

Case study on Agrarian Production Credit Program for Small Rice Farmers in the Philippines

Overview of the study

Expanding the accessibility of agricultural credit has been widely used as a policy instrument to accelerate agricultural and rural development (ADB, 1998; Binswanger, et al., 2000). While it is vital to solve rural poverty (Llanto, et al., 2000), access to credit is limited in the rural areas (Sahu et al., 2004).

Credit can facilitate the purchase of costly inputs and the adoption of alternative crops (Zeller, et. al., 1998) as well as encourage farmers to use modern technologies to achieve higher productivity (Llanto, 1987; Atieno, 1997; Duong & Izumida, 2002; Meyer and Nagarajan, 2000). Policymakers believe many smallholders, especially rice farmers, experience difficulty in accessing credit from formal financial institutions. This is one reason Filipino farmers lag behind Asian neighbors and make minimal contributions to the national economy (Habito, 2021).

On 20 January 2021, policymakers signed the amended Implementing Rules and Regulations (IRR) of the Agri-Agra Reform Credit Act of 2009 that requires private banks to set aside at least 15 percent of their loan portfolio for agri-fishery and another ten percent to support agrarian reform beneficiaries (ARBs). Loan utilization has been low. Some banks opt to pay penalties instead of providing credit to farmers. The new IRR aims to facilitate larger bank investments in the sector to ensure food security while contributing to national economic recovery amid the pandemic (Simeone, 2021).

While various credit programs have been implemented to improve rural credit delivery, many small farmers are discouraged from borrowing from formal financial institutions because of restrictions on collateral, complicated and lengthy procedures, commodity specific credit programs, limited coverage in rural areas, and, lack of participation in planning agricultural credit programs. Many rely on informal lenders despite higher interest rates because of simpler loan transactions and the timely release of funds (Poliquit, 2006).

The Land Bank of the Philippines (LBP) has been the major financial institution supporting the agricultural efforts of smallholders given the following limitations of the informal credit lenders:

- a. they are ill-equipped to meet the requirements of modernizing agriculture;
- b. high interest rates limit smallholders' adoption of socially profitable technical innovations:
- they rarely give supervision, capacity building, technical assistance, or savings deposit services; and,



d. the volume and term structure of informal lending operations are confined to small, short-term loans that do not fully support the adoption of modern farm technologies.

This study is part of a regional initiative of the Asian NGO Coalition for Agrarian Reform and Rural Development (ANGOC) on smallholder agriculture towards sustainable food systems and livelihoods. Its focus is the Agrarian Production Credit Program (APCP) that is implemented by the Department of Agriculture (DA), Department of Agrarian Reform (DAR), and LBP with support from the Department of Environment and Natural Resources (DENR) and the Philippine Crop Insurance Corporation, Inc. (PCIC). Launched in October 2012 as a five-year program, APCP has been extended for another five years to 24 October 2022 in order to provide continuing credit assistance to agrarian reform beneficiaries (ARBs), especially those belonging to new associations that do not yet qualify for the regular lending programs of LBP.

The APCP is demand-driven, covering a whole gamut of income-generating projects that farm households may undertake. It is a two-step loan program with government financial institutions (GFIs) as wholesalers and qualified private banks, microfinancing institutions, and farmers' organizations or cooperatives as retailers. It adopts market rates (Geron, et al., 2016).

It caters to the credit needs of smallholders who are direct beneficiaries of past agrarian reform programs under PD 27 and the Comprehensive Agrarian Reform Program (CARP). According to DAR, there are around 2.4 million rice farmers who cultivate and own agricultural lands of not more than five hectares in the country.

The APCP has three lending windows that support crop production and diversification, agribusiness, and livelihood projects aimed towards higher productivity, income, and savings. It provides capacity building and support services through local government units, including the Municipal Agriculture Office (MAO), Municipal Agrarian Reform Office (MARO), and, Municipal Environment and Natural Resources Office (MENRO).

Statement of research objectives

- To analyze the appropriateness, accessibility, and usefulness of the APCP to smallholder rice farmers in the Philippines;
- To understand the challenges in APCP implementation and the subsequent adjustments made by the government;
- To determine the credit needs and preferences of small rice farmers that should be considered in designing an appropriate and accessible credit program in the Philippines; and,
- To propose recommendations to government lending institutions on how to improve smallholders' access to and utilization of credit programs.



Framework of analysis

Credit pertains to a financial transaction where money will be repaid by smallholders with interest to LBP. The amount is meant as capital for crop production, agribusiness, and livelihood to achieve higher productivity, income, and savings. Family farming pertains to agricultural activities and practices which are

owned, managed, and operated by small farmers that rely on family labor. Family and farm are linked, co-evolve, and combine economic, environmental, social, and cultural functions (FAO, 2017).

Figure 1 shows the vicious cycle of low capital formation that is true in the Philippines where the prevalence of poverty and underdevelopment of agriculture is due to the lack of public investment and capital



formation in rural areas, which has resulted in limited savings and investment, hence, low productivity for small farmers. Heidhues and Schrieder (1999) espouse that credit breaks the vicious cycle of low capital formation to increase per capita income, savings, investment, and productivity.

Figure 1. The Vicious Cycle of Low Capital Formation

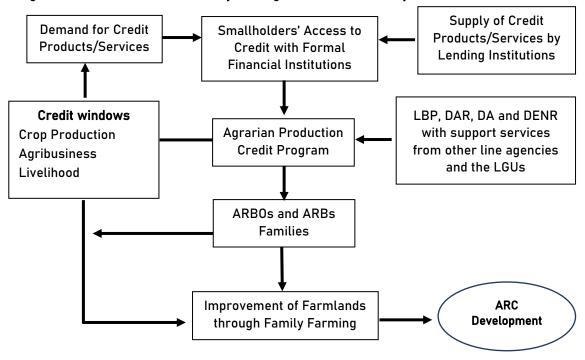


Expanding credit programs leads to higher productivity and incomes (Llanto, 1987; Atieno, 1997; Meyer and Nagarajan, 2000). It is hoped that the continuing credit and other program interventions by the government, together with other stakeholders, will improve rice farmers' farmlands. Over time, the improvement should lead to the development of agrarian reform communities (ARCs) that are envisaged under the Comprehensive Agrarian Reform Program/Extension with Reforms (CARP/ER) as the economic hub in the delivery of support services in rural areas.

Figure 2 shows smallholders are organized into ARBs registered as farmer's associations or cooperatives that can be developed into lending conduits to reach more farmers in remote areas.



Figure 2. Financial Inclusion and Family Farming as Framework of Analysis



Research methodology

This study relied on reports of government agencies and national assessment studies on agricultural credit focused on rice farmers conducted by the Philippine Institute for Development Studies (PIDS) and the Multi-Sectoral Management Development Corporation (MMDC). Primary sources included focus group discussions (FGDs) with rice farmers and civil society organizations as well as program implementers from government to validate the challenges faced by small farmers.

On 14 May 2021, ANGOC held an FGD with APCP implementers that was attended by 11 participants from the ACPC Secretariat, DAR, DA, and DENR. The discussion focused on the salient features of the APCP, accomplishments, and, challenges encountered in the field.

This study preselected farmer participants based on their knowledge and experience on credit as this relates to rice production, organizational development, and marketing. The original design involved 15 rice farmers from Luzon (5), Visayas (5), and, Mindanao (5). During the FGDs, Luzon and Mindanao participants were unable to attend because of time constraints and mobility restrictions due to the Covid-19 pandemic. Hence, the study focused on the Visayas region, involving APCP and non-APCP beneficiaries. The FGDs held on 19 May and 8 June 2021 had eight rice farmers from Negros, Iloilo, and Leyte (Table 1).



Table 1. Sample Size of Respondents

Dravinasa	APCP		Non- APCP			
Provinces	Male	Female	Male	Female	Total	
Iloilo	2	0	0	2	4	
Negros	1	0	0	0	1	
Leyte	1	0	2	0	3	
Total	4	0	2	2	8	

The e-survey generated information on the socio-demographic profile, knowledge, and experience with credit programs of APCP and non-APCP respondents from four farmers' organizations and one NGO.

Table 2. Names of Participating Organizations

Name of Organization	Province	APCP Members	Non-APCP
Katilingban sang Agraryo Padulong sa Pag-uswag sang Iloilo Agrarian Reform Cooperative (KASAPPI)	Iloilo	2	2
Guim-o Layan Agrarian Reform Cooperative	Negros	1	-
Kaisahan tungo Sa Kaunlaran Ng Kanayunan at Repormang Pansakahan, Inc. (KAISAHAN)	Leyte	1	-
Salvacion United Leyte Farmers Association (SUFA)	Leyte	-	1
Ormoc Kananga Leyte Farmers Federation (ORKALEFF)	Leyte	-	1

Table 3 shows the characteristics and socio-economic profile of the respondents based on the e-survey.

Table 3. Socio-economic profile of the Respondents

Demographic Profile	APCP	Non-APCP	Remarks
Ave. age of respondents	57	48	Age range is between 48 and 57 years old.
Ave. number of children	5	4	The average size is 4 to 5 children.
Ave. size of landholdings	1.22	1.08	The average landholding is at 1 hectare.
Land Tenure Status			
With CLOAWithout CLOA	3 (75%) 1 (25%)	3 (75%) 1 (25%)	Majority of respondents are small owner cultivators as ARBs.
Crops PlantedPrimarySecondary Crops	Rice Corn, Sweet Potato, Sugarcane	Rice Corn, Vegetables	All respondents plant rice with secondary crops with some of them practicing crop rotation to prevent soil acidity that would allegedly require additional fertilizers.
Methods of Farming Conventional Mixed/LEISA Organic Farming	2 (50%) 1 (25%) 1 (25%)	0 4 (100%) 0	It appears that the APCP is promoting modern farming technology as most respondent-farmers have adopted either conventional farming and/or combined conventional and organic farming technology with integrated pest management. Only one farmer beneficiary has adopted organic farming.

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4 (100%) @ 8% p.a.	2 (50%) 1 (25%) @ 8% p.a. 1 (25%) @ 26% p.a. CARD	All APCP respondents sourced their credit from the LBP. Non-APCP respondents relied on their own capital, friends/ relatives, cooperatives, and microfinance institutions. No respondent availed of credit from private lenders like rice traders, millers, etc.
All	All	All respondents are aware of the APCP.
2 (50%) 2 (50%)	3 (75%) 1 (25%)	Information about credit came from two sources, government/LGUs and their cooperatives.
All availed credit	All availed credit	All respondents have received crop production loans from either public and/or private financing institutions.
4 (100%) 4 (100%)	3 (75%) 1 (25%)	Both APCP and Non-APCP farmers experienced difficulty in availing of credit due to strict documentary and collateral requirements. One respondent expressed hesitation to avail of credit due to high interest rate.
	@ 8% p.a. All 2 (50%) 2 (50%) All availed credit	1 (25%) @ 8% p.a. 0 8% p.a. 1 (25%) @ 26% p.a. CARD All All 2 (50%) 2 (50%) 1 (25%) All availed credit 4 (100%) 3 (75%) 3 (75%)

Scope and limitations of the study

Due to COVID-19 health protocols, the study relied on online discussions and was limited to the experiences of eight farmers in Iloilo, Negros, and Leyte provinces. It may not represent national perspectives and preferences of small rice farmers. It did not undertake a thorough analysis of the rice industry, nor of the impact of various policies such as the Rice Tariffication Law.

