



RESEARCH FOR DEVELOPMENT BAR DIGEST

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**CPAR: CHANGING LIVES
ONE COMMUNITY AT A TIME**

BAR R4D Digest is the official quarterly publication of the Department of Agriculture-Bureau of Agricultural Research (DA-BAR). A staff bureau of DA, it was established to lead and coordinate the agriculture and fisheries research for development (R4D) in the country. Specifically, DA-BAR is tasked to consolidate, strengthen, and develop the R4D system to improve its effectiveness and efficiency by ensuring customer satisfaction and continuous improvement through work excellence, teamwork and networking, accountability, and innovation.

This publication contains articles on the latest technologies, research results, updates, and breakthroughs in agriculture and fisheries R&D based from the studies and researches conducted by the member-institutions of National Research & Development System for Agriculture and Fisheries (NaRDSAF).

BAR R4D Digest welcomes comments and suggestions from readers.

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What is **CPAR**?

The Community-based Participatory Action Research or CPAR program is an extension modality and an innovative approach to Research for Development (R4D) that focuses on the verification, demonstration, and adoption of agricultural technologies at the community level.

Under the CPAR program, the Department of Agriculture-Bureau of Agricultural Research uses the community-based participatory approach wherein community members are actively involved in the testing and in applying new and improved farming practices and technologies.

CPAR's approach aims to verify the technical and economic feasibility of emerging, as well as mature technologies in specific locations prior to widespread promotion.



CPAR does not only diversify the livelihood options for the farmers and fishers who implement and adopt the technology but also helps boost the income of its beneficiaries.

Since CPAR takes advantage of the cooperation approach, it also establishes and strengthens the market position of the commodity in the value chain.

As more farmers learn about the positive impact of CPAR, they are becoming more involved in the project as manifested by the increasing number of farmer-cooperators and adopters of CPAR technology throughout the country.

What are the objectives of **CPAR**?

The CPAR program aims to: (1) enhance the role of research, development, and extension in technology transfer and production management system; (2) develop the strategies for effective integration of support services for fisheries and agribusiness, and enterprise development; and (3) institutionalize active community participation in the overall management of farm and aquatic resources.

CPAR: Changing lives one community at a time

Dr. Nicomedes P. Eleazar, CESO IV

As an agricultural country, farmers and fishers play a vital role in producing and putting food in our table, ensuring the country's food security. Ironically, they are also one of the marginalized members of society as they are often neglected.

The Department of Agriculture (DA) strongly stands with our farmers and fishers by recognizing their importance in our society and country. As such, programs and initiatives were implemented to cater to their needs for many years now.

In support of this, the DA-Bureau of Agricultural Research also continuously develops programs that answer the calls and cater to the needs of farmers and fishers. Hence, the Community-based Participatory Action Research (CPAR) program.

CPAR is a location-specific research cum extension activity that focuses on improving farming system technologies for specific micro agro-climatic environments within a province or municipality. It merges research initiatives and the active involvement of farmer-

and fisher-cooperators under the program's activities in various regions of the country.

Since the birth of CPAR, DA-BAR has coordinated 287 projects covering 635 sites nationwide. The program has since been benefitting more than 13,930 farmers from 336 farmer and fisher organizations in the country.

At present, with Agriculture Secretary William D. Dar's "New Thinking" paradigm and battlecry, "*Masaganang Ani at Mataas na Kita*," the existence of CPAR program has been validated as the Agriculture Department now focuses on the farm applications and utilization of research outputs.

In Mindoro, hundreds of yellow corn farmers reaped the benefits of adopting the site-specific nutrient management approach to boost their crop production.

A cacao community project was started in Davao to help capacitate farmers on proper cultural management practices as solution to low crop yield

caused by pests and apparent soil exhaustion.

A community in Quezon highly dependent on agricultural produce plagued by poverty was introduced to technologies and processing procedures to find additional sources of income apart from farming alone. Agriculture-based enterprises were founded which resulted to significant increase in the farmers' income.

The productivity of rice farmers in Capiz was rather low because of low buying price of palay. As such, farmers were introduced to other sources of income while they wait for harvest time to come. With the CPAR project, the farmers' income significantly increased.

Outdated farming practices became a problem of a farming community in Laoag when it affected their productivity. However, through the intervention done by the CPAR project in the community, farmers' productivity was increased after they decided to adopt the new farming technologies introduced to

them. The project benefitted farmers in that they also started receiving support from their local government unit.

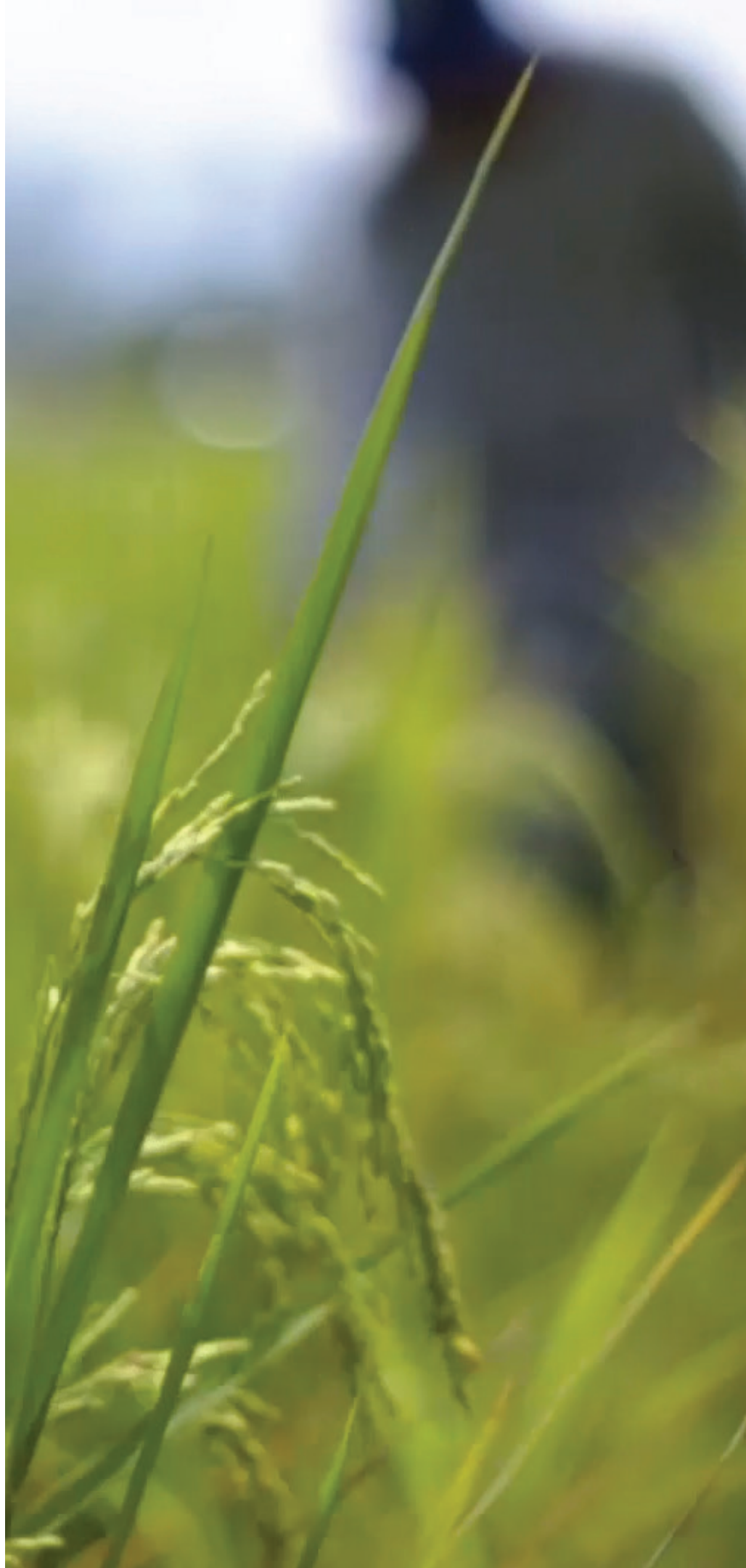
Vegetable production was the main source of income of a small community in Siquijor. But due to a rugged soil landscape, farmers suffer from low productivity caused by constant soil erosion which led to the degradation of crops and resources. Through a CPAR project, proper farming system technologies were introduced to them to replenish nutrients in the soil.

Another project doubled the production of rice farmers in Isabela by means of introducing an efficient irrigation system.

An OFW-turned-farmer was also given assistance through a CPAR project in Ifugao. Through the capacity building activities, trainings, and seminars received from the project, an OFW realized that there is money in farming in the country.

Rubber farmers in Zamboanga were also capacitated through a CPAR project. Livelihood ventures turned out to be successful.

This issue of BAR R4D Digest gives faces to the many projects that were undertaken throughout the years, detailing every story's road to success. ###



A new approach called site-specific nutrient management (SSNM) introduced to farmers in Sablayan, Occidental Mindoro boosted the municipality's yellow corn industry.

Under the project "Community-based Participatory Action Research (CPAR) on Yellow Corn using Site-Specific Nutrient Management (SSNM) Approach in Sablayan, Occidental Mindoro," corn farmers were taught proper cultural management practices to capacitate them and likewise increase their production and income.

Rodel Mendez, aged 52, shared his experiences prior to being a farmer-cooperator of the project in one of the monitoring activities conducted by the Department of Agriculture-Bureau of Agricultural Research.

"Mahirap talaga para sa amin noon. Magsisimula kami sa paghahanap ng mauutangan para may ipambibili [kami] ng mahal

na seeds. Pagkarating naman ng ani, porsyentuhan din sa kita kaya maliit lang din talaga ang natitira [sa'min]. Mahirap din kasi malikot ang presyo ng mais."

Mendez also shared the benefits of being part of the project in an interview during one of the farmers' field day held recently at Barangay San Vicente, Sablayan, Occidental Mindoro.

"Noong dumating ang CPAR, tinuruan kami ng kaalaman at teknolohiya. Ngayon may distansiya na talagang sinusunod sa pagitan ng mga pananim, may basal application na rin. Nakatulong talaga ang CPAR nang malaking-malaki kasi walang interes 'yung binibigay nila sa aming pananim na materyales," Mendez recounted.

Meanwhile, in the recently concluded 4th National CPAR Farmers and Fisherfolk Congress, the project was showcased as a success story as it was able to capacitate hundreds of corn

farmers in the said municipality through the introduction of relevant technologies.

From a net income of PhP 42,494 using farmers' practice, the earnings of yellow corn farmers grew to PhP 60,774 per harvest or a return-on-investment of 111.3 percent.

"Dati, nakaani lang kami ng 80 na sako na may 60-65 kilo bawat isa. Ang mais noon naibebenta lang namin ng PhP 12 kada kilo. Ngayon sa CPAR, umaabot na kami ng hanggang 120 sako na naibebenta namin sa mga trader ng PhP 14.50 kada kilo," recounted Emelyn Salamanca, 54, a farmer-cooperator with more than 25 years of experience as a corn farmer in Mindoro.

The overall yield of the yellow corn farmers also improved. In 2016, the national average yield of corn was set at a record of five metric tons.



Corn R4D boosts farmers' *ani, kita* in Mindoro

Jhon Marvin R. Surio

In Occidental Mindoro, however, the local average yield of yellow corn farmers using their own practice was 7 metric tons. Consequently, with the implementation of the SSNM approach, the local average yield of farmer-cooperators reached 7.9 metric tons – the highest that they were able to record by far.

From 2016 to 2017, there was an increase of 6.43 percent in the volume of production of yellow corn in the province.

Jose Paquidongan, one of the farmer-cooperators who was part of the first implementation of the CPAR project, delivered

his testimonial in front of the participants of the CPAR Congress, including Acting Agriculture Secretary William Dar himself.

“Dati, limang tonelada lang ang ani ko ng mais pero dahil sa proyekto ng CPAR, nadagdagan pa ito ng 2.8 tons per hectare. Dahil sa CPAR, tumaas ang aking kita kasama ang daan-daang farmers na patuloy na ang pag-angat ng pamumuhay sa aming munisipiyo,” he said.

Paquidongan used to be an agriculturist but decided to settle and rekindle with his farming roots.

At present, he advocates the adoption of technologies introduced by CPAR by other farmers in their municipality.

CPAR is one of the banner programs of the bureau being implemented nationwide. ###

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Davao farmers score better life through cacao community project

Chantale T. Francisco

Native cacao is one of the most abundant crop in the Calinan District in Davao City. However, due to the limited knowledge of farmers in cacao handling and management, problems caused by pests and soil exhaustion result to low crop yield.

This led to the project on cacao funded by the Department of

Agriculture-Bureau of Agricultural Research which focused on introducing relevant technologies and innovations to capacitate farmers.

