

lack the technical know-how of production but once they learned it, they will see the good effect of organic farming not only in profit but also human health and environment), expressed Nick in an interview during a visit to his farm in Asipulo.

Nick is among the first 20 FCs from his municipality that availed of the training under the capacity building component of the CPAR project. Learning organic production did not only equip him with the skills and the know-how but it also strengthened his earlier confidence on growing organic crops. He mentioned that ever since, he was already interested in organic farming but with limited technical know-how, he was into semi-conventional farming. He was only engaged into organic farming in 2010 when CPAR came and he became an FC. Currently, he is tilling a 200 sq.m. farming land, which he is renting to grow organic crops like pepper, tomato, beans, *upo*, cabbage, broccoli, *kamote*, *pechay*, and *adlai* (for feeds). Come harvest time, most of his produced are consumed by his family and the rest are sold in the market.

As an organic farmer, he tells his fellow farmers the advantage of growing crops the organic way. “Kasi kung ikaw ay farmer tapos ikaw na ang gumagawa ng sarili mong abono, libre naman yung mga gagamitin tapos may technical knowledge ka na kung paano, hindi ka na bibili ng mahal na pestisidy. Kapag gusto mo talaga mag-organic, dapat alam mo din paano gawin ang mga inputs” (If you are the farmer and you make your own fertilizer, the materials are free and you you have technical knowledge on how to do it, you need not to buy those expensive pesticide. If you really want to go into organic, you have to know how to make your own inputs), said Nick.

More than the profit from

farming, Nick mentioned that health is one of the important aspects that organic farming is giving, knowing that many people nowadays, particularly the consumers, are health-conscious. “Kaya kami, konti lang ang ibinebenta namin sa display center kasi kinakain na namin. 'Yung sobra 'yun lang ang ibinebenta namin kasi sigurado kami na healthy ang kinakain ng pamilya namin” (We only sell a small portion at the display center because we eat most of our produce. We only sell surplus produce because my family is ensured that what we are eating is healthy,) he added.

This habit of ensuring that the family has food to eat first before selling their produce to the market can be rooted to the culture of the people in Asipulo. “Our culture here is that we eat most of our produce and sell them only if we really need the money, say for the tuition of our children. Importante ang sikmura muna!” explained Nick.

Nick is also the chairman of the Asipulo Organic Producers Cooperative (ASOPCo) which initially started as an association with two groups of farmers from Amduntog and Antipulo. The members decided to merge the group to become an association. In 2013, the association was approved and registered as a cooperative providing them better benefits particularly in selling their products.

As a cooperative, ASOPCo became municipal-wide with members from Asipulo, mainly from Brgys. Haliap, Amdugdog, Antipulo, and Pula. Currently, it has 40 members, more than half are women and majority owns their farming lands.

Having tried both conventional and organic farming, Nick prefers the

latter. He confessed that it is much profitable “because one, it's not risky to your health, second you can grow vegetables even without money to buy fertilizer since you are making your own, third you can eat your own produce if you don't have money to buy food.”

Nick was able to convince other farmers to also engage in organic farming. He said that most of them got interested but they don't know how to do it. “Di sila naniniwala na may pera talaga sa organic farming. 'Di nila alam na mas binobomba nila ng pesticide at nilalagyang fertilizer mas nadedeplete ang nutrients ng soil.” (They don't believe that there is money in organic farming. They don't know that the more they apply pesticide and fertilizer, the more the nutrients in the soil are being depleted.)

When asked what change the CPAR project brought upon him, Nick said that more than the profit, it's the awareness on organic farming that he was more thankful for. “Sa ngayon 'pag wala kaming vegetables parang natatakot na kaming kumain kasi naranasan na namin yung awareness” (We are scared to eat other vegetables that we do not produce). He added that, his family grows organic, from the chicken that they raise, the vegetable that they grow, to the rice that they plant. “Yung organic palay na pinapatubo namin, 'yun din ang ginagamit naming patuka sa mga manok namin” (We also produce our own organic rice that we feed to our chicken), concluded Nick.

###

For more information, please contact:
Dr. Catherine V. Buenaventura
Supervising Agriculturist
Provincial Agriculture Environment and
Natural Resources Office, Lagawe, Ifugao
Tel. No.: (074) 382-2063
Email: paenro_lagawe@yahoo.com

First CPAR Congress concluded; close to 400 participants in attendance



“GO CPAR!” shouts the farmers and fisherfolk from each region of the country who attended the 1st National CPAR Congress. Joining them is BAR Director Nicomedes P. Eleazar (middle).

Filipino farmers and fishers from across the country gathered to personally share their stories of success as the Bureau of Agricultural Research (BAR) staged its first ever “CPAR National Congress” held on 20-21 February 2014 at the Manila Hotel.

With the theme, “CPAR: Pagtutulungan ng mga Mananaliksik,

Magsasaka't Mangingisda Tungo sa Malawakang Pag-unlad ng Pamayanan,” the congress showcased the accomplishments and success stories from selected CPAR projects nationwide through product promotions, exhibits, project presentations of researchers and project leaders, and testimonials from the farmers and fishers themselves.

The Community-based Participatory Action Research (CPAR), one of the flagship programs of BAR, is considered a downstream research that focuses on technology verification, demonstration, and adoption in the community. Its primary goal is to empower farmers and fishers and their communities

turn to page 9

Alcala responds to concerns of CPAR farmers and fisherfolk

Taking the opportunity of the presence of Agriculture Secretary Proceso J. Alcala, keynote speaker during the “First CPAR National Congress” held on 20 February 2014, the farmers and fisherfolk in attendance expressed their respective concerns to the secretary. In return, after hearing the CPAR success stories as told and testified by the farmers and fisherfolk themselves, Secretary Alcala quickly responded.

“Although I have picked up a lot of feedback doon sa inyong success stories pero baka may gusto pa kayong ipaabot sa Kagawaran. This is the proper venue and



DA Sec. Alcala addresses the concerns of the farmers and fisherfolk. PHOTO:DDELEON

turn to page 7

IN THIS ISSUE...

First CPAR Congress concluded	1
Alcala responds to concerns	1
CPAR Primer launched	2
CPAR Best Posters awarded	3
Soybean production triples	4
2 beekeeping projects	5
Hands-on training on Patent	6
Yamang Lupa program launched	7
Sariaya gears up for Yamang	8
BIARC develops new product	9
Bicol farmer invents motorized	10
Eat with your eyes	11
Creating a market niche	12
CPAR Batanes' farmers	14
CPAR vegetable farmer in Ifugao	15



RDMIC Bldg., Visayas Ave., cor. Elliptical Rd.
Diliman, Quezon City 1104
PHILIPPINES

PHOTO:RDELACRUZ



CPAR Primer launched

A primer titled, “CPAR: Empowering Communities; Transforming Lives towards a Progressive Nation” was launched during the First National Congress held on 20 February 2014, Manila Hotel.

Organized and led by the Bureau of Agricultural Research (BAR), the congress carried the theme, “CPAR: *Pagtutulungan ng mga Mananaliksik, Magsasaka't Mangingisda tungo sa Malawakang Pag-unlad ng Pamayanan.*”

The CPAR primer is a 10-minute audiovisual presentation which features how CPAR as a banner program of the bureau evolved since it was initiated in 1999, first as a research methodology called the On-Farm Research (OFR) to now, a location-specific research cum extension activity using community-based approach. The primer also highlighted three aspects of

CPAR including its history, objectives, and dimensions which were woven to tell a story on how communities are being empowered and how lives are eventually being transformed towards a progressive nation.

The primer is narrated in Filipino to serve its purpose well with majority of the participants coming from the farming and fishing communities from all over the country.

The CPAR Congress was specifically conducted to highlight the accomplishments and success stories from the CPAR program and eventually to forge stronger linkages among partners for better implementation.

CPAR is being implemented nationwide in cooperation with the Department of Agriculture-Regional Field Units (DA-RFUs), Regional Integrated Agricultural Research Centers (RIARCs), local government units

(LGUs), and the farmers and fishers cooperatives.

BAR, as the research arm of the DA, oversees and coordinates the CPAR projects nationwide.

“Implementing CPAR is seen as an effective means to strengthen the role of R&D in technology transfer and in production management system. It also institutionalizes the active involvement of the community both in the identification of the most appropriate technologies that suit their needs and management of their own farm resources,” explained BAR Director Nicomedes P. Eleazar.

In CPAR, specific technologies and interventions are being introduced and taught to the farmer beneficiaries particularly, in applying effective total farm productivity within the context of a sustainable production and farming system approach. Through this initiative, farmers are able to optimize the use of their lands and ensure available and affordable food for the family through the integration of crops, livestock, and aquaculture productions in the farming system.

To date, there are more than 200 CPAR projects being implemented all over the country since it was initiated under the leadership of Dr. Eleazar. These projects are benefitting more than 11,000 farmers and fishers and through the multiplicity effect, the program continues to expand and affect the lives of the communities.

(Rita T. dela Cruz)

CPAR vegetable farmer in Ifugao proves there is money in organic

Story and photo by Rita T. dela Cruz

The government has been consistent in its promotion of organic agriculture to address food security, sustain human health, and protect the environment. However, most farmers still prefer conventional farming due to a widely-held public perception that shifting to organic farming will decrease their production. With years of practicing conventional farming, farmers have come to associate high crop production with the heavy use of chemical fertilizers and pesticides.

One farmer that is going against the tide is Nicolas Dulawan, 59, a vegetable farmer from Asipulo, Ifugao and a farmer-cooperator of the “Community-based Participatory Action Research (CPAR) on Organic Vegetable Production”. The project is being implemented by the Provincial Agriculture Environment and Natural Resource Office (PAENRO) in Lagawe, Ifugao and funded by the Bureau of Agricultural Research (BAR).

CPAR on organic vegetable

Asipulo is conducive for vegetable production. The locals live mostly from growing different kinds of vegetables which serve both as their sources of food and livelihood. Common vegetables grown are snap beans, wing beans, *pechay*, string beans, squash, cabbage, tomato, and eggplant.

Given the high cost of inputs and limited know-how on vegetable production, it often results to low profit margin and subsistence level of production. Most farmers in the area are engaged in conventional farming. After years of dependency on chemical fertilizers and pesticides, the fertile soil has slowly depleted making it acidic and unsuited for planting.

The PAENRO, led by the group of Dr. Catherine V. Buenaventura, supervising agriculturist, looked into the possibility of introducing interventions and technology that would help the vegetable farmers in Asipulo, not only to improve their production but also to give them a better perspective on vegetable growing, the organic way. They also looked at organic farming as an effective means to regain the nutrients in the soils that were depleted due to years of using chemical fertilizers. It was from here that a CPAR project on organic vegetable

production came about in 2009.

Dr. Buenaventura, also the CPAR project leader, said that in order for this initiative on organic farming to be effective, farmers must appreciate first its “goodness” both for the people and the environment. There is a need to capacitate them on how to grow good food the organic way. “To be effective, farmers need to be taught on integrated pest management (IPM) through Farmer's Field Approach (FFA), improve husbandry practices, fertilizer applications, insect pests and diseases control measures, thereby reducing input costs and optimizing profit,” explained Dr. Buenaventura.

Specifically, the CPAR project aimed to increase production and profits through efficient application of improved farming technologies and the adoption of sustainable, ecologically-sound, and economically-viable production system. It has three essential components: 1) introduce approved (package of technology) POT on organic production, 2) train farmers on organic production technology, and 3) provide marketing assistance to farmers' organic produce.

The project started with 40 farmer-cooperators (FCs) from the two municipalities of Asipulo: Amdugdog and Antipulo, which were chosen as sites for the CPAR. The FCs underwent eight sessions of Farmers' Field School (FFS) to learn several topics on organic farming. Among the topics were on: formulation of Indigenous Micro-organisms (IMO), Oriental Herbal Nutrients (OHN), foliar fertilizers, fermented plant juice (FPJ), and fermented fruit juice (FFJ). Farmers were also taught how to formulate their own gardens, make compost, and carbonize rice hull. Other topics were on: pest and disease management of crucifers and legumes, controlling diseases in seedbed, and insect trapping. To further their technical know-how, the FCs had cross farm visits and educational tours featuring different organic vegetable gardens and vermicompost technology demonstrations.

As cooperator of the project, the farmers were provided inputs (UV treated cellophane, sprayers, watering cans, and other materials for the construction of rain shelters).

For the marketing component of the project, a display center for organic vegetable was constructed at the provincial capitol in Lagawe to serve as



Nicolas Dulawan shows newly harvested organic lettuce

market outlet for the harvests of the farmers. This also serves as display area for the organic produce.

“Likewise, a regular market day (every Wednesday) was set for the selling of organically-produced products,” explained Dr. Buenaventura. The market day was launched in June 2013 and as reported, six from the 40 FCs are regularly bringing their produce for the market day.

Currently, the provincial office of Lagawe is exploring the possibility of a contract growing scheme through the *Organic Options* that will be provided with the produce of the organic vegetable growers in Ifugao. *Organic Options* will provide the technology and seeds while the cooperators will produce the organic vegetables.

Why organic is the way to go

Nicolas Dulawan or simply “Nick” to his fellow farmers is a vegetable farmer from Brgy. Haliap in Asipulo, Ifugao and one of the active advocates of organic farming in his community. “Mas malaki ang kita mo sa organic! Sinasalungat ko nga 'yung common notion ng mga tao na walang pera sa organic farming. Hindi lang nila alam ang mga tamang paraan pero 'pag natutunan na nila, makikita nila ang magandang epekto ng organic farming hindi lang sa kita, pati sa kalusugan ng tao at sa kapaligiran na rin” (You have bigger profit in organic! I often dispute common notion of people that there is no money in organic farming. They just

turn to next page



BAR CHRONICLE is published monthly by the Applied Communication Division of the Department of Agriculture - Bureau of Agricultural Research, RDMIC Building, Visayas Avenue, cor. Elliptical Road, Diliman, Quezon City 1104 Philippines.

This publication provides regular updates on DA-BAR's activities as the country's national coordinator for agriculture and fisheries R&D. It also highlights features and news articles concerning NaRDSAF-member institutions.

PRODUCTION TEAM

Editor:	Rita T. dela Cruz
Consulting Editors:	Julia A. Lapitan and Victoriano B. Guiam
Managing Editor:	Patrick Raymund A. Lesaca
Layout:	Anne Camille B. Brion
Writers:	Ma. Eloisa H. Aquino, Liza Angelica D. Barral, Daryl Lou A. Battad, Anne Camille B. Brion, Diana Rose A. de Leon, Rita T. dela Cruz, and Patrick Raymund A. Lesaca
Reproduction/Printing:	Ricardo G. Bernardo and Lino Norman D. Reyes
ACD Head:	Julia A. Lapitan
Adviser:	Dr. Nicomedes P. Eleazar, <i>CESO IV</i>

ISSN 1655-3942

Copyright Bureau of Agricultural Research, Department of Agriculture 2014.

For subscription and inquiries, please contact us at: Tel. Nos: +63 (2) 928-8505, 928-8624, 920-0234

local nos. 3012, 3323, 3328 Fax No. +63 (2) 927-5691 Email: acd@bar.gov.ph

Articles are also available online, visit our official website: <http://www.bar.gov.ph/barchronicle>



CPAR Batanes' farmers: Letting them do it

Story by Daryl Lou A. Battad

To enhance people's knowledge on a particular situation and to take action to change it to their benefit are the basic concepts of a participatory research. Done with a direct involvement of the community, this innovative approach to research and development (R&D) so far proved to be an effective means to transform an empowered community.

The Community-based Participatory Action Research (CPAR) works on the same principle. It is a downstream research that determines and addresses a need specified by the community members themselves. It serves as a venue to find out the intervention that will best serve the community in terms of agriculture and fisheries.