The agriculture sector in the Philippines

Overview of Philippine agriculture

Situated in Southeast Asia, the Philippines is an archipelago of more than 7,100 islands. It consists of 298,170 square kilometers of land and 1,830 square kilometers of water (see Figure 3). The three largest groups of islands – Luzon, Visayas and Mindanao – are subdivided into 16 regions, 81 provinces, 144 cities, 1,496 municipalities and 42,028 barangays. The islands are mostly mountainous and covered by tropical rainforests with high levels of biodiversity.

The country has two seasons: wet season is from June to November and dry season from December to May.





Photo source: http://www.destination360.com/maps/philippines-map.gif

The Philippines has a current population of 109 million, composed of 53.8 million men and 54.9 million women¹ (PSA, 2020; PSA 2021a), with a median age of 25. Forty percent are below 20 years old (NEDA, as of 28 January 2020). About 60 percent are rural dwellers, and two-thirds of these depend on farming for their livelihood (Balisacan, 2001; Venkataramani, 2005).

Since the majority of the poor depend on the four agricultural sub-sectors - farming, fisheries, livestock and forestry - the growth of Philippine agriculture is crucial to poverty alleviation and food security. But it has been growing erratically since the early 1980s and its growth is well below potential (Balisacan, 2001).

Despite the poor economic performance of agriculture, its share of employment is at almost 30 percent of the national total although jobs are seasonal and low paying. Underemployment in the sector is high at 25 percent, compared to 20 percent in the industrial sector and almost 15 percent in services (NEDA, 2017). Women comprise 27.3 percent of the 10.4 million workers employed in the agricultural sector, hunting, and forestry (NSO, 2004 in FAO, n.d.).

The underdevelopment of agriculture is due to the confluence of the following interrelated factors:

- a. Low public investment in agricultural development programs and infrastructure projects, i.e., inadequate irrigation systems and postharvest facilities, farm to market roads, etc.:
- b. Decrease in productivity and income due to high production costs, lack of credit and technical support, and low market prices of agricultural products;
- c. Land conversions that have reduced the areas devoted to agriculture due to the lack of a comprehensive national land use law;
- d. The unfinished business of agrarian reform with 92.8 percent (561,131 hectares of private lands) yet to be awarded. Landlord resistance has been growing, as indicated by the increasing number of agrarian disputes/cases (Quizon, et al., 2018);
- e. Aging farmers and fewer young people engaged in agriculture (IFAD, Elauria, 2015). Palis said most farmers think their children would not have a good future as rice farmers (73 percent). Farmers want a college education for their children so that they would have a stable job and income (32 percent). Others said their children were not interested in rice farming (21 percent);

¹from 2020 population projections



- f. Dismal failure of farmers' cooperatives due to mismanagement, insufficient working capital, and high indebtedness;
- g. Unequal gender relations between men and women in agriculture despite the Magna Carta of Women and special provisions of CARPER, resulting in the prevalence of gender stereotyped roles and limited participation of women in agriculture;
- h. Limited capabilities of national and local governments units in manpower, expertise, and resources and the seeming lack of coordination among line agencies and key stakeholders;
- i. *Increased frequency of natural disasters* due to the adverse effects of climate change; and,
- j. The COVID-19 pandemic that has exacerbated poverty, unemployment and hunger.

The pandemic plunged the economy to its worst performance in decades. Gross domestic product fell eight percent in the fourth quarter of 2020, resulting in a -9.5 percent regression for the year. Agriculture contributed -2.5 percent, followed by services (-8.4 percent) and industry (-9.9 percent) (PSA, 2021b). Closing down the economy in 2020 led to the complicated issue of supporting millions of Filipinos who were unable to earn a living. Access to food was extremely compromised. The three-month community quarantine led to the lack of public transportation that made food inaccessible to urban areas even as limited LGU relief packs lasted only a few days. At the same time, rural food producers experienced difficulty in transporting their products to urban centers due to strict travel restrictions.

Agricultural policy in the Philippines

Agricultural credit programs have evolved from subsidized interventions to a more market-based approach (Galang, 2020). In the 1970s, the government provided targeted and subsidized credit programs to support farmers at reasonable interest rates through the adoption of Green Revolution technologies – a package of incentives that include fertilizer subsidy, price support, technical assistance, and other support services. These proved costly and unsustainable over the long term. Many failed to pay their debts with LBP. Many rural banks closed due to high levels of loan defaults by farmers' cooperatives and associations (Esguerra 1981; Meyer and Nagarajan, 2000).

In 1997, Republic Act 8435, or the Agriculture and Fisheries Modernization Act (AFMA), which promotes market-based principles and greater private financial sector participation in agricultural development and phased out subsidies, was passed. Non-financial State agencies were disallowed from implementing direct agricultural credit programs (Galang, 2020).

As the policy framework for agricultural development, AFMA aligns with the Philippine Development Plan for 2017 to 2022 that seeks to promote inclusive and sustained economic growth aimed at raising productivity; strengthen forward linkages with the industry and service sectors; and boost resilience to risks in light of climate change (NEDA, 2014 in OECD, 2017). It is funded through the General Appropriations Act.



These goals are supported by rural development programs that aim to accelerate the implementation of CARPER to provide security of tenure and improve access to credit of ARBs; strengthen farmers' groups and cooperatives via capacity building, agribusiness development, and value chain management; encourage public-private partnerships to finance agricultural extension services, infrastructure, and postharvest facilities; encourage greater investment in research and development, encourage diversity of production and livelihood sources while strengthening the crop insurance system; and, adopt community-based employment programs to function as a social protection mechanism (NEDA, 2014 in OECD, 2017).

The ACPC is the main implementing mechanism to synchronize all government agricultural credit policies and financing programs; formulate credit policies and programs; and, oversee the implementation of the Agricultural Modernization Credit and Financing Program (AMCFP). It also provides certification of eligibility of bonds and other debt securities and accreditation of non-bank rural financial institutions.

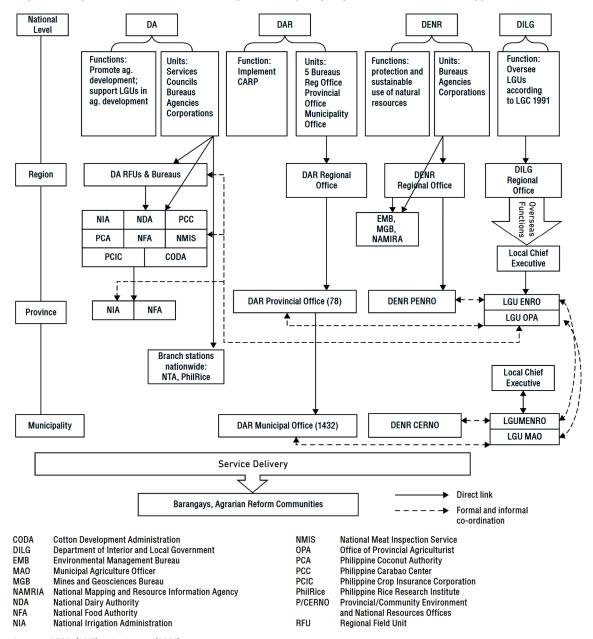
All government credit programs were consolidated and transferred to the AMCFP, the umbrella credit program of DA and DAR for APCP implementation. AMCFP funds are channeled to GFIs and rural banks, microfinance institutions, and cooperative banks to serve small farmers and fisherfolk.

The government provides an enabling environment for agriculture. Aside from the Social Reform Agenda and Poverty Alleviation Act, these recognize land rights and advance the asset reform agenda of basic sectors: the Comprehensive Agrarian Reform Program (CARP/CARPER); Philippine Fisheries Code; Indigenous Peoples' Rights Act (IPRA); Urban Development and Housing Act; and, Community-Based Forest Management (CBFM). Laws have also been passed to enhance the sector's resilience against climate change, deforestation, and natural disasters, namely: Climate Change Act; Ecological Solid Waste Management Act; Strategic Agricultural and Fisheries Development Zones; and, Organic Agriculture Act (RA 10068). RA 10068 requires the DA to direct two percent of its yearly expense towards promoting organic agriculture for sustainable food production and expand the availability of safer, more nutritious foods. The National Organic Agriculture Program of 2012 to 2016 of DA's Bureau of Soils and Water Management (BSWM) envisioned that at least five percent of agricultural farms would practice organic farming by 2016.

The Philippine agricultural sector is governed by four key departments responsible for rural development, namely: DA, DAR, DENR, and DILG (Department of Interior and Local Government). The government has adopted a whole-of-government approach that requires greater coordination and collaboration among different agencies to ensure the nation's food security and for agricultural development. DA is the lead agency for the realization of the Philippine Rice Master Plan 2017 to 2022 that seeks to enhance provincial rice self-sufficiency in the country (OECD, 2017).

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Figure 4. Organizational framework for agricultural policy implementation of the Philippines



Source: OECD (2017) citing Lange (2009)

Rice industry in the Philippines

Rice is the staple food for most Filipinos. Well-milled rice retailed at an average of PhP 43/kg (approximately USD 0.86/kg) from January to June 2017. Rice consumption was estimated at 13.91 million metric tons (MMT) in 2019, 14.45 MMT in 2022, and 15.18 MMT in 2026. It is projected to reach 15.88 MMT by 2030 due to population growth and a possible rise in per capita consumption. According to the DA, a changing demand pattern from quantity to quality is expected to affect the rice supply in the country.



Rice accounts for 35 percent of the average calorie intake of the population and 60 to 65 percent for households in the lowest income quartile. It is cultivated on 4.06 million hectares, or 13.62 percent of the country's total land area. The rice industry employs 2.5 million households: 2.1 million farmers, 110,000 workers for post-farm activities and 320,000 for ancillary activities (Global Cost and Price Competitiveness of Philippine Rice, in Gonzales, 2013).

The Philippines is the eighth largest rice producer in the world. Its arable land for rice has expanded from almost 3.8 million hectares in 1995 to about 4.4 million hectares in 2010. Seventy-one percent of rice production comes from irrigated areas. Although yield has improved from 2.8 t/ha in 1995 to 3.6 t/ha in 2010, this is still way below the yield potential of modern varieties (Ricepedia, n.d.).

In 2017, the DA Rice Master Plan reported that the county produced 19.3 MMT of paddy, equivalent to 12.53 MMT of rice. The average yield of paddy is four MT/ha. As shown in Table 4, a total of 29 provinces have average yields of more than four MT/ha with production costs pegged at a low of PhP 12/kg (approximately USD 0.24/kg. Thirty-nine (39) provinces have average yields at three to four MT/ha; and, 14 provinces at medium cost at PhP 17/kg (approximately USD 0.34/kg).

Table 4. Priority Provinces for Enhancing Yield and Reducing Cost

	High Yield (> 4 tons/hectare)	Medium Yield (3 to 4 tons/hectare)
Low Cost (P12/kg)	Nueva Ecija, Isabela, Bukidnon, Zamboanga del Sur, Pampanga, Misamis Occidental, Lanao del Norte, Biliran, Aurora, Kalinga	Camarines Sur, South Cotabato, Leyte, Negros Occidental, Iloilo, Capiz, Albay, Maguindanao, Agusan del Norte, Antique, Sorsogon, Masbate, Palawan, Cavite, Lanao del Sur, Western Samar, Surigao del Sur, Aklan
Medium Cost (P12 to 17/kg)	North Cotabato, Tarlac, Cagayan, Pangasinan, Bulacan, Nueva Vizcaya, Ilocos Norte, Davao Oriental, Davao del Sur, Davao del Norte, Southern Leyte, Laguna, Zambales, Quirino, Misamis Oriental, Zamboanga Sibugay, La Union, Ilocos Sur	Compostella Valley, Negros Oriental, Bohol, Occidental Mindoro, Quezon, Ifugao

Source: DA, 2018

The Philippines imports about 10 percent of its annual rice requirements. The National Food Authority (NFA) is responsible for the import control of rice, from procurement to distribution with accredited retailers and wholesalers at a predetermined price.



At a 35 percent tariff, the landed cost of imported rice amounts to PhP 35.31/kg (approximately USD 0.71/kg). On this basis, the farm gate price of paddy should be at least PhP 17/kg (approximately USD 0.34/kg) to maintain a minimal PhP 5/kilo (approximately USD 0.1/kg) profit margin for the farmer (Table 5).

Table 5. Effect of Rice Tariffication Law

ltem	Value (PhP/kg)
Import Parity Price/Price at the Wholesale Market	35.31
- Total Marketing Cost	5.25
- Traders Income	4.00
= Cost of Milled Rice	26.07
X Milling Ratio	0.65
= Price of Palay	16.94
- Farmer's profit of PhP 5/kg	5.00
= Production Cost	11.94

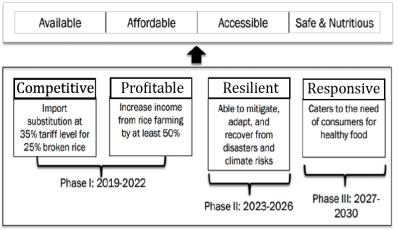
Source: DA, 2018

The Philippine rice industry provides staple food and income to more than three million farmers and their families, thousands of traders, millers, retailers, and individuals employed in the production, processing, and marketing of its related products (Intal and Garcia, 2005).

In its various forms – rough, brown, milled, broken, flour, and starch – rice is a processed material with added value (Juliano and Hicks, 1996). By-products – straw, hull, and bran – are becoming important sources of raw material for industry use, creating new income opportunities. There are also non-edible products from rice and rice by-products, e.g., cosmetics, pharmaceuticals, and rice bran oil. Processing rice bran oil and other non-edible food for commercialization is not yet well-advanced in the country, partly due to the cost of raw materials (Mataia, et al., 2020).

Considering its contributions to the national economy, rice is a highly political commodity. This is why the rice sector has always been the center of the government's food security goals with policies and programs that emphasize improvement of the competitiveness and income of farmers, ensuring rice self-sufficiency, and making rice prices affordable, safe, and nutritious to Filipinos (Figure 5).

Figure 5. Rice Secure Philippines



Source: DA, 2018



The country's Rice Master Plan for 2017 to 2022, which envisions a rice-secure Philippines, pursues location-specific interventions to help farmers get higher yields. By 2022, the targets are to: raise productivity from an average yield of four MT/ha to six MT/ha in high-yield provinces and five MT/ha in medium-yield provinces; reduce average farm production cost to PhP 8/kg (approximately USD 0.16/kg) in low-cost provinces and PhP 10/kg (approximately USD 0.2/kg) in medium-cost provinces; reduce average postharvest losses to 12 percent of harvest in provinces with drying capacity deficiencies; reduce average marketing cost by PhP 1/kg (approximately USD 0.02/kg); and, help rice farmers and farm workers transition in low priority areas.

The government's strategic interventions require a multi-pronged approach that includes land tenure improvement; program beneficiaries' development; coordinated support services delivery that incorporates effective and efficient irrigation systems; credit provision for farm inputs, such as high-quality hybrid and inbred seeds; adoption of integrated and sustainable crop management technologies; and, the delivery of extension support services. The government also supports farm mechanization through the Rice Mechanization Program. It aims to procure and distribute postharvest units (i.e., drying and milling machines) and on-farm machinery through a financing scheme where it shoulders a chunk of the cost. The plan does not reflect how the DA and its attached agencies will promote the adoption of organic farming technology.

DA and its attached agencies advocate the passage of the Philippine Rice Industry Reform (PRIR) Act to ensure its funding by 2030. It also plans to review the Seed Industry Development Act; support the passage of the Comprehensive Land Use Plan; harmonize the Philippine Grain Standardization Program; institutionalize a rice buffer stock mechanism; and, converge government agency initiatives on the management of water resources (DA, n.d.).

Overview of the situation of rice farmer smallholders

Smallholders are family units that exist in a family-labor intensive system with low capital input. They have limited opportunities for livelihood improvement because of small farm size, poor knowledge in accessing finance/credit, and production and marketing difficulties (Geron, et al., 2016). Below are the characteristics of smallholders in this study.

• Smallholders own and cultivate less than five hectares of land with low productivity. Based on Census of Agriculture data (2012), out of 9.6 million hectares, the total land area cultivated by 4,419,326 small farmers is estimated at 5,607,022 hectares (Table 6).

Table 6. No. of Farm Holdings, By Size of Area (As of 31 December 2012)

Farm Size	No. of Holders	Total Area (hectares)
Under 0.5 hectare	973,601	232,731
0.5 and under 1 hectare	962,273	594,300
1 and under 2 hectares	1,349,903	1,635,995
2 and under 3 hectare	624,669	1,365,613
3 and under 5 hectares	508,880	1,778,383
5 and under 7 hectares	221,198	1,248,615
7 and under 10 hectares	81,941	665,781
10 and under 25 hectares	88, 658	1,192,188
Total	4,822,739	9,670,793

Source: PSA, 2012

• Smallholder farmers can be grouped according to land tenure status. The 2017 ANGOC study in the Visayas revealed 11 types of land tenure status of farmers and farmworkers in alienable and disposable lands. Figure 6 shows the land rights continuum from informal to formal rights according to the farmers' physical access and actual use of the land and their tenure instrument and legal recognition of rights over the land provided under CARP/ER.

Figure 6. Land Rights Continuum

INFORMAL LAND RIGHTS

Collective CLOA	Individual	CLOA holder, w/	CLOA holder,	Owner –
holder, land	CLOA holder,	land under formal	awarded free	Cultivator
awaiting	land pawned informally	lease – out or	or under	with title, deed
subdivision		contract	amortization	or land patent

FORMAL LAND RIGHTS

Source: ANGOC, 2017

Family farming is the main source of food regardless of tenurial status. Rice cultivation is primarily for household consumption, augmented by backyard gardens and raising farm animals. Food security is linked to tenurial status. Those with secure land ownership have sufficient and diverse food supply. Security of tenure provides the incentive for more intensive cultivation and higher investments by small cultivators in developing their farmlands. For landless agricultural workers, the wages from both farm and non-farm labor are their main source of food for the whole year.

• Smallholders are organized into farmer's associations and cooperatives. Farmers' organizations have two important roles: people's empowerment as an alternative locus of power so that the voices of the poor are heard by authorities (Ford, 1987); and an economic viability role that allows individual farmers to boost their quality of life and organizations via better use of resources, overcoming production and marketing risks, better market positioning, better supply of inputs, and, better knowledge transfer (Verhagen, K., 1986; Göler von Ravensburg, in Münker, 2012).

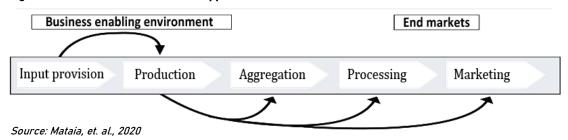
Based on the Registry System of Basic Sectors of Agriculture (RSBSA), 4.5 million of 6.6 million farmers cultivate less than five hectares of land. DAR reported 2.7 million ARBs, of whom 41 percent are RSBSA registered. NIA reported 5,320 irrigator's associations, while the CDA reported 28,784 registered cooperatives in 2018 (Arnaoudov, Sibayan, and Caguioa, 2015). Quizon et al. (2018) say farmers' organizations enable them to pursue land rights claims and get support services. A fraction of ARBs is organized as ARBOs/cooperatives. Non-ARBs include leaseholders, farmer claimants, sharecroppers, farmworkers, informal settlers and migrant or seasonal workers.

- Some smallholder farmers have multiple sources of income. Family farming is the main source of income for small farmers but there are others. Some get remittances from family members who are abroad. According to IFAD (2011), 30 to 60 percent of rural households earn around 75 percent of their total income from more than two sources. Multiple income sources enable smallholders to manage risks. Income from one economic activity offsets the decline in another.
- Smallholder farmers are considered high risk by lending institutions. Smallholders' economic opportunities are constrained by the lack of transportation and communication infrastructure. They have variable incomes and are vulnerable to exogenous economic shocks. The seasonality of crops and production schedules leads to spikes in loan demand and shortage in funding and labor. The concentration on agriculture and agriculture-related activities exposes smallholders to multiple risks. The two main ones are production risk due to costly farm inputs and labor, lack of irrigation systems and access to suitable technology, crop seasonality, and natural disasters; and marketing risk from the low price of rice and lack of transportation and marketing information.
- Smallholders are the primary food producers in the rice value chain (RVC). About 2.4 million farmers are engaged in rice production in the Philippines. Figure 7 shows the rice value chain. The stages of the RVC involve greater interaction among chain actors through value-adding activities (Mataia, et al., 2020).

Value chain actors are responsible for moving paddy and milled rice across markets in the country. These are transported from production surplus areas to deficit provinces and trading centers through various market channels. Government agencies and NGOs provide support services in the RVC (Mataia, Beltran, Manalili, Catudan, Francisco and Flores, 2020).



Figure 7. Rice Value Chain in the Philippines



Key problems of smallholder rice farmers

• Lack of credit access. Lack of access to credit for daily food consumption and other expenses (education, medicines, etc.) and crop production constrains smallholders. Kloeppinger-Todd and Sharma (2010) explain that when the poor have limited saving or borrowing options, their investment plans are stifled and breaking out of poverty is harder. Households with no access to insurance or savings that can cover household and business expenses limit risk exposure even if high returns are likely. Small farmers secure credit for crop production and livelihood from formal financial institutions, i.e., State agencies with tie-ups with LBP and other private microfinancing institutions, and informal lenders.

In credit provision, traders and millers set the terms. The average loan amount is PhP 36,838 (approximately USD 734) with three to five percent interest per month for a four-month period (Mataia, et al., 2020).

- Lack of transportation and poor access to post-harvest facilities and communication infrastructure. Many smallholders are in areas with limited access to transportation, farm to market roads, post-harvest facilities, and, communication infrastructure. Farmers have complained of inaccurate weighing scales when selling their produce. Quality assessment of paddy grains is based on 14-percent moisture content; appearance; presence of foreign material; and, impurities. Moisture content (MC) is assessed by hard pressing the grain or biting it, but farmers think this practice does not determine actual MC. Farmers prefer to use certified seeds to grow quality grains and command better prices. However, rice traders undervalue their products by mixing different "certified rice varieties" called "rumble" to lower the price.
- Dole-out mentality, fungibility of credit and traditional mindsets among farmers. There are misplaced mindsets among farmers that money from government lending programs are grants that they need not pay back even if it was clarified during the program orientation that they have to repay their loans. Fungibility occurs when borrowers use the loans for other purposes. Despite opportunities for education and agricultural extension services, some farmers refuse to adopt modern farming technology to achieve higher productivity and income.

