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BAR showcases 5 technologies for adoption

The Bureau of Agricultural Research (BAR) showcased five mature technologies during the recently concluded 2006 National Agriculture and Fisheries Technology Forum on 19 May 2006, BSWM Convention Hall, Visayas Ave., Diliman, Quezon City.

By "mature" as emphasized during the presentation of the National Technology Commercialization Program (NTCP), it means those technologies and innovations that have been assessed as suitable to the needs of farmers and fisherfolk and are ready for adoption. This NTCP endeavor is in line with the Department of Agriculture's (DA) goal to empower farmers and fisherfolk through agribusiness development projects.

The technologies presented during the forum were: 1) minus-one-element technique (MOET), a nutrient deficiency test for lowland rice soils, presented by Mr. Josue Descalsota, Philippine Rice Research Institute (PhilRice); 2) production of sugar from coconut toddy, presented by Ms. Erlene Manojar, Philippine Coconut Authority (PCA); 3) use and promotion of mobile spindle stripping machine for the extraction of abaca fiber, presented by Engr. Adriano Valenzuela , Fiber Industry Development Authority (FIDA); 4) use of *trichantera* (madre de agua) in swine feeding, presented by Ms. Avelina Samiano, Bureau of Animal Industry (BAI); and 5) demonstration technology on growing fillet fish size tilapia in earthen pond

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CPAR operation manual launched

(L-R) BAR Director Nicomedes Eleazar, ARMM-RFRDC Manager Macmod Mamalangkap, BIARC Manager Elena delos Santos, and DA Asec Felix Jose Montes.

The Bureau of Agricultural Research (BAR) launched the Community-based Participatory Action Research (CPAR) Operation Manual at the Bureau of Soil and Water Management (BSWM) Convention Hall, 18 May 2006.

The launching was part of the activities lined up during the 2006 National Agriculture and Fisheries Seminar Series and Technology Forum, organized and facilitated by BAR's Technology Commercialization Unit (TCU). With the theme, *Teknolohiya sa Agrikultura at Pangisdaan para sa Masaganang Kabuhayan at Kaunlaran*," the techno forum and seminar series are BAR's

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BAR Chronicle
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It provides regular updates on the activities on BAR's activities as R&D coordinator and news and features concerning NaRDSAF-member institutions.

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BAR participates in mango festival

BAR Director Nicomedes P. Eleazar delivers his inspirational message during the opening program of the 5th Mango Festival in Taguig City.

The Agri Aqua Network Incorporated (AANI) Mango Industry Network (AMIN) Foundation led in the celebration of the 5th Mango Festival at the Food Terminal Inc. (FTI) Complex, Taguig City on 27-28 May 2006. The two-day event was highlighted by technical discussions, open forum, and product display and exhibition. Participants in the exhibits were mainly composed of the private sector with the Bureau of Agricultural Research (BAR) as the only government agency participant.

BAR Director Nicomedes Eleazar gave a message in the short program that formally opened the event. In his message, he informed the participants of the support that BAR has relentlessly given to develop the country's mango industry. This is tapping the mango export potential to the European Union (EU), one of the biggest markets in the world of which the country has yet to penetrate. He said that BAR has started funding and coordinating with prospective partners and officials who could help in the program such as Agricultural Attaché to Brussels (Belgium), Ana Abejuela.

Scientists from the Postharvest and Horticulture Research and Training Center, University of the Philippines Los Baños (PHRTC-UPLB) led by Dr. Edralina P. Serrano were the resource speakers during the technical session. Dr. Serrano together with Engr. Kevin Yaptengco discussed the quality management of mango. This was followed by a short open forum.

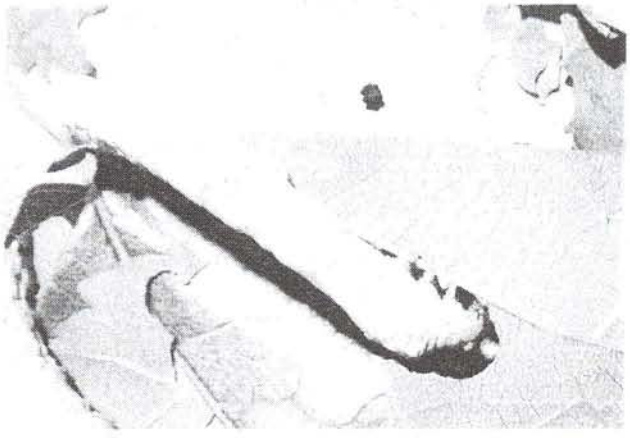
PHRTC is also the implementing agency in the BAR-funded project on enhancing the export potential of fresh fruits and vegetable to the EU market.

Also present in the event were Engr. Ricardo L. Cachuela, executive director of the Bureau of Postharvest Research and Extension (BPRE) and other BAR officials. The exhibits of BAR were prepared by BAR's Applied Communication Section led by Ms. Julia Lapitan who was present in the event with Ms. Digna Sandoval, coordinator for crops of BAR's Technology Commercialization Unit. The successful celebration of the mango festival was made possible through the leadership of its chairman, Mr. Armando del Rosario. *(Miko Jazmine J. Mojica)*

FIDA, Benguet bat for silk industry revival

"It is our commitment to continuously improve the silk industry and assist the farmers working for its development," thus was the statement of Dr. Remedios Abragon of the Fiber Industry Development Authority (FIDA) during the two-week training of silk weavers from 22 May 2006 to 02 June 2006 at the FIDA Training Center in Wangal, La Trinidad, Benguet. The training was sponsored by the FIDA Central Office and the provincial government of Benguet headed by Governor Melchor Borromeo.

The training is part of Benguet's development program to revive and boost its silk industry through local production and processing. The provincial government believes that reviving the silk industry will make the province known again for its rich culture and natural resources. Through the silk industry, natural fibers and natural dyes will be the focal point of development especially their promotion and commercialization. Majority of the silk industry stakeholders and leaders signified their support to use of new and existing technologies. The training is an initial activity for the Benguet silk weavers to produce quality woven products in time for the grand fashion show during the Benguet "*Adivay*" Festival in November 2006. This festival highlights woven materials from natural fibers in vibrant colors that are inspired by traditional designs and patterns.



The training included technologies in natural and commercial dyeing of silk, print designs using tie-dyeing and hand painting, loom weaving and color-design combinations. To support these activities, farmers are encouraged to plant mulberry so that there will be a steady supply of mulberry leaves. Mulberry leaves are used as feed for silkworms which produce the raw silk through their cocoons.

The activities from production of mulberry leaves, processing of raw silk until completion of woven products are supported by FIDA and Benguet provincial government through technical assistance and financial support. Both organizations believe that with the new technologies in production and processing, and in marketing support, the silk industry will be back to its glory through appropriate promotion and commercialization activities. *(Marlowe U. Aquino, Ph.D.)*

RIARC managers present zonal R&D activities; Dir. Eleazar proposes a benchmarking group

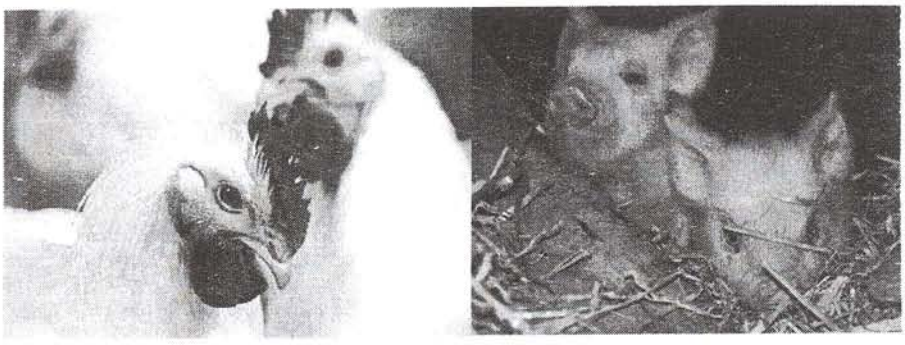
Managers of the Regional Integrated Agricultural Research Centers (RIARCs) presented their zonal R&D activities during a special meeting on 18 May 2006, RDMIC Lobby, Visayas Ave., Quezon City. Presenting their regional R&D activities were: Dr. Orlino Mercado of Central Luzon Integrated Agricultural Research Center (CLIARC) (for Luzon); Ms. Elvira Torres, Easter Visayas Integrated Agricultural Research Center (EVIARC) assistant manager (for Visayas); and Mr. Constancio Maghanoy, Northern Mindanao Integrated Agricultural Research Center (NOMIARC) manager (for Mindanao).

BAR Director Nicomedes P. Eleazar's welcomed the group and he proposed the creation of a small group in the Bureau to conduct benchmarking activities in each region.

The purpose of the benchmarking group is to facilitate and monitor all projects being conducted in the regions particularly the documentation of success stories, benefits and impacts of the technologies in the regions and identification of successful modalities in the implementation of regular R&D, CPAR, and agribusiness projects. Projects to be monitored and documented are those implemented by RIARCs, not necessarily only BAR-funded projects.

The group, he stressed, will be comprised of key technical staff from BAR's Project Development Division (PDD), Regional Coordination Division (RCD), and Technology Commercialization Unit (TCU). He further stated that BAR will release to the RIARCs the members of the group who will conduct the benchmarking activities in June 2006. Region 2 will be the first to be visited *(Rita T. dela Cruz)*

Partnership: Key to hog and poultry commercialization



It is evident that the swine and poultry industry and other stakeholders have one thing in common—that all their activities will *accelerate the swine and poultry industry development towards economic stability and global competitiveness*. This, coincidentally, was the theme of the North-Central Luzon Hog and Poultry Industry Congress held on 23-26 May 2006 at the Officers Club, Clark Special Economic Zone Compound, Angeles City, Pampanga. The congress was participated in by the Department of Agriculture-Regional Field Units (DA-RFU) I, II, III and CAR, private swine and poultry raisers/farmers, private sector in the industry and meat processors. The event was sponsored by the DA-GMA Livestock Program, DA-RFU III, Regional Agriculture and Fishery Council III and the Pampanga Association of Meat Processors (PAMPRO).

During the congress, the topics discussed included prospects of the industries at the domestic and global markets, operationalization of the meat inspection service, food safety, handling and sanitation, research and development (R&D), and commercialization activities. Topping the list of topics is the trend and policy direction for swine and poultry raisers to produce meat products that could be exported to other countries. With the strict compliance to rules and regulations on meat processing and food safety the goal could be attained. The participants identified strong partnership as the ultimate factor for this endeavor.

Partnership as viewed by the stakeholders include establishment of networks here and abroad for sustained industry development at the same time maintaining linkage with organizations that address the challenging programs of the industry particularly on animal health, pharmaceutical and biotechnology, R&D on feed formulation and animal nutrition and management. Through partnership, key players and stakeholders can make the industry competitive in the global market through complementary and collaborative projects. Moreover, they agreed that partnership among local government agencies, non-government agencies within the clustered areas will guarantee a stable meat and processed products supply within North-Central Luzon including Metro Manila. This was assured by Mr. Miguelito Buerja, RAFC III Chairman, Jose Maria Hizon of PAMPRO and DA GMA Livestock Program Director Pete Ocampo and DA-RFU III OIC Regional Executive Director Renato P. Manantan. *(Marlowe U. Aquino, Ph.D.)*

Visayas zonal centers streamline R&D programs

In the recent quarterly meeting of the Visayas Zonal R&D centers on 14-16 May 2006 at the Malay, Boracay Island , the managers had one vision in mind – systematize agriculture and fishery R&D activities to respond to the needs of their clientele. They agreed to support their respective regional programs in agriculture and fisheries especially the GMA banner programs for high value commercial crops, rice, corn, livestock and poultry and fisheries. To support these banner programs are the Bureau of Agricultural Research's (BAR) initiated programs which systematize program operations, namely; Community-based Participatory Action Research (CPAR), Agribusiness Development Projects (ADP) and the National Technology Commercialization Program (NTCP). The CPAR and ADP complement the NTCP particularly on regional priority commodities and technologies that address the needs of the farmers/ fisherfolk and their communities.

Furthermore, the center managers stressed that there is a need to come up with policy directions to improve the management of the zonal R&D network and implementation of its programs. This can be achieved through a zonal technical advisory committee composed of the DA Regional Field Units (DA-RFUs) regional executive

Δ *see Visayas zonal...page 11*

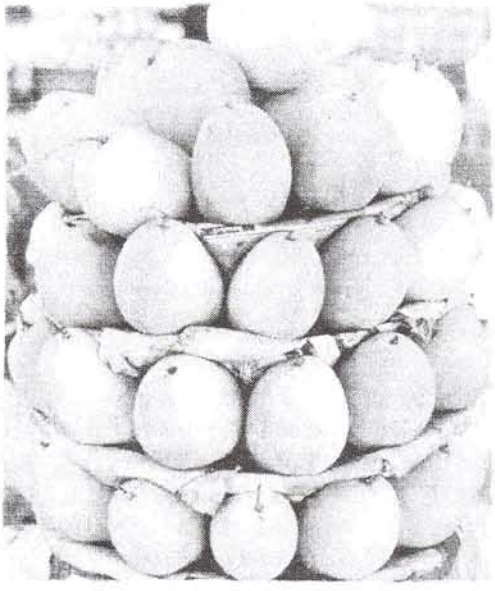
European Union market tapped; agricultural attaché sits in meeting

Ms. Ana Abejuela, the Philippine Embassy's agricultural attaché to Brussels (Belgium) and Mission to the European Communities, sat in a meeting with the representatives of agencies collaborating with the Bureau of Agricultural Research (BAR) in tapping the European Union (EU) market.

BAR's National Technology Commercialization Program (NTCP) is currently supporting the UPLB Postharvest and Horticulture Training and Research Center (PHRTC) in its effort to improve the country's fresh fruits and vegetables for export. The program focuses on the implementation of good agricultural practices (GAP) and the application of postharvest handling technologies which are the stringent requirements of the export market.

In February, BAR and PHRTC including several agencies of the Department of Agriculture (DA) and private sector met to discuss the prospects of exporting to the EU market, considered one of the biggest traders in the world. During the meeting on 23 May with Ms. Abejuela, the requirements of the EU market and potential problems were discussed.

Abejuela pointed out that exporting to Europe would mean high economic returns to the country and if sustained could translate to an improved income of farmers. She said that initially the country could target the ethnic market in the European community composed of Asians, although it is just a small niche in the market. She also said that Philippine fruits will be in stiff competition with those from established Asian exporters such as Thailand and Malaysia but the country could aim to provide the market during the off season.



"Thailand and Malaysia are credible suppliers of mangosteen and other fresh fruits but the peak slides down by the end of the second quarter. Since there is a market glut in the Philippines for rambutan, lanzones, and mangosteen during the last quarter, we could export these around that time and generate a big income," says Abejuela.

Since PHRTC plans to bring some of the country's fresh fruits to Europe to determine the demands of the market, Abejuela advised it to ensure that these will pass Europe's GAP standards (EurepGAP). She said that if the Philippine's GAP could be harmonized with EU, she could request EU to guide the country in applying for accreditation from EurepGAP. "If we have accreditation from EurepGAP, our products will be accepted without question by Europe's big supermarkets which are members of the EU," says Abejuela.

Abejuela said that in terms of the quality of fruits, the EU market is particular with size uniformity. It shuns fruits that are too juicy and prefers those with small seeds and thick flesh. She added that a single insect or bug found among the fruits would spoil the whole package.

On the other hand, Dr. Erlinda Serrano, PHRTC head, said that they have developed a technology that ants from pestering fruit trees particularly that of lanzones which are notoriously mobbed by black ants.

In the meeting, the usual problems of trade cost, shelf life, and inability to promote the products surfaced in the discussion. Abejuela said that tropical fruits can be sold at a high price in Europe but the problem of distance, thus the exorbitant cost of transporting the produce is one of the biggest hurdles of exporting to Europe. Moreover, Abejuela said that if the fruits from the Philippines could reach the shores of Europe after 30 days, the products would be delivered to the importers after 3 to 4 days, then at least a week for retailers to dispose them from their stores. This means that effective postharvest technology remains one of the biggest challenges to the country's export venture. Lastly, the country has inadequate promotion programs so that even if the fruits are of superior quality, they cannot compete with the produce of other Asian countries.

Even with these challenges, the DA agencies and partners in the private sector remain optimistic in pursuing the new program boosting the economy through agricultural exports. Abejuela committed herself to help in the program through her influence in the EU as the Philippine's agricultural attaché. She also encouraged the conduct of feasibility studies for market opportunities and easier means of trade access. *(Miko Jazmine J. Mojica)*

BAR orients private sector on CGRM

BAR Director Nicomedes Eleazar presiding the CGRM orientation with the private sector.

The private sector had its turn when the Bureau of Agricultural Research (BAR) oriented them on the Competitive Research Grant Manual (CRGM) on 17 May 2006, BAR Conference Room, Visayas Ave., Quezon City. The orientation aimed at enhancing the participation of the private sector in the implementation of agriculture and fisheries research and development (R&D) projects.

Highlights of the orientation included discussions on the following major topics: R&D thrusts and priorities; implementing guidelines for the private sector/NGO-led grant; and overview of the National Technology Commercialization Program (NTCP). BAR Director Nicomedes Eleazar led the discussion on the thrust and priorities of the Bureau for R&D. He presented R&D goals and objectives, priority areas and commodities, and major programs and activities.

Private sector/NGO-led grant system was presented by Ms. Brenda Bautista and discussed by Dr. Amy Kagaoan, head of the Program Development Division (PDD). The presentation focused on the criteria for the selection of research projects to be funded and the eligibility of implementer from the private sector. Requirements for the submission of research proposals as well as the monitoring of on-going projects were explained to give the participants a clear picture of how the research projects are coordinated and monitored.

Meanwhile, an overview of the NTCP was included in the orientation to brief the participants on the available grants and the programs where they can collaborate or participate. Dr. Marlowe Aquino, overall coordinator of the NTCP, presented the program.

Eight private companies participated in the orientation. These are: 1) Secura International, 2) San Miguel Corporation, 3) East West Seed Company, 4) Organic Producers and Traders Association (OPTA), 5) Kensearch Trading Corporation, 6) Ever Rich Farms, 7) Fabcon Philippines, and 8) Galactic.

This is the third orientation conducted by BAR for the year. The first two were for the State Colleges and Universities (SCUs). Orientation briefings for the SCUs in the Visayas and Mindanao will be conducted this May and June. *(Connie R. Fernando)*

CPAR...from page 1

participation in the annual celebration of Farmers' and Fisherfolk's Month.

The CPAR manual seeks to reach more clients and provide them a better understanding of its operation. BAR Director Nicomedes Eleazar welcomed the guests, which included Department of Agriculture (DA) Assistant Secretary Felix Jose Montes.

Asec. Montes, filling in for DA Undersecretary Jose Emmanuel Paras, affirmed in his message, the need for more vigilant movement of technology and knowledge from research and development institutions to the farming communities,

"To close the gap between technology R&D and commercialization, BAR implements the National Technology Commercialization Program (NTCP). I learned that this program supports the appropriate promotion and marketing of R&D outputs, specifically mature technologies, with comparative advantage in the domestic and global market. By "mature" we mean those technologies and innovations that have been assessed as suitable to the needs of farmers and fisherfolk and ready for adoption. This is line with the Department of Agriculture's (DA) goal to empower farmers and fisherfolk through agribusiness development projects."

