PHILRICE®

A quarterly publication of the
Philippine Rice Research Institute

MAGAZINE

Ripples of Change

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Apr-Jun 2014

Photo: Sergiu Bacioiu
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ABOUT THE COVER

Sensitive to the pressing issues of poverty and unemployment in the rural farming areas today, PhilRice has refocused its efforts toward resolving these rural development impediments. The Institute's goal is to create an impact that ripples through the implementation of a nucleus estate strategy. With this strategy, PhilRice stations across the country would play a dual role as an R&D institution (its core role) and as a one-stop agribusiness service provider to the farmers.

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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
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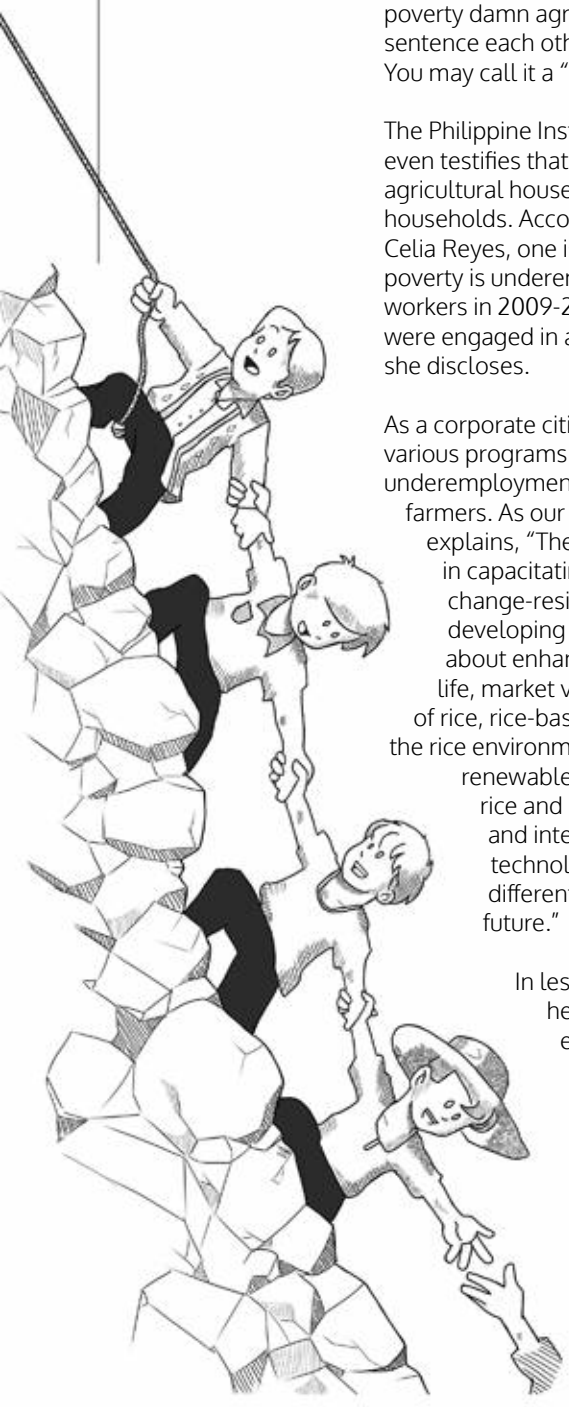
A Springboard toward Rural Transformation



Poverty remains as the "bitter half" of Philippine agriculture. Does agriculture mother poverty? Does poverty damn agriculture? Do they condemn and sentence each other? The association seems illicit. You may call it a "chicken-and-egg" quandary.

The Philippine Institute for Development Studies even testifies that poverty incidence among agricultural households is thrice higher than in other households. According to its Senior Research Fellow Celia Reyes, one issue that binds agriculture to poverty is underemployment. "Seven out of 10 poor workers in 2009-2010 who were underemployed were engaged in agriculture, forestry, and fishery," she discloses.

As a corporate citizen, PhilRice is executing various programs to help address poverty and underemployment that continue to hound our rice farmers. As our feature *Rice and Poverty* (page 7) explains, "The institute is intensifying its efforts in capacitating farmers by developing climate change-resilient rice-based farming systems; developing value-adding systems to bring about enhancement of quality, nutrition, shelf-life, market value, profitability, and availability of rice, rice-based products, and products from the rice environment; developing alternative, renewable energy sources and inputs for rice and rice-based farming application; and integrating and promoting rice technologies to prepare farmers for different rice farming scenarios in the future."

In less mysterious language, we want to help fathers and mothers know more easily where the next meal for the family would come from. We want to see them ably supporting at least their eldest child to obtain a college degree from some state university nearby. Never mind if macroeconomics mysteries such as Gross Domestic Product, Balance of Payments, inflation, etc. remain incomprehensible to them – as long as they are able to buy medicine, salt, sugar, coffee, and pay for tricycle/jeepney fares.

While the litany of programs cited above are seen as technologically efficient, they need to match the agronomic and market conditions to ensure they would be translated into more profits for the farmers.

Putting it all together, the Institute is launching an admittedly ambitious campaign dubbed as '*Gusto Namin, Milyonaryo Kayo*', which aims to transform farmers' perceptions, attitudes, and practices of agriculture from a losing proposition into a lucrative enterprise. Strategies of this campaign are introduced on page 8.

Our goal of motivating farmers to gross a million pesos from a hectare in 365 days, and transforming rural communities is nothing new. There are groups who have done it ahead of us. There are farmers now who gross a million and they continue to do so to inspire their fellow farmers.

In this issue, we share stories of successful farmers. Most of them are *Gawad Saka* awardees who have proven that there is much money in farming. We also feature stories of enterprises, outstanding rural women, and organized cooperatives to demonstrate how they help bring about transformation in their communities. As you flip through the pages, we hope you'll be inspired with how a community of organic farmers in Tarlac ensures a sustainable and healthy food supply for their family and their buyers in Metro Manila; how a retired teacher-turned farmer creates an impact in a male-dominated industry like agriculture; and how an organization helps marginalized groups in Negros Occidental.

PhilRice is after rural transformation. Ambitious as it might be, we are confident that the first steps we have taken could turn out as a springboard to create an impact that ripples.

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News

Agencies to raise the bar on rice extension

Research and extension agencies are collaborating to raise the bar on rice extension to support the initiatives on helping farmers gross P1 million in a hectare a year.

PhilRice, Agricultural Training Institute, and International Rice Research Institute are gathering extension workers and recognized development workers for the project IPaD or *Improving Technology Promotion and Delivery through Capability Enhancement of the Next Generation of Rice Extension Professionals and Intermediaries*.

PhilRice's Dr. Karen Barroga, project lead, said IPaD aims to develop a new breed of rice extension professionals who are equipped with knowledge to meet the challenges of a more complex rice farming environment.

It also aims to identify key extension intermediaries and engage them in activities designed to further hone their role as additional sources of information and services for rice farmers.

"With IPaD, we are building and expanding on our three-year experience with the Rice Sufficiency Officers. And to further guide us on this big task, we have conducted focus group discussions nationwide as well as in-depth interviews with leaders, professors, and practitioners of agricultural research and extension both in the public and private sectors," she said.

Implementers have initially found that the new breed of rice extensionists need training programs and learning activities, which consider technical knowledge and expertise, field training and experience, competencies and skills, and values and attributes.

Barroga said that there is a demand for the new training curriculum to include modules on transformational leadership, entrepreneurship, various extension modalities, building alliances, agricultural laws and policies, climate change adaptation, and capacity to localize technologies.

"Clearly, we see an expanded role for the rice extensionist, who is expected now to be more of a development facilitator and catalyst. Thus, we need a more appropriate curriculum, and the team is challenged to provide a fun, meaningful, challenging, and hands-on learning experience for this. This should help entice more young people to the world of agricultural extension where aging personnel is currently a problem," Barroga said.

Moreover, Barroga said that a well-informed group of alternative extension intermediaries from the civil society, universities, media groups, local leaders, farmers' and rural-based organizations, input dealers, and microfinance institutions are also expected to further raise the bar on rice extension.

Studies have shown that farmers also learn much from sources outside of the government extension system, thus the project will design and coordinate knowledge-sharing and learning activities that will enhance partnerships with non-government extension systems.

Aside from the training programs and learning activities, the IPaD project will provide other enabling mechanisms such as access to nondegree scholarships, technical advisories, ICT-based extension tools, and journal subscriptions. IPaD is one of seven projects being funded by the Department of Agriculture's Food Staples Sufficiency Program under the DA-IRRI collaboration.

▶ Ev A. Parac

Be persistent and practical, research community urged

"Persistence and pragmatism are needed in dealing with policies and politics."

Thus stressed Dr. V. Bruce J. Tolentino, deputy director-general for communication and partnerships of the International Rice Research Institute, during the 15th Santiago R. Obien seminar series on research management and institution-building.

In his lecture titled, *Policies, politics, persistence, and pragmatism: Experiences in research-based policy reform*, delivered at PhilRice in Nueva Ecija, he emphasized the two values owing to the complex nature of economic policy-making in a democratic environment.

"Policies are always political and we`ve got to be sensitive to the politics of the policies we would like to implement. You need to be persistent because over time, you've got to keep working on the same key issues, and in that process you need to be pragmatic," he said.

Tolentino said that among the key elements in research management in support of the political economy include focus and sustained attention; thorough analysis and metrics; flexibility and timing; communication and perception; reform champions, coalition-building and mobilization; and implementation assistance.

When it comes to metrics in helping farmers increase their income, he said that the farm household must be a priority.

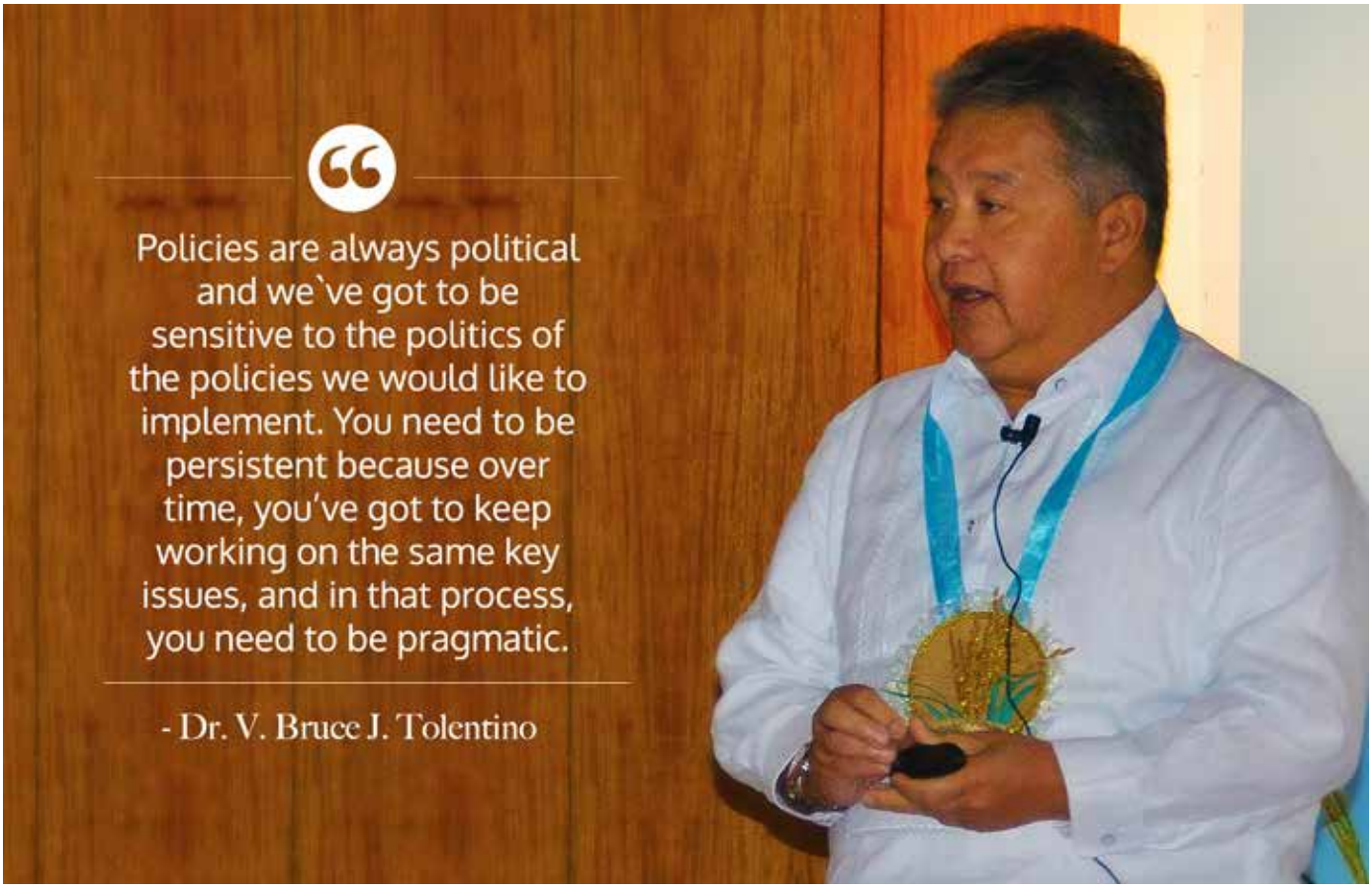
"Knowing that a household gets more income from outside the farm than from the farm itself, then we should focus on what we're good at," he said.

He explained that all commodity agencies should focus on productivity – their basic mission, which is a metric for performance measurement.

"Focusing on our principal priority of productivity means that added all up, we can generate a set of influences that benefit the farm family as a whole," he said.

Tolentino`s policy reform involvements straddle food security strategy, rice buffer stock policy, private sector development, land use planning/zoning, inter-island shipping, specialized lending, structural adjustment, agricultural and agrarian reform, and trade/tariff liberalization.

He joined IRRI in 2012 to serve as the lead point of liaison between the Philippine government and the institute. ▶ Mary Grace M. Nidoy



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News

Rice breeder on scientists' list

Dr. Norvie L. Manigbas, one of the breeders of NSIC Rc298 (Tubigan 23), the first released variety for direct wet-seeded rice, was recently conferred the Scientist I rank by the Philippine Scientific Career Council.

Manigbas, 53, also a crop physiologist for the past 7 years, had bred and co-developed several elite breeding lines.

As a senior researcher, he officially holds salary grade (SG) 22 but actually receives the equivalent of SG 26 for being a conferred scientist.

He had published seven papers in Institute for Scientific Information (ISI)- indexed science journals and four non-ISI scientific journals. He had co-authored a manual, five patents, and presented scientific papers and posters in international and national scientific conferences.

"Direct-seeded rice matures 7-10 days earlier than transplanted rice. So if a farmer plants early-maturing varieties using direct seeding, he could cultivate rice in three cropping seasons if the condition is favorable. This means more income," Manigbas said.

Currently, his team is developing tropical japonica direct-seeded varieties with tolerance to drought, better seedling vigor, and resistance against lodging. These varieties will also be high-yielding, pests and diseases-resistant, and will have good grain quality and high milling recovery.

Joining the ranks of five other conferred scientists at PhilRice, Manigbas also leads and pioneers the project on breeding heat-tolerant rice in the Philippines in collaboration with national rice research institutes in South Korea, Cambodia, Indonesia, Thailand, and Vietnam. Such rice varieties are expected to tolerate temperatures up to 40°C.

Manigbas said that his conferment as scientist is not one of his dreams, but was given to him as a result of his research work for 32 years.

"Professional growth is just one thing, but helping farmers and seeing them prosper using the varieties that we breed is my ultimate goal," Manigbas said. He is a son of Naujan, Oriental Mindoro and holds a doctorate degree in Agronomy-Crop Physiology and Plant Breeding from UPLB.

► Jungie Q. Amacanin











There's future in Agriculture

Dr. Milagros C. Valles, director of the Technical Vocational Unit of the Department of Education (DepEd), told some 600 high school students that farming is a lucrative career if one "knows the hows."

"Wealth is at hand in agriculture if we know the technical know-how and know how to compete in the market," she said during the 3rd *Lakbay-Palay* for students hosted by PhilRice in Nueva Ecija, March 12.

Encouraging the youth, aged 15 to 18, Valles said that skills and competencies are needed in farming so students must constantly learn from their school's demonstration farms and help their farmer-parents access new information through the Internet and mobile phones.

With farmers' age averaging 57 and education level at fifth grade, Valles urged the students to venture in agriculture to sustain development in the country.

"We also hope that you pursue agriculture-related courses. With agriculture as an expertise, you can become teachers, consultants, researchers, communicators, engineers, and more," she said.

Valles commended PhilRice for encouraging the youth to engage in agriculture, which, she said, is a challenge for DepEd with its more than 7,000 schools across the country.

Participated in by students mostly from Nueva Ecija, Pangasinan, and Bulacan, *Lakbay-Palay* aims to help mold a new generation of farm entrepreneurs and research and development workers.

This season's theme was, *Astig mag-agri* (It`s cool to be in agriculture), with students meeting the young PhilRice staff and talking with them on the careers and opportunities in agriculture, especially in the rice sector. ▶ Mervalyn G. Oplas (with contributions from Michelle Colleen G. Tobias)

Rice & Poverty:

Another Unsettling Look

▶ DIADEM G. ESMERO

Poverty from Asia to Africa, where most of Earth's people live, is a hubris that begs for sympathy and solace from the developed world and international organizations. This long saga of misery brought about by that silent terrorist – poverty – continues to pierce through the development process of countries like the Philippines.

Poverty has resonated down the centuries with clarion clarity, and no government, whatever form it may be, has the right to offer an oh-so-relative vision and bankrupt promises on a social malaise that consigns so many to the peace of the grave.

In 1998, the United Nations (UN) defined poverty "a denial of choices and opportunities, violation of human dignity. It means lack of basic capacity to participate effectively in society. It means not having enough to feed and clothe a family, not having a school or clinic to go to; not having the land on which to grow one's food or a job to earn one's living, not having access to credit. It means insecurity, powerlessness and exclusion of individuals, and communities. It means susceptibility to violence, and it often implies living on marginal or fragile environments, without access to clean water or sanitation."

Although the UN now claims that substantial progress has been achieved in reducing poverty because of the combined efforts of governments, the international community, civil society, and the private sector, a great divide still persists in easing the lives of poor people worldwide.

Not all is lost. UN Secretary General Ban Ki-Moon says: "Through accelerated action, the world can achieve the MDGs (Millennium Development Goals) and generate momentum for an ambitious and inspiring post-2015 development framework."

Be that as it may, addressing poverty remains a recurrent challenge in the Philippines notwithstanding the much-vaunted UN MDGs and the moderate economic expansion thus far achieved, albeit slowly and often exclusive.

In fact, the proportion of the country's households living below the official poverty line has declined very slowly and unevenly since the 1980s compared to Indonesia, China, Thailand, and Vietnam due in part to the high rate of inequality across income brackets, regions, sectors and run-away population growth.

A Filipino family of five in 2012 needed a P5,458 monthly income to buy their basic food needs and P7,821 for basic nonfood needs. At the same time, national poverty statistics showed 28 out of 100 Filipinos lived in poverty between the first semesters of 2006 and 2012.

Moreover, 2013 statistics indicate fishermen, farmers, and children were the poorest sectors in 2009. Majority of these people with large families and limited access to credit live in rural areas. Based on a report on the *Economic Effects of Agrarian Reform programs* by Raul Fabella of UP, poverty rate in agrarian reform communities is 54%, much higher than the 35% poverty rate in all farming communities. Most of the ARCs are cultivating rice, thus "rice cultivation, especially on a small plot, is a poverty trap. For the amount of land cultivated and the cost of inputs required by the crop, including an unsustainable volume of water, rice yields the lowest return. Any other crop will yield higher value per square meter of farmland than rice."

The natural characteristics of our geography may provide excuses for such low productivity. For instance, variations in the distribution of rainfall greatly impacts on our agricultural landscape. Such variations, experts agree, can still occur because of such factors as elevation and a whole range of rich and poor soils. Water availability for specific crops, e.g., rice vs. corn, and crop choice "determines cropping systems and associated cultural patterns."

"If land-based agricultural prospects are to be realized," says former BAR Director Eliseo Ponce," then no one-size-fits-all approach to production and farm management will work. Instead, a wide range of technologies and approaches must be made available through highly customized agricultural extension services that can be matched with individual farms."

At the moment, PhilRice is intensifying its efforts in capacitating farmers by developing climate-resilient rice-based farming systems; developing value-adding systems to bring about enhancement of quality, nutrition, shelf-life, market value, profitability, and availability of rice, rice-based products, and products from the rice environment; developing alternative, renewable energy sources and inputs for rice and rice-based farming application; and integrating and promoting rice technologies to prepare farmers for different rice farming scenarios in the future.

The institute is also modifying the roles of its branch stations. From specializing on specific research, they shall be transformed into broad-based, systems-oriented technology development centers. Following the Nucleus Estate Strategy (discussed on page 8), agribusiness enterprises and other support services will be developed and demonstrated in the stations. It is envisioned that food production becomes localized and farm productivity to gross a million per hectare in a year. These efforts are seen as vital for rice productivity as trade liberalization looms closer in the agricultural landscape.

Rice economists Dr. David Dawe, Dr. Cheryl Launio, and Rowena Manalili sounded the alarm in 2006 thus: "If rice trade liberalization were to occur, rice farmers would need to improve productivity, plant alternative crops, or leave farming altogether."

Poverty cannot be trivialized beyond recognition. Programs now in place do not guarantee its eradication. The nature of the country's long-term response to agricultural productivity is the ultimate and uncompromisable test to its national character in alleviating this national malaise.

> "Through accelerated action, the world can achieve the MDGs (Millennium Development Goals) and generate momentum for an ambitious and inspiring post-2015 development framework.
>
> -- BAN KI-MOON --

NUESTRA [Nucleus Estate Strategy] at work

This might be one KEY to Rural Transformation

▶ RONAN G. ZAGADO

Few years from now, PhilRice is optimistic that, given the right elements of technological and institutional interventions, more farmers grossing one million pesos per hectare per year may no longer remain a dream. Here's how we hope to help realize the dream...

A SITUATIONER

Government agencies admit that three of four poor Filipinos live in the rural areas. The rural poor largely depend on agriculture, which has necessarily become associated with poverty. Seen as a meager, non-lucrative venture, many rural poor no longer see a future in agriculture, and would not like their children to become farmers.

President Aquino wants to change this perception of agriculture. He believes there's a gold mine in it! He emphasizes that he would put greater premium on rural transformation by fostering poverty alleviation, food security, higher income, climate change resilience, and employment creation. He calls it his 'social contract'.

RESOURCE BASE

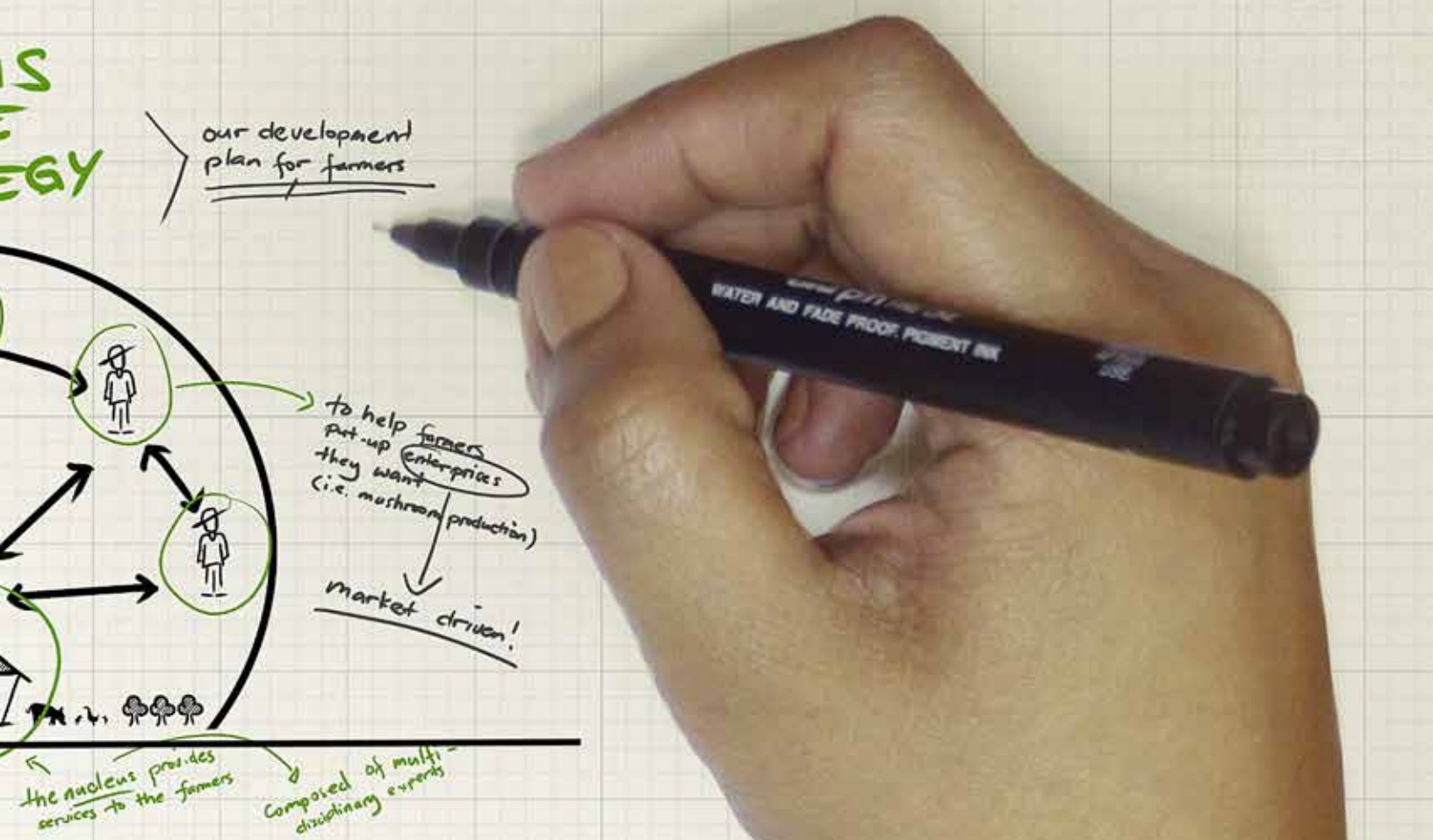
Despite the misconception, economic analysis indicates that agriculture is still one of the key drivers of the country's economy. The Department of Agriculture (DA) maintains that agriculture accounts for 20% of the national gross domestic product, or 1/5 of the country's economy. Weather and soil are favorably suited to agricultural activities. Some 32% of the country's total land area are arable. Rice constitutes the bulk of farming activities, with roughly 3.31 million hectares of our prime agricultural land being used to grow rice. Our tropical country can grow any crop and raise livestock all year round, making it ideal for a range of agricultural ventures.

