# A quarterly publication of the Philippine Rice Research Institute Rice Science for the armers **JAN-MAR 2020**

### ABOUT THE COVER

Rice science for the farmers mirrors people whose lives were touched and transformed through rice R&D. Our science is not just ricecentered, it is also people-centric. It is not merely doing research for research's sake because our R&D workers believe that many people entrust their aspirations on us hoping that these will come true. In this issue, people from all walks of life retell how our R&D outputs have created an impact in their lives.



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Editor-in-Chief: Ronan G. Zagado · Assistant and Managing Editor: Hanah Hazel Mavi B. Manalo · Co-managing Editor/Layout: Reuel M. Maramara Writers/Photographers: Ajea C. Alcantara Zenny G. Awing Anna Marie F. Bautista · Jayson C. Berto · Allan C. Biwang Jr. · Keesha N. Bornaes · Pamela V. Carbungco · Aldrin G. Castro · Donna Cris P. Corpuz · Carlo G. Dacumos · Renz Romyl C. De Joya · Jesrel O. Edraira · Christina A. Frediles · Charisma Love B. Gado-Gonzales · Vanneza B. Isidro · Edmar B. Juanitez · Joillie Nicole B. Lacbayan · Richard Malihan · Hanah Hazel Mavi B. Manalo · Reuel M. Maramara · John Joward A. Martillana · Mary Grace M. Nidoy · Jose Mari Z. Nombrere · Anileen O. Pajarillo · Job U. Ramos · Julianne A. Suarez · Ronaldo C. Tabiling Jr. · Sherlyn Dawn D. Taglucop · Ruby Moselle O. Tumanguil · Ian Joseph G. Zara · Design/Layout: Carlo G. Dacumos · Illustrations/Graphics: Zenny G. Awing · Perry Irish H. Duran · Reuel M. Maramara · Circulation: Christina A. Frediles · Teofilo C. Paulino · Admin. Support: Derwin J. Villena · Printing Press: Innovations Printshoppe, Inc. · Consulting Editor: Constante T. Briones · Editorial Advisers: John C. De Leon · Karen Eloisa T. Barroga · Eduardo Jimmy P. Quilang



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### **EDITOR'S NOTE**

### RICE SCIENCE FOR THE FARMERS



Public discourse on the value of research or science recently went viral. On the upside, there was a semblance of serendipity in that social debate! It allowed everyone from all directions to deliberate, contest, and assess the significance of science, and gave it a human face. It pulled more skeptics into admitting that research outputs are not simply left piled up on shelves or in journal publications, but have genuinely reached and transformed people in need, like our farmers.

PhilRice's reason-for-being as a research for development (R4D) institute is to create innovations and solutions that can advance farmers' productivity and income. Now in its  $4^{th}$  decade of operation, the Institute continues to help contain emerging challenges and pressures in the rice industry. Its work covers not only research but also extension and policy advocacy.

It takes on nutrition research and advocacy, together with its parners, like the development of Golden Rice, to add one solution to the public health problem of Vitamin A deficiency. It likewise takes heed to the challenge of digitalization to achieve efficiency in rice farming, and probably convince the youth that agriculture is evolving into a profession – not just an unpreferred occupation.

Are these investments in rice science worth it?

Results of a recent external study suggest that a peso worth of investment in PhilRice to perform R4D work could earn some 17% net annual rate of return, which is not inferior to what the banks can offer. This impact speaks for itself. Before PhilRice was established, the average yield was only 2.67t/ha; these days, the national average yield from all ecosystems is 4.04t/ha thanks to the modern rice varieties and other farming technologies, including irrigation and mechanization, that reached our farmers. While production and yield performance have increased over time, population growth rate continues to outpace it. Therefore, we need more investments in rice R4D to develop technologies that would augment production to feed the growing population.

Let us tell you true-to-life stories of how our R4D outputs and policy advocacy work etched their indelible marks in the lives of our stakeholders, especially the rice farmers.

### **NEWS**



### RCEF SEED DISTRIBUTION CONTINUES

Simultaneous seed distribution efforts for this dry season cropping under the Rice Competitiveness Enhancement Fund (RCEF)- Seed Program nationwide continued this January.

Farmers listed in the Registry System for Basic Sectors in Agriculture from Central Luzon, MIMAROPA, CALABARZON, Bicol, Western/Eastern Visayas, Zamboanga Peninsula, SOCCSKSARGEN, and BARMM received certified inbred seeds.

In total, more than 1.24M bags of such seeds have been distributed in rice-farming provinces from October 2019 to January 31, 2020. This equates to almost 609,000ha of land to be planted with quality seeds that include three nationally recommended varieties

namely NSIC Rc 222, 160, and 216 plus two regionally recommended rices suited per area.

Each farmer can receive up to four bags of 20kg seeds each, depending on the size of their rice farms. Studies have proven that the use of quality seeds, along with proper farm management, can boost farmers' yields by at least 10%. Seed distribution for the 2020 wet season planting episode will begin in due time.

- DONNA CRIS P. CORPUZ

With the RCEF now providing free seeds to farmers, analysts profess that seeds undergo the tedious quality control process prior to distribution.

Josephine Reyes, Chief of the Region 3 National Seed Quality Control Services (NSQCS), said that seeds for distribution are not taken for granted.

Beginning from document verification, training, field and seed scrutiny, until tag issuance, analysts conduct thorough inspection.

"Seed growers, as part of their requirements for accreditation, should attend a 5-day training on inbred seed production organized by the BPI. They

### ANALYSTS GUARANTEE RCEF SEEDS QUALITY



### RCEF EXTENSION SUPPORT ENERGIZED

PhilRice, together with ATI, PHilMech, and TESDA, is intensifying its efforts to ensure effective implementation of the RCEF-extension program in support of the seed distribution pursuits being conducted across the country.

According to Lea D. Abaoag, head of the Technology Management and Services Division, the first batch of the RCEF Rice Specialists' Training Course has been conducted by the institute, producing 30 graduates from DA-ATI and regional field offices. Together with the RSTC graduates, 112 farmer-graduates from Llanera and Rizal, Nueva Ecija were also produced. Two batches are ongoing in Nueva Ecija and Agusan with 26 and 17 participants, respectively.

Agriculture Secretary William D. Dar has signed a Special Order that instructs RSTC graduates to serve as technical support staff to RCEF-Extension Program.



Training of Trainers (TOTs), led by PhilRice, is also being conducted in 11 batches with more than 200 participants.

On the other hand, the conduct of training of farmers through the farmers' field school is led by TESDA.

Along with these extension activities are the communication support services for RCEF through the conduct of technical briefings and dissemination of almost 200,000 copies of knowledge products on seeds and rice-farming technologies during seed distribution activities. -DONNA CRIS P. CORPUZ

also have to submit documents like land title," Reyes said.

Only accredited seed growers can apply for seed certification.

Deputized seed inspectors from local agriculture offices conduct unannounced preliminary field inspection 15 days after transplant; final inspection at 15-20 days before harvest. Inspectors then conduct seed sampling in different warehouses. Samples are submitted to the laboratory for seed analysis.

To pass the quality control, seed samples should have 98% minimum purity, 85% or higher germination, 14% or lower moisture content, 0.04% maximum weed

and other crop seeds, 2% or less inert matter, and not more than 500g other varieties and grains.

The DA is in official partnership with the top seed growers' associations and cooperatives in the country to ensure that inbred seeds distributed under the RCEF program are only of good quality.

Seed growers in Pampanga, meanwhile, expressed their fulfillment in becoming part of the country's program to help small-scale rice farmers.

"The RCEF program also helps the seed industry. We are thankful for the opportunity to help our small rice farmers here in our region and even nationwide," said Arnel Salenga, 50, of the Pampanga Seed Growers Multipurpose Cooperative.

Salenga also said that the guidelines provided by the program implementers ensured ease in seed production.

"We produce the recommended top five varieties as provided in the guidelines. We also follow the planting calendar to determine when the seeds would be needed so we can provide them right away," Salenga assured.

"We didn't have a hard time adjusting because we were also provided with the guidelines and we have a sure market now," he added. - JULIANNE A. SUAREZ

### **NEWS**



### PHILRICE, SEARCA SIGN MOU

The Laguna-based Southeast Asia Regional Center for Graduate Study and Research in Agriculture (SEARCA), one of the pioneer institutions of the Southeast Asian Ministers of Education Organization (SEAMEO) has entered into a fresh memorandum of understanding with PhilRice, Jan. 20, here in Nueva Ecija.

Adopting a holistic and inter-disciplinary approach, the parties will collaborate on

programs, projects, and other related activities addressing the challenges common to PhilRice and SEARCA. Among these challenges are global warming and unpredictable weather patterns; periodic but unpredictable food shortages and price spikes; uneven, inequitable, and jobless economic growth; and globalized supply chains. Exchange of scientific materials, publications, and information will also take place.

Executive Director John De Leon and Dr. Glenn Gregorio, SEARCA director, led the MOU signing.

SEAMEO established SEARCA in 1966 to help provide high-quality graduate education in agriculture, promote and coordinate research programs, and circulate agricultural research findings.

- PAMELA V. CARBUNGCO

### BOHOL TAPS PhilRice to beef up Local production

Bohol governor Arthur C. Yap is asking PhilRice to assist the estimated 240,000 rice farmers in his province amidst international competition by providing technologies that help achieve higher yields.

