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Sec. Panganiban commends 50 grad scholars produced by BAR's IDG

DA Secretary Domingo F. Panganiban delivers his keynote address during the fellowship night.

In 2000, the Bureau of Agricultural Research (BAR) established its degree scholarship program for employees of the National Research Development System for Agriculture and Fisheries (NaRDSAF)-member institutions to improve the manpower capability of agriculture's over-all R&D system. Five years later, after awarding 110 scholars through its Institutional Development Grant (IDG), BAR has produced 50 master's degree (MS) and doctorate (PhD) holders from different reputable universities in the country.

On April 27 at the Sulo Hotel in Quezon City, the BAR-NaRDSAF scholars convened to celebrate the first fellowship night since the program's existence. The 50 graduates, of whom 24 completed MS and 26 completed PhD, were recognized for their accomplishments in a gathering including 54 on-going scholars, distinguished guests from the Department of Agriculture (DA) and state universities, and BAR staff led by Director Nicomedes Eleazar. Agriculture Secretary Domingo Panganiban was the event's guest of honor and speaker.

"The success in modernizing Philippine agriculture in the years ahead will depend largely on our ability to produce substantial number of people who understand our national goals and objectives. These same people must be well grounded in economics and the agricultural sciences. So far, the BAR-NaRDSAF degree scholarship program has been a successful attempt to address these prerequisites. I am confident that we shall continue to succeed as we bring more of our most talented, most promising young men and women into positions of knowledge and influence," Secretary Panganiban said during the event. He also encouraged BAR to continue its active implementation of the scholarship program and support more intensively private research initiatives for the R&D priority commodities for 2004 to 2010.

The scholarship program is one of

Δ *see Sec Panganiban on page 9*

Dir. Eleazar, Dr. Alcala represent RP in World Rubber Summit in Malysia

Bureau of Agricultural Research (BAR) Director Nicomedes P. Eleazar and Philippine Rubber Board, Inc. (PRBI) Executive Director Eugenio A. Alcala represented the Philippines in the World Rubber Summit on 24-25 April 2006 held in Kuala Lumpur, Malaysia. This year's theme, *Global supply and demand challenges: Developing strategies for the future*, is focused on addressing key issues and challenges pressing the global rubber industry.

The World Rubber Summit was organized by the International Rubber Study Group (IRSG) based in London. Established in 1944, IRSG is an intergovernmental organization recognized as an international body and was formally established by a Headquarters Agreement with the Government of the United Kingdom and Northern Ireland.

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BAR Chronicle
The offical monthly publication of DA-BAR

RITA T. DELA CRUZ
Managing Editor/Layout

MARIA LIZBETH SEVERA J. BAROÑA
RITA T. DELA CRUZ
MIKO JAZMINE J. MOJICA
Staff Writers

MARLOