

2020

PhilRice R&D Highlights



RICEponsibleR&D



Science-based Policies in Advancing Rice Communities

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Science-based Policies in Advancing Rice Communities

Program leader: **Alice B. Mataia**

EXECUTIVE SUMMARY

The Science-based Policies in Advancing Rice Communities (SPARC) Program was created to build a strong science-based and supportive policy environment that will guide national and local decisions on rice-related issues. Program outcomes were achieved through the synergies of its two projects. Project FIRE (Fostering Improved Rice Research Environment in Policy) aims to generate and provide science-based information and policy recommendations to influence or provide support in the making of sound policies and programs. Meanwhile, project BURN (Building Unified Rice Network Through Campaign and Advocacy) packages and communicates the generated policy relevant information to policymakers and rice stakeholders to advocate for policies.

Under project FIRE, relevant science-based information and policy recommendations were disseminated through two policy papers and two policy briefs. The policy brief on truthful labeling was also used as reference for a campaign on National Rice Awareness Month (NRAM) celebration, which promoted locally-produced rice to consumers. Related to this, a proposed ordinance, “Truthful Labeling Ordinance of 2020,” was submitted and lobbied to local government units (LGUs). The project also provided the Department of Agriculture (DA) with policy analysis and recommendations related to falling palay prices. Quick study report on the impact of projected 16% increase in third quarter *palay* production on *palay* prices and on the National Economic Development Authority proposed determination of the critical level of farmgate price for 4Ps rice subsidy was forwarded. Articles on *palay* prices were drafted to educate the public about this issue.

On the other hand, project BURN spearheaded the ‘Grow Local, Eat Local, Buy Local’ campaign to promote the 2020 NRAM focusing on the entire rice value chain from production to marketing and consumption of locally produced rice. The campaign was implemented mostly through digital platforms, which resulted in 98.4% reach and 196.12% engagements. A total of 36 advocacy campaign materials were also produced, packaged, and communicated/uploaded through Facebook and shared to partner agencies. The project also established network and rice champions by tapping celebrity Toni Gonzaga and Mayors Vico Sotto and Isko Moreno to support

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the advocacy campaign especially in the implementation of the truthful labelling ordinance, respectively. A KADIWA rice as a brand for locally-produced rice was also soft launched to provide better marketing and income opportunities for local farmers.

SPARC also organized and conducted a policy forum on mobilizing LGUs to solicit support for farmers toward this year's advocacy campaign. Through the policy forum, our network with the League of Provinces of the Philippines (LPP) was strengthened. Three webinars were also conducted for farmers, consumers, and rice stakeholders to communicate policy results and increase public awareness.

Fostering Improved Rice Research Environment (FIRE) in Policy (Policy Research)

Alice B. Mataia, Aileen C. Litonjua, Manuel Jose C. Regalado, Jesusa C. Beltran, Aerone Philippe G. Bautista, Janine P. Curibot, Paula Marie G. De Gracia, Richelyn Rose D. Clavero, and Racquel F. Ibarra

This project aimed to generate and provide science-based information and policy recommendations to influence or provide support in crafting sound policies and programs for a favorable rice policy environment. To achieve its outcome, the project conducts policy research of existing and emerging issues across the rice value chain wherein research results are translated into forms that can be considered or used for policy making. These information or recommendations are in the forms of policy paper, policy brief, position paper, briefer, and short articles that are also used to support rice policy advocacies. Moreover, the project provides a quick response to the Department of Agriculture (DA) policy discussions.

In 2020, the project produced plentiful and rich information, which can be used as a reliable source of information for policymaking on research conducted (1) price analysis of F1 seed, (2) credit system, and (3) changes in the rice production systems. The study on public F1 seed provides information on the price analysis of public F1, which showed that at government price of P212/kg, the net profit was P89.98/kg, which is 42% of the unit price of F1, suggesting that seed growers and cooperatives are earnings favorable returns. However, net profit on a per hectare varies due to unstable yield and high cost of seed production. Government price of F1 is reasonable; however, to sustain the net earnings of seed growers and cooperatives, the following were recommended: improve hybrid rice research, development and extension, enhance government support to small seed producers' cooperatives, increase demonstration sites of public hybrid rice varieties, and establish Memorandum of Agreement between seed cooperatives and DA.

The study on credit offers information on why farmers chose informal sources despite the lower interest and penalty rates, bigger loanable amount offers, and longer loan period from formal sources. Farmers prefer informal lenders due to accessibility and because they are friendly to the farmers. Hence, it is recommended that the government should focus more on intensifying information dissemination of credit programs that are farmer-friendly and engage more lending conduits to host low cost-credit programs to make them available and accessible. Major findings of the study were also disseminated through a webinar with 359 post views. The study on changes in the rice production systems provide insights on the most notable changes in the Philippine rice production system, which is the adoption of combine harvesters for mechanical harvesting, which resulted in reduced labor use and production cost.

PROJECT 1

In addition, the project produced policy recommendations to support advocacy activities that help create a favorable policy environment in the rice industry (1) truthful labelling of rice source and (2) crop diversification as a strategy to increase farm income. The approval of the Rice Trade Liberalization (RTL) Law in 2019 repealed the regulatory functions of National Food Authority (NFA) including its role in enforcing national grain standards. This provides leeway for some rice retailers to disregard the labelling guidelines. The policy brief on truthful labelling was used for advocacy campaigns to elicit LGUs' support on enforcing prescribed labelling of rice through a local ordinance. Meanwhile, the policy brief on crop diversification included a strategy to increase farm income, policy options, and initiatives to address low adoption of crop diversification.

Information and policy analyses were also prepared and provided to DA and congress for policy discussions: (1) quick study on the impact of projected 16% increase in Q3 *palay* production on *palay* prices, (2) review of National Economic and Development Authority's proposed determination of critical farmgate prices, and (3) *palay* support price. Short articles were also disseminated to spur awareness on pressing issues on *palay* prices: (1) sustainable measures to address falling prices of *palay* and (2) price difference between wet and dry *palay*. An article titled, "Sell quality dry *palay* for higher income, farmers told," was uploaded on the PhilRice website.

The project likewise provided relevant policy information in the conduct of two policy forums on mobilizing LGUs to support local rice farmers and on safety and quality of locally-produced rice. These settings elicited support from the LGUs and sparked interest among rice consumers.

Economic Analysis of the Hybrid Rice Seed Price in the Philippines

Alice B. Mataia, Aerone Philippe G. Bautista, and Paula Marie G. De Gracia

Hybrid rice plays a major role in attaining rice self-sufficiency and security. However, adoption remains low due to the persistently high price of its F1 hybrid seed, which makes it non-affordable to ordinary farmers. Amidst ordinary farmers' inability to buy hybrid rice, local hybrid seed producers are also calling for an increase in the price of public F1 due to low seed yield and high production cost. Thus, this study assessed the unit price of public F1 hybrids through the analysis of the costs and returns of seed production, processing, and marketing functions across the hybrid seed value chain.

Value additions across the chain were also examined to determine the distribution of the unit price of F1 seed and the financial position of major actors in the total chain profits. Public hybrid rice seed growers from major seed producers' cooperatives in major hybrid rice seed producing provinces were also surveyed.

