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COALITION FOR AGRICULTURE MODERNIZATION IN THE PHILIPPINES, INC.

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Pathways to a P20 per kilo of Milled Rice

by EUFEMIO RASCO JR., Academician and CAMP President

There is a prevailing sense of panic in the government machinery as it seeks to deliver the "aspiration" of President BBM to provide the Filipino consumer with milled rice at P20 per kilo. At first glance, it seems impossible. Even if we import, the "aspiration" will still be beyond reach, because the landed cost of imported milled rice is P24 per kilo. On the other hand, locally produced milled rice (at the prevailing palay price of P17 per kg) can only be sold at prices exceeding P35 per kilo because of high marketing cost.

If the government is looking for a quick solution, the key is reducing the cost of marketing. President BBM knew this when he asked for improvements in the value chain for agricultural products.

If the cost of marketing can be reduced to zero and milling recovery is increased by 10% to 74.5%, then palay bought at P17 per kilo will give milled rice at P22.80 per kilo. This is within the range of President BBM's aspirations.

But of course, the cost of marketing cannot be reduced to zero. Its efficiency can only be improved.

How? Localized marketing is a viable option. One can conceive of a system wherein farmers can mill their own palay and supply the local markets directly. The worst case scenario for this system is that the price of milled rice will not be reduced but farmers will earn more, as they perform the services provided by the prevailing centralized marketing system. Farmers will also keep the by-products of milling, which can be used as feed or soil conditioner. Farmers may



Photo from <<https://www.freepik.com/photos/sticky-rice>> Sticky rice photo created by jcomp

"science and technology for agriculture and fisheries transformation"



COALITION FOR AGRICULTURE MODERNIZATION IN THE PHILIPPINES, INC. (CAMP)

is a non-stock, non-profit organization whose members are men and women from agriculture, agribusiness, academe, government, professional groups, and international organizations that advocates and promotes sound agriculture policies and programs; massive utilization of climate-resilient and environment-friendly agricultural innovations; and, improved governance and management systems to help improve the livelihoods of Filipino farmers and fisherfolk to achieve a productive, profitable, globally competitive, modernized, and sustainable Philippine agriculture for inclusive national development.

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be able to sell the milled rice at a price competitive with imports while keeping their income above the poverty threshold, because their income would not come only from palay but also from the other value adding services that they will perform.

One can imagine a small rice mill operated by farmers' cooperatives in every community. Consumers buy rice retail, bringing their own bags (good for the environment as well, if they use "bayong" instead of plastic bags).

To make milled rice available at a lower price to the consumer, another strategy is for the consumer to do the marketing services herself. She can buy palay directly from the farmer, and mill it. In this manner, she can minimize the marketing cost. By how much? According to a PhilRice survey reported in 2016, the gross marketing margin for milled rice is P9.06 per kilo (*Figure 1*). A big part of this is returns above major costs (profit that accrue to traders, millers, and retailers), which is P4.43. But the consumer can also save on transport, storage and packaging. Total savings is P7.16 per kg. A consumer cooperative can do this better than individual consumers.

Table 11.1. Differential gross marketing margins (GMM) and marketing costs, by function, PhP kg⁻¹ of milled rice.

Item	Philippines (PH)	Indonesia (IND)	Thailand (TH)	Vietnam (VN)	Differential PH vs IND	Differential PH vs TH	Differential PH vs VN
Gross marketing margins (GMM)	9.06	5.61	5.27	4.55	3.45	3.79	4.51
Total marketing cost	4.63	4.97	2.73	3.78	-0.33	1.91	0.85
Drying cost	0.26	0.62	0.33	0.52	-0.36	-0.07	-0.26
Transport cost	2.09	2.22	1.08	1.76	-0.12	1.02	0.33
Milling cost	1.38	1.22	0.89	0.93	0.16	0.48	0.44
Storage cost	0.19	0.40	0.20	0.23	-0.21	-0.02	-0.04
Packaging cost	0.45	0.24	0.14	0.22	0.21	0.30	0.22
Cost of working capital	0.27	0.28	0.09	0.11	-0.01	0.18	0.16
Returns above major cost	4.43	0.65	2.54	0.77	3.78	1.89	3.66

Figure 1. Cost of marketing in the Philippines compared to Indonesia, Thailand and Vietnam (Bordey, F. H. et al, 2016).

A complementary strategy is to switch to brown rice, which gives a 10% higher milling recovery than white rice. Consumption of brown rice gives consumers better nutrition. It is suited to localized marketing because of its short shelf life.

The needed technology for the above strategies are already in place and in fact, being used to some extent. Small mobile or stationary rice mills (*Figure 2*) are now being used, primarily by workers who are paid palay (sharing system) or by small rice farmers that are not being served by the centralized marketing system operated by traders and big millers.

Another technology is the household type of rice mill (*Figure 3*). The PhilRice model shown here can be pedal powered or motor powered.

In the proposed strategy, the government may help farmers and consumer cooperatives to purchase their own rice mills through grants from the RCEF or loans. If the farmers and consumers own the rice mills, they can maximize the savings. Consumers can further help themselves by switching to brown rice. If these strategies are executed in scale, the price of milled rice can only go down without sacrificing the income of farmers.

On the production side, PhilRice has demonstrated that a production cost of P7 per kg of palay is attainable in scale, although it may require more cost, effort, and time to achieve than the marketing cost reduction approach. Any palay production cost reduction between this possibility and the prevailing cost of P12 per kg will add to farmers' income and lead to reduction in the price of milled rice.

On an optimistic note, the P20 per kg milled rice may not be exactly out of this world. But President BBM or farmers alone cannot deliver it. The consumers must help by doing the marketing function themselves and switching to brown rice. The P20 per kg "aspiration" requires UNITY among consumers, the political leadership, and the farmers.



Figure 2. Mobile rice mill.



Figure 3. Pedal-powered brown rice mill designed by PhilRice.



A Promising Batangas as PAFES Begins

by RICKY BRYAN BIAGTAN

The Province-led Agriculture and Fisheries Extension System (PAFES) is one of the 18 key strategies of the Agriculture Department to transform the agriculture sector of the country. It aims to develop and harmonize plans and programs by the province and component LGU's as well as collaboration with the academe and better private sector to serve those in the grassroots level.

Last July 19, 2022, the Provincial Government of Batangas, through the Office of the Provincial Agriculturist, successfully kicked off their Province-led Agriculture and Fisheries Extension System (PAFES) in their province at Regina Reyes Mandanas Memorial DREAM Zone, Capitol Hills, Batangas City.

Present in the launching were Provincial Agriculturist Dr. Rodrigo Bautista who gave an overview of PAFES; DA ASec Engr. Arnel V. De Mesa who distributed certificates of agricultural interventions; and Gov. Dodo Mandanas who pledged his strong support towards the improvement of life of local farmers and fisherfolks. Also participating in the said event were



members of the Sangguniang Panlalawigan, staff from DA, members of US Agribusiness Trade Mission, and Mr. Crisanto Gualberto as CAMP Representative.

The event was followed by an exhibit of various agricultural products by different participating cooperatives and groups at the Community Food Market.

Photos from Batangas Provincial Agriculture Office's FB Page

CAMP's Growing Force

by RICKY BRYAN BIAGTAN

CAMP keeps on enhancing its overall expertise as two seasoned Development Management Specialists joined its force. Last July 16, 2022, Dr. Evan Anthony V. Arias and Ms. Brenda B. Furagganan were inducted as members during the CAMP's 7th Board of Trustees (virtual) Meeting.



DR. EVAN ANTHONY V. ARIAS

He is an Environmental Planner and Development Management Specialist.

He earned his Bachelor's degree in Civil Engineering at Central Philippine University. He also has a post-baccalaureate degree in Environmental Resource

Management from UP, a Master's

degree in Business Administration from International Academy of Management and Economics, and a Doctor of Management degree from Central Philippine University. His career and experience span 30 years dealing with development projects in all sectors. His areas of expertise include governance, local government planning and development, metropolitan arrangements, and comprehensive land use planning focused on urban-rural linkages, tourism planning and development, DRR-CCA, environmental management and road network planning, development, and management.



MS. BRENDA B. FURAGGANAN

She is a Development Management Specialist.

She earned her Bachelor's degree in Computer Data Processing Management from Polytechnic University of the Philippines. She also earned Master's degrees in Business Administration from Adamson University and

Development Management from Asian Institute of Management. She had served as Chief of TESDA Women Center, Director of TESDA, National Project Manager of Arabic Language and Islamic Values, Executive Director of Health and Development for All Foundation, Inc. (HADFAFI), and President of Aptissimi Development Innovations, Inc. (ADII). She is also an Adjunct Faculty in Asian Institute of Management.

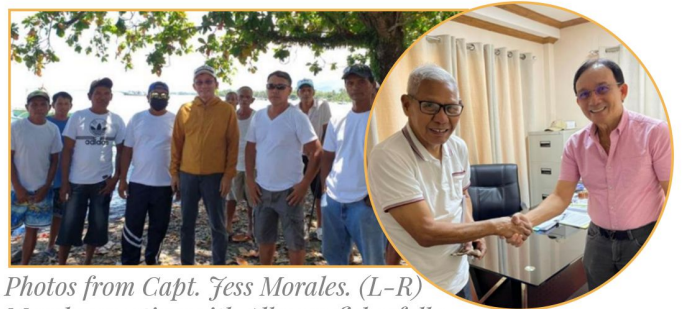
Stem the Tide, Trim the Sails

by RICKY BRYAN BIAGTAN

CAMP recognizes the vital role the maritime industry plays towards the economic recovery of our country. As Capt. Jess Morales- a former mariner and businessman, shared his experience and insights to the other members, the Coalition had a better grasp of the reality our local fisherfolks and ferry operators experience.

To stem the tide of sea mishaps and declining fish production, we need to trim our sails by modernizing the maritime industry. This would entail policy reforms to impose similar tax reliefs and incentive schemes given to foreign shipbuilders to local shipbuilders to lower the cost of vessel production; improve the coastal and inland waterways transport system for safer transport and trading operation; and boost the domestic production for food security and sustainability.

Aside from Capt. Jess involvement in the Philippine Association of Coastal and Inland Waterways Ferry Inc. (PACIWFI) as the founding President, he also took the initiative and started a shipyard and fishport project in Albueria, Leyte. It seeks to help local fisherfolk and ferry



Photos from Capt. Jess Morales. (L-R) Morales meeting with Albueria fisherfolks and Mayor Sixto Dela Victoria

operators upgrade their fleet being hindered by financial constraints. This is possible through good payment terms such as bareboat charter and rent-to-own scheme. Moreover, IMP Shipyard is now considering collaborations with the Albueria LGU, Philippine Fisheries Development Authority (PFDA), and local fisherfolk in establishing a modernized fishport to match the vessel modernization.

The Coalition sees the IMP Shipyard and Fishport project as a good start to revolutionize our nation's maritime industry. CAMP's hands are on deck to help improve the quality of lives of maritime stakeholders especially our small fisherfolks in the countryside.

Agri Department Launches a Transformative Plan for the Philippine Food System

by RICKY BRYAN BIAGTAN



Photo from Licas News



Photo from Agriculture Monthly



change-induced risks. Agricultural commodities are classified into five commodity systems (i.e., (1) rice-based, (2) corn, livestock, and poultry-based, (3) coconut-based, (4) fisheries-based, and (5) geographically specialized).

Other unmentioned commodities are subsumed once or many times into these five commodity systems. Furthermore, solutions pathways out of poverty or commodity system are established to guide the agencies (e.g., DA, LGUs) and other stakeholders in conceptualizing comprehensive commodity-based roadmaps.

Last May 2022, the Department of Agriculture led by then Sec. William D. Dar formally launched the National Agriculture and Fisheries Modernization and Industrialization Plan (2021-2030) (NAFMIP 2021-2030). This is a medium-term directional plan that aims to transform the national food system towards a "food-and-nutrition-secure and resilient Philippines with empowered and prosperous farmers and fisherfolk".

In order to achieve this, a whole-of-a-nation approach having interrelated and complementary plans, programs, and activities is necessary. NAFMIP features three component plans that embodies this strategy.

1. COMMODITY SYSTEMS PLANS aim to shift farmers and fisherfolks away from a single commodity to various viable combinations of crop, livestock, poultry, and fishery commodities to create a diverse income and employment opportunities and minimize climate

2. REGIONAL PLANS are based on commodity systems plans heavily dependent on the information generated by the GIS-supported Integrated Spatial Planning Framework (ISPF). These guide regions and provinces in developing diversification-oriented commodity systems suitable in their area to ensure the maximum utilization of human and natural resources. Diversification takes four directions which are (1) combining primary production with linked commodities, (2) adding value by venturing in one or more postharvest value chain segments to engage in a linked enterprise while continuing primary production; (3) increasing production of non-commodities to supply quality food for health and nutrition improvement, and (4) doing non-farm livelihood activities during off-season.

3. FUNCTIONAL PLANS focus on decentralization and devolution. These present the specific support services that are necessary in each segment of the commodity value chain. These plans will be given to concerned DA units along with outputs of stakeholder consultation (e.g., smallholder farmers and fisherfolks, enterprises, and LGUs). These will guide the steering roles of DA and other agencies and the complementary rowing functions of LGUs in consideration with the Mandanas

ruling in preparing service delivery transition plans that will show delineation and convergence of central and local functions.

CENTRAL LEVEL STEERING FUNCTIONS

1. formulating policy, plans, systems, advocacy, and results-based monitoring and evaluation (RBME)
2. developing regulations and product standards
3. developing credit, insurance, and financing facilities
4. developing local and international agribusiness and market
5. promoting private investments and organizing AF industry organizations
6. constructing and establishing infrastructure and facilities for commodity systems
7. developing capacity of LGU's and private sector
8. developing transformative R&D and ICT-enable AF

LGU LEVEL ROWING FUNCTIONS

1. enforcing policy, regulation, and product standards
2. providing production support services
3. facilitating credit, insurance, and financing
4. linking of farmers, livestock raisers, and fisherfolks groups to agriculture and fishery industrial business corridors (AFIBCs) and other markets
5. developing capacity of farmers, livestock raisers, and fisherfolks
6. maintaining and operating of production and postharvest infrastructure, facilities, machineries and equipment
7. institutional strengthening of small farmers, livestock raiser, and fisherfolk cooperatives and associations
8. conducting research, extension, and training for development (RETD)

It also contains the following transformative plans for budget and investments, governance and capacity development, performance management, and communication to complement the aforementioned plans.

CAMP has always been advocating for the modernization of the agri-fisheries sector through improved governance and management, timely and relevant policies and programs, and maximized utilization of climate-resilient and environment-friendly innovations. CAMP President and Academician Eufemio Rasco Jr. together with CAMP Members Mr. Cesar Umali Jr., Dr. Evan Anthony Arias and Ms. Brenda Furagganan was involved in drafting NAFMIP 2021-2030.

Visit tinyurl.com/NAFMIP20212030 for full copy of NAFMIP 2021-2030.



Photo from Armecin et al, 2010.



