BAR
BUREAU OF AGRICULTURAL RESEARCH
Chronicle
ISSN 1655-3942
Visit our official website at http://www.bar.gov.ph
2003 Gawad Oscar Florendo Awardee for Outstanding Information Tool for Print
Vol. 6 No. 5
A monthly publication
MAY 2005

BAR celebrates Farmers & Fisherfolk Month; 8 technologies presented

May is Farmers and Fisherfolk Month as declared by Proclamation No. 33 in 1989 during the time of President Corazon Aquino. This activity honors the invaluable contribution and role of our farmers and fisherfolk to nation building. BAR took part in the celebration through a techno exhibit and product displays and technology forum held on 18 May 2005 at the BSWM Convention Hall.

This year's theme, "*Teknolohiya tungo sa masaganang agrikultura, pangisdaan, at industriya*," underscores BAR's commitment to define itself in the challenging role of modernizing the country's agriculture and fisheries industry, which is to ensure that all agricultural researches are coordinated and undertaken for its maximum use to agriculture. Thus, BAR makes it its concern that these researches do not end up with research results only but that such results are accessible and acceptable to the farming and fishing communities.

The activity kicked off with the opening and ribbon cutting of the techno exhibit by DA Asst. Sec. Segfredo R. Serrano representing DA Secretary Arthur C. Yap, DA Asst. Secretary for Finance Belinda A. Gonzales, and BAR Director Nicomedes P. Eleazar. Also assisting the opening were: Dr. Teodoro S. Solsoloy, BAR asst. director; Dr. Carmencita B. Kagaoan, PDD head; and Mr. Victoriano B. Guiam, MISD head. Featured in the exhibit were product displays on: strawberry processed products, mushroom fruiting bag, carabao processed products, corn hybrid seeds, bangus processed products, ulang, tilapia processed products, meat processed products, virgin coconut oil, and off-season tomato varieties among others.

Top photo: *Opening of exhibit (L-R) Dr. Carmencita Kagaon of BAR, DA Asst. Sec for Finance Belinda Gonzales, DA Asst. Sec Segfredo Serrano, BAR Dir. Nicomedes Eleazar, BAR Asst. Dir. Teodoro Solsoloy, and Mr. Victoriano Guiam of BAR.*
Bottom photo: *DA Asst. Sec Segfredo Serrano and BAR Dir (partly hidden) visiting the exhibit booths.*

The technology forum featured presentations on eight commerciable technologies in three categories: crops, fisheries, and livestock.

For the crops category, the technologies presented were: use of GA in tablet form to increase size of garlic bulb; bagging to control bugtok disease in saba; effective measures to control banana bunchy top virus (BBTV); production of silica gel from rice hull; BIO-N fertilizer for rice, corn, and vegetables; and modified

see BAR celebrates...page 8

IN THIS ISSUE

BAR connects

In the game of basketball, a shot at the goal may not yield a score. Many times the attempt is off-target as the player making the shot did not put enough power into it or his aim was inaccurate or the opposing team was vigorous in thwarting the action. In these instances, what is needed is a follow-up or "assist" to take the attempt to its desired conclusion which is a goal. When the team succeeds, sports announcers say that the team has "connected". Last 18 May, BAR did just that when it held the 2005 Agriculture and Fisheries Technology Forum.

In this analogy, the ball represents technology and other research-generated inputs to agriculture and fisheries productivity. The goal is the delivery of the ball to intended end users which are the farmers and fisherfolk. BAR is the home team. The opposing team represents R&D issues, weaknesses in governance and all of the things that hinder or prevent the home team from scoring in the court of national agricultural development.

Why is BAR doing the connecting?

Farmers and fisherfolk, the key group for agricultural development, have not fully enjoyed the benefits of the development. They are still left behind in terms of productivity and income improvement. Therefore, suitable, transferable, sustainable, and acceptable technology must be identified for them by agents of agricultural change.

To be an effective agent of agricultural change, BAR has to transform into a more active player in agricultural technology transfer. As such, it has to identify alternative means of effecting the movement of technology from researchers to the end-users and not be fully dependent on passive agricultural extension approaches. It cannot stand still because the world of the farmer and fisherfolk is constantly changing and posing challenges which require continuous responses from the providers of technology and other inputs to production. Technology commercialization is one response available from BAR.

By no means is BAR alone in the technology commercialization action. It is very much a group effort with players from various partner agencies and institutions suited up for Team BAR. R&D agencies acting independently of other institutions who have important roles to play in connecting with the clientele are likely to fall short of their goal. Hence, BAR has seen it that these other institutions shall be in the team to give the much needed "assist". In the 18 May techno forum held as part of technology commercialization activities, we had people from the DA-RFUs, RIARCs, partner SUCs, and DA offices. We also had representatives of farmers and fisherfolk groups as well as BAR's own technical staff. They are all working towards winning the game for our clientele. We shall see more of this kind of cooperation in the coming months.

****

For details on the recently held techno forum, we have an article describing the activity in this issue. A related piece is about the regional consultation on R&D priorities of DA-CARAGA in support to Goals 1 & 2 of the DA.

Two articles tell us how to increase profit from the garlic and onion, and the coffee growing businesses. Through an innovation in plant physiology and nutrition, a hormone has been harnessed by Region 1 researchers to increase the bulb size of garlic and onion.

A small scale but quality coffee roaster was developed by CavSU and UPLB researchers for coffee brewers who do not want expensive franchising arrangements with international brands. This is good news for both the industry and consumers of brewed coffee as this means lower prices and higher demand.

We have a slew of articles on BAR connecting with international organizations. In the Asian region, there is the Asia-Pacific Association of Agricultural Research Institutions (APAARI) and the UN-ESCAP's Centre for Alleviation of Poverty through Secondary Crops Development in Asia and the Pacific (CAPSA). BAR was recently voted into the APAARI's Executive Committee which reviews and manages the implementation of the association's annual workplans for the region.

The CAPSA is the direct successor to the former UN-ESCAP Regional Co-ordination Centre for Research and Development of Coarse Grains, Pulses, Roots and Tuber Crops in the Humid Tropics of Asia and the Pacific or CGPRT. The CAPSA has retained the focus on secondary crops but now works towards the achievement of the UN's Millennium Development Goal of poverty reduction. The Philippines, through BAR, is a Board member of this new international center and held its very first meeting on 5-6 April 2005.

The Philippines was re-elected for an unprecedented second time as the Chair of the Executive Council of the prestigious Centre for Agro-Biosciences, International (CABI). This powerful council, with the BAR Director presiding, sets the directions that the international center should take each year. As of last count, there were 44 member-countries of CABI.

As a member of the International Rubber Research and Development Board (IRRDB), BAR is entitled to participation in its training activities. A bureau staff attended the recent IRRDB Training Fellowship for Technology Transfer and we have an article on his experience.

With the recent changes and developments in BAR, it was high time for a team-building exercise. And so, off to Subic, Zambales did most of the rank-and-file go for much needed upliftment and strengthening of the team spirit. The article on this tells how BAR went through the process. (VBG)

BAR Chronicle

A monthly publication of the
Bureau of Agricultural Research
RDMIC Bldg., Visayas Ave. cor.Elliptical Road
Diliman, Quezon City 1104

VICTORIANO B. GUIAM
Editor-in-Chief

RITA T. DELA CRUZ
Managing Editor/Layout

MA. LIZBETH J. BARONA
RITA T. DELA CRUZ
MIKO JAZMINE J. MOJICA
Staff Writers

ANGELA E. OBNIAL
RUDYARD R. ROXAS
Contributing Writers

RICARDO G. BERNARDO
Print Manager

JULIA A. LAPITAN
VICTORIA G. RAMOS
Circulation

NICOMEDES P. ELEAZAR, CESO IV
TEODORO S. SOLSOLOY
Advisers

For subscription and questions, contact the:
Applied Communication Section
3/F RDMIC Bldg., Visayas Ave.,cor. Elliptical, Rd.
Diliman, Q.C. Tel.no. 928-8505 local 2043
or e-mail at misd-acs@bar.gov.ph

