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Championing competitiveness of the Filipino rice farmers

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ABOUT THE COVER

Ways to become competitive have been presented to us multiple times. The next steps now rest on the ability of agencies to deliver interventions effectively, policymakers to put in place relevant policies, consumers to support local producers, and farmers to adopt best-fit practices. While we embody the challenge, let us also learn from those who made it through the journey, even in the global market. They are the farmer-champions we can take inspiration from, as we tread the path toward competitiveness.

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www.philrice.gov.ph
www.pinoyrice.com
PhilRice Text Center
0917-111-7423
@rice_matters
rice.matters

EDITOR'S NOTE

Championing competitiveness of the Filipino rice farmer

About 70% of rural folks in the country are farmers and fishers. Sadly, they radiate a daunting picture of poverty and deprivation with many of them living in a stilt house and with income barely enough to get by the day. We critically look into the narratives of this condition and the social standing of our rice farmers, and attempt to forward an optimistic view that something can be done to uplift their living status and boost their morale. There remain reasons for them to hold on and to aspire to be globally competitive someday!

To begin, let's have a keener look at who the Filipino rice farmer is. Generally, they are small-scale farmers with a landholding of one hectare or below. If they grow rice alone, then their income is definitely not enough to raise a family of five.

Experts suggest that farmers need to scale up their enterprise activities (i.e., they have to look at farming as a business) as well as their social behaviors (i.e., they organize themselves and work together, rather than operate individually). As the saying puts it, "no business can succeed in any greater degree without being organized". Being organized empowers farmers to overcome many challenges that confront them (e.g., market pressure) and allows them to succeed together.

In view of the allocation of the Rice Competitiveness Enhancement Fund (RCEF) as a safeguard mechanism to aid our farmers to become competitive in the face of the liberalized rice market, farmers receiving basic support from the government, such as seeds, machines, credit, and training, must utilize these services along with not only cooperation but also with diligence so these will all end up coming to fruition.

To sum up, for farmers to be globally competitive, they must work together and carry out farming as a business venture, apply modern technologies, seasoned with compassion to help each other. This way, we can catalyze changes necessary to achieve a rice-secure Philippines with prosperous rice farmers. To further digest this, flip the page and read about motivational stories of farmers who exhibit ideal behaviors needed to be able to triumph in an open global rice market. •

PhilRice turns 34

Led by Christian missionary and life coach Myraflor Cayog-Sotto, a prayer of thanksgiving and moral enrichment among its management and staffers start a new year for PhilRice.

The Institute marked its 34th year taking on the challenge of fulfilling its newly added mandate to help implement the Rice Competitiveness Enhancement Fund (RCEF)- Seed and Extension programs.

With the theme, "Championing Competitiveness of the Filipino Rice Farmers," the anniversary coincided with the observation of the National Rice Awareness Month every November.

"As we continue to embody the mantra of public service, let us all be servant-leaders. Let us do what we can to serve. That is our calling," Dr. John C. De Leon, PhilRice executive director, said. Emphasizing strengthened cooperation to empower farmers amidst rice trade liberalization, De Leon said discussions on RCEF during the anniversary further drove the Institute toward RD&E and production competitiveness.

"More than anything else, it is teamwork that causes the celebration of success," he said. **-DONNA CRIS P. CORPUZ**

RCEF seed distribution takes off

(L) A rice farmer from Balungao, with his bag of certified seeds, which he acquired during the first RCEF seed distribution event, Oct 28; (R) RCEF-Seed program recipients pose for documentation and database purposes.

In time for the dry season planting, farmers across the country received certified inbred seeds under the Rice Competitiveness Enhancement Fund (RCEF) through PhilRice. More than 320,000 bags of seeds have already been distributed in many of the target municipalities as of Dec. 2.

Dr. Flordeliza H. Bordey, designated deputy executive director for special concerns, said the Institute targets to disperse over 2.1 million bags of certified inbred seeds (at 20kg/bag) to at least one million farmers by January 2020.

An information technology application was introduced to manage and promote more systematic distribution, monitoring, documentation, and databasing.

Over 600 farmers from Balungao, Pangasinan were the first to receive seed support, Oct. 28.

"You're lucky to be the RCEF program's first beneficiaries. The government gives this support for you to be more competitive so I urge you to do your part for you to gain more from farming amidst challenges," Mayor Maria Theresa Peralta admonished the farmers.

Dominica Lobusta, one of the beneficiaries, said the distributed seeds would help them cope with the low rice price.

Before they receive seeds, farmers also undergo technical briefing to brush up on recommended rice production technologies for better chances of achieving high yield. **-CHARISMA LOVE B. GADO-GONZALES**

De Leon, now a full-fledged exec

Effective Dec. 3, Dr. John C. De Leon is the full-fledged executive director (ED) of PhilRice, as he took his oath before Pres. Rodrigo R. Duterte in Malacañang.

Specializing on genomic selection, aromatic traditional varieties, seed technology, and genetic diversity, De Leon has earned 30 years of well-rounded work experience in managing rice R4D programs. He specializes on commercial seed product development and testing, seed systems, and multi-national breeding systems.

One of the prominent varieties he co-developed was Mestiso 59, with a yield record of 12t/ha. It was hailed as the highest yielder during the Northern Mindanao Hybrid Rice Derby in 2017, outshining 12 other varieties.

De Leon was also PhilRice's hybrid rice program leader in the early 2000s. He came back to the Institute after 10 years of working for the private sector as senior breeder at DevGen and head of rice breeding in Syngenta.

-DONNA CRIS P. CORPUZ

PhilRice, level 3 GAD-certified

The Philippine Commission on Women (PCW) has granted Level 3 accreditation to PhilRice as a gender-responsive agency.

The PCW audit team sees PhilRice programs, projects, and activities as "participatory and empowering, equitable, sustainable, free from violence, respectful of human rights, supportive of self-determination, and actualization of human potential."

"This accreditation signifies that PhilRice researches and programs respond to clients' needs; meaning, it exerts substantive efforts in creating impact on the lives of the men and women, especially marginalized women in rural areas," explained Silayan Teresita Quintanar, evaluation team lead and PCW senior GAD specialist.

The Magna Carta of Women (RA 9710) contends gender equality as one of the mechanisms in reducing poverty.

Through its R4D initiatives, PhilRice acknowledges the importance of reducing gender inequality by providing better access to information and agricultural resources, enhancing farmers' work efficiency, and increasing farm competency.

As GAD-certified agency, the Institute's farm machines, such as the drum seeder, microtiller, gasifier stove, and brown rice machine can be easily operated by women as they are portable and lightweight. The proportionate number of women-farmers to male participants is also ensured during project implementation. Moreover, women-farmers and farmers' wives are encouraged to attend PhilRice training and seminars. **-ALLAN C. BIWANG JR.**

True to her role as the new RICEponsible ambassador, Ariella Arida urges consumers to buy locally-produced rice as a way to support the Filipino rice farmers.

Beauty queen celebrates rice month

Ariella Arida of Miss Universe 2013 fame kicked off this year's celebration of National Rice Awareness Month (NRAM), Nov. 4 at UP Diliman.

As "Be RICEponsible" ambassador, Ariella, who joined the Run4Rice for the Yolanda survivors six years ago, helped promote NRAM's theme, "Buy local. Eat local. Support our rice farmers".

The theme hoped to impart the importance and benefits of eating safe and nutritious rice, and the value of patriotism in supporting the local rice farmers. Radio reports had been quoting rice retailers in Metro Manila saying that local rice had been selling faster than foreign rice.

Pursuant to Presidential Proclamation No. 524 s. 2014, PhilRice and its partners had put up exhibits at the DA Central lobby and SM City Cabanatuan, Brown Rice and Rice Mix Day, and Ceremonial Harvesting at the Rice Garden (Luneta Park). **-CHARISMA LOVE B. GADO-GONZALES**

RCEF extension services to benefit 2M rice farmers


RENZ ROMYL C. DE JOYA

A series of tracer studies by PhilRice Technology Management and Services Division show that farmer-trainees share rice production-related technologies to their fellow farmers, and that they are also tapped to teach young farmers.

With the release of the Rice Competitiveness Enhancement Fund (RCEF), better extension services for about 2M farmers nationwide can be expected as more rice specialists, extension workers, and farmers are trained under the RCEF- Extension Program.

Through a two-week training of trainers on production of high-quality inbred rice and seeds, and farm mechanization, Dr. Glenn Ilar, training coordinator, said PhilRice together with PHilMech and ATI capacitates extension workers and farmer-leaders in educating farmers in their areas so that they can cope with the challenge of cheaper rice from the international market.

"This training that we recently completed for farmer-leaders and extensionists of Luzon amplifies the program's extension services. The participants were updated on modern farm technologies and techniques, especially on the production of quality rice and seeds and use of farm machines, which they will impart to farmers by conducting Farmers Field Schools," he said.

PalayCheck system – a dynamic rice crop management approach, high-quality inbred rice and seed production, and farm machinery operations, maintenance, and safety were parts of the curriculum.

About 30 agricultural extensionists and trainers from the Technical Education and Skills Development Authority in RCEF target municipalities in Region 5 are being trained.

The 85 regional and provincial RCEF coordinators who recently completed training are now assisting in the seed distribution program.

"Character formation provided us the competence and the heart to help farmers uplift their lives [in these trying times]. I will not stop sharing the technical knowledge I gained here until the farmers I serve would be able to compete with the ASEAN farmers," trainee Luisito Parcon of Laguna vowed.

-NOEL S. MARIANO JR.

Strat Plan 2017-2022 revisited

PhilRice directors, officials, and branch station managers reviewed the targets and indicators of the Strategic Plan (Strat Plan), which set the Institute's directions from 2017 to 2022 on Dec. 2-3.

The review focused on evaluating the performance of projects and programs contributing to the accomplishment of the targets of the Institute. It also measured the Plan's responsiveness to emerging challenges and changes in the rice industry during the third year of its implementation.

"Aside from updating the Strategic Plan, this also gives us the chance to harmonize the Rice Competitiveness Enhancement Fund Seed and Extension Programs, and the Department of Agriculture's New Thinking paradigms with PhilRice targets," Dr. John C. De Leon, executive director, emphasized.

The Plan shifts PhilRice operations from business-as-usual to business-unusual and rice industry development focusing on cultivation, commerce, consumption, and competitiveness. It also aims for certain strategic outcomes through impact-oriented and partnership-driven R4D. **-DONNA CRIS P. CORPUZ**


ZENNY G. AWING

RCEF rice specialists graduate

Following course completion, this year's first batch of Rice Specialists' Training Course under the Rice Competitiveness Enhancement Fund (RCEF) is now ready for their role as rice focal persons in their provinces. They will promote technologies for farmers to be competitive and will assist in technical briefings and seed distribution. While on training from April to October, they taught more than a hundred farmers from Llanera and Rizal, Nueva Ecija who also joined them in the culmination program, Oct. 18. Mayor Hannah Katrina Lapuz-Andres of Rizal lauded PhilRice for enabling the rice farmers while PhilRice Executive Director John De Leon challenged the newly trained farmers on the *PalayCheck* system to adopt a business unusual perspective amidst the implementation of the Rice Tariffication Law.

Meanwhile, two new batches of rice specialists are undergoing training at PhilRice CES and Agusan. These batches participated in by the Technical Education and Skills Development Authority (TESDA), Agricultural Training Institute (ATI), Department of Agriculture- Regional Field Offices (DA-RFOs) and Local Government Unit (LGU) staffers are set to complete their training in May 2020. **-ZENNY G. AWING**


ALLAN C. BIWANG JR.

RCEF seed inspection, automated

With the RCEF seed distribution going full-swing, the Institute is administering its simultaneous seed inspection activities through the use of an IT application for proper documentation and database. PhilRice and its counterparts from the local government units, and partner-seed grower cooperatives jointly weigh seed bags at the delivery points, and check for the blue tags, signifying that the seeds had passed the quality standards.
-DONNA CRIS P. CORPUZ

PRIME FACEBOOK PAGE

Modern tools for the rice sector

Rice industry stakeholders across the country acknowledged the contributions of two inter-agency projects in modernizing the rice sector, Nov. 18. Philippine Rice Information System (PRISM), operating on its 2nd year, was recognized for its efforts in maximizing the potentials of ICT to efficiently transmit data from ground validations to an online information, for faster and easier access. Pest Risk Identification and Management (PRIME) maps potential pest outbreak risks and formulates integrated pest management strategies using field-based surveillance and other information derived from satellite and drone images. Both projects are collaborative efforts of the International Rice Research Institute, PhilRice, Bureau of Plant Industry and DA-Regional Field Offices, funded by the DA-Bureau of Agricultural Research. **-DONNA CRIS P. CORPUZ (With reports from PRISTINE E. MABALOT)**

RICE ACROSS THE COUNTRY

COMPILED BY: DONNA CRIS P. CORPUZ

BATAC

LEA MAY D. TAPEC


ISABELA


LOS BAÑOS

More support for brown rice

RiceBIS Community - Rayuray Farmers' Agriculture Cooperative (RFAC) of Batac City, Ilocos Norte continues to energize the promotion and consumption of their brown rice product, thanks to the Department of Science and Technology's (DOST) financial assistance to the group.

On Oct. 13, DOST granted RFAC P131,000 for the improvement of the packaging, labeling, and nutritional analysis of their products.

Strengthening support for farmers

Joint efforts of PhilRice Isabela and Agricultural Training Institute Regional Training Center 2 added glamor to the National Rice Awareness Month Celebration in November in San Mateo, Isabela. Local farmers and rice stakeholders participated in the motorcade featuring *Palay*man and a cookfest activity. Various brown rice recipes were served and promoted to encourage consumers to patronize rice and rice-based products as a sign of support for local farmers.

Regional efforts for RCEF take off

In support of the Rice Competitiveness Enhancement Fund (RCEF)– Seed Program, PhilRice Los Baños held technical briefings for farmers across 11 municipalities in MIMAROPA and CALABARZON, Oct 15-18.

The briefings shed light on the mechanics of seed distribution and strategies aimed to increase farmers' skills on seed handling and management, and integrated crop management options. Partners from local government units across the two regions participated in the events.

Negros peeks into the future of rice farming

The Central Philippine State University and PhilRice Negros jointly held a seminar series on the Future of Rice Farming to promote the free flow of rice science updates and information among stakeholders and agencies.

Aside from current farming technologies, sustainability and mechanization were also highlighted in the lectures. Drone technology in rice farming was introduced to participating farmers, researchers, faculty members, and students.

Timely technologies and varieties promoted

More than 600 farmers, students, and rice stakeholders participated in the PhilRice Agusan's Lakbay Palay, Oct. 17 and 18, with the theme, "*Makigrupo. Maging Aktibo: Benepisyo sa RCEF, Sigurado*."

PhilRice and other agencies discussed the RCEF-Seed Program besides the field tours and free consultations on nutrient management through the Rice Crop Manager Application. A technology clinic showcasing farm machines, recommended varieties, and products and technologies was an added benefit.


ADRIENNE V. TANDANG


NEGROS

GERALD E. BELLO


AGUSAN

SHERLYN DAWN D. AGLUCOP


BICOL

MIDSAYAP

JAYSON C. ARIO

Aspiring Bicolano seed growers trained

The Oct. 21-24 Training Course on Inbred Rice Seed Production and Certification for Seed Growers conducted in PhilRice Bicol taught 15 participants about varietal selection and characteristics of new inbred rice varieties, cultural management practices, and harvest and post-harvest technologies.

Experts from the National Seed Quality Control Services detailed the process of seed inspection and certification.

More farmers gear up for RCEF

Even the magnitude 6.3 earthquake in October could not stop the 700 Region 12 farmers from attending the RCEF program briefing, Oct. 17, held in Southern Christian College Midsayap, North Cotabato. The briefing presented options to farmers on how to be competitive amidst the now easier importation of cheaper rice from neighboring Asian countries.

PhilRice Midsayap Branch Director Dr. Sailila E. Abdula encouraged the farmers to register in the Registry System for Basic Sectors in Agriculture (RSBSA), an electronic database containing basic information of farmers [and fisherfolk]. This is one of the requirements that farmers must meet to benefit from government agriculture programs.

Lactose-free health drink

NOEL S. MARIANO JR.

Isn't it fascinating how rice – the most widely consumed staple food, when combined with soy, can turn into a nutrient-filled drink that is essential for the body?

Food nutritionists Dr. Riza G. Abilgos-Ramos and El Shaira A. Labargan from PhilRice Rice Chemistry and Food Science Division are pioneering Rice-Malt-and-Soy Beverage, a non-dairy health drink for children and an alternative drink for individuals with lactose intolerance.

Their study, "*Rice-Based Complementary Foods and Beverage: Value-added products for enhanced nutrition and income among rice-based farm households*," rationalizes that non-dairy, ready-to-drink beverages can serve as an effective vehicle to deliver the nutritional needs of the body and may alleviate the persistent problem on undernutrition and lactose deficiency among school children.

Rice malt, also known as brown rice syrup, is nutritionally rich in natural sugar constituents, low in fat, significant source of fiber, complex carbohydrates, energy, and vitamins that make it an ideal food and beverage ingredient. Soy milk, on the other hand, is a cheaper source of protein and an ideal substitute of dairy products suitable for those who have the uncommon inability to digest milk sugar.

NSIC Rc 160, a rice variety that is found most suitable in making the product, undergoes three malting processes, which include steeping and germination for 48h, and kilning for 24h.

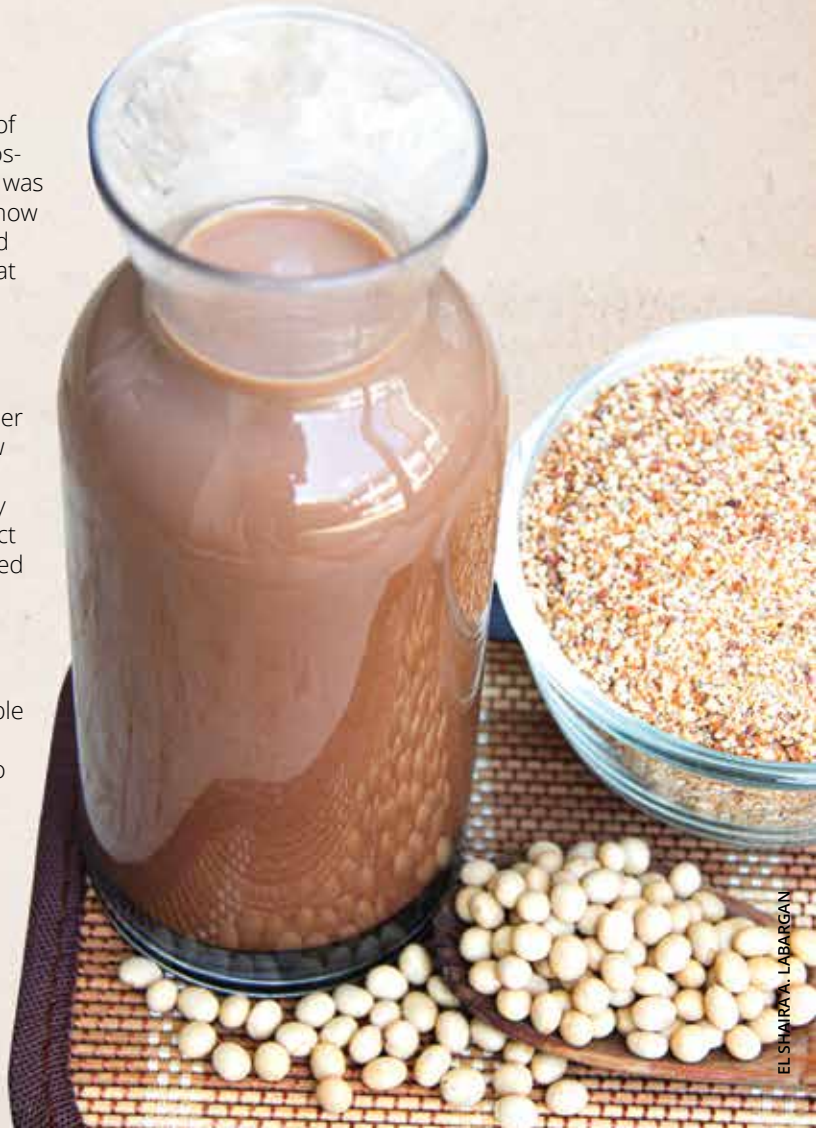
The non-dairy health drink is formulated by 70% malt and 30% soy milk. This obtained an acceptable overall sensory profile. A 100-ml serving of the product can supply 64.5% kg calorie, 1g fat, 11.2g carbohydrates, and 2.4g protein needs of 3-to-12-year-old children.

A "would buy" product

Aside from the nutritional benefits of the beverage, Abilgos-Ramos noted that it was also developed to show women in rice-based farm households that rice-based products can be an additional source of income.

Results of a consumer evaluation test show that children aged 3-12 years old highly accepted the product while parents signified interest in buying it. The rice-malt-and-soy beverage is also comparable to the commercially available malt drink, making it highly appealing to consumers.

"We still have to conduct storage study for the product's ready-to-drink form. We also hope to make a powdered/instant variation that can at least have one-year shelf-life and in a convenient packaging," the food nutritionist explained. •



EL SHAIRA A. LABARGAN

Compared with the original *Salumpikit* variety (top photo), the mutant rice lines (below) have more tillers and are shorter, lessening the plant's vulnerability to lodging.

New climate stress-tolerant rice being developed

REUEL M. MARAMARA

More mutant rice lines (variants) are being developed to help farmers deal with climate-related stresses like drought.

PhilRice breeder Christopher C. Cabusora said these new lines were derived from *Salumpikit,* a Philippine traditional rice variety that is highly tolerant to drought. It has been used as a drought-tolerant check variety since the 1970s.

"Traditional rice varieties are highly tolerant to stress but unfortunately, they are tall and late-maturing, and produce less tillers that make them less acceptable for cultivation. Our goal is to transform them as varieties appealing to farmers," the researcher said.

Employing *in vitro mutagenesis* (IVM), a technique that combines tissue culture and gamma irradiation to produce mutants, the team led by Cabusora started improving *Salumpikit* in 2011. This resulted in 10 IVM_1 families that generated 484 IVM_2 plants.

In 2012, the team evaluated these plants for trait differences that led to the selection of 39 plants with improved and acceptable characteristics compared with the wild type. These mutant lines were evaluated for abiotic stress tolerance (submergence, salinity, and drought), blast resistance, grain quality, and field performance under irrigated and managed-drought conditions from 2013 to 2015.

In a paper titled, "*Improving Drought-Tolerant Rice Cultivar Salumpikit through Combining Tissue Culture and Gamma Irradiation*," Cabusora and his team argued that the mutants are comparable with the tolerant check FR13A under submergence, making its wild type significantly inferior. Meanwhile, salinity tolerance-screening identified 1 line as highly tolerant; 9 tolerant; and 20 moderately tolerant. Furthermore, 12 lines with seedling drought and salinity tolerance under submerged conditions were identified.

Field performance trials also showed that 30 lines yielded higher than the wild type and are comparable with NSIC Rc 222 under non-stress conditions. Another line yielded higher than the highest-yielding check, PSB Rc 14, under managed-drought stress conditions. Stress tolerance indexes of 38 mutant lines were also higher than Rc 222 and 3 lines were higher than the wild type.

"These lines surpassed the 5% yield advantage over Rc 14 and Rc 222," Cabusora said.

Moreover, 32 of the mutant lines were labeled as resistant to the *Maligaya* strain of blast and 5 with intermediate resistance. Blast is one of the most destructive diseases of rice, which can kill seedlings or plants.

More than 30 lines had improved milling recovery, and had a soft cooked rice texture.

At present, the rice line, PR45713-SalumpikitIVM2011WS 1-9-12, was selected for evaluation in a multi-environment trial in rainfed drought-prone areas and PR45713-Salumpikit-IVM2011WS 1-3-18 (saline-tolerant) has been nominated to the National Cooperative Tests. This will then be recommended for accreditation and registration to the National Seed Industry Council, which approves the release of plant varieties. •


PhilRice through the years:

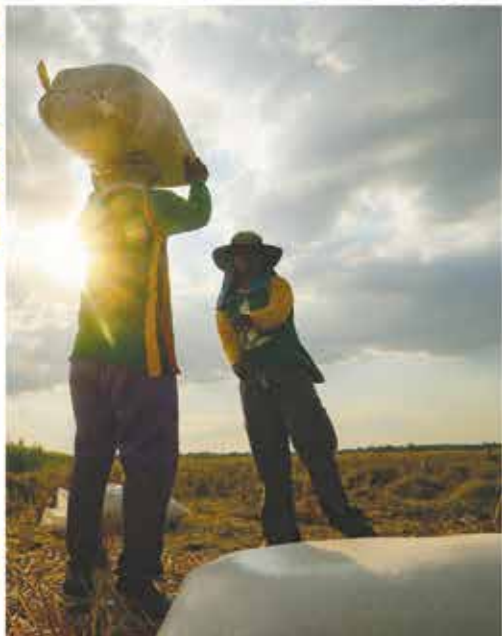
Helping farmers rise


REUEL M. MARAMARA


That 9 of 10 Filipinos live on rice could have begun long before Philippine history started documenting itself. Results of a Philippine Statistics Authority (PSA) survey in 2015-2016 assert that some 93% of the country's households eat rice daily.

With this high public demand and importance, PhilRice rallies behind the rice farmers who tarry year-round for us to enjoy rice in every meal. This has been the tradition even before 1985 when we were created – to help farmers rise up to production challenges through research, development, and extension initiatives.





New era, new tests

Experts agree that the agricultural landscape continues to change. For one thing, PSA estimates 142 million Filipinos in 2045 from today's 108M. For the rice sector, this is a stunning scenario as it struggles with land conversion, scarcity and infertility of resources, and unfavorable climate, which make production challenging.

In the coming years, dry areas will be drier and wet areas will be wetter due to severe droughts and floods, no thanks to climate change. For rice farmers, this means yield losses. For instance, a typhoon in September 2018 damaged an estimated 765,000mt of rice. If saved, we could have surpassed our 19.28M mt *palay* production in 2017, the highest on record.

Additionally, our international trade commitments left our government with no option but to enact the 2019 Rice Tariffication Law (RTL), replacing import limits with tariffs. Economists say the invisible mouth of the law of supply and demand dictates that rice will be more affordable as cheap imported rice fills the market. While this benefits consumers and local farmers whose households also buy rice, the latter have yet to beat the suffocating global competition.

The book, "*Comparative Efficiency of Rice Farming in Asia and the Philippines*," admonishes local rice farmers to maximize their outputs with similar or better quality at a lower cost, if only to brandish a semblance of competitiveness. That is on top of their challenges other than trade.

Backing farmers

PhilRice has been developing yield-enhancing, cost-reducing, and environment-friendly technologies since its creation in late 1985. An impact study covering 1997-2007 commissioned by the DA-Bureau of Agricultural Research (BAR) found that for each peso invested on the Institute, a net return or benefit of P4.45 for the Philippine economy was gained.

The report also noted that commercialized varieties and crop management technologies, which were developed, extended, and promoted, have enabled the Institute to contribute to growth in productivity. Net incomes for rice farmers in less-favorable environments also inched up.

Up to 2018, PhilRice developed more than 80 varieties suitable to various farmer preferences and local conditions. Its genebank also houses more than 17,000 germplasm collections that are being utilized in breeding better varieties.

In his message for the Institute's 34th anniversary, Agriculture Secretary Dr. William D. Dar has lauded PhilRice's efforts.

"For more than three decades, we are pleased to note that PhilRice has indeed made great strides in increasing rice production and farmers' incomes. These include the continued development and promotion of cost-reducing and yield-enhancing technologies, such as hybrid rice and *Palayamanan,* an integrated rice-based farming system," he said.

The Institute also pursues development initiatives to directly reach out to farmers, among which is the PhilRice Text Center (PTC). Ricardo Martinez, 59, of Bacolor, Pampanga affirmed that he seeks help from PTC every cropping season.

"I am thankful that there are institutions like PhilRice who do research to improve rice farming. That is why through PTC I always update myself on the latest developments, especially on seeds adapted to our farming environment," the regular subscriber said.

For Martinez, the knowledge contribution and services of the Institute helped him sustain rice farming.

The Institute has also been regularly training rice specialists since the 1990s. It started from the implementation of the Integrated Pest Management-KASAKALIKASAN Program, Agricultural Productivity Officers under the Hybrid Rice Program, and UpTech for the Upland Rice Development Program. Rice Sufficiency Officers were also trained, that contributed to the country's 98% rice self-sufficiency level in 2012.

In addition, a new breed of extensionists called AgRiDoc were trained under "Improving Technology Promotion and Delivery through Capability Enhancement of Next-Gen Rice Extension Professionals and Other Intermediaries" or IPaD funded by the National Rice Program through the DA-BAR.

These rice specialists have likely reached more than a million farmers through the years.

PhilRice had also trained rebel returnees, military personnel, retirees, women, and youth on rice and rice-based production.

Ways forward

As the rice industry sails through a new era, the Institute exerts its best efforts to serve the farmers. With RTL, PhilRice is commissioned to develop, propagate, and promote high-quality inbred rice seeds and strengthen organizations toward seed production. It also has funding for extension services.

On top of implementing the RCEF-Seed and Extension Programs, the Institute also runs initiatives that focus on climate resiliency, market competitiveness of rice and rice-based farming communities, advanced science and technology, increased availability and accessibility of public-bred varieties, strong science-based and supportive policy environment to guide national and local decisions on rice-related issues, and knowledge management.

As ordained in its mission statement, "PhilRice will pursue a balanced R4D approach along strategic areas to effectively address problems and opportunities in the rice industry."

Farmers are assured that, as they face gargantuan challenges in the industry, PhilRice will continue to walk with them every step of the way. •

With excerpts from *Our Best for our Farmers: the PhilRice Story, The PhilRice Strategic Plan 2017-2022, and the PhilRice website.*

8 PARADIGMS to level up PH agriculture

By: William D. Dar, PhD, *Secretary, Department of Agriculture*

Modernization

The use of high-quality seeds, machines, and other cost-reducing and yield-enhancing technologies is crucial. Also, engaging the youth, being tech-savvy and receptive to technologies, can help modernize the country's agriculture.

Industrialization

Treating agriculture as an industry can open opportunities for farmers to become productive and profitable. They must play an integral part in the whole value chain. Digitization, agribusiness, and formation of social enterprises are keys.

Promotion of exports

Offering the country's raw and processed agricultural products in the international market should be explored. Economies of scale in on-farm production can provide the quality and quantity needed to sustain export initiatives.

Legislative support

Effective initiatives call for strong support from the policymakers. With the help of the Senate and the House of Representatives, policies and structural reforms will be legislated and institutionalized.

Source: Department of Agriculture

"The new thinking envisions a food-secure Philippines with prosperous farmers and fisherfolk. It guides the actors and stakeholders in the agriculture sector to ensure that farmers and fisherfolk become prosperous, with eight paradigms putting in place the required policies, programs, projects, and funding. These paradigms make up the new thinking to double the income or earnings of farmers and fisherfolk."

Farm consolidation

Small farmers can become huge producers when linked to institutional buyers. Either block, trust, contract, or corporative farming can help them reduce production cost and increase income.

Higher investment

The growth and development of Philippine agriculture relies on the necessary budget and investment. This will unlock bigger potentials of the sector as it builds more innovations and opens employment opportunities.

Infrastructure dev't

To maximize production in the all-productive areas, establishment of new and improvement of existing agriculture infrastructure are critical. Priorities include irrigation systems, food terminal markets, farm-to-market roads, among others.

Roadmap dev't

The vision of inclusive development in farming [and fishing] villages must be the guiding principle that holds all the other paradigms. It should have a value-chain approach so that smallholder farmers can have their fair share.

FEATURE

Globally-competitive Filipino rice farmers

ANNA MARIE F. BAUTISTA AND
KAREN ELOISA T. BARROGA

Cut-throat competition characterizes the liberalized rice trade regime. This makes it vital for Filipino farmers to be globally competitive. What does that entail?