Dir. Eleazar, on his part, expressed his hope that the CPAR program will be able to reach more people through the newly published manual, thereby lending a hand to the agricultural modernization effort that the Agriculture and Fisheries Modernization Act (AFMA) promised. *(Maria Lizbeth J. Baroña)*

BAR conducts topo survey and mapping for RIARCs in Luzon through GIS

The Bureau of Agricultural Research (BAR) through its Management Information Systems Division (MISD) held its "Zonal Meeting on Planning and Conduct of Topographic Survey and Mapping of RIARC Stations" on 23-24 May 2006, CLIARC Conference Room, Magalang, Pampanga. Hosting the Luzon meeting was the Central Luzon Integrated Agricultural Research Center (CLIARC) headed by its manager, Dr. Orlino Mercado. Participants included RIARC GIS personnel and staff of the Regional Agricultural Engineering Group (RAEG).

In the zonal meeting, the participants had practice exercises on the creation, planning, and preparation of topographic maps and a review of the station's profile through Geographic Information System (GIS). GIS is a planning tool in agriculture and fisheries in redefining the ways local agricultural programs are handled and resources are allocated.

Mr. Joel Abunda, BAR's GIS staff, shows participants how topographic survey and mapping is done during the zonal meeting and planning of the Luzon group at CLIARC, Magalang, Pampanga.

BAR encourages partner institutions in the regions to use GIS and related spatial technologies such as Global Positioning System (GPS) and remote sensing as integral tools in the implementation, monitoring, and evaluation of CPAR. Processes such as identification of project sites based on bio-physical and socio-economic variables and progress monitoring can be justified and presented through data and maps.

Highlights of the meeting included discussions on GIS and topographic map requirements presented by Mr. Ricarte Castro, regional coordinator of the Research Coordination Division (RCD) and Mr. Joel Abunda, GIS staff of the Management Information Systems Division (MISD). The meeting also included a workshop on: the preparation of workplan for topographic mapping and digitization (facilitated by MISD head, Rodolfo Galang); and modifying station profile database (facilitated by GIS technical staff, Herminigildo Quibuyen). After the workshop, participants presented their workshop outputs that included project background and topographic map requirements. The second part consisted of the reformulated GIS database template.

BAR officials hope that after this activity, the RIARCs in Luzon are able to prepare a GIS compatible topographic map and develop their station profile database template for R&D. This station profile database will be linked to all the topographic maps prepared in the regions.

This is the first zonal meeting conducted and facilitated by BAR for the year. The meeting for the Mindanao group will be held on 5-6 June 2006 at the Southern Mindanao Integrated Agricultural Research Center (SMIARC), Davao City while the Visayas group will convene on 8-9 June 2006 at the Eastern Visayas Integrated Agricultural Research Center (EVIARC). *(Rita T. dela Cruz)*

Keeping it...from page 10

not for others, it is worth pursuing, and perfecting. After all, there are other technology transfer modules that different arms of the Department of Agriculture is implementing to expedite the movement of usable technologies for the farming communities.

CPAR, however, has also become an avenue where the important components of a successful production and knowledge management system work together—the researcher, the farmer, and the local government.

Also, it has become an avenue that opens up a clear, open road where science and farming and local communities could easily reach each other.

BAR showcases...from page 1

BAR Dir. Nicomedes P. Eleazar delivers his welcome message during the opening program of the 2006 National A/F TSeminar Series and Technology Forum Forum.

presented by Ms. Eva Zafra, Bureau of Fisheries and Aquatic Resources (BFAR).

MOET for lowland rice

The minus-one-element technique (MOET) is a crop diagnostic tool for lowland rice soils developed by researchers from PhilRice, Dr. Cezar P. Mamaril and Mr. Josue Descalsota. MOET is a test to identify the limiting or deficient nutrients in the soil through a simple pot experiment. This technique is based on the principle, referred to as the *law of minimum*, which simply means that the plant's growth and yield are limited by the deficient nutrients. "The plant itself is a good indicator on what is going on in the soil. Identify first what is limiting in the soil and be assured of an increase in yield," Dr. Mamaril pointed out during the open forum discussion. He added that, although the technique may sound too technical, it's actually farmer-friendly as no technical knowledge is required to determine the deficient nutrient in the soil. MOET, according to him, is friendlier and easier to use than the conventional soil test kit being used in the laboratory.

Sugar from coconut toddy

Toddy is the sweet sap from coconut, locally known as *tuba* which the PCA researchers, in cooperation with a lady coconut farmer in Misamis Oriental, were able to develop to make a perfect granulated coconut sugar. The coconut sugar from toddy was proven to be profitable and cheaper to produce (although labor intensive as the coco sugar from toddy has to be manually produced). The sugar from coconut has a great market potential. Aside from its being organic and natural it is also rich in fructose, the sugar found in fruits and honey. Moreover, Ms. Manojar, lead researcher, explained that nut production is not affected in producing the sugar.