WHY FARMERS ARE POOR

Rice farmers operate individually and on a small scale at an average of 1.04 hectares, according to Dr. Irene Tanzo of PhilRice. Most of them are tied to middlemen by contracts that deny them competitive prices for their produce. While waiting for harvest, farmers resort to credits to cover their daily expenses. Before the harvest comes, they are already fully in debt and most of their long-awaited farm income is bound to pay for it. The farmers become hostaged by this cycle. The high input cost in farming adds to their misery and unproductivity. Economist Raul Fabella of UP refers to growing rice in small scale as 'a poverty trap' because it is costly, yet it gives low return. His advice is to grow high-value crops that can generate more income.

SUCCESSES IN FARMING

There are farmers, however, who make it



big in agriculture. Every year, DA through the *Gawad Saka* commends successful farmers who earn more from agricultural ventures. Some of these farmers are featured in this magazine. Grossing a million pesos per hectare per year is possible, they say. Most of these farmers manage large-scale farms, are business-oriented, have high educational attainment, and most importantly, practice diversified farming.

DOMESTIC INTERVENTION

Not only technological but also institutional interventions are needed! Our average farmers cannot work on their own. They operate within a system that provides them financial means to sustain their production. This system, however, is regrettably controlled by capitalist middlemen whose motivation is profit rather than economic emancipation for the farmers.

The country's agricultural extension system is good though heavily steeped within the rationality of technology transfer. It fails to take into account the dynamics and complexity of farming as an agribusiness venture. Added to communication and training programs, which are our predominant extension interventions, an extension thrust that offers a holistic package including some agribusiness interventions is but fitting. It has to be a collective affair or system rather than individual-oriented to empower farmers through the provision of community or institutional support.

NUCLEUS-DRIVEN EXTENSION STRATEGY

Beyond technology sharing, NUESTRA (nucleus estate strategy) is integrated with certain agribusiness components implemented in an organized system. It is built on the principles and theories of the nucleus estate model, a scheme that is widely adopted by many plantations worldwide. The nucleus aims to provide production, post-production, and marketing support services to the contract growers.

PhilRice has seen the impact of this model on its operations. Its presence in Maligaya,

In sum, NUESTRA upholds the concepts of integration, diversification, and intensification as critical elements necessary toward achieving rural transformation. The economics of this model are calculated, based on the assumption that with the availability of investments, market, technologies, and institutional support, a gross of one million pesos per hectare annually is not far-fetched to achieve.

Science City of Muñoz, Nueva Ecija as a nucleus has triggered the mushrooming of seed enterprises in the area. Only 18 seed centers stood in Maligaya in 1995; they are now 500, supplying quality seeds to farmers across the country, according to PhilRice Acting Deputy Executive Director for Research Dr. Manuel Jose C. Regalado. Because of this, Maligaya has gained the moniker 'seed capital' of the country. Regalado adds that Muñoz in 1990 was a 4th class municipality; now, it is hailed as a 'science city'. This growing seed industry in the area can be largely attributed to PhilRice as a ready source of foundation and registered seeds.

So, what's with this nucleus-inspired extension model? A nucleus will be established to serve as a service provider to help farmers put up different farm enterprises. It will be driven by multi-disciplinary experts who will provide farmers with: capacity enhancement; production and distribution of farm inputs (seeds, mushroom spores, biocontrol agents, and azolla propagules); recycling; custom services (for production and postproduction); product development and packaging; and marketing. The nucleus will also make available modern farming support technologies, such as information and communications technologies (ICT), renewable energy, and mechanization. Ideally, a nucleus can cover a community of farmers with at least 20 hectares. From the nucleus, farmers will access technologies and services they need to improve their farm productivity. Farm production interventions will be for rice, other high-value crops, and livestock suitable to the area and the market. The *Palayamanan* Plus will serve as the cropping production framework, promoting diversification and intensification in an integrated manner.

According to Rizal G. Corales, who leads PhilRice's Intensified Rice-Based Agro-bio systems (IRBAS) program, crop diversification means purposive integration of various agri-business enterprises, such as rice and other high-value crops and livestock; intensification is maximum use of farm space and time. An average farmer, according to Dr. Eufemio T. Rasco Jr., PhilRice executive director, has 145 free days in a year because he or she only works for 110-220 days in growing rice. The *Palayamanan* Plus provides options for farmers to optimize their time and earn extra income.

In sum, NUESTRA upholds the concepts of integration, diversification, and intensification as critical elements necessary toward achieving rural transformation. The economics of this model is calculated based on the assumption that with the availability of investments, market, technologies, and institutional support, a gross of one million pesos per hectare annually is not far-fetched to achieve.

To test-run this strategy, PhilRice is currently adapting its 9 stations across the country to the nucleus design. Once set up, PhilRice hopes to serve its surrounding farming communities not only as an R&D institution (its core role) but also as a one-stop agribusiness service provider to the local farmers.

To create a greater impact, the country needs thousands of "nuclei", which can be established through partnerships with state universities, technical vocational schools, and more significantly, the private sector. "They only need a working model to imitate, and I hope that what we have started at PhilRice could serve as an inspiration to them," asserts Director Rasco.

VOX POP

MARIA ADRIELLE S. ESTIGOY

Public opinion about the 'Gusto Namin, Milyonaryo Kayo' Campaign...

DR. ERNESTO M. ORDONEZ
Chair, Agriwatch

When I first heard about it, I immediately said this is it. This is another project from PhilRice to look forward to, and hopefully will be a success next to *Palayamanan*, which I think is one of its best projects. And yes, I believe that it is possible through strong partnerships and collaboration with the private sector. Also, I encourage the idea of collectivism.

BERNARDITA BITO-ONON
Mayor, Bagumbayan, Sultan Kudarat

Yes, it is possible as long as you will be able to identify the right crops to plant on your farm. For instance, in our place most farmers plant the African Palm Tree because it has a sure market. Though being a millionaire seems possible, it doesn't happen overnight. There are many factors to consider.

USEC DANTE DELIMA
Department of Agriculture

I think this campaign is good as it will spur awareness and discussion of the issue or debate on how to optimize farm use.

JACQUE MANABAT
TV Reporter, ABS-CBN News

To be honest, I have no idea if P1-M gross income per hectare per year is possible, but the campaign sounds interesting. Who doesn't want to be a millionaire, right? As a media practitioner, one of my responsibilities is to encourage or inspire others through my stories, and if there is someone out there who can attest to the validity of this claim, then it would be best to share it to the world.

FE "BONG" YBANEZ
GAD Focal Person, Region 12

This campaign sounds interesting because it aims to change farmers' attitude toward success or how to gross P1-M income per year/ha. But what I would love to see in this campaign is the involvement of women as they play a big role in the development of rural areas.

DR. JOSE RENE C. GAYO
President, MFI Farm Business Institute

It is possible through diversified farming. To do this, all family members must be involved. Moreover, we need to instill in them the idea of entrepreneurship and that farming is not just plain production but also a money-making venture.

Million Farmers: how many are Millionaires?

Grossing a million pesos per hectare per year is like dreaming to hit jackpot in the lottery. Chances are low but it can be possible, according to **Rey F. Quisumbing**, 60, from Kumalarang, Zamboanga del Sur.

▶ CHRISTINA A. FREDILES

Mang Rey has been farming for almost 30 years. His life takes shape and revolves around it! Farming feeds and sustains his family and most importantly sends his son and two daughters to top universities in the country. As a father, he is proud to say that his three children are now professionals in their own fields because of farming.

A GLIMPSE OF HIS FARMING ACTIVITIES

Mang Rey owns more than 4 hectares of farm land. But looking at how he utilizes his farm per hectare, he grows rice in a half hectare, some 100 sweet coconut palm trees along the dikes at 8m x 8m, manages two ponds at 4,000 m^2 for tilapia grow-out, and runs a restaurant that serves food using his farm produce, such as crab, prawn, and native chicken.

His coconut palm bears an average of 18-21 nuts. Assuming each tree has 10 nuts and sold fresh at P30.00, he could earn P30,000 monthly or P360,000 in a year. Coconut palm trees, according to *Mang* Rey, require little supervision and expenses compared with other crops. To fertilize, the coconut tree only needs a mixture of 3kg of 14-14-14, 2kg of 0-0-60, and 10kg of salt dissolved in 200 liters of water. "Each coconut tree should be fertilized monthly through drench application of 20 liters solution to increase its growth and nut yield," says *Mang* Rey.

The Philippine Coconut Authority says the use of salt as fertilizer in coconut can increase its meat. Salt accelerates crop growth and development; increases copra weight and number of nuts; minimizes leaf spot damage; and it is environment-friendly under judicious practice.

Mang Rey's farm also grows fruit trees, such as mangoes, rambutan, durian, mangosteen, and Longkong lanzones. For his tilapia grow-out, each pond can have 5,000 fingerlings. At 85% recovery, this roughly comes to 8,500 pieces of tilapia. Sold at P10 each, this gives *Mang* Rey a handsome income of P170,000 or more a year.

As regards to his rice, *Mang* Rey says that the produce of his half-hectare rice field is mainly used as supply for his restaurant and as ration for farm workers. "I distribute the rice to my farm workers as perk for working for me. Aside from rice, I also provide them with accommodation, water, and electricity. I think these perks have inspired them to work hard. For a year, my rice farm yields 80 bags, of which 36 bags are given to my farm workers and the remaining 44 bags go to the restaurant. Nothing goes to waste on the farm," explains *Mang* Rey as he also uses the rice bran for animal feed.

Mang Rey's restaurant is called *Kan-Anan sa Balsa*, which literally means floating restaurant. "What you eat in my restaurant are all produced from my farm. We are the only producer of sweet coconut and soft-shell crab in the Philippines. Aside from that, we also serve crab, *tilapia*, and *bangus*. On the average, our gross sale comes to P4,000 daily, which is P960,000 or better for a year," he explains. Summing all his earnings, *Mang* Rey clearly grosses more than a million.

"Hard work alone will not make you a millionaire no matter how high your produce may be. You have to be smart! You have to know your market."

-- REY F. QUISUMBING --

WHAT MAKES "REY" NOT IN GREY

Mang Rey is a graduate of B.S. Agricultural Economics major in Marketing at UP Los Baños. According to him, some farmers have the capacity to produce more, but the problem is they can't market their produce. His products reach Manila and other neighboring provinces. "If I only sell my sweet coconut in the local market, I don't think I can make big money from it," the enterprising farmer avers.

He goes on to say that the soft-shell crab is very much in demand in Manila compared in the province.

"So, if you want to earn money, dream big, and plan ahead. Farming is a business, if you have more losses than gains, diversify your crops. Know what's in demand. Be pro-active and don't just wait for miracles to happen. Make it happen," *Mang* Rey preaches.

THE OTHER SIDE OF THE FARM

What's more, *Mang* Rey is also raising native chickens. "It is very scary to eat caged chickens because they are raised and harvested in 35 days only. They are treated with hormones, steroids, and additives for them to grow fast," *Mang* Rey discloses. That is why native chicken is very in demand now because it is healthier and yummier.

He started raising native chickens in 2010 with only 9 hens and 2 roosters. Now, he has 500 hens and roughly 100 roosters. In a year, a hen can produce an average of 50 eggs. So with 500 hens, *Mang* Rey gets some 25,000 eggs a year; half of which are hatched and raised as chicks. After 3-4 months, an average of 12,500 chickens are sold at P150 each. In total, this gives him an income of P1,875,000, assuming that each chicken weighs 1kg. Deducting all the expenses from feeds, medicines, wages and incentives, power, water, among others, a net income of P1.2M can be earned. According to *Mang* Rey, the income earned from raising chicken is higher than the salary received by ordinary executives.

WORK SMART AND HARD

Mang Rey started to work as a marketing agent for a fertilizer company in their town. He married his wife, Mercedes, in 1981, and began to manage the family's farm. He started growing rice alone, but later he decided to diversify his crops with the hope of improving his production.