Fermin Anog, a long time cacao farmer, was one of the farmer-cooperators of the said project. According to Anog, the setbacks in their area were brought about

by the enduring lack of interest among farmers to participate in trainings and seminars as well as poor information dissemination.

In 2016, Grace Gutierrez of the DA-Regional Field Office Davao Region saw this as an opportunity to introduce the Community-based Participatory Action Research (CPAR) project to Brgy.

Sirib and Subasta in Calinan District.

Upon its introduction, 30 farmers immediately showed interest in the program and became farmer-cooperators. Anog stood as the group's leader, as head of the Sirib Active Group of Individual Growers Cooperative (SAGING Coop).

The CPAR program in Calinan is composed of interrelated activities and processes that aims to increase cacao productivity and profitability. Cultural management and rehabilitation techniques of old cacao trees were introduced which included the grafting and/or chupon technique.

"I was involved with CPAR since 2016. This is where I started to plant cacao varieties or grafted cacao like UF18, W10, and BR25," Anog recounted. He also added that aside from the varieties, they were also taught proper planting, pest suppression, harvesting, soil sampling, and even better fertilization.

Anog attested that CPAR has brought him new learnings and techniques that helped him improvised their traditional ways of crop management. Owning only a piece of a 0.6-hectare land, Anog harvests an average of 150-160 kilos of cacao per month.

With the grafting/chupon technique, "farmers have continuous income while waiting for the newly-grafted cacao to bear fruit in the same tree."

"We can now control the effects of pests and diseases that have been our problem then, we are now producing quality cacao pods. We now sell our harvest in a very modest price, which in turn, gives us higher income," Anog added.

Since one of the goals of CPAR also concentrates on the dissemination and adoption of technologies, the 30 farmer cooperators who graduated from the training and seminars were tasked to double their number and train 60 more farmers (2 beneficiaries each farmer-cooperator) to adapt their farming techniques. To make this possible, a cacao nursery with a couple of seedlings was provided to the community.

In the recently concluded 4th National CPAR Farmers and Fisherfolk Congress, Anog gave his testimony and rendered thanks to the people behind the program.

"Before I started farming, I already chose cacao as my main crop. But I do not have enough experience and know-hows on how to properly execute cacao planting. With CPAR's introduction to our barangay, we were now able to attend formal trainings and seminars about cacao planting and management," he shared. "We now also have our Farmer Field School launched in 2011 about the UF18 cacao variety which was led by Ma'am Fe Oguio, our agricultural technician," he added.

Anog expressed his gratitude greatly to CPAR as it became

a tool in establishing the Sirib Farmers Association (SFA) in their area. He concluded his testimony by quoting DA Assistant Secretary for Special Affairs and BAR Director Nicomedes P. Eleazar that "farmers are the backbone of the country and indeed the legends of the community."

In line with Agriculture Secretary William D. Dar's New Thinking Paradigm, the implementation of CPAR especially in far-flung areas, is one way to help uplift the lives of small-scale farmers through increasing their crop productivity and profitability.

Fermin Anog, along with fellow farmer-cooperators, are just some of the many others across the country who have benefitted from the CPAR program. ###

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Setting up **agriculture-based enterprise** programs for farmers in **Quezon**

Jhon Marvin R. Surio

“Dati po kapag natatapos ang panahon ng anihan, ‘yun pong kinikita ko ay ibinabayad ko lang din sa nautang kong puhunan para makapagtanim,” farmer-cooperator Dante Alcazar recalled in his testimony during the 4th National Community-based Participatory Action Research (CPAR) Farmers and Fisherfolk Congress held recently in Diliman, Quezon City.

Alcazar is from Dolores, Quezon which is known for vegetable production in the province. Planting vegetables and other crops were their main sources of income.

People in their community rely heavily on agriculture for profit; however, being in a rain-fed area, planting starts on May to June so harvest time comes by September

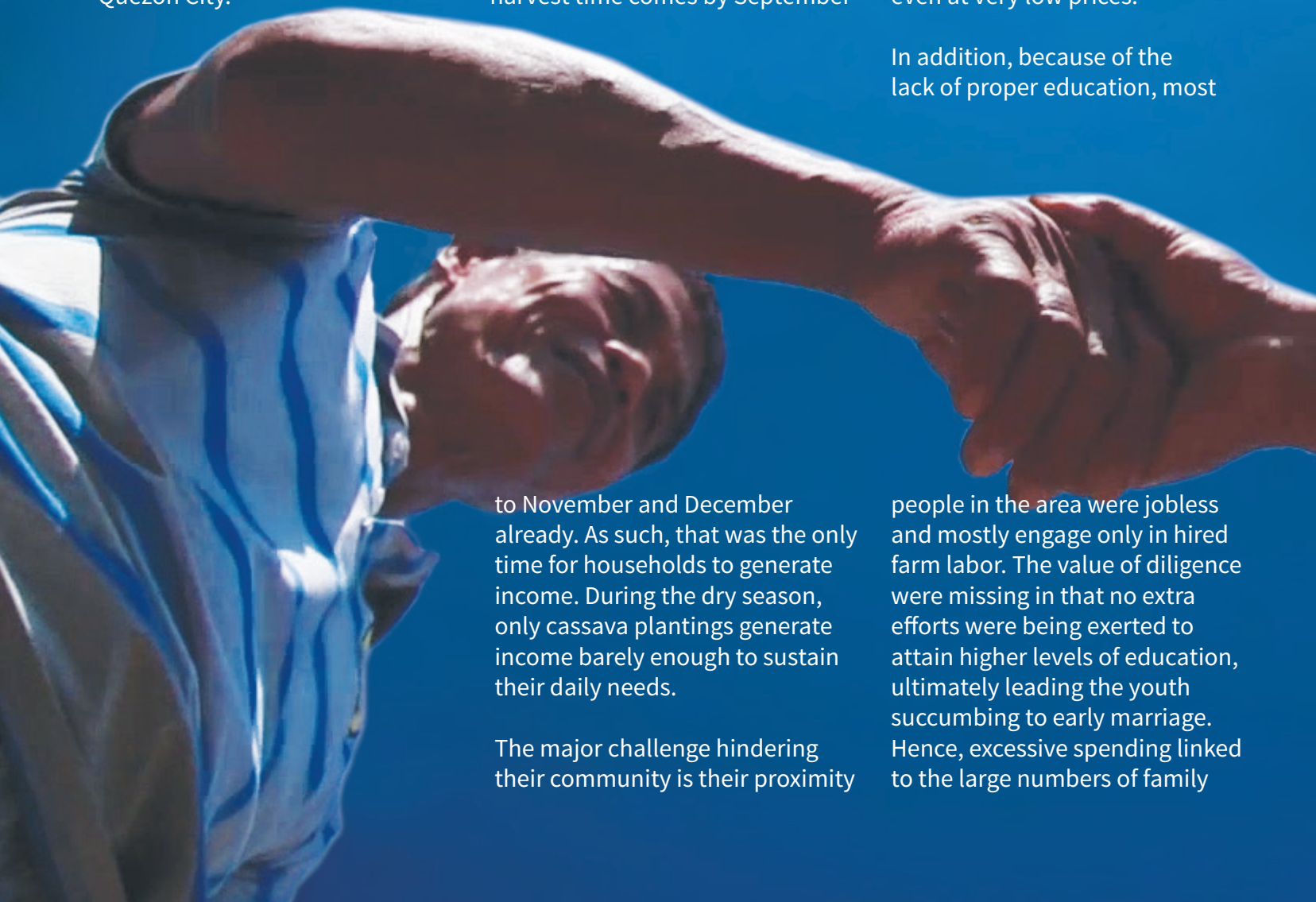
to trading posts located in the nearby towns, and their marketing strategy or the lack thereof. Because the bagsakan centers start early morning and farmers haul their produce using horse-drawn carriages, by the time that they reach the center, it is already done for the day. Consolidators take advantage of this as farmers are forced to sell their produce even at very low prices.