CAPSA realigns mandate to address poverty in Asia Pacific Region

(First of a series of articles highlighting BAR's various commitments, partnerships and projects with international bodies and agencies. To date, the BAR Director sits, and in one international organization, serves as board chair, in various boards of international agricultural R&D centers such as the UK-based CAB International (CABI), the Taiwan-based Asian Vegetable Research and Development Center (AVRDC), the International Rubber Research and Development Board, and the UN's Centre for Alleviation of Poverty through Secondary Crops Development in Asia and the Pacific which is featured in this issue. He is also currently a member of the Executive Committee of the Asia-Pacific Association of Agricultural Research Institutions or APAARI).

Over two-thirds of the world's 1.2 billion poor people reside in the Asia-Pacific region. Majority of them lives and works in rural areas relying on secondary crops agriculture for livelihood.

The Centre for Alleviation of Poverty through Secondary Crops Development in Asia and the Pacific (CAPSA), a subsidiary body of the UN Economic and Social Commissions for Asia and the Pacific (ESCAP), is at the forefront of addressing this wretched condition through the promotion of agro-related R&D particularly on secondary crops to achieve the UN's Millennium Development Goal of poverty reduction.

Statute

An agreement signed between the UN and the Government of Indonesia on 29 April 1981 and UNESCAP Resolution 220 (XXXVIII) sponsored by nine Asian countries, including the Philippines, formally established the Regional Coordination Centre for Research and Development of Coarse Grains, Pulses, Roots and Tuber Crops in the Humid Tropics of Asia and the Pacific (CGPRT) with its headquarters in Bogor, Indonesia.

For more than two decades, the Centre established a reputation as a leading institute in fighting poverty in this part of the globe before Fiji, Japan and Indonesia moved to change the name and statute of the Centre following an evaluation of the Centre in 2003.

The objective of renewing and revitalizing CGPRT's commitment and relevance to member countries as an important regional agent in rural poverty reduction through its work on secondary crops was approved during the 60th session of UNESCAP on 28 April 2004 in China.

Philippine participation

Philippine involvement in CAPSA is not limited to providing financial institutional support. The Philippine representative to the Centre, usually the BAR Director, plays an active role as member of the Centre's Governing Council and had been elected chair on several sessions of the governing body.

Collaborative projects conducted with the Centre for the past two years include the Stabilization of Upland Agriculture and Rural Development in El Niño Vulnerable Countries (ELNIÑO) and the Prospects of Feed Crops in Southeast Asian Countries (FEED-SEA) both co-funded by the Government of Japan.

In the pipeline are workshops on rural prosperity and secondary crops, namely: Development of a Comprehensive Approach – Poor and Marginal Farmers' Access to Value Adding Activities (VALAD 2005) and Poverty Reduction through Substitution of Fossil Fuel by Renewable Biomass Products (RENEW 2005).

The Philippines has also supported other Centre activities

including provision of information services, resource persons and consultants, and has sent participants in participating its seminars, workshops and training courses.

Meeting today's challenges

The first session of the newly constituted Governing Council was held in Indonesia on 5-6 April 2005. Dr. Teodoro Solsoloy, BAR's OIC-Assistant Director, represented the Philippines and was elected rapporteur.

Discussed at the session was the Centre's three-year plan that will revitalize the Centre as the leading institute in the region for poverty alleviation. CAPSA's new Director, Dr. J. W. Taco Bottema, also reported activities under the current biennium and plans for resource mobilization and realigned programs focusing on poverty reduction and pro-poor policies.

In his opening address, UNESCAP's Executive Secretary, Mr. Kim Hak-Su said that the realignment of the Centre shall strengthen CAPSA's capability to examine the multiple dimensions of rural poverty and establish a unique position to examine linkages between agriculture and all the other factors affecting the living conditions of the rural poor in our part of the world and to develop innovative solutions.

Among those included in the priority issues are the allocation of seed money for the preparation of the VALAD and RENEW projects.