Results showed that public hybrid seed growers produced an average yield of 1,649kg/ha (hectare) of clean F1 and 1,275kg/ha for R-line. The analyses of costs and returns showed that seed growers and cooperatives spent total costs of P122.02/kg, in which seed production cost got the largest portion (77%), followed by processing cost (18%), and marketing cost (5%). At government procurement price of P212/kg, they incurred a net profit of P89.98/kg, which is 42% of the unit price of F1, suggesting that seed growers and cooperatives are earning favorable returns. Of these total profits, cooperatives received 66% while seed growers who encounter more production risk got only 33%. On a per hectare, net profit is variable due to unstable yield of F1, limited supply of parental lines that constraints them to produce sufficient supply and sustain the demand and bidding process of the government. This study found that the suggested price of public F1 seed is just right. However, the shares of seed growers and seed cooperatives need to be improved to favor seed growers who are facing more risk than the other players in the chain. The following policy imperatives are recommended to sustain profits of key players and increase adoption of public F1: (1) improve hybrid rice research, development, and extension; (2) enhance government support to small seed producers' cooperatives; (3) increase demonstration sites of public hybrid rice varieties, (4) establish a Memorandum of Agreement between producers' cooperatives and the DA, and (5) improve the distribution of share of profits in favor of seed growers.

A Review of the Credit System for Rice Farmers

Aileen C. Litonjua, Janine P. Curibot, and Alice B. Mataia

Sufficient capital is necessary to help farmers produce a bountiful harvest. Almost half of them (42%) in 2003 borrowed money (PhilRice-BAS, 2003, as cited by Mataia and Dawe, 2006) to have adequate capital for their production. But despite availability of low-interest credit programs of the government, majority of them still sourced credit from informal lenders. This study aimed to review the credit system to understand such behavior of rice farmers. Descriptive statistics were used to determine the differences between formal and informal lenders while regression analysis was employed to determine the factors that could significantly influence a farmer's decision to borrow from formal or informal sources. Results showed that among formal lenders, most farmers loaned money from cooperatives while they borrowed money from individual private lenders among informal sources. Formal lenders had the capacity to offer bigger loanable amount, had lower interest and penalty rates, and provided longer loan period than informal lenders. The cost of credit was also lower for formal creditors than their counterpart. Despite this, farmers still chose informal lenders because it is more convenient and easily available in the locality. Informal lenders were also easier to access because of farmers' good relationship with them (e.g., relatives and close friends); hence, higher chances of approval. Farmers who borrowed capital from informal sources lacked self-confidence, had less diversified household income, and were less involved in farmer-organizations. Regression analysis identified membership in farmer-organizations, longer loan period, and lower monthly interest rate as some of the significant factors that could increase the possibility of farmers borrowing from formal sources. Features of some existing credit programs were observed to have considered these important factors; thus, considered farmer-friendly. The government, therefore, could focus more on intensifying information dissemination about these programs and how farmers could access them through different extension modalities. Engaging more lending conduits to host these low-cost credit programs can also help increase loan access in the rural areas.