In addition, because of the lack of proper education, most

to November and December already. As such, that was the only time for households to generate income. During the dry season, only cassava plantings generate income barely enough to sustain their daily needs.

The major challenge hindering their community is their proximity

people in the area were jobless and mostly engage only in hired farm labor. The value of diligence were missing in that no extra efforts were being exerted to attain higher levels of education, ultimately leading the youth succumbing to early marriage. Hence, excessive spending linked to the large numbers of family



members had been a major problem in the area.

Further, no community plan, organization, and development among the community members were made.

In 2013, the projects “CPAR on Integrated Organic Vegetable Farming Under Coconut-based Areas in Dolores, Quezon” and “CPAR on Dairy Buffalo and Vegetable Farming in Dolores, Quezon” were founded by the Department of Agriculture-Bureau of Agricultural Research (DA-BAR) in collaboration with the DA-Regional Field Office CALABARZON Southern Tagalog Integrated Agricultural Research Center (STIARC) to upgrade the living conditions of the farmers in the area through the utilization of agricultural technologies generated from researches.

With the presence of a wide range of grazing areas in the community, the potential of raising dairy buffalos for milk and other milk products was explored to augment additional income.

to augment additional income. The introduction of milking technologies and processing enabled farmers to find means of income apart from farming alone.

Through the founding of agriculture-based enterprise programs in the community, significant increase in the farmers’

income was projected. Capacity-building trainings were done to instill values to members of the community.

Water sources and irrigation facilities were also provided to

“Sa tulong po ng teknolohiya mula sa CPAR, unti-unti po akong nakapagpundar,” added Alcazar. Annual net income from vegetable and dairy production was recorded at PhP 258,495.39 and PhP 257,080.35 for the two barangays involved in the projects, a 3.83 and 5.30 percent increase, respectively.

As for the dairy buffalo farming, of the initial total of 119 heads introduced, a total of 472 buffalos were now in Dolores, Quezon. Milk intensification and dairy processing were also in place.

CPAR is one of the banner programs of BAR aimed at involving farmers in the conduct of researches to fast track technology and information transfer to farmers and fishers for increased research utilization. ###

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Helping **Capiz rice** farmers attain *‘Masaganang Ani at Mataas na Kita’*

Jhon Marvin R. Surio

Rice farmers are continuously being plagued with low buying prices resulting to the country's record of only 1.9 percent production growth every year.

In the recent 4th National Community-based Participatory Action Research (CPAR) Farmers and Fisherfolk Congress held in Diliman, Quezon City, Western Visayas farmer Albert Geral shared their story.

“Dati po kami ay walang-wala talaga. Sapat lamang po ang kita namin para makakain sa isang araw,” Geral, who came all the way from the province of Capiz, shared.

Capiz is known to be one of the top rice-producing provinces in the country, having been attained 156 percent sufficiency level in 2008 and named as one of the rice granaries of the Western Visayas region.

However, in the municipality of Dumarao where Geral hails, farmers suffer because of the inability to farm more productively. This was caused by the spiraling increase of prices of necessary farm inputs and prime commodities.

Ironically, while the province attained rice sufficiency many years ago, this was not reflected in the lives of farmers in the barangay level.

Through funding from the Department of Agriculture-Bureau of Agricultural Research (DA-BAR) and the help of the DA-Research Outreach Station and the DA-Western Visayas Integrated Agricultural Research Center, the project “CPAR on Rainfed Rice-based Farming System in Dumarao, Capiz” was pioneered.

With the demonstration and promotion activities of the rain-fed rice-based farming system in the community, farmers' productivity was expected to increase accordingly.

The interventions done were comprised of introduction to package of technologies on rice production as well as vegetable farming and goat raising. Since rice cropping can only be done twice every year, additional farm activities will become additional sources of income for farmers while they wait for their rice crops and as the lands are fallow.

Further, to promote capacity

enhancement among farmers, trainings and seminars were also conducted through the establishment of a Farmer's Field School tied with the holding of Participatory Technology Demonstrations.

In 2012, the wet season average production recorded was 3.37 tons per hectare with a difference of 1.01 tons per hectare or 42 percent higher compared to farmer's practice.

Similarly, for the succeeding cropping seasons, production increased with 2.54 tons per hectare and 2.9 tons per hectare with a difference of 23.9 and 17.41 percent higher compared to farmer's practice of 2.05 tons per hectare and 2.47 tons per hectare or 23.29 and 41.46 percent, respectively.

“Nang dumating ang CPAR noong 2015, naturuan po kami ng mga bagong teknolohiya sa pagsasaka para tumaas ang ani namin,” Geral said as he continued his testimony.

With the help of the CPAR project, farmers of Dumarao, Capiz now earns at least PhP 25,000 from PhP 19,000 per cropping for



planting rice alone. Additional income can be further sourced from vegetable production and goat raising.