In their recent visit here in Nueva Ecija, the local government unit purchased 200 sets of Minus-One-Element Technique (MOET) materials following expert's advice to use MOET to assess soil deficiencies and get fertilizer recommendations.

MOET comes with a kit and an android application, which can generate the right amount and combination of fertilizer in some 60 seconds.

According to researcher Juvy Jane Aungon, MOET kit and app can compute the appropriate field fertilizer requirements of a particular irrigated lowland rice variety and predict its yield.

Smartphone-based applications such as Leaf Color Chart, AgRiDOC, eDamuhan, and Binhing Palay were also introduced.

Through PhilRice technologies, hybrid rice varieties, and irrigation programs, the province targets 6t/ha average yield in the next cropping seasons. In 2018, the province averaged only 3t/ha across all ecosystems. - ALLAN C. BIWANG JR.



The former DA secretary Arthur Yap, who chaired the PhilRice Board of Trustees also proposed that the institute to set up a branch station in Bohol to solidify support for the province's agricultural initiatives.

### GOLDEN RICE APPROVED AS FOOD AND FEED, OR FOR PROCESSING

The DA-Bureau of Plant Industry has characterized Golden Rice to be "as safe as any conventional rice". The biosafety permit issued to PhilRice and International Rice Research Institute (IRRI) details the approval of GR2E Golden Rice for direct use as food and feed, or for processing (FFP).

PhilRice Executive Director John C. De Leon welcomed the positive regulatory decision. "With this FFP approval, we bring forward a very accessible solution to our country's problem on Vitamin A deficiency that's affecting many of our pre-school children and pregnant women."

Despite the success of public health interventions such as oral supplementation, complementary feeding, and nutrition education, Vitamin A deficiency among Filipino children aged 6 months to 5 years increased from 15.2% in 2008 to 20.4% in 2013. The betacarotene content of Golden Rice aims to provide 30-50% of the estimated average requirement of Vitamin A for pregnant women and young children.

"IRRI is pleased to partner with PhilRice to develop this nutrition-sensitive agricultural solution to address hidden hunger. This is the core of IRRI's purpose: to tailor



global solutions to local needs," notes IRRI Director-General Matthew Morrell. "The Philippines has long recognized the potential to harness biotechnology to help address food and nutrition security, environmental safety, as well as improve the livelihoods of farmers."

The FFP approval is the latest regulatory milestone in the journey to develop and deploy Golden Rice in the Philippines. With this approval, PhilRice and IRRI will now proceed with sensory evaluations and finally answer the question that many Filipinos have been asking: What does Golden Rice taste like?

To complete the Philippine biosafety regulatory process, Golden Rice will require approval for commercial propagation before it can be made available to the public. This follows from

the field trials in Nueva Ecija and Isabela that were harvested September and October 2019, respectively.

The Philippines now joins a select group of countries that have affirmed the safety of Golden Rice. In 2018, Food Standards Australia New Zealand, Health Canada, and the United States Food and Drug Administration published positive food safety assessments for Golden Rice. In Bangladesh, a biosafety application lodged in November 2017 is being reviewed.

Meanwhile, PhilRice and IRRI are now collecting information to develop sustainable delivery strategies to ensure that Golden Rice could reach the farmers and consumers who need it the MOST. - GOLDEN RICE COMMUNICATION TEAM

### PHILRICE TEXT CENTER RECOGNIZED AS GOV'T BEST PRACTICE

The Development Academy of the Philippines recently recognized the PhilRice Text Center (PTC) for its client-centric service, specifically on serving the country's rice farmers.

Garnering 4.4 points from the screening committee over the highest possible score of 5, PTC was cited as one of 21 government best practices in 2019.

The scoring was based on the best practice focus areas, which include social and environmental responsibility,

strategic planning and deployment, customer and citizen focus, and strategic performance management.

Operating since 2004 as an offshoot of the Open Academy for Philippine Agriculture, the digital platform connects rice growers with the experts who can provide recommendations on their farming concerns.

By simply texting keywords, farmers can also instantly obtain information such as rice varieties, pests and diseases, water management, harvesting and post-harvest recommendations, and other farm technologies.

As of 2019, PTC caters to more than 35,000 registered clients who receive regular rice updates from 0917-111-7423.

Receiving and attending to more than 100 queries per day, the platform's texters are mostly based in North Cotabato, llocos Norte, Nueva Ecija, Agusan del Norte, and Isabela–all host provinces of the institute's branch stations. - DONNA CRIS P. CORPUZ

## RECENTRY SS

**COMPILED BY: ZENNY G. AWING** 





### RSTC COMMENCES IN AGUSAN

PhilRice Agusan officially welcomes the participants of the Rice Specialists' Training Course (RSTC), who, from Jan 20 to Mar 27, are undergoing a 3-module training course funded by the Rice Extension Services Program of the Rice Competiveness Enhancement Fund.

The RSTC is a three-part training program that revolves around transformational leadership to catalyze inclusive growth in disadvantaged rice communities, modern rice production technologies, and delivery and sharing of rice production technologies.

Participants are from ATI Centers and DA-Regional Field Offices in the Visayas and Mindanao.- POST FROM PHILRICE AGUSAN FB PAGE

### LEARNING FARMS ENDORSED, ACCREDITED

Five partner-managed learning farms have been established in Cagayan and Isabela with technologies being showcased depending on farmers' needs per site.

The farm of Romeo Ramirez in La Suerte, Amulung, Cagayan was accredited by TESDA, while the farm managed by Christian Paulo Magsino in Santiago City, Isabela was endorsed to ATI for validation as a learning farm.

This activity aims to engage partners in showcasing rice production technologies through learning farms by increasing the production of high-quality rice,

reducing labor cost, and learning how to modernize farming.

In Amulung, the use of high-quality seeds and cost-reducing technologies, and nutrient management practices was introduced through the learning farms and modified season-long training on PalayCheck System. It also included a demo on the use of the drum seeder to lessen cost and achieve the recommended seeding rate.

High-quality seeds and nutrient management practices were showcased in Santiago City.

The farm school owners will be PhilRice Isabela's partners in promoting rice and rice-based technologies. - JOILLIE NICOLE B. LACBAYAN





### PHILRICE, UPLB, NCPC JOINTLY ADDRESS RBB OUTBREAK

PhilRice LB partnered with the Institute of Weed Science, Entomology and Plant Pathology, College of Agriculture and Food Science of UPLB, and the National Crop Protection Center to organize a breeding program that addresses problems on rice black bug (RBB).

The project Deployment of Genetic Resistance in the Management of Rice Black Bug, Scotinophara coarctata (F.) aims to develop screening methodologies for resistance to RBB and evaluate available elite breeding lines and NSIC-released varieties to help identify genotypes with resistance to RBB. The concept of developing genetic or built-in resistance in varieties is known to be an effective, environment-friendly, and the most economical means of managing pests.

This joint project, which is funded by DA-BAR, started in June 2019 and will end in May 2022. For its second season of implementation, activities like the seed-increase of varieties for trials will be done in areas around the UPLB Agripark and in IRRI. -RUBY MOSELLE O. TUMANGUIL

### OKRA, AMPALAYA Earn Highest Roi In Palayamanan

Of the various cropping patterns demonstrated under *Palayamanan Plus* (PalayPlus) in PhilRice Negros, intercropped okra and ampalaya generated the highest return on investment (ROI) at 92%.

PalayPlus is a rice-based production system aimed at increasing productivity and profitability in the rice environments.

Under the study Discoverice:
Palayamanan demonstration, learning
and one-stop shop information system,
four consumer and market-driven
cropping systems were showcased:
tomato+pechay+mungbean+upland
kangkong, ampalaya+okra, tomato+
ampalaya+pechay+string beans, and
cucumber alone. Two of these were under
the Sorjan farming system that constructs
a setup of alternating deep sinks and
raised beds.

The intercropping of ampalaya+okra under Sorjan netted the highest ROI owing to its low labor cost and minimal chemical inputs. In the 154m² land area, only P1,924.32 was spent with a net profit of P1,771.36.

Data generated in the demonstration will be used for location-specific recommendations to address rice-farming challenges. -ANILEEN O. PAJARILLO

### RICEBIS COMMUNITY FLOURISHES IN MIDSAYAP

The RiceBIS community is now rooted in four barangays of Midsayap particularly Central Glad, Upper Glad-I, Bual Sur, and San Pedro, covering 62.94ha and involving 71 farmer-members.

Through RiceBIS, farmers' knowledge on rice production, processing, and agripreneurship was enhanced by using the Farmers' Field School method. It also capacitated cluster leaders to help their fellow farmers in agro-enterprise development and raise farmers' and the public's awareness on the project for possible market of farm products.

Since 2017, Upper Glad I and Central Glad had been offering quality seeds while Bual Sur sold milled rice. San Pedro, on the other hand, has started identifying their enterprise. - JESREL O. EDRAIRA

### What's new in Rice Research

AJEA C. ALCANTARA

### PLANNING TOOL FOR RAINFED FARMERS

Our country has more than 7.5M ha of dryland or rainfed areas, which account for three-fourths of the 10M ha of cultivated (arable) areas. Over 5 million households are in the rainfed rice environment and are at high risk owing to the difficulties being inflicted by climate change.

How can we help the rainfed rice farmers become climate change-adaptive? A strategic crop production planning tool like WeRise could be tapped.

According to senior researcher Ailon Oliver Capistrano, the Weather-Rice-nutrient integrated decision support system (WeRise) is a platform that consists of two modelling tools-climate and cropmodelling-that are integrated to identify the best planting schedule in a rainfed rice environment based on forecasted weather data.

WeRise uses seasonal climate predictions providing farmers crucial weather

information for the incoming cropping season. Weather information includes the start and end of the rainy season and rainfall distribution during the cropgrowing season.

This also advises farmers when to sow and transplant the crop, what variety is appropriate, and how fertilizer may be efficiently applied.

"Before using WeRise, there should be a calibration conducted in terms of crop data. In our case, we use varietal data to be included in the crop database along with historical weather data of a specific location so WeRise could model the projected weather data for the coming year or for the next six months," Capistrano explained.

The projected weather data will then become an input information in the cropmodelling tool and will be processed to determine the highest possible yield of

Sampling for soil analysis and soil data using "auger", a 1-m

device that can get five samples in every 20cm depth.

a variety across the projected annual or 6-month weather data.

Moreover, the technology will be transferred to LGUs after validating WeRise predictions through on-farm field experiments. "We target two barangays per municipality and from each barangay, we will be needing the help of six farmers to validate the platform," Capistrano said.

Since this is for the use of extension workers, Capistrano said, they should be capacitated first, specifically in collecting data from an authorized weather data provider.

WeRise was developed by the IRRI-Japan collaborative research project on Climate Change Adaptation in Rainfed Rice Areas. Through the IRRI-PhilRice-JIRCAS collaborative research project, WeRise is localized to suit rainfed rice areas in the Philippines. •



## New Knowledge Products\*

**COMPILED BY: CHARISMA LOVE B. GADO-GONZALES** 



Videos in Filipino on increasing competitiveness contextualize rice trade liberalization and teach farmers on how to enrich their harvest through the PalayCheck System. These are shown during technical briefings required under the Rice Competitiveness Enhancement Fund-seed distribution activities.



**Championing Competitiveness** is all-eyes on farmer-champions who have adopted best-fit practices so they can cope with imported rice. It also enumerates the qualities of Filipino rice farmers that make them stand out.

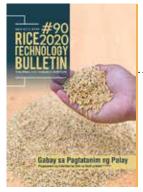
**Quality Rules** highlights how agencies like the BPI-National Seed Quality Control Services ensure that quality processes are complied with from varietal development to seed production. It also encourages farmers to adhere to the best crop management practices.







**2019 Rice-Based Biosystems Journal** publishes research results on proper nutrient application, increased seed viability, and profitable rice-based products as the scientific community's way of helping uplift the lives of rice growers.



### RICE TECHNOLOGY BULLETIN

Gabay sa Pagtatanim ng Palay: Pagpaparami ng dekalidad na binhi sa sariling bukid details the steps on how to produce high-quality rice seeds.



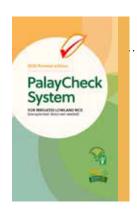
parades rice farmers sharing their own best practices on achieving high yield.



### LEAFLET

Gabay sa Makabagong Pagpapalayan instructs rice farmers on proper land preparation, seed germination, transplanting, fertilizer application, harvesting, and seed production.





### BOOKLE

PalayCheck System for irrigated lowland, revised edition compiles strategies that had been proven effective in the field based on results of researches and farmers' experiences. In addition to the eight original farm recommendations known as Key Checks, it introduces the new Key Check 9, which revolves around postharvest management.

### RISE WITH RICE

### POSITIVE VIBES FROM FARMERS

#### ALLAN C. BIWANG JR. AND JULIANNE A. SUAREZ

Since 1987, PhilRice has been developing and promoting high-yielding, pest and abiotic stress-resistant, and good grain-quality rice varieties suitable to major rice-growing ecosystems. And success stories of rice farmers and seed growers cultivating these varieties continue to inspire the institute to raise the bar in breeding rice varieties to ensure that rice production will be stable and sustainable.



### VICTOR DE GUZMAN, 37

#### Farmer, Malolos City, Bulacan

Victor considers NSIC Rc 194 suited to their submergence-prone area. For several cropping seasons, his 2.5-ha farm suffered losses as they couldn't find the right variety for their area.

It was in 2018WS when he tried Submarino 1 that he bought from Nueva Ecija. With 5-6 bags of fertilizer, it yielded 72cav/ha despite being submerged for some time. He says it was one of the highest yields he achieved in his 5 years of farming.

Victor recommends Rc 194 to his fellow farmers and 11 of them are now planting it.

### NSIC Rc 194 (SUBMARINO 1)

Average yield: 2.5t/ha

Maturity: 125 days direct-seeded

Should not be grown in blast and tungro-stricken areas.

### FAYE HOLM, 42

#### Farmer, Tigaon, Camarines Sur

Farming for 14 years, Faye recommends NSIC Rc 402 for the WS. "I've learned Rc 402 can yield up to 14t/ha so I gave it a try," said Faye.

"On my first try in December 2018 to March 2019, my field was affected by tungro. I only harvested 50cav."

However, this failure didn't stop her from cultivating Rc 402. "I harvested 12t/ha the following season," said Faye. She boasted that her field was even affected by a storm.

She shares farming tips to her fellow farmers through social media. Among those who tried Rc 402 was Efrel Banal Sugue of Casili, Mallig, Isabela.

"I am starting to get seeds of Rc 402 in preparation for the 2020WS," Sugue said.

### NSIC RC 402 (TUBIGAN 36)

Average and maximum yields: 5.5t/ha and 14t/ha

Maturity: 107 days direct-seeded; 114 days transplanted

Moderately resistant and susceptible to blast, BLB, sheath blight, BPH, and GLH; and susceptible to tungro.



### MIKE DELOS SANTOS, 47

#### Farmer, Buenavista, Quezon

Mike has been cultivating inbred rice for 16 years. He never considered planting the more expensive hybrid seeds but not until he gambled with public hybrid Mestiso 20 (M20), which he received from the DA-regional field office.

Despite the insufficient water that started at tillering owing to El Niňo, Mike managed to hit big time with M20. During 2019DS, M20 yielded 178cav in his 1.1-ha farm. This was the highest yield he has ever achieved. "M20's leaves remained green and showed no signs of drying," he described.

Prior to planting M20, he tried a hybrid variety developed by a private company that yielded only 157cav. It was even susceptible to bacterial leaf blight. But with M20, Mike said goodbye to all his debts after pocketing P136,000 gross income.

He recommends M20 to his fellow farmers especially during the DS. In fact, most of his fellow coop members now cultivate M20. He hopes that M20 seeds will always be available.

### NSIC RC 204H (MESTISO 20)

Average and maximum yields: 6.4t/ha and 11.7t/ha

Maturity: 111 days direct-seeded

Moderately susceptible and resistant to blast; susceptible to tungro and BLB; and moderately resistant to GLH and RPH



### GERARDO GAGELONIA, 58

#### Seed Grower, Science City of Muñoz, Nueva Ecija

Gerardo gave Rc 160 a thumbs up!

For two decades, Gerardo has ventured into seed growing and his 10 years were spent in producing NSIC Rc 160, a variety known for its good eating quality.

"As a seed grower, we should make the farmer-preferred varieties always available. Rc 160 may have lower yield compared with other inbreds, but its good eating quality commands higher price in the market," Gerardo said.

He also said market for Rc 160 has never been a problem for farmers as traders always look for it.

During DS, Gerardo shared that Rc 160 averages 140cav/ha and 100cav/ha during WS.

### NSIC Rc 160 (Tubigan 14)

Average and maximum yields: 5.6t/ha and 8.2t/ha

Maturity: 107 days direct-seeded; 122 days transplanted

Moderately resistant and susceptible to blast, BLB, and GLH; susceptible to tungro and BPH; resistant to stemborer.

**Acronyms:** Bacterial leaf blight (BLB), brown planthopper (BPH), green leaf hopper (GLH), dry season (DS), wet season (WS)



### RENATO MACASPAC, 51

Farmer, Lubao, Pampanga

Renato manages a 1.5-ha rice farm after he left his job as OFW. In 2014, his cousin convinced him to plant NSIC Rc 218, aromatic and soft rice, which his family prefers.

"With Rc 218, the highest yield I gained was 220cav from my 1.5 ha. I was surprised that aside from its aroma and outstanding eating quality, it also yields high," Renato wondered.

This variety helped him settle his debts. "Traders would usually buy it P2/kg higher than other rice varieties." he said.

Renato cautioned his fellow farmers to plant aromatic varieties only during DS to achieve their maximum yield potential and avoid pest infestation.

"If farmers want to transform rice farming into business, try Rc 218 as price of special rice in the retail market is stable at P60/kg," Renato said.

### NSIC RC 218SR (Mabango 3)

Average and maximum yields: 3.8t/ha and 8t/ha

Maturity: 120 days direct-seeded

Susceptible to blight and tungro; moderately resistant and susceptible to BLB and BPH; moderately susceptible to GLH and white stem borer.



### GIL DEL BARRIO, 53

#### Seed grower, Daet, Camarines Norte

Gil is among the few seed growers in his province who produce certified seeds (CS) for rainfed farmers. For two consecutive cropping seasons, he allotted 1ha to seed-produce NSIC Rc 346.