CPAR and PRA

The Participatory Rural Appraisal (PRA) is one of the most important tools of CPAR. PRA is the *why* and *how* of CPAR, and jumpstarts the implementation of a CPAR project. It is where the community members gather together to raise their issues that can be addressed through a CPAR intervention. It involves a whole range of tools depending on the needs and preferences of the community members and researchers.

In CPAR, PRA assesses, envisions, and plans what the farmers and fishers want for their community. In short, PRA materializes a CPAR intervention.

The case of Batanes

The project titled, "CPAR in Enhancing Productivity and Income in the Coastal and Upland Farming Areas of Batanes," implemented by DA-

Cagayan Valley Integrated Agricultural Research Center (DA-CVIARC) in collaboration with the provincial and municipal local government units of Batanes Island, aimed to accelerate promotion of appropriate technologies of viable farming enterprises within the context of an integrated farming system to increase productivity and income of farmers.

To attain this, a PRA was conducted to characterize the community in terms of potential and possible resources, thus providing the basis for the formulation of the CPAR 'game plan.' This, in turn, was able to identify the technologies best fit for the community's agri-fishery needs, which ensued increase in productivity and profitability of the farmers.

PRA played an important role in this project. To the farmer cooperators, it became a means of capacitating and further enhancing their knowledge to improve their practices in the farm.

Mr. Arnold Viegan, one of the farmer cooperators (FCs), shared during the CPAR Congress, "Akala ko ay tulad lang ng dating karaniwang kino-conduct ng Department of Agriculture (DA) training kung saan ay may nagle-lecture at may nakikinig. Pero ako po ay natuwa dahil sa ilang araw [na pag-coconduct ng PRA] ay nag-enjoy po talaga kami."

For the rest of FCs, PRA is not an ordinary group assembly and discussion. It comes with a purpose of knowing the participants a little more, encouraging and equipping them so that they are capable of improving and helping not only themselves, but also their communities.

Marks of a PRA

Before the project was established, farmer-partners were

identified and were subsequently called for a meeting. Project details were discussed with emphasis on counterparting schemes for labor and material requirements of the project. A workshop was also conducted to equip the farmer-partners with the necessary data gathering skills needed in the project implementation.

Since PRA is more than just tools and techniques, the results delivered more than what is expected from the project. Together with the researchers, the farmers were actively involved in decision-making activities. "Tinuturing kong isang malaking pribilehiyo na maging kasali sa pag-identify ng mga problema sa agrikultura sa aming lugar para ang mga ito ay mabigyan ng tamang solusyon. Bukod pa ryan, napakasaya ng proseso dahil para lamang kaming naglalaro habang ginagawa namin ang iba't-ibang mga workshops," Ms. Anicia Camaya said, also an FC of the project.

CPAR project leader, Cesar Hostallero recalled that during one of their PRA meetings, the team also encountered challenges because the farmers had difficulty in welcoming introduced interventions. "They were hesitant at first," said Mr. Hostallero. "Dahil doon sa PRA, may mga farmers na pinipilit 'yung sa kanila pero na-u-unlearn nila dahil na rin sa tulong ng ibang farmers. Other farmers share their experiences which gave better results than the conventional farming practices," he added.

In a case like this, PRA does not just mean learning, it also means unlearning. For the CPAR team in Batanes, this is what makes PRA unique and effective.

Another quality of PRA in the CPAR context is that it builds the involvement of the farmer-partners. This solicits their full commitment to the project, creating a sense of ownership, thus empowerment. ###



1st place: CPAR on Jackfruit Production and Processing in Barangays Malinao and San Isidro, Mahaplag, Leyte



2nd place: CPAR in Enhancing Productivity and Income in the Coastal and Upland Areas of Batanes



3rd place: CPAR on Improved Arrowroot Production Technologies and Enhancement of the Arrowroot Starch in Catanaun, Quezon

PHOTOS: ABRION

CPAR Best Posters awarded

One of the highlights of the "First National Community-based Participatory Action Research (CPAR) Congress" held on 20-21 February 2014 at the Manila Hotel was the "Product Exhibition" that featured various products developed and generated from the different CPAR projects of the Bureau of Agricultural Research (BAR).

Part of the exhibit was the presentation of CPAR posters that contains information on the projects implemented under the program. The projects were selected by the proponents/project leaders in terms of significance and impact in the farming and fishing communities. Included in the posters were the processes involved in the implementation of the project, as well as the accomplishments that were achieved through the CPAR. There were 23 posters that vied for recognition, but only three were hailed as the "Best Posters" during the event.

Bagging the third place was the poster "CPAR on Improved Arrowroot Production Technologies and Enhancement of the Arrowroot

Starch in Catanaun, Quezon" of the Southern Tagalog Integrated Agricultural Research Center (STIARC). The project resulted in increased yield, different by-products generated from the arrowroot, capacitated farmers, area expansion, strengthened farmers' association, and financial assistance, among others. It is one of the best examples of a CPAR project that successfully entered into technology commercialization.

The second place was awarded to the poster "CPAR in Enhancing Productivity and Income in the Coastal and Upland Areas of Batanes" of the Cagayan Valley Integrated Agricultural Research Center (CVIARC). With the interventions introduced by CPAR both in the coastal and upland areas in the region, there was a significant increase in yield, income, and technology adoptors. The project was able to contribute to vegetable sufficiency in the province with the production of 89.38 metric tons. It also served as a basis in the crafting and implementation of different organic food production projects of the local government.

Winning the "Best Poster" award was the "CPAR on Jackfruit Production and Processing in Barangays Malinao and San Isidro, Mahaplag, Leyte" of the

Eastern Visayas Integrated Agricultural Research Center (EVIARC). Problems associated with jackfruit production, processing, and marketing were addressed through the CPAR approaches used in the project. With the two-year implementation of CPAR, yield increased by 82.13 percent while production areas expanded by 79.8 percent. Average income of farmers also increased from P96, 250 mt/ha to P317, 500 mt/ha. Various by-products from jackfruit have also been developed which include *pastillas*, tart, jam, and jelly. These outcomes spurred the interest of other farmers, hence the initial 22 farmer-cooperators increased to 52.

The posters were evaluated based on technical content which covers creativity, originality and quality of work, and poster design and visual impact. BAR technical advisers: Virginia Agcopra, Josefina Lantican, and Engr. Roberto Villa; and technical experts: Elmer Enicola (University of the Philippines Los Baños) and Rose Mary Aquino (CVIARC), served as the judges for the contest. ### (Anne Camille B. Brion)



Soybean production triples; number of adopters increased

Attending the activity are soybean focal persons from the regions, concerned bureaus of the DA, and technical staff from BAR. PHOTO COURTESY OF MEAQUINO

A record-breaking 5,280 hectares planted with soybean across all regions were noted, resulting to a triple increase in soybean production from 1,685 hectares in 2012. But more than these remarkable figures are the number of farming communities/peoples organizations that adopted the technology. These highlighted the “Annual Soybean Review and Planning Workshop” wherein respective soybean focal persons presented their project results on 10-14 February 2014 in Jaro, Iloilo City.

Production areas increased due to active participation of the following People Organizations including the Golden Beans and Grains Producers Cooperative (GBGPC) and Kapampangan Development Foundation in Pampanga; Kaharian Farms; and Mangyan (indigenous peoples from Oriental Mindoro in Roxas and Masalay).

Soybean was also utilized during the Barangay Nutrition Scholar feeding program in Palawan and those children with cerebral palsy in Region 5. Regions also established strong collaboration with their local government units and other government agencies in the implementation of their projects and activities.

Dr. Corazon Arroyo, manager of the Western Visayas Integrated Agricultural Research Center

(WESVIARC), officially welcomed the participants. Ms. Rose Mary Aquino, chairperson of the Soybean Technical Working Group (TWG), provided the updates on the Philippine Soybean Development Program. “There has been an increased farming community and public consuming community appreciation including school children. This is because of the growing interest and enthusiasm of the local food and feed entrepreneurs,” she said. She remarkably noted Regions 3 and 5 as among those that doubled their targets.