"With the help of my networks, I have learned what's in demand and more profitable," he says. Upon learning what's in demand, he decided to loan money from the bank and started to build fish ponds, plant sweet coconut, and raise native chickens.

For *Mang* Rey, farming is a passion and learning is a continuous process. He advises farmers to learn the basic principles in farming. For fertilizer use, he asserts not to apply more but only when needed. He adds that it is important to understand how the fertilizer works and the benefits it gives to your crop. "Also, it helps a lot when you get yourself always updated with the latest technologies that can potentially help improve your farm production," *Mang* Rey stresses.

Likewise, he brings up the importance of keeping a good working relationship with farm workers. "They are valuable to the success of your farm venture. That's why be nice to them and treat them well," says *Mang* Rey.

Inescapable Journey to Farming

JAYSON C. BERTO

A farmer and a politician, **Mr. Jomar Jarvinia**, 37, of Cabatuan, Isabela became an ultimate pride of his community after winning the National *Gawad Saka* Search for Outstanding Farmer, Integrated Rice-Based Farming System in 2013.

PASSION FOR FARMING

Who would have thought that after working for aviation electronic devices, one would choose to work in agriculture? It may sound odd, but it happened to Jarvinia.

He finished Aviation Electronics Communication Engineering in Manila. His mother, however, asked him to return to Isabela and venture in agriculture. He had kept that hereditary passion for farming burning, so he couldn't resist following his mother's advice. In 1997, he began making their 2 hectares of land productive. He now manages almost 20 hectares of rice field optimizing the integrated farming system.

Jomar stresses that it is good to diversify your crops so one gets more income, and you have lower risk of being persecuted by climate change.

Farmers should understand the climatic conditions in their area because it helps them plan out for their cropping strategies. "The PAGASA reports are quite reliable," he says.

Jomar plants inbred, hybrid, and traditional rices. One hectare is slated for organic vegetables, livestock and poultry, such as duck, native pig, chicken, and cow.

He won the *Gawad Saka* award for having harvested a 2-season average of 16 metric tons (MT) or about 320 cavans of hybrid unmilled rice per hectare in 2012. He is also into aquaponics andhydroponics. In aquaponics, wastes produced by fish, snails, and other aquatic animals supply nutrients in a hydroponics system - a method of growing plants in sand, gravel, or liquid, with added nutrients but without soil. Eventually, the water used from the hydroponics system recirculates back to the aquaponics system.

His formula to increasing income in farming is a combination of: theory, skills, and practice.

Jomar also does vermicomposting and livestock manure processing. With this, he earns additional income and lessens the cost of his fertilizers. Dependent on its surplus, he can sell at P300 per bag. He applies the vermicompost and manure to his vegetable garden, aiming for high-quality crops with high income.

KNOWLEDGE SPREADS

Jomar helps his fellow farmers and the whole community as a way of giving back to the people who have helped him along the way. He emphasizes that being an official lends him the power to influence people. Thus, he grabs every opportunity to initiate agricultural projects, aside from conducting seminars for farmers.

"They shouldn't ignore agriculture because this is the foundation of life. I believe that agriculture is not something that should be taken for granted. Most young people nowadays have a hard time considering agriculture as a possible career. Surely, we will need more agriculturists in the near future."

-- JOMAR D. JARVINIA --

He preaches and practices sustainable farming in his community. "Through voluntary knowledge-sharing, I can help in poverty reduction among my co-farmers as well as the youth in my community," he attests without openly imploring the aid of Divine Providence.

Back then, Jomar had little knowledge in farming just like his co-farmers. However, this did not hinder him from learning and being competitive. He considered his fellow farmers and agricultural technologists as teachers. He pursued several training programs provided by the Agricultural Training Institute (ATI), which he now applies. This, however, required him having time and money in investing on knowledge and skills to have better livelihood outcomes.

He has also chaired several organizations such as the Municipal Agriculture and Fishery Council (MAFC), Barangay Councilors League of the Philippines (BCLP), and Cabatuan Farmers Cooperative. Being one of the leaders in the community, he provided consultation and instruction to others who are into agriculture.

His farm serves as an agricultural show-window where technologists from different local government units under the practical school for agriculture have their exploratory tours.

ASTIG MAG-AGRI ADVOCATE

Alternatively, Jomar deals with youth interested in agriculture. He has been serving as an instructor and co-operator of the 4H Club of DA-ATI, where the youth engage in farming and agribusiness. He incessantly motivates out-of-school youth to apply what they have learned and gives them capital in building their own small business.

"They shouldn't ignore agriculture because this is the foundation of life," he contends.

Jomar believes that agriculture is not something that should be taken for granted. Accordingly, most young people nowadays have a hard time considering agriculture as a possible career.

He says, "Surely, we will need more agriculturists in the near future."

Jomar articulated that in the end, the challenge is on the youth. He appeals to professionals to support initiatives relating to empowering Filipino youth toward appreciating agriculture as part of their everyday living.

The 'I's in a Million Earning

To an ordinary farmer, using a calculator and dialling a series of numbers that add up to a million is easy. What's difficult is cultivating land that could gross one million pesos per hectare per year.

But NOT to **Ricarte J. Corpuz** (Manong Carte) of Laoag City, Ilocos Norte.

▶ EV A. PARAC

A CHAMPION IN MORE WAYS THAN ONE

"It is more than possible!" *Manong* Carte enthusiastically says as he shares his secrets to attaining a gross income of more than 1 million/ha/year. Having been farming since 14, *Manong* Carte, now 64, draws wisdom from his extensive farming experience. His father's ailment and inability to continue laboring on the farm had compelled *Manong* Carte to pursue rice farming, which is the bread and butter of his family. He became a full-time farmer even before he could set foot in high school.

Strong determination and hard work, *Manong* Carte points out, are his key elements in championing the drudgery and challenges of rice farming. To show that he is certain of his claims, *Manong* Carte put out a calculator and started punching numbers. He could very well account for what goes in and out of his 3-hectare farm. With a calculator in hand, he recalls how he was able to earn a P1-M gross income.

"You have to plant hybrid rice and other crops and raise livestock," he suggests. Blessed with sufficient water from a communal irrigation system, he grows hybrid rice TH-82 and Bigante in 3 hectares during the wet season, 2 hectares during the dry season, and a hectare for his third crop.

For a hectare, *Manong* Carte can get a harvest of 12.5 tons from hybrid rice. Planted for 3 croppings and sold dry at P23/kg, this gives him an earning of P719,700. This high performance record has earned *Manong* Carte the title of hybrid rice champion. His multiple awards from various agencies and organizations can attest to his farming prowess. His latest are the *Gawad Saka* Award for Outstanding Hybrid Rice Farmer in 2012 and TOFARM Outstanding Farmer of the Philippines in 2013.

Not only is *Manong* Carte a hybrid rice champion; he is also a champion in other business ventures. He runs a rice mill, which he acquired through a bank loan but now maintains it using his earnings from rice farming. *Manong* Carte's rice mill services his own and other farmers' harvests. Not only that, he also owns three retail stalls in the public market where he sells his own rice produce. His wife tends a *sari-sari* store at home. With the rice mill earning an average P89,000 per year and stores, P49,000, these contribute to his annual income and support the daily needs of his family.

Having served as barangay chairman for 18 years, manager of Madiladig Multipurpose Cooperative since its foundation in 1988, and officer of various other organized groups, *Manong* Carte is a champion and a go-to person to farmers and local residents. He provides jobs by employing his nephew to help manage the day-to-day activities in his business ventures, and 80 of his neighbors to work on farm operations beyond those that he can manage personally in the 5 hours he spends on his farm daily. Pressing more numbers, his calculations led him to reaffirm his claim. He confides that he complements hybrid rice with corn and mungbean or watermelon, and raises pigs, cattle, chickens, and ducks. For a hectare, he earns an average net income of P50,000 from corn or mungbean and as much as P187,000 from watermelon. By raising cattle, a net income of P47,000 is possible while pigs give him a net of P92,000.

I AM FOR INTEGRATED FARMING.

"It is not possible with rice alone; integration is key to attaining a million."

-- RICARTE J. CORPUZ --

The rice bran produced from his rice mill is used as feeds for the pigs he raises in his backyard and *tilapia* that he grows in a 0.1-ha pond adjacent to his farm. All the corn he harvests are milled and sold in his retail stores, while the corn meal by-products are fed to his chickens, ducks, and pigs.

In his backyard, a portion is utilized to produce organic fertilizer from animal manure, rice hull from his mill, farm by-products, and household wastes. By producing his own, *Manong* Carte claims to have saved a considerable amount in fertilizer inputs.

"I AM AN INTELLIGENT FARMER"

Manong Carte is known as a smart farmer, as evidenced by his choice of rice varieties and technologies to adopt. In particular, he is open to all rice varieties available in the market but he has a technique in making sure the variety is suitable for his farm. "I am not afraid to test any variety. When I hear of something new, I try to acquire seeds and plant them in a small portion on my farm for at least 1 season to see exactly how they perform. That is my secret," he shares. By testing the variety, he is assured that whatever the company claims or whatever testimony other farmers tell about the variety is true and that he can also attest to it. This technique, along with his credible reputation as a leader, is what draws private companies to commission *Manong* Carte as a speaker in many of their field days and promotional events.

Manong Carte's top secret: He keeps an open mind. He reads farming-related publications and listens to stories of other farmers to learn new technologies. Adding to this is his constant exposure to training programs and seminars organized by the local agriculture office. It is through reading that he learned about the 10 x 10 x 30 cm Japanese-style planting distance for hybrid rice. He claims that the distancing gives ample room for rice to produce more tillers and panicles, promotes proper aeration, and at the same time provides enough space for spraying and fertilizer application. In the same manner, *Manong* Carte learned and tested what he claims as the most effective fertilizer recommendation. His practice has been to apply 3 bags of inorganic fertilizer plus 200 bags of organic fertilizer per hectare, all worth P10,500.

The time and skills required to manage an integrated farm and several business ventures can be astounding. When asked how he is able to manage all this, "It is not enough that you are just an ordinary farmer. You have to be an owner, a manager, and a wise farmer at the same time," he concludes.

(*With contributions from Coxiela A. Cabrera)

Gusto namin MILYONARYO kayo!

This campaign supports the NUESTRA Project of PhilRice (see page 8). But unlike the conventional agricultural development programs, this campaign is behavioral change-driven rather than mere technology transfer. It is an action research campaign that aims to assess farmers' readiness and provide strategies to guide them through the stages of behavioral change toward rural transformation. Four key messages will be particularly emphasized in this campaign.

1

DAGDAGAN ANG MAPAGKAKAKITAAN SA INYONG BUKID

2

ALAMIN KUNG ANONG PRODUKTO ANG PATOK SA MERKADO

3

GUMAMIT NG MGA MAKABAGO AT ANGKOP NA TEKNOLOHIYA

4

I-PROSESO ANG PRODUKTO SA IBA'T-IBANG PAMAMARAAN


REPUBLIKA NG PILIPINAS

This Woman has a Voice in Rural Transformation

▶ MARY GRACE M. NIDOY

> "When women are empowered, whole families benefit, and these benefits often have ripple effects to future generations."
>
> -- The United Nations Population Fund --

The life of a retired teacher and now full-time farmer from Bagumbayan, Sultan Kudarat – **Rebecca Latog** – is a living testimony to this epigraph.

Ma'am Bekay as everyone would address her was last year's *Outstanding Rural Woman*, an award given by the Department of Agriculture through its Gender and Development (GAD) Program. She bested 11 contenders across the country.

A 2004 survey of the National Statistics Office (NSO) saw that 27.3% (2.8 million) of 10.4 million workers employed in agricultural, hunting, and forestry were women. Ma'am Bekay's story is one of the growing cases in the country where women empowerment has become an impetus to development. Her story particularly tells us of the hurdles she has gone through and how she creates an impact on a predominantly male-anchored industry – agriculture.

MARRIED TO FARMING

Ma'am Bekay was raised and continues to live her life in farming.

She recounts that her parents were making ends meet for the family from farming.

Her life has always been attached to farming that even the man she wanted to marry is a farmer. "I always wanted to marry a farmer. When I met my husband, I noticed his thick-skinned palm so right there and then, I knew he was the one for me," she says in jest.

Before Ma'am Bekay could transform her community, the first signs of transformation sparked within the family.

The early years of their marriage were not always rainbows and butterflies. *Manong* Hector, her husband, was hooked to several vices. She vividly remembers the time her husband nearly died out of drinking a lot of alcohol that clogged the air passages in his body. Thanks to her first-aid training from Red Cross, she was able to save him.

"My children became the subjects of some bickering at school because of their father but I told them not to worry because I would take care of the situation," she says. Farming became her silver lining.

"My husband always wanted me to go to farm with him. During those times, I would give him suggestions and pieces of advice to show that I was really interested in his work," she says.

"I'm a retired teacher and my husband is an agriculturist but oftentimes, I teach him the do's and don'ts of farming," she adds.

Her plan worked and Mang Hector eventually changed his ways.