CAMP Meets DA-PCC

by DANILDA HUFANA-DURAN

CAMP Chairman NS Emil Javier, CAMP President Acd. Eufemio Rasco, and members Acd. Arnel del Barrio and Ms. Virma Rea Lee met with Philippine Carabao Center's (PCC) OIC Executive Director Dr. Caro Salces and technical staff Dr. Danilda Hufana-Duran, Dr. Rommel Herrera, Mr. Jimmy Espina, and Ms. Angela Jane Andres last July 27, 2022 at Institute of Plant Breeding, UPLB to go over the National Carabao Program.

The meeting centered on the six-year strategic plan to upscale the production of calves using reproductive biotechnologies and bulls through the entrustment program. To meet the national milk and meat demand by 2027, the target annual nationwide calf production is set to 200,000 calves both for meat and dairy purposes. This is 10x higher than the existing annual target of 20,000-30,000 calves.

A holistic strategy encompassing various aspects of the production system is necessary to reach this target. As issues in the production system were identified during the meeting, possible solutions and innovations were also discussed.

1. INCENTIVIZE AI TECHNICIANS - a provision of P2,000 incentive to artificial insemination (AI) technicians (both from private and government agencies) shall be included in the program to motivate and provide income to these key players in the production of calves in the country.

2. MAXIMIZE USE OF ENTRUSTED BULLS - this is to maximize the reproductive performance. Bulls shall be

stationed in strategic areas called "bull motels". All the females in estrus (receptive period) shall be transported using a roaming vehicle operated by the bull handler for mating. Once the bull has produced 25 calves, the bull handler can own the entrusted bull. Another strategy is the "moving bull" where proven bulls are placed in reconstructible animal pens stationed in pre-identified locations for night corralling with females in the area. After impregnating all the females, bulls will be transferred to other pre-identified areas and stay again for 3 months. The bulls are rotated to promote diversity and avoid inbreeding. PCC shall procure a minimum of 50 proven bulls annually to augment this initiative. Active mapping of all breedable female buffalos shall also be carried out to ensure intensified breeding services for both AI and Bull Program.

3. STRENGTHEN COW-CALF OPERATION SYSTEMS - this is to overcome the low interest of farmers to use 50:50 female crossbred (CB) for dairying and rescue these crossbred from slaughterhouse. PCC shall serve as a broker to bridge farmers who want to sell their 50% CB to farmers who want to operate a cow-calf farm that will carry out the backcrossing to produce Philippine Riverine buffalo. A social networking app shall also be established to facilitate the connection between the buyer and the sellers. The traceability of animals shall also be observed.

4. EXPAND DAIRY COOPERATIVE OPERATIONS - this primarily involves the promotion of circular economy strategies to spur growth, reduce costs, and build resilience among buffalo raisers. Strategies include vermicomposting and methane gas production which

aim to reduce carbon footprint and promote green technology. Moreover, cooperatives shall be supported to meet the animal requirement capacity; new dairy farms shall be established, the export market of dairy products shall be explored; and, a billionaires' cooperative shall be formed.

5. SUPPORT PRIVATE BREEDING ESTABLISHMENTS - this involves the creation of private facilities like the "bull motel" and cow-calf operation systems. Interested operators shall be provided with technical and logistics support to ensure the success of the venture.

6. UPSCALE FEED PRODUCTION INITIATIVES - this entails strengthening of livestock feed producers and modeling various crop-livestock integration systems to support an efficient livestock production. Silage and soilage production shall be promoted to potential farmers in appropriate areas as a source of income. The crop-livestock integration system shall be promoted to producers of coconut, cassava, sugarcane, corn, and other potential feed crops to add value and increase buffalo production systems. The potential of ipil-ipil, acacia, and other trees with leaves palatable to ruminants and resistant to drought shall be

promoted in hilly and mountainous areas to optimize production systems.

7. STRENGTHEN FROZEN SEMEN PRODUCTION FACILITIES - this involves the complete operationalization of semen collection and processing facilities of PCC in Central Mindanao University (CMU) to produce a sufficient volume of frozen semen that can support the target calf production. The export of frozen semen shall also be done to maximize the use of genetically superior bulls and generate funds for the sustainability of the bull farms and semen processing labs.