They use modern, environment-friendly technologies

The book, "*Competitiveness of Philippine Rice in Asia*," notes that "to be competitive, farmers [and processors] must produce rice with the same or superior quality at costs lower than those of international competitors." Economists interpret this as increasing farmers' yield from 4t/ha to 5-6t/ha as well as reducing production cost by 30%, postharvest losses to 12%, and cost from drying to retailing by P1/kg.

PhilRice experts espouse the use of high-quality seeds of a recommended variety for a specific location, coupled with appropriate, integrated crop management practices to achieve a 10% or more yield increment with low environmental impact.

Raising the level of mechanization and automation can also help reduce production cost, enhance farm operations and use of inputs, and elevate farmers' income. Additionally, this may entice more youth into farming, as they tend to be more open to innovations than the aged farmers, and view farming more as a business rather than an occupation.

"Using the mechanical transplanter and the combine harvester can reduce labor cost by P4 to P5/kg of *palay,"* PHilMech accounted.

Regularly seeking credible information leads to knowledge of available modern technologies for more efficient and profitable ways of producing rice.

They follow global crop management standards

The country already has a set of Good Agricultural Practices for Rice (GAP for Rice) that covers production, harvesting, and on-farm post-harvest handling and storage of paddy rice to ensure product quality and safety. The Bureau of Agriculture and Fisheries Standards is working on the Philippine National Standards for Grains – Grading and Classification for Paddy and Milled Rice. It encompasses recommended product specifications, packaging, and labeling of paddy and milled rice to be sold in the local and international markets.

"Farmers should strive for quality process in producing rice. Just like any product, better quality whether in seeds, paddy, milled rice or cooked rice, translates to better market value," Dr. Marissa Romero, PhilRice food scientist reminded.

They are active, responsible members of an organized, business-oriented group

Alice Mataia, supervising science research specialist at PhilRice, stated that organized groups of farmers gain more if they particularly capture the value-adding activities in the rice value chain. This includes input provision to production, aggregation, milling or processing, and distribution. In truth, a number of farmer groups have proven that working together expands opportunities to acquire inputs, market produce, and gain income in a more sustainable manner.

Kalinga's Macutay Farmers' Association has modeled how their members are able to use modern technologies, such as high-quality seeds, nutrient management tools, and farm machines to sophisticate their production. They now have over P2.4M worth of total assets that the group uses to sustain the needs of their members.

Iloilo's *Kaitlingban Sang mga Agraryo Padulong sa Pag-Uswag sang Iloilo* Agrarian Reform Beneficiary MPC is connected to several institutional buyers in selling the produce of its 400 members.

South Cotabato's *Binhian ng Timog Kutabato* MPC has benefited from government assistance in the form of farm machines that they rent out to their members. This generated a steady income for the group, which they use to establish more services to farming communities. Meanwhile, business in rice can also go beyond milled rice.

"Rather than increasing rice production alone, adding value to rice by creating healthy and nutritious rice-based products spurs the economic activity of rice-farming communities. It increases their profitability and eventually enhances their nutritional status and overall quality of life," PhilRice food nutritionist and rice-based product developer Dr. Riza Abilgos-Ramos emphasized.

Like any other venture, rice business by organized farmers' groups also requires farmers to invest in their enterprise and become financially literate. Farmers need to learn how to manage their finances. If they need to make a loan to augment their existing resources, they should also be responsible enough to pay on time. They should also enroll in crop insurance to mitigate impacts of certain risks.

They have a strong sense of mission and patriotism

Beyond the technologies and critical skills needed to engage in the free trade, globally-competitive farmers strongly commit to a mission of improving the volume and quality of their rice production, and help fellow farmers and the country. Nothing beats the spirit of unity and patriotism.

Becoming a globally-competitive farmer is not easy. However, if the Filipino rice farmers would go out of their way to enter into a productive, profitable, resilient, and sustainable rice venture, then they can survive, or even conquer, the global market. •

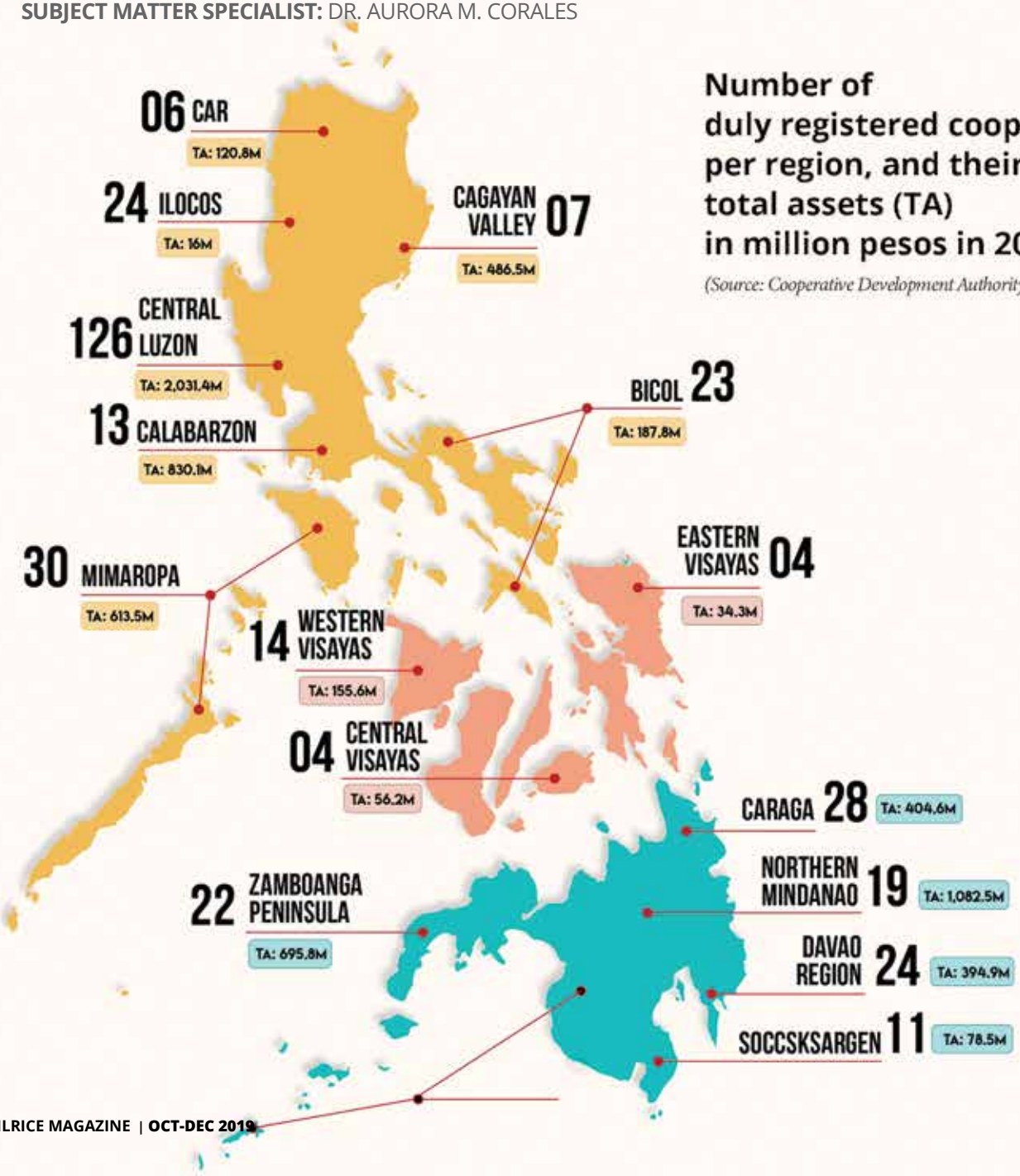
Becoming a globally-competitive farmer is not easy. However, if the Filipino rice farmers would go out of their way to enter into a productive, profitable, resilient, and sustainable rice venture, then they can survive, or even conquer, the global market.

GETTING TO KNOW COOPERATIVES

No man is an island, so they say. With the present challenges in the rice industry, no farmer should stand alone. United, they become stronger and their economies of scale grow larger. Farmers' cooperatives can work for this purpose – for everyone to lock hands and rise together.

There are 355 registered rice farmers' coops in the Philippines. These are joined by 167,274 farmers, 64% of whom are from Mindanao.

ILLUSTRATED BY: ZENNY G. AWING
SUBJECT MATTER SPECIALIST: DR. AURORA M. CORALES



Number of duly registered coops per region, and their total assets (TA) in million pesos in 2018

(Source: Cooperative Development Authority)

GOALS OF COOPERATIVES

- Provide goods and services to its members to enable them to attain increased income, savings, investments, productivity, and purchasing power, and promote among themselves equitable distribution of net surplus through maximum utilization of economies of scale, cost-sharing, and risk-sharing
- Provide optimum social and economic benefits to its members
- Teach them efficient ways of doing things in a cooperative manner
- Propagate cooperative practices and new ideas in business and management
- Allow the lower-income and less privileged groups to increase their ownership in the wealth of the nation
- Cooperate with the government, other cooperatives and people-oriented organizations to further the attainment of any of the foregoing objectives

BENEFITS OF JOINING A COOPERATIVE

- practice group enterprise
- maintain good camaraderie of the community
- hold bargaining power, especially in acquiring reasonably priced farm inputs
- facilitate consolidation of farmer-members' produce
- provide services such as financing and marketing, and access to business development service providers
- farmer-members patronize local produce
- create economies of scale

A cooperative is an autonomous and duly registered association of persons, with a common bond of interest. They voluntarily come together to achieve their social, economic, and cultural needs and aspirations by making equitable contributions to the capital required, patronizing their products and services, and accepting a fair share of risks and benefits of the undertaking.

- Cooperative Development Authority

FEATURE

Modernize to rise

ALLAN C. BIWANG JR.

JAYSON C. BERTO

Embracing modernization in rice farming was never hard for the members of TCP3 Lagare Multi-Purpose Cooperative, Inc. (TCP3 MPCI). They willingly unlearned their old farming practices and welcomed technologies that brought them better yields and savings.

Trained under the Technical Cooperation Project 3 (TCP3) of the Japan International Cooperation Agency (JICA) and PhilRice, this farmers' group based in Brgy. Lagare, Cabanatuan City, Nueva Ecija in 2008 garnered a 1-ton yield increase per hectare, two years after adopting new farm technologies, from 3.5t to 4.5t/ha during WS and from 5.0t to 6.8t/ha during DS.

Unending use of quality seeds

TCP3 farmer-trainee Crisostomo Subido believes that the use of quality seeds had helped his yield grow.

He learned that 40kg of certified inbred seeds are enough for a hectare. Upon following the recommendation, he now saves up to P4,500/ha in seeds alone.