"When I accepted my award, it was the first time in so many years that I saw my husband very happy," she says.

DEVOTION TO INTEGRATED FARMING

When Ma'am Bekay retired from teaching in 2006, she became a full-time farmer, managing their 22-hectare farm.

To make the most out of their farm, she always seeks information on new farm technologies from DA and other agencies. She realized that tending a single crop couldn't make a fortune. Hence, Ma'am Bekay decided to get into diversified and organic farming.

In palm oil, which comprises 16 ha of their farm, she earned P641,915 (net income) in 2012 or P40,000/ha. In the same year, she earned P49,900 from mango production plus P33,355 from mango puree processing. Her other sources of income include: banana production and saba processing, vegetable and mushroom production, livestock, and poultry.

As an organic farmer, she owns 10 vermicast beds and gets 25-30 bags of organic fertilizers every month that she uses on their own farm. Visit her abode and you'll see that every nook and cranny is filled with assorted fruits and ornamental plants making her entire lot look like a mini forest and nursery.

Ma'am Bekay also manages 2500 sq. of organic rice, for her family's consumption, and a fishpond. Through their income, they managed to buy a farm truck, which they use to transport their produce.

"Some people say that farmers only know 4 English words: failure, short and over drop. But I work so hard to prove them wrong," she asserts. Ma'am Bekay recognizes the fact that the success of a farm largely lies in its caretaker. "A lot of people are interested to farm but they don't know how to plant," the lady farmer laments.

She adds that "even if you know how to plant but don't know how to take care of your crops, then nothing will happen."

EMPOWERING WOMEN AND THE COMMUNITY

In the early years of managing their farm, Ma'am Bekay was a regular participant in training programs organized by the local government, DA, Cotabato Agriculture and Resources Research and Development Consortium (CARRDEC), and other national agencies.

"Every time I come back from training programs, I always share the new information and knowledge I learned with my fellow farmers," she discloses.

She uses her farm as a 'classroom', where she discusses and showcases how farm technologies work in actual. She does this in partnership with the Bagumbayan local government and other agencies that would invite her to serve as a speaker.

"I think the Rural Improvement Club (RIC) and the Mindanao Rural Development Program (MRDP) always invite me as their resource speaker because I'm a very talkative person", she jokes.

Some of her learners are her former pupils in grade school. "One of my former students, Emoloria Tortosa, attended my training about food processing and she told me that if not for banana chips, her two kids would have not graduated from college," she says.

Everyone in the community calls her *"Ang babaeng walang kapaguran"* because aside from being a farm manager and resource speaker in training programs, she also volunteers for the Alternative Learning System (ALS) and teaches the T'boli tribe in the upland areas of Bagumbayan. Every Wednesday, she rides a 'skylab' or '*habal-habal*' to get to the mountains and teach the indigenous people in the area.

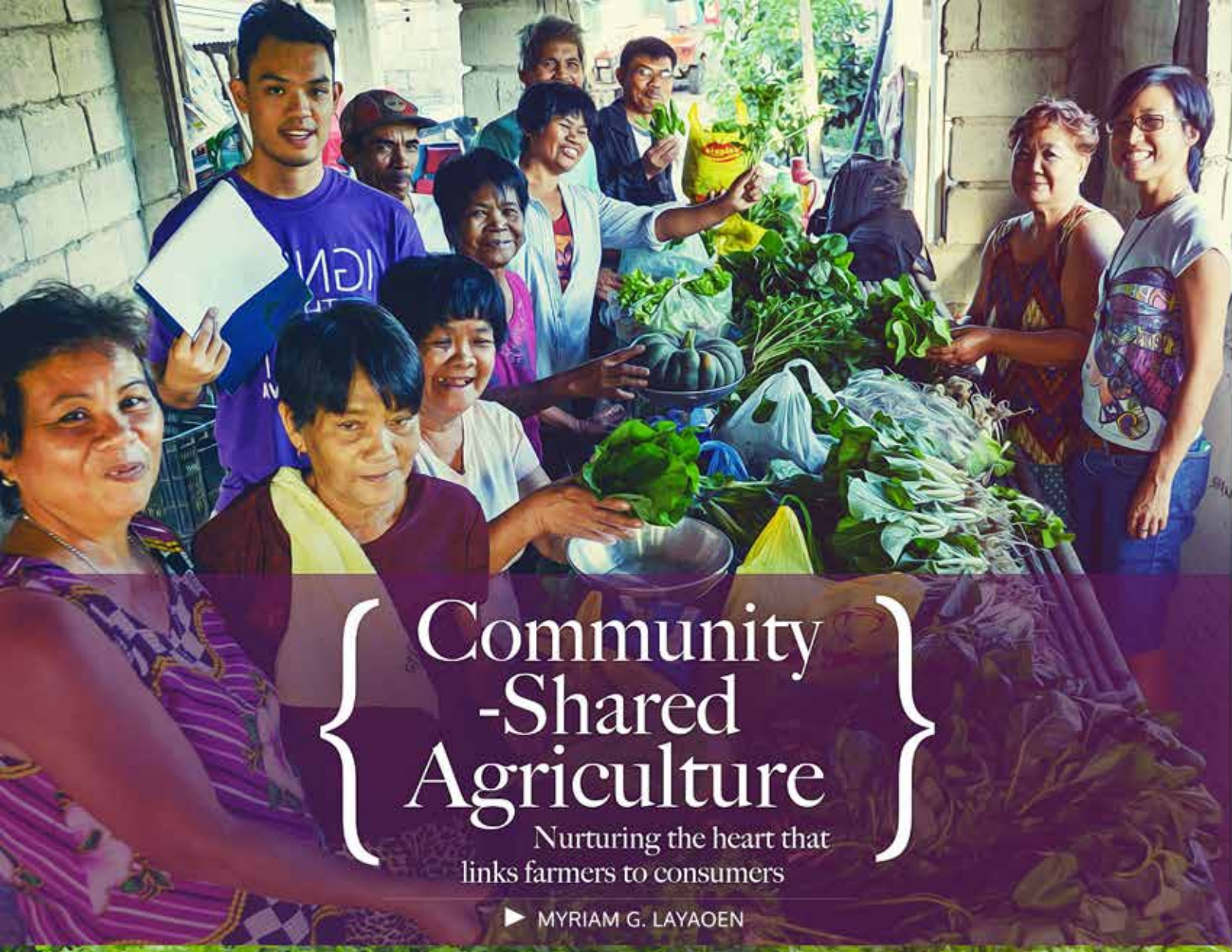
As if it's not enough, she has adopted 21 families who live in her own lot. Some of the members of these families work on her farm. "Sometimes, I teach them how to make 'kalakat' (woven oil palm strips) so that they could get additional income," she says.

DA Region 12 GAD focal person Fe Ybañez shares that Ma'am Bekay is a true example of an empowered rural woman-farmer who never gets tired of learning and sharing to others the good agricultural practices she's adopting in her farm, and very generous with the fruits of her labor.

"She inspires women like me to do better in the field of agriculture and confirms that women are equal partners of men in the pursuit of sustainable rural development," Ybañez adds.

In the midst of all this, Ma'am Bekay's work is far from over as she hopes to inspire more rural women in the country.

We tell Ma'am Bekay's story to demonstrate that women have the voice and active role to play in shaping agriculture into a productive industry that sustains the country's need for more food and income.



Community -Shared Agriculture

Nurturing the heart that links farmers to consumers

▶ MYRIAM G. LAYAOEN

In tears, Rosemarie Cajuguiran recollects her recent past when she literally broke her back growing her crops only to see her harvests wilt in vain. At her golden years, she stopped hoping to expand her production base from mere household consumption to the tables of the larger population.

The rest of the nearby rice, vegetable, and sugarcane farmers in Brgy. Manga, Capas, Tarlac shared the same sentiment. Harboring idle lands in their backyards only depresses their faith to earn more, send their children to school, and survive a decent living.

This WAS the past. Farmers now practice systematic production management, ensure a sustainable and healthy food supply for their family, and sell their produce to a more profitable market. When asked how, the farmers have only one thing in mind – thanks to good food!

GOOD FOOD'S HEARTY AND LEAFY MAGIC

The "good food" that farmers refer to is the Good Food Community Inc. (GFC), a group of young entrepreneurs who envision to bring closer the rural farmers to the urban dwellers by providing a marketing mechanism for the community's produce. Quezon City-based GFC is registered as a profit-oriented company but works as a social enterprise as it gears toward community-shared agriculture (CSA).

CSA establishes a deeper, more meaningful relationship between the farm producers and consumers. The system assures the smallholder farmers of a stable demand while providing the city folks access to healthy and delicious food.

"I've always wanted to work in a rural context. In my social circle, I see the demand for healthier food sources. I pondered on bridging the gap between production and consumption, thus, the birth of GFC," shares Charlene Tan, GFC founder and chief executive officer.

GFC developed a systematic model that organized individual farmers into a community with "a happier, healthier, more fulfilling way of living".

AGRI MARKETING AND ORGANIZING

Over the years, new trends in marketing agricultural produce have emerged. This has been driven by the increasing urban population with diverse food requirements and dynamic lifestyle. The Catholic Relief Services (CRS) Philippines in 2007 reported that the increase in demand for safe and quality produce, the want for leisure and convenience, globalization, among other factors gave rise to the dramatic change in agricultural markets. CRS believes that clustering or organizing farmers is an effective approach.

Forming associations and cooperatives among farmers has, however, been a challenge. Despite the various laws supporting farmer organizations, most farmer groups are not sustained. Dennis Araullo of the Department of Agriculture (DA) in 2006 attributed this to "weak enabling policy environment, lack of government support, weak capability-building systems, and absence of strong centralized agricultural cooperative financial, production, and marketing systems." Araullo acknowledged in his paper the significance of grouping farmers to attain individual productivity and economic growth for the country.

Farmers in an Islamic community in Palimbang, Sultan Kudarat can attest to that. Through the help of a non-government group and DA, they forged an agreement with the National Food Authority and fair traders in the neighboring municipalities where they can sell their produce. Last season, they were able to consolidate and sell more than 166,000 tons of paddy rice.

Good Food follows this lead and actually does more.

HOW IT WORKS

GFC utilizes the clustering approach but recognizes that harmonizing diversity of the people in the community is a key toward its success. Tan's team helped organize the farmers in the community to link their produce to the demand of their identified niche market, usually composed of people who are conscious of what they eat.

"We thought of bringing the consumers the freshest and healthiest food while providing our local farmers stable source of income. The CSA does just that. It establishes sustainable farming communities, produces healthy food, and cultivates the *bayanihan* (cooperativism) spirit among community members," explains Tan.

Through GFC, Capas farmers established the Capas Organic Farm Producers Cooperative (COFPC) in 2011 to systematize their production and marketing methods. They produce a great selection of vegetables from leafy ones like lettuce, mustard, *pechay*, and camote tops to hearty varieties like papaya, eggplant, squash, tomatoes, *ampalaya*, and a lot more. Most of them also plant rice and/or sugarcane.

Every Monday, the 20 farm-household members meet, usually in Cajuguiran's house, to plan the crops they will plant in the coming weeks so that vegetable harvest every Monday is possible. Tan, with her teammates Ernest Barreiro and Drei Castillo, gathers the produce for next day's delivery to customers in the metro. GFC buys the farmers' produce at a pre-agreed price.

At present, GFC has about 100 patrons in Metro Manila. To pre-order, a customer must register online (www.goodfoodcommunity.com) and pay through bank deposit. GFC offers a wide range of order combinations depending on the customer's preference. The customers will then receive their orders packed in bayong through door-to-door delivery or the 12 distribution hubs.

"We meet in cafès, a friend's house, or anywhere we can share our passion for healthy food and inspiring stories on working with the farmers. We also encourage our customers to personally visit the farms where their food is planted. This way, they may appreciate the drudgery in the field and the efforts that farmers put to feed us," says Tan.

GFC also implements the Fund-a-Farmer Project to aid the COFPC farmers in production expenses. Donors may send financial support through GFC to cover cost of inputs. Some of the funds are also loaned out with zero interest for facilities like greenhouses.

THRILLS AND REWARDS

"We did not really promise to drastically change their lives, but we assured them we will be with them all throughout. And that made them dream for themselves," says Tan, unconscious of the magnitude of the impact GFC has brought to the farmers' lives.

And yes, farmers have their own stories. Carlito Pabustan, 65, can attest to that as he now earns at least P1,000 a week from his 2,000 m^2 vegetable farm. He is one of the first farmers who engaged in organic farming in the area. In the past, however, he had difficulties in selling his produce.

"Good Food taught us to plan our planting calendar, something we didn't do before. More importantly, they introduced us to buyers who regularly order organic food," Pabustan remarks.

Another senior citizen, Federico Salac, now reaps the fruits of his used-to-be unproductive land.

"When I retired as a construction foreman, I just stared at my empty backyard until Good Food came to us. Farmers who lost faith in earning more from farming started to regain hope. Good Food dreams big for us, how can we not dream big for ourselves?" Salac says.