Farmers in the area gave positive feedback to implementers thanking them for the additional knowledge taught to them about rice production, added income from vegetable and goat production, and the benefits derived by their

association from the interventions. In conclusion, farm productivity was raised by more than 15 percent and income by 20 percent for the farmer-cooperators.

CPAR is a banner program of DA-BAR that focuses on the improvement of farming system technologies within a province or municipality, aiding farmers attain “*Masaganang Ani at Mataas na*

Kita.” ###

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Empowering agri community in **Laoag** through **CPAR**

Rena S. Hermoso

“Alam po natin na iyong mga farmers po natin magagaling po ang mga iyan. Kapag binigyan mo ng bagong technology sasabihin nila, ‘mas marami na kaming nakain na bigas kaysa iyo, ineng,’” began Sherlie Suniga, manager of Baggak ti Daya Development Cooperative, during the 4th National Community-based Participatory Action Research (CPAR) Farmers and Fisherfolk Congress in Diliman, Quezon City.

This is a common sentiment among research extension specialist working with farmers.

“Nagkakaroon talaga ng problema in terms of their attitude in adopting the different mature technologies or iyong mga bagong teknolohiya sa pagsasaka,” said Mark Ariel Agresor, science research specialist of the Department of Agriculture (DA)-Ilocos Region.

“Hindi na nga po sila uma-attend ng mga trainings kulang pa sila sa kaalaman sa makabagong pagsasaka,” he added.

But that was in 2012. Forward to 2019, “the integrated farming system in Ilocos Norte is [now] a community-driven agricultural development towards community empowerment,” shared Agresor.

How did it happen? “Through CPAR, *iyon pong* DA-Bureau of Agricultural Research funded a research project *para magkaroon po tayo ng isang programa* on integrated rice-based farming system,” said Agresor. The project aimed to increase farmers’ productivity and income through the introduction and promotion of technologies such as nutrient management which is consist of balanced-fertilization technology, integrated pest

management, vermiculture production, and cattle fattening for a six-month period.

Diversified farming system was implemented in the area. The rice-rice-mungbean+cattle fattening production was carried out for irrigated areas while, rice+wingedbean-corn+cattle fattening production for the rainfed areas.

“We partnered with different agencies. These are the key players in conducting the project,” said Agresor. This is to ensure smooth implementation of the project and cooperation from stakeholders.

After four years, the project was turned over to the local government unit to promote the technologies for wide-scale adoption and to sustain the production.



“Through CPAR, our farmers have witnessed strong support from the LGU in further realizing *masaganang ani at mataas na kita*,” said Marilyn Martin, Laoag City agriculturist.

“We are very proud *na napili po ang Calsit Consumers Cooperative at Baggak ti Daya Development Cooperative sa Laoag na ma-experience po namin ‘yong knowledge kasi noon po kanya-kanya system*,” Suniga shared.

Acknowledging their shortcomings and opening their minds to new agricultural technologies, farmers in Laoag, Ilocos Norte successfully adopted the interventions and technologies introduced and promoted through CPAR and reaped its benefits.

According to Suniga, there are three key components that made this project successful.

First, the people and the community. “*Dapat may connectivity, may harmonious relationship iyong mga tao*,” said Suniga.

In 2012, the four-year project

started with 38 farmer cooperators. What the farmers learned, they shared to other farmers as well.

Three years after the project has been turned over to the local government unit, there are now 246 beneficiaries and 379 farmer adoptors. DA-Ilocos Region has since capacitated more than 1,300 farmers.

Agresor recalled, “*kung noon kanya-kanyang plano, ngayon it’s a collective action for their agricultural development. The farmers themselves upscaled the project even without [DA].*”

Second, disaster resilience. “*Kailangan pliant tayo kahit may drought, kahit palaging umuulan. We always have to be ready para iyong mga ani natin ay maproteksyunan*,” Suniga said.

Adapting to climate risks was also made possible through the technology interventions introduced under CPAR.

Agresor said that “before the establishment of the project, *nagkaroon muna ng training. We have season-long trainings, package*

of technologies, technology briefing in terms of the different crops, farming system as well as financial literacy and management of the association.”

Third and last, good financial management. “*Kailangan kapag may pera tayo dapat we use it in a proper way*,” said Suniga.

She added that “under CPAR, we were provided with free inputs. This empowered us to prove that we’re connected and harmonious as a group and that we can properly manage our finances.”

“*Dapat matuto tayo na pahalagahan iyong binibigay sa atin para magkaroon tayo ng sustainability in the future kasi hindi lang para sa atin ito ngayon but for the future generations din po itong CPAR*,” Suniga concluded. ###

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Boosting vegetable production in Siquijor

Chantale T. Francisco

Vegetable production is one of the main sources of livelihood in many parts of the country. High market returns and productivity make the industry very promising. One of the areas that have recently been into the industry is the municipality of Enrique Villanueva in Siquijor.

Farmers in the municipality had been producing vegetables for personal consumption and additional income. With agriculture as the area's predominant sector, vegetable farming is considered a cultural and traditional practice. But due to rugged soil structure, farmers had been facing problems like excessive soil erosion which led to the degradation of crops and resources.

With that, a Community-based Participatory Action Research (CPAR) on Lowland Vegetable-based Farming System in the Municipality of Enrique Villanueva was conducted by the Department of Agriculture – Regional Field Office (DA-RFO) Central Visayas together with the local government unit and other attached agencies.

Funded by the DA-Bureau of Agricultural Research, the CPAR

project recommended solutions in collaboration with the farmer-cooperators to mitigate the impacts of erosion and execute sustainable vegetable farming in Siquijor. Led by Dr. Fabio Enriquez and his colleagues, this project assisted vegetable farmer-cooperators to increase their profit and yield.

During the introduction of the project in 2017, mulching, contour farming for sloping areas, planting of hedgerows, and construction of diversion canals were some of the recommended actions taught to farmers during the project implementation.

Mario Dumat-ol, a farmer-cooperator and a beneficiary of CPAR, affirmed the benefits brought by the project during the 4th National CPAR Farmers and Fisherfolk Congress.

“CPAR made a difference in our livelihoods. It taught us different technologies, particularly on mulching, and soil and water conservation. They lectured us on how mulching can help especially in controlling weeds and soil erosion,” he said.

Under the municipality, barangays Parian and Olave were chosen for the inauguration of the project. A CPAR model farm was established in these areas to further promote improved vegetable crops and train farmers in the packaging of these technological interventions. During its introduction, 20 farmer-cooperators joined the initiative.