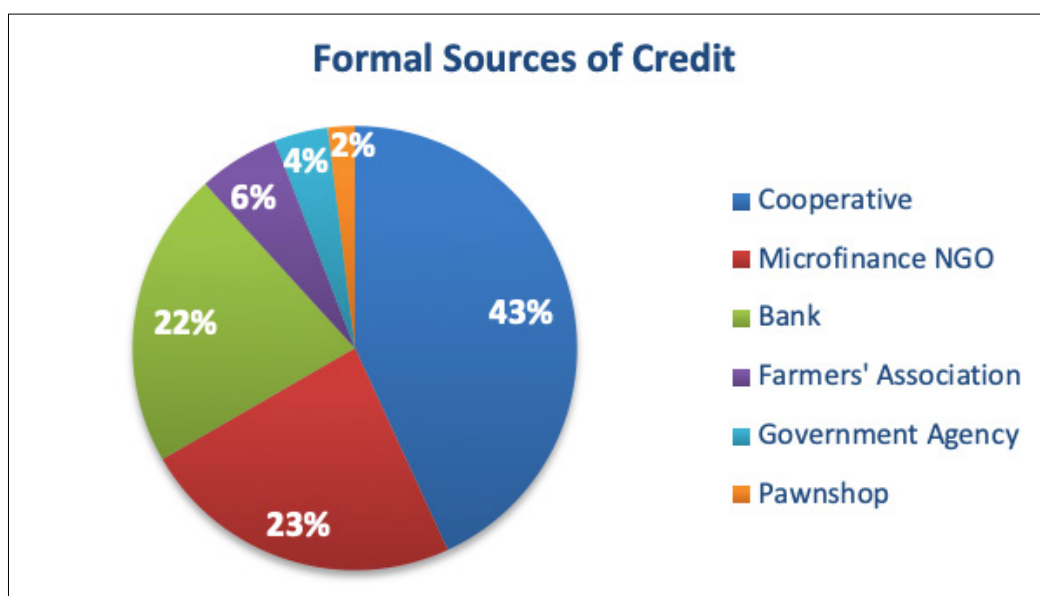


Figure 1. Formal sources of credit, top rice-producing provinces in the Philippines, 2019.

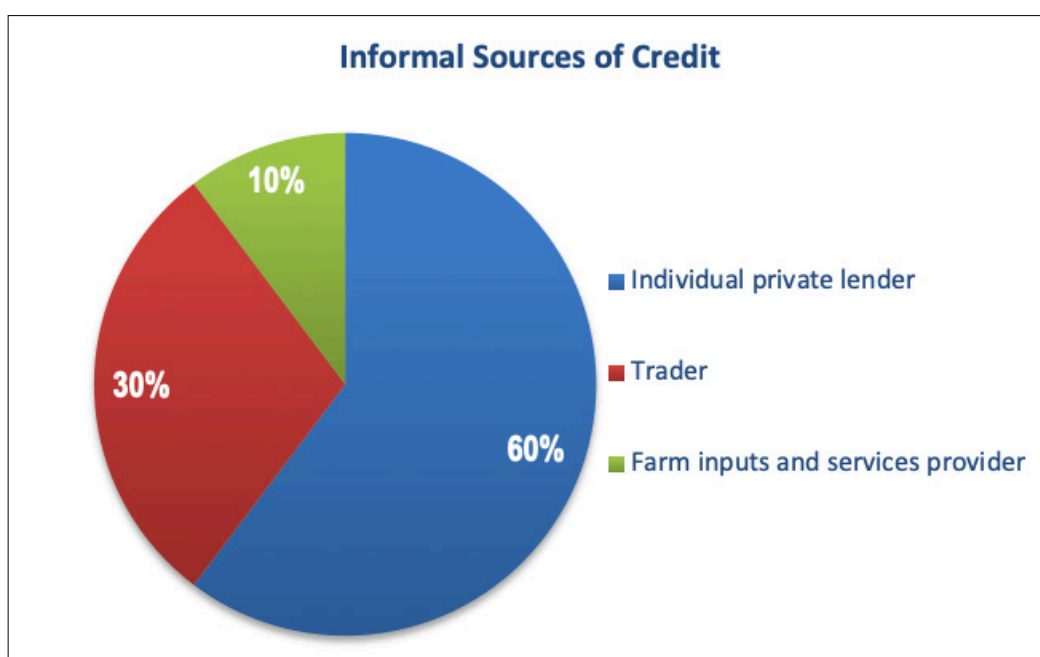


Figure 2. Informal sources of credit, top rice-producing provinces in the Philippines, 2019.

PROJECT 1

Table 1. Characteristics of usual sources of credit of farmers, top rice-producing provinces in the Philippines, 2019.

Characteristics	Formal	Informal
Amount of loan provided (PhP)	32,948	24,534
Monthly interest rate (%)	3.12	7.00
Loan period (%)		
1 - 6 months	84	99
> 6 - 12 months	14	1
more than 1 year	2	-
Mode of payment (%)		
Cash	94	82
In-kind	-	13
Both	6	4
Default-payment penalties (% per month)	2.34	2.84

Table 2. Credit schemes/arrangement of farmers with usual source of credit, top rice-producing provinces in the Philippines, 2019.

Credit Scheme/Arrangement	Formal (%) (n=51)	Informal (%) (n=68)	All (%) (n=119)
None	92	88	90
Credit marketing tie-up	-	6	3
Avail farm inputs and/or services of creditor	-	4	3
Staggered payment	8	1	4

Table 3. Socioeconomic characteristics of farmer-borrowers by source of credit, top rice-producing provinces in the Philippines, 2019

Socioeconomic Characteristics	Formal (n=51)	Informal (n=68)
Age	56	54
Sex (% male)	65	74
Civil status (% married)	78	87
Years of schooling	9	9
Farming experience	29	24
Average household size	4	4
Attendance in training	69	44
Membership in organization	86	50
Rice land cultivated	1.67	1.28
Rice land owned	0.90	0.78
Tenurial status (% owner)	71	72

PROJECT 1

Table 4. Average annual income of farmers by income source, by source of credit, top rice-producing provinces in the Philippines, 2018

Income Source	Formal (n=51)	Informal (n=68)
Rice	273,261	163,994
Non-rice	61,555	52,858
Non-agricultural	177,986	137,523
Average household income (total)	512,697	354,374

Table 5. Cost of credit per P1,000 amount of loan by source of credit, top rice-producing provinces in the Philippines, 2019.

Costs	Formal (P1,000 loan)	Informal (P1,000 loan)
Transactions costs	43	9
Cost of requirements	24	0
Cost of travel	5	3
Cost of hours spent	14	6
Interest paid	180	280
Average monthly interest rate (%)	3	7
Average loan period	6	4
Cost of credit**	223	289

** significant at 5% level of probability.

Table 6. Reasons for choosing specific creditors, top rice-producing provinces in the Philippines, 2019.

Reasons for choosing the lender ^a	No.	%
Formal (n=51)		
Fast loan release	29	57
Low interest rate	27	53
Convenience/no paper requirements	13	25
Credit scheme	13	25
Member of the cooperative	10	20
Informal (n=68)		
Fast loan release	38	56
Convenience/no paper requirements	34	50
Relationship to creditor	32	47
Low interest rate	16	24
Availability	9	13

^aMultiple responses

Table 7. Factors affecting the decision of farmers to borrow from formal creditors.

Variable	Coefficient	Std. Error
Membership in organization*	1.9996	4.4446
Loan period*	0.8824	0.6351
Monthly interest rate*	-0.3060	0.0569
Constant*	-4.2961	0.0171
Observations	116	
Pseudo R2	0.4079	

* significant at 1% alpha.

Drivers and Pathways of Changing Rice Production Systems

Manuel Jose C. Regalado, CAngulo, Richelyn Rose D. Clavero, Jesusa C. Beltran, and Aileen C. Litonjua

This study is a component of an international project, RICH-3P (Rice in Change: Patterns, Pathways, Perspectives), in collaboration with the University of Bonn, Germany; Yezin Agricultural University, Myanmar; Royal University of Agriculture, Cambodia; and Philippine Rice Research Institute, Philippines. The project determined and analyzed emerging patterns and pathways of change in major rice production and assessed likely future perspectives of rice systems and their implications for well-being at the farm and food security at the regional scale.

In the second workshop held in April 2019 in Phnom Penh, Cambodia, the project implementers agreed to have two additional sites for the Philippines to gain more information on how things changed for Philippine rice production systems at peri-urban and remote rural sites, which were in Bulacan and Aurora, respectively.

The Philippine project team gathered data on previous and present rice farm practices by interviewing 402 farmers in the study sites: 201 from San Ildefonso, Bulacan and 201 from Dilasag, Aurora. To ensure data accuracy, soil sampling and farm area measurements were also conducted.

One of the most notable changes that happened in the Philippine rice production systems is the adoption of mechanized harvesting. The use of the combine harvester shortened harvesting time and reduced production cost.

PROJECT 1



Figure 3. Farmers' forum and survey feedback in San Ildefonso, Bulacan, January 2020.



Figure 4. Farmer's forum and survey feedback in Dilasag, Aurora, January 2020.