Sixty participants attended the five-day activity including soybean focal persons from the regions and concerned bureaus of the Department of Agriculture (DA), and Bureau of Agricultural Research (BAR) technical staff. Focal persons presented the results of the technology demonstration trials, hence, the yield and income derived from the sites. After discussing the interventions applied in their region, presenters laid down their plans for 2014-2015 such as establishment of additional sites for soybean production and utilization. Engr. Cristy dela Cruz from Region 2 showed the geotagging technology which provides geographical location and identifies the soybean areas in the Philippines.

Ms. Aquino; Ms. Virginia Agcopra, BAR technical adviser; and Mr. Elmer Enicola, vice-chairperson of the Soybean TWG, raised their recommendations particularly on the needs-based approach to be implemented in 2014 and developing areas and sustaining the production. Another suggestion was to identify a group of beneficiaries that will be visited for documentation highlighting their interventions.

Since 2011, DA through BAR and the High Value Crops Development Program (HVCDP), started crafting the Soybean R&D Roadmap. Initiatives were geared towards building a strong soybean production and processing industry in the country. Various attached agencies of DA and Regional Integrated Agricultural Research Centers (RIARCs) are implementing the Soybean Program.

In addition, “The benefits of an integrated soybean production provides employment opportunities, improvement of health and nutrition of farm households, more stable prices and marketing for raw materials, and a more competitive crop growing or livestock raising at the rural level,” concluded Mr. Tong Abas of the ARMM Integrated Agricultural Research Center. ### (Ma. Eloisa H. Aquino)

basin tray, measuring devices, fruit crushers, funnel and dipper; 2) fermentation process like fermentation vat/container/jug, alcohol lamp and inoculating needle and fermentation lock/airlock/bung; 3) harvesting and aging like aging vat/tank/jug, filtration device and siphon hose; and 4) bottling and packaging process like cork, aluminum cap and capsule, air blower, corker, wine label, pH meter, hand refractometer and ebulliometer or hydrometer.

Dr. Dizon highlighted that the preparation of fruit is the most critical stage in wine making wherein the fruit to be used must be suitable for the process. Further, the juice extraction will depend on the type of fruit whether it is soft, dried, hard and citrus. The fruit juice can be treated either by boiling or chemical treatment. Acidity of the wine is also essential in providing good keeping properties and resistance to bacterial attack, balance fermentation and production of flavor during maturation. However, the acidity of fruits will depend on its variety, type and degree of ripeness.

According to Dr. Dizon, sugar content is another basic ingredient of all wine because it is needed by yeast to convert to alcohol and carbon dioxide (CO₂). The next step of wine making is fermentation wherein juice fermentation normally applies for white wines, while pulp fermentation is useful in the production of red wines. The fermentation process was done at 29-30°C for three to four weeks and the fermentation temperature should be regulated since there is further increase in temperature during active yeast fermentation. As soon as the bubbling ceases which usually takes 3-4 weeks, harvesting will start by siphoning the clear portion to separate from the less and transferring it to holding tanks for racking, clarification and aging and filtration. After six months of aging, matured wines are bottled. Proper control during filling in sterilized bottles was done to produce consistent volume per bottled wine. Bottles should be tightly closed with either sterilized cork or aluminum cap followed by storing the bottled wines

in slanting position for 24 hours to check for the presence of leaks. Bottling is followed by wiping of bottles and labeling.

Challenges and opportunities in the local wine industry

Dr. Dizon identified the common problems in wine production. Among them included the seasonality of raw materials, limited supply of wine bottles, seals or closures, inconsistent quality of products, and lack of quality control. In response to the following problems, individuals who are planning to engage in wine business must be equipped with technical know-how starting from the selection of raw materials, wine processing, product packaging and labeling up to the commercialization and marketing aspect.

Just like any other promising industry, it has been a challenge for wine processors to produce high quality and globally competitive products through exceptional packaging and labeling. Further, the creation of an innovative product is also essential so that the manufacturers will be able to provide new variety of choices for the consumers. In an effort to address the problems, wine processors should look into the possibilities of expansion of cultivated area for minor but potential fruits and establishment of wine processing plant in areas/regions where raw materials are accessible. Through the following initiatives, there will be a huge opportunity for the tropical wine industry to flourish not only locally but internationally. ###

For more information, contact:
Dr. Erlinda Dizon
Professor
Food Science Cluster, UP Los Baños
Tel. No.: (049) 536-2312/536-3472
Email: ei_dizon@yahoo.com

References:

1. National Statistics Office. (2000). Manila, Philippines
2. Lichine, A.W., et al. (1968). Alexi's Lichine's Encyclopedia of Wines and Spirits. Random House, Inc. Canada
3. Landrault, N.P., et. al., (2001) Anti-oxidant capacities and phenolic

- levels of French wines from different varieties and vintages. J. Agric. Fd Chem. 49 (7): 3341-3348
4. Kahkonen, M.P., et. al., (2001) Berry Phenolics and their anti-oxidant activity. J. Agric. Fd Chem. 49 (8):4076-4082
5. “The Wine Industry in the Philippines” (2010). Retrieved from <http://winestory.com.ph/news.php?newsid=3>

Eat with your eyes...from page 11

over the shelves in a supermarket. Mr. Reyes used the term “eating with your eyes,” which means that the consumers must be enticed to buy the product.

In fast food chains for instance, they are using images showing their delicious and mouth-watering meals so that more customers will buy their products. Also, packaging must comply with the local and international requirements so that more consumers and other businessmen will buy and invest on the products.

Aside from the packaging and labeling requirements, Mr. Reyes emphasized that product quality and safety should always be the top priority. An effective management system of plants/factories which comprises of prompt employees practicing good sanitary measures and utilizing high quality raw materials are the right formula in establishing a successful business related to consumer/food products. In order to cast the purchasing power over the consumers, businessmen should come up with the best quality products with exceptional and unique packaging and labeling.

In his concluding statement, Mr. Reyes encouraged his participants to be as unique and as creative in packaging and labeling their products. He said, “Hindi pwede ang pwede na, dapat pwedeng, pwedeng, pwede na!” ###

For more information, contact:
Mr. Emmanuel C. Reyes
Corporate Secretary
Cocoa Foundation Philippines, Inc.
Tel. No. (02) 722-8959/09209525294
Email: reys_exim@yahoo.com

Creating a market niche for Pinoy's tropical fruit wine

Story by Liza Angelica D. Barral



PHOTO: DDELEON

Healthy beverage

The changing trend is also caused by the changing lifestyle and the recent reports with regards to the benefits of wine to human health than other alcoholic drinks. Louis Pasteur once said that wine is the most healthful and the most hygienic of all beverages. It can give the body 500 calories that are normally taken from fats and carbohydrates. All of this energy is completely consumed by the body and will not add an ounce of the body weight (Lichine, et al. 1968).

Red wine, for example, protects against heart disease by reducing the build up of fat cells in the arteries. One of the popular findings is the "French Paradox". France has one of the highest saturated fat intake which is positively correlated with arteriosclerosis, yet there is low incidence of coronary heart disease in France (Landrault, et al. 2001). Wine also prevents food poisoning by helping wipe out bacteria that are responsible for food-related stomach problems. One surprising study on wine is that it shows positive effects to cancer patients if taken moderately. *Catechins*, a type of natural phenol and anti-oxidant found in red wine, helps to reduce cancer risks. Wine may also be helpful in treating anorexia patients

In general, Filipinos are beer and liquor drinkers. No wonder the wine industry is a booming business in the country. According to the National Statistics Office (2000), Filipinos are the number one wine drinkers in Asia consuming 146 bottles of wine and is increasing by 10 percent each year. The NSO data also showed that the Philippines is consuming about 1.3 billion liters of beer and 3 million liters of grape-based wines per annum which are imported from USA, France, Australia, among others.

In 2005, the value of wine imports increased to 7.5 million liters of grape-based wine amounting to US\$ 12.8 million. The main consumers are those belonging to the age group of 35-44 and mainly from the middle to upper income classes.