On-farm studies have confirmed that quality seeds can increase yield by 10% or more compared with farmers' seeds. Quality seeds have higher seedling vigor and pest resistance.

"I can attest that 40kg of certified seeds are enough to cover a hectare at 1-3 seedlings per hill. I hope my fellow farmers use such seeds to benefit from high germination rate and purity," Subido wished.

The 60-year-old coop member also cautioned that it is best for farmers to buy certified seeds with the BPI-NSQCS blue tag to protect themselves from malpractices of illegitimate seed growers. The tag documents the names of the seed grower and inspector, rice variety, and season harvested.

Meanwhile, Nicolas Dela Rosa, 62, took pride in his greatest success with hybrid rice SL-8H that gave him 13t/ha, well beyond the average 10t/ha.

"I have full confidence in hybrid rice because it produces more tillers, panicles, and grains," Dela Rosa posted. He said he was guided by the *PalayCheck* System, a seed-to-harvest integrated crop management approach for rice.

Slashing fertilizer use

A handful of farmers could "underfertilize" or "overfertilize" their rice plants with nitrogen (N). According to the book, *"Comparative Efficiency of Rice Farming in Asia and the Philippines"*, farmers in Nueva Ecija usually apply an average of 102kg N/ha during DS. Dela Rosa had been doing the same until he stumbled upon the Leaf Color Chart (LCC), a four-stripped plastic "ruler" used in assessing the nitrogen status of rice plants, during the TCP3 training. They were told the LCC can save up to P2,000/ha in precise nitrogen fertilizer use.

"Since then, I always check the greenness of my crop's leaves before applying urea (46-0-0) especially during WS. That is, to avoid excessive application and prevent pests and disease infestation," he explained. Never deviating from the recommendation from LCC always turned out good for him.

Dela Rosa used to harvest 5t/ha, not bad. With the technologies introduced to them in the training, he can now produce 8t/ha during DS from any inbred variety.

(L-R) Coop advocates Lorenzo Aber, Crisostomo Subido, Amelia Camua, and Nicolas Dela Rosa.

> **We only pay 9 sacks in mechanical harvesting, which is much lower than the 20 sacks that we have to pay if we do manual harvesting and threshing.**
>
> **-NICOLAS DELA ROSA**
> Farmer, Nueva Ecija

"It did save me money. As I follow the LCC recommendation, I found that I need not spend more on fertilizer when it is not needed," he affirmed.

Cutting on cost

TCP3 MPCI members Subido, Dela Rosa, and 130 more now enjoy the ease of rice production, thanks to mechanization. The 11-year-old cooperative has even acquired two combine harvesters, one four-wheeled tractor, three hand tractors, one transplanter, and a small truck.

The coop rents out machines to members at fees comparable to other service providers. Collected fees are used to repair and maintain the equipment.

Subido giggled as he reminisced how their members looked relaxed in front of their farms after every season because they have the combine harvester and its operator to do the cutting and threshing in just a matter of hours.

"We see a huge difference in cost and time using this pro-farmer machine. For every 100 sacks done, we only pay 9 sacks in mechanical harvesting, which is much lower than the 20 sacks that we have to pay if we do manual harvesting and threshing," Dela Rosa compared.

Today, the coop is looking for more opportunities to acquire flatbed dryers, knowing their usefulness during the rainy season.

Aiming for sustainability

Established in 2008, TCP3 MPCI has 32 pioneering members who were privileged to acquire knowledge and skills from the PhilRice-JICA training. Technologies were imbibed among members and eventually shared to new coop recruits. During several meetings, problems in the field were usually raised by new members and addressed by trained officials.

In 2014, 30 new members were trained on rice production courtesy of the Cabanatuan City Agriculture Office (CAO). Subido, one of the coop officials, said they aim to conduct basic rice production training for new members in 2020 through the CAO to have the high yields sustained.

Also, their members who were trained by PhilRice, Philippine Center for Postharvest Development and Mechanization (PHilMech) to become machine operators eventually echoed their knowledge and skills to five other members to maximize the use of two harvesters during the peak season.

TCP3 MPCI still hopes that majority of the farming population will have the opportunity to experience the convenience of modern technologies through various non-formal education pathways, like training. Good thing, the government has already intensified its efforts to capacitate rice farmers through its training programs financed by the Rice Competitiveness Enhancement Fund. PHilMech, Agricultural Training Institute (ATI), and Technical Education and Skills Development Authority (TESDA) are joining forces in educating more than 100,000 farmers nationwide.

And now that the Philippine rice market has been liberalized, our farmers have to step-up their rice production techniques and adopt mechanized farming, like what Subido and Dela Rosa, and the members of TCP3 MPCI are doing. •

FEATURE

Building a farmer-friendly rice enterprise

DONNA CRIS P. CORPUZ

On an early Wednesday morning, able bodies of the Pili-based Camarines Sur Multipurpose Cooperative (CMPC) load up some 250 sacks of milled rice on their truck to be delivered to customers outside CamSur. Along with their produce roll the hopes of CMPC to hoist the livelihood of 1,400 Bicolano farmers they serve by creating a huge enterprise driven by true-blue champions of farmers.

The heart of what they do

Annielen L. Panerio, CMPC's general manager, admitted that their Coop was originally formed in 2000 to provide credit service packages, trading loans, and time and savings deposits to its members. But when they began to sell milled rice in one of their trading stores years later, they learned that they could do more than merely providing financial assistance to their members.

"Camarines Sur has a large area for rice production, hence, we saw the potential for rice, not just for consumption, but also as an enterprise," Panerio said.

Now, CMPC's purpose is geared toward helping Bicolano farmers reduce their production expenses and propel the growth of their yields and incomes. They are even more determined to seek every opportunity to provide for the needs of their farmer-members and their families.

"We realized that the true purpose of a farmers' cooperative is to give to our members every possible support they could get. We are here for that," Panerio said.

In 2012, they decided to go full-blast on their rice enterprise to benefit the whole of Bicol. They then began massively recruiting farmers and decided to lend them farm inputs such as fertilizers, seeds, and pesticides instead of money.

"That makes our services more efficient and sustainable. We can be sure that the resources we lend them are directly being used for farming activities," Panerio explained.

CARLO G. DACUMOS

Rising to the challenge

As they began to pursue their new direction, CMPC noticed that their farmer-members had a hard time paying their loans. The cost of farm inputs also continued to spiral causing farmers to incur more debts.

In response, CMPC expanded their services in 2013, by procuring *palay* from their members at a price higher than other buyers.

"We buy at a competitive price because we want the farmers to earn, too, to have enough money to pay their debts, and to provide for the needs of their families," Panerio reiterated.

They also became a distributor of fertilizers and dealer of other farm inputs, which they offered to their members at lower prices.

"We are glad to have resorted to such solutions. We needed to acquire the proper facilities to upscale and industrialize our operations," Panerio shared.

They also began building beneficial partnerships to upscale their activities. They sought help from the Department of Agriculture and applied for assistance in the form of facilities, transportation equipment, and warehouses.

With their effective 2012-2013 performance documented, DA granted them a rice processing center and a flatbed dryer in 2014.

CMPC also linked with other coops and associations in CamSur to consolidate farmers' demand for fertilizers and attain lower prices of farm inputs through bulk orders. They established fertilizer outlets through their partner dealer-cooperatives in 2014. Two years after, their outlets extended from CamSur to Camarines Norte, Albay, Masbate, and Sorsogon.

Earning and growing

Living out industrialization, CMPC continued acquiring more facilities and equipment, finding new markets, and catering to the needs of farmers in their area.

The 19-year-old cooperative now owns a delivery truck, mini 4WD tractor, rice processing centers in Minalabac and Ocampo, offices in Pili and Calabanga towns, flatbed and solar dryers, and several rice mills.

They also established a wider and more reliable venue for farmers to market their harvest.

They coordinated with traders to facilitate the selling of their members' rice produce. Despite the lack of vehicles then, they continued to transport *palay* from the farm to their customers by renting tricycles, jeepneys, and trucks, not minding the additional administrative, monitoring, and transportation costs it incurred on them.

They also knew that the competition for rice was already tough among the big dealers in Naga City and Pili, so instead of loitering in an already saturated market, they decided to find a new one. That was when they found their market in the remote areas of Masbate. They also began in 2017 supplying rice to beneficiaries of the Department of Social Welfare and Development in various areas in CamSur.

Remaining true to their purpose, CMPC's acts of serving the farmers did not go unnoticed. In 2018, the Cooperative Development Authority recognized them as the Most Outstanding Agricultural Cooperative in Bicol Region – an award befitting those who can build a sustainable enterprise where farmers' interest comes first. •

Annielen Panerio (1st from L) and other CMPC officials.

CARLO G. DACUMOS

CARLO G. DACUMOS

FEATURE

Winning the market as one

JAYSON C. BERTO

CHRISTINA A. FREDILES

"Farmers who work together will never be poor."

Ricardo "Carding" Buenaventura, 62, held on to his conviction as he and his fellow farmers tried to pull strings and keep the *Nagkakaisang Magsasaka* Agricultural PMPC live on. Of all the things that the group tried to introduce, farm consolidation seemed to be one of their best practices, even with the growing presence of foreign rice. It appears there's a lot to learn from this 30-year-old cooperative glittering in Tabacao, Talavera, Nueva Ecija.

ALLAN C. BIWANG JR.

Ricardo Buenaventura (front center) and other Coop stalwarts.

Buying and selling as one

Mang Carding believes that the first wave of help must come from farmers themselves – self-help if you prefer – especially in marketing. The coop offers to buy the fresh produce of its members, process it, and sell it to their customers as a group.

The *Nagkakaisang Magsasaka* coop buys *palay* based on the prevailing price and moisture content. They also account for the cost of drying and transportation. The higher the moisture content, the lower the command price.

"We encourage our members to sell their *palay* produce to us, especially if the buying price of traders in their area is low. We pay them here based on the going average price," Mang Carding said.

In 2019 WS, the cooperative bought fresh NSIC Rc 216 at P13.50/kg and Rc 218 at P18/kg.

To earn more, the cooperative processes the *palay* and sells it as milled rice. Its warehouse can contain 400,000 sacks of *palay* or 200,000 sacks milled rice, categorized based on grain quality.

Their market straddles Metro Manila suburbs, Parañaque City, Quezon City, Morong in Rizal, and at times Bohol. Each 50kg sack is usually sold at P1,600 (P32/kg) and may vary depending on milling classification.

Beyond business, the Coop is committed to maintaining good relationships with their customers. They ensure that each sack is of high quality, weighs right, and is delivered on time.

When asked how their milled rice competes, Mang Carding contends that theirs is superior to foreign rice.

"Imported rice may be cheaper but ours is tastier and more aromatic," the Coop founder proclaimed.