Figure 5. Soil sampling at farmer's rice field in Bulacan, January 2020.

Building Unified Rice Network (BURN) Through Campaign and Advocacy (Policy Advocacy)

Ronan G. Zagado, Alice B. Mataia, Jungie A. Diamsay, Aerone Philippe G. Bautista,
Gladys May G. Cristobal, Allan C. Biwang Jr., and Angeliko L. Sevilla

This project sought to actively influence policymakers and other stakeholders to achieve a science-based and supportive rice policy environment towards a rice-secure Philippines. This was implemented through various communication strategies, which constitute the two studies of this project. Study 1 is “Create SPARC: Development and production of popularized knowledge products on rice and rice-based policies”. This study popularized existing and new policies in the form of various knowledge products to influence decision-making on interventions that will help improve the Philippine rice industry. Study 2, “Ignite SPARC: Influencing rice policy directions through advocacy campaigns,” explored and utilized communication modalities to disseminate popular versions of policy research outputs to help legislators in crafting policies on rice; aid decision makers in the adoption of sound rice interventions/programs; and educate the general public on the relevance and use of rice advocacies.

Under study 1, a campaign to promote the National Rice Awareness Month (NRAM) was carried out, focusing not only on the production aspect, but also on marketing and consumption of locally produced rice. It was implemented mostly through digital platforms with four engagements per week through the Be Riceponsible FB page. It got 98.4% total reach and 196.12% total engagements against the target. Thirty-six (36) advocacy campaign materials were produced, uploaded online mainly through FB (riceponsableako), and shared to partner agencies. Three webinars for farmers, consumers, and policymakers were also organized. The webinars were participated by 208 individuals during the live broadcasts and earned 10,800 views for the uploaded video.

Under study 2, DA’s e regional information officers (RIOs) and all government departments were engaged to support the NRAM campaign. One celebrity endorser (Toni Gonzaga) was also tapped to advocate for the campaign, whose appearance contributed to an increase in online reach and views of the kick-off event. Two opinion leaders (Mayor Vicco Sotto and Mayor Isko Moreno) were also reached out to support the advocacy campaign especially in the implementation of the truthful labelling ordinance. Mayor Vicco Sotto responded positively to the request to support the NRAM campaign. Furthermore, partnership with Philippine Council for Agriculture and Fisheries (PCAF) was strengthened through the conduct of the policy forum event. They co-organized the event and have expressed support to the campaign advocacy. A network with the LPP was also established following the conduct of the Policy Forum on Truthful Labeling & Kadiwa Rice, which was participated in by 32 LPP governor members and representatives who also expressed support to the campaign advocacy.

CREATE SPARC: Development and production of popularized knowledge products on rice and rice-based policies

Ronan G. Zagado, Jungie A. Diamsay, Alice B. Mataia, Aerone Philippe G. Bautista, Gladys May G. Cristobal, Allan C. Biwang Jr., and Angeliko L. Sevilla

This study popularized existing and new policies in the form of various knowledge products to influence decision-making on interventions that will help improve the Philippine rice industry. This was done by utilizing communication strategies to develop the most appropriate knowledge product/s on specific rice policies for identified target audiences primarily composed of policymakers and the public. This year, the study focused on the implementation of the NRAM campaign advocating not only the production aspect but also the marketing and consumption of locally-produced rice. The campaign was carried using the digital platform and with the aid of strategic communication materials and collaterals designed, produced, and shared to our stakeholders with the help of our partner agencies and government departments.