Most of COFPC's members are senior citizens and women. GFC helps them become productive while at home. Cajuguiran is one of them. She tills with her husband 0.8ha rice farm and 1,200m^2 vegetable land.

"The Good Food's marketing system provides us with weekly income for our daily needs, while my earning from rice gives my family a lump sum amount for savings and big expenses. Together, I believe we can still earn more," Cajuguiran says.

GFC's efforts may have started with little steps but the values they impart to the farmers is a giant leap that helps them cross the boundaries of agricultural production and marketing. In their humility, GFC's vision has evolved from simply partnering with the farmers into transforming their practice for a productive and sustainable rural community.

"We are really banking on the community aspect of development as farming is not something you can do alone. We hope that what we do can be a vehicle for us to be together toward a shared goal," Tan says.

With such vision, Cajuguiran's hopelessness will remain a thing of the past.

NO More Dead Dreams

▶ CHARISMA LOVE B. GADO

It was harvesting time, but Ninfa Benitua of Don Salvador Benedicto in Negros Occidental didn't want to get up, for the first time in her life. Surrender was easier than piecing together the fragments brought about by Typhoon *Pipang* in 1995, which left her a measly harvest of only .3 t/ha or 6 cav.

"Like my fellow farmers, I thought of giving up on our land. But then, I have 7 children; the youngest was 3. Their dreams were so vibrant and alive, and I don't have the right to destroy them. Through God's grace, farming gets them through school," says 'Nay Ninfa, 63.

'Nay Ninfa speaks fluent English despite finishing only 2nd year high school. Amidst her and her husband's success in educating their children, she humbled herself as a poor farmer in a tribute to senior citizens organized by the University of Negros Occidental – Recoletos.

But declaring poverty may just be her way of looking back to her journey few years ago. Her children now have careers in education, agriculture, commerce, engineering, criminal justice, social work, and medicine.

Her life in farming was transformed, so with her fellow rice farmers who have returned to farming because of the help of the Multi-Sectoral Alliance for Development-Negros (MUAD), a federation of organizations that helps marginalized groups in Negros.

MUAD CARE

'Nay Ninfa and her community are among the thousand farmers whose lives were changed, thanks to MUAD.

Reynic Alo, MUAD executive director, says that the alliance, established in 1990, envisioned "an improved quality of life in Negros through a strong and self-sustaining unity."

"We're one with PhilRice in helping farmers gross P1-M/ha in a year. But to do that, we have to promote agri-enterprise. Production alone cannot improve farming; business does," the agronomist Alo with extensive training on value-chain and entrepreneurship emphasizes.

With an alliance of more than 23 associations, MUAD promotes best development practices, mobilizes resources, and encourages concerted efforts toward reducing poverty in Negros. Its main thrusts encompass CARE: conservation of resource and enhancement of biodiversity; advancement of education services for adults and the youth; rural enterprise advancement program; and enhancement of networking and linkage-building for development.

In promoting agri-enterprise, MUAD establishes ICARE or Integrated, Climate-adaptive Agriculture, and Regenerative Enterprise farms, which Alo says takes 3 to 5 years to develop.

"When we say poverty alleviation, we have to compute the expenses and income; increase the inflow and sustain it. We noticed that farmers go bankrupt when disaster comes due to climate change. So in our 15-ha technology center in Calatrava, we test climate change-adaptive crops and technologies, and promote them in the ICARE farms," he explains.

Negros Occidental farmers learned to diversify as a result of the economic crisis brought about by world sugar prices that dipped in the early 1980s. Sugar plantation owners then invested in prawn farming, livestock, and high-value crops such as fruits and vegetables.

However, the farmers' long connection with sugarcane made them quite reluctant and unfamiliar with efficiently planting other crops.

"With funding from We Effect (formerly Swedish Cooperative Centre), we train farmers with 0.5 to 7-ha farms. We help them make farming sustainable and process and market their produce. We also connect them to processors and traders," Alo explains.

The Swedish organization funds the project until 2016. Alo enthuses that project sustainability is ensured with farmer groups already linked to the supply chain and will still receive technical assistance from MUAD.

We're one with PhilRice in helping farmers gross P1-M/ha in a year. But to do that, we have to promote agri-enterprise. Production alone cannot improve farming; business does.

-- REYNIC ALO --

"By connecting them to the market players, whom we organized and tapped, their farm operations will not be disrupted," he says.

BRINGING THE "DEAD" TO LIFE

Learning from her ordeal during the onslaught of typhoon Pipang, 'Nay Ninfa planted strawberries in her 100-sq m upland farm.

"Should strong typhoons damage my rice, I have another crop to harvest," she reasons.

With MUAD help, she and other "strawberry ladies" in their community, called Benjawan Integrated Social Forestry Farmers' Association (BISFFA) as a group, are reviving this sweet fruit's industry, which died 15 years ago owing to weak market link.

Together with 15 fellow farmers, BISFFA chair 'Nay Ninfa noted social and economic transformation in their community resulting from a 3-year collaboration with MUAD.

"MUAD first came to us in 2007 to provide loans. In 2010, they started to help us establish climate change-ready and sustainable farms, and process and market our produce. From then on, our lives were changed," she says.

In applying the organic farming technologies promoted by MUAD, 'Nay Ninfa said they have saved around P10,000 in a hectare in pesticide and chemical fertilizers.

"Many of us used to spend about P13,000 on chemical inputs. During the transition period from inorganic to organic farming, we only apply a sack of chemical fertilizer and home-made vermicast. Our crops are also zero-pesticide," she says.

When the community started to adopt the technology, farmers' harvest went up from 70 to 100 cav. The Negros Organic Rice Industry Association buys their rice, which is priced P7/kg higher than inorganic rice. Their produce are sold in Negros and in Metro Manila. Their yield in vegetables also went up by 5 to 10%.

Farmers who once abandoned their fields gradually returned to their farms to plant again. Of the 72 farmers in their barangay, only 10 are considered "inactive farmers."

"Before, we used to walk from our barangay to the market, about 6 km away. Now, we could afford to hire the habal-habal, (motorcycle taxi). We also used to eat hard rice, now it's soft rice," 'Nay Ninfa says.

From their increased income, Esmeralda Pañuelo had bought a tricycle, rotavator, motorcycle, and paid their debt within 3 years that MUAD had been supporting their community. Amy Rose Abada was also able to send her four children to school, and bought TV and DVD.

For 'Nay Ninfa, leaving the farm is like abandoning dreams. But dreams, intense as the colors of strawberries, need hard work and a bit of help to realize. MUAD provided the means, 'Nay Ninfa and her community adopted them and, as the strawberries symbolize, brought abundance in their barangay.

Service Beyond Seeds

▶ ANDREI B. LANUZA

In 2012, the Department of Agriculture initiated the creation of a nationwide network of locally managed community seed banks (CSB) that will ensure a steady supply of quality seeds by turning farmers into not only target clients but also seed "depositors". CSB is not a new concept; it already exists and has been operationalized in some parts of the country as a means to collect, preserve, and secure quality seeds of indigenous rice varieties and other crops. This is where the new CSB departs from the stereotypical concept of the norm.

BEYOND STORAGE

The CSB, aside from being storage areas for indigenous and popular varieties of farm crops, will also serve as a seed exchange, information, and technology hub for the surrounding community. As a centralized community service hub, CSB will provide technical assistance as well as training and extension (led by DA-Agricultural Training Institute in partnership with PhilRice, IRRI, DA-Regional Field Offices, and community-based NGOs). It will also maintain and manage seed banks, and give farmers the needed skills to properly store and preserve seeds to maintain their viability.

To maintain the CSB's stocks of seeds, Undersecretary for Operations Dante Delima has instructed PhilRice, DA-Bureau of Plant Industry, and the RFOs to plan and act on the strategic and timely positioning of right lowland and upland rice varieties in the regions. He also advised that the Seed Network, with funds provided by the National Rice Program, be utilized if the required registered seeds for the CSB cannot all be produced by PhilRice. For rice production, the CSB caters to all rice ecosystems, giving rice farmers better access to local and popular rice varieties.

DEMO FARMS

Another unique trait of the CSB is the establishment of a "back-up farm" alongside it, which serves both as seed production and technology demonstration area. This approach ensures that a steady supply of popular seeds is maintained, and provides a site to test and demonstrate the capabilities of new varieties and technologies.

This system will be particularly beneficial to marginalized farming communities where new information on farming, needed technical assistance, and other farming-related services are difficult.

FARMERS AS CLIENTS/DONORS

To help maintain and replenish seed stocks at CSB sites, the concept of having "farmer-depositors" was strategized as a means of sustaining them in the long term. PhilRice's Ruben Miranda of the Upland Rice Development Program explains that a 1:1.5 seed exchange scheme will be the primary means of maintaining and increasing the stocks of quality seeds for all CSBs.

"The idea behind the 1:1.5 scheme is for every kilogram of quality seeds given to a farmer, he or she is obliged to return at least 1.5kg of seeds after harvest," says Miranda.

"Without having to buy, farmers are afforded better access to quality seeds. This will also boost the sustainability of the CSB, by giving local farmers a stake on the continuity of the project. " he adds.

"The idea behind the 1:1.5 scheme is for every kilogram of quality seeds given to a farmer, he or she is obliged to return at least 1.5kg of seeds after harvest.Without having to buy, farmers are afforded better access to quality seeds. This will also boost the sustainability of the CSB, by giving local farmers a stake on the continuity of the project."

-- RUBEN MIRANDA--

POWER TO THE FARMERS

During the National CSB Conference in December 2013, Delima encouraged participants to organize a federation of CSB operators to give voice to issues and concerns, and institutionalize government support for the next administration.

He also instructed DA-ATI, DA-RFOs, and Local government Units (Agricultural Extension Workers) to provide accurate information on the yield potentials of rice varieties produced in specific ecosystems (upland or lowland). They also need to understand why farmers plant certain varieties to ensure that seeds in CSBs are well-adapted to local conditions, have good eating quality and aroma, and marketability.

To encourage CSBs to operate and perform at their best, awards will be given to the best-performing banks this year. The DA-National Rice Program, DA-BPI, and PhilRice will set the criteria for the awards.

₱5 TO A kilo OF Palay

► MERVALYN G. OPLAS

It appears possible, though it still borders on fact and fiction. With P5, farmers can produce a kilo of *palay* (unmilled rice).

Pampering the rice farm with wisdom and industry helps to achieve this.

In his first attempt at the grand slam 10t/ha at P5/kg input cost (10-5 Palayabangan Challenge), Job Sevilleja spent only P5/kg in bagging 7.5t/ha of palay.

PhilRice's Leylani Juliano, co-chair of the Challenge, rates 7.5t/ha as a very high yield. "Sevilleja was very efficient, good at resource and crop management," she says.

TEACHER TO FARMER

Sevilleja's joining the contest satisfied his desire to apply what he has learned in his lifelong experience in his parents' rented rice field in Alfonso Lista, Ifugao. This is seasoned by the knowledge he has gained from books on rice farming.

His passion for farming shot up after retiring as a teacher. Growing up in the farm has helped him see how important it is to follow certain systems.

"There is nothing costly in what I did in my *Palayabangan f*arm. I did not have any formal education on agriculture. It was good timing and management, and use of some economical technologies," he says.

He had lapses during the 2013 Wet Season contest. "I fell short of seeds so instead of using hybrid Mestiso 20 only, which I know is tried and tested, I had to use inbred Rc240 for the rest of the farm," he explains.

FARMING STRATEGIES

Proper land preparation is an important practice before planting. "There should be no high or low portions of the field because this malpractice causes low yield," he says.

He transplanted 11-day-old dapog seedlings at 20 x 20 cm distance.

In the *dapog* method, seedlings are transplanted young, seedbed size is reduced, seedlings do not suffer from root or stem injury, and labor cost for pulling seedlings is eliminated. However, the system needs enough water and a great deal of work. "The method calls for further improvement," Sevilleja challenges PhilRice.

He used organic (vermicompost and fermented plant juice) and inorganic fertilizers combined. He theorizes that the effects of organics on increasing rice yield are yet to be proven.

"We need to follow the exact time of irrigating the field," he advises.

The PalayCheck System guided Sevilleja in his farm maintenance. "We also had to follow a system in nutrient management. We have to consider good timing," he explains.

The top Palayabangan contender believes that it is better for rice farmers to plant synchronously to manage pests. This will help reduce concentration of pests in one spot because they will be scattered in the neighboring fields.

He shares that monitoring the farm is another plus. "Sometimes this is where farmers fail. They do not regularly visit their farms after planting to see the progress," he explains.

"Monitoring the farm is important. Sometimes this is where farmers fail. They do not regularly visit their farms after planting to see the progress."

-- JOB SEVILLEJA --

"It is best to comply with the prepared work plan," Sevilleja shares the wisdom he gained from his failure to follow his work plan.

