PhilRice Magazine

A quarterly publication of the
Philippine Rice Research Institute

Group marketing

sell as one, rise as one

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ABOUT THE COVER

The power of group marketing lies on the idea of farmers working together and helping each other. Everyone has an opportunity to acquire inputs, learn new knowledge, market produce, and increase income. As a result and in a sustainable manner, they sell their produce together and eventually rise as one.

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2009 Binhi Agri Magazine of the year
2007 Binhi Hall of Fame Awardee
2001 Gawad Florendo Awardee

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EDITOR'S NOTE

GROUP OVER SOLO ENTERPRISE

(Don't go to heaven alone)

Our farmers are unquestionably seasoned crop producers having accumulated an average of 20 years of farming experience. The question is why can't they make much money from it? Why has agriculture remained as the face of poverty in the Philippines? Closer investigation suggests that this is partly because they lack resources and entrepreneurial skills. After harvest, they simply give up their fresh produce to traders at a relatively low price, making small income. After the last bullet has been fired, so to speak, the farmers are at the losing end; much of the income has gone to the other market players, such as the traders and wholesalers.

In South Korea, agricultural outputs are produced through a cooperative system in which over 90% of their farmers are members of cooperatives. They are clustered according to product. Their products are well-packaged, and are commercialized in bulk in a highly competitive market through public bidding. Some cooperatives are members of a corporation that runs a supermarket, where they sell their own freshly harvested agricultural produce.

We would like to emulate this approach initially through our program – Rice Business Innovations System (RiceBIS) Community, which ensures that the technologies (e.g., rice varieties) we have developed will translate into bigger income for farmers using the agro-enterprise framework. Agro-enterprise, as applied in RiceBIS on pages 16-17, is a group business approach geared at developing a rice and rice-based enterprise within a province to address farmers' needs – from production, to processing, to marketing – in a resilient and sustainable manner, ensuring available, accessible, and affordable rice to all Filipinos at all times.

This quarter's issue of our magazine brings to light different stories that will offer us insights on the concept of agro-enterprise. The concept may not be new to us anymore but let us help each other digest the crux of the matter and appreciate its value to enhance farm productivity and profitability among small-scale rice farmers.


NORVIE L. MANIGBAS, PhD
Presidential Lingkod Bayan Awardee


SAILILA E. ABDULA, PhD
Presidential Lingkod Bayan Awardee


ROGER F. BARROGA
CSC Pagasa Awardee

Photos from the Office of the President

THREE PHILRICE STAFFERS ARE OUTSTANDING GOV'T WORKERS

President Rodrigo Roa Duterte himself on Sep. 27 conferred the highest awards in public service to 30 recipients (individual and group categories), three of whom are senior PhilRice staffers, a first in the Institute's history, in a glittering ceremony in Malacañang.

Chosen by the Civil Service Commission (CSC) for their exemplary performance, Acting Executive Director Dr. Sailila E. Abdula and Scientist Dr. Norvie L. Manigbas, both rice breeders, are two of this year's 10 Presidential Lingkod Bayan Awardees. Roger F. Barroga, Information Systems Division (ISD) Head, is one of 10 CSC Pagasa Awardees.

Abdula helped develop the tungro-resistant rice varieties NSIC Rc 120 (2003-released) and Rc 226 (2010) to escape the disease then prevalent in Southern Mindanao. Before assuming the Institute's top post, he was acting branch director of PhilRice Midsayap in North Cotabato in July 2015 to July 2016.

He was recognized in 2017 as Outstanding Rice Scientist of the Philippines by the ASEAN Rice Science and Technology Ambassadors Award Search Committee.

The CSC cited Abdula for driving organizational performance and success by strictly aligning all organizational initiatives to the 2017-2022 PhilRice Strategic Plan, "which in turn contributed to the country's capability for rice research and production."

Abdula, 46, is a Maguindanaon from West Patadon, Matalam, North Cotabato. In 2012, he obtained his PhD in agriculture, major in plant genetics from Chungbuk National University in South Korea. He has master's degrees in plant breeding from UP Los Baños and in Development Management from the Development Academy of the Philippines.

Manigbas, 57, one of the seven DOST-conferred scientists at PhilRice, also received the 2018 Regional Gawad Saka Award for Outstanding Agricultural Scientist in Central Luzon.

He is a Chief SRS at the Plant Breeding and Biotechnology Division. He used to work as breeder at the International Rice Research Institute. His team at PhilRice led the development of the first released (2012) direct wet-seeded rice variety, NSIC Rc 298, which is now grown nationwide.

He was cited for his "diligence and tenacity in developing the country's first series of heat-tolerant rice varieties."

Manigbas finished his PhD in Agronomy (Crop Physiology and Plant Breeding) from UP Los Baños as a scholar of the Philippine Sugar Research Institute. He holds a master's degree in agriculture from the same university. He is from San Agustin 2, Naujan, Oriental Mindoro.

Barroga, 54, acted as Deputy Executive Director for Administrative Services and Finance in 2016-2017.

He leads FutureRice, a program that explores ways to increase current rice output using practical cutting-edge technologies.

The CSC cited him for turning the FutureRice Farm into an agritourism destination to raise appreciation for rice farming among the youth.

"The creation of the Rice Paddy Art paved the way for the nationwide exposure and dissemination of innovations created at the farm."

He once led the Open Academy for Philippine Agriculture (OpAPA), which received the 2010 International Prize for Pioneering Human Development Projects awarded by the Arab Gulf Programme for Development (AGFUND).

Barroga holds a Master's degree in Development Communication from UP Los Baños. He is an Information Technology Officer 3 at ISD. He is a son of Luna, Apayao.

Other PhilRice staffers were also recognized by CSC Region 3 for their outstanding performance during the Honors and Awards Program held in San Fernando City, Pampanga, Sep. 12.

Regional Winners:

Jonathan M. Niones, PhD, Chief SRS, Presidential Lingkod Bayan Award – Individual Category

PhilRice Genebank, Ms. Marilyn S. Ferrer (Team Leader), Presidential Lingkod Bayan Award – Group Category - **MARY GRACE M. NIDOY, WITH REPORTS FROM HANNAH MAE A. TOLENTINO AND ALLAN C. BIWANG JR.**

Anna Marie F. Bautista

DEPUTIES, TRUSTEE TAKE OATH

DA Secretary Emmanuel Piñol administered the swearing-in ceremony for a newly Malacanang-appointed member of the Board of Trustees and three permanent deputy executive directors (DED) of PhilRice, Aug. 31, Quezon City.

Dr. Flordeliza Bordey (Research), Dr. Karen Eloisa Barroga (Development), and Mr. Abner Montecalvo (Administrative Services and Finance) were inducted as duly appointed DEDs.

Trustee Romeo S. Vasquez, 56, from San Mateo, Isabela, now represents the agribusiness sector.

A farmer since 1995, he received the TOFARM Agricultural Entrepreneur Gold Award in 2013 and the DA's Regional Gawad Saka Award for Outstanding Agri-Entrepreneur in 2014. - **ANNA MARIE F. BAUTISTA**

PUBLIC PARTICIPATES IN GOLDEN RICE CONSULTATIONS

Local government units of the Science City of Muñoz, Nueva Ecija and San Mateo, Isabela engaged the public in the July 18-19 consultations on the application for new field trials of Golden Rice.

This was following the DA – Bureau of Plant Industry's (DA-BPI) notice to PhilRice to proceed with the consultations.

A total of 226 local stakeholders including government officials, farmers, consumers, women's groups, teachers, health workers, and other community members joined the consultations.

"This empowers communities to participate responsibly in a critical biosafety decision-making process. People were also encouraged to ask questions and submit comments to DA-BPI," Dr. Reynante Ordonio, project leader, explained.

On Feb. 28, 2017, PhilRice applied for a permit to conduct Golden Rice field trials in compliance with the country's biosafety regulatory procedures.

The DA-BPI also published the consolidated risk assessment report containing the collective recommendation of the regulators to "grant the biosafety permit to conduct the field trials."

Golden Rice is a new type of rice that contains beta carotene, a source of vitamin A. It is developed as a potential complementary food-based intervention to address vitamin A deficiency.

"PhilRice and the International Rice Research Institute (IRRI) are committed to complete the development of Golden Rice and satisfy all regulatory requirements to have well-documented, science-based evidence on its efficacy and safety," Ordonio concluded. - **JUNGIE A. DIAMSAY AND MARY GRACE M. NIDOY**

Keeping up with agriculture innovations

Helping farmers and the agriculture sector is now at the tip of your finger with these new digital platforms designed by our home-grown ICT experts.

PhilRice Geotagging Tool

It enables rice researchers and extension workers to gather data and tag geo-locations. This app is installed in smartphones or tabs that makes surveys easier and faster. ICT expert Arturo Arocena said the app has a customizable survey form that makes data collection flexible. It can also get point or polygon data.

The system is presented in two platforms: web and app. The web allows project profile management, data entries, user management, data approval and presentation; the app platform features data collection, dynamic forms, geotagging, and data exporting.

AgriDOC app

The PalayCheck System is now going digital. PhilRice's home-grown innovators Roger Barroga and Nehemiah Caballong took a big step forward as they packed rice crop management, monitoring, and decision-making into one app called AgRiDOC, now on Google Play. With this app, data management and implementation of schematic guides will soon improve. It also offers an alternate access to already established databases of rice information and knowledge banks developed by PhilRice and other organizations.

Other key features of AgRiDOC include record-keeping of major farm management operations; geo-visualization, which allows farmers to view their farms from satellite google maps images; rice crop insights; and rice variety catalogue. You won't be needing flyers as it is like a knowledge product on-the-go.

- AURA SHAZNAY P. TUMULAK


Carlo G. Dacumos

Dr. Nicomedes P. Eleazar (3rd from left), director of the Bureau of Agricultural Research (BAR), leads the opening of the new exhibition of the Rice Science Museum during the National Rice R4D Conference, Sep. 6.


Donna Cris P. Corpuz

Mihály Jancsó, a researcher at the National Agricultural Research and Innovation Centre talks about Hungary's best practices in rice breeding and production during the plenary session of the Rice R4D Conference, Sep 6.

BAR DIRECTOR LAUDS SLOGAN

Dr. Nicomedes P. Eleazar, director of the DA–BAR, supports PhilRice's new slogan, Quality Rice. Quality Life., launched during the 31st National Rice Research for Development (R4D) Conference, Sep. 6-7.

"[This new slogan is relevant as we try] to understand the rice economy and strategize interventions to ensure adequate rice supply. Rice self-sufficiency remains the holy grail. Achieving it requires multiple approaches of which R&D plays a crucial part," Eleazar emphasized.

Speaking before 800 members of the R&D sector, academe, and media, the BAR director since 2004 said that quality life can be provided to Filipinos through quality rice – "rice that we can grow and eat, and sell at a competitive price."

To achieve this, Eleazar reiterated the need for more investments in rice R&D.

"Rice quality does not only depend on rice breeding. We, at BAR, support other relevant R&D programs aside from developing new varieties. These include those that relate to crop care, pests and diseases management, post-harvest practices and processing," he said.

The country's lead agency in coordinating national agriculture and fisheries R&D had funded 13 PhilRice-based projects focusing on rice breeding, digital technologies, training a new breed of extensionists, and increasing farmers' competencies. These projects were the focus of the latest exhibit at the Rice Science Museum launched during the conference.

Eleazar added that *Palayamanan* – a project on intensifying, diversifying, and integrating crops; Philippine Rice Information System – an ICT system for rice monitoring; and Heirloom Rice – on improving farming communities in Cordillera and North Cotabato, were successful in increasing farmers' food and income, providing quick and relevant information, reaching the grassroots, and preserving cultural heritage. - **DONNA CRIS P. CORPUZ**

AFRICAN AND FILIPINO EXTENSIONISTS TRAINED ON SEED PRODUCTION


Gee Christine R. Perez

Nineteen African and 11 Filipino extension workers from Visayas and Mindanao completed a two-month training on seed and crop production at PhilRice Central Experiment Station, Sep. 28.

Benefiting government workers from Benin, Burkina Faso, Cameroon, Congo, Cote d'Ivoire, Guinea, Madagascar, Mali, Senegal, and Togo, the training equipped them with skills to work together with farmers to optimize local seed production and maximize marketing opportunities in their respective communities.

JICA, the agency funding the project, IRRI, Global Rice Science Partnership, and PhilRice jointly planned and implemented the training. The Coalition for African Rice Development also supports the three-year capacity-building project to strengthen the national rice development strategies of its member-countries. - **DONNA CRIS P. CORPUZ**

* NEW KNOWLEDGE PRODUCTS

COMPILED BY REUEL M. MARAMARA

BOOKS

Comparative efficiency of rice farming in Asia and the Philippines contrasts the country's rice farming efficiency with the world's major rice producers, and presents factors that can improve yield and minimize losses.

Hungry Oryzaurus (The Rice-Eating Monster) teaches children to conserve rice.

ABCs of Rice offers nuggets of information about rice from A to Z.

Aklat Ukol sa Produksyon ng Palay sa Sistemang Sabog-Tanim lays down best practices bit-by-bit, and guides farmers on the process of rice production employing direct seeding.

MANUAL

PRISM Operations Manual Vol. 1&2 (in collaboration with IRRI) structure the operational aspects of PRISM that provide readers the necessary information and guidance in running the system both at the national and regional levels.

INFOGRAPHICS

TRAIN clarifies the technicalities of the TRAIN Law and its effects on rice farming cost and income.

MILESTONES

2017 Milestones chronicles the Institute's significant accomplishments last year.

TECHNOLOGY BULLETINS

Pagpaparami ng purong binhi ng palay sa sariling bukid encourages farmers to use high-quality seeds and outlines the procedures of producing them in their own fields.

Multicrop reduced-till planter presents its operation and advantages in direct-seeded and rainfed areas.

BROCHURES

Corporate Brochure describes what to experience and enjoy in each PhilRice station.

BDD Brochure outlines PhilRice's existing products and services.

MAGAZINES

Exploring digital farming to enhance agricultural precision and efficiency peeks at the possibilities of integrating modern ICTs in agriculture to fortify rice research, development, and extension.

Rice seeds systems: Right dapat features success stories of farmers who have benefited from using high-quality seeds through the RSS.

JOURNAL

Rice-Based Biosystems Journal features studies on rice and rice-based research. It also covers economics, social, and communication systems that may influence the landscape of rice and rice-based production.

* These knowledge products are available at www.pinoyrice.com, www.philrice.gov.ph, and PhilRice Development Communication Division.

RICE ACROSS T

AGUSAN HOLDS LAKBAY PALAY

More than 400 participants joined the station's 2018 wet season field day that highlighted the high-yielding varieties suitable in Caraga Region, October 11.

The station introduced NSIC Rc 222, Rc 300, Rc 216, and Rc 160. Nutrient and water management technologies were also exhibited such as the minus-one-element technique (MOET), rice crop manager (RCM), and the alternate wetting and drying (AWD).

Dr. Gerardo Estoy, the station's acting branch director, urged farmers to integrate new technologies in


RTR Facebook page

rice cultivation for them to achieve higher yield and income.

"We are planning to boost our development initiatives through technology demonstrations, mobile pest clinics, farmers' training, and school-on-the-air in strategic areas to ensure adoption of our technologies," Estoy said. • **With reports from Alona P. Tape**

NEGROS, PHILMECH PARTNER IN PROMOTING BROWN RICE

The Philippine Center for Postharvest Development and Mechanization (PHilMech), in partnership with a farmer-organization in Murcia, Negros Occidental launched the project *Brown Rice Processing Impeller Technology* at PhilRice Negros.

A two-day business planning workshop with RiceBIS farmers prepared them for the launching. The discussions covered managerial, financial, organizational, technical, and economic aspects of planning. This activity was spearheaded by PHilMech's Dr. Michael Gragasin, project lead.

The commercial-scale use of the technology will be the first rice-based enterprise of the RiceBIS farmers. They will consolidate a portion of their harvest and sell it wholesale to their cooperative to be processed into brown rice. Farmers from nearby Victorias City are also part of this project. They will assist Murcia farmers in marketing brown rice.

This venture is expected to be profitable with the 72% milling recovery of brown rice. The technology can mill both white and brown rice, depending on adjustments, but unpolished (brown) rice is preferred.

PhilRice Negros helped organize the RiceBIS farmers to help them earn more income and link them to business development service providers.

Representatives from PhilRice CES, National Irrigation Administration, Philippine Crop Insurance Corporation, Office of the Provincial Agriculturist, Department of Agrarian Reform, and Municipal/City Agriculturists of Murcia and Victorias graced the launching. • **With reports from Vanessa A. Tingson**

LOS BAÑOS RUNS FARM BUSINESS SCHOOL

On its third season of implementation, the RiceBIS community program led by PhilRice Los Baños in collaboration with ATI–4A, DA–CALABARZON, OPAg Quezon, and LGU-OMA, Sariaya, launched the Farm Business School (FBS), Aug. 24. This season-long activity intends to expose farmers

Maribel B. Alupay

BATAC, MMSU LAUNCH MARCOS RICE PADDY ART

Ilocos Norte Governor Imee R. Marcos with her 3 sons, Matthew Joseph Manotoc, Borgy, and Michael posed in front of the rice paddy art during the Marcos Fiesta Celebration at the extension demonstration area of the Mariano Marcos State University (MMSU) in Batac City.

The activity was part of the 101st birthday celebration of the late former President Ferdinand E. Marcos.

PhilRice Batac Director Dr. Reynaldo C. Castro said the rice paddy art is a creative way of recognizing the former president, who was behind the establishment of both MMSU and PhilRice. He added that it is also one subliminal way to entice the youth to pursue degrees in agriculture.

The rice paddy art was made through the help of Mr. Nehemiah Caballong of the FutureRice Program.

Government officials of Batac City and Ilocos Norte, students, and other civil servants took a close look at the work of art. • **With reports from Maribel B. Alupay**

HE COUNTRY

▶ ZENNY G. AWING

to the principles in enhancing their entrepreneurial skills as active players in rice production and marketing, as well as managing rice farming as a business.

FBS classes started on Aug. 31 and are projected to end early next year. • **With reports from PhilRice Los Baños FB page**

MARAWI FARMERS TO PLANT AGAIN

PhilRice Midsayap and Japan International Cooperation Agency (JICA) trained about 300 rice-based food growers in Marawi City, Lanao del Sur to help them resume farming after almost a year owing to the Islamic city's siege.

A total of 376 sacks of quality rice seeds were distributed to the farmers after the training. Rainfed cultivators in barangays Patani and Sugod received NSIC Rc 286 seeds while upland farmers in Kilala and Banga were provided with traditional Alo-al and Dapolog seeds.

Moreover, three sacks of organic and inorganic fertilizers were provided to each farmer. Vegetable seeds and farm tools such as shovels, hand and knapsack sprayers, and garden hoes were also spared. •

ISABELA RICEBIS FARMERS GRADUATE

The 102 participants finished on June 19 their season-long training on rice production and processing, organization-building, and enterprise development at the ATI Regional Training Center in San Mateo, Isabela. Organized by the RiceBIS team of Isabela, the training started in Aug. 2017.

San Mateo Mayor Crispina R. Agcaoili delivered an inspirational message to the farmers and pledged to support the MarDag RiceBIS Association.

The Eco-Friendly Swine-Raising project was launched after the graduation rites. A total of 88 RiceBIS farmers in San Mateo are to be trained and engaged in the project *Babuyang Walang Amoy.*

The launching was highlighted by the signing of a Memorandum of Agreement among PhilRice Isabela, San Mateo LGU, MarDag RiceBIS Association, Isabela Mayflower Incorporated, and Isabela Dynamic Feed Distributor Corporation to pool their collective support and commitment to the said project.

Meanwhile, the station also held the *Lakbay Palay* that showcased high-quality hybrid and inbred seeds, Oct. 11.

Seed growers and farmers from Region 2 learned of the station's various R&D initiatives such as varietal demonstration; multi-yield and environment trials; Rice Crop Manager; and WateRice project. • **With reports from Maritha M. Baloy**

BICOL FARMERS' INFO ACCESS WIDENS

Farmers and other citizens in Polangui, Albay are learning more about rice production through a recently launched public information kiosk, courtesy of PhilRice Bicol.

Called *PalayTambayan* and housed at the Hibiga Irrigators Association office in Polangui, the information shop contains publications and videos on pests and diseases, rice machines, integrated crop management practices, and other rice and rice-based technologies. Farmers can borrow the materials and read them at home for them to better learn and understand their contents.

PalayTambayan is under the strategic and transformative communication initiatives of the Rice Business Innovations System (RiceBIS) program. • **With reports from Allan C. Biwang Jr.**

WHAT'S NEW IN RICE RESEARCH?

Drought-tolerant lines developed through mutation

ALLAN C. BIWANG JR.

Good harvest under drought condition is now possible with the development of five breeding lines that can thrive well even with less water in rainfed areas.

Bred by PhilRice, the drought-screened (DrS) lines are DrS 1062, DrS 1085, DrS 1061, DrS 1042, and DrS 1057. The lines, which are identified under moderate to severe drought conditions, were developed from NSIC Rc 9 (Apo).

"Rc 9 is an upland drought-tolerant rice variety with poor grain quality. To improve its adaptability to rainfed areas, yield performance, and grain quality, our team conducted a series of studies from induced mutation, line traits characterization, drought tolerance screening, and field performance evaluation," said Jonathan S. Concepcion, science research analyst. Induced mutation is a process that alters the genetic make-up of a plant.

The lines performed well in Nueva Ecija, Iloilo, and Samar with average yields of 3.97, 3.92, and 3.42t/ha respectively, higher than the 2.9t/ha national average of Rc 9.

The research team used In vitro mutagenesis (IVM) to develop these elite mutant breeding

BRICS: A new value-added convenient snack from brown rice and buffalo's milk

DONNA CRIS P. CORPUZ AND HANNAH MAE A. TOLENTINO

Craving for ice cream but minus the guilt? Then the Brown Rice Cracker-Ice Cream Sandwich (BRICS), when available, will be for you!

Imagine luscious ice cream made from fresh buffalo's milk sandwiched in crackers made from brown rice flour. Healthy and mouth-watering at the same time, BRICS is definitely a better alternative to commercial ice cream sandwich. It is expected to be out in the market by late Dec. 2018.

BRICS is born out of a 2016 consumer-driven market study by PhilRice's Josefina F. Ballesteros, El Shaira A. Labargan, Rosaly V. Manaois, Amelia V. Morales, and Dr. Riza G. Abilgos-Ramos. Based on the survey results, consumers associate health and wellness with the concepts of food, diet, and nutrition. Hence,

lines. IVM is a process of combining tissue culture technique with gamma irradiation, which enhances genetic variation to improve plant traits and quality.

Tissue culture is a process of growth and development of cells derived from living tissues in an artificial medium containing different plant hormones. Gamma irradiation is a procedure that uses gamma ray, which allows alteration in the genetic make-up through deletion, insertion, or rearrangement.

According to Concepcion, DrS 1057 was identified as the most stable line with wide adaptability across sites.

Grain quality has also improved after the use of mutation techniques. The IVM lines have longer, more slender grains, and better eating quality than Rc 9.

These lines are also to be used as gene sources for drought tolerance in improving rice varieties for rainfed-ecosystem and multiple-stress tolerance. DrS 1042 has been nominated and evaluated in the National Cooperative Testing for rainfed–direct seeded areas.

Drought-screened (DrS) lines have been identified through induced mutation, a process that alters the genetic make-up of a plant.

In 2016, almost 200,000 local farmers were affected with drought.

"This will help the farmers get more profit, especially those cultivating in rainfed areas that are often subjected to drought," Concepcion expressed optimism.

The excellent grain quality made possible by these drought-tolerant lines will mean higher price of milled rice for the benefit of farmers. •

there's a market opportunity for new rice-based products that offer a wide range of health and nutritional benefits.

According to Labargan, BRICS chose brown rice flour for its nutritional superiority. It has higher amounts of protein, dietary fiber, vitamins, minerals, and several health-enhancing benefits owing to the bioactive compounds that the whole grain carries. Buffalo's milk is an excellent and versatile replacement of cow's milk because it produces better ice cream body and texture. Its calcium content is known to be substantially richer and a good source of magnesium, phosphorus, and potassium. The cholesterol content of buffalo's milk is also 79% lower than cow's milk!

Consumer-driven product

Among other ice cream sandwiches in the market, BRICS is probably the healthiest one yet. At a projected selling price of P30 each, BRICS eaters will not only get to indulge their sweet tooth but also fill up their nutritional requirements for the day.

The study behind BRICS found that convenient, nutritious, and healthy rice-based bakery products are highly appealing and most likely to be bought by majority (61-85%) of consumers from Central Luzon. Pre-packaged bakery food products such as biscuits, breads, and chips were the most commonly purchased items at 71%. The data from the study inspired the creation of BRICS that was rated 8.4 out of a 9-point scale, which means the target consumers highly approved the product! "BRICS is from and for the consumers," Ballesteros was emphatic.

Hitting two birds with one stone

Aside from the nutritional benefits of BRICS, it was also developed to show farmers that rice-based products can be an additional source of income. BRICS adds more value to rice and transforms it to a healthier version, thereby addressing two of the most pressing problems of Filipino farmers: poverty and malnutrition. The research team considers the development of BRICS as a holistic solution because the basic needs of rice-based farm households gravitate around income and nutrition.

"If rice-based farmers have something to sell other than *palay*, they earn more income. If they have something nutritious to eat, then they will be nourished," Dr. Abilgos-Ramos figured out.

"In providing additional sources of income through BRICS, we address poverty because there will be continuous transactions of money in the community. BRICS also addresses malnutrition because it is healthy and convenient at the same time," Ballesteros added. •

RICE VALUE CHAIN:

JAYSON C. BERTO
Subject Matter Specialist: Alice B. Mataia

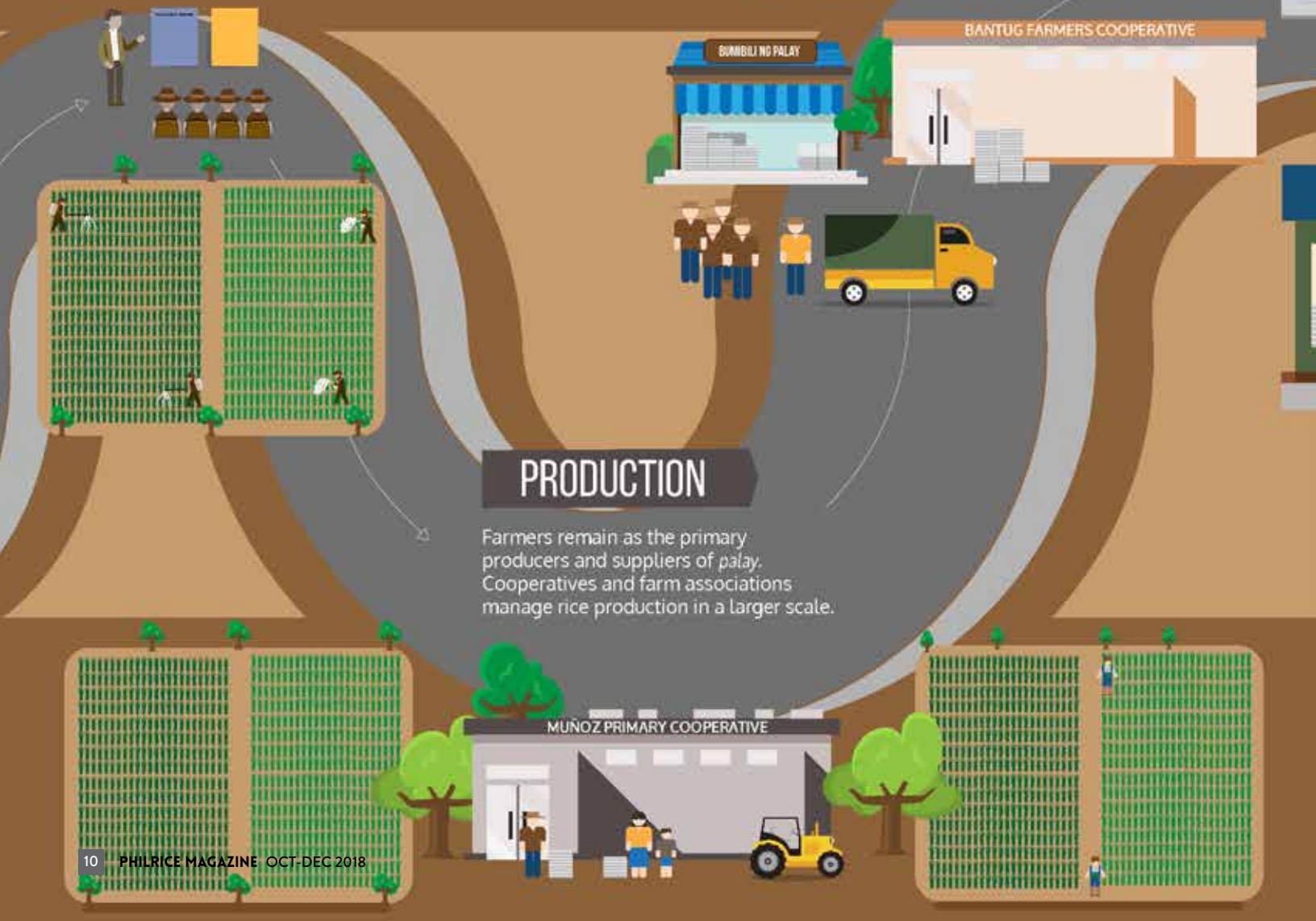
From the farm to the market, rice journeys through several interactions and processes supported by input providers, aggregators, millers, wholesalers, retailers, and consumers. Enablers of this rice value chain such as national agencies and local government units as well as non-government and international organizations help in providing financial support, farm inputs, technology transfer, and research for development initiatives.

INPUT PROVISION

Rice farmers access farm inputs such as fertilizers, pesticides, machines, and extension services either from the government or the private sector.

AGGREGATION

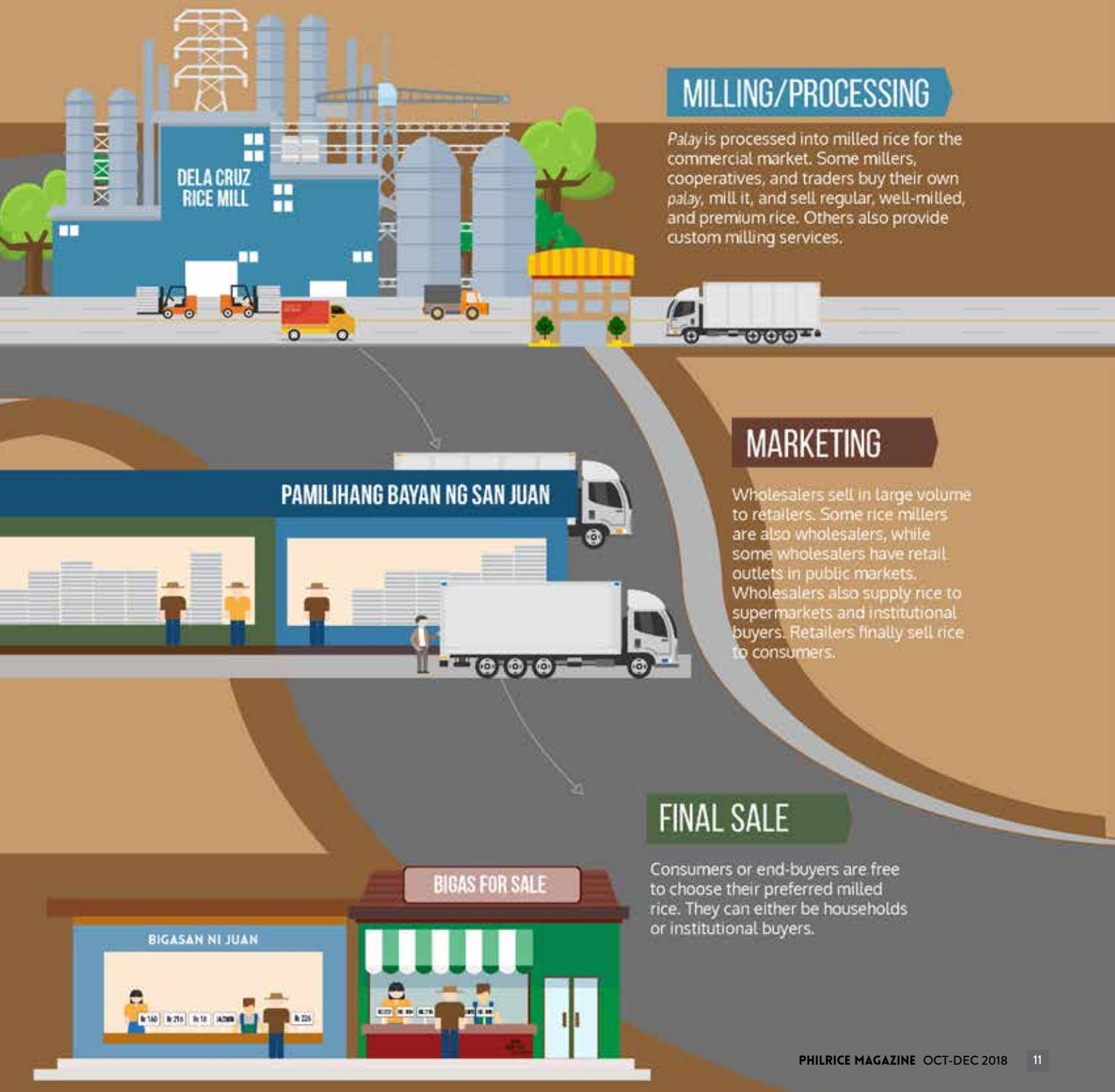
Palay is aggregated and usually dried by traders. They are usually aided by agents who act as brokers, and in turn receive commission fee for their service. Traders sell dried *palay* to rice millers and multi-purpose cooperatives.