Starting from the farm

From 16 pioneers, the *Nagkakaisang Magsasaka* coop now has 1,488 members from neighboring towns. To welcome their growing number, they crafted more services for members to help them in their primary farm needs. This is to ensure that the concept of "inclusive growth" goes to work.

Their own agricultural supplies store sells farm inputs to their members. They do not provide special discounts to anyone, after all the profit will benefit the members themselves.

Also, 7 tractors, 4 combine harvesters, and 3 rotavators are available for rent. A production loan of P35,000/ha for inbred and P50,000 for hybrid was also opened for each member. They can also avail of a personal loan up to P18M depending on capacity to pay. So far, Mang Carding can tell anyone that all their members are good payors.

The Coop even operates their own Member-Saving Operation Minibank with millions of pesos deposited.

Capturing the whole

The *Nagkakaisang Magsasaka* coop is a living testament that a cooperative makes a profitable and sustainable venture. According to PhilRice economist Alice Mataia, organized farmers will earn more if they capture the full-range activities of the rice value chain and if gaps in the chain are addressed. Clearly, that is how this 3-decade-old cooperative withstood the tests of time. •

Imported rice maybe cheaper but ours is tastier and more aromatic.

-RICARDO "CARDING" BUENAVENTURA
Chairperson, Nagkakaisang Magsasaka Agricultural PMPC, Tabacao, Talavera, Nueva Ecija

FEATURE

From seeds to shelves

(of the global market)

MARY GRACE M. NIDOY

If the enactment and inescapable enforcement of the Rice Tariffication Law (RTL) has put the Filipino rice farmers right at the belly of the beast, then the organic farmers of Don Bosco Multipurpose Cooperative (DBMPC) based in Makilala, North Cotabato have extricated themselves unscathed.

While they remain unaffected by the plunging prices of fresh *palay* in the market, it took years of preparation for the cooperative to survive the effects of the RTL – slow yet steady.

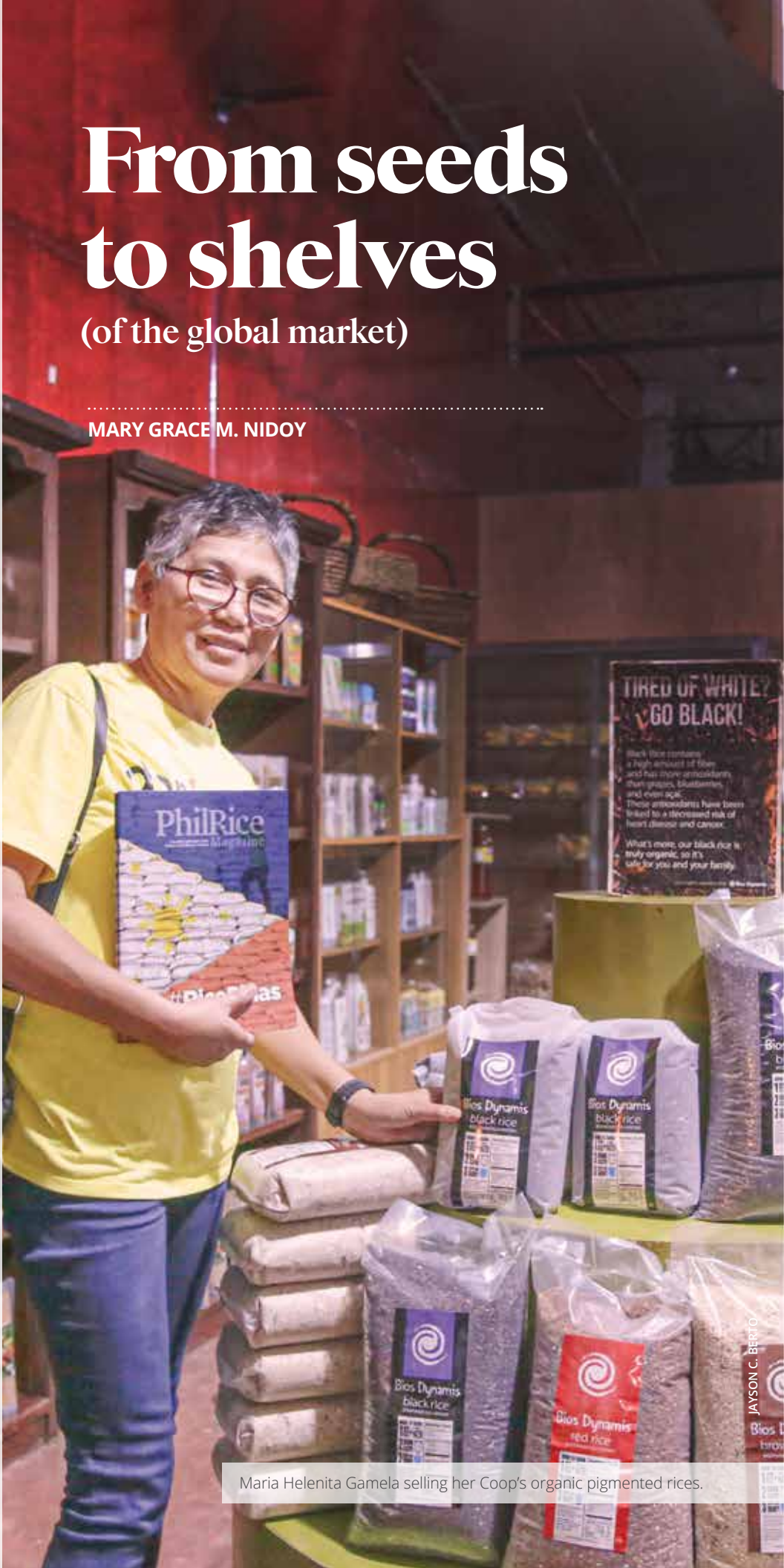
'Soul to soil'

The Cooperative traces its roots to Don Bosco Foundation for Sustainable Development Incorporated (DBFSDI), an offshoot of a program called Don Bosco Diocesan Youth Center Inc. established in Kidapawan City, North Cotabato in the 1980s.

It was led by Maria Helenita Gamela, a former philosophy professor at Xavier University Ateneo de Cagayan in Cagayan de Oro City.

"During our consultations when I was at the youth ministry, poverty always came as a hindrance to young people," Gamela revealed. The crux of the matter is that it was challenging to teach Christian values when people don't have enough food on their table. It is said in various ways that no one can preach on an empty stomach. To help uncoil the problem, Gamela's team began focusing on agriculture.

"But what agriculture?" she asked, narrating how they started given that during that time, phrases such as 'sustainable agriculture' or 'organic farming' were not yet buzz words.



JAYSON C. BERTO

Maria Helenita Gamela selling her Coop's organic pigmented rices.

Gamela's exploration led her to the Mindanao Baptist Rural Life Center in Bansalan, Davao del Sur and learned their way of 'farming with faith.' Soon enough, Gamela's team gained their own ground and started teaching upland farmers. They then extended their help to farmers in the lowland.

For her, it was all learning by doing. When the foundation began teaching the rice farmers on organic farming, the challenges began to surface – from production, lack of drying facility, to marketing.

"That's when we conceptualized our extension modality – from seeds to shelves," Gamela said.

It was the kind of packaged value chain that made Gamela and the foundation realize that the most difficult task was changing the farmers' mindset. The paradigm shift, Gamela believes, must be from soul to soil.

People, prosperity, and planet

When the partner farmers were converting from conventional to organic farming, the next challenge then was marketing their produce.

While buying and selling rice was easier if it were produced conventionally, that is not the case for organic rice.

"You can't just sell all at once. You need to sell them gradually and have a steady supply because your clients have already changed their lifestyle," Gamela learned.

And selling needs an effective marketing strategy that includes brand development and design. The foundation named its brand of products Bios Dynamis. Under the alternative marketing services of the foundation, Gamela and her team gradually opened nine shops located in Regions 11 and 12 selling organic products such as brown, red, and black rices. When they aimed to put their products at the supermarkets of big shopping malls, the intricacies of the market opened the opportunity.

"Our followers began asking supermarkets in the malls if they have our products, and then the malls notice you and they try to look for you," Gamela narrated.

The market, according to her, must be the fuel or engine of production that must be linked to the farmers. She analyzed that many NGOs fail for not having the holistic approach in extension.

"When you talk of value chain, you are just the enabler. When you leave the program, it would still continue because you have already linked them to the market," Gamela reflected.

For Bios Dynamis, sustainability involves balancing these three factors: people, planet, and profit.

Green and profitable business

In 2007, the foundation finally established a cooperative with 50 organic farmers.

Today, DBMPC has more than 70 organic farmers with 152-ha total area of production and an average yield of 10t/ha annually. One of their farmers is Antonio Palec, 59, from M'lang, North Cotabato. In 1999, he converted his 1-ha farm to organic farming.

"My cost of production back then was P20,000/ha. With organic farming, I now spend P15,000/ha," Palec recalled.

Thankful to be on board at the early stages of the cooperative, what really made the difference for him is the price of fresh *palay* in the market.

"The Cooperative buys my fresh organic red and black rices at P21/kg. My fellow farmers here who practice conventional farming are selling their *palay* at P13/kg," Palec said.

He now owns a 5-ha farm and owing to a stable selling price of his produce, he was able to college-graduate his three children.

The Cooperative packages and sells the organic rice at P60/kg in Mindanao. In Metro Manila supermarkets and high-end malls, the price balloons to more than P120/kg.

According to the Organic Rice Industry 2019 Global Market research report, worldwide market is expected to grow at a compound annual growth rate (CAGR) of 7.5% for the next five years.

In 2013-2017 alone, the cooperative exported premium organic rice to various countries such as Singapore, Italy, Netherlands, Germany and cities Hong Kong, Macau, and Dubai.

Surviving the RTL

During the Mindanao Rice Farmers' Forum in September, Gamela shared that organic rice is not vulnerable to the rise and fall of commodity rice as it has a non-price-sensitive following who are willing to pay higher to be healthy.

The said event, organized by the Mindanao Development Authority (MinDA), helped organic farmers seal a deal with a US-based buying group.

On his online post, MinDA Secretary Emmanuel Piñol wrote that the marketing agreement "would give American consumers access to organic rice" grown in Mindanao. He also shared that the event formed the Mindanao Organic Rice Council (MORCO).

"Chosen as Interim Chair of MORCO was the Don Bosco MPC with Agro-Eco Philippines and SRII Technology Group as vice chairpersons," Piñol wrote.

Today, the cooperative is doubling its efforts to meet the demand of the US-based marketing firm, its biggest deal since its establishment.

DBMPC, indeed, is breezing through the notorious effects of RTL.

"We're not affected. I told them we are not selling a commodity; we are selling a product."

The thing is, a product must be defined according to Maria Helenita Gamela. It has character.

The cooperative made rice different. They made it a product. There lies the difference. •

JOEYNER BARANGAY


RICHARD RODRIGUEZ


FEDERICO GANITAO JR.