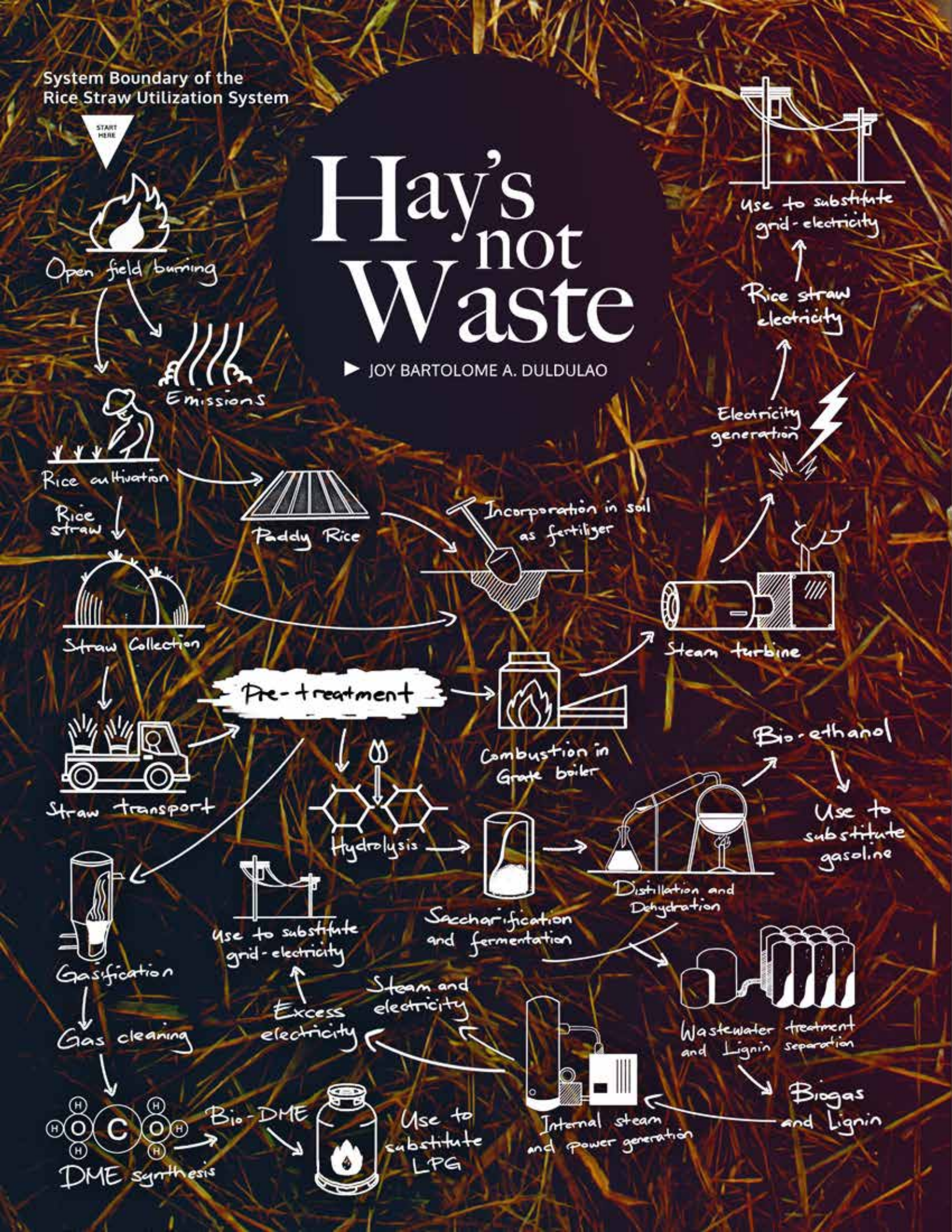
Sevilleja has joined the ongoing second season of the Challenge . "I failed in some aspects during the first season so I want to apply what I learned this season. I wrote the things where I failed so that I can improve on them now," he explains.

He is very positive that 10-5 can be achieved even by farmers who cannot afford costly technologies.

There may be many kinds of technologies popping up in this modern era. Everything can be done in a snap of a finger, but oftentimes it entails a large sum of money. In the Philippines, it is difficult for small-time farmers to cope. But, Sevilleja is a living testimony that the average Filipino rice farmer can garner higher yield at lesser cost, which means higher income.

Hay's not Waste

JOY BARTOLOME A. DULDULAO



Around 9 million tons of rice straw had been produced per year in Philippine farms in the past 5 years. A recent PhilRice survey saw that around 30% of farmers interviewed burned straw, 40% scattered and incorporated it into the soil during land preparation, and the rest either left the straw in the threshing area to decompose or for feeding animals, or gathered and stacked in one place for other purposes, such as mulching for vegetable crops.

For PhilRice's battle cry of enabling rice farmers to gross a million pesos a year from a hectare of land to be realized, the big bulk of hay that go to waste must be used in more profitable and environment-friendly ways.

Open-field burning of rice straw, on top of degrading local air quality, wastes a valuable resource for energy and fertilizer conversion. There are four rice straw utilization pathways currently recognized (see Figure) : direct combustion for electricity; biochemical conversion to bioethanol and biogas; thermo-chemical conversion to bio-dimethyl-ether (DME); and incorporation into the soil as fertilizer.

Heat and power generation from direct combustion of rice straw is widely adopted in developed countries such as Denmark, UK, Spain, and China. With the rapid growth in conversion technology development, rice straw is eyed as a promising feedstock for bioethanol and biogas conversion and for thermo-chemical conversion to synthesis gas, DME, methanol, and diesel. The use of rice straw as soil fertility enhancer is at odds with its potential as a biofuel feedstock, which poses a challenge in the promotion of sustainable rice straw utilization.

THE ENVIRONMENTAL DIVIDE

A 2013 study of Silalertruksa and Gheewala (2013) assessed in a "cradle to grave" scope the environmental impact of the use of rice straw for electricity, fuels, and fertilizer in Thailand. The impacts considered were global warming, resource depletion, eutrophication, acidification, photochemical oxidation, and human toxicity.

They found out that per ton of dry rice straw, the bioethanol pathway resulted in the highest environmental sustainability in terms of net reduction of global warming and resource depletion (RD) potentials. "Production of bio-DME had the highest impact on RD while use as fertilizer predictably had the least impact," the researchers stressed.

Eutrophication is the production of excessively high levels of macronutrients especially nitrogen and phosphorus. The net reduction in eutrophication potential (EP) was similar for rice straw-based electricity, bio-DME, and fertilizer. These pathways channel the rice straw away from open-field burning, which is a major contributor to EP. However, rice straw bioethanol had the biggest EP, which is attributed to its generation of organic waste water.

Open-field burning of rice straw causes the emission of SO2, NOX, CH4, CO, and particulates. Thus it highly impacts acidification (high emissions of acidifying pollutants such as SO2 and NOX), photochemical oxidation (associated with SO2, NOX, CH4 and CO emissions), and human toxicity potentials.

> The use of rice straw for fertilizer and energy therefore avoids the impacts of emissions on acidification, photochemical oxidations, and human toxicity. Among the four pathways, rice straw bio-DME had the least impact on acidification, followed by rice straw bioethanol and fertilizer.

THE BIG PICTURE

In a 2014 paper by PhilRice's Launio and coworkers, they determined factors that affect Filipino farmers' decisions to choose an option over open-field straw burning. When they choose to either incorporate the straw into the soil or remove it from the field, they are influenced by the type of farm they till, number of household members older than 13 years old, distance from farm to house, perceptions on impacts of open-field burning, awareness of environmental regulations, and attitudes toward incentives. When they exclusively choose to remove straw from the field, their decision is driven by income from non-rice farming, total area cultivated and tenure status. When they opt to incorporate the straw into the soil, the decision is influenced by their attendance in rice production training programs and their perceptions on the positive and negative effects of straw incorporation.

Launio and coworkers recognized policy directions so farmers do not engage in open-field burning. They stressed that it is important for government to sustain and expand efforts to train farmers not only on rice production but also on environment-friendly technologies. Furthermore, they pointed out that increasing the demand for rice straw for other uses and heightening awareness of environmental laws and regulations through information campaigns and drives can significantly discourage open-field burning. Public research institutions can greatly contribute in expanding the use of rice straw as other pathways in rice straw utilization do not yet exist in the Philippines.

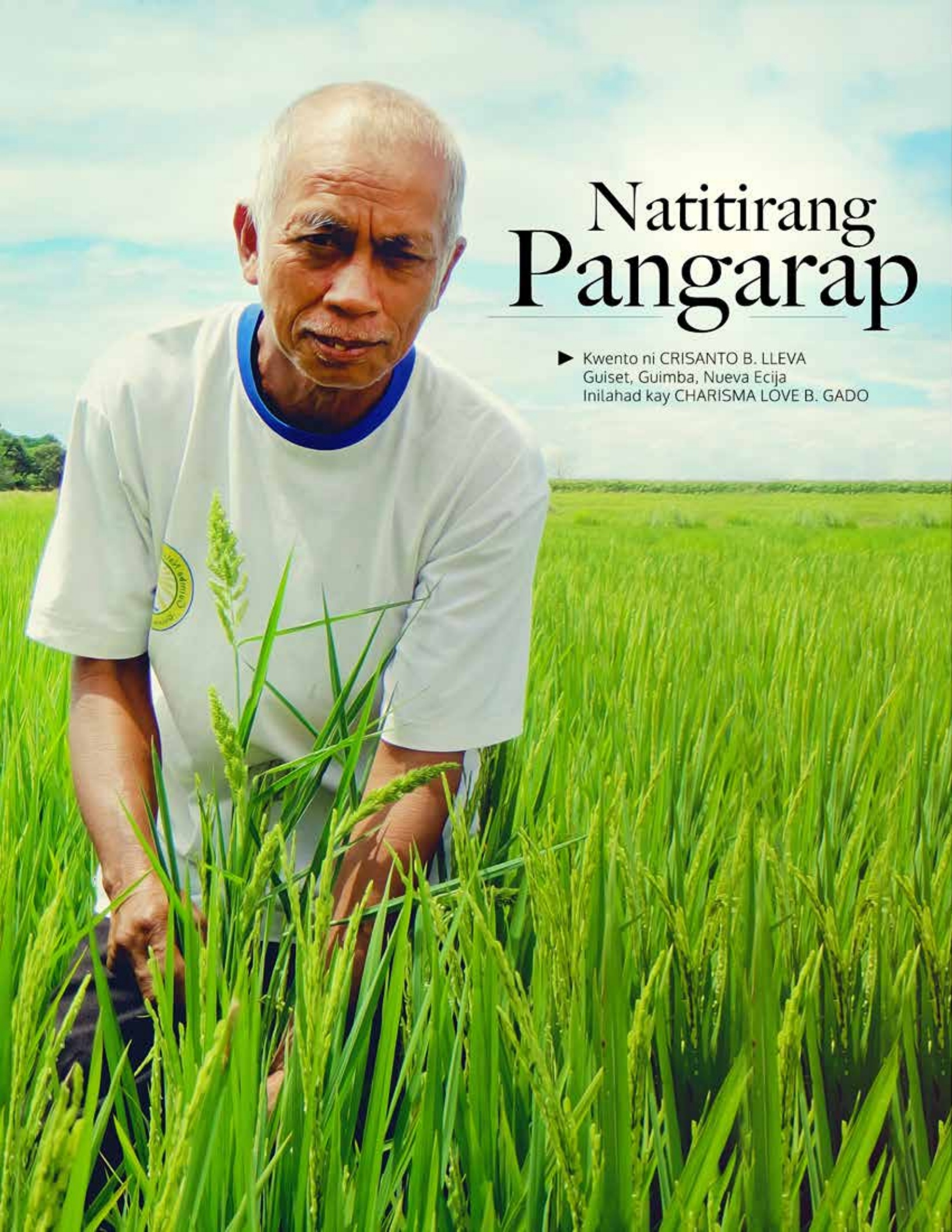
Clearly, the key environmental benefit of rice straw utilization is from avoiding the deleterious effects of burning straw in the field. Silalertruksa and Gheewala averred that policy makers must also understand the environmental impacts and performance of the different rice straw utilization pathways as well as the environmental "hotspots" from these production systems so that they can identify the effective measures for promoting sustainable rice straw utilization in the future.

In recognizing that rice straw is not waste and in harnessing its full potential, the lowly hay is transformed to an instrument of rural economic growth, employment generation, and, of course, cleaner environment.

Who doesn't want that?

Natitirang Pangarap

▶ Kwento ni CRISANTO B. LLEVA
Guiset, Guimba, Nueva Ecija
Inilahad kay CHARISMA LOVE B. GADO



Sa edad kong 59, mayroon pa akong natitirang pangarap. Gusto kong yumaman. Makaluwag man lang. Gusto kong magpatayo ng machine shop para makatulong sa kapwa mahirap. Mahal kasi ang magpaayos at ang mga piyesa ngayon. Bigyan sana ako ng Maykapal ng lakas ng katawan at loob na magsaka at medyo kumita din.

Sa pagsasaka, pwede sigurong kumita ng kalahating milyong piso sa isang ektarya kung may magpapautang ng puhunan na hindi malaki ang porsiyento; 30% ang interes ng mga maykayang nagpapautang sa amin. Kung mga 5% man lamang sana, ok na.