PRODUCTION

Farmers remain as the primary producers and suppliers of *palay*. Cooperatives and farm associations manage rice production in a larger scale.

FARM TO MARKET



MILLING/PROCESSING

Palay is processed into milled rice for the commercial market. Some millers, cooperatives, and traders buy their own *palay*, mill it, and sell regular, well-milled, and premium rice. Others also provide custom milling services.

MARKETING

Wholesalers sell in large volume to retailers. Some rice millers are also wholesalers, while some wholesalers have retail outlets in public markets. Wholesalers also supply rice to supermarkets and institutional buyers. Retailers finally sell rice to consumers.

FINAL SALE

Consumers or end-buyers are free to choose their preferred milled rice. They can either be households or institutional buyers.

* Source: *Rice Value Chain Analysis in the Philippines*

WHEN FARMERS ARE MORE THAN JUST PRODUCERS

HANAH HAZEL MAVI B. MANALO
AND HANNA JOYCE B. MACAWILI

"We are left with no better choice. We directly sell to traders our fresh palay right after harvest and content ourselves with the prevailing price they impose on us."

Edwin De Guzman, a farmer in Cuyapo, Nueva Ecija, expresses this sentiment that many others share.

According to Alice Mataia, a senior researcher of PhilRice, the rice farmers' role in the current rice value chain starts and ends with the production of *palay*. This means they only benefit from the value of their *palay*.

Mataia explained that rice value chain is the full range of activities from input provision to production, aggregation, milling or processing, and distribution – converting *palay* into ready-to-cook rice sold to consumers.

"If organized rice farmers capture all the value-adding activities in the whole value chain, and if gaps in the chain are addressed, they will earn more," Mataia elaborated.

Closing the gaps in the chain

"It would be a big help if the government would provide us mechanical dryers so we can more easily dry *palay* during the wet season and sell our produce at a higher price," De Guzman wished.

Mataia said that the insufficiency of modern mechanical drying, milling, and storage facilities is one of the constraints identified in the existing rice value chain. DA's Philippine Center for Postharvest Development and Mechanization (PHilMech) helps address this constraint by providing postharvest facilities such as rice processing centers and mechanical dryers to farmer associations across the country. With this, farmers could dry and process *palay* into milled rice that they sell to pocket a fatter income.

Mataia and her team also diagnosed as another constraint the limited entrepreneurial skills of farmer organizations and cooperatives engaged in rice milling and marketing.

Currently, PhilRice is pursuing the development initiative called Rice Business Innovations System Program (RiceBIS) that employs strategies to transform a community of farmers from being merely rice producers to agripreneurs. This it does by training farmers to engage in various farm enterprises with rice as the resource base, and linking them to the appropriate market. RiceBIS works to establish rice hubs to serve as the community of farmers' support system in carrying out their rice-based enterprises. With this, farmers are led into engaging in other rice value-adding activities to gain stouter earnings.

So, could organized farmers also operate as agri-input suppliers, seed growers, traders, millers, wholesalers, and retailers? Yes they surely could, as long as the government and other sectors walk with them.

Given a conducive playing field founded on a sound and humane policy environment, our farmers' role in the rice value chain need not prematurely end with the production of high-moisture-content *palay* bought by traders at a take-it-or-leave-it price. •

Carlo G. Dacumos

EXPERT'S CORNER

GROUP MARKETING EXPLAINED

ALICE B. MATAIA
Socioeconomics Division, PhilRice
Illustration by Jude Klarence C. Pangilinan

Most rice farmers run after the highest possible price of their palay produce during the time of harvest. Yet, small-scale farmers have always been at a disadvantage in marketing their produce. Majority of them are decimated into mere price-takers because they sell palay individually. They have little bargaining power with traders because of the small volume of grains they offer. Oftentimes, they sell newly threshed palay directly from their fields, mostly to small-scale village traders whose buying prices are low.

Group marketing is one strategy through which farmers can assert a better price by making collective sales to large-scale buyers such as miller-traders, wholesalers, institutional buyers, or supermarkets that buy quality products preferably in bulk.

Group marketing is an action by farmer groups or cooperatives that nurture a common goal to share market knowledge, sell together, and consequently develop agri-business opportunities. This marketing strategy eliminates the interference from traders/agents/middlemen, thereby shortening the multi-layer supply chain.

Group marketing at work

An example is the group marketing resorted to by farmer clusters in barangay Macarse, a Rice Business Innovations System (RiceBIS) Community site in Zaragoza, Nueva Ecija where their large-volume *palay* production was linked to an established miller-trader in neighboring San Leonardo town. The clusters worked together by synchronizing the schedules of their *palay* harvests. They then organized, consolidated, and collectively marketed the harvested *palay* to the partner miller-trader. Their produce was sold at a miller's procurement price, which was higher than the village traders' offer. In addition, the clusters managed to negotiate a consolidation fee of 10 centavos/kg on *palay* sold collectively to the miller-trader. The deal reduced the transaction costs for farmer clusters through updated market information, and free weighing and transportation costs. Farmer clusters have likewise established market linkage for long-term market engagement, which improves their bargaining power. It likewise lowered the transaction costs of the miller-trader through better aggregation of *palay* supply, resulting in less time and resources in not dealing with fragmented small-scale farmers on an individual basis.

Threats to group marketing

But make no mistake about it, group marketing is not as simple as it sounds. Many challenges could stand in the way such as lack of mutual trust, cooperation, knowledge and experience, strong hands-on leadership, financial and entrepreneurial skills, and postharvest and market facilities of farmer groups. Building mutual trust through a high level of transparency and credibility in transactions is crucial for farmers to participate in group marketing. A strong trusted leader among them is important to convince them to act together more effectively and tighten their sense of cooperation to pursue common goals.

Group marketing is new for many farmers and they lack the skills, knowledge, and experience to implement it. Even worse is a good number of them might have had sad experiences associated with it.

An illustrated interpretation of a farmers' cooperative with different facilities for group marketing.

Enhancing their leadership and technical capacity to develop their negotiating and entrepreneurial skills will heighten their assertiveness to deal with bulk buyers as well as nourish their business talents. Likewise, typical farmers lack the shrewdness to secure commitments from output markets because of their short-term trading mindset among buyers.

Support for farmer groups is therefore necessary, especially in linking them with established and interested bulk markets to help them forge long-term trading partnerships that produce win-win results. The great potential benefits from mutually beneficial linkages between farmers and buyers depend much on the enabling environment that government and other organizations are able to bring about.

In the case of the farmer clusters in Macarse, their market linkage with a large miller-trader was facilitated by the RiceBIS program. The success and sustainability of group marketing can be achieved if the government is supportive of farmer groups' development and greater market access. Farmers are not looking for philanthropists; they need trustworthy business partners, if one wants to look at it that way. •

RiceBIS Community
BUSINESS INNOVATIONS SYSTEM

PERRY IRISH H. DURAN
Subject Matter Specialists:
Dr. Aurora M. Corales and
Dr. Ronan G. Zagado

The **Rice Business Innovations System a.k.a. "RiceBIS" Community** is a community of practice geared at developing rice and rice-based enterprises within a province to address farmers' needs - from production, to processing, to marketing - in a resilient and sustainable manner, ensuring available and affordable rice.

RiceBIS STRATEGIES:

1. Mindsetting, capacity enhancement, and clustering
2. Diversified farming (e.g., cash crops, livestock) for added income
3. Adopting environment-friendly and climate-resilient technologies
4. Use of farm machines to reduce labor cost and postharvest losses
5. Use of high-yielding rice varieties
6. Consolidation of farmer-members' produce
7. Value-adding through processing
8. Linkage with market, business development service providers, and public/private organizations

Filipino farmers' average annual income is below the poverty threshold

Need for an agripreneurial mindset

Farmers still use conventional rice farming methods

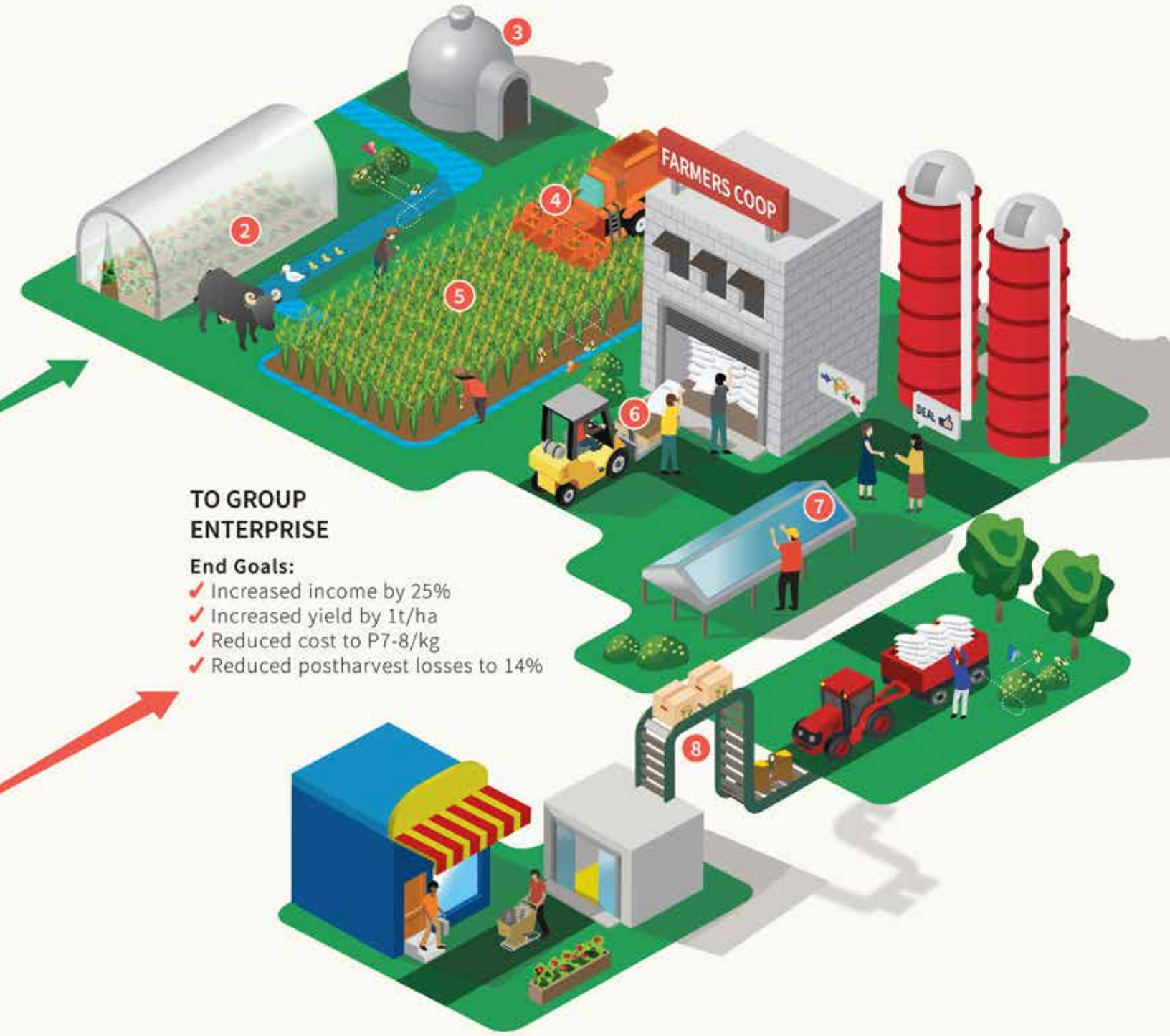
FROM SOLO ENTERPRISE

Farmer sells his/her produce individually to rice traders

Individual Farmer
(1) Joins an organized farmers' group/cluster.
(2) Sees farming as a business venture.

join

Cooperative
(1) Practices group enterprise.
(2) Maintains good camaraderie of the community.
(3) Farmer-member patronizes local produce.



TO GROUP ENTERPRISE

End Goals:

- ✓ Increased income by 25%
- ✓ Increased yield by 1t/ha
- ✓ Reduced cost to P7-8/kg
- ✓ Reduced postharvest losses to 14%

partner

Business Development Service Providers

(1) Support local cooperative's enterprises in the community.
(2) Present services and opportunities for value-adding.
(3) These providers include rice traders, custom service providers, etc.

partner

Public and Private Organizations

(1) Pool and mobilize resources and expertise.
(2) Establish policy support, and extend technological and logistical assistance.
(3) Provide services and market linkages.

THE VALUE OF SELLING AS ONE

ELSIE E. REYES

The Iloilo City Hall is more than just an edifice housing its top officials and the important documents of the locale. If visitors will look up to see the top of its structure, they will see the bronze statue of a woman holding a bunch of harvested rice. The statue, which is called Lin-ay sang Iloilo (Lady of Iloilo), is said to symbolize Iloilo's culture, including its abundant rice harvest. This was indeed reflected in the 2017 PSA report since the province made it as the fifth top rice-producing province in the country with 937,000mt harvest.

In as much as the statue represents the rich culture of the province in terms of rice farming, looking into the lives and stories of the farmers who reap rich harvests also appreciates more profoundly the province's great contribution to the rice industry of the country.

The story of KASAPPI

While the *Lin-ay sang Iloilo* is a magnificent lone statue, KASAPPI's story is a testimony to how being organized as a group instead of acting alone could benefit the province, the country, and of course the farmers. This story is also an illustration of how an organization can spell the difference by going the extra mile of connecting to others.

Edmund Sanchez recalled that it all started in 2007 when the Center for Agrarian Reform and Rural Development (CARRD) formed the *Kaitlingban Sang mga Agraryo Padulong sa Pag-Uswag sang Iloilo* Agrarian Reform Beneficiary Multipurpose Cooperative (KASAPPI ARB MPC) in Passi City. It puts together farmers planting organic rice, conventional rice, and sugarcane who have grown prominent because of their organic rice processing and marketing initiatives. CARRD, an NGO, did this as part of their program on sustainable agriculture and enterprises.

CARRD then already recognized the importance of organizing farmers into a cooperative. Edmund, CARRD's area coordinator in Iloilo, said that perks like access to farm machinery, farm inputs, and loans are just within the reach of the farmers if they join a cooperative. He also said that aside from organizing KASAPPI, linking them with government, other NGOs, and institutional buyers is another part of the formula in ensuring the sustainability of the group enterprise. These initial partnerships yielded opportunities for KASAPPI such as the acquisition of an organic rice milling facility and training on organic rice farming.

Partnerships, through thick and thin

KASAPPI's Jose "Joe" Amora and Noni Baradas joyfully told some anecdotes about their partnerships with different

The *Lin-ay sang Iloilo.*

(From left) The Lin-ay sang Iloilo as seen on top of the Iloilo City Hall; farmers of *Kaitlingban Sang mga Agraryo Padulong sa Pag-Uswag sang Iloilo* Agrarian Reform Beneficiary Multipurpose Cooperative (KASAPPI ARB MPC) in Passi City; organic red rice is one KASAPPI product.

organizations. These stories range from the lowest times of their group to the most stable ones.

Joe remembered that their partnership with DAR rescued their sinking boat when they were on a financial slump in 2010. "Should we still carry on?" was the question they all asked each other when they held a face-to-face meeting to talk about the situation.

The answer to the question turned to yes when DAR's Agrarian Reform Connectivity, Community, and Economic Support Services (ARCCESS) Program and Agricultural Production Credit Program (APCP) dovetailed with the financial slump. With the two programs combined, they were granted farm implements and loans that helped them get through. Joe also added that more members registered with the cooperative after this. Currently, KASAPPI has over 400 members.

Their partnership with DAR also helps when it comes to land tenure. Edmund believes that owning the land they till is a huge factor in uplifting farmers' lives as they are more empowered to make decisions in farming and marketing their products.

On the marketing side, KASAPPI is connected to different institutional buyers such as Global Organic Wellness Corporation (GlowCorp), Iloilo local Go Negosyo centers, Iloilo Supermart, National Food Authority in Pototan, among others.

KASAPPI also has harmonious collaboration with other cooperatives that advocate organic farming in the province. They work together in anchoring the radio program titled *Mangunguma Dungannon ka, sa organiko nga pagpanguma!* (You're an honorable farmer with organic farming) to promote farming practices and the benefits of their organic products.

After 11 years, the tight connection between KASAPPI and CARRD has remained. This connection did not mean dependency, though. For Edmund, "It is a little difficult at the start. You really have to care for the group like they are your baby. But now, they are empowered. They are starting to forge partnerships on their own."

Their anecdotes show that KASAPPI have partners through thick and thin, from production to promotion, making them strong in covering broader roles in the rice value chain. Edmund proudly shared that KASAPPI is equipped especially in the postharvest aspects of farming. "When we go to fora, we always hear how other groups lament the lack of postharvest facilities. In KASAPPI, we already have what we need in production, processing, and marketing."

Strong connection to what they do

Among all the benefits they reap from being connected, Edmund said that teaching them to connect with their land was one of the most important. By doing so, they hope to imbibe the spirit of stewardship so that the farmers will take good care of the parcels of land granted to them through the reform programs. With this teaching and all the connections that helped them sustain livelihood in those parcels, farmers would less likely think of selling their lands.

Strong connection to what they do in organic farming was also emphasized by Joe. He said that their operations, from production to marketing, strongly adhere to the organic rice farming internal quality control system. Another proof of this dedication to achieving quality organic products is the certification KASAPPI received from the Organic Certification Center of the Philippines in 2016 along with their partner CARRD. The group was also recognized by the DA-RFO 6 through the Outstanding Small Farmer Group Award in the 2017 Organic Agriculture Achievers.

Indeed, Joe and his co-farmers will feel less of an island because of their connection within KASAPPI and also among other organizations. Their story shows that going beyond organizing by being immensely connected to what they do, as well as with relevant partners, can go a long way in reaping better harvest for themselves, the province, and the country as a whole. •

EMBRACING OPPORTUNITIES: RISING AS ONE

ASHLEE P. CANILANG AND STEVEN MATTHEW H. SAJONIA

While the town of Zaragoza in southwestern Nueva Ecija was pampering its lush-green rice farms in tandem with a propitious sun, its Pinagbuklod na Adhika Credit Cooperative (Adhika) was stealthily taking root. From its humble beginning as a mere "credit union," it transcended into a progressive organization – thanks to group marketing and sustainable partnerships.

Carlo G. Dacumos

Adhika's 32 starting members in 2013 now number 44, all in good standing, and growing. Its goal then was to provide basic credit services to its members. According to Chairman Francisco Ignacio, the service seemed to work fine for the members for a couple of years.

"We lend them production money, payable at the end of each planting season," Ignacio said.

As years passed, however, Ignacio sensed that Adhika's sole purpose became dull and routinary as the credit scheme didn't appear to create a stunning impact on the members' lives.

"And so we sought help outside," Ignacio said. Solicited interference, if one prefers to put it that way.

Ignacio defined help as collaborative and collective efforts of different government agencies, including PhilRice.

Uncapping the limits

PhilRice dutifully intervened through its Rice Business Innovations System Community Program or RiceBIS with the goal of growing farmers' income by developing rice and rice-based enterprise models. According to Dr. Aurora Corales, program lead, RiceBIS served as an intermediary for the cooperative's progress.

"PhilRice started its intervention with KOICA's provision of registered seeds (RS) to help the cooperative set up its seed capital. We then brought RiceBIS' capacity-building and mind-setting exercises toward agripreneurship," Corales said.

After the Korea International Cooperation Agency (KOICA) ignited the partnership, members of Adhika were taught and guided toward agro-enterprise development. Important lessons were the *PalayCheck* System, mind-setting and organizational development, and farm product-processing.

"We realized that there is more to rice than just harvesting and selling. And we also found out that our cooperative can offer more than just money-lending," said Ignacio, as he narrated the training and exercises they went through.

(Clockwise): *Adhika* farmers participate in mind-setting activity; they receive farm machines from DA-RFO3; they troop to Farmer Business School at PhilRice Central Experiment Station.

Realizing the potentials

In 2017, Adhika ventured into group marketing where harvests of coop members are combined and sold as a whole directly to millers or traders.

"The group marketing strategy avoids the middleman, keeping more income for the coop members," Corales explained.