- Poor market linkages. With small volumes of produce, smallholders lack the ability and resources to negotiate prices. Most are unaware of market prices and are at the mercy of traders/millers. They have poor linkages and little access to formal and organized markets.
- Adverse effects of climate change and natural disasters. Small farmers are vulnerable to typhoons, changes in weather patterns, temperature, droughts, and lack of water supply. Many farmers have no access to crop insurance to mitigate risks and disasters.

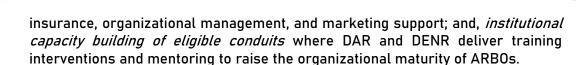
The Agricultural Production Credit Program (APCP)

The APCP is one of the critical support services of CARP. The program was selected because:

- It pursues a clustering, multi-stakeholder approach;
- It is designed to meet the credit needs of ARBOs and ARBs engaged in agricultural crop production, agri-enterprise, and livelihood projects;
- It adopts a whole-of-government approach that includes credit and support services such as capacity building, strengthening links between farmers' organizations and agricultural extension services, facilitating access to modern farming technologies and innovations, providing rural infrastructures, marketing, and, communications; and,
- More lessons and insights can be derived from APCP implementation. Some new lessons have already emerged aside from the longstanding problems of smallholders related to existing land and agricultural policies, rice production, and financial management practices.

Description of the APCP

- Overview. The APCP is a PhP 2.5 billion (approximately USD 49.8 million) credit facility and capacity development program implemented jointly by the DA and the LBP with support from DAR, DENR and the PCIC.
- Objectives. The APCP aims to provide credit assistance to ARBs/ARBOs to ensure sustainable production of crops and increase farmers' productivity and income and strengthen ARBs and their organizations through capacity building and other support services.
- Key program design features and components. The APCP has three complementary components: provision of agricultural production credit where LBP provides credit for crop production, agri-enterprise, and/or livelihood projects to ARBOs, ARBs, and their households; provision of agricultural production management and financial management support where DA and its attached agencies provide technical assistance to eligible ARBOs including crop



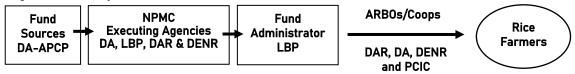
- Program management and staffing. A National Project Management Committee (NPMC) composed of officials from DAR, LBP, DA, DENR, and Department of Finance, and a farmer representative, oversees program implementation. It is chaired by an Undersecretary of the DA and co-chaired by an Undersecretary from the DAR. The NPMC provides direction and formulates policies on the program; approves the work and financial plan; monitors the overall performance of the APCP; acts on issues or concerns relative to program implementation; and, conducts program evaluation. It is supported by a Technical Working Group (TWG) that is headed by the Executive Director of the ACPC and consists of technical staff from the represented agencies. A secretariat headed by the ACPC supports the TWG and the NPMC.
- Geographic and sectoral scope. The APCP is implemented nationwide to support the rice producing regions, provinces and municipalities. ARBs and their organizations are clustered into four lending groups: Northern and Central Luzon, Southern Luzon, Visayas, and Mindanao.
- Target beneficiaries and eligibility requirements. The target clients are small rice farmers who are organized as associations or cooperatives. Below are the credit requirements (Table 7).

Table 7. Eligibility criteria and credit requirement for APCP

Eligible borrowers	 ARB Organizations with ARB members (cooperatives and farmers' organizations); other conduits
Eligibility criteria	With legal personality duly registered with CDA or SEC
for borrowers	Operational for the past six months
	With ARB members
	With core management team
	With systems and procedures in place particularly on lending
Projects that	Crop production
can be financed	Agri-enterprise and livelihood
Loan amount limit	Up to 80% of the total project cost
	For agri-enterprises and livelihood projects
	For those with existing crop production loan, up to 10% of the outstanding loan portfolio
	• For those without existing crop production loan, not to exceed PhP1 million per ARBO
Interest rate	• 8.5% p.a. for short term loans
	• 9.5% p.a. for long term loans
	*inclusive 2% p.a. incentives for service conduits
Loan terms	For short term loans – term of not more than 1 year
	For long term loans – up to 7 years inclusive of 3-year grace period
Loan repayment scheme	Based on crop cycle, cash flow and/or remaining useful life of the asset finance
Collateral	Deed of Assignment of promissory notes and underlying collateral
requirements	Deed of Assignment of market contracts
	Deed of Assignment of crop insurance proceeds (if any)
	Chattel mortgage

Program implementation on the ground. Funds came from the DA (PhP 2 Billion or approximately USD 39.8 million) and APCP (PhP 500 million or approximately USD 9.96 million). DAR has its own capacity building funds for smallholders. LBP lends to ARBOs while rice farmers are the end-users. Implementing agencies strengthen the capacity of farmers' organizations and cooperatives that serve as credit conduits to small farmers in remote areas.

Figure 8. ACPC Implementation Scheme



Source: Modified by Quitangon (2021) from the Sikat Saka Assessment Study by Quilloy and Asma, 2017

Lending policies and procedures are simple to facilitate credit access. The APCP can assist ARBOs that are normally not qualified to borrow from the regular lending program of LBP via the following: ARBOs that have been operating for less than six months can borrow from the program; the debt-to-equity ratio requirement is waived; and less stringent screening of ARBO borrowers is conducted.

The provincial and municipal offices of DAR, DA, and DENR provide capacity building to ARBO borrowers. DAR has assisted ARBs in loan applications and processing. The PARO/MARO has endorsed ARBOs/coops/associations as legitimate borrowers that were then assessed by LBP. If these borrowers are eligible with complete documentary requirements, LBP releases the loan within 30 days from proposal submission. DAR coordinates and liaises with LBP to follow up the status of loan approval and fund releases (Geron, at al., 2016; MMDC, 2020).

Major accomplishments of the APCP

• Credit performance. From October 2012 to February 2016, APCP lent out PhP 1.95 billion (approximately USD 38.84 million) to 526 ARBOs (31,036 ARBs) with an 89.7 percent repayment rate and 10.54 percent past due rate. Loans repaid by members were used to provide loans to good-paying ARBO borrowers. However, some ARBOs were unable to pay their LBP loan because they were unable to collect from all the members. Since most ARBOs do not have buffer funds for relending, they chose to default on their LBP loans. This barred them from taking a re-loan from LBP. (Geron, et al., December 2016).

The APCP is now on its second cycle of program implementation, which runs from 2016 to 2022. LBP has extended a total of PhP 9.231 billion (approximately USD 184 million) in production loans to 886 ARBOs (or 68,963 ARBs) from October 2012 to 31 December 2020 (MMDC, 2020).

The Visayas has the most borrowers with 342 ARBOs (25,512 ARBs). This is followed by Northern and Central Luzon (240 ARBOs and 24,078 ARBs), Mindanao (200 ARBOs and 12,811 ARBs) and finally, Southern Luzon and Bicol



(104 ARBOs and 6,562 ARBs). The program's loan repayment rate, which had stood at 89.7 percent, dropped to 58 percent. It registered a 42 percent past due rate at the end of December 2020 (MMDC, 2020).

Program implementers said repayment declined because of natural calamities which resulted in lower productivity and income; pest infestation; and the adverse effects of the COVID-19 pandemic (FGD with ACPC, May 2021).

Figure 9. Four Major Lending Groups by Geographical Coverage Cumulative Amounts in Million Pesos (October 2012 to 31 December 2020)

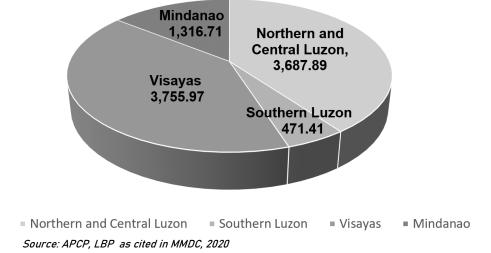
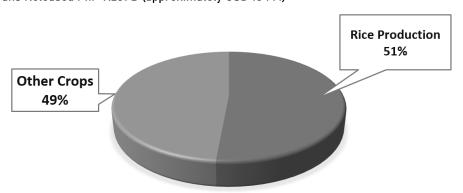


Figure 10. APCP Accomplishment
Total Loans Released PhP 9.231 B (approximately USD 184 M)



Source: APCP, LBP as cited in MMDC, 2020

• Capacity building. The capacity building program aims to strengthen ARBs and their organizations so they qualify for the regular lending program of LBP. It deploys consultants/mentors to assist ARBOs in developing an organizational vision and relevant operational policies, systems, and procedures; setting up the loan disbursement and repayment procedures; and, the institutional development and strengthening of ARBOs/coops to ensure economic viability and sustainability (Geron, et al., 2016).

DAR is the lead implementer for capacity building. It introduces and promotes the purpose and features of the program to agrarian reform beneficiary organizations (ARBOs) and ARBs in special meetings or during general assemblies. Interested ARBOs inform the DAR through development facilitators who then conduct a maturity assessment of the ARBOs using DAR's Information Technology Enabled Maturity Assessment (ITEMA) to check their eligibility under the program.

Upon identification of eligible ARBOs, DAR – with the support of LBP and PCIC – conducts orientation meetings on APCP to detail the roles of participating agencies, requirements, loan charges, loan collection and repayment, etc. Onsite planning meetings to determine the needed production loans follow. The DAR training team, in coordination with DA municipal agricultural officers, assists ARBs in developing farm plans and budgets. DAR personnel assist ARBOs in their loan application and submission of documentary requirements. The PARO/MARO then endorses the ARBO loan proposal to the LBP lending window for approval (MMDC, 2020).

• Capacity building accomplishments. With support from LBP, PCIC and DA-LGUs, DAR provided four major types of training to ARBs and their organizations from January 2017 to May 2020, namely: Governance, Financial Management, Farm Technology, and, Agri-enterprise. Governance ranked first in terms of number of trainings conducted and participated in by ARBs/ARBOs (Table 8). Training on governance and financial management is conducted by the DAR-Program Beneficiaries Development Team while DA and DENR spearhead the training on farm technology and agri-enterprises.



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Table 8. Accomplishment of Capacity Building per Category CY 2017 to 2020

INDICATORS	FINANCIAL	GOVERNANCE	FARM-TECH	AE/LIVELIHOOD	OTHERS	TOTAL
			CY 2020			
NO. OF ARBO	251	195	19	18	129	612
NO. OF ARB	4,488	3,389	339	143	2,069	10,428
NO. OF TRAINING	203	158	11	7	96	475
			CY 2019			
NO. OF ARBO	1,095	895	164	61	146	2,361
NO. OF ARB	17,988	13,187	3,679	948	1,420	37,222
NO. OF TRAINING	572	386	109	34	42	1,143
	CY 2018					
NO. OF ARBO	1,015	1,136	227	135	9	2,522
NO. OF ARB	13,948	15,737	4,198	940	155	34,978
NO. OF TRAINING	511	485	133	47	9	1,185

Source: ACPC, 2020

Table 9 shows 2018 was the most productive year for capacity building. Due to calamities and the pandemic, 2020 had the least training courses given to the fewest ARBs and ARBOs).