The current membership of the CAPSA Governing Council includes Bangladesh, France, India, Indonesia, Japan, Pakistan, Philippines, Republic of Korea, and Thailand. The Governing Council met on 5-6 April 2005 at CAPSA headquarters in Bogor. *(Rudyard R. Roxas)*

Eleazar heads CABI Exec Council

Governed by the motivation to "promote the advancement of agricultural and allied sciences" by disseminating scientific information worldwide, the Center for Agricultural Biosciences International (CABI) held its annual meeting on 6-7 April 2005 at CAB International Centre, Wallingford, England. Director Nicomedes P. Eleazar of the Bureau of Agricultural Research (BAR) attended his first CABI meeting not only as the Philippine representative but also as head of the Executive Council which is responsible for the direction of the general operations of the Center, together with the Governing Board.

At CABI's 39th meeting, the Executive Council Chair, its members and observers as well as the Governing Board and member country representatives were in attendance. Dr. Dennis Blight, CABI director general, welcomed the participants, emphasizing that each member country is significant in the CABI organization because they serve as the "organic link" between and among the members and the scientific community.

Among the topics discussed during the meeting included updates on its two major divisions—CABI Bioscience and CABI Publishing; the Step Change Programme, which aims to "integrate and streamline" the corporate services across CABI focusing on cost reduction in Bioscience and Publishing; cash over profit strategy; profitability analysis for the businesses and an outlook on markets and linked strategies; and authority of the management team.

CAB International is a not-for-profit intergovernmental organization with more than 40 member countries "dedicated to fostering sustainable development for small farmers" for over 70 years. Majority of its revenues comes from sales of publications, CD ROMs, and donor-funded projects. One of its major projects is in providing technical services on coffee and cocoa, helping farmers to "solve their problems in order to give added value" to their products, giving quality produce and services, in return, to consumers.

The Philippines has been an active member of CABI. Its international membership was previously handled by the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) but was transferred to BAR through the endorsement of then Secretary of the Department of Agriculture (DA), Edgardo Angara to the Department of Foreign Affairs (DFA). BAR actively plays its role as the National Implementing Agency that is tasked to "sustain the membership of the country and payment of membership contributions" as among others.

The Philippines was re-elected to lead the CAB International Executive Council during an election involving all member countries late last year.
(Angela E. Obnial)

Sources:
http://www.cabi.org/
http://www.cabi-commodities.org/
Proceedings of the 39th CAB International Meeting, 6 – 7 April 2005, Wallingford, England

APAARI ExeCom convenes to plan activities for 2005

Addressing the implementation needs of resource mobilization and technology commercialization through national R&D is already a formidable task on its own. But to be with an organization that sets itself in addressing food security, poverty alleviation, agricultural and environmental sustainability on a bigger and wider scale – the Asia and the Pacific region - is an even challenging and at times, pressure-laden responsibility.

This is part of the major undertaking of the Executive Committee (ExeCom) of the Asia-Pacific Association of Agricultural Research Institutions (APAARI) meeting held on 16 May 2005 at Rama Garden Hotel, Bangkok, Thailand. BAR Director Nicomedes P. Eleazar, having been voted as one of the members of the prestigious ExeCom, attended the biennial meet that hosted the assembly of the Association's ExeCom officers and members which have been selected from among 19 National Agricultural Research System (NARS) members from South Asia, Southeast Asia, Northeast Asia and the Pacific.

The ExeCom met to discuss agenda updates on Asia-Pacific Agricultural Research Information System (APARIS) work plan and activities that are lined up for 2005. A critical strategy for successful partnership is the strengthening of regional research collaboration among identified regional and interregional networks.

One of the major projects banked on by the Association is its involvement in several regional and global meetings that address postharvest R&D activities, endorsing a "new strategic framework for a global postharvest R&D of major importance to

see APAARI...page 8

DA-CARAGA identifies R&D priority commodities

Dr. Rey Velasco addressing the questions of the participants during the DA-CARAGA consultation

The third to the last leg of the Regional Consultations on R&D Priorities for CY 2005 in support to the DA's twin-goals (developing idle or unutilized lands and reducing the costs of wage goods) was conducted on 25-26 April 2005 in Butuan City.

The consultation aims to validate priority commodities of DA Goals 1 & 2 vis-à-vis the Regional Integrated Research, Development and Extension Agenda Program (RIRDEAP) and identify regional R&D priorities for 2005.

The priority commodities identified under Goals 1 and 2 that are in common with the RIRDEAPs were: rice, corn, coconut, mango, banana, durian, pineapple, broccoli, carrot, potato, amplaya, eggplant, tomato, garlic, coffee, rubber, abaca, cassava, chicken, bangus, tilapia, and seaweeds. After the consultation, DA-CARAGA was able to identify 14 agriculture and fishery projects that focus on corn, rice, banana, bangus, tilapia, and seaweeds.

The consultation in Region XIII was attended by Regional Technical Director Edgardo Dahino, Regional Integrated Agricultural Research Center Manager Wilfreda Maslog, Regional Fisheries R&D Center Manager Manuel Sanoria, Regional Agriculture Fisheries Council Chair Joseph Wood, Consortium Director Gaundencio Petalcorin, and members of the Farmer and Fisherfolk Advisory Committee (FIAC).

Four technical experts from University of the Philippines Los Baños (UPLB), De La Salle University (DLSU) and Madecor assisted in the consultation, Dr. Teodoro Abilay for livestock, Dr. Roberto Rañola for agricultural economics, Dr. Louie Divinagracia for agribusiness, and Dr. Rey Velasco for crops. Dr.Catalino de la Cruz, a member of BAR's Technical Advisory Group as an expert on fisheries was also with the group. Mr. Rolando Labios, Head of the Regional Coordination Division and Ms Salve Ritual, Assistant Head of the Program Development Division represented BAR.

During the consultation, the group visited a private farm in Agusan del Norte that employs intercropping of fruit crops such as watermelon, banana, melon, and papaya. The farm utilizes modified technologies on drip irrigation and mulching to conserve soil moisture. *(Mariko M. Ramos)*

BAR rep attends IRRDB fellowship on rubber tech-transfer

Bureau of Agricultural Research's (BAR) Senior Agriculturist and Asst. Head of the Planning, Monitoring and Evaluation Unit (PMEU) Rodolfo Galang is back from attending the International Rubber Research and Development Board's (IRRDB) Training Fellowship for Technology Transfer from March 21 to May 1 2005 in Kuala Lumpur, Malaysia and South Sumatra, Indonesia.

IRRDB is a voluntary association of national organizations, called Member Institutes, devoted to research and development on natural rubber. The countries in which these Institutes are located cover 96 per cent of world natural rubber production. It is a research and development network that brings together natural rubber research institutes of almost all natural rubber-producing countries.

The fellowship served as the forum by which the Malaysian and Indonesian governments shared with the participants, composed of representatives from the rubber industry and governing institutions, their countries' respective policies in rubber research and extension.

The Rubber Research Institute of Malaysia, and the Indonesian Rubber Research Institute have been effective in developing new technologies through their breeding programs and production and exploitation technologies.

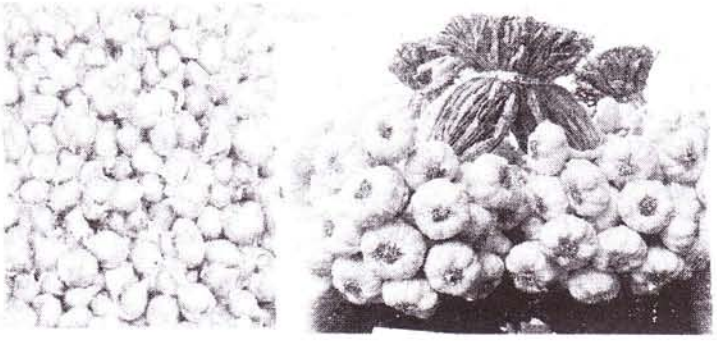
Mr. Galang reported that the fellowship gave him insights on the status of smallholders in IRRDB member countries, including the programs being implemented by their governments to increase productivity and income.