ZENNY G. AWING

More than just cash transfers

CHARISMA LOVE B. GADO-GONZALES

Joeyner Barangay's residence is all green and clean – vegetable and ornamental plants surround his yard, floor is well-polished and spotless, and the wall is decorated with his five children's medals and certificates of school achievements. This could be usual in a farming community, but this small home is special. Joeyner's household is a recipient of the *Pantawid Pamilyang Pilipino* Program (4Ps) and his family's room is a haven of dreams.

"I asked for *kuliglig*, it was granted. I wished for a motorcycle, I got it.... This is a family house. We love it, but I also dream of a place that we can call our own even if it's small. With the training I gained from the Department of Social Welfare and Development (DSWD) and PhilRice, God will provide," the farmer from Dingras, Ilocos Norte said.

Farming for 26 years, Joeyner only had his first training on rice production from the year-long DSWD-PhilRice project that he could still remember the relief when he received the starter kit distributed during their graduation in Dec. 2018. The starter kit contained three kinds of fertilizer, 10kg of registered seeds, 10 packs of vegetable seeds, and a liter of decomposer.

> **We were hit by typhoons *Ineng* and *Jenny* this year, which reduced our yield. But while on training, our learning fields gained 21.20% more yield than our usual harvest.**
>
> **-JOEYNER BARANGAY**
> Farmer, Ilocos Norte

Funded by DSWD-Regional Field Office 1, the training is part of the Department's Sustainable Livelihood Program (SLP) that aimed to enhance the capacity of about 1,000 4Ps beneficiaries in Ilocos Norte, Ilocos Sur, and La Union.

From his four-month training, Joeyner adopted proper land preparation, hybrid rice, and right fertilizer application that saved him P2,000.

"We were hit by typhoons *Ineng* and *Jenny* this year, which reduced our yield. But while on training, our learning fields gained 21.20% more yield than our usual harvest. Maybe, we're being tested now that we're equipped. Surely, we'll carry on," the 37-year-old farmer said.

In Burgos, Ilocos Norte, farmer Richard Rodriguez learned mushroom production as source of additional income.

"Farmers here used to burn rice straw. Now, we're cashing in on it as we now use it for mushroom production. In our first try, we harvested 25kg, which was sold for P6,250 in six months. This income may be small for some but this is just a trial. We'll do it again next year and earn more," Richard was optimistic.

Meanwhile, Federico Ganitao Jr., also a 4Ps farmer from Dingras, said the training enabled them to form an organization named Barangay San Marcelino, Baresbes, and Francisco SLP Farmers' Association of Dingras. The Association president proudly said they have P32,000 in the bank from the members' savings.

"The training did not only increase my yield from 2.9 to 3t/ha but it also helped build my self-confidence. I'm now sharing what I learned to my fellow farmers. Through the association, we can continually improve our lives and get out from poverty. We do not want to be 4Ps recipients forever," the 38-year-old farmer said.

Ardel Laroya, SLP regional coordinator, said the training expanded from a PhilRice collaboration project *Pagsasanay sa Produksyon ng Palay at iba pang Pangkabuhayan* in Mabini, Pangasinan.

According to Ardel, project beneficiaries were "transformed from being heavily dependent on government intervention to being self-reliant community members."

"They also practice vegetable gardening and livestock production; producing safe and easily available food for their families. The impact inspires us to duplicate this project in a wider scale so we tapped PhilRice Batac to implement this P15-million project," he said.

Dr. Reynaldo Castro, PhilRice Batac director, said that the training followed the "Real Learning for Real Farming" framework.

In this framework, he stressed that learning is relational; whereby participants and training team can both be learners and teachers. Training activities also promote respect, enhance understanding, and build friendships.

He also said that they ensure learning is experiential, appropriate, and learner-based.

"We move learning from information to transformation," he said.

In a 2017 briefer, the World Bank published that the country's flagship anti-poverty program is one of world's largest conditional cash transfers based on population coverage. Providing conditional cash grants to the poorest of the poor, "the program aims to break the cycle of poverty."

The international financial institution stated that an "estimated poverty reduction impact of 1.4 percentage points per year is achieved; household heads, spouses, and other adults are more encouraged to work and set up their own businesses; and 87% of 4Ps parents are now more optimistic about their situation and their children's futures."

The World Bank data could be just statistics. Joeyner's and his colleagues' experiences are realities. His green and clean residence was improved through his participation in the DSWD's sustainable livelihood program showing that indeed, when we improve farm practices, a rice farmer can do more and dream bigger. •

QUESTIONS AND ANSWERS ON THE RCEF-SEED PROGRAM

01 WHO ARE THE ELIGIBLE BENEFICIARIES?

Farmers listed in the Registry System for Basic Sectors in Agriculture (RSBSA), an electronic database containing basic information of farmers [and fisherfolk]. Your ricefield must also be located in the municipalities or cities listed under the program.

02 HOW CAN I CHECK IF I'M LISTED IN THE RSBSA?

Go directly to your City/Municipal Agriculture Office (C/MAO) to verify.

03 IF NOT ENLISTED, HOW CAN I REGISTER IN THE RSBSA?

- Bring the following documents to your C/MAO:
  - 2x2 ID Picture (taken at most 6 months ago)
  - Original and photocopy of any of the following: land title, lease/sharing agreement, or any proof of farming
  - Original and photocopy of government-issued ID (SSS, GSIS, UMID, Postal, TIN, Passport, PRC, OWWA, iDOLE, voter's, senior citizen's, school ID for students)
- At the C/MAO, accomplish the RSBSA Enrollment Form.
- Have the form signed by your Barangay Chairman, C/MAO, and Municipal/City Agriculture and Fishery Council/ Agrarian Reform Officer.
- Submit the form including the other documents to the C/MAO.
- Be sure that you get the RSBSA enrollment stub. This is the assurance that you are qualified to receive RCEF/ DA assistance.

04 HOW MUCH RICE SEEDS CAN I GET FROM RCEF?

You will receive free seeds for 2020 dry and wet seasons, with the following allocation:

BAGS (20kg/bag)	FARM SIZE (ha)
1	Less than or equal to 0.5
2	More than 0.5 to 1
3	More than 1 to 1.5
4	More than 1.5 to 2

05 HOW MANY TIMES CAN I RECEIVE RICE SEEDS FROM RCEF?

After 2 seasons, you can still avail of seeds if you meet your area's target yield.

06 WHEN AND WHERE CAN I GET THE RICE SEEDS?

Your LGU will announce the schedules of seed distribution, including the drop-off points, within October 2019 - January 2020 for 2020 dry season, and April - July 2020 for 2020 wet season.

07 WHAT DO I NEED TO BRING ON THE DAY OF SEED DISTRIBUTION?

Any of the valid IDs enumerated in item #3 and the RSBSA enrollment stub. Upon arriving at the area, go directly to the registration table and follow the procedures that the staff will tell you.

08 WHAT ARE THE VARIETIES TO BE DISTRIBUTED?

Five varieties will be offered: three nationally recommended (NSIC Rc 222, Rc 160, Rc 216) and two regionally recommended varieties. These may change in the coming seasons based on results of research.

VOX POP

What are the qualities of the Filipino rice farmers that stand out?

COMPILED BY: TEOFILO C. PAULINO, ALLAN C. BIWANG JR., AND BENJAMIN Q. FLORES JR.

Nothing compares to our farmers as they always show **CARE AND GREAT SOCIAL SKILLS**. I see our farmers as most generous. As a researcher, I have felt their kindness. They prepare your food and even give *pasalubong* before going home."

John Jeric Batanes
Camarines Sur

We have more knowledgeable farmers in terms of rice production practices. Aside from that, they show **PASSION AND PERSEVERANCE** despite the challenges they are going through.

Michelle Adzuara
Ilocos Norte

We may be lagging behind our neighboring countries in terms of mechanization but with our farmers' great qualities such as **DILIGENCE, PERSEVERANCE, AND HARD WORK**, they continue to finish their farm tasks even with just a carabao.

Richalyn Sambat
Bataan

The qualities of a Pinoy farmer that can outshine others include **UNPARALLELED PATIENCE, AND INDUSTRIOUSNESS.** Technical know-how of our farmers is also higher than Vietnam and Thailand farmers.

Lolita Quilope
Negros Oriental

Filipino farmers can best represent the country's labor sector. What drives them to continue in farming is their dreams for their family. This separates our farmers from the rest, being **FAMILY-CENTERED**.

Justin Aquino
South Cotabato

Filipino farmers are **RESOURCEFUL**. They can grow crops on their own even with limited budget. It is inspiring how they never get tired of doing farm works daily.

Cynthia Lumogda
North Cotabato

Filipino farmers maintain their **POSITIVE OUTLOOK** in life despite the struggles they are facing. This serves as an inspiration!

Aratuc Kamid Zainal
Sultan Kudarat

My parents and relatives are into farming. I think what makes them outstanding in farming is their **SELF-TRUST.** Years of experience in managing crops help.

Norjaima Kadatuan
Davao del Sur

I observed that Filipino farmers are **HARD-WORKING AND PERSEVERING**. All praises to our rice farmers!

Winniefrida Cadavid
Pampanga

BEING PASSIONATE is a common virtue among Filipino rice farmers. They are persistent in tilling the land in spite of the losses. I can also observe resiliency among them.

Victor De Paz
Leyte

PhilRice reaps awards

Diadem B. Gonzales-Esmero & May Angelica A. Saludez
2nd Best Paper
(Professional Category)
Title: Gender Mainstreaming in Philippine Rice R&D: Progress, Challenges, and Opportunities
National Gender and Development Research Congress
Central Luzon State University, November 15, 2019

FutureRice Farm Project
Model Extension Project
PhilEASNet Biennial AFFNR Extension Symposium
Tagbilaran City, October 9-10, 2019

Marissa V. Romero
Distinguished Alumni Award, UPLB (Rice Chemistry and Food Science)
UP Los Baños, October 9, 2019

Mary Grace M. Nidoy
"Golden Waste"
Merit Award
Asian Scientist Writing Prize 2019
Singapore

Riza G. Abilgos-Ramos, Josefina F. Ballesteros, El Shaira A. Labargan, Rogerine B. Miguel, Alice B. Mataia, and Aurora M. Corales (Outstanding Research Paper on Extension)
Stimulating the Entrepreneurial Prowess of Women Farmers: Building a Sustainable Rice-Based Enterprise in Macarse, Zaragoza, Nueva Ecija; 2019
PhilEASnet AFFNR Symposium

Newly appointed/ promoted staffers

ABEGAIL T. DONAYRE
Executive Assistant III, CES

ELIZABETH P. MOLINA
Administrative Officer V, CES

JERRY D. BATCAGAN
SRS II, Isabela

IRISH D. BULAON
Librarian II, CES

MARY GRACE D. CORPUZ
Chief Accountant, CES

ROLANDO F. ALVAREZ
Administrative Aide V, CES

Newly conferred executive

DR. FLORDELIZA H. BORDEY
Career Executive Service Eligible
Career Executive Service Board

STAFF EXTRAORDINAIRE

ALDRIN G. CASTRO

KUDOS TO OUR NEW SCIENTISTS!