Mobile spindle stripping machine for abaca fiber

The machine was designed and developed by FIDA and was proven to be effective in extracting abaca fiber. The improved mobile spindle stripping machine, according to Engr. Valenzuela, has similar operating principle as the traditional spindle-stripping machine. It consists of three major parts: stripping assembly, flywheel, and safety clutch mechanism. The machine can extract 80-120 kg/day with fiber recovery of 1.52-2.3% of good to excellently clean fibers. The machine is safe and easy to operate. It is also mobile, so it can be brought, transferred near or right at the plantation site.

Madre de agua in swine feeding

Trichantera gigantean, also known as *madre de agua* is a non-legume species that grows well with repeated cutting and without fertilizer input. This promising fodder tree, is a potential source of protein, its leaves contain 18-22% crude protein in dry matter form. According to Ms. Samiano of BAI, partial replacement of mixed feeds with *madre de agua* gives almost the same results in terms of weight gain, meat quality, and income with those pigs given mixed feeds.

Growing fillet fish-size tilapia in earthen pond

Tilapia is the second most important cultured fish species next to milkfish. Fish fillet promises a great market potential for tilapia growers. It is a value-added product and has the potential as dollar earning industry in the international market. A technology demonstration was conducted wherein tilapia was grown in earthen ponds to fillet size, about 500-650 gram average weight. According to Ms. Zafra of BFAR, although market acceptance for tilapia in Visayas and Mindanao is not as great compared to Central Luzon, tilapia raisers could look at it as an opportunity to grow more tilapia.

Providing the welcome address during the technology forum was BAR Asst. Dir. Teodoro S. Solsoloy. Meanwhile, NTCP Overall Coordinator and TCU Head Marlowe Aquino explained the objectives and rationale of the techno forum.

The recently concluded National Agriculture and Fisheries Technology Forum is the first of a series lined-up for this year and the fourth since its inception in 2005. *(Rita T. dela Cruz)*

Upland development convergence initiative (DA-DAR-DENR tripartite leadership)

by ANGELA E. OBNIAL

Much has been said and hoped for rural development in the country. Although many people, especially farmers and fisherfolk, find the government's programs temporary to a point, a convergence initiative was initiated to address issues of duplication of efforts, question of mandate, and overlapping of functions among government agencies.

The move to prioritize the agribusiness and agroforestry sectors is one of the salient agenda in the tripartite leadership meeting of the Department of Agriculture (DA), the Department of Environment and Natural Resources (DENR), and the Department of Agrarian Reform (DAR). This move was formalized through Joint Memorandum Circular No. 1, Series of 1999, signed by the three department secretaries.

Following the framework on Sustainable Rural Development (SRD), which aims to harmonize the mechanisms for effective implementation of the Agriculture and Fisheries Modernization Act (AFMA), the Comprehensive Agrarian Reform Law (CARL), and relevant environmental laws, the convergence initiatives hope to address national goals and objectives such as food security, increased food supply, employment, poverty alleviation, and sustainable agriculture.

Synergy among the three departments is perceived to effectively implement the convergence as well as the complementation of efforts that would preserve the country's prime agricultural lands, and watersheds, and develop agrarian reform communities.

Through this circular, the three development agencies realigned their programs and commitments considering their areas of expertise in coming up with the convergence initiatives. The DENR lays the foundation for sustainable agricultural, fishery, and forestry development in a regenerative environment, and provides an ecosystem development strategy, embracing a holistic approach of managing life forces of water, soil, air, flora, and fauna.

The DA, on the other hand, takes over the downstream task by nurturing the regenerative life forces from DENR while DAR acts as the forefront of social capital formation such as organization development, institution building, and cooperative enterprise promotion.

Under President Gloria Arroyo's leadership, the convergence initiative took a newer path when it primarily focused on "the creation of six million jobs in six years giving more opportunities to entrepreneurs, tripling of the amount of loans for lending to small and medium enterprises, and the development of one to two million hectares of land for agricultural business."

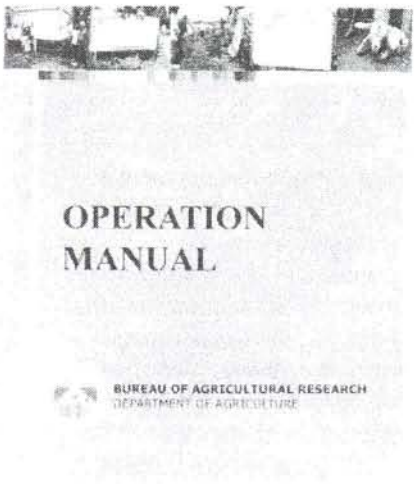
Financial assistance is a primary concern among farmers. To address this, the three department secretaries have initially identified financing institutions that could help with the program– Land Bank of the Philippines, Development Bank of the Philippines, and Quedancor. One of the policies in funding assistance is to give loans through cooperatives, farmer groups, or local government units, with the convergence group acting as loan guarantors.

"The project is being undertaken for its promise to create more jobs in the countryside as an off-shoot of upland development," conveys Sec. Arthur C. Yap, presidential adviser for job creation and currently chair of the committee on convergence initiative.