Mahirap magsaka sa sahod-ulan. Sa krudo pa lang lalo na kung tag-araw, tatlong drum na ang aming nagagamit. Sa 600 litro, halos P25,000 na ang aming gastos. Panay utang yun ah, pag umani ako, binabayaran ko agad.

Sa taniman, uutang na naman. Kaya walang gaanong neto, puro palabas. Nababaon sa utang kaming mga magsasaka. Mayroon ako diyang 4,000 sq m na pwedeng gulayan kaya lang di ko pa natatamnan. Panay kugon ngayon ang bukid! Paano, wala akong P10,000 na puhunan.

Napapagastos din kami sa patubig lalo na kung datnan kami ng kalaliman ng balong (water table) mula Marso hanggang Abril. Naghuhukay kami. Malalalim ang hukay para makakuha ng tubig.

Kung maayos ang patubig, pwedeng kumita ng malaki sa pagpapalay at paggugulay. Tuluy-tuloy kasi ang pagtatanim. Kung nayari ka sa pagpapalay, magtanim ka naman ng gulay gaya ng kamatis. Piso ang isang kamatis pag Oktubre. Kaya dapat makapagpunla ka ng kamatis mga Hunyo 30 para matamaan mo ang mahal na presyo.

Wala akong ibang trabaho kundi pagsasaka at minsan, pag-aalaga ng kalabaw at manok. Naitataguyod ko naman ang aking pamilya; 4 ang anak ko.

Ang pinakamalaking benta ko sa pagpapalay ay P80,000 sa isang ektarya. Pero kokonti lang ang natitira sa akin. Mayroon sigurong mga limang sako ng palay at P2,000. 'Yung ibang kita naman, pang-kusina at para sa pag-aaral ng mga bata. Nag-asawa ako sa 34 na edad, kaya ang aking bunso ay 16 na taong gulang pa lang.

Malaking katipiran din ang reduced tillage (modified plowing) at ang paggamit ng organic pesticide. Nakatipid ako ng P2,000 sa reduced tillage at P50 na lang ang nagagastos ko sa pagkontrol ng mga insekto. Imbes na kemikal, nagbuburo ako ng isang kilong siling Taiwan, sibuyas, luya, at bawang. 'Yun na ang aking pang-isprey.

MINANANG PAGSASAKA

Higit 40 taon na akong nagsasaka. Konti man ang kita, di ko na ipinagpalit ang gawaing ito. Pamana ito sa akin ni tatay. Hindi ako nag-aral nang mabuti kaya pinahinto niya ako. Third year high school nga lang ang inabot ko. Nagsisisi man ako, huli na.

Marami na akong dinanas na hirap sa pagsasaka. Andiyan 'yung alipungahin. Kahit umuulan at kumikidlat, nasa bukid pa din ako, nagtatrabaho. Kalabaw pa nun ang gamit. Hindi gaya ngayon, may handtractor na kaya mabilis nang magsaka. Kaya lang, wala namang naiipon. Hanggang sa pagkain lang.

Sa mga dinanas ko, hindi ko naisip na mahirap magsaka. Kung iisipin ko 'yan, ano ang ikabubuhay namin? Wala na kaming ikabubuhay kung ibinenta ko ang lupa, at bumili ng tricyle. Wala na, laspag na siguro. Wag na din ang sari-sari store. Baka nalustay ko pa ang puhunan.

Nakaaaliw naman ang pagsasaka. Pag mataas ang ani, naaaliw ako. "Ah, sa susunod, gagalingan ko pa ang pagsasaka para lumaki ang kita." Itong bahay namin, naipatayo ko mula sa pagsasaka lang. Gastos ko diyan, mga P50,000. Sa akin pa ang punong-kahoy.

Kailangang magsumidhi kang magsaka para kumita ng malaki. Sipag at tyaga ka lang. Minsan, nakakabalakid ang pag-inom nang sobra kasi di ka na makapagtrabaho nang maayos. May mga kaibigan eh, syempre naman, hirap tumanggi. Pero kung ang pag-iwas sa sobrang pag-inom ng alak ang dahilan para makamit ang mas mataas na kita, ang kalahati o isang milyong piso, pwede namang bawasan. Nasa iyo na 'yan, nasa isang magsasaka na 'yan, kung gusto niya itong makamit.

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USAPANG MAGSASAKA

DALAWANG MAGSASAKA NAG-UUSAP SA DI KALAYUANG LUGAR NG TIBOK-TIBOK...

GUSTO NAMIN
MILYONARYO KAYO!

• Ito ay isang kampanyang itinataguyod ng PhilRice katuwang ang Kagawaran ng Agrikultura na naglalayong maitaas ang kita ng ating mga magsasaka at makapagbigay ng trabaho sa ating mga mamamayan o ang pagkakaroon ng Rural Transformation.

• Maisasakatuparan ito sa pamamagitan ng pagtatatag ng isang nucleus upang magsilbing 'service provider' para sa mga magsasaka kung saan tuturuan sila ng mga angkop na mapagkakakitaan at suporta sa pamamagitan ng mga training at farm mechanization.

Ano nga ba ang mga estratehiya upang makamit ang 1-milyong kita kada ektarya kada taon?

Tandaan ang mga sumusunod na 2 M para makamit ang 1-M!

1. Magtanim o magsagawa ng ibat-ibang uri at angkop na mapagkakakitaan sa inyong bukid. Wag makuntento sa isa at nakasanayan!

2. Makilahok sa isang samahang makapagbibigay ng mga kinakailangang suporta.

▶ MARIA ADRIELLE S. ESTIGOY

Palay

by: Angel G. Parayao
(Seed Grower) Bahay Pare, Candaba, Pampanga

Butil kang nahulog sa tigang na lupa
Lumasap ng pait, biro ng tadhana
Sa maghapon singkad ay nakatihaya
Sa init ng araw tuyot nang mistula

Pagdating ng gabi saklot ng panganib
Baka sa daraan itong dagong ganid
Bakit magkahalo ang takot at lamig
Ang buong katawan ay kinakaligkig

Sa araw at gabi naghahari'ng takot
Sa buhay daw niya'y bahala na'ng Diyos
Lalo't isang gabi'y kumidlat, kumulog
At hindi nagtagal ulan ay bumuhos

Paniniwala mo'y lalo kang kawawa
Katawa'y nababad at lubhang namaga
Nakapagtataka'y kung anong hiwaga
Sa nadarama mo'y parang tuwang-tuwa

Katawa'y namaga, at kusang bumitak
At magmula roo'y sumulpot ang ugat
Nang ito'y humaba ang inaapuhap
Sa noo'y tigang na lupa'y lumikha ng butas

Sumulpot sa iyo ang tila karayom
At hindi nagtagal ito'y naging dahon
Ito ay lumaki sumupling yumabong
At ito'y naglihi sa takdang panahon

Naging masaya ka sa iyong paglilihi
Sa pagbubuntis mo ay nagmamalaki
Sa simoy ng hangi'y ipinaghehele
At ang pagsilang niya'y sinasabi-sabi

Sumilang sa iyo ang uhay na sutla
Sa pagmamahal mo ito'y naaruga
Nakapagtataka sa butil mong mura
Gatas ay naroong tila kakang gata

Sa tangkay mong angkin ay idinuruyan
At iniuugoy naman ng amihan
Pagaspas ng daho'y nagsilbing kundiman
Inaawitan ka at isinasayaw

Sa uhay mong hitik hubog puso't lintog
Nagmistulang gintong pinagtuhug-tuhog
Bakit ang ayos mo ay nakabalantok
Parang sinasabing sukdol na sa hinog

Dahil maganda ka'y daming nakapansin
Sila namang lahat gusto kang maangkin
Walang anu-ano'y biglang may dumating
Ikaw ay pinutol nang may panggigigil

Nang ika'y maputol saka binilad
Ika'y pinatuyo't, katawa'y nilanat
Sa uhay mo ika'y pilit na nilugas
Buhay na buhay ka'y inalis ang balat

Nang ang iyong ipa ay maipahangin
Sa kalderong sunog ika'y isinaing
Ginatungan ka ma'y hindi makadaing
Dyos ko'y ikaw na pong bahala sa akin

Ika'y inihain sa mahabang hapag
Pinagsaluhan ka nang walang patawad
Ikaw ay naubos hindi man nagluwat
At sa busog sila'y nagpapasalamat

Buhay mong malungkot kahit na naapi
Taas ang noo mo na nagmamalaki
Sa silong ng langit mayama't pulubi
Lunas ka sa gutom di kayang itanggi

Butil ka ng palay na yaman ng lupa
Misyon mo sa buhay banal at dakila
Sa kapalaran mong bigay ng Lumikha
Alay mo sa taong ikasasagana

STAFF EX

Getting to know some of PhilRice's R&D Brains

PART II

JAYSON C. BERTO

The road to R&D is often long and arduous that tests patience and perseverance. In a world of endless revisions of proposals, deep-rooted methodologies, immersed data gathering, and brain-wrenching analysis of data, we take a look at PhilRice's diverse yet focused researchers and development workers and how they contribute to a more competitive rice R&D.

NORVIE L. MANIGBAS

53, Oriental Mindoro

Supervising SRS
Plant Breeding and Biotechnology Division

ACADEMIC PROFILE:

Post-Doctoral Fellowship
Rural Development Administration
[South Korea]

PhD Agriculture
[Crop Physiology and Plant Breeding, UPLB]

MS Crop Science Credit Units
[Wageningen Agricultural University, the Netherlands]

BS/Master in Agriculture [UPLB]

RESEARCH:
Breeding rice for heat tolerance, direct wet-seeded irrigated lowland, molecular marker-assisted breeding for drought tolerance and hybridity tests, conducting multi-location yield trials, genotype x environment data analysis; academic loads as Affiliate Professor at the Graduate School of Central Luzon State University, Adjunct Associate Professor at UP Los Baños; writing, publishing, and presenting research outputs in national and international scientific journals, conferences, conventions, and workshops.

DINDO AGUSTIN A. TABANAO

40, Cebu City

Chief SRS
Plant Breeding and Biotechnology Division

ACADEMIC PROFILE:

PhD Applied Plant Science
[University of Minnesota]

MS Plant Breeding [UPLB]

BS Agriculture [cum laude, UPLB]

RESEARCH:
Plant breeding and molecular genetics (agronomic traits and stress resistance); population structure analysis; molecular phylogenetics and plant genomics. Since 2008, he supervises genome wide selection for grain yield, marker-assisted selection for native and transgenic bacterial and viral disease resistance, mixed model analysis of multi-environment data, and association analysis of drought tolerance. He currently leads the Rice Technical Working Group, which is composed of National Seed Industry Council, Bureau of Plant Industry, and Department of Agriculture representatives.

TRAORDINAIRE:

RONAN G. ZAGADO

33, Misamis Oriental

Senior SRS
Development Communication Division

ACADEMIC PROFILE:

PhD in Media Studies
[with Thesis Excellence Award, The University of Adelaide, South Australia]

MS in Development Communication
[with cognate in Community Development, UPLB]

BS in DevCom (major in Journalism),
[Central Mindanao University]

R&D WORK:
Trained in communication and media for development with intensive application in agriculture, particularly in rice. He specializes in: campaigns, content development, science/popular writing, ICT for development, and communication research (social and cultural dimensions). His PhD dissertation was a critical analysis of texting as an everyday farming practice in the Philippines. He now leads the development campaign '*Gusto Namin, Milyonaryo Kayo*' that aims to spur behavioral change toward rural transformation. He also does research on: 1) Ethnomethodological study of the PalayCheck adoption, and 2) Knowledge production, sharing, and consumption of the Pinoy Rice Knowledge Bank.

JONATHAN M. NIONES

38, Davao City

Supervising SRS
PhilRice Midsayap

ACADEMIC PROFILE:

PhD in Bioagriculture Science
[major in Crop Physiology, Nagoya University, Japan]

MS Plant Breeding
[minor in Plant Physiology, UPLB]

BS Agriculture [major in Plant Breeding and Genetics, cum laude, University of Southern Mindanao]

RESEARCH:
Evaluating the interaction of root traits – related quantitative trait loci and soil stress factors in rainfed lowland and upland rice systems, a project collaboration of PhilRice and Nagoya University. He helps develop location-specific rice varieties adapted to rainfed drought and submergence - prone areas, particularly in Mindanao. He significantly contributed to the development of Raeline 3, a promising line for rainfed lowland drought-prone areas.

MARY ANN U. BARADI

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Supervising SRS
PhilRice Batac

ACADEMIC PROFILE:

MS/PhD Agricultural Engineering,
[UPLB]

BS in Agricultural Engineering
[cum laude, Mariano Marcos State University]

RESEARCH:
She helps develop postharvest technologies for traditional rice, expecting to modernize threshing, drying, storage. Besides, she leads the development of pre- and post-harvest management of aromatic and organic rices.

DIVERSIFY
your farming to earn more and beat climate change

INTENSIFY
to maximize farm use, earn more, and create employment

INTEGRATE
to increase farm value-adding

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