In 2003 and 2005, the population under the age group dramatically increased at 8.8 million and 10.3 million, respectively. This shows that the wine industry is catching up with the popularity of beer despite its huge domination in the market. But why is there a gradual but significant change of trend in the wine industry?

because alcohol, in its concentrated form in grape wine, improves appetite by prompting flow of saliva and gastric secretions (Kahkonen, et al, 2001). One of the natural effects of wine is it reduces anxiety and tension due to its tranquilizing action.

Despite all the health benefits of the beverage, the unchanging reality still remains that grapes have limited supply in tropical countries like the Philippines resulting to bigger imports from top wine-producing countries. However, the Philippines is blessed with a tropical climate and rich natural resources which results to vastly growing exotic fruits.

Sourcing Pinoy wine from locally-available fruits

"Let us explore our tropical fruits," this is the encouraging statement of Dr. Erlinda Dizon, professor from the Food Science Cluster of the University of the Philippines Los Baños (UPLB). She implemented a project, "Technology Commercialization of Packaging Development of Wine from Selected Local Fruits," funded under the National Technology

Commercialization Program (NTCP) of the Bureau of Agricultural Research (BAR). The project, which started in 2007, aimed to produce appropriately packaged quality wine from selected local fruits such as Philippine berry (*bignay*), black plum, (*duhat*) and mango.

The project was completed in 2009 producing three tropical fruit wines from the selected local fruits and these *Pinoy* wines were registered under the product label, *LB Vino*.

During the recently held BAR Seminar Series on "Tropical Fruit Wine Processing," Dr. Dizon mentioned other potential indigenous fruits that can be processed as wine. These were: *atis dalandan*, *guyabano*, *kalumpit*, *lipote*, mangosteen, passion fruit, *pinya*, *saging*, and *sampalok*.

Knowing the basics

Once the potential fruits are already identified, individuals who want to engage in wine processing should invest on the materials needed for winemaking, specifically during 1) fruit preparation like mixing tank/vessel, stirring paddle,

turn to next page

2 beekeeping projects monitored

Two beekeeping projects funded by the Bureau of Agricultural Research (BAR) were visited by a Monitoring and Evaluation (M&E) Team composed of staff from BAR, and University of the Philippines Los Baños (UPLB) Bee Program on 18-19 February 2014. The projects, namely: 1) "Promotion of Beekeeping and Bee Product and By-Product Development" and 2) "Packaging of Apiculture Food-Based and Non-Food Based Products" are being implemented by the Pampanga Agricultural College (PAC) and the Don Mariano Marcos Memorial State University (DMMMSU) in Bacnotan, La Union, respectively.

The M&E Team from BAR was composed of Mr. Alvin L. Fontanil and Mr. Patrick Raymund A. Lesaca of BAR; while Dr. Cleofas Cervancia, Mr. Noel Sabino, and Ms. Lorena Sabino, led the pack from UPLB Bee Program.

As courtesy, the group visited the university presidents: Dr. Honorio M. Soriano, Jr. of PAC, Dr. Benjamin Sapitula of DMMMSU, and Dr. Florentina Dumlaog of the Nueva Vizcaya State University (NVSU). The visit aimed to ascertain the progress, evaluate the implementation, and propose recommendations to further improve the implementation of the projects.

Promotion of beekeeping and bee products

PAC is keen on bringing the importance of beekeeping as a livelihood opportunity to various municipalities and barangays around Mt. Arayat in Pampanga. The project aims to: upscale the apiary of PAC for training, research and extension; conduct relevant researches (documentation of indigenous beekeeping practices, pollination, foraging behaviour and economics); and extend beekeeping technologies to farmers.

Dr. Norman G. de Jesus, main proponent of the bee project, presented the status and plans to be implemented in the succeeding months. Dr. de Jesus said they already conducted profiling



(L-R) Ms. Lorena Sabino, Mr. Alvin Fontanil, Dr. Cleofas Cervancia, Mr. Patrick Lesaca, and Mr. Noel Sabino visit a beekeeping project site in DMMMSU, La Union. PHOTO COURTESY OF PLESACA

of beekeepers within the vicinity of Mt. Arayat and a baseline data has been gathered and is in the process of completion. The data will provide information as to farmers' existing practices and verify their other means of livelihood since beekeeping is another viable source of income. He added that, they quantified the effects of bee pollinators on cashew, tamarind, and squash which showed a significant increase in their yield. This allowed them to compute the economic value of bee pollinators for each crop.

Dr. de Jesus also toured the team to the project site and explained how PAC is managing the project. Dr. Cervancia checked the conditions of the apiaries and health of the bees, and observed a good foraging area for bees in the site that will allow them to harvest quality honey products. Mr. Sabino collected brood sample from the bee colony for laboratory analysis on pests and diseases. Results will be disseminated to PAC after the UPLB Bee Program finished the laboratory test.

The team suggested confirming and verifying with the Food and Drugs Agency (FDA) the registration of non-food products like bee soaps, balm, sanitizer, and moisturizer. To meet FDA approval, the production facility should be ISO accredited, must comply with Good Manufacturing Practices (GMP), and must have business permit. It was also recommended to acquire additional stock inventory of bees for them to sell to other beekeepers and to increase the number of colony of *Trigona* species (stingless bees) since it is considered as "bees of the future". A bee techno-demo



Mr. Noel Sabino (UPLB) collects brood sample from the bee colony at PAC. PHOTO: PLESACA

should be established in PAC or in the preferred site by the university. The team also visited other on-going projects on lotus and adlai.

Packaging of apiculture products

The DMMMSU project aims to design and develop a packaging material and label for apiculture products and by products for food such as honey, wine, vinegar, and honey *calamansi* juice drink and nonfood-based products including soap, balm, hand sanitizer, and moisturizer.

Dr. Dumlaog, project leader, presented the updates and informed the team that they already conducted an inventory of packaging materials of apiculture products and by-products and determined the best practices of apiculturist in product packaging. Various label designs were done and ready for scrutiny through market surveys.

turn to page 6

Hands-on training on Patent Search and Documentation held

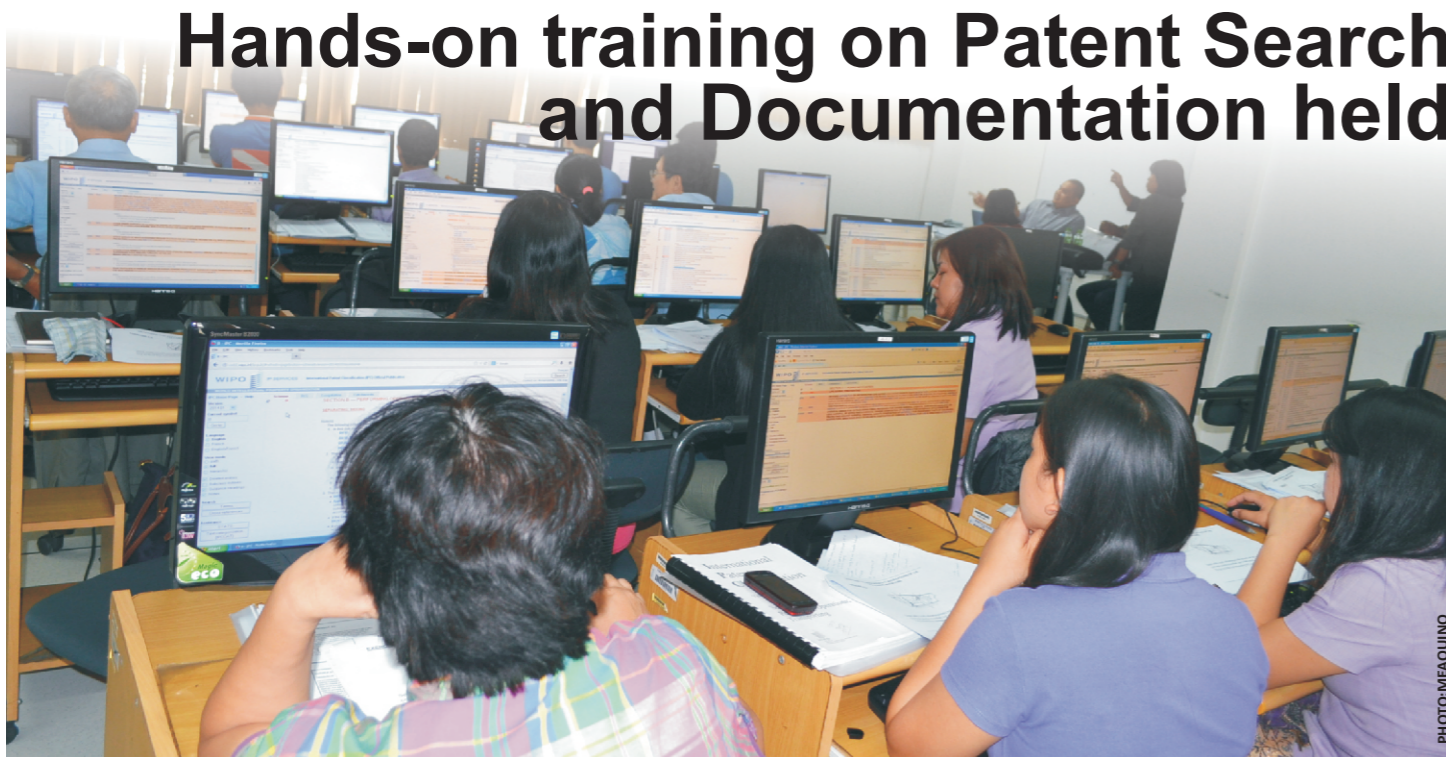


PHOTO: MEAQUINO

As an offshoot activity of the “Intellectual Property Rights (IPR) Awareness Training Seminar” for the staff of the Bureau of Agricultural Research (BAR) held in 2013, the Intellectual Property Management Section (IPMS) of BAR facilitated the conduct of the “Training Workshop on Patent Search and Documentation” on 4-6 February 2014 at UP Diliman, Quezon City.

The three-day level-up training provided a venue for BAR technical staff for a hands-on training on prior art and patent search. Attending were 26 staff who are involved in proposals, projects and evaluation functions, making the activity beneficial to them as project coordinators. Three staff from the Technology Transfer Office in UP Diliman also joined the training.

Resource speakers were Mr. Ace C. Acosta of the Office of the Vice Chancellor for Research and Development, UP Diliman; Engr. Virginia F. Aumentado of the Patent Information Analytics and Technology Monitoring Division, Documentation, Information and Technology Transfer Bureau, Intellectual Property Office of the Philippines (DITTB-IPOPHI); Maria Winelma Garcia and Ms. Brianne Nicole Sanchez of DITTB-IPOPHI; and Michael Jorge N. Peralta of the

Office of Research and Innovation, University of Sto. Tomas.

Mr. Acosta presented an overview of the Intellectual Property (IP) System. This serves as a run through of the basics of the IP system, what IP is, its role in the technological and economic development, and what may be protected under the IP system. He also laid down the different types of patent search that can be conducted based on the purpose of the search.

On the other hand, Engr. Aumentado introduced the importance of the International Patent Classification in providing a system of classification. Representatives from the DITTB-IPOPHI also explained a sample of a Patent Landscape Report. The document is a new information used in management that can be generated from

patent databases around the world.

Different patent databases and patent search strategies were discussed by Prof. Peralta. Patent databases contain readily accessible and retrievable patent information. “A reliable search is indispensable in investigating the novelty and inventiveness of an application,” Peralta said.

During the workshop proper, BAR staff were given exercises which included determining the appropriate classification of cited inventions, prior art or state-of-the-art search.

Dr. Andrea B. Agillon, a Patent Agent Qualifying Exam (PAQE) passer and licensed patent agent, served as the master of ceremony and one of the facilitators. ### (Ma. Eloisa H. Aquino)

2 beekeeping projects...from page 5

The team recommended to incorporate relevant information such as percent alcohol content, batch number, and expiration date in the label. Mr. Sabino recommended that the bee be subjected to dishwashing liquid for further analysis to determine or test how much percent of microbes can be cleaned, while Dr. Cervancia suggested putting in the label “cider” rather than simply “vinegar” to promote its premium quality. In terms of pricing and marketing strategy, it was suggested that

they consult a marketing expert to further improve their product label presentation.

The team also went to the National Apiculture Research, Training and Development Institute (NARTDI) office where various packaging materials for honey, honey wine, honey dishwashing liquid, among others, were shown. The processing facility of DMMMSU was also visited by the team. ### (Patrick Raymund A. Lesaca and Alvin L. Fontanil)



Sample products under the National Technology Commercialization Program of BAR with good packaging and labeling. PHOTOS: LBARRAL



Mr. Emmanuel Reyes of CocoaPhil explains the importance of proper packaging and labeling of products. PHOTOS: LBARRAL

EAT WITH YOUR EYES:

The importance of packaging and labeling

Story by Liza Angelica D. Barral

There's an old culinary proverb that says, “You eat first with your eyes.” This means that before you even taste a dish, your opinion on a certain product is mostly shaped by how it looks. In the case of food, the more delish and appetizing the packaging is, the more likely that it will be consumed.

This was the topic of Mr. Emmanuel C. Reyes, corporate secretary of the Cocoa Foundation of the Philippines, Inc. (CocoaPhil), during a seminar organized by the Bureau of Agricultural Research (BAR) on 27 February 2014.

Mr. Reyes, also an import and export business veteran, in his introduction explained that if you want to be noticed and to be remembered, you have to be unique in your own way. That principle is also applied in doing proper packaging and labeling.

Defining packaging and labeling

Packaging is defined as the art and science and technology of bringing goods from its source to place of consumption at the minimum cost possible. It creates a link between producers and target market consumers through quality goods.

According to Ms. Ray Anne Grace M. Garalde of the Packaging and Technology Division of the Department of Science and Technology-Industrial Technology Development Institute (DOST-ITDI), there are different

package classifications: primary, secondary, shipping or tertiary, consumer and institutional package. Primary package comes in contact with the food itself. The product in the primary container may be used for retail sale. The material that protects the primary package and appears on the product shelf for retail sale is the secondary package. Shipping or tertiary package, on the other hand, refers to the package used for storage, identification and transport. Consumer packs are intended in a retail outlet while institutional packs are usually packaged in bulk for manufacturers, restaurants, fast food chains, etc. Types of packaging materials may vary from glass, metal, plastics, paper or paper board and composites. Numerous forms of packaging materials are also used like bottles, pouch, tubes, gallon, sachet, jars, tray, cups, etc.

On the other hand, labeling refers to any written printed or graphic matter upon any article or any of its container or wrappers or accompanying the packaged food. According to DOST-ITDI, the mandatory labeling information in the Philippines include: 1) brand name or trade name, 2) product identity/name, a precise description of the product which distinguishes it from others of the same type, 3) net content declaration, expression of the weight, measure or numerical count or a combination of numerical count and weight of the product inside the

package, 4) information panel which contains the ingredient list, the name and address of the manufacturer, packer or distributor, country of origin (e.g. Product of the Philippines) and nutrition facts (optional), 5) lot identification code, 6) open-date marking, also known as the expiration date, and 7) bar code.

Why improve packaging and labeling?

The basic functions of packaging and labeling are to contain the product itself, to protect the product from various hazards and other environmental factors for increased shelf-life, to facilitate handling for storage, to transport packing, and most especially to inform the consumers about the product. However, packaging and labeling has greater importance because of its huge impact to the target consumers.

Mr. Reyes, during his seminar talk, cited that packaging is an effective marketing tool by utilizing catchy and distinct presentation of the product. “If you talk about packaging, it should be impressive, [your packaging] should stand out,” he explained.