In 2018, he sold 240 bags of CS Rc 346 in six towns. "Believe me or not, Rc 346 sold like a hot cake. The variety was introduced to us as suitable for drought-prone areas," he said.

After producing Rc 346 for the first time, farmers visited him to look for its seeds. He narrated that farmers were extremely satisfied with its performance even with less water.

"This 2020DS, farmers who bought CS from me used the seeds from their previous harvest. They approved the use of Rc 346 for rainfed and even upland areas in my province," Gil declared.

Gil is a recipient of the 2018 BPI-National Seed Quality Control Services Outstanding Seed Innovator award for his success in the utilization and production of high-quality seeds.

### NSIC RC 346 (Sahod-Ulan 11

Average and maximum yields: 3.3t/ha and 6.2t/ha

Maturity: 105 days direct-seeded

Resistant to white stem borer and moderately resistant to yellow stem borer.



### JOB JONDONERO, 60

Farmer, Dumarao, Capiz

lob, cooperator of the Participatory Variety Trial Selection project in Astorga, Dumarao, was among the few farmers in their locality assisted by PhilRice in looking for the variety fit for their rainfed ecosystem.

For the 2019 first cropping season, Jondonero planted eight varieties under the said project, with NSIC Rc 416, a dry-seeded variety for rainfed areas as one of the top-performing varieties.

"I have been using Rc 416 since 2016. It is among the varieties that constantly produce a good yield. For the 2019WS, it yielded 105cav/ha," Jondonero said.

PhilRice, through the Next Generation project, introduced the 400 series of rice varieties to the Capiz farmers.

"This variety is suited for my semi-irrigated lowland rice farm," Jondonero said.

Iondonero invested about P16,000 for a hectare of Rc 416 covering land preparation, equipment, pesticides, and transplanting. Even with a buying price of P13/kg, Jondonero said he had P24,000 net income during the previous cropping.

Among the best characteristics of this variety is its resistance to diseases, Jondonero built it up.

### NSIC RC 416 (SAHOD-ULAN 13)

Average and maximum yields: 3.4t/ha and 5t/ha

Maturity: 116 days direct-seeded

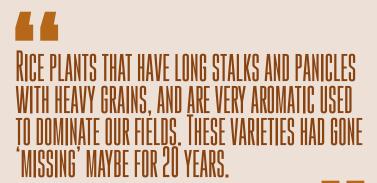
Moderately resistant and susceptible to rice blast, sheath blight, and stem borer; susceptible to BLB and tungro; and resistant to BPH and **GLH** 

## **IWFNTY YFAR**

CHARISMA LOVE B. GADO-GONZALES

### VARIETIES LOST; VARIETIES FOUND.

Certain farmers in Mountain Province have waited for two decades to know that some of their presumed-lost varieties still exist and are actually being planted in other areas. They were reunited with their lost varieties through the Rice Diversity Seed Fair initiated by PhilRice's Genetic Resources Division.



MARY AIDA SULIPA **Municipal Agriculturist** 



In the Tadian Fair in September 2019, municipal agriculturist Mary Aida Sulipa said that farmers in the village clusters in Poblacion/Kayan East and West learned that their 30 lost varieties are thriving in other villages. These traditional rices include Dateko, Baay, Bulilising, and Mantika.





Through the Fair, farmers regained some of their old varieties from other villages, which are at least an hour by foot away from them, and oftentimes separated by rugged mountains and hills.

Despite its being only a 2-year-old initiative, the Fair allowed farmers to identify about 400 lost varieties and most of them were recovered during its seed exchange activity. Farmer-participants each brought to the Fair a bundle of panicles of at least 1kg of traditional rice varieties from their villages.

According to Sulipa, traditional varieties slowly disappeared from their fields with the introduction of modern rice – so-called high-yielding varieties (HYVs). Pest attacks hastened their near extinction.

"HYVs may not be as delicious and aromatic as the farmers' "tribal" rices, but they were still chosen for their big yields that can feed more people," she said.

However, Sulipa went on to say some farmers are returning to traditional rice cultivation owing to health anxieties.

"Farmers here are becoming health-conscious. They want to cultivate varieties with less fertilizer and pesticide application," she said.

The Seed Fair started in 2018 with PhilRice senior researcher Marilyn Ferrer adapting the concept she learned while on training in Nepal. The UN Food and Agriculture Organization funded the first seed fair, which had spread from Ifugao to Mountain Province, Kalinga, Benguet, South Cotabato, and Sarangani with 30-200 farmer-participants in each site.

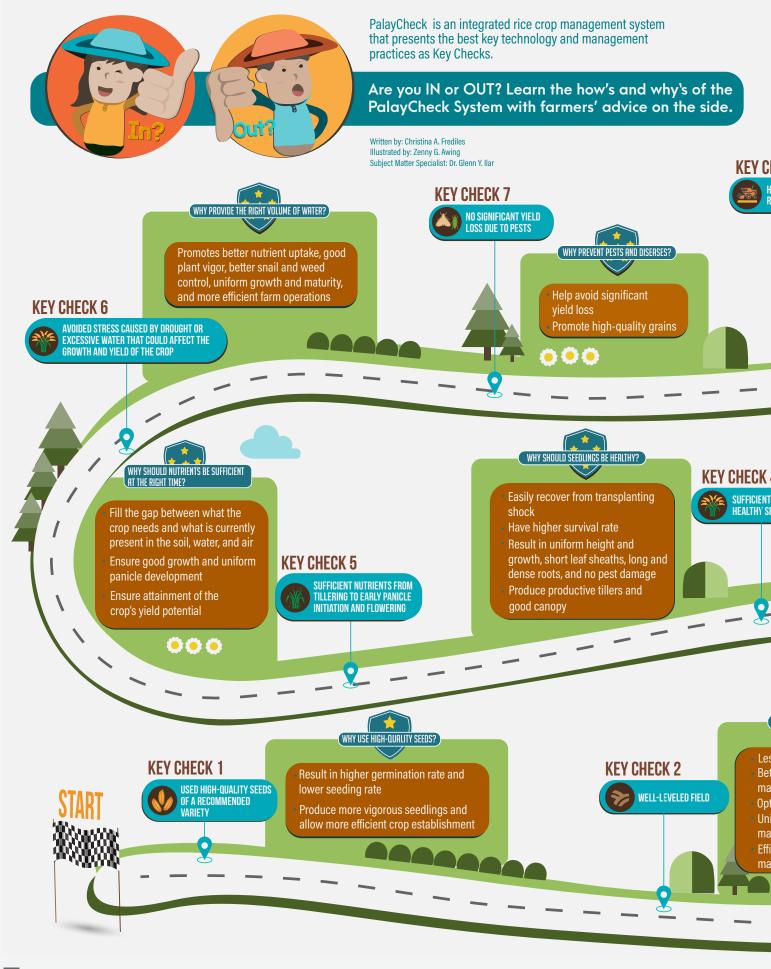
"Some of the lost varieties that farmers are tracing are stored in the PhilRice Genebank, so rice growers can easily retrieve them. The fairs did not only provide an avenue for repossessing missing varieties but also created the opportunity for us to collect traditional rices and conserve them at our Genebank," Ferrer said.

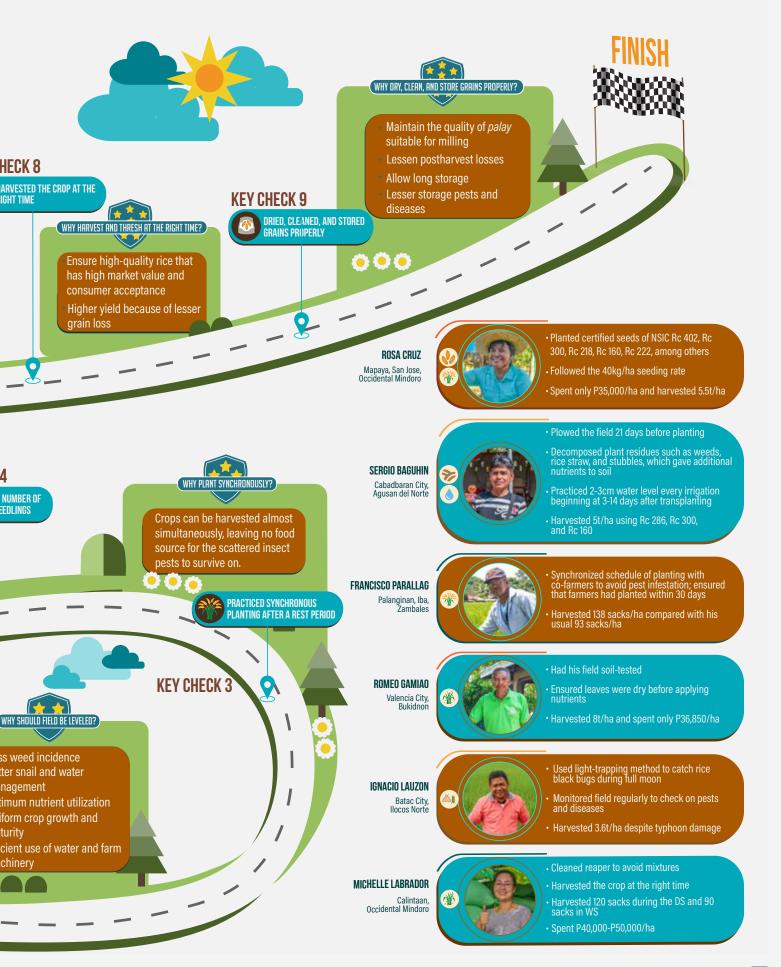
In Ifugao, where the first fair was conducted, Ferrer noted that common traditional rices, which are grown for food security, commercial, and export reasons are planted in large farm areas with many households. Meanwhile, varieties that can tolerate poor soil fertility and low temperature are cultivated in large areas but with few households.

Other than daily food, rice in Ifugao is used in feasts and faith rituals. Rices used in socio-cultural activities are cultivated in small areas with many households. On the other hand, rices for specific uses, which are usually rare and under threat, are grown in small areas with few households.

More than 300 traditional rices for conservation have thus far been collected from the Rice Diversity Seed Fair series.

"I'm happy that researches on traditional rice are prioritized. And I'm thankful that these fairs are being conducted because, as we have regained some of our varieties, we can now savor again the delicious and aromatic rices, which I last enjoyed when I was in high school long ago. But more than this, we can pass on these varieties to the future generations. For what is Cordillera without our rice?" Sulipa stressed. •





**DONNA CRIS P. CORPUZ** 

The Palayamanan Plus (PalayPlus) that started in 2014 as a rice-based production system program encourages rice farmers to diversify and integrate to increase their productivity and profitability. This is consistent with the Department of Agriculture's 8 Paradigms looking at farm diversification and agripreneurship as important factors in agricultural modernization.

PalayPlus adopters across the country have testified on how this way of life has sustained them:



**REYNALDO SILO, North Cotabato** 





### WILLY HIDALGO, 53, Nueva Ecija

Farming for almost half of his life, he joined the PalayPlus project in 2016 through the initiative of the municipal government of Talavera. *PalayPlus* taught the participants to use every space in their lands to earn extra income. Aside from rice farming, Mang Willy and his co-farmers were led into initiating other sources of livelihood through the program's livestock and vegetable components.

After harvesting rice in September 2019, he planted squash, chili, and pechay in one of his 4ha of land. "It really makes a huge difference when farmers have an alternative source of income, aside from rice farming. It gives us a sense of stability, knowing that we will still have enough money to sustain our family and buy farm inputs without putting ourselves in a sea of debts," Mang Willy shared.

This helped them boost their earnings surpassing their usual net income of some P55,000/ha,

Aside from the project components, PalayPlus also distributed high-quality PhilRice-bred varieties to farmers. "My yield had increased from 130 to 160cavs/ha during the dry season through the use of high-yielding varieties and recommended practices," Mr. Hidalgo testified.







### ENRICO BAYANI, 41, Bulacan

Everyone in Enrico's family has always been into agriculture work. Putting his whole heart into it, he considers *PalayPlus* as his formula in getting the best out of his 6.8ha farm in San Rafael.

Through the free seminars and lectures under this project, he and his cofarmers were introduced to agribusiness opportunities that they can do alongside rice farming.

"I have learned a lot of useful things from *PalayPlus*, specifically vegetable farming, livestock, and mushroom production," Mang Enrico admitted.

Enrico added that these options had truly helped them survive tough times in rice farming, especially with the weak prices of *palay*. He notes that the profit he gains from planting chili is enough to cover the operating expenses in his field.

Through continuous training and his knowledge of the different *PalayPlus* components, Mang Enrico is maximizing his opportunities in the field. As a matter of fact, he and five of his co-farmers from their site are currently undergoing a training on seed production, which leads to more earnings.

"Like experience, farmers also need to hone their knowledge continuously. There's always something new to learn from training courses and seminars under *PalayPlus*. Likewise, there's always something to gain from using new technologies in farming," Enrico believed.

### CARMELITA SUELLO, 57, North Cotabato

She started participating in *PalayPlus* activities in their area in 2017. With her family's income relying heavily on farming, she considers her involvement in projects like this as a ray of sunshine.

"I have been farming since 1995, yet I didn't know I could still learn so much. *PalayPlus* was able to correct some of our common misconceptions in the field. The experts taught us the right way to do farm activities, such as land preparation, fertilizer application, pest and disease management, and many more," Carmelita was all praises.

By learning and eventually practicing the right way of doing farm activities, Carmelita increased her income from her 1ha irrigated land, enough to make ends meet in their household and farm.

"It really uplifts our [farmers'] spirit when projects like *PalayPlus* are implemented in our areas. For us, farming is everything. We don't just shell out money for our fields, we also invest our dreams and our children's future every time we gamble on farming," she shared.

### REYNALDO SILO, 50, North Cotabato

Mang Reynaldo considers buying his home lot and sending his children to a good school as his greatest achievements in life. These would not have been possible had he not participated in *PalayPlus* activities.

"I joined *PalayPlus* to increase my knowledge in agriculture and meet farmers who share the same struggles with me. Little did I know, this project would equip me and give me the motivation I need to pursue the comfortable life I dream for my family," Reynaldo recounted.

In 1998, he started tilling the 1.5ha irrigated land he inherited from his family. He usually plants NSIC Rc 224 and Rc 308.

"Before *PalayPlus*, I was already satisfied harvesting approximately 110cavs, earning P60,000. But now, after applying everything I have learned from there, my income was augmented by almost 50%," Mang Reynaldo testified.

He said he now makes P90,000–never mind the so-so *palay* prices. His 130cav now bring about the growing income.

IT REALLY UPLIFTS OUR (FARMERS') SPIRIT WHEN PROJECTS LIKE PALAYAMANAN ARE IMPLEMENTED IN OUR AREAS



CARMELITA SUELLO, North Cotabato



## MECHANIZE DRYING,

WRITTEN BY: ALDRIN G. CASTRO **SUBJECT MATTER SPECIALIST: JOEL A. RAMOS** 

Since childhood, Eladio R. Gales Jr., 64-year-old farmer from Surigao City, Surigao Del Norte, has always recognized the importance of farming through his farmer-parents. Now, Gales takes on the role of being a farmer, miller, trader, and retailer after retiring as electrical engineer.

It was in 2015 when Gales learned about the reversible dryer while he was buying seeds in PhilRice Agusan.

"I learned that postharvest losses can be diminished. Even bad weather is a problem no more in drying palay. That's the advantage of having a mechanical dryer," Gales said.

"Unlike solar drying, the machine can save up to P3,000 in drying 200 sacks," Gales calculated. "Compared with other dryers, the reversible dryer is what I like the most."

He bought two units of the 8t-capacity from PhilRice CES. Now, he plans to purchase a smaller unit that is suitable for small-scale farmers.

Farmers can rent his reversible dryers at P7,000 for 10-12 hours or until the grains have reached the standard moisture content, thus earning him additional income.

Currently, there are 46 reversible dryer adopters in the country. Individual traders, millers, and farmer cooperatives are operating a total of 52 machines.

The use of machines in production and post-production operations is emphasized in one of DA's eight paradigms, specifically that on modernization to help level up local agriculture. •



### Unlike solar drying, the machine can save up to P3,000 in drying 200 sacks

ELADIO R. GALES JR, Surigao del Norte



## TREASURE TROVE IN TRAINING

#### **ZENNY G. AWING**

Recognizing one's value and purpose in life fuels a person's drive to serve. This is what the graduates of the Rice Specialists' Training Course (RSTC) realized after completing their training at PhilRice.

The RSTC is a season-long training course that enhances the technical competence of rice focal persons from partneragencies, stakeholders, and PhilRice employees. Since the early 90s, more than 900 RSTC graduates have been produced to respond to the various needs of the rice industry.

### CLARK N. MELENDRES, 32

#### Senior Agriculturist, DA-RFO 6

Melendres belongs to the PalayCheck System batch of RSTC. He was among the fresh college graduates recruited by PhilRice to become Rice Sufficiency Officers (RSO) deployed in the major rice-producing provinces to implement the institute's Location-Specific Technology Development Program.

According to Melendres, the training built his core character and played a crucial role in preparing him for his current job. It did

not only prepare him technically but also mentally, emotionally, and socially for his work

When he served as RSO in Iloilo and Capiz, the knowledge he gained during the training helped him in influencing the agricultural extension workers and farmers through the conduct of field schools and training of trainers.

However, challenges such as dealing with traditional farmers were inevitable. A former farmer-cooperator named Rogelio Ureta challenged Melendres' convincing abilities as Mang Rogelio held on tightly to his belief that 160kg seed/ha was the right amount of seeds for direct seeding. It took him three seasons to convince Rogelio about the positive results of using PalayCheck. Eventually, the "converted" Mang Rogelio testified that 80kg of seeds/ha was cost-efficient and effective.

When Melendres was hired by the DA in 2012, he served as technical staff, facilitator, and project leader of programs and projects under the Regional Rice Program. He pursued his master's degree in Agricultural Economics at Kangwon National University in South Korea as a KOICA scholar.

"The knowledge, lessons, and experiences I acquired from RSTC had prepared and molded me into a better person and I was able to use them in my current job and in realizing my goals in life. I am living the life that I want. I am happy and contented with my job and the blessings that come unexpectedly," he enunciated.

### MARYLIE P. MONTEROYO, 27

#### **Assistant Rice Focal Person, ATI-RFO 10**

Monteroyo is from the 1st batch of RSTC graduates under the Rice Competitiveness Enhancement Fund. As a lady who grew up in the rice fields, Mary admitted that she still had so much to learn and the training had gone beyond quenching her thirst for knowledge.

"Before, I only worked for the sake of compensation. Now, I work without any expectations. A simple smile from the farmers is enough to give me a sense of fulfillment," she proudly said.



After the training, Monteroyo together with her colleagues in ATI 10, supervised two batches of farmers' training in partnership with PhilRice and DA-Region 10 Field Office in Bukidnon. It was a 12-day seminar on PalayCheck, field demonstrations, and agripreneurship.

Ruth A. Acosta, one of Monteroyo's farmer-trainees, immediately ordered a transplanter after witnessing its efficiency. To her excitement, a week after the training, Acosta gathered her neighbor-farmers for a lecture. She invited Monteroyo together with her fellow trainees to attend the re-echo activity.

"I immediately fulfilled my action plan to share my learnings to my co-farmers. I saw their struggles especially with the implementation of the Rice Tariffication Law. So, I organized a lecture believing that through this, we will all one day become progressive," Acosta recounted.

Through the stories of her farmer-trainees, Monteroyo happily said her purpose in life is starting to unfold. •





#### DA'S PARADIGM ON LEGISLATIVE SUPPORT

"In partnership with our top lawmakers, we will aggressively pursue the formulation of conducive agricultural policies and legislative measures to achieve the DA's vision through the implementation of the eight paradigms on the New Thinking for Agriculture." - Sec. William D. Dar



Members of the Hotel & Restaurant Association of the Philippines (HRAP) are now serving half-cup white rice and brown rice on agreed terms or schedules



INFOGRAPHICS BY: PERRY IRISH H. DURAN SUBJECT MATTER SPECIALISTS: ADELINE P. GOMEZ • MYRIAM G. LAYAOEN

Be RICEponsible is a national advocacy campaign that promotes non-wastage of rice and consumption of brown rice and rice mixes to help achieve rice security. Implemented since 2014 onwards, the campaign has resulted in the legislation of the half-cup serving of rice ordinance and brown rice resolution in various cities, municipalities, and provinces nationwide. Here's a quick look on the campaign's facts and wins, to date.





3 TABLESPOONS of cooked rice or 14 GRAMS of uncooked rice

2015



2.5 TABLESPOONS of cooked rice or 12 GRAMS of uncooked rice

Mean per capita plate waste of rice, 2013-2015 (latest data from DOST-FNRI)

CITIES



**PROVINCES** 

Have officially passed the half-cup serving of rice ordinance/resolution



Have officially passed the brown rice resolution



Has adopted the BeRiceponsible logo in its meal packs



Has featured the national rice awareness month and the campaign for years









Known HRAP restos and food chains that have adopted BeRiceponsible practices







### OK PALA ANG PARAAN NA GINAGAMIT NINYO SA SCHOOL. EPEKTIBO. (YOUR FARM PRACTICES AT SCHOOL ARE GOOD. THESE ARE EFFECTIVE.)

Departed uncle of Ronaldo (Baluan National High School)



I first heard about agriculture back in 2009 when a friend persuaded me to join the 4-H Club [an organization that promotes youth development]. He said that I could learn so much from the group. It was my membership in the club that made me appreciate the role of farmers in society.

My family did not own the land where we lived back then. When we were asked to vacate the place in 2015, I had to stay at my uncle's house for 8 months so that I could attend school while waiting for my parents to find a new place for us. After class or during my free period, I helped my uncle in the farm. He taught me how to plant rice, remove weeds, and harvest using a sickle.

The club and my experiences in the field gave me the idea that I can take agriculture production as specialization in senior high. A part of my decision was influenced by my family's financial status. Culinary arts was really my first choice but agriculture was more practical for me to take.

In 2016, I enrolled at Baluan National High School as a Grade 11 student. Our school had an ongoing project with PhilRice, which they called the Infomediary Campaign. I saw some people from PhilRice a few times when they visited the school. During class, our technical-vocational livelihood teacher, Sir Edmar (Juanitez), would talk about them, their work, and the lessons they shared about rice production. Of all the topics discussed, my favorite was organic concoctions and carbonized rice hull (CRH), which can be used as fertilizers.

These topics were new to me: materials found in our surroundings, when you turn them into concoctions, can function as fertilizers; and the rice hull, which is considered as waste in our barangay, can

help condition the soil when carbonized. Sir Edmar said we could also sell these kinds of organic fertilizers. All this time I had thought that commercial fertilizers are the only ones we can use for our crops, and that our harvest is the only thing we can sell when we plant rice.

I shared these learnings to my uncle while we were eating at home. I tried to explain them properly. I also gave him some print materials to read. At least by doing so, he would learn something new about rice farming.

He was shocked. He had no clue that there are many ways to grow healthy rice plants without using commercial fertilizers.

I also told him about some flowers that can be planted around the farm to host natural enemies of pests.

Uncle told me he'll try it next time and compare the harvest.

When we started planting again, I asked for some concoctions and CRH from the school and gave them to my uncle. He also planted cosmos, zinnia, lemongrass, and oregano around his farm.

"OK pala ang paraan na ginagamit ninyo sa school. Epektibo (Your farm practices at school are good. These are effective.)," my uncle said when he saw the difference.

Before, pests kept on attacking his field so we had lesser harvests. After trying organic concoctions, CRH, and pestrepelling plants, the crops looked healthy. No pests were found. We harvested more. We did not even buy so many commercial fertilizers and pesticides.

Because of that, my uncle asked me to help him make concoctions and CRH so

he can have something to use in his farm again.

Sadly, he died after a while. However, his family continued tending the farm and they still followed the practices I have shared whenever they have the resources.

I was very happy to help. I may be young. I may not be a farmer's son, but I know I can help the industry. I cannot waste what I learned about new practices in rice production knowing there are farmers who have limited knowledge about them. I won't be able to help if I kept the information to myself.

Today, I like agriculture more than my first choice (culinary arts). I have decided to take Bachelor of Science in Agriculture for college this August 2020. I hope I could find a scholarship, though. •

Ronaldo, 21, from Purok Pagkakaisa, Baluan, General Santos City, graduated from senior high school in 2018. He was awarded Best in Organic Agriculture Production and Best in Immersion by his school. He also acquired his NCII in organic agriculture.

Baluan National High School is among the partner-schools of PhilRice in the Infomediary Campaign, a youth-engagement initiative in agriculture. Together with the Department of Education and the CGIAR-CCAFS, the Campaign established an alternative extension modality for the rural rice-farming areas. The schools become the nuclei of rice science information, and the students serve as the information mediators for their farmer-parents and other farmers in their communities. As Agriculture Secretary William Dar proffered in his 8 paradigms, the youth can help modernize Philippine agriculture because they are techsavvy and receptive to technologies.

## HE JOY OF TOGETHERNESS

HANAH HAZEL MAVI B. MANALO

It's mid October. Harvest time. Some 20 hours ago, the *palay* trader's agent assured the farmer that a truck was to pick up from the farm the 85 sacks of fresh palay that the farmer had to sell at a price offer good enough to be silent about. After an almost sleepless night of watching over the piles of sacked grains along the concrete barangay road, the farmer has yet to receive texted advice that the truck is finally on its way.

Meanwhile, the sky is darkening and the restless clouds are graying. The combine harvesters continue roaring from many directions as though to scare the rain away.

Not so far away, another farmer hesitantly remembers that in late March of the same year, the trader's truck was on time to haul his dry season harvest. Disappointingly, the crew brought out a single 60kg-capacity weighing scale and started weighing the 110 sacks one-by-one. The farmer would have preferred to have his produce weighed in bulk at the truck scale. He

could not say much, though, as he had already advanced 50% of the estimated total payment for his palay. All he could do was to stare at the weight figures being recorded by the truck driver. Tonight he would forget the day through the company of some cheap brandy.

Farmers in Barangays Marasat Grande and Dagupan in San Mateo, Isabela are no strangers to the true-to-life experiences sketched above. They can relate. However, with the influence of the Rice Business Innovations System (RiceBIS), those days are gone (and will probably not dawn again).

RiceBIS is a PhilRice program that works on empowering farmers to become agripreneurs, not forever producers. It aims to increase yields, pull down production costs, and link farmers to business development services.

"My friend Diosdado of Dagupan and I volunteered to become part of the RiceBIS community since the other 31 barangays

The positive impact of the well-milled rice enterprise had not only benefitted the association's members but also their other family members who were also engaged in selling.

were not interested. We believed that the program can help us," Jose V. Guillermo, 60, elected Marasat Grande Barangay Chairperson, started telling their story.

"Through the guidance of the program, from being individual farmers, we formed the MarDag RiceBIS Association and registered it with the Department of Labor and Employment in October 2018. Now, we have eight clusters with 85 members," Diosdado S. Sagaysay, 59, elected Dagupan Barangay Chairperson, participated in the story-telling.

Julita M. Cadiz, 61, of Dagupan introduced the association as an instant and constant buyer of *palay* produced by the members. They feel financially secured. Because the association is engaged in well-milled and



brown rice production and marketing as its agro-enterprises, Manang Julita and the other members also help sell the products thus earning the member-sellers, association, cluster, and manager additional income.

Dr. Ofelia C. Malonzo of PhilRice Isabela, lead of the RiceBIS Community Project in San Mateo, said that the well-milled and brown rice enterprises of MarDag became the members' unifying arm and gave equal opportunities to all men and women members.

Ronaldo B. Sagaysay, 43, of Marasat Grande disclosed with an unrehearsed smile that when he joined the association, he started to have a social life and improved his people skill. Before, he used to go home immediately after working in his field. Now, by leading one of the eight clusters of the association with 10 farmermembers, he does enjoy doing other activities.

Mang Ronaldo is also thankful that they were trained on PalayCheck, an integrated rice crop management system. He has lowered his production costs by reducing the amount of seeds from 120kg to 60kg per hectare and lessening expensive fertilizers by incorporating rice straw into the soil, and by not spraying pesticides.

Joanne Virginia E. Adolfo of PhilRice Isabela commended the MarDag association for performing well during the 2019DS with 6.87t/ha average yield from their baseline yield of 5.72t/ha.

Her colleague Jaymar U. Ballad, on the other hand, said that through the association's well-milled rice enterprise, it earned P20,000 during the 2019DS and P13,000 during the 2019WS. Not bad, what with foreign rice abounding at the retailers' stalls?

Mang Ronaldo and Julita both agreed that the association affords them a "you-are-not-alone" feeling as exuded by their barangay captains who manage the association.

Together with Adolfo and Ballad, Malonzo emphasizes that behind the success of the RiceBIS community in San Mateo are its supportive and dedicated local officials. •

### ON ENGAGEMENTS AND PARTNERSHIPS

MARY GRACE M. NIDOY

There is no sign of slowing down for Negros Occidental's Provincial Agriculturist (PA) Japhet T. Masculino, 60. With his tight schedule, the lawyer and agricultural engineer who believes in transforming our farmers into agri-preneurs always takes on challenges with his infectious positive attitude. One of PhilRice's strongest allies in rice R&D, he shares us his thoughts on sustainable partnerships and advice to his fellow PAs.

### Did you always dream of being an agriculturist? Can you tell us what led you to become what you are now?

To be an agriculturist was never among my dreams. After graduating from high school in 1976 at Southern Baptist College in M'lang, North Cotabato, I was contemplating on what course to take, having passed the UP College Admission Test. It was my mother who suggested to me to take agri-engineering at the then Mindanao Institute of Technology, now University of Southern Mindanao in Kabacan, North Cotabato. It was a lady agri-engineer working with the National Irrigation Administration in our hometown–M'lang, –who suggested to my mother that I take up the course.

### Who inspired you to become a lawyer, as well?

Our neighbor-lawyer did, when I was still a kid.

### How do you describe your leadership style as PA?

Ever since I was given a management position, I have always adhered to the situational leadership style. I fit my style to the development level of my personnel. If one needs more guidance, I provide closer supervision. For those who need less guidance and I see that this is their motivation, then I give less supervision.



JAPHET T. MASCULINO Provincial Agriculturist Negros Occidental

### What are the challenges and important lessons you've learned as PA?

We have not prepared our farmers for the challenges of tariffication. We must strengthen extension service delivery to our farmers. We should increase availability of affordable farm mechanization services. Our farmers are aging, hence, we have to entice our youth to venture in agriculture. We have to make access to credit less burdensome for our farmers. We need to transform our farmers into agri-preneurs who can market their products.

### How do you plan to achieve the goals of the DA for the rice industry and help the Negrense farmers to be more competitive?

We must implement a focused delivery of agricultural services (farm mechanization, technology transfer, provision of quality seeds, available credit facilities, transform farmers into agripreneurs) to lower production cost and push up their profitability.

### Can you identify gaps in the implementation of national programs and projects at the local government level?

Due to the devolution of agricultural services, national agri-programs are highly dependent on the local government units. It's good if LGU officials are agriculture-oriented because support to agriculture is substantial. However, if they do not make agriculture as a priority, like less agriculture personnel are hired, then program implementation suffers.

### How important is partnership in terms of working with different government agencies in the rice industry?

Partnership with agencies is very important for a cohesive and seamless implementation of agri-programs and projects. When these government agencies plan and implement programs on their own, we see duplication of projects and waste of scarce government resources.

### What do you think are the roles of the provincial and LGUs in terms of helping the national government achieve its goals?

Under a regime of devolution where the bulk of agri-extension workers are under the control and supervision of the LGUs, the roles of the provincial and LGUs are very vital, hence, there is a need for DA to support the LGUs, not only with programs and projects but also in terms of mobility, financial assistance for traveling expenses/allowances, and the like

### Can you tell us about the projects/programs that the provincial government of Negros and PhilRice are part of?

We have been partners from the establishment of PhilRice Negros in 2003, to the current seed production and distribution under RCEF, and the multi-crop seeder testing.

### What is the impact of these projects/programs on the rice industry in Negros Occidental? Can you cite one project successfully implemented with PhilRice?

PhilRice has been the source of quality seeds and technologies for many rice farmers in my province. One good example is the multi-crop seeder. The use of this machine can allow another cropping for rainfed rice farmers. We are now planning to implement this on a larger scale.

### What lessons or tips can you spare to your fellow PAs on making partnerships sustainable?

Partnership among stakeholders can be sustainable if there is always engagement among the parties, and communication is not severed. Even at times when misunderstanding occurs, if engagement is maintained and communication line is open, solutions can always be found to solve the misunderstanding.



### Leveling up PH Rice Farming

WRITTEN AND ILLUSTRATED BY: REUEL M. MARAMARA

The DA is after rice modernization, through the use of cost-reducing and yield- enhancing technologies, as one of its 8 paradigms. PhilRice has been developing ICT-based technologies, training various stakeholders, and sharing rice knowledge through a number of platforms to help rice farmers produce more at a lesser cost, thus helping them become competitive. Let us look at the 2019 figures on the institute's efforts in helping to level up Philippine rice farming.



### **AgRiDOC App**

2,951 active users

This farm management App for farmers, agriculture extension workers (AEWs), and researchers allows simple record-keeping and provides farm satellite images, easy task-scheduling, and information on the needs of the rice crop in every stage. It also contains the PalayCheck, an integrated rice crop management system presenting the best key technologies and management practices as Key Checks.



### **MOET App**

2,598 active users

The App complements the Minus-One-Element Technique (MOET), an easy nutrient deficiency identification setup. It has a fertilizer calculator that recommends the timing and precise amount of fertilizer needed by the rice crop according to the MOET results. The app can also predict yield based on your own fertilizer plan.



### e-Damuhan App

4,040 active users

This offline App equips farmers and AEWs with artificial intelligence on weed recognition that identifies various weeds and recommends management options for each type. It contains a condensed

catalogue of weeds in Philippine ricefields, their scientific and local names, and impact on rice.

### Binhing Palay App

6,950 active users

The App helps farmers and AEWs identify the perfect variety for every type of farming ecosystem by season, through a list of released local varieties with their characteristics, such as maximum and average yiel

such as maximum and average yields, maturity, height, number of tillers, resistance to pests and diseases, and milling potential. The Institute lives up to providing science-based knowledge on rice production to various stakeholders, especially rice farmers, thus tapping different platforms and modalities. Some of these are as follows:

### Knowledge Products (KPs)

KPs are information, education, and communication materials produced in various formats. These were distributed to 259,258 farmers; 51,479 extension workers; 13,314 teachers; 12,370 students; and 21,629 other stakeholders.

### PinoyRice Knowledge Bank (PinoyRice)

PinoyRice (www.pinoyrice.com) is an information portal on rice. It has **81,908** website visits and **340,046** downloads with **91.08%** satisfaction rating.

### Radio

50 program segments aired 203 times with 83.3% of partners extremely satisfied and 44 broadcast releases aired 402 times in 6 radio stations nationwide with 100% user satisfaction rating.

### PhilRice Facebook Page

(rice.matters) 57,637 page likes; 72,245 followers

#### PhilRice Text Center (PTC) PTC (0917-111-7423) is an

PTC (0917-111-7423) is an SMS-based service that answers queries and provides technology updates to farmers, extension workers, and other stakeholders. It has more than 35,000 registered clients and responded to 31,151 queries.



### Rice Science Museum

more than 20,000 general audience were catered to in various activities



### Learners taught

17,333 farmers, students, collaborators, NGOs, and LGUs were given basic rice education; 309 participants from 16 provinces attended 14 PalayAralan sessions at PhilRice CES.







**Library 1,546** visitors



### Corporate Website

(www.philrice.gov.ph)275,011 website visits;84.75% satisfaction rating

### Field Days

**4,712** farmers and stakeholders participated in field days

### **Training**

292 farmers, extension workers, students, educators, and other professionals participated in 10 customized training courses conducted at PhilRice CES.

### YOX POP

## HOW ARE YOU DIGITALIZING YOUR FARM ACTIVITIES?

### COMPILED BY: ALLAN C. BIWANG JR., AND JOHN JOWARD A. MARTILLANA

\*Crowdsourced through PhilRice Facebook page and Text Center

### STEPHEN GONZALES, 31 Farmer, Nueva Ecija

I am using BinhingPalay App to know the maturity days, grain quality, and other essential information on a specific variety I want. The app helps farmers like me to decide on the suitable rice variety for every season.

### Pope Quijada Loz, 46 Farmer, Surigao Del Sur



The information I accessed using my mobile phone had helped me figure out the answers to my queries in rice farming just like the advice I received from the PhilRice Facebook page. Information on rice variety and pest management from the page helped me decide on what to plant and what technology to adopt. I can also access information on crop insurance and proper management via Facebook.

### POLA DOMINGO, 71 Retired-teacher/farmer, Bulacan

I joined online groups that provide information on crop propagation and livestock management.

Through this, I know the updates on the latest technologies and eventually apply them in our farm. Sharing of information about farming and adoption were made faster through this.

### LIZA MAGAOAY, 46 Farmer, Ifugao



Just by texting the PhilRice Text Center and my fellow farmers, I get the information I need about rice varieties with no fuel cost spent.

### CRISTIAN SAMPILO, 28 Farmer, Occidental Mindoro



YouTube videos provide access to various rice-farming information that are easier for me to understand.



#### **Ingredients:**

Raw glutinous rice Garlic, minced **Ground Pork** Onion, chopped Salt Cooking oil Black pepper Cooking oil Lumpia wrapper

80 grams ½ tablespoons 160 grams 1 tablespoons ½ teaspoon 2 tablespoons ¼ teaspoon 1 cup 20 pieces

#### **Procedure:**

- · Cook glutinous rice. Set aside.
- Sauté garlic and onion in cooking oil.
- · Add ground pork, salt, and pepper. Cook until golden brown. Remove excess oil.
- Mix ground pork and glutinous rice in a large mixing bowl.
- Scoop 1 tablespoon of the mixture and wrap in lumpia wrapper.
- · Deep-fry until golden brown.
- · Serve.

### RICE BALLS

#### **Ingredients:**

Cooked rice 3 cups Bacon, fried and cubed ¼ kilogram Cheese, cubed ½ cup Eggs, lightly beaten 2 pieces Breadcrumbs Chicken coating powder Salt and pepper to taste Oil for frying

1 cup 2 tablespoons

#### **Procedure:**

- Combine rice, pepper, salt, and chicken coating powder.
- Form into balls.
- Stuff with bacon and cheese. Roll again into balls to fully cover the filling.
- Dip stuffed rice balls into beaten eggs and roll in breadcrumbs.
- Deep-fry until golden brown.
- Serve with sweet chili sauce or garlic-mayonnaise.

<sup>\*</sup>Makes 20 pieces

### **STAFF** EXTRAORDINAIRE



### SERVING FOR 35 YEARS AND BEYOND

### **JOSE A. ORCINO**

57, Science City of Muñoz, Nueva Ecija Sales and Promotion Supervisor II Business Development Division

#### **ACADEMIC PROFILE:**

• BS Agriculture, Christian Colleges of the Philippines

Kuya Onyie' was recognized in November 2019 as the longest-serving employee of the institute. He took into account the proximity of his hometown to his workplace, so he chose to work at the Maligaya Rice Research and Training Center (MRRTC, now PhilRice CES) starting as student assistant in 1984, where he learned to love and be passionate about his work.

The staff rationalization in 2013 promoted him as Farm Superintendent I but based in PhilRice Batac. He readily took this chance for his personal and career growth. In 2016, he moved up again and returned to Nueva Ecija.

Kuya Onyie is grateful for the opportunities given to him such as his participation in international training programs in South Korea in 2015 (Capacity-Building Course in Rice Seed Production, Certification and Field Inspection); Brunei in 2010 (Philippine-Brunei Bilateral Agreement); China in 2005 (Regional Training Course on New Frontiers of Developing and Handling Mutants); and Thailand in 2000 (Training on Germplasm Evaluation and Utilization, and Genetic Evaluation and Utilization for Rainfed Lowland Rice).

Serving PhilRice for more than three decades has deepened and broadened his knowledge and skill on rice production. This experience has also improved his ways as farmer in his own farm and the ways of his fellow farmers in his immediate community outside PhilRice. This is a good opportunity for him to prepare for his retirement as he sees himself as a full-time farmer in the future.

Onyie maintains that it is essential to be competent, patient and industrious to stay longer in work. Kuya Onyie was also awarded as Outstanding General Administrative Support Staff in November 2019 and Outstanding Support Staffer in November 2011.

His hard work and dedication had paid off. Now, he has a son who finished BS in Business Administration major in human resource development and management. He hopes to soon see his other children become professionals. For PhilRice, he hopes that the institute will continue to live up to its mission to help the Filipino rice farmers. -JOHN JOWARD A. MARTILLANA

### **CONGRATULATIONS!**



**VICTORIA C. LAPITAN** 

Director I, PhilRice Bicol

#### **Academic Profile:**

- PhD in Agricultural Science (Iwate University, Japan)
- Master in Development Management (DAP)
- MS in Agronomy, major in Crop Physiology (UPLB)
- BS in Agriculture, major in Agronomy (UPLB)

#### Specialization:

• Microtechniques-handling, and conventional and molecular rice breeding techniques.

Hometown: Los Baños, Laguna

Prior to her promotion as Director I, Lapitan was a recipient of the 2019 Dangal ng PhilRice Outstanding Official award owing to her assertive leadership skills, overall performance, and good governance initiatives.

Her operational strategies and general directions led PhilRice Bicol to be hailed as the Best Station in 2018.

She was also distinguished as the Most Outstanding Principal Investigator for the implementation of the Asian Food and Agriculture Cooperation Initiative project on the development of rice production techniques. -DONNA CRIS P. CORPUZ

### NEWLY APPOINTED/PROMOTED STAFFERS

JOY T. AGUDIA

Accountant III, CES

**EV P. ANGELES**Supervising SRS, CES

3aper (1311 16 31 13) C23

**IMELDA A. ARIDA**Senior SRS. CES

#### MARVIN D. MANALANG

Senior SRS, CES

**FIDEL M. RAMOS** 

Senior SRS, Isabela

**GLENDA D. RAVELO** 

Chief Administrative Officer, CES

**CLARIVEL O. SEGURITAN** 

Administrative Officer II. Isabela

**GRACE S. VILLAROMAN** 

Supervising Administrative Officer, CES

### THANK YOU AND FAREWELL!



#### **IUANITA C. GUILLERMO**<sup>+</sup>

Position: Administrative Officer I

Station: Isabela

Length of Service: 23 years

Before her early retirement in June 2019, Guillermo headed the Supply and Property Office of PhilRice Isabela. She also carried out other tasks such as member of the Appraisal and Disposal Committee, and the Secretariat of the Bids And Award Committee of the station.

She also performed various administrative responsibilities that include being designated as budget officer, human resource management in-charge, station inspector, and as member of the fact-finding and investigation/awards staff development committees, and the inventory team.

PhilRice is grateful for her selfless devotion to its mission and for epitomizing a loyal employee. She succumbed to heart failure in December 2019. -HANAH HAZEL MAVI B. MANALO

### AWARDS



**ENGR. ALEXIS T. BELONIO** 

2020 Manila Water Foundation Prize for Engineering Excellence



**DR. NORVIE L. MANIGBAS** 

2020 National Research Council of the Philippines' Achievement Award



DR. AURORA M. CORALES

2020 Siever Award for Professional Achievement, CLSU Alumni Association Incorporated



PHILRICE CENTRAL EXPERIMENT STATION Maligaya, Science City of Muñoz, 3119 Nueva Ecija Tel: (44) 456 -0277 • Direct line/Telefax: (44) 456-0354

#### **BRANCH STATIONS:**

PhilRice Batac, MMSU Campus, Batac City, 2906 Ilocos Norte; Telefax: (77) 772-0654; 670-1867; Tel: 677-1508 Email: batac.station@philrice.gov.ph
PhilRice Isabela, Malasin, San Mateo, 3318 Isabela; Mobile: 0908-875-7955; 0927-437-7769; Email: isabela.station@philrice.gov.ph PhilRice Los Baños, UPLB Campus, College, 4030 Laguna; Tel: (49) 536-8620; 501-1917; Mobile: 0920-911-1420; Email: losbanos.station@philrice.gov.ph PhilRice Bicol, Batang Ligao City, 4504 Albay; Tel: (52) 284-4860; Mobile: 0918-946-7439; Email: bicol.station@philrice.gov.ph
PhilRice Negros, Cansilayan, Murcia, 6129 Negros Occidental; Mobile: 0949-194-2307; 0927-462-4026; Email: negros.station@philrice.gov.ph PhilRice Agusan, Basilisa, RTRomualdez, 8611 Agusan del Norte; Telefax: (85) 343-0768; Tel: 343-0534; 343-0778; Email: agusan.statlon@philrice.gov.ph PhilRice Midsayap, Bual Norte, Midsayap, 9410 North Cotabato; Telefax: (64) 229-8178; 229-7241 to 43 Email: midsayap.station@philrice.gov.ph

#### SATELLITE STATIONS:

Mindoro Satellite Station, Alacaak, Sta. Cruz, 5105 Occidental Mindoro • Mobile: 0917-714-9366; 0948-655-7778 Samar Satellite Station, UEP Campus, Catarman, 6400 Northern Samar • Mobile: 0948-754-5994; 0929-188-5438 Zamboanga Satellite Station, WMSU Campus, San Ramon, 7000 Zamboanga City • Mobile: 0910-645-9323; 0975-526-0306

> PhilRice Field Office, CMU Campus, Maramag, 8714 Bukidnon; Mobile: 0916-367-6086; 0909-822-9813 Liaison Office, 3rd Flor. ATI Bldg, Elliptical Road, Diliman, Quezon City; Tel/Fax: (02) 920-5129