Table 9. Accomplishment of Capacity Building Per Calendar Year 2017 to 2020

YEAR	No. of CapDev/Training Interventions	No. of ARBOs Involved	No. of ARBs Covered
2020	475	612	10,420
2019	1,143	2,361	37,222
2018	1,185	2,522	34,978
2017	1,042	3,027	32,304

*The number of Capacity Development/Training Intervensions as well as the Number of ARBOs Involved and ARBS Covered are service count, which means that the same number of ARBOs and ARBs are subjected to various and multiple training activities.

- Crop insurance coverage. From 2014 to 2020, 114,105 farmers had crop insurance amounting to PhP 6.8 billion (approximately USD 135 million) with 20,852 claimants (18 percent) indemnified in the amount of PhP 264.44 million (approximately USD 5.27 million).
- Support services. DAR and DA delivered limited support services to ARBOs, including providing storage facilities that had previously prevented ARBOs from buying in bulk their members' produce to command better prices.

Design adjustments in the APCP made by government and their results

The government has made adjustments in the design of APCP to effectively raise farmers' access to timely, adequate, and affordable credit in line with efforts to find a balanced mix of lending features and practices that would allow farmers to optimize credit services that create huge positive impacts on their production and income (Quilloy and Asma, 2017).

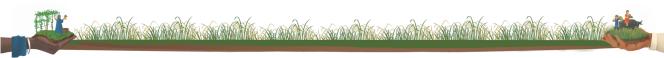
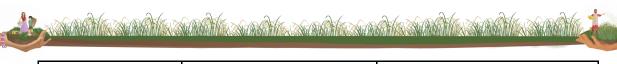


Table 10 summarizes the credit restrictions that inhibited small farmers from borrowing in past government credit programs and the adjustments made in the APCP. Table 10 was informed by the two FGDs conducted by ANGOC with rice farmers in the Visayas from June to July 2021.

Table 10. Credit Restrictions and Adjustments already made by the Philippine Government

Credit Restrictions	Adjustments made by Phil Government thru APCP	Remarks and Gaps in Program Implementation	
A. Credit/Lending Program			
Inaccessibility	LBP Branches are based in strategic municipalities to cater to the needs of farmers.	As a strategy, DAR/LBP has tapped ARBOs and coops as credit conduits in areas beyond their reach. However, there are few ARBOs to tap since most were unable to improve credit worthiness and reach organizational maturity.	
	 Provide sufficient information about the credit program through program orientation and meeting with ARBs. 	 The government has adopted the commodity clustering approach to serve farmers. In Iloilo and Negros, the DAR-PBD team invited farmers for program orientation in ARC areas. In Leyte, farmers are invited to go to the LBP office for the program orientation on credit. 	
	Limited professional staff to serve farmers.	 All participants affirmed that additional staff are needed to facilitate efficient delivery of services. 	
Commodity specific credit policy	Adjusted credit policies from monocropping rice production to multicropping (corn, sugarcane. coconut, HVCs) and diversified farming through agribusiness and livelihood projects.	 All participants confirmed they were able to avail of loans for rice production and their other crops like cassava, sugarcane, cacao, etc. Some participants availed of loans for agribusiness and livelihood projects. 	
Risky to venture into agricultural production	 Established PhP2.5 billion guarantee fund in case of default payment. The PCIC provided full premium free crop insurance to reduce the risk of rice farmers against pest and calamities. 	 The participants affirmed that the guarantee fund from DA/APCP and PCIC has made easier their access to loans. Crop insurance served as the farmers' safety nets during calamities. 	



Lending institutions not within reach by small farmers	 Farmers' organizations and cooperatives were allowed to serve as credit conduits. DAR provided capacity building to farmers' organizations and cooperatives to improve their creditworthiness and effectiveness in the provision of services. Participating ARBOs have qualified staff of credit manager, finance officer, and bookkeeper. Functional administrative, financial, and bookkeeping systems were installed within the ARBOs. Simplified credit policies and procedures were installed in the ARBOs. ARBOs facilitate members' loan application, processing, monitoring and collection. LBP provides loan restructuring to ARBOs in case of default payment by individual farmers. 	 All participants confirmed that the DAR provided capacity building to improve creditworthiness. However, capacity building activities were irregular and there was a lack of follow-up training and mentoring to ensure that knowledge and skills were fully acquired by the trainees. Hence, many ARBOs have not reached their full potential as credit conduits for APCP. In South Negros (from Bacolod to Hinobaan), 358 ARBs (almost 80 percent) failed to pay their leasehold obligations (Arienda) because farmers mismanaged their credit loans. In Leyte, only one coop completed 12 loan cycles with LBP, while 19 farmers' coops experienced project mismanagement. These mismanaged coops lack social preparation to sustain their projects. They need follow-up trainings on values formation, leadership, financial management and enterprise development, including marketing support.
Complicated loan application	DAR staff facilitate loan applications in the field, given the low literacy rate among small farmers.	 All participants affirmed the important role of DAR in providing information on credit and facilitating loan applications of small farmers. The endorsement and certification issued by the MARO/PARO facilitated the immediate approval and release of LBP loans to farmers. However, in instances where the ARBO and member-ARBs only had a mother CLOA, such as in Iloilo, the absence of a technical description for the land survey made loan processing and approval difficult because the amount of the crop production loan could not be computed.

Difficult and lengthy loan procedures	LBP lending policies and procedures are kept simple to facilitate credit access of farmers' organizations and cooperatives. Newly organized farmers' organizations are allowed to borrow. They are not required to pass the regular cooperative accreditation and risk assessment criteria of LBP.	All participants affirmed that the APCP lending policies and procedures are simpler compared with the regular LBP lending policies and procedures.
Too many documentary requirements	Fewer documentary requirements than those normally required by LBP and formal financial institutions.	 Some farmers are still experiencing difficulty in complying with the documentary and collateral requirements of the LBP. Eligible borrower must be a CLOA holder to be endorsed by DAR.
High interest rates	Affordable, low interest rates based on government regulations @ 1.25% per month.	All participants affirmed the APCP has low interest rates compared with other lending institutions.
Delayed loan processing and release of funds	Despite limited staff, LBP tried its best to facilitate loan approval and release of funds.	Loan processing and release of funds depend on the early submission and completeness of documentary requirements by farmers. Incompleteness of documentary requirements results in delayed loan processing and release of funds.
B. Credit Policies and Pro	ocedures	
Inadequate loan amount approved by the lending program	Loan approval limit for APCP loan is higher (PhP 5 million or approximately USD 99,602) than the regular LBP lending program (only PhP 1 million or approximately USD 19,920).	All participants confirmed sufficient loan amounts were granted by the LBP. Some farmers even received PhP 50,000 (approximately USD 996) per hectate for crop production loans.
Collateral requirements	Innovative collateral substitutes accepted, such as assignment of crop insurance, chattel mortgage, guarantee and use of the PhP 2 billon (approximately USD 39.84 million) credit surety fund from DAR.	 Group lending was accepted. The MARO certifies that the farmers and their organizations are legitimate and duly registered with SEC/CDA. LBP accepted certificate of crop insurance and chattel mortgage as loan collateral. DAR guarantee funds used by LBP in case of default payment.
Lack of farmers' participation in planning credit programs	DAR coordinates closely and liaises with LBP on the status of loan approval and loan releases.	The participants affirmed that DAR conducted its periodic consultations with farmers' organizations to follow-up loan repayments.

Source: FGDs with rice farmers (2021)



Key implementation challenges

Table 11 highlights key challenges identified by the Mid-Term Program Evaluation Report (as shared by APCP to ANGOC on 7 June 2021) conducted by the Multi-Sectoral Management Development Corporation (MMDC) commissioned by the ACPC. The study, conducted from 2017 to 2020, involved 15 ARBO-borrowers and 10 ARBO non-borrowers strategically distributed among the four lending groups of LBP.

Table 11. Identified Problems and Issues in APCP Implementation

Implementation Area	Identified Problems/Issues	
Amount of Loans	While DAR had allocated PhP 2.5 billion (approximately USD 49.8 million) as guarantee funds for APCP implementation, funds were not distributed to the lending centers based on the need of ARBs. Loan approval, which was done on a first-come, first-served basis, resulted in the uneven distribution of production loans depending on the capability of development facilitators.	
	From October 2012 to December 2020, LBP extended total loans of PhP 9.231 billion (approximately USD 183.88 million) to 886 ARBOs (68,963 ARBs). Of this amount, 51.47 percent (PhP 5.147 billion or approximately USD 102.5 million) was released for rice production to 454 ARBOs (35,671 ARBs).	
	The absence of benchmarks for target setting of borrowers made it difficult to identify and estimate the demand and supply for credit per region/province/municipality. The DAR reported that it had set targets but, according to the MMDC consultant, there is hardly any indication that these targets are used for planning on how much funds should go to the local chapters of LBP.	
Loan Interests, Pass-on Rates, Penalties, and Incentives	The APCP loan interest is relatively low as borrowing conduits pay 8.5 percent interest rate per annum for short-term loans and 9.5 percent for long-term loans. For conduits, the pass-on rate to end-borrowers is up to 15 percent for short-term loans and up to 16 percent for long-term loans.	
	In cases of late payments, the borrower is charged with three percent penalty per annum. As incentive, coop borrowers receive interest rebates of two percent per annum on the principal paid when the loan amortization is paid on time.	
	While ARBs recognize that a pass-on 15 percent interest rate is reasonable since interest rates of private loans can go as high as 75 percent to 100 percent per annum, respondents have recommended strongly that the APCP loan interest rate should be on par with the other government credit programs – ACEF, AFFORD, and PLEA – which charge much lower interest rates. In Quezon Province and other areas, many microfinance institutions, including ASA and CARD, lend at two percent interest rate per annum.	
Loan Repayment Rates and Defaults	The program has experienced low repayment rates and high loan defaults by ARBOs/ARBs. The ANGOC research team validated this during the FGD with ACPC implementers in May 2021.	
	The repayment rate for ARBOs dropped from 89.7 percent (PIDS, 2016) to 58 percent in 2020, while the past-due rate registered at 42 percent. Reasons cited by LBP were: a) lack of social preparation of ARBOs; b) lack of LBP staff to supervise and monitor closely the APCP implementation; c) ARBO areas are isolated and difficult to reach; and, d) application	

of the Rice Tariffication Law that resulted in the influx of imported rice and low buying prices for palay. In turn, this resulted in low income for

farmers and their inability to pay their loans with LBP.

ARBs loans have almost the same repayment and past due rates at 50 percent each. Most ARBs (87 percent) cited crop failure due to calamities and drought that hit their provinces as the major reason for default payment although they were covered by crop insurance. Some ARBs said they were not indemnified by PCIC because of drought and late submission of reports.

Capacity-Building of ARBOs

From 2017 to 2020, 3,845 capacity building activities were conducted by DAR to benefit 114,924 ARBs (8,522 ARBOs).