Although it started small, the tripartite convergence initiative will expand the sites to nationwide implementation focusing on the development of new lands for agribusiness to contribute two million jobs in 2010. Potential farmer cooperators and LGUs have expressed their support and optimism on the benefits that this convergence initiative would bring. The program sees opportunities for export deals, and more importantly, this initiative is critical since the development of more bio-diesel and ethanol fuel could be integrated. It also promises to tap able families for additional employment, increasing daily wage income in the communities as a whole by sustaining farming activities in the areas. ■

Keeping it real with CPAR

by MA. LIZBETH SEVERA J. BAROÑA



Sometimes, the ideas that make the most sense, are the simplest. In agricultural research and development (R&D), this idea has a name: Community-based Participatory Action Research.

Participatory

The fragmented, even vague notion of R&D in agriculture as an important factor in infusing modernity to a technologically-challenged agricultural system is manifested in the poorly-designed programs that need sustainability.

The Agriculture and Fisheries Modernization Act (AFMA) underscores technology to be the bedrock of modern agriculture. But it also acknowledges that for modernization to happen, there should be effective modules of technology transfer.

The good thing about CPAR though, is acquiring and sharing information is two-way. It is participatory. This makes it different from other ideas that have been implemented through the years in the hope of achieving agricultural modernization. It is about working hand-in-hand with the beneficiaries of the technologies in determining, developing, and finetuning a technology that works specifically on their farms.

What sets CPAR apart from other community-based programs, is that it imposes an important prerequisite before it is established in an area: a participatory research appraisal (PRA). This involves full participation of the farmers in identifying their needs as they are in the best position to determine what they need in their farms.

And they would get the opportunity to do so during the PRA. The PRA has redefined the meaning of technology transfer. The full participation of farmers in the planning and design of suitable technologies for their farms enables both the farmers and the researchers to have better understanding of local and their felt and realistic needs.

CPAR

CPAR's success underscores the role of R&D in effective technology transfer and production management system. It also helps institutionalize active community involvement in the management of farm and coastal resources, as it provides an avenue for developing strategies in the effective integration of support services for enterprise and agribusiness development. All these lead to the common goal of a modernized agriculture through an R&D system that is both efficient and effective.

A locality cannot implement CPAR without a PRA. The results of the PRA will be translated into a CPAR Action Plan. Once proposals for CPAR projects are approved for funding, CPAR can now be implemented in the area.

The success of CPAR lies greatly on a good working relationship between the researchers, the community, and the local government.

Farmers and CPAR

"There is money in duck raising". This seems to sum up a successful CPAR venture in Brgy. Hibago, Ocampo, Camarines Sur.

Farmer and engineer, Alfredo Lanusga, with CPAR intervention of diversified farming system and agribusiness, raised ducks side-by-side with rice. The intervention proved to be financially viable with his return on investments doubling. He went on to become an important member of his community providing livelihood to members of the community through duck raising, and providing a market for red egg, *balot*, and *penoy* to adjacent communities.

Over in Central Luzon, a newly-purchased tractor was stolen at the farm of Antonio Gomez, a CPAR farmer-cooperator in Mexico, Pampanga. Instead of wallowing in his misfortune of losing his new tractor, we went on to buy two new tractors to replace the lost one.

Mang Antonio has CPAR to thank for his new-found purchasing power. During an interview held in 2004, Mang Antonio related their dismal living conditions before he became a CPAR cooperator. The CPAR team from DA-Region III tested his soil type, gave new recommendations, and introduced diversified farming through livestock-raising side by side his corn farm. Antonio became a resource person for the CPAR team and helped encourage his fellow farmers to give CPAR a try.

CPAR is also prepping up seaweed production in Pilar, Sorsogon. A cooperator, Mang Ramiro, armed with seaweed seeds and seaweed growing technologies provided by the CPAR team, in cooperation with the local arm of the Bureau of Fisheries and Aquatic Resources, doubled his income. He was also able to buy a new boat and other materials he need in his farming activities.

We know what works

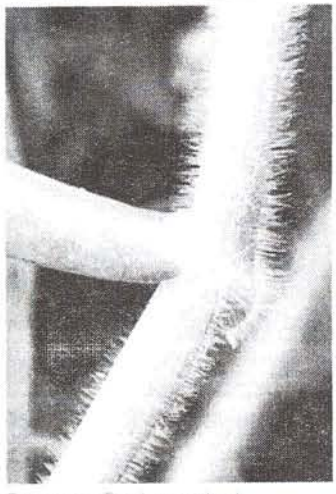
If it works for some, even if does

Δ *see Keeping it... page 7*

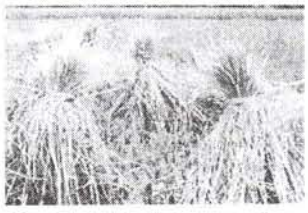
Para grass, rice straw, and molasses: The cheap combo to fatten goats

by RITA T. DELA CRUZ

Goat definitely, is a low-maintenance animal. They can survive and grow with just grass and woody feed. Goats are raised by almost all farmers considering land size, location, and cropping pattern. These animals are considered complementary to both food crops and tree crop-based farming systems so they can be grown in all different types of farming systems. In the Philippines, buffalo and goats are considered largely as backyard animals. Although raising goats is not as demanding as piggery or poultry, like any ruminants, goats also require more nutrient-rich diet to produce quality milk and meat. But achieving this does not have to be expensive. One of the greatest concerns among goat raisers today is producing quality pasture forage. A key strategy to address this concern is to include not only a diversity of forage species to compose its feeds but also to ensure that the goats will grow to their market potential.