Further, a product with good packaging captures the attention of consumers even when you place it among hundreds of similar products

turn to page 13

Bicol farmer invents MOTORIZED WEEDER



The prevalence of weeds in the farm is a common problem among farmers. Weeds reduce rice yield resulting to low farmers' income and production as a whole. Even if a number of options are available to get rid of them, they still have their own drawbacks and limitations. For instance, the use of herbicide is now being avoided because of their potential threats to human health and the environment. Meanwhile, with hand weeding, farmers have to singly pull out the weeds and will require about 20-30 man days or even more depending on the population density and stage of weed growth. Even before they can complete a hectare of land, the weeds will start to grow again. The more popular practice is operating a manual weeder. However, this machine is very tedious and costly to operate. Almost 10 people are needed to be able to finish the weeding of a one-hectare farm.

Mr. Carlito Aquino, a simple yet innovative farmer in Ocampo, Camarines Sur, thought of how he can address the problem on weeding. "Isa sa mga problema ng mga magsasaka ay ang pagdami ng damo sa kanilang palayan. Naisip ko, kung gagamit ng mechanized na weeder, mababawasan ang gastos dahil

mababawasan din iyong tao na kailangan para mag-weed," [One of the problems being faced by the farmers is the widespread growth of different types of weeds in their farms. I thought that through the use of a mechanized weeder, there will be reduction in cost because there will also be reduction in the number of people who needed to weed the farm] said Mr. Aquino.

With the help of another farmer, Gil Penetrante who used to be a machinist, they were able to devise a motorized weeder out of scrap materials. With the machine, a one-hectare farm can be weeded completely with just three farmers only, thus reducing the cost of labor. Expenses incurred in a day using the motorized weeder amount to only P1,260.50 compared to P2,500 using the manual weeder.

"Madami pong nagtatanong kung magkano o kung saan makakabili nitong aming naimbento. Ngunit hindi pa po kami makapagbenta dahil inaayos pa rin po namin ito hanggang maging perpekto na," [Many are already asking how much or where they can buy our invention. But we are not yet selling it because we are still refining it until it becomes perfect] said Mr. Penetrante.

Mr. Aquino is one of the progressive farmers in Bicol who received various awards for his efforts towards agricultural productivity. He is

also a farmer-cooperator of the Department of Agriculture-Bureau of Agricultural Research (DA-BAR) initiative on CPAR project in the region. He organized the Cagmanaba Association of Neutral Domain for Union Yield of Organic Farmers Group (CAANDUYOG), which is supported by the DA-RFU V with the leadership of Regional Executive Director Engr. Abelardo R. Bragas. To date, the equipment is being improved by the Regional Engineering Group and Research Division to come up with data on the measurement of efficiency and fund allocation.

"CPAR used to be concentrated only on crop production. But here in Bicol, we want to teach our farmers how to become more innovative in their farming endeavors. Together with our farmer-partners, we came up with the concept of participatory technology development. This is best exemplified by Mr. Carlito Aquino when he invented the motorized weeder," stated BIARC Manager Luz Marcelino.

Mr. Aquino's efforts were acknowledged by Agriculture Secretary Proceso J. Alcala during the 1st National CPAR Congress held at the Manila Hotel. ### (Anne Camille B. Brion)

Yamang Lupa Program launched in Zamboanga-Sibugay

As a follow through of the first Yamang Lupa Program (YLP) Management Committee meeting held in January 2014 at the Bureau of Agricultural Research (BAR), a team composed of: Dr. Heraldo A. Layaoen, ICRISAT liaison officer; Engr. Samuel Contreras of the Bureau of Soils and Water Management (BSWM) and YLP national program coordinator; Mr. Joell Lales, head of the Planning and Project Development Division of BAR; and selected BAR technical staff, went to Zamboanga City, Mindanao to officially launch the Yamang Lupa Program on 5-7 February 2014.

Dr. Eriberto D. Salang, dean of the College of Agriculture of the Western Mindanao State University (WMSU) acknowledged key personalities, local officials, and other guests.

Zamboanga City Mayor Maria Isabelle G. Climaco-Salazar delivered the welcome remarks and acknowledged the efforts of the

national government through BAR in partnership with ICRISAT, other local government units, and the academe in harnessing whatever technology is available to make the soil and other resources useful. The mayor likewise enjoined the attendees to "make our lands productive in order for the agriculture and fisheries sector to be competitive in the world market."

Engr. Peter M. Andalahao, regional technical director (RTD) for operations and regional program director, gave the rationale of the program and emphasized that the approach is soil rejuvenation by adopting the Bhoochetana principles, which was successfully being implemented in India through the endeavors of ICRISAT. RTD Andalahao also underscored the importance of micro nutrients for crop development.

The keynote message of BAR Director Nicomedes P. Eleazar was read by Mr. Joell Lales. In the speech of Dr. Eleazar, Mr. Lales pointed out that achieving food sufficiency and security amidst the threats and challenges of



Mr. Joell Lales, head of BAR-Planning and Project Development Division, participates in the ceremonial "Ringing of the Bell" that signifies the launching of the program in Zamboanga-Sibugay. PHOTO:DA-RAFI99

climate change and the rapidly increasing population has always been the top priority of DA. Various strategies have been sought including the utilization and development of more responsive research, development, and extension programs (RDE) for the rainfed areas.

turn to page 8

Alcala responds...from page 1

time para marinig ko dahil hindi tayo araw-araw nagkakasama-sama na nanggagaling sa lahat ng rehiyon sa ating bansa. Bilang kayo ang aming tinatanaw na totoong tutulungan, pag-uusapan po natin" (Although I have picked up a lot of feedback from your success stories, you may also have other concerns that you may want to convey to the Department. This is the proper venue and time for me to hear you out because it is not often that we get to be in one venue as you are coming from various regions of the country. You are what we really aim to help, let us talk about it)," said Sec. Alcala.

Following the testimonials from the different CPAR farmer-cooperators nationwide, Sec. Alcala addressed their requests. The Secretary pledged to Mr. Rufo Dolueras, a farmer and goat raiser from Zambales, a water pump for his rice field which is another source of his income. In addition, the Secretary instructed the region to distribute an

additional breeding buck to the farmers and avoid inbreeding of goats.

Meanwhile, Mrs. Gloria Cruz, farmer from Oriental Mindoro, asked for assistance in their farm-to-market road (FMR) to facilitate the efficient delivery of their produce. Cruz is a farmer from the upland and so the transportation of their produce, particularly banana, going to the lowland has become difficult. In response, Sec. Alcala promised to schedule a meeting with the incumbent officials in Region IVA so that the budget for the FMR will be included in the 2014 or 2015 budget of the province. In view of this, the Secretary emphasized that all the facilities that will be constructed should be climate-resilient, thus, the FMR should be of quality and should follow the high standards. He included that if ever the FMR project will pursue, it will be on a counter-parting scheme. The local government unit (LGU) should also be responsible in this undertaking.

The Secretary applauded the ingenuity of Mr. Carlito Aquino, a

farmer-inventor from the Bicol region. Mr. Aquino's group invented a motorized weeder which helped the farmers in easier land preparation resulting in the reduction of labor cost. Mr. Aquino mentioned that he has other innovative ideas for farm mechanization including the biomass collector and he will request the Department for funding assistance. The Secretary, seeing the potentials of this invention, asked Mr. Aquino, together with the DA-RFU V, to submit a proposal to BAR for funding support.

Lastly, Vice Mayor Victor Tabaquirao of Tubungan, Iloilo who is also a farmer, requested that more investment be allotted to research and development (R&D) so that more programs like the CPAR will be implemented at the grassroots. In response, the Secretary cited the increase in budget allocated for agriculture and fisheries research and development. ### (Diana Rose A. de Leon)

Sariaya gears up for Yamang Lupa program



MOA signing of officials from DA Region IVA, SLSU, and LGU of Sariaya to signal the start of the implementation of the Yamang Lupa Program in Quezon PHOTO: DDELEON

The signing of Memorandum of Agreement between the Bureau of Agricultural Research (BAR) and the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in October 2013 officially started the implementation of *Yamang Lupa* Program in the country and jumpstarted the series of activities in the identified three pilot sites.