However, only 16 of the 885 ARBOs became eligible for the LBP regular lending program. The bases for ARBO eligibility are: a) ARBOs have fully paid their loans for at least two cropping cycles; b) ARBOs have no outstanding loans from other sources; c) ARBOs are engaged in lending operations using internally generated resources; d) ARBOs are using their own farm machineries/equipment for rent by members and non-members; e) ARBOs have legitimate ARB members; f) ARBOs have fully functional credit, education and membership committees, sound policies, financial management, systems and procedures in place; and, g) ARBOs have a strong core management team.

Moreover, even qualified ARBOs did not want to access credit from the LBP regular lending windows for the following reasons: too much paperwork, high interest rate, payment of premiums for crop insurance, much consumption of time and money in loan application and follow-up, etc.

The low number of eligible ARBOs indicates a need to improve the APCP capacity building program for ARBOs to reach their full potential in terms of organizational development, financial literacy, management, and, technical capability.

Some ARBOs are requesting for refresher courses for their new officers and members. Unfortunately, DAR only has PhP 2 to PhP 4 million (approximately USD 39,841 to USD 79,682) per annum, which is extremely limited to meet the demands for training.

Crop Insurance Coverage

All APCP borrowers are provided with free crop insurance by PCIC.

From 2014 to 2020, a total of 114,105 farmers were covered by crop insurance of PhP 6.8 billion (approximately USD 135.5 million) that cost a premium of PhP 656 million (approximately USD 13.1 million). For the same period, a total of 20,852 farmer-claimants were indemnified with the aggregate amount of PhP 264.44 million (approximately USD 5.27 million). As of 30 June 2020, the PCIC fund utilization rate was slightly higher at 90 percent compared with 86 percent in 2014.

Despite the orientation sessions conducted by PCIC, DAR and LBP, many ARBs still do not fully understand their insurance policies. According to the survey in 2018, some farmers believe that, in the event of a calamity, they will get full payment of their production costs. However, many were disappointed when the drought occurred and they were not indemnified by PCIC. It appeared the drought is not included in the list of calamities covered by the insurance. Other ARBs were also not indemnified by the PCIC when they failed to beat the cut-off date for the submission of their reports and other requirements. In addition, for those who were paid, the amounts received were lower than their loans.

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	Once the DAR-PARO has endorsed the qualified ARBOs and member-farmers to the LBP, the PCIC issues the insurance policy in the name of the farmer. Few farmers understand, however, that their policy is assigned to LBP which collects the indemnity as part of the payment for the ARB's production loan. Since the insurance premium is subsidized 100 percent, no cash really passes through the hands of the farmer borrower. The review consultant also noted the need for ACPC to validate in the field the list of farmers who are given insurance for purposes of checks and balance.
	Further, since crop insurance is an important component of the Program, the PCIC should be represented in the NPMC and TWG.
Provision of support services by DAR and DA provided to the ARBOs	While support services were delivered by the DAR and DA to the ARBOs, these were limited. For instance, the lack of storage facilities prevented ARBOs from buying in bulk and sell cheaper products for their members. Likewise, ARBOs lack the warehouse storage area to buy and store their members' produce in order to command better price by taking advantage of the economies of scale.

Source: MMDC, (2020)

Persistent challenges and proposed solutions

Table 12 shows persistent and unresolved challenges and solutions proposed by the rice farmers in the Visayas to improve the APCP implementation.

Table 12. Persistent Challenges and Proposed Solutions by Farmers in the Visayas

Perceived Constraints	Proposed Solutions	
Limited number of LBP staff to service farmers, causing delayed release of funds	 Increase the number of staff in charge of agri-credit to three for Negros Occidental North (Districts 1, 2 and 3) and 3 for Negros Occidental South (Districts 4, 5 and 6). 	
Lack of sufficient and timely information on credit	 Intensify information – via IEC and tarpaulins – on how to avail of APCP loans and other support services; these should be posted within the <i>barangay</i>, especially in areas with high numbers of agrarian reform beneficiaries and farmers. 	
Too many documentary requirements	Review credit policies and requirements to reduce documentary requirements.	
Lack of follow-up and close monitoring of credit program	 Stringent and close monitoring of loans, especially for new applicants. 	
Lack of competent and qualified program manager, bookkeeper, and auditor for the ARBOs	 DAR and LBP must ensure and encourage the recruitment and training of qualified program manager, bookkeeper, and auditor for ARBOs. 	
Lack of credit windows for women and youth	 Provide credit windows for women and youth to support family farming and the development of their farmlands. 	
Lack of training for the women and youth as second liners	 DAR should develop training programs for women and youth as second liners for the long-term sustainability of the ARBOs. 	

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Adverse effects and impact of	
COVID-19 pandemic	

- DAR should have at least two staff per area who are knowledgeable and mindful of the COVID-19 health protocols and these should conduct training in the field to mentor and monitor the farmers' organizations.
- Farmers should be gathered in one venue and provided free transportation during training to minimize their costs, control mobility, and reduce exposure to COVID-19.
- Training should include helpful tips and heath protocols on COVID-19. The government must ensure the safety of farmers by providing protective masks/face shields during trainings.
- Online loan applications through accessible and approachable hotline agents should be accepted.
- Basic Information should be disseminated through social media platforms, e.g., postings on FB page, to provide reliable information on the credit programs and other services.

Source: FGD with Rice Farmers, 2021

Analysis of factors affecting credit access

Credit access. Access to credit is limited to ARBs excluding leaseholders and farmworkers directly tilling the former's lands. The APCP also limited participation of women and the youth.

On limited service coverage of LBP offices and physical farm location of smallholders. The limited area coverage of LBP made the credit program less accessible to farmers in remote areas considering transportation costs and other expenses in following up loan approval.

On availability of credit funds and approval of loanable amount for crop production Sufficient funds for credit are available for farmers' rice/crop production and for agribusiness and livelihood projects. The PhP 2.5 billion (approximately USD 49.8 million) credit facility served as guarantee for the production and marketing risks in rice production as well as a buffer to ensure the continuous APCP operations.

On the conduct of regular communication to ARBs/ARBOs. Rice farmers asked government agencies to hold regular dialogues with ARBs/ARBOs, intensify information dissemination, and promote the credit program in strategic places. They proposed online loan applications and called for complete and concise information on crop insurance.

On the institutional capacity of LBP to effectively deliver the credit program in an efficient and timely manner. LBP accepted certificates of crop insurance and chattel mortgage as collaterals. Group lending was allowed. The farmers said more staff would expedite loan processing. They also want fewer documentary requirements.

On credit loan processing and approval Access to credit and the loan amount are subject to LBP's evaluation of farm plans, taking into consideration tenurial status, farm size, land use, the adoption of modern farm technologies, and labor supply.



On farmer's tenurial status. Fast track the parcelization of CLOA to better serve rice farmers in accessing credit through CARP/CARPER. APCP implementers should develop policies for the credit needs of leaseholders and landless farmworkers who depend on informal lenders.

On small farm size with a good farm plan. In principle, a small manageable farm with a good farm plan is better than a large farm not fully optimized for productive use.

On land use and adoption of appropriate farm technology. All respondents plant rice with secondary crops to prevent soil acidity. Most farmers in the study have adopted conventional farming (25 percent) and low-external-input sustainable agriculture (LEISA) plus integrated pest management (62.5 percent). Only one farmer (12.5 percent) has adopted pure organic farming.

On labor supply. Labor is critical in seed and land preparation, transplanting, harvesting, threshing, hauling, drying, and storage. In family farming, the extent of labor support provided by women and adult children based on their capability and availability is important in determining the saving labor schemes of rice farmers.

On the effectiveness of capacity building and readiness of ARBOs as eligible credit conduits under APCP. In 2020, the MMDC reported that out of 885 ARBOs, only 16 were eligible for LBP's regular lending program. This study noted cases of loan defaults by coops which key informants ascribed to the lack of competent program managers, bookkeepers, and auditors in ARBOs.

Looking to the future

Table 13, which is based on the e-survey conducted by the ANGOC research team, shows factors that farmers consider in accessing credit. Some non-APCP respondents prefer the service of cooperatives because of the benefits they receive through patronage. One raised the need for life insurance as social protection on top of crop insurance. Another pushed for the adoption of organic farming technology.



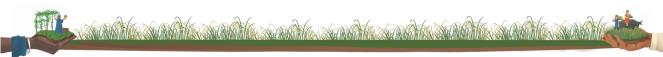


Table 13. Farmers' Preferred Features of a Credit Program

Knowledge and Perceptions	APCP Beneficiaries	Non-APCP Beneficiaries
Factors in choosing a credit facility	Low interest rate Minimal requirements Easy loan application and fast processing of requirements Collateral is not required Good and accommodating staff to assist the farmers	Low interest rate Minimal requirements Cooperative providing accessible credit program to farmers Accommodating staff With life insurance as social protection
Expectations among credit programs within their area	 Low interest rate Minimal requirements Easy/fast process/transaction Material collateral is not needed Loans available for crops production and livelihoods The staff know how to assist the farmers 	 Low interest rate Minimal loan requirements Accessible credit program for smallholder farmers Proper information is provided to the farmers Accommodating staff
Recommendations to improve accessibility of credit in local areas	A) Lending Institutions/Program For the Government to provide farmers with appropriate orientation and knowledge about the program Staff are knowledgeable to discuss clearly the program with the clients Borrowers are well-assisted and advised in utilizing their money wisely B) Lending Policies/Procedures Faster process/transaction Access to information C) For Farmers Fellow farmers to pay loans	A) Lending Institutions, Policies/ Procedure • Proper information disseminated through social media (not just through seminars) B) For Farmers • For fellow farmers to pay loans on time • For fellow farmers to ulitize the loan appropriately

Source: FGDs with Rice Farmers, 2021

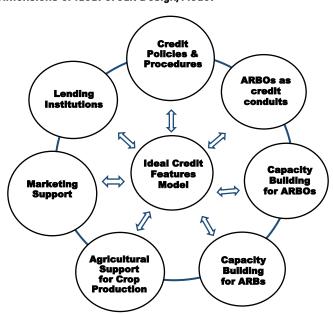
Farmers' priority features of an "ideal" credit program

Based on the credit preferences of the key respondents, the previous assessment on the Sikat Saka Program for rice farmers (Quilloy and Asma, 2017), and direct experience with APCP implementation, a model of an ideal credit program was developed which espouses a value chain approach that covers the full range of activities from credit provision to consumer sales. The following are the four touchstones:



- a. **Finance/credit** that is accessible, appropriate, relevant and useful to smallholders;
- b. **Production**, which implies the adoption of appropriate farm technologies that are site-specific, environment-friendly and least costly through family farming;
- c. Management to strengthen the entrepreneurial skills of ARBs and institutional capacity building of ARBOs to become credit conduits of LBP with the end goal of people's empowerment; and,
- d. Marketing support to wean farmers' organizations away from traditional channels to alternative marketing arrangements (e.g., supermarkets, national people's cooperatives, institutional arrangements with national government and LGUs, CSOs, private sector) in selling their rice and other agricultural products, especially in this time of pandemic.