Para grass (*Brachiaria mutica*)



Rice straw (*Oryza sativa*)

Molasses

In a recent study conducted by Dr. Ali Karimi Rizi of the Gregorio Araneta University, he determined the potential of a specially-combined feed on the maximum weight gains of the goats. The goat feed is mainly composed of rice straw *(Oryza sativa)* and para grass *(Bracharia mutica)* supplemented with molasses. These are waste products that are easily available in the farm. They are not only cheap but good for the environment as farm wastes are being used as goat feed.

To determine the effect of the formulated goat feed, the study used 25 growing-fattening goats. Five treatment rations were used for the study, each consisting of different percentage of para grass, rice straw, and molasses. Maximum weight gains of the goats were observed and recorded to determine the effects. Result of the study showed significant increase in the weight of the goats. Specifically, the ration consisting of 60% rice straw and 40% para grass supplemented with 10% molasses—gave the highest significant increase in gain weight. It also gave the highest net profit of P1, 245. This ration showed that it is the most palatable among the ration treatments as the goats fed with it consumed the highest amount of feeds (1.69 kg). This was observed during the first month to the last few months of the study period.

Source: Rizi, Ali Karimi. *Higher profitability in goat production through rice straw and para grass with molasses.* Unpublished Ph.D. dissertation. Gregorio Araneta University, 2005.

Visayas zonal...from page 4

directors of regions VI, VII and VIII; zonal technical working group composed of R&D center managers in agriculture. Although initial efforts were focused on agriculture, the group included fisheries because of its contributions in the development of the different Visayas regions and the zone in general.

With these agreements, the center managers identified projects for implementation in the coming months, namely: jackfruit and mango production, processing and marketing, and the institutionalization of the geographic information system (GIS) for site specifications and characterization including mapping of priority commodities.

The meeting was attended and participated in by the different Visayas Agriculture and Fisheries R&D center managers, DA-BAR regional coordinators for Region VI, VII and VIII and host DA-RFU VI Regional Executive Director Jindra Demeterio who expressed support in the undertaking of making the Visayas Zone proactive and responsive to the needs of its clientele.

The quarterly meeting is rotated among the different regions in order to showcase R&D activities for information/experience sharing and local participation for a unified system and programs for the Visayas. *(Marlowe U. Aquino, Ph.D)*

BAR, ATI, ICRISAT team up to train RDE workers in Aklan

The Bureau of Agricultural Research (BAR) joined the Agriculture Training Institute (ATI) and International Crops Research Institute for the Semi-arid Tropics (ICRISAT) for the conduct of a training-workshop on project proposal development and resource generation at the ATI Training Hall, Aklan State University, 15-19 May 2006.

The three-day training included lectures and practical applications so participants could acquire all the information and skills they need to prepare a project proposal. The goal of the training was to equip the research and extension workers competency to make project proposals that are acceptable in form and content by both the local and international RDE funding institutions. The training is divided into 10 sessions with each session tackling topics on good conceptualization; stakeholder, problem, and objective analyses; writing techniques; logical framework; concept note; and budgetary requirements.

The participants were required to make an individual draft of a complete package of proposal which they presented at the end of the training. These were evaluated by the resource speakers and members of the training team for improvement. Resource speakers in the training included officials from ATI Region VIII, namely, Dr. Vilma A. Patindol, Dr. Segundino H. Cebu, and Ms. Artemia A. Gotardo. The 25 participants in the training were agricultural technicians, professors, and municipal agriculturists in the province.

Ms. Almira Magcawas of BAR's Program Development Division (PDD), who was part of the training team, discussed the vision and mandate of BAR as a coordinating and funding agency for agricultural RDE activities. She highlighted the implementing guidelines of BAR's RDE grant system and the Competitive Research Grant Manual (CRGM) developed by the Bureau. Dr. Rex Navarro, ICRISAT director of communication and special assistant to the director-general, gave a brief presentation on "Resource mobilization for the Philippines National Agricultural Research and Extension Systems (NARES)." One constraint that Ms. Magcawas observed was the inadequate knowledge and ability of the participants to use the computer. This hindered most of them in finishing their work on time. She recommended that the training team should continue to monitor the progress of the participants after the training to ensure that what they have learned will be fully utilized. *(Miko Jazmine J. Mojica)*

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