In addition, the National Milk Feeding Program is hoped to invigorate local milk production to supply the program's milk requirement, benefit more farmers and entrepreneurs, and boost the national dairy industry. Milk hubs and milk collection systems shall be strengthened and improvement of milk quality and innovations in new dairy products shall be undertaken.

The meeting ended with the note that whatever we do meets the national needs and lays the foundation for lifelong needs and long-term solutions.

Alternative Rice Dryer Launched in Quezón

by RICKY BRYAN BIAGTAN

In the Philippines, sun drying is the most common way of drying palay (unmilled rice). This is by spreading the grains (usually on the roads or concrete lots) and exposing them to solar heat. It may be a low-cost and environment-friendly method but it is also labor-intensive, time-limited, and weather-restricted. There are instances where farmers' palay are soaked wet due to sudden weather changes. The wet palay needs to be dried immediately otherwise will yield low milling recovery, poor grain quality, or germinate after some time. This reality faced by our farmers motivated CAMP member Mr. Jose Diego Roxas, a graduate of BS Agricultural Biotechnology, to initiate a community small rice dryer project.

Mr. Roxas introduced the coil-heating system-based BAU-STR dryer from the Bangladesh Agricultural University in a community in Lopez, Quezón last 2021 dry season. The design was chosen due to its low-cost, simple, and user-friendly design suitable for smallholder farmers who cannot meet the minimum volume for commercial dryers. After pilot testing, output quality was relatively good; however, it is not drying fast enough (moisture removal rate is about 0.5-0.75% mc/hr). In the wet season of the same year, he opted to try LPG in lieu of a heat coil as the heat source. Significant improvement in drying rate was observed (0.75%-1.0% mc/hr) which leads

to higher service capacity. This 2022 dry season, the LPG-based dryer was again used for final trial/demonstration. Farmers and millers, who were very hesitant before to use mechanical dryers due to the burnt smell it leaves to the palay, gave good feedback and acceptance to the technology.

As of the moment, two millers already gave an advance notice to use the dryer this coming wet season harvest. This is a good start towards cascading alternative technology to minimize post-harvest losses, maximize income generation by our smallholder farmers, and ensure rice self-sufficiency in our country.





Appeal for the Retention of Dr. Leo Sebastian as Undersecretary of Agriculture

The Coalition for Agriculture Modernization of the Philippines joins many voices from the community of agriculture scientists, farmers and advocates of agriculture modernization in calling for the retention of Dr. Leo Sebastian as Undersecretary of Agriculture. We believe his action at the Sugar Regulatory Administration (SRA) is within his delegated authority and it is justified by information about sugar supply and the condition of the sugar industry.

He joined the Department of Agriculture (DA) about one year ago with an outstanding record as an individual with competence and integrity, and a leader in agricultural development. His distinguished career in public service in PhilRice rising from the ranks to become the second Executive Director, was punctuated with recognitions such as Outstanding Young Men of the Philippines, Outstanding Young Scientist, and Pantas Award.

Dr. Sebastian also has an exceptional record in international agricultural development, having served in the Consultative Group for International Agricultural Research (CGIAR) centers for many years. He was awarded the prestigious “Medal for Contribution to the Cause of Agriculture and Rural Development” from the Ministry of Agriculture and Rural Development of Vietnam (MARD), the highest possible honor from the ministry given to someone who has made a significant contribution to agriculture and rural development of the country.

In his short stint with the DA, he supported the Secretary in crafting progressive policies and programs, efficiently and without fanfare. He has been very thorough in studying problems, consulting stakeholders and experts when required. Throughout this period, he was never implicated in any wrongdoing.

We believe he can do more to serve the country if given the chance to continue as Undersecretary of Agriculture.

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