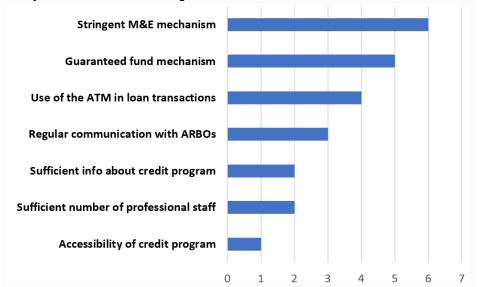
Figure 11. Seven Dimensions of Ideal Credit Design/Model



As shown in Figure 11, the seven dimensions of this ideal credit design were presented to the rice farmers to determine accessibility, appropriateness, relevance, and usefulness. Farmer-participants ranked preferences, values, needs and priorities. They selected the four most important of the seven dimensions. The top four priorities are the minimum, non-negotiable, and indispensable criteria of an ideal credit program design and would constitute the best scenario for small farmers.







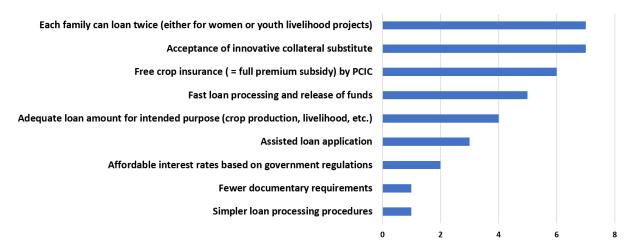
The top priorities for features of credit lending institutions are:

- a. Credit program accessibility;
- b. Sufficient professional staff who provide credit information;
- c. Regular communication with ARBOs; and,
- d. Use of ATMs in loan transactions for easy access to cash given the pandemic.

For features on credit policies and procedures, the following four are the top priorities of the participants:

- a. Simple loan processing procedures and fewer documentary requirements;
- b. Affordable interest rates;
- c. Assisted loan application; and,
- d. Adequate loan amount for crop production.

Figure 13. Key Features of Credit Policies and Procedures

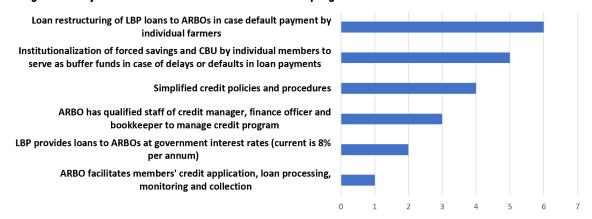




The following are the five priorities in terms of the desired features of ARBOs as credit conduits:

- a. Facilitate members' credit application, loan processing, monitoring, and, collection;
- b. Government interest rates for LBP loans;
- c. Loan application assistance;
- d. Qualified credit manager, finance officer, bookkeeper; and,
- e. Simplified credit policies and procedures.

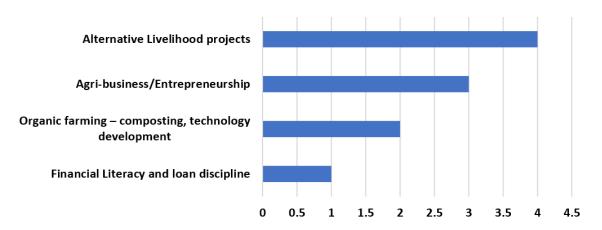
Figure 14. Key Features of ARBOs as conduit of credit program



The top four priorities in terms of the desired key features of ARB capacity building are:

- a. Financial literacy and loan discipline;
- b. Organic farming;
- c. Agribusiness and entrepreneurship; and,
- d. Alternative livelihood projects.

Figure 15. Key Features of Capacity Building for ARBs

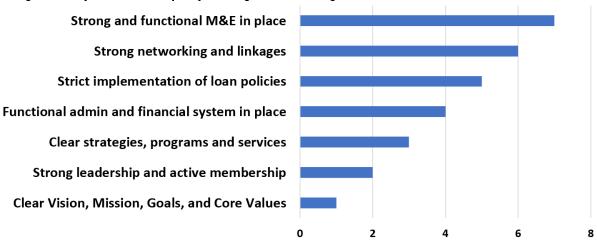




The top four priorities in terms of the desired key features of capacity-building for their organizations are:

- a. Clear vision, mission, goals, core values;
- b. Strong leadership, active membership;
- c. Clear strategies, programs, services; and,
- d. Functional financial and administrative system in place.

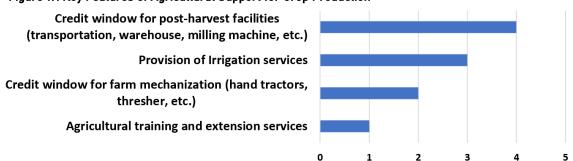
Figure 16. Key Features of Capacity Building towards strong ARBOs



The four priorities for features that support crop production are:

- a. Agricultural training, extension services;
- b. Credit windows for farm mechanization;
- c. Provide irrigation; and,
- d. Credit windows for post-harvest facilities

Figure 17. Key Features of Agricultural Support for Crop Production



The top priorities for marketing support features are:

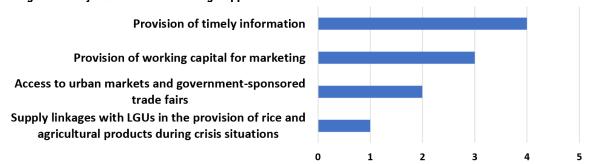
- a. Linkages with LGUs in providing rice during crises;
- b. Access to urban markets and trade fairs;
- c. Working capital for marketing; and,
- d. Provision of timely information.



The top priorities for marketing support features are:

- a. Linkages with LGUs in providing rice during crises;
- b. Access to urban markets and trade fairs;
- c. Working capital for marketing; and,
- d. Provision of timely information.

Figure 18. Key Features of Marketing Support



Moving on: specific recommendations on the current program

Improve the APCP capacity building program. Apart from natural disasters and the effects of climate change, the rural situation has worsened due to the Covid-19 pandemic that has restricted the movement of farm laborers to support rice production and the marketing of agricultural goods. State agencies should consider the following for capacity building:

- Review APCP objectives to see if these are realistic and consistent with LBP's regular credit program to assist ARBs/ARBOs. There is a need to strengthen the capacity of farmers' organizations to overcome the limited coverage of LBP and serve farmers in remote areas. But ARBOs are not only meant to be credit conduits and marketing channels for the adoption of modern farming technology. Capacity building is integral for farmers' self-sufficiency, self-reliance, autonomy, and resilience to natural disasters, climate change, and the pandemic.
- Establish and develop a comprehensive database of smallholder rice farmers containing information on loan repayment record, loan default, and creditworthiness. This provides useful information to policymakers and program implementers in the following areas:
 - a. As basis for LBP to create policies and set criteria in fund allocation to lending centers consistent with the Philippine Rice Master Plan and the productivity and competitiveness of rice producing regions, provinces, and municipalities;
 - As a benchmark for setting targets during strategic assessment and planning where program performance is in terms of target vs actual outputs and assessed through feedback and analysis of factors affecting program operations;

- c. As basis for conducting training needs assessment in the capacity building program;
- d. As basis to increase the program budget based on the review of the APCP capacity building program target by geographical coverage vis-a-vis the required manpower, with the objective of recruiting more mentors for consistent trainings, monitoring, coaching, and evaluation of ARBs/ARBOs, farmers' organizations, and cooperatives; and,
- e. Implementing agencies should consider accepting online loan applications.



- Provide support services in an effective and timely manner. PIDS noted that agricultural credit is necessary but insufficient to improve the income levels of small farmers. It revealed implementing agencies provide limited and sporadic support services to help ARBs/ARBOs access farm mechanization, post-harvest facilities, and marketing support. These are recommendations to improve the delivery of timely support services in rural areas:
 - a. A multi-agency, on-call TWG for support services that would involve other agencies for their expertise such as NIA (irrigation), BSWM (soil/water management and organic farming), DTI and LGUs (marketing support), DPWH (infrastructure), CDA (coop development) including CSOs (for organizing and capacity building of farmers), Phil Rice, IRRI and the academe;
 - b. Hike investment in agriculture to ensure the timely and adequate delivery of support services and infrastructure, review the present budget allocation vis-a-vis the needs of ARBs/ARBOs, and identify strategic investments in ARC support services to create high impact.



Policies on site selection of investments should be reviewed, including: the presence of strong ARBs/ARBOs; ARBs/ARBOs with access to agricultural extension, irrigation facilities, suitable land use for rice production, and practicing crop rotations.

Improve the credit scheme. The respondents are satisfied with the repayment schemes and interest rates but would welcome better terms.

Enhance women's participation. Provide credit windows for women and youth to support family farming and the development of their farmlands. DAR should develop training programs for women and youth as second liners for the long-term sustainability of the ARBOs.

Strengthen support for organic farming. The study found that the APCP is not yet fully supportive of the adoption of organic farming. Farmers who prefer organic farming technology may be excluded from availing of credit assistance. This study supports the promotion of organic farming technology for APCP. Rice farmers should be allowed to choose their farming technology.

Provide documentation on the free crop insurance coverage. Many ARBs do not fully understand their free crop insurance policies. The study recommends that farmers be given a hard copy of PCIC policies in a popular language understandable to them that provides a clear computation of the indemnification amount a claimant will receive in calamities. PCIC should simplify documentary requirements; extend the deadline of document submission; and, include drought in its insurance package.

Responding to the COVID-19 pandemic. Basic Information should be disseminated through social media platforms, e.g., postings on the FB page, to provide reliable information on the credit programs and other services. Online loan applications through accessible and approachable hotline agents should be accepted. The use of the ATM in loan transactions for easy access of cash given the pandemic. The training design/module should include tips and heath protocols on COVID-19.



List of acronyms

ADB Asian Development Bank

AFMA Agriculture and Fisheries Modernization Act

ANGOC Asian NGO Coalition for Agrarian Reform and Rural Development

APCP Agrarian Production Credit Program

ARBs agrarian reform beneficiaries

ARBOs agrarian reform beneficiary organizations

CARRD Center for Agrarian Reform and Rural Development

CARP Comprehensive Agrarian Reform Program
CADT Certificate of Ancestral Domain Title
CBFM Community-Based Forest Management
CLOA Certificate of Land Ownership Award

CLT Certificate of Land Transfer
CSO Civil Society Organization
DA Department of Agriculture
DAR Department of Agrarian Reform

DENR Department of Environment and Natural Resources

FGD Focus Group Discussion

GLARC Guim-o Layan Agrarian Reform Cooperative

IPs Indigenous Peoples

IPRA Indigenous People's Rights Act
IRR Implementing Rules and Regulations

Kaisahan Kaisahan tungo Sa Kaunlaran Ng Kanayunan at Repormang Pansakahan Inc.