The first cycle of crop production in the model farm involved the conventional farming approach that used plastic mulching, balanced fertilization, and hybrid seeds such as watermelons, squash, and ampalaya. In terms of labor, the bayanihan system was done by the CPAR farmer-cooperators during the farm operations. They were then tasked to maintain the sustainability of the farm site.

Farmers were also trained in intercropping glutinous corn with peanut together with pole sitao, eggplant, and mungbeans for green manuring purposes. Aside from that, rotational cropping was also introduced to minimize the use of synthetic chemicals, reduce pests and diseases, and revive soil fertility.

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Livestock was also integrated into the program. This served as an ideal alternative source of income because of its minimal management and cost production. The manure from animals was then converted into organic fertilizers to be used in their plantation sites.

“It is seldom for us to eat rice. Most of the time, if we do not have any rice available, we would rely on our vegetable produce. That is why we are very thankful for CPAR,” Dumatol added. Apart from improving the quality of their crops, the project also introduced the ‘farm-to-market’ system to the farmers.

As most of them practice subsistence farming, the ‘farm-to-market’ system helped them commercialize their products through the production of high-value crops using the appropriate technologies and farming practices.

Hence, the group of farmers aimed to venture on the production of processed products like peanut brittle, peanut kisses, and other value-adding techniques applicable to their crops.

In terms of yield and income, the use of hybrid seeds, plastic mulch, cropping pattern system, and balanced fertilizer aided in the revenue and productivity of crops. With a staggering Php 22,639.66 increase, ampalaya was one of the crops to gain the highest income under the CPAR technology. Watermelon, having a net increase of Php 7,812.32 and corn with Php 2,552.14 also gave a promising improvement to the farmers’ income.

In yield production, 815.05 kg of ampalaya was added in their crop basket together with 415.71 kg from watermelon and 151.5 kg

from beans. All of these increases happened through the CPAR project which proved the success of the intervention in Siquijor.

According to DA-RFO Central Visayas, three farmers from Brgy. Olave attended the farmer’s field day and eventually took part to become adopters of the project. They also added that organizing the CPAR beneficiaries into cooperatives or associations made an impact in technology dissemination as this further encourage participation and collaboration from the farmers. ###

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CPAR intervention doubles Isabela farmer's rice production

Leoveliza C. Fontanil

“Isa po akong simpleng magsasaka sa bayan ng Soliven, sa probinsya ng Isabela sa Cagayan. Dati wala kaming alam sa teknolohiya, ngunit noong nagpa-training ang Department of Agriculture-Cagayan Valley Research Center (DA-CVRC) tungkol sa mga teknolohiyang ito, ngayon ay in-adopt namin,” said Roger Santos Camonayan in his farmer testimonial in the recent 4th National Community-based Participatory Action Research (CPAR) Farmers and Fisherfolk Congress.

Cagayan is a primarily agriculture-based region and a consistent producer of rice and corn in the country. Through the years, it has played a very significant role in taking the lead towards agricultural development and food security.

Among the five provinces of Cagayan, Isabela has the biggest agriculture industry. Isabela was recognized second in terms of the highest rice-growing province in the country. It produces 15 percent of the aggregate national rice

production on an annual basis. However, despite being a high producer, the country's rice sufficiency is still very low and needs an unprecedented increase in paddy rice production to supply the national rice requirements of Metro Manila, and many other provinces.

SWIP water management for rice production

Isabela has different kinds of small-scale irrigation projects such as the small water impounding project (SWIP) which provides supplemental irrigation to rice areas that are not reached by water coming from major irrigation facilities.

SWIP is a water collecting and storage structure consisting of spillway, outlet structure, and canal facilities designed for soil and water conservation and flood control by holding water during the rainy season. The stored water in the reservoir is an important source of supplemental irrigation for agriculture. The municipality of Soliven, Isabela is one of the

beneficiaries of SWIP.

According to Camonayan, SWIP often could not deliver irrigation water requirements in the downstream areas which resulted to poor water management. He pointed out that water from SWIP could cater to the irrigation requirements of rice and other crops if effective interventions such as water management would be available for farmers like him. Also, Camonayan envisioned an alternative cropping system that will help them maximize the benefits derived from the existence of SWIP.

Beginning of CPAR in Isabela

Aware of the existing problems in the province, Fidelino Cabantac, senior science research specialist from DA-CVRC; Gloria Aniceta Domingo, agriculturist II; and Rodolfo Carlos, agriculturist I, spearheaded the project “CPAR on SWIP Water Management of Hybrid Rice-based Cropping System in Lucban Benito Soliven, Isabela – Cagayan Valley Region,” through the funding support from the DA-Bureau of

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Agricultural Research (BAR). Implemented in 2017, the project aimed to increase farm productivity at the SWIP service area in Soliven, Isabela through the adoption of improved technologies. It also aimed to develop business enterprise in support to hybrid rice production of the SWIP Beneficiaries Association.

Some of the technologies introduced were the hybridization of rice program, rice additional irrigation, postharvest facilities, and package of technology for cropping patterns such as intercropping and crop rotation, establishment of model and demo farms, and conduct of technical briefing on soil fertility management and conservation.

The technologies were introduced to farmers supplemented by a series of training to develop farmer technical skills and improve their financial constraints. Farmers were taught the practice of intercropping of rice, corn, and watermelon (rice-corn, rice-watermelon) cropping pattern and proper management, showcasing fertilizer recommended rate and supplemental irrigation water.

The epitome of a humble success

“Alam ninyo po na napakalaking tulong ng CPAR sa amin, dahil dito nagawa namin ang tamang pamamaraan sa pagtanim ng palay. Natuto kaming mag-soil sampling kaya nalalaman namin kung ano ang kailangan ng aming lupa, akmang klase ng abono at kung kelan ka dapat mag-abono,” Camonayan said as he recalled the early days when they received the

CPAR intervention.

“Dahil sa teknolohiya kami ngayon ay nagha-hybrid rice na. Sa dati naming farming practice ang naaani lang namin noon ay nasa 3,530 kilograms per hectare kumpara sa ngayon na may CPAR intervention na nakaka-ani na kami ng 6,623 kilograms per hectare.”

CPAR interventions showed an average income of PHP 35,615.30 compared to farmer’s practice. This is equivalent to 5,935.88 monthly income.

The said interventions had greatly improved the rice yield of farmer-cooperators from 2.5 metric tons to 5.6 metric tons. Because of this, 95 percent of the farmers of Soliven SWIP have adopted the introduced hybrid rice technologies with the alternate wetting and drying technology, farmers at the downstream area were able to plant rice twice a year, attaining 326.82 percent rice sufficiency rate in the province.