IGNITE SPARC: Influencing Rice Policy Directions through Advocacy Campaigns

Ronan G. Zagado, Jungie A. Diamsay, Alice B. Mataia, Aerone Philippe G. Bautista, Gladys May G. Cristobal, Allan C. Biwang Jr., and Angeliko L. Sevilla

This study sought to actively influence rice policy directions through advocacy campaigns. It explored and utilized various communication modalities to disseminate popular versions of policy research outputs. This year, policy advocacy centered on truthful labeling, Kadiwa (marketing platform for farmers), and *palay* buying. DA-RIOs and all government departments were engaged to support the NRAM campaign. Campaign materials and collaterals were sent to them, and they were regularly given updates of the campaign activities. A draft ordinance on truthful labelling was also given to the RIOs for lobbying to their respective local government units. Two opinion leaders (Mayor Vicco Sotto and Mayor Isko Moreno) were also reached out to support the advocacy campaign. Communication letters seeking support for NRAM activities and a draft ordinance on truthful labelling were sent to them. Mayor Vicco Sotto responded positively, and his team is currently reviewing the draft ordinance. Celebrity endorser Toni Gonzaga was tapped to advocate for the campaign. She starred in the NRAM kick-off event dubbed as Rice & Shine, which got 17,700 reach and 5,167 views. Partnership with PCAF was strengthened through the conduct of the policy forum event. A network with the LPP was established following

PROJECT 4

the conduct of the Policy Forum on Truthful Labeling & Kadiwa Rice. Thirty-two (32) LPP governor members and representatives from various provinces in the Philippines have participated in the campaign. They also expressed their support to the campaign advocacy and vowed to seek additional ways to help our farmers.

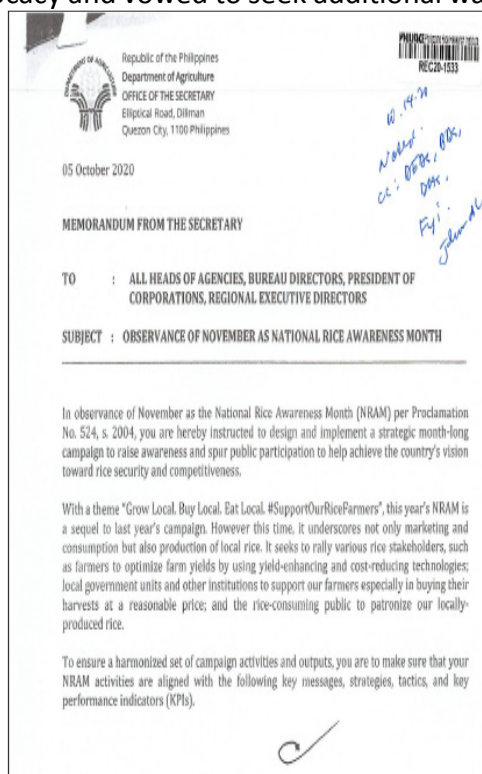


Figure 6. DA's memo enjoining all government bureaus and departments to observe NRAM.

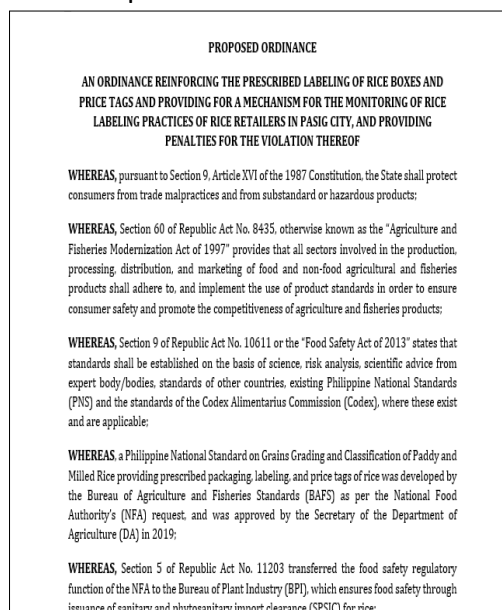


Figure 6. Proposed Ordinance on Truthful Labelling.

PROJECT 4



Figure 7. Celebrity endorser Toni Gonzaga at the NRAM kick-off event premiered in Facebook.



Figure 8. Policy Forum on Truthful Labelling & Kadiwa Rice.