Adhika's first attempt at bulk marketing was a success. And the happiness of the members trickled down from their smiles to the many pockets of their cargo pants.

"We were able to sell our *palay* at a higher price," Ignacio relished the moment.

Their dried *palay* was bought at P21-P22 per kilo, much higher than per-sack trading. He said they will call on even non-coop members to join the group marketing approach.

"As a cooperative that now aims for something greater for the community, we should also cater to the needs of our neighboring farmers," he said.

More intervention

The intervention wasn't confined to PhilRice. Through its RiceBIS program, other government agencies extended help to Adhika.

"From training down to capital assistance, we were able to provide venue for the cooperative to progress toward agripreneurship," Corales said.

The Agricultural Training Institute, Cooperative Development Authority, Departments of Trade and Industry/ Agrarian Reform, Landbank of the Philippines, local government unit of Zaragoza, and the DA-RFO 3 put in their respective contribution.

PhilRice helped Adhika procure a combine harvester from DA-RFO3, from which a flatbed dryer could soon be acquired as well. "From seed (RS) to seed (harvest) we steered them toward agri-entrepreneurial development," Corales said.

Training on processing rice-based products will also be pursued. The coop's farm area may soon expand from 4 clusters to 8 with a total coverage of 206 ha. •

7 ENTERPRISE IDEAS for rice farmers' cooperatives

ANDREI B. LANUZA
Subject Matter Specialists: Alice B. Mataia and Fredierick M. Saludez

1

LABOR AND MACHINE SERVICE CONTRACTORS

They hire out farm equipment and operators to farmers (i.e. land preparation, transplanting, fertilizer application, combine harvesting, etc.).

2

SEED SUPPLIERS

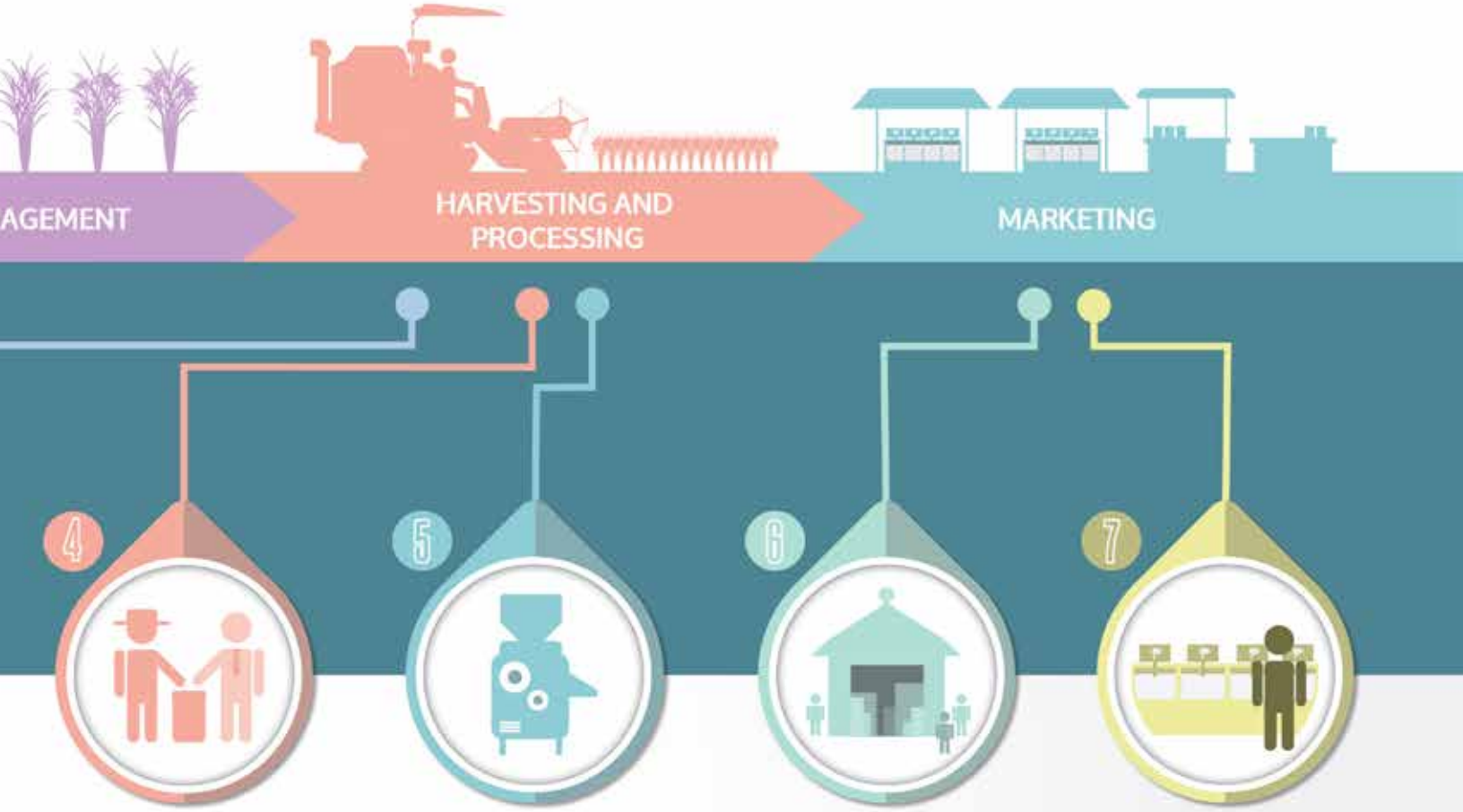
They provide farmer-members with the needed rice seeds for planting. Certified seeds are sourced from seed growers while hybrid seeds are available at accredited seed centers.

3

INPUT SELLERS

They market farm inputs such as pesticides and fertilizers to rice farmers.

Unlike capital-driven privately owned companies that seek to enrich their investors, cooperatives or "coops" are established with the primary purpose of improving the quality of life of their voluntary members. Cooperative Development Authority records show that in 2014, more than 7.6M Filipinos belonged to various cooperatives nationwide. A coop member normally enjoys tax exemptions, access to credit, and other advantages. Lending money on easy terms is the primary source of income for many rice-based farmers' cooperatives. Others create additional income by offering various services like palay milling and trading, depending on resources. Of course the more sources of income they engage in, the more risks they expose their resources to. Here are other enterprises to invest in and make money from later:



PALAY TRADERS

They purchase fresh *palay* from individual or group of farmers or in bulk, dry then sell it to large rice millers.

MILLERS

They buy *palay* and process it into graded or classified milled rice, and sell it to wholesalers or retailers.

WHOLESALERS

They sell milled rice in large volumes and cater to capital-intensive transactions. They also store milled rice in their warehouses. They sell to public market retailers, supermarkets, and institutional buyers such as hotels and restaurants.

RETAILERS

They are the most common and numerous players in the market chain who cater directly to everyday end-users (rice consumers). Their ubiquitous stalls are visible in any populous place, in public markets, in large groceries, or supermarkets. One can buy as little as a kilo of rice from a retailer.

Depending on available resources and capabilities, cooperatives may opt to engage in all three services of palay trading, milling, and wholesaling. This is financially profitable as potential total income will not be spread too thinly as a result of cutting redundant costs, minimizing post-harvest losses, and increasing efficiency.

MUSHROOM FRUITS


Perry Irish H. Duran


Jayvee P. Masilang

Farmers in Candaba, Pampanga usually plant rice during the wet season; corn in the dry season. What bothers Marivic Manalastas and her husband are the corn stalk and rice straw residues during harvest time.

According to the Philippine Statistics Authority, around 19M mt of rice straw was produced in 2017. Considered waste by many, the straw is wantonly set on fire emitting obnoxious gases into the atmosphere.

Thanks to the community-based agro-enterprise initiative called *PalaYamaNayon* of PhilRice and DA-RFO 3, the local residents have found a way to address the said farm waste problem and make a living out of it.

Community organizing

Cognizant of the reeling problem of farm wastes in Candaba, PhilRice and DA-RFO 3 came in to introduce to the local community a project that offers livelihood opportunity using rice straw.

The *PalaYamaNayon* Project aimed to enable positive and relevant change in farmers' perceptions, attitudes, practices, skills, and life chances with rice-based agriculture driving inclusive and sustainable growth.

The project was funded by DA-RFO 3 with AgriDOC Genesis Martin as the counterpart project lead.

"When we organized meetings and other activities, most of the intended beneficiaries of the project (the rice farmers) would not attend," Dr. Ronan G. Zagado, PhilRice project lead, recalled their frustration.

The project team knows that it has always been challenging to organize a community. And while attendance in their activities did not usually meet their expectations, the team found new allies – wives of the rice farmers, most of whom do not have full-time jobs, who would religiously attend the project's mind-setting activities.

"We built on their interest and enthusiasm so we took the initiative and opportunity to form them as an association," Zagado explained.

And that is how the Pansinao Parent Agriculture Association (PPAA) was born in 2016.

Capacity enhancement

The *PalaYamaNayon* team then started capacitating the members of the newly formed association on how to make use of farm wastes (e.g., rice straw). Mushroom production using rice straw as substrate was identified.

"Though mushroom has many health benefits, only few people in Pansinao know about it," Manalastas regretted.

Mushroom is rich in antioxidants comparable to tomatoes, carrots, green and red peppers, squash, and green beans. It is even reported to help treat migraine, headache, arthritis, cardiovascular problems, and cancer.

For fear of the unknown, they were a bit skeptical to start the mushroom enterprise.

But Manalastas and others participated in the training on mushroom production organized by PhilRice and DA-RFO 3. They were taught how to prepare rice-

IN PANSINAO

CHRISTINA A. FREDILES AND
ELLA CAMILLE A. BONILLA

(From left): PPAA members show their mushroom growing house; Genesis Martin of DA-RFO 3 (middle) with *PalaYamaNayon* project lead Dr. Ronan G. Zagado; PPAA women participating and making money in a trade fair.

straw fruiting bags, pasteurize to eliminate unwanted organisms and avoid contamination, and to plant or spawn mushroom fruiting bags.

"They taught us the rudiments of producing fruiting bags to harvesting our own mushroom," Manalastas said.

They also received guidance on how to market mushroom, and visited PhilRice's mushroom site under the *Palayamanan* project and a successful mushroom grower in Lupao, Nueva Ecija. Manalastas said their visits made them draw enough courage to pursue mushroom production after they witnessed that it is feasible.

"The *PalaYamaNayon* group from PhilRice taught us strategies on how to sell mushroom," Manalastas recalled, "that began from introducing the vegetable to our neighbors and featuring its nutritional benefits."

Enterprise development

Mushroom production ignited the formation of PPAA, now with 35 members, and Manalastas as its Vice Chairperson. Rosalie Paguinto heads the association.

"This mushroom enterprise included new opportunities especially for housewives in our community. I'm proud that I can also earn money and help my husband foot our expenses," she attested.

PPAA can produce 6,000 fruiting bags, sold at P35 each that yields 200g in 8 growth flushes. This means a fruiting bag can yield 1.6kg of mushroom (P250/kg) for 3 months under optimal growing conditions.