“With this, we are considering our province to become the center for hybrid rice in the Cagayan Valley region with our continuous good performance in rice production for the coming years,” Cabantac concluded. ###

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OFW-turned-farmer proves there is hope for farming in the country

Rena S. Hermoso

“Akala ko po noon ang pagfa-farm ay walang patutunguhan. Ngayon ko napagtanto na ‘yong kikitain natin sa abroad eh pwede nating kitain dito sa pamamagitan ng pagfa-farm,” shared Villafuerte Camat, Jr., an Ifugao-based organic farmer, during the 4th National Community-based Participatory Action Research (CPAR) Farmers and Fisherfolk Congress in Diliman, Quezon City.

Camat worked as a laborer abroad for 10 years before going back home and decided to venture into farming.

In 2009, he started integrated conventional farming for personal consumption.

Ten years later, he is now a major supplier of vegetables and livestock in the locality and is a contact grower of Multi-Fresh, a Nueva Vizcaya-based company.

He is working on upgrading his certified organic farm into an Extension Service Provider in coordination with the Department of Agriculture-Agricultural Training

Institute (DA-ATI).

His commitment to practice and teach organic agriculture has earned him the 2014, 2015, and 2017 outstanding organic farmer award at the provincial and regional levels.

What worked for Camat, one may ask. He asked the right questions at the right time.

His first few attempts on farming were not rainbows and butterflies. While practicing conventional farming, he realized that he cannot earn the maximum profit due to high cost of inputs.

So he decided to convert his farm into an organic one. Camat sought the assistance of Arthur Fontanilla, agriculture technician of Lamut Municipal Agriculture Office.

Fontanilla, at that time, was involved with the implementation of CPAR on Fishpond Tilapia Production and Processing project. He invited Camat to attend the capacity-building training,

educational tours, and other activities of the said project. Eager to learn more about farming, Camat attended all the said activities and trainings. He also participated in the ongoing sessions of farmer’s field school on organic vegetable and chicken production at that time.

Camat modified and applied the knowledge and skills he learned on integrated organic production to his farm. Through this, he developed his own feed formulation for swine, chicken, and fish. He also produced his own fertilizer using Azolla, a floating aquatic fern that has the ability to fix nitrogen, in combination with the manure from his organic swine.

Dr. Catherine Buenaventura, CPAR project leader and supervising agriculturist of the Provincial Agriculture Environment and Natural Resources Office in Ifugao, also helped Camat by providing him with technical assistance and endorsing him to other government agencies.

In 2013, Camat has fully transitioned his farm into an organic one. Because of his continuous passion for learning and innovation, his farm was later accredited as School for Practical Agriculture (SPA) by DA-ATI in 2016. As an SPA, the farm now offers courses on organic agriculture in partnership with DA-ATI and the Technical Skills and Development Authority (TESDA).

TESDA also certified his farm as a farm school. Through this, he became eligible to train farmers and interested individuals on Organic Agriculture NC II.

As a trainor, Camat often comes across farmers telling him that generous income is not possible with their meager farms. He contested this and said, *“Hindi po makasasagabal ‘yon. Pwede mong i-maximize ang pagkakakitaan. Sa oras na makita*

ka ng agencies ng gobyerno, matutulungan ka nila, aangat po ‘yong farm. Hindi lang ‘yon dapat madiskarte ka kung paano madadagan ‘yong kita sa farm.”

Camat also entered into a Memoranda of Agreement with Ifugao State University and agricultural high schools. With this, both parties benefit through learning in exchange of labor.

With the developments in his farm, he soon decided to undergo the Kapatid Mento ME program of the Department of Trade and Industry to better understand farm management. After all these, Camat remained open-minded.

“May pera po sa farming basta alam natin i-manage kung paano aangat. At huwag po tayong mag-atubiling lumapit sa gobyerno dahil sila po talaga ang nakatulong sa

akin doon sa farm,” ended Camat in his testimony during the CPAR Congress.

The 4th National CPAR Congress convened the farmers, fishers, and project implementers to share their experiences and best practices achieved through the CPAR program.

CPAR is one of the banner programs of the DA-Bureau of Agricultural Research that merges research initiatives and the active involvement of farmer- and fisher-cooperators. ###

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Rubber farmer's income shoots up with CPAR project

Chantale T. Francisco

Rubber cultivation is popular in Zamboanga Peninsula. With Mindanao's favorable climate conditions supporting its growth, rubber is considered one of the area's major crop. However, with the rubber industry declining over the years, it leaves rubber farmers with little to no income, especially during the crop's premature phase.

To help elevate the productivity and profitability of the rubber industry in the said region, a Community-based Participatory Action Research (CPAR) project on rubber-based farming system (RBFS) was funded by the Department of Agriculture-Bureau of Agricultural Research (DA-BAR) in close collaboration with the DA-Western Mindanao Integrated Agricultural Research Center (DA-WESMIARC), the local government unit, and other attached agencies.

Vicente Casas Sr., a farmer from the region, is one of the cooperators who reaped benefits from the project. In his testimony during the 4th National CPAR Farmers

and Fisherfolk Congress, he affirmed that "our area is one of the sites that was chosen by CPAR. It started in 2010 and I greatly benefitted from this project. During its implementation, we attended various seminars about rubber-based farming wherein we were taught strategies on how to properly cultivate rubber and increase our income."

Considering the demand for rubber and the setbacks of the industry, the initiative provided technical support as solutions to the inadequacy of rubber. Further, proper cultural management practices were communicated to locals.

Since one has to wait five years for rubber to mature, small-scale farmers have gap years in their production cycle. This is one of the problems addressed by CPAR, introducing farmers to a multi-cropping system that involves growing of perennial crops for additional source of income. The RBFS technology taught in

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the project was specialized for the immature phase of rubber. In between rows, short-term crops such as corn alternated with leguminous crops (e.g. peanut, mungbeans) were planted. Medium-term crops like pineapple and bananas together with fruit trees such as rambutan were also incorporated in the said technology.

“Even in the first two years of planting rubber, we still have our income. This is because during our first year in CPAR, we are capacitated to continuously plant corn while alternating it with mung beans,” Casas shared.

Casas also underscored that the intercropping method is better as compared to their prior farming practice “as it provided them good sources of income.” “When my corn plantation did not thrive, we still have other crops to harvest like our pineapple. We harvested up to 9 kilos before, and we could not even believe the crop’s productivity ourselves,” he added.