KASAPPI Katilingban sang Agraryo Padulong sa Pag-uswag sang Iloilo Agrarian Reform Cooperative

OFWs Overseas Filipinos Workers
LAD Land Acquisition and Distribution
LBP Land Bank of the Philippines

MNDC Multisectoral Management Development Corporation

NEDA National Economic Development Authority
ORKALEFF Ormoc Kananga Leyte Farmers Federation

PFC Philippine Fisheries Code

PhP Philippine Peso

PIDS Philippine Institute for Development Studies

RA Republic Act

SUFA Salvacion United Farmers Association

SFF Small Farmers and Fishers

UDHA Urban Development and Housing Act

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- Salvacion United Farmers Association

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REFERENCES

- Asian Development Bank (ADB). (1998). ADB Study Urges Rural Development for the Philippines. http://www.adb.org/ Documents/News/1998/nr1998037.asp.
- Arnaoudov, V., Sibayan, E., & Caguioa, R. (2015). Adaptation and mitigation initiatives in Philippine rice cultivation. United Nations Development Programme.
- Asian NGO Coalition for Agrarian Reform and Rural Development (ANGOC) and Land Watch Asia (LWA). (2019). State of Land Rights and Land Governance in Eight Asian Countries: Forty years After the World Conference on Agrarian Reform and Rural Development, pp. 24-26. ANGOC.
- Asian NGO Coalition for Agrarian Reform and Rural Development (ANGOC). (2017). From the Farmland and the Table: Exploring the Links Between Tenure and Food Security. Pages 21-22. ANGOC and the Global and Food Network (GLTN).
- Atieno, R. (1997). Determinants of credit demand by smallholder farmers in Kenya: an empirical analysis. Tropenlandwirt. 98, 63-71.
- Balisacan, A. (2001). Pathways of Poverty Reduction Rural Development and Transmission Mechanisms in the Philippines. https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.200.7080&rep=rep1&type=pdf
- Bayudan-Dacuycuy, C., Magno-Ballesteros, M., Baje, L. K. C., & Ancheta, J. A. (2020). 2020 Towards a More Sustainable Financing of Small Farmers and Fisherfolk's Agricultural Production. PIDS Discussion Paper Series No. 2020-38. Philippine Institute for Development Studies (PIDS).
- Binswanger, H. & Khandker, S. (1995). The Impact of Rural Finance on the Rural Economy of India. Journal of Development Studies. Taylor & Francis Journals, vol. 32(2), pages 234-262.
- Briones, R. M., & Dela Pena, B. (2015). Competition Reform in the Philippine rice sector. *PIDS Discussion Paper Series, No. 2015-04. Philippine Institute for Development Studies (PIDS).*
- DA. (n.d.). Philippine Rice Industry Roadmap. [PPT Presentation]. https://asiarice.org/assets/uploads/ Philippine_Rice_Industry_Roadmap_2030_v2_std.pdf
- Department of Agriculture (DA). (2018). The Philippine Rice Industry Road Map 2030. https://www.philrice.gov.ph/wp-content/uploads/2018/09/The-Philippine-Rice-Industry-Roadmap-2030.pdf
- Elauria, M.M. (2015). Farm land policy and financing program for young generation in the Philippines. https://www.fftc.org.tw/htmlarea_file/activities/20150505123058/10D_Elauria.pdf
- Esguerra, E. F. (1981). An assessment of the Masagana 99 credit subsidy as an equity measure. *Philippine Review of Economics*, 18(3 & 4).
- Fajardo F. (1985) Critical Analysis on Agrarian Reform in the Philippines. Agricultural Economics.
- Food and Agriculture Organization (FAO). (n.d.a). FAO Regional Rice Initiative Pilot Project Philippines. http://www.fao.org/fileadmin/templates/agphome/scpi/Document_pdfs_and_images/Presentation_RRI-Philippines.pdf
- FAO. (n.d.b). Agriculture Fact Sheet Philippines. https://www.fao.org/3/ae946e/ae946e03.htm
- Ford, W. (1987). Operational Guidelines for Community Development: A People-Centered Approach. National Council on Integrated Area Development (NACIAD).
- Galang, I. M. R. (2020). Land Tenure, Access to Credit, and Agricultural Performance of ARBs, Farmer Beneficiaries, and Other Rural Workers. *PIDS Discussion Series No. 2020-44. Philippine Institute for Development Studies (PIDS).*
- Geron, M. P. S., Llanto, G. M., and Badiola, J. A. R. (2016). Comprehensive study on credit programs to smallholders. PIDS Discussion Paper Series No. 2016-48. Philippine Institute for Development Studies (PIDS). https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidsdps1648.pdf
- Gonzales, L. (2013). Global cost and price competitiveness of Philippine rice. www.fao.org/fileadmin/templates/agphome/scpi/Document_pdfs_and_images/Presentation_R RI-Philippines.pdf
- Habito, C. (2021). An "Independent Dialogue for the UN Food Systems Summit 2021: Pathways to Sustainable Food and Nutrition, Consumption and Livelihood." Organized by the Ateneo de Manila University, Xavier University and the Sustainable Development Solutions Network (SDSN) last 16 April 2021.

- Heidhues, F. and Schrieder, G. (1999). Rural Financial Market Development, Vol. 2005. Institute of Agricultural Economics and Social Sciences in the Tropics and Subtropics (Ed.). Forschung zur Entwicklungsökonomie und Politik Research in Development Economics and Policy, Discussion Paper 1/1999.
- Intal, P.S.J. and Garcia, M.C. (2005). Rice and Philippine Politics. Discussion Paper Series, No. 2005-13. Philippine Institute for Development Studies (PIDS). https://dirp4.pids.gov.ph/ris/dps/pidsdps0513.pdf
- Juliano, B.O. and Hicks, P.A. (1996). Rice functional properties and rice food products. Food Reviews International, February 1996, 12(1), pp. 71-103. DOI: 10.1080/87559129609541068
- Kloeppinger-Todd, R. and Sharma, M. (Eds.). (2010). Innovations in Rural and Agricultural Finance. International Food Polity Research Institute, The World Bank.
- Land Bank of the Philippines (LBP). (2016). Quick Assessment of The Sikat Saka Program (SSP) and Agriculture and Fisheries and Financing Program (AFFP) Borrowers With Past Due Loans. https://acpc.gov.ph/wp-content/uploads/2015/06/Quick-Assessment-SSP-AFFP-with-Past-Due.pdf
- Llanto, G. (1987). Rural Credit Policy: Do We Need to Target? Agricultural Credit Policy Council, Philippines. Economics and Sociology Occasional Paper No. 1397. Agricultural Finance Program Dept. of Agricultural Economics and Rural Sociology, The Ohio State University.
- Llanto, G. (1993). Agricultural credit and banking in the Philippines: efficiency and access issues. PIDS Working Paper Series No. 93-02.
- Llanto, G., Geron, M. P. S., Badiola, J. R. (2016). How to improve smallholders' access to formal credit: Lessons from the Agrarian Production Credit Program. Philippine Institute for Development Studies (PIDS). https://think-asia.org/handle/11540/6833
- Mataia, A. B., Beltran, J. C., Manalili, R. G., Catudan, B. M., Francisco, N. M., & Flores, A. C. (2020). Rice Value Chain Analysis in the Philippines: Value Addition, Constraints, and Upgrading Strategies. Asian Journal of Agriculture and Development, 17 (1362-2020-1834), 19-42.
- Medina, R., Ridao, A. (1987) IRRI Rice: The Miracle That Never Was, Agency for Community Educational Services (ACES), Quezon City
- Meyer, R. & Nagarajan, G. (2000). Rural Financial Markets in Asia: Policies, Paradigms and Performance, Vol. 2005. Oxford University Press.
- Mina, C.D., Reyes, C.M., and Gloria, R.A.B. (2015). Targeting the Agricultural Poor: The Case of PCIC's Special Programs. PIDS Discussion Paper Series No. 2015-08. Philippine Institute for Development Studies (PIDS).
- Multi-Sectoral Management Development Corporation (MMDC). (2020). Final Report: Agrarian Production Credit Program (APCP) Mid-Program Evaluation and Impact Assessment. Mid-Year Evaluation Report submitted to Agricultural Credit Policy Council (ACPC), Ortigas Center 1605, Pasig City.
- Münkner, H.H. (2012). Co-operation as a Remedy in Times of Crisis. Agricultural Co-operatives in the World. Their Roles for Rural Development and Poverty Reduction, p.46, Marburg Studies on Cooperation and Cooperatives Nr. 58.
- National Economic and Development Authority (NEDA). (2017). Philippine Development Plan 2017-2022. NEDA. https://pdp.neda.gov.ph/wp-content/uploads/2017/01/PDP-2017-2022-07-20-2017.pdf
- Ofreneo, R.E. (1980). Capitalism in Philippine Agriculture. Foundation for Nationalist Studies.
- Organisation for Economic Co-operation and Development (OECD). (2017). Institutional Arrangements for Administering Agricultural Policies. OECD Food and Agricultural Reviews Agricultural Policies in the Philippines. Chapter 2, pp. 109-110. OECD Publication. http://dx.doi.org/10.1787/9789264269088-en
- Palis, F. (2020). Aging Filipino Rice Farmers and Their Aspirations for Their Children. Philippine Journal of Science, 149(2), 351-361.
- Philippine Statistics Authority (PSA). (2012). Census of Agriculture and Fisheries 2012. PSA. https://psa.gov.ph/sites/default/files/CAF2012Agri_Philippines.pdf
- PSA. (2021a). 2020 Census of Population and Housing (2020 CPH) Population Counts Declared Official by the President. https://psa.gov.ph/content/2020-census-population-and-housing-2020-cph-population-counts-declared-official-president
- PSA. (2021b). Philippine GDP posts -8.3 percent in the fourth Quarter 2020; -9.5 percent for full-year 2020. https://psa.gov.ph/content/philippine-gdp-posts-83-percent-fourth-quarter-2020-95-percent-full-year-2020
- PSA. (5 March 2020). Fact Sheet on Men and Women in the Philippines. https://psa.gov.ph/sites/default/files/Women% 20and%20Men%20Fact%20Sheet%202021.csv
- Poliquit, L. Y. (2006). Accessibility of rural credit among small farmers in the Philippines. [thesis presented in partial fulfilment of the requirements for the degree of Master of Applied Science in Rural Development, Institute of Natural Resources, Massey University, Palmerston North, New Zealand (Doctoral dissertation, Massey University)].
- Quilloy, K.P. and Asma, J.D.S. (2017). Revitalizing Directed Credit Approach: Lessons Learned from the Department of Agriculture's Sikat Saka Program. Public Policy (Philippines).
- Quizon, A., Marzan, A., de Vera, D., & Rodriguez, M. (2018). State of land and resource tenure reform in the Philippines. Asian NGO Coalition for Agrarian Reform and Rural Development (ANGOC).
- Ricepedia. (n.d.). Philippines. https://ricepedia.org/philippines
- Sahu, G.B., Madheswaran, S., & Rajasekhar, D. (2004). Credit constraints and distress sales in rural India: Evidence from Kalahandi District. Orissa. Journal of Peasant Studies, 31, 210-241.
- Simeone, L. M. (20 January 2021). Agri-Agra Law changes seen to boost farm productivity. In *PhilStar Global. https://www.philstar.com/business/2021/01/23/2072300/agri-agra-law-changes-seen-boost-farm-productivity*
- Venkataramani, G. (2005). Country Profile: The Philippines. Philippine Resource Center.
- Verhagen, K. (1986). Cooperation for Survival: Participatory Research with Small Farmers. Community and cooperatives in participatory development, 139-154.
- World Bank. (2000). Philippines Rural Development & Natural Resource Management: Trends, Strategy Implementation, and Framework Performance Indicator System. The World Bank Rural Development and Natural Resources Sector Unit.
- Zeller, M., Diagne, A., and Mataya, C. (1998). Market access by smallholder farmers in Malawi: implications for technology adoption, agricultural productivity and crop income. Agricultural Economics, 19, 219-229.