Members earn from every work they do: P2/for every fruiting bag, and P350/person/day for tending to exhibits that their association puts up. For members who want to retail mushroom, they can buy it wholesale at P150/kg.

Marketing

"Market is no longer our problem as DA, Department of Trade and Industry, and PhilRice have linked us to potential buyers. Our concern now is on how to meet the growing demands for mushroom," Manalastas pointed out.

DTI and DA invite PPAA to showcase and sell mushroom in exhibits or *tiangge* that they organize. Aside from fresh mushrooms, they also cook bun or *puto-pao* stuffed with mushroom as meat substitute. PhilRice taught them how to cook *puto-pao.*

Aside from production and marketing of mushroom, PPAA has become a learning and sharing place for interested residents of Pansinao, making the humble barangay in Candaba a community of mushroom growers.

And before we know it, a new mushroom cooperative sprouting is within sight. •

PARTNERS IN THE FIELD

SAN MATEO'S WINNING TRADITION

MARY GRACE M. NIDOY

When it comes to molding successful farmers and winning awards on agriculture, San Mateo in Isabela is ahead of the pack. Name the awards, from provincial to national, and chances are, this first-class municipality, 3-time Seal of Good Governance Awardee, Rice Achievers Award, and TOFARM Hall of Famer, has them.

With a population of over 64,000, this town in the province's 3rd congressional district never runs out of would-be progressive and multi-awarded farmers.

At the helm of this success is a strong local government unit (LGU), said Emil Camba, San Mateo's Municipal Agriculturist. With a supportive LGU that serves as a foundation of their agri-programs, Camba shared some of their lessons to inspire others who want to emulate their victories.

Recipe for success

Strong partnerships have helped San Mateo achieve its target in crop production, according to Camba.

Behind every award is a legion of agencies and organizations supporting their farmers. Among these are DA-Region 2, PhilRice, DOST, DTI, BPI-National Seed Quality Control Services (NSQCS), Agricultural Training Institute (ATI), and Isabela State University (ISU).

"Partnering with PhilRice, for instance, accorded us additional resources in terms of disseminating climate-resilient technologies," Camba explained.

These technologies are alternate wetting and drying, hybrid seed and rice production, PalayCheck System, and development interventions such as the RiceBIS Community Program and school-on-the-air.

San Mateo has consistently performed as the highest rice-producing municipality in Isabela with an average yield/ha of 7.47mt (2017 DS and WS). While Nueva Ecija remains the top rice-producing province in the country, the 2010-2014 Provincial Crops Statistics published by the Philippine Statistics Authority (PSA) ranked Isabela as second with 6.7% share to the national total production. In 2017, Isabela produced more than 1.2M mt of *palay*.

San Mateo has also won as Outstanding Municipality four times in the National Rice Achievers Award of the DA National Rice Program in 2011, 2012, 2013, and 2017. Staff at San Mateo's Rice Production Program were also awarded as Outstanding Extension Workers.

The P3.5M cash prize was then used to acquire a 1.5ha land area that now houses their TechnoDemo Farm Training Center, a farm school accredited by TESDA.

"The surplus in our rice production has helped our municipality attain rice security. We were also able to help other regions in the country," Camba said.

San Mateo Vice Mayor Roberto Agcaoili cites the town's environment as one of the reasons why farmers have been successful in achieving bountiful harvests.

The majority of the town's soil type is under Sta. Rita Clay Loam series. According to a handbook titled *Simplified Keys to Soil Series* (Isabela) published by PhilRice, this soil type is suitable for rice, mungbean (*munggo*), corn, banana, peanuts, and tobacco.

Munggo is a popular legume in San Mateo that makes them celebrate *Balatong* Festival every May. Average *munggo* production is 800-1000kg/ha. PSA data show that in 2010-2014, Isabela was the top-producing province with 6.48 thousand mt or 20.2% of the country's total output. Through AO No. 23 series of 2011 signed by then DA Secretary Proceso J. Alcala, San Mateo was named as the *Munggo* Capital of the Philippines.

Linking farmers to the market

A few meters away from the municipal hall is the Galing San Mateo Pasalubong Center (GSMPC) established by the LGU to help farmers market their produce. The LGU helps farmers in promoting and packaging their products which are then sold at the center. These products have reached other places as far as Japan.

"The LGU also buys directly from farmers and processes them into various products such as *munggo* blends and *munggo* coffee at our processing and packaging center," Agcaoili said.

Trade fairs have also become an avenue for the LGU to promote the products of San Mateo farmers. They also use these products as tokens for the town's guests and visitors.

These are the conventional ways of linking farmers to the market. But winning national awards, as the LGU discovered, promotes farmers and their products on a larger scale.

Own brand of winning

Learning from this lesson, Camba and his staff found themselves helping farmers not only package and promote their quality products but also their farming journey.

(Clockwise): President Rodrigo Duterte confers the Gawad Saka award on Vivian Taniza; outstanding extension workers from San Mateo LGU were awarded during the 2017 Regional Rice Achievers Awards; San Mateo LGU recognized as one of the outstanding municipalities in the 2017 Rice Achievers Awards.

"Once a farmer wins a national award, he or she gets a well-deserved exposure to the media," Camba observed. And everything, as they say, ripples.

Multi-awarded farmer Vivian Taniza knows this all too well. After winning the Gawad Saka Outstanding Fisherfolk Award, her farm received more attention that helped widen her market and network.

"Before winning the award, I was earning P1M from tilapia. With the Award, I am now netting P1.5M owing to having more clients who became aware of my product," Taniza divulged.

She said it is important that farmers and the LGU work together, as one should not be alienated from the other.

"We know that these awards will create positive impact on our farmers and their products, and it is our job to help them in their campaign," Camba said.

This is why the LGU and San Mateo farmers participate in almost all agriculture-related competitions. Win or lose, Camba believes they have nothing to regret as joining alone fuels the town's tourism and helps promote their farmers' products.

When a farmer joins in a competition, he puts his best foot forward and improves his farm, products, and behavior.

"But when he loses, at least he was able to upgrade and sharpen everything. In that way, he still wins," Camba argued.

Participating in one competition to another, Camba claimed, takes their farmers one step closer to success in farming.

The secret, therefore, of San Mateo's and its farmers' winning tradition is not all about harvesting victories. Their own brand of winning is about persistence – the audacity to keep on progressing even in times of defeats. •

RISE WITH RICE

CHARISMA LOVE B. GADO-GONZALES

A SENSE OF PEACE

It was a sleepless night. Rufino Pajo's mind was whirling as Typhoon Mario in 2014 ravaged his village, leaving a fourth of his remaining harvest wasted on the field. Although he had secured most of his crop, every kilo of grains was important as the bounty was to settle his debt and pay for the children's school fees.

"It's crazy. Sometimes, I think more of my crops than our own safety during typhoons. Natural calamities can blow away our money in an instant," the 45-year-old rice tiller of San Ildefonso, Ilocos Sur, said in Ilocano.

Giving the best for rice

Rice is central to Pajo's livelihood; raising his children and providing for his family through his income from the country's staple food. To gain good profit from rice, the farmer for 25 years used to borrow money from traders. After the onslaught of Mario, which left Ilocos Sur with P187 million worth of agricultural damages, Pajo joined the Nueva Segovia Consortium of Cooperatives (NSCC) to finance his farm needs.

"Truth be told, farming is good if you have resources; without, it's headache. Now that I'm a Coop member, it's like having a financier," he said.

Established in 1992, NSCC is a multi-purpose cooperative with programs on financial and social services, agro-enterprise and marketing, capability-building and training services, and tourism. Led by its chief executive officer, Dr. Divina Quemi, the Ilocos Sur-rooted Cooperative had won awards recognizing its contributions in nation-building. From the Cooperative Development Authority alone, it consecutively received the Best-Performing Cooperative Federation award in 2013, 2014, and 2015. It also won the 3rd Most Outstanding Coop Leader accolade in 2015.

"Easy loan access is just one of the benefits of being a Coop member in good standing. I also get help from the coop's partner-technicians who conduct soil analysis and teach me right fertilizer application," Pajo said.

Rufino initially loaned P30,000, mostly for fertilizers. Currently, he owes about P100,000 to cover the requirements of his 4-ha farm.

"I started farming with a hectare because this was what I could support," Pajo recalled. "Then, I didn't have enough money to buy the 'food' for my crops. Now, you can say I'm bolder. As I can rely on the cooperative, I asked the owner of an idle land to entrust it to me. He agreed. I can now manage well a 4-ha ricefield."

Living in good debt

Schubert Espejo, manager of NSCC-Vigan City, said that Pajo and his fellow farmers borrow money from the cooperative to buy organic and synthetic fertilizers.

"Cultivation cost is quite high that there was a time when farmers in this area didn't plant rice as they could not afford fertilizers," Espejo recollected. "So we introduced organic fertilizers to them, which they patronized. From P2,000 per sack of ammonium, this price went down to P1,150."

Espejo also said that farmers benefit from their membership through the Coop's procurement program. Farmers can sell their rice harvest at a P0.25/kg higher price than the traders'. They are also prioritized in using the drying facility.

Photos by Aura Shaznay P. Tumulak

Rufino Pajo tilling his farm.

NSCC members at their milling facility.

"Among our services, Pajo and most of our farmer-clients prefer our loan program," Espejo said. "The cooperative is generous in increasing what we lend as we base our approval on their character. We call it character loan. This is why from P30,000, we didn't hesitate to lend Pajo about P100,000."

Pajo, whose children are criminology and automotive courses graduates, said that his yield grew from 100 to more than 200 cavans as he was able to buy the right nutrients needed by his crop.

"Before, I was contented with a 100-cavan harvest in a hectare. Now, I'm harvesting and earning more," Pajo, who earns P40,000 in a hectare, remarked.

While traders used to charge him 5% in every loan, NSCC only collects less than 2% interest.

"Traders also used to badmouth me on account of delayed payments. As NSCC is church-based, its people are very patient in dealing and talking with us. They work even in times of typhoons to serve us," he painted a wholesome atmosphere.

Carrying on

With more resources, Pajo said his heart and soul are now at peace that he can even afford to spend more time on doubling his income and checking on his plants' health than on thinking about where he would get financial help.

But in farming, sense of peace is disrupted, sometimes when one is least prepared.

Again, a rough night; the hostile gusty winds awkwardly dancing on the once proud field, and he knew his crops had the slimmest chances to survive. Two weeks before he was supposed to harvest this wet season (Sep. 15, 2018), Typhoon Ompong – the country's strongest to make a landfall since the November 2013 Typhoon Yolanda – destroyed his crops. Only a fourth of the rice was spared from the storm's wrath and fury.

"Well, this is farming," Rufino Pajo shrugged his shoulders. "Sometimes, we can have extra for farmers' simple pleasures like going out with the family. But, as long as we have rice 'till the next harvest, there's joy. I'm quite content that what's left is enough for a few months' household supply of rice."

With lesser harvest than during the rage of typhoon Mario, his sigh is still full of hope for the next cropping season. As cooperative member, his field is insured for P60,000 as NSCC is an underwriter of the Philippine Crop Insurance Corporation – the government arm that alleviates farmers' nightmares during natural calamities. The Coop also accorded them a reasonable grace period for paying their loans.

"At least, I have something rather than nothing," Pajo chuckled. "I'll plant as long as there's farm to till. This is my life; a bit crazy life. But somehow, I found peace in this craziness." •

GET IT RIGHT IN FARMING

SOFIA ANNELLA G. WENCESLAO AND MARY GRACE M. NIDOY

While some farmers or even capital sources do not know where to start when they venture in business, Eugene Gabriel, Romeo Vasquez, Sharon Marie Paet, and Reynaldo De Leon knew exactly what they wanted to do: help the agriculture sector through mechanization.

In 2014, the four advocates of farm mechanization and modernization jointly put up a development corporation in Santiago City, Isabela.

Right Agri Development Incorporated is a visionary farming service provider specializing in carefully crafted combinations of "right machines, right technology, and right farming" for client farmers to achieve a more productive and profitable cultivation.

Choosing the "right" combination

Right Agri stays humble despite its successful enterprise.

"Business is not the first thing in mind. It all started with our hearts," said Paet, the corporation's vice president for administration and finance.

The founders of the corporation were aware of the conditions of agriculture in the country. They believed that they could help the sector by upholding the intents of the 1997 Agriculture and Fisheries Modernization Act (AFMA).

"We wanted to promote mechanization to farmers and that became the foundation of our business. After that, we were able to craft an effective selling point that takes off from right machines," divulged Gabriel, Right Agri's president.

By "right machines," the corporation provides full mechanization assistance to rice and corn farmers based in Isabela and Cagayan.

"We provide services if the farmers need mechanized operations from seedling and land preparation, up to harvesting and processing," said Vasquez, vice president for planning and business development, and now PhilRice trustee (see page 3).

"When farmers choose to fully mechanize their activities, we provide them a realistic computation and compare it with their expenses in doing manual operations," Vasquez added.

Among those who have availed of Right Agri's services is Albert Galiza, a farmer from Cauayan City, Isabela. In

By "right machines," the corporation provides full mechanization assistance to rice and corn farmers based in Isabela and Cagayan.

2018 dry season, Right Agri provided him transplanting services using its mechanical rice planter.

"I paid more or less P7,500/ha and it's cheaper than the almost P9,000 for manual transplanting in our area," Galiza compared costs.

Through this scheme, Galiza said that farmers become more aware of the benefits of doing mechanical operations in their farm.

When farmers want to learn farm mechanization systems, the corporation offers consultancy services under its "right technology" scheme through seminars and training programs.

By on-site demonstration of machines, farmers also learn how to operate the "right machines" in their own fields.

Hand-in-hand with various stakeholders

Right Agri has a variety of experiences in launching mechanized crop production in many areas in North Luzon. It also conducts seminars for other stakeholders and service providers from other provinces.

The founders have presented some of their proposed projects to the Department of Agriculture, which adopted most of their strategies. They worked with DA in providing farmers free technical training on farm mechanization and setting up demonstration sites.

They see full government subsidy for production cost as the answer to most of the issues in agriculture. In the meantime, they hope that the number of service providers in the country will multiply to meet the needs of farmers and rationalize service fees as well.

"In fact, we want farmers, especially those in the Visayas and Mindanao, to replicate our business and become service providers themselves, which is why we continue to conduct trainings," Gabriel revealed his aspiration.

Post-harvest and other ventures

Right Agri is now venturing into the production of high-quality feeds, which is a combination of harvest waste (rice stock and hay) and enzymes. This is being carefully researched in partnership with chemists and nutritionists to ensure efficiency and marketability. They branded their innovative feeds as Total Mixed Ratio (TMR) for goats and pigs.

The corporation continues to improve its livestock project through the constant monitoring of goat and pig nurseries in various locations in Central Luzon.

They are also developing a new scheme for e-farming that will be highly dependent on agricultural technology and farm mechanization.

"Soon, farmers will be farming online and mechanization will be at their fingertips," Gabriel made a fearless forecast.

In perfect harmony with this modern time, Right Agri is offering a fresh view of agriculture in the country – with its heart and head working together toward helping solve the age-old problems of the hardworking Filipino farmer. Perhaps its business paradigm is worth a closer look to distill its advantages.

The founders will always believe that mechanization will help increase farmers' yields at inflation-tolerant costs, making room for competitiveness. •

VOX POP

* What do you think of farmers doing business together?

COMPILED BY ALLAN C. BIWANG JR.

Mikel V. Bokingkito, 39, Zamboanga Del Sur, Farmer

We can expect significant changes if this happens. This will make us aware of the reasons why prices are fluctuating, identify new markets, acquire knowledge on marketing, and determine the best crop to plant in the coming seasons. In a way, this practice will drive other farmers to engage in agribusiness.

Rolando Benosa, 57, Pangasinan, Farmer/Electronics Technologist

This system can address the demand of hotels, restaurants, malls for pre-processed agricultural products. Once organized, there is no need for farmers to bring their products to public markets and buying price is higher under bulk orders from big-time traders.

Juvy L. Guatno, 29, Zamboanga del Sur, Agriculturist

Clearly, this will have economic advantage to farmers. Products will be bought at the right selling price, which can prevent profit losses owing to some abusive businessmen. Farmers doing business together can address the needs of the people at affordable prices.

Graciano E. Claveria, 38, Singapore, OFW

I can see benefits from this idea like more young people engaging in agri-business. Milled rice and other products will be cheaper as the supply will be coming directly from farmers. Farmers' income will also increase owing to absence of the "middleman" scheme.

Frances Mendoza, 35, Parañaque City, Teacher

I think farmers should be more entrepreneurial to increase their profit. Farming should be economically rewarding so that it will be a viable option for young people. We need farmers and farmers need to live a decent life.

Mafema Domingo Abaya, 54, Ilocos Sur, Farmer/Businesswoman

In reality, farmers are businessmen in practical terms though they need practical training on bookkeeping and elementary accounting. If they will be partners in doing business, major problems will be addressed such as lack of market outlets of their products, low quality of their produce, lack of equipment and capital, and processing and packaging of technologies.

Raven Carlo S. Parreño, 21, Laguna, Agribusiness Management Graduate

Farmers working together creates synergy, that is, it empowers them as whole more than the sum of their individual capacities. Working together would involve pooling their resources and sharing knowledge on the technicalities of farming. It also increases their chance of getting recognized in the market and ultimately increasing their profit.

Cherryl Catedra, 35, Lanao Del Norte, Farmer

A farmer doing business with co-farmers would mean extra income. Possibly, we will no longer rely on loans with excessive interest rates. If our group business would prosper, our daily needs would be assured.

Benevangeline P. Reyes, 56, Nueva Ecija, Extension Worker

Their capacity to cater to the needs of consumers will be strengthened. They can also venture in other major crops and improve product quality.

* Crowdsourced through PhilRice Facebook Page.

STAFF EXTRAORDINAIRE

Getting to know more of PhilRice R&D brains

REUEL M. MARAMARA

GENEVIVE A. NEMEÑO

Tomado, Aleosan, North Cotabato

Academic Profile:

- PhD/MS in Soil Science major in Soil Chemistry, Minor in Agronomy (UP Los Baños)
- BS Agriculture Major in Soil Science, Minor in Horticulture (University of Southern Mindanao)

Congratulations to our new graduate!

For 20 years, Nemeño has dedicated her life to improving rice farming in Mindanao. The soil scientist has served as technical expert in the development of location-specific knowledge products and as a resource person in various training courses for rice farmers, technicians, and students. She was involved in the implementation, technical monitoring and evaluation of the JICA – Technical Cooperation Project (JICA-TCP 3) in Charito, Bayugan City and Tagabaca, Butuan City in the Agusan provinces.

As Development Coordinator of PhilRice Agusan in January 2010–June 2011, she closely supervised an average of 20 Rice Sufficiency Officers and development workers.

Among her major researches are *Correction of micronutrient disorders in soils planted to irrigated lowland rice in Mindanao; Improvement of nutrient management for yield maximization; Identification and amelioration of soil constraints to yield of upland rice in highly weathered soils; and Utilization of Azolla for nitrogen fixation and carbon sequestration.*

She is a Senior SRS at PhilRice Agusan.

BON VOYAGE TO OUR RETIREES!

NECITAS B. MALABANAN, 64

Nagcarlan, Laguna
Position: Chief Administrative Officer
Division: CES/GASS
Length of Service: 27 years

Malabanan has served with dedication to administrative management. She was instrumental in creating and heading the Income Generation Office in 2002 (now Business Development Division), which produced income that financed the acquisition of basic equipment and infrastructure to help stabilize the Institute's operations.

She used to be a member and chairperson of the Bids and Awards Committee for Goods and Services and was the founding head of the Procurement and Property Management Division.

She also headed the Administrative Support Division and acted as Deputy Executive Director for Administrative Services and Finance.

Malabanan was a recipient of the Outstanding Administrative Support Staffer award.

ANITA V. ANTONIO, 60

Lupao, Nueva Ecija
Position: Supervising SRS
Division: CES/TMSD
Length of Service: 35 years

Antonio has trained farmers, extension workers, rice specialists, and other stakeholders to become the prime movers of technology promotion in the country. She has served as subject matter specialist for PhilRice publications including rice technology bulletins, handouts, field guides, Q&As, manuals, videos, the *Palaytandaan*, and the Rice Doctor, a collaborative project of PhilRice, IRRI, Research Institute for Rice in Indonesia, and the University of Queensland, Australia. She also helped develop the *PalayCheck* System and co-authored its training manual.

In 2002 and 2006, Antonio received the Special Citation Award for Senior R&D Staff.

RONELL B. MALASA, 38

Roxas City, Capiz
Position: SRS II
Division: CES/SED
Length of Service: 17 years

As a sociologist, Malasa helped improve the methodology of the Rice-Based Farm Household Survey. During his leadership, pictures of farmers identifying pests and technologies were included as part of its method. He also supervised the development of the PalayStat, an interactive web-based system that provides easy access to survey outputs and other data from the SED.

He was bestowed with the 2015 Special Citation Award for Outstanding Junior Development Worker.

CELIA G. ABADILLA, 64

San Jose City, Nueva Ecija
Position: Senior SRS
Division: CES/TMSD
Length of Service: 26 years

Abadilla's dedicated service was in development and extension. She headed various projects and was actively involved in learning and development interventions. She also won Best Poster and Best Paper awards from the Crop Science Society of the Philippines in 2004 and 2009. Prior to her involvement in R&D, she was into administrative work.

She received a Special Citation as Outstanding R&D Staffer in 2017.

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AJA

LRQA

Rice farmers can increase their income through group marketing.

-study titled *Enhance Farmers' Market Access through Collective Marketing: Key Lessons Learned from RiceBIS Community Experience*