Meanwhile, just like his pineapple crops, banana production also increased within its three years of establishment.

According to DA-WESMIARC, the rubber-based farming system techno demo farms were handled and cultivated by farmer-cooperators. Planting materials were provided together with recommended rubber clones such as PB 330, PB 260, and RRIM 600.

Seeds, fertilizers, and chemicals, on the other hand, were granted through the people’s organization (PO) as part of the farmers’ “Plant/Raise Now- Pay Later Plan.”

With the adaptation of the RBFS, farmers enjoyed significant increase in their productivity because a year earlier than expected, rubbers can already be tapped as compared to their traditional practices. The implementation of RBFS also helped them improve the quality and performance of their crops as a noticeable increase in the rubber’s girth and yield were also recorded.

The net income of farmers had a significant increase as well. From Php 5,444.00 in 2005, a staggering Php 88,143.00 was earned in 2010. Apart from the income increase, job opportunities were also created for the locals. Manpower was utilized to execute land preparations, maintenance, and other farming activities.

“My livelihood turned out to be successful because of the CPAR program. I was able to provide the needs of my family and support the schooling of my grandchildren. My fruit trees also flourished. Now in my 10th year of RBFS, I can now build my own store and directly sell my fruits to the people,” Casas concluded.

From the data of DA-WESMIARC, more than 200 farmers replicated the technology. These adopters obtained planting materials availed

by farmer-cooperators through the PO for the techno demo farm. Moreover, consultation and personal interviews of farmer-cooperators were also conducted for further technology adoption and dissemination. ###

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CPAR FARMER BENEFICIARIES

*as of July 2019

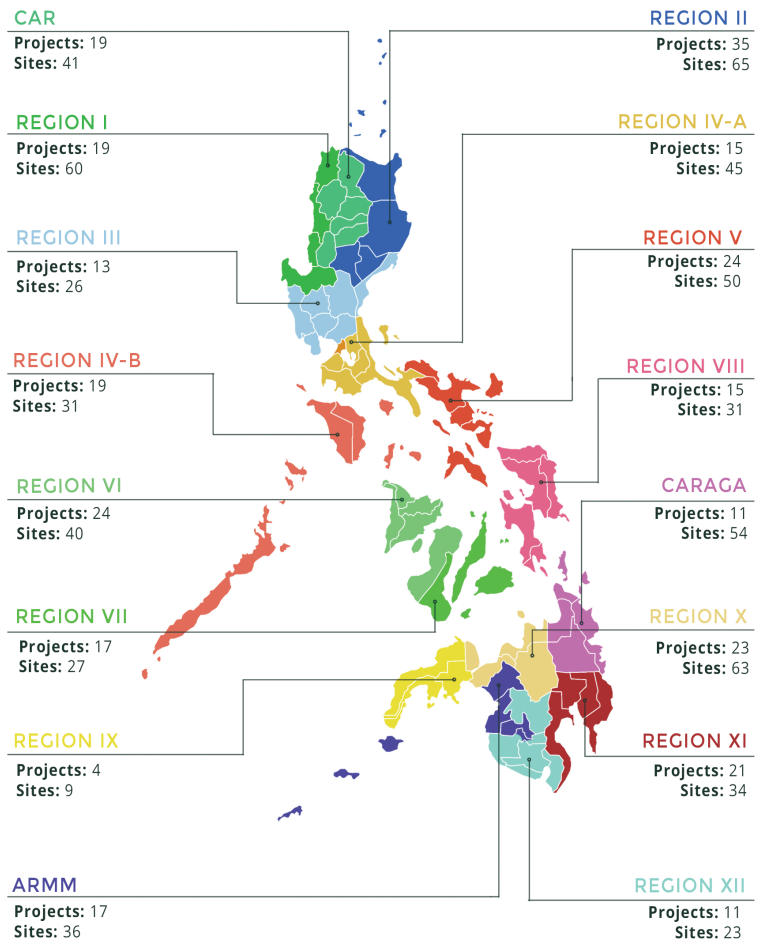
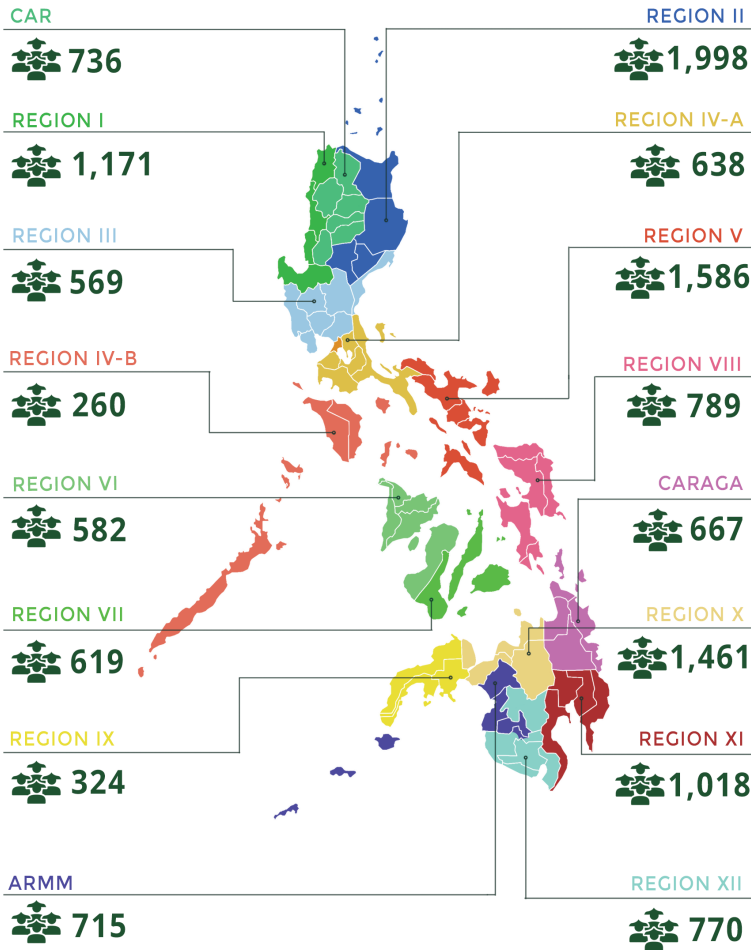
13,930
FARMER
BENEFICIARIES

CPAR PROJECTS PER REGION

*as of July 2019

287
PROJECTS

635
SITES



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