Mr. Galang also said that the Philippine government requires the support of IRRDB in training Filipino researchers in various disciplines. He opined that a more frequent exchange of information on technologies and swapping of new rubber clones between countries would help small rubber stakeholders in the Philippines. With a diversity of rubber clones, the industry would be less vulnerable to pest and disease outbreaks. Furthermore, he said that BAR, being the Philippine's central coordinating body for research has to be kept abreast of new technologies and trends for it to be more effective in the allocation of limited R&D resources. *(Ma. Lizbeth J. Baroña)*

Mr. Galang during one of the rubber plantation visits

Are garlic and onion still making money?

by MIKO JAZMINE J. MOJICA



Can you imagine not putting garlic or onion in any of your food? I imagine that soups, stews, and casseroles wouldn't be as delectable, aromatic, and appetizing. But can you imagine if these high value crops are no longer planted in Philippine soils?

There was a time when onion and garlic were produced abundantly in the country, meeting the demands of both the local and international markets. However, the decline in local production and the influx of cheap imports from neighboring countries in the past years saw the downturn of onion and garlic industry in the country.

Winning research

The Ilocos region leads in the production of garlic and onion in the country. However, with the rising cost of fertilizers and prevalence of pests, and add the imported produce sold at much lower prices are disappointing the farmers of Ilocos Norte and Ilocos Sur.

In a bid to revive the garlic and onion production of the region and sustain the livelihood of the farmers, scientists and researchers of DA-Regional Field Unit 1 (RFU 1) and Don Mariano Marcos Memorial State University (DMMMSU) in Bacnotan, La Union joined hands to commercialize new technologies that will increase the efficiency and yield and income of farmers by at least 15-20%.

The research made by Wilhelmina Castañeda, Leticia Bensan, Edmundo Quinit, and Benjamin Ronduen on garlic and onion technology commer-cialization earned top recognition in last year's National Research Symposium. Their study showed that the technology of using processed chicken manure (PCM) with giberellic acid (GA3) gives higher yield and income compared to the usual fertilization practice of farmers in the Ilocos region.

Learning by doing

In order to facilitate the adoption of technology, the DA-RFU 1 purchased the growth hormone, Berelex, and other farm inputs. They also developed a facility wherein materials would be given as loans with 50 percent subsidy, plus a free flyer containing the step-by-step procedure of the technology. The farmers would repay these after a month's harvest.

A field demonstration was conducted so that the farmers would have first-hand experience on learning the proper methods of seed sowing for garlic and transplanting for onion as well as the application of inorganic and microbial fertilizers (vital N and Bio N). They were also given a chance to discuss and compare the results of the technologies. The interaction proved to be the venue for exposing the fallacy that applying big amounts of fertilizer shall result to higher yield and income.

Points of success

Results of the Region I study showed that the application of 50+15+45 kg NPK ha with ten bags PCM sprayed application at 36 and 56 DAP, gave higher yield and income by 29 percent and 83 percent, respectively, than the farmer's practice. It was also found that the best garlic is produced in Pasuquin, Ilocos Norte with cool and windy climate throughout the growing period, and sandy loam textured soil that favors better growth and development of the bulbs. However, it was advised that garlic should not be grown along with onion since the bulbs will be highly susceptible to thrips.

Promoting GA$_3$ technology

Recently, the group of Ms. Castañeda participated in the Technology Forum organized by the Bureau of Agricultural Research (BAR). Ms. Castañeda presented the technology of using GA$_3$ for garlic. She explained that GA$_3$ is a hormone that promotes plant growth and development and its proper use can indeed increase the yield of farmers. The commonly used GA$_3$ is commercially available as Berelex.

Applying the GA$_3$

According to Ms. Castañeda, to apply the gibberellic acid, 1/4 tablet Berelex should be mixed with 16 liters of water in a sprayer tank. The soil should be moist before spraying. She said that one tank mixture is enough to spray 2,500 sq m farm using a single low volume sprayer nozzle. This should be sprayed at the growing tissues or on young leaves late in the afternoon at 36 and 56 DAP for optimum results.

