechanical onion seeder.

continued on next page...

TMTD chief retires from service

DR. EDUARDO T. Cayabyab, 61, retires from government service after 30 years. Quietly and with dignity, he turned over his post as chief of the Technology Management and Training Division (TMTD) of PhilMech.

Under his leadership, the TMTD has trained more than 17,000 intermediaries during his service period. This consisted of agricultural engineers, agricultural officers, extension workers, farmer leaders, cooperative officers and managers and other technical staff of national and regional agencies.

The division also conducted several hundreds of training courses, both general and specialized, in partnership with national and international agencies and organizations. Most notable were the 18th ASEAN Seminar on Grains Postharvest Technology; In-Country Training on Rice Production and Postproduction



in cooperation with DAR-ARISP; Third Country Training Program on Rice PHT and Extension Methodologies in cooperation with the Japan International Cooperating Agency (JICA); and the month-long Training Course on the Operation and Management of KOICA-assisted RPC.

One of the legacies of Dr. Cayabyab, however, is the establishment of the Postharvest Specialist Network. This critical pool of experts has been trained many times to

serve as resource persons on postharvest and mechanization in their own respective areas.

Ms. Helen Calica, supervising science research specialist of PhilMech and his staff for more than two decades, is all praise and grateful to her boss. "...He instilled in us the importance of integrity and sincerity... He is a leader who gave us direction; a coach, a mentor, a father, a brother, a friend who gave us inspiration..."

MBGonzalez

Director Bingabing...from previous page

These new technologies are now being readied for commercialization and will eventually be available in the market through the local agricultural machinery manufacturing sector. Similarly, he has also increased

the morale of PhilMech because of his transformational leadership style where he leads by example and with a humble heart. His being new in the government service did not hinder him from doing his mission with passion.

Director Bingabing is leaving the Center with a deep mark and high hopes that agricultural mechanization continues to be geared at full throttle to modernize the Philippine agriculture sector.

RPEstigoy

Behind the Cassava...from page 13

ng dati na mag eexert sila ng effort at mapapagod talaga sa pag bubunot, kasi ngayon pupulutin nalang nila to gather tsaka idedetach.” Mr. Cattiling explained.

Aside from owning a six hectare farm, Mr. Cattiling also manages 100 hectare farm rented by YAO JIA XI Corporation from the Ifugao State University for cassava production. According to Mr. Cattiling, with the cassava digger performing the major works, digging a 100 hectare cassava farm, is a lot easier and faster.

The income from the rented farm is being used for their social corporate responsibility. They give school supplies and IT materials to daycare centers and elementary schools. Cassava and dragon fruits are the main products of the farm.

Best practices

Mr. Cattiling advised that farmers should follow proper machine operation and good land preparation for a bountiful cassava harvest. The maintenance of the machine is easy, so Mr. Cattiling



Mr. Cyri Cattiling shows dried cassava granules

suggested that farmers follow instructions well.

He is really thankful to PHiMech for being able to share this kind of cassava technology. “It is such a huge help not only for me but also to the laborers. For other growers out there who want to use this kind of machine, you must really try it. It’s really convenient. To see is to believe.” he added.

What’s the secret of success in cassava farming?

Mr. Cattiling believes that achieving success is not an overnight process. Handling

a six hectare farm is not easy especially in their municipality which has labor shortage. “You just have to be patient and caring when it comes to your crops. You must also be hands-on to your farm and know exactly what your laborers are doing.”

Mr. Cattiling believes that growing cassava with TLC and proper technology like the cassava digger are the reasons behind cassavas’ bountiful harvest.

Outstanding...from page 19

loyal employees were E.T. Cayabyab, R.P. Estigoy, H.R. Calica, O.A. Capariño, R.R. Villanueva, E.S. Estigoy, E.C. Tumampo, R.F. Ramos, R.B. Ontong, C.S. Encarnacion Jr., and D.L. Jamora. They served PHilMech for 30 years.

Team building activities and employees' night were also part of the celebration of the 38th anniversary of the PHilMech. The agency team building activities aimed to enhance and develop better relationships among employees.

The half day program is a joint activity of the Human Resource Management Section and the PHilMech Employees' Association. All regular staff and service contractors were grouped into teams and were asked to complete different tasks. The objective of the tasks was not to encourage competition among employees but to further develop and forge better relationship among PHilMech personnel. It also aimed to orient and familiarize staff about the PHilMech history, core values, PHilMech technologies, and the like.

Moreover, to recognize the efforts of employees for their contributions in the success of the week long activities, the PHilMech organized an 'End of Summer Bohemian Themed' Employees' Night on the same day. The said activity featured special presentations from service contractors, including regular staff, from the Admin. Divisions; Agri Infra Coordinating Unit; ESETS divisions; and, the R&D Divisions. The night was a mix of music, fun and awards.

JForonda

Coffee...from page 4

TuBengCoga in Tuba, Benguet and SACGPO, in Sagada, Mt. Province. These coffee enterprises have been groomed to become models in the Cordillera Region under the DA RFO-CAR – PHilMech project collaboration.

TuBengCoga farmers led by its manager, Ms. Shierly Palao-ay, conducted a lecture and demonstration of the PHilMech recommended PH System for Arabica coffee.

They showcased the proper operation of the complete set of coffee equipment used in pulping, fermenting, drying, hulling, MC determination, roasting and grinding of

Arabica coffee. The lecture-demo encouraged active interaction between the farmers and appreciation of the technology.

The Enterprise Development Division of PHilMech spearheads the implementation of the project in four strategic sites nationwide. As a matter of strategy, the project will encourage collaborative efforts of farmers, government agencies, and other key players in the region for more efficient use of resources to equip the farmers to become efficient entrepreneurs.

JKSantiago and HFMartinez

37th inhouse..from page 18

(UPLB); and Ms. Raquel Q. Bermundo, a freelance consultant from the Cagayan de Oro City. Dr. Jimenez chaired the Board of Judges for Best Paper.

For the Best Poster, Dr. Julius Caesar V. Sicat, Regional Director of the Department of Science and Technology in Region III, chaired the Board of Judges. Members were Ms. Janet L. Saturno from the Central Luzon State University and Ms. Marnelie G. Subong from the Bureau of Agricultural Research.

The panel of evaluators were high caliber scientists and experts from UPLB, CLSU, PHilSCAT, DA-ICTS (OSEC), ITDI-DOST and BAI. ***VMBarlis***



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CLSU Compound, Science City of Muñoz,
Nueva Ecija, Philippines, 3120
Tel. No.: (044) 456-0282 Fax No.: (044) 456-0110

Cleansed with root crop washer

Carrots produced by the Benguet farmers experienced the PHilMech-developed carrot/rootcrop washer at the Benguet Agricultural P-Noy Trading Center