Part of the lineup of activities under the program was its launching in Sariaya, Quezon which is the selected pilot site in Luzon. The Department of Agriculture-Regional Field Unit IVA (DA-RFU IVA) and the Southern Luzon State University (SLSU) are the lead program implementers.

Gracing the event were Dr. Pardha Saradhi G, scientist from ICRISAT; Dr. Heraldo L. Layaoen, ICRISAT liaison officer; Engr. Samuel M. Contreras, national program leader

for *Yamang Lupa*; Mrs. Rowena Masilang, wife of the mayor of Sariaya; Dr. Cecilia N. Gascon, president of SLSU; Dir. Vilma M. Dimaculangan, regional executive director of DA-RFU IVA; and Dir. Brigida G. Mercado, regional technical director for research and regulatory of DA-RFU IVA.

Mr. Joell H. Lales, head of the Planning and Project Development Division of BAR, delivered a message in behalf of BAR Director Nicomedes P. Eleazar. In the message, he emphasized that for the country to be food secure and be self-sufficient, rainfed areas should be maximized for its potentials to add on the food productivity, and this can be achieved through the *Yamang Lupa* program.

The event was attended by key staff from DA-RFU IVA and SLSU, officials and staff of the local government unit of Sariaya, and

members of the various farmers' association in Sariaya.

Prior to the launch, the BAR staff visited Brgy. Manggalang I, one of the adjacent four barangays in Sariaya which was initially tapped for the first year implementation of the program. The implementers targeted 2,500 hectares of rainfed areas from these four barangays and will expand until the targeted 10,000 ha rainfed areas in Sariaya have been reached during the three year duration.

For the initial activity, farmers of Manggalang I, with the guidance from technical experts, did soil sampling. A core strategy of the program is soil rejuvenation, wherein the soil health status of the project site must first be analyzed and tested. Result of the soil analysis will be the basis for developing package of technologies that will be used by the farmers in their farms. At the end of the program, a target of 20 percent increase in production is expected.

In an interview, Mr. Hermanito Reyes, president of *Nagkakaisang Magsasaka ng Manggalang*, is hoping that through the program, their production will increase.

Weeks earlier of the same month, the program was also launched in Zamboanga-Sibugay, a pilot site in Mindanao and preparations were being done for the coming launching of the program in Samar. ### (Diana Rose A. de Leon)

Yamang Lupa program...from page 7

To effectively uphold the goals and principles of YLP, the bureau, in consultation with other government agencies involved, has identified the province of Zamboanga-Sibugay as one of the pilot areas for the implementation of India's Bhoochetana program in the Philippines.

Dr. Eleazar likewise congratulated the DA-Zamboanga Peninsula Integrated Agricultural Research Center (ZAMPIARC) for being the lead implementing agency

in the region and for making the initial steps in embracing the principles of soil health management.

Guests and key personalities individually professed their support to the program followed by a "Ceremonial Toast" and the "Ringing of the Bell".

After the official launching, the group together with RTD Andalaha visited Brgys. Casacon and Tilasan in R.T. Lim, Zamboanga-Sibugay. The visits and consultations with the local officials and farmers provided better understanding on their farming and

traditional practices.

The YLP is a partnership among ICRISAT, BAR, High Value Crops Development Program, BSWM, Bureau of Plant Industry, Agricultural Training Institute, and selected DA-Regional Field Units and state universities and colleges.

Aside from Mindanao, the YLP is also scheduled for launching in other pilot areas in Luzon and Visayas. ### (Patrick Raymund A. Lesaca)

BIARC develops new product lines from herbs and spices



They may be little, but they do wonders to make our foods palatable and appetizing. Enriching flavors and bringing out aroma—these herbs and spices are already parts of the Filipino cuisine that we simply cannot live without. Beyond food, they are also being utilized for their medicinal and cosmeceutical values.

According to Ms. Luz Marcelino, manager of the Bicol Integrated Agricultural Research Center (BIARC), it is of significant contribution to the agriculture sector to explore the potentials of herbs and spices for entrepreneurial

opportunities. Thus, these plants should be conserved and utilized for their medicinal and nutritional value, and should be promoted as additives to local and national food cuisines.

"At present, many of these indigenous herbs and spices are not yet fully utilized because of lack of knowledge and information on

their economic importance. Their values as food and as affordable sources of nutrients and medicine are often undermined. If they will be given full attention, they could help us in addressing food shortage, high cost of medicine, and the likes," Marcelino said.

In line with the Indigenous Plant for Health and Wellness Program of the Department of Agriculture (DA), BIARC, in collaboration with the Bureau of Agricultural Research (BAR), embarked on the project, "Collection, Propagation Techniques of Indigenous Herbs, Spices and Medicinal Plants and Establishment of Demo Nursery". The project aims to further explore the potentials of

indigenous herbs, spices, and medicinal plants in the Bicol region.

As part of the postharvest processing activities, BIARC through its Product Development Unit, developed suitable drying, dehydration, and powdering techniques for the local use of the herbs and spices. This resulted in the production of various by-products including tarragon mint tea, cool mint tea, sweet basil dalandan juice, and 6-in-1 herbal juice, among others.

In coordination with the Provincial Agricultural Offices and Municipal Agricultural Services, there are 46 different kinds of herbs and spices, and 21 known medicinal plants identified and collected in different areas in the region. These were planted in BIARC to serve as mother plant and of planting materials for propagation.

To date, 11,831 assorted kinds of herbs and spices, and medicinal plants have been propagated. Of these, 3,039 have been distributed to interested clients and stakeholders. ### (Anne Camille B. Brion)

First CPAR Congress...from page 1

thereby transforming their lives through efficient and effective community-based R&D systems.

Close to 400 participants attended the congress including researchers, CPAR implementers, representatives from local government units (LGUs), DA attached agencies, farmer and fisher cooperators, and representatives from the private sector.

Agriculture Secretary Proceso J. Alcala served as the keynote speaker during the opening ceremony. Joining him were Dr. Rex Cruz, chancellor of the University of the Philippines Los Baños; and Atty. Denis Habawel, governor of Ifugao.

Dr. Nicomedes P. Eleazar, BAR director in his opening message said, "Naniniwala kami sa BAR na may iisa tayong layunin sa CPAR, ang maglingkod sa mga Filipino at makapagdala ng malawakan at pangmatagalang pagbabago sa ating bansa na magsisimula sa ating sariling pamayanan."

Secretary Alcala said in his speech, "Sana po magsilbi itong [CPAR Congress] paraan hindi lamang para makilala ang tagumpay ng CPAR, ngunit kundi upang palakasin ang ugnayan at lalong palawakin ang kooperasyon at pagtutulungan ng mga mananaliksik at mga magsasaka, ng pamahalaan at iba't-ibang stakeholders ng agham at teknolohiyang pang-agrikultura."

The agriculture chief also commended and thanked the stakeholders in making the CPAR program a success. "I have to thank BAR and all the individuals, agencies, and groups who helped transform our farmers and fisherfolk into scientist entrepreneurs," he stressed.

Culminating the two-day congress were eight topics which were presented in plenary sessions. The topics include: 1) PRA Implementation, 2) Community Organization, 3) Production Management, 4) Participatory Monitoring and Evaluation, 5) Financial Management/Rollover Scheme, 6) LGU Support to CPAR, 7) CPAR to Technology Commercialization, and 8) Effective

Collaboration. Each topic was presented by the CPAR project leaders and farmer/fisher cooperators.

In addition, three special topics were also discussed by different agencies including Product Packaging and Labeling by the Department of Science and Technology-Industrial Technology Development Institute (DOST-ITDI); Organizing Farmers Association and Cooperative by the Cooperative Development Authority (CDA); and the *Abakayamanan* Project of the Philippine Fiber Development Authority (PhilFIDA)-Region 5.

Dr. Teodoro S. Solsoloy, assistant director of BAR, concluded the CPAR congress, leaving the participants with a note that "each success is due to the hardwork and determination of our farmers and fisherfolk." ### (Daryl Lou A. Battad)