RICARDO F. ORGE

58, Leyte
Scientist II (upgraded)
Rice Engineering and Mechanization Division

ACADEMIC PROFILE

- PhD in Energy Engineering, UP Diliman
- MS in Agricultural Engineering, UP Los Baños
- BS in Agricultural Engineering, Visayas State University

Orge's major accomplishments include the development, improvement, and deployment of the Continuous-type Rice Hull carbonizer, a newly patented machine that processes rice hull into biochar and utilizes the heat generated from the exothermic carbonization process for various applications that open opportunities for farmers to earn additional income.

This technology earned him four national accolades and the 2019 Presidential Lingkod Bayan Award.

EDWIN C. MARTIN

47, Nueva Ecija
Scientist I
Crop Protection Division

ACADEMIC PROFILE

- MS Agronomy, UP Los Baños
- BS Agriculture, Major in Crop Protection, Central Luzon State University

Specializing in weed/ insect pest management and pesticide bioefficacy, he determined the prevalence, agronomic characteristics, and biology of weedy rice in Iloilo, Nueva Ecija, and Mindanao areas. He intensified awareness about weedy rice by producing videos, leaflets, and brochures. He also developed books and posters about common weeds in irrigated and rainfed ricefields, and in vegetable production. Currently, he co-leads the DA-BAR-funded Pest Risk Identification and Management, a collaborative project among IRRI, PhilRice, BPI, and DA-RFOs.

JESUSA C. BELTRAN

43, Nueva Ecija
Scientist I
Socioeconomics Division

ACADEMIC PROFILE

- PhD in Agricultural Economics, University of Western Australia
- MS in Agricultural Economics, UP Los Banos
- BS in Business Administration, Major in Economics, Central Luzon State University, *cum laude*

An agricultural/ production and resource economics and bioeconomic-modelling specialist, she has dissected for the layman's understanding the Philippine rice industry, its strengths and weaknesses, the politics of its complex relationship with the international market, and the opportunities and threats provided by climate change.

With years of relevant research experience in agricultural economics, Beltran has published several quality scientific papers and presented her results in various national and international conferences and symposia.

JONATHAN M. NIONES

42, Davao del Sur
Scientist I
Genetic Resources Division

ACADEMIC PROFILE

- PhD in Agricultural Science, Nagoya University, Japan
- MS in Plant Breeding, UP Los Baños
- BS Agriculture, University of Southern Mindanao, *cum laude*

He has done extensive research works on understanding the genetic mechanisms and roles of root plasticity in growth and yield in response to transient soil moisture fluctuation stresses in rice. He also initiated the systematic characterization and gene-mining of PhilRice rice germplasm for key root traits exhibiting plastic responses to different simulated stress-prone activities.

As a rice breeder, he developed NSIC Rc 416, a high-yielding and stable variety with wide adaptability under the rainfed dry-seeded ecosystem.

He helped develop, register, and release 3 rice varieties with the National Seed Industry Council.

HENRY M. CORPUZ

Senior Science Research Specialist

ACADEMIC PROFILE

PhD in Agricultural Science, major in Food Science (Shinshu University, Nagano, Japan)
MS in Biochemistry (UP Los Baños)
BS in Chemistry (Central Luzon State University)

CONGRATULATIONS TO OUR NEW GRADUATE!

Henry started in 2002 as SRS I at the Rice Chemistry and Food Science Division (RCFSD). He led several studies on rice grain quality evaluation and brown rice quality improvement, and division-based research projects funded by DA-BAR and KOPIA. He was designated as Laboratory Manager of RCFSD and supervised the operations and administrative functions of the analytical services laboratory while mentoring undergraduate thesis students.

In 2015, he was granted a MEXT: Monbukagakusho Scholarship to earn his PhD. In his dissertation titled, "Neuroprotective and Cognitive Decline-Suppressing Activities of Fermented Rice Beverage Biomaterials," he investigated the preventive effects of long-term dietary supplementation with *Lactobacillus* strains isolated from rice wine lees on cognitive decline in a mouse model of aging. He also evaluated the effects of fermented rice peptides against scopolamine-induced memory impairment in mice.

He authored and co-authored some papers published in peer-reviewed international journals related to agricultural and food science and brain research.

His current research focuses on the antioxidant and neuroprotective activity of rice wine lees bioactive peptides against oxidative stress-induced toxicity in human-derived neuronal cells, and on the development of advanced and rapid methods of measuring rice physicochemical properties.

THANK YOU FOR YOUR SERVICE

The PhilRice family mourns the sudden passing of one of its R&D managers, Roger "Roj" F. Barroga, Sept. 23.

Known as a visionary and an innovator, Roj, 54, is commended for bridging people and rice science close to the masses, especially the rice farmers, through a strong print and online presence. He pioneered initiatives like the Rice Technology Bulletin series, internet connectivity of the Institute, Open Academy for Philippine Agriculture (OpAPA), PhilRice Text Center, and Pinoy Rice Knowledge Bank.

He also brought the Institute to the future through his high-tech, yet practical and artistic showhouse now widely known as the FutureRice Farm, a smart and ecologically-friendly farming made for real.

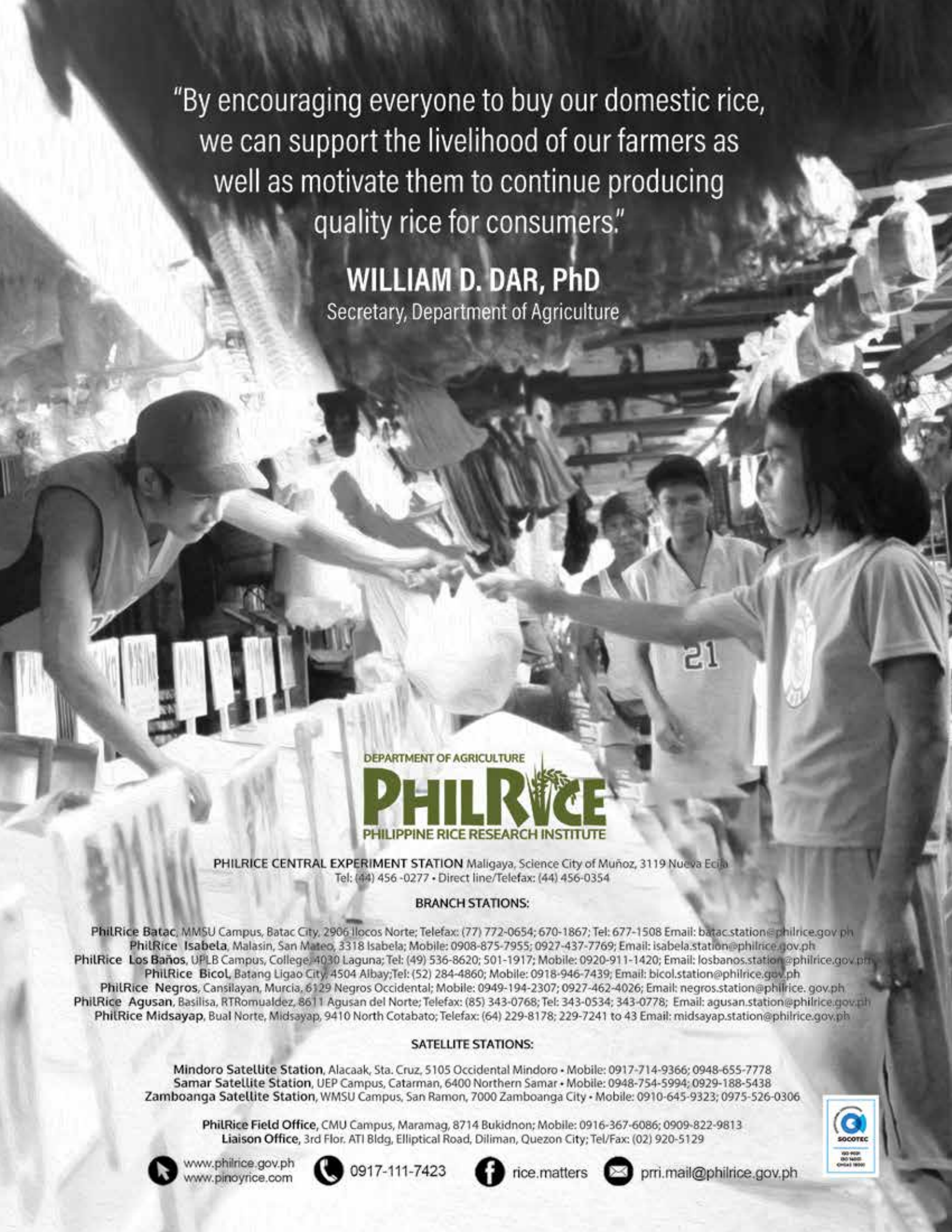
Roj also directed the extensive automation of administrative and financial systems that streamlined processes in the management of corporate resources and simplified PhilRice's compliance to stringent standards of quality and efficiency.

PhilRice former Executive Directors Dr. Santiago Obien and Dr. Leocadio Sebastian also expressed their condolences to the bereaved family.

"We will always remember and love Roger as one who worked so hard, did innovative programs, managed OpAPA to its heights - served our rice farmers and brought honors and respect to PhilRice. His initiatives were excellent," Obien stated.

"Considering the strength of his character, his innovative mind, and his adept managerial skills, he could be an Executive Director of PhilRice in the future. Unfortunately, with his untimely demise, Roj is the Executive Director PhilRice never had," Sebastian shared.

During his 30 years stint at the Institute, Roj led the Information Systems Division/ Information and Communication Technology Division (2018-2019; 1998-2008), became the Acting Deputy Executive Director for Administrative Services and Finance (2016-2017; 2001-2002), Program Director of the OpAPA (2003-2006), Head of the Development Communication Division (1989; 1993-1998) and the Program Leader of the FutureRice Farm (2013-2019). He was one of the pioneer staffers of PhilRice in 1988. **-JOY BARTOLOME A. DULDULAO**


"By encouraging everyone to buy our domestic rice, we can support the livelihood of our farmers as well as motivate them to continue producing quality rice for consumers."
WILLIAM D. DAR, PhD
Secretary, Department of Agriculture
DEPARTMENT OF AGRICULTURE
PHILRICE
PHILIPPINE RICE RESEARCH INSTITUTE
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.station@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
www.philrice.gov.ph
www.pinoyrice.com
0917-111-7423
rice.matters
prri.mail@philrice.gov.ph
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