She noted that garlic grows best in sandy loam to silt loam soils with a pH of 5.5 to 6.5 and is well adapted to areas with Type 1 climate (with the wet season from May to October and the dry season from November to April). Also, in order to establish the crop, she said that garlic should be planted in a well-drained and medium textured soil to avoid water logging. She advised the use of integrated pest management approaches to control the growth of pests. However, the effectiveness of GA$_3$ still depends on the right timing and amount of application, and growth requirements of garlic. ■

Coffee roaster fit for small-time coffee business

by RITA T. DELA CRUZ

Filipinos love to drink coffee. The emergence of coffee shops in almost every corner of the Philippines shows that drinking coffee is a favorite pastime and an engaging activity for many of us.

Our love for coffee was basically brought about by the colonization of the country by the Spaniards more than two centuries ago when they turned our highlands into coffee plantations. They loved the perfect mix of heat, humidity and cold plus the wet and dry tropical climate that made the cultivation of coffee well suited to the Philippines.

Profit from coffee

Growing coffee became such a profitable venture that for a while, the Philippines became one of the lead coffee-producing nations during the 19th century. But due to the coffee rust disease such reputation was cut short. It was during this time that the Latin American countries battled it out and dominated the global coffee market.

In the Philippines, the coffee plantations are mostly concentrated in the mountains of Batangas, Bukidnon, Benguet, Cavite, Kalinga-Apayao, Davao, Claveria and Misamis Oriental. Approximately 60,000 - 80,000 families with roughly 120,000 hectares of productive land grow coffee. These lands are both home and production unit for our local coffee growers.

the first ever batch-type coffee roaster

The heat problem in coffee roasting

Coffee shops in the Philippines continue to thrive by the numbers. But most of them are under franchising arrangements with big, foreign companies. These franchising companies can afford expensive roasters and other costly equipment. With huge processing equipment, an ordinary coffee grower cannot compete with them. There might be a few available coffee roasters for smallscale roasting but they may not turn out as efficient as the expensive ones, resulting to poor quality roasted beans. Since coffee roasting involves proper heat application, common problems encountered include the uneven distribution of heat inside the roasting chamber and the lack of insulating materials which result to excessive heat loss.

Here comes the batch-type roaster

Addressing this problem, Engr. Ruel M. Mojica of the Cavite State University (CaVSU) and Dr. Engelbert K. Peralta of the University of the Philippines Los Baños (UPLB) developed the first ever batch-type coffee roaster that can be used for small-scale roasting. The coffee roaster was designed and fabricated at the College of Engineering and Agro-Industrial Technology in UPLB wherein the machine's performance was also evaluated. The prototype coffee roaster is made up of six major parts, namely, roasting chamber, outside drum, auger, heating plate, and burner. Parameters used during the evaluation included: auger speed, roasting time, valve opening, and fuel consumption.

Results of the performance evaluation, results showed that the machine had varying levels of auger speed. However, the varying speed made no significant effect on all the response variables. They also found an increase in roasting time which decreased the weight and moisture content of the roasted beans. Varying the levels of valve opening was found to have significant effects on the weight and moisture content of the roasted beans as well as the fuel consumption of the machine. No significant effect was noted on the roasting capacity of the machine. In terms of sensory evaluation, coffee obtained using treatment combination of 40-rpm auger speed, 60-minute roasting time, and 3/4 open valve obtained the highest coffee rating of 86.1. In the cost and return analysis, results showed that using this coffee roaster for smallscale custom work can be a profitable business with a potential net income of P63,450 annually.

Based on the study, "Design, Constuction and Evaluation of a Batch-Type Coffee Roaster for Smallscale Roasting" by R.M. Mojica and E.K. Peralta. This paper won the AFMA R&D Paper Award during the 16th National Research Symposium.

For more information, please contact the authors:
Engr. Ruel M. Mojica
Cavite State University, Indang, Cavite 4122
Tel.No. (046) 415-0021
Fax No. (046) 415-0012
Dr. Engelbert K. Peralta
University of the Philippines Los Baños
College, Laguna 4031
Tel. No. (049) 536-3291
Cel.No. 0919-3516437

BAR staff and officers hold team building exercise

Work hard, play even harder. This might have been the motto adopted by the Bureau of Agricultural Research (BAR) staff and officers when they participated in this year's team building exercise and workshop for the BAR employees on 5-6 May 2005 in Subic.

Mr. Braulio Tamayo, Dr. Marlowe Aquino, and Mr. Bernardo Manuel planned and coordinated the said affair with the objective of providing relaxation and recreation to the staff and officers from the daily workload even for a short while. BAR Director Nicomedes Eleazar advised that the activity should not only bind the employees to a merry gathering but also forge the spirit of team effort and support to the whole organization.

In an informal fashion, Director Eleazar emphasized in his welcoming remarks the importance of reaching out to co-workers and sharing an open communication to build solid cooperation to everybody and fully realize the goals and agenda of the Bureau. He assured the employees that what he intends for the Bureau is to be an efficient organization that can sustain quality service for the welfare of the Filipino farmer and fisherfolk.

Dr. Jaine C. Reyes, a University Extension Specialist from UPLB, served as the resource speaker for the team-building workshop. An experienced leader in operations and management, she was able to give worthwhile thoughts and enlightenment on the significance of working as a team for the efficiency of the organization. She also facilitated group dynamics to develop conscious team effort and camaraderie among BAR employees.

The one and a half day activity was well attended and participated in by the staff and officers including the janitorial service providers detailed at BAR. This year's awaited event happened in Subic, Zambales where the spacious and relaxing environs of the White Rock Beach Resort served as a big playground for everyone. The participants were divided into three teams, Orange team, Red team, and Green team where they competed in group cheering and various group games. Although simple, the games were fun-filled and showed teamwork, flexibility, and discipline among the participants..

An exciting highlight was the awarding of Miss BAR. The winner of the Miss BAR Popularity Contest was automatically the Bureau's muse for the Department of Agriculture sportsfest and this month's *Santacruzan* gala. This year's winner is Ms. Evelyn H. Juanillo, executive assistant at the Office of the Assistant Director and concurrent agribusiness specialist of BAR. *(Miko Jazmine J. Mojica)*

APAARI...cont

the socio-economic development of the region".

It is good to note however that given the humongous task of APAARI's mission which is to promote the development of the various NARS in the Asia-Pacific region through inter-regional and inter-institutional cooperation, the Philippines and Filipinos has always served at the forefront. Dr. Maripaz I. Perez, formerly of the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD), became an ExeCom member in 1991 - 1992 while the present PCARRD chief, Dr. Patricio S. Faylon, was a member of the 2001 – 2002 ExeCom. Likewise, Dr. William D. Dar, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) director general, became a member in 1993-1994 and in 1997 - 1998 and was the ExeCom's Chair in 1995 – 1996. *(Angela E. Obnial)*

(Editor's note: The Philippines has two NARS in APAARI, one of which is the NaRDSAF.)

BAR celebrates...cont

atmosphere packaging (MAP) to extend the shelf-life of mangoes. Presenting the technologies were: Ms. Wilhelmina P. Castañeda of DA-ILIARC (garlic), Dr. Rafael C. Espino of UPLB (banana), Dr. Leni L. Quirit of UP Diliman (silica gel), Dr. Mercedes U. Garcia of BIOTECH (BIO-N), and Ms. Rachel Rocafort of NFA (mango). For fisheries, Mr. Nelson A. Lopez of BFAR presented new technologies on mariculture particularly, using floating sea cages while Mr. Hermogenes Tambalque of RIFRC Region II dealt on the production of *ulang* and turning it into a profitable business. Lastly, Dr. Angel Lambio of UPLB presented for the livestock sector with his topic on organic production of native chicken.

Brochures specifying how the farmers and fisherfolk could apply the technologies in their own field were handed also out. Each material contained contact information so that they could easily coordinate with the scientists for technical advise.. *(Rita T. dela Cruz)*

BAR Chronicle

A monthly publication of the
Bureau of Agricultural Research
RDMIC Bldg., Visayas Ave.
cor. Elliptical Road, Diliman
Quezon City 1104
PHILIPPINES

Entered as second class mail at the Quezon City Central Post Office under permit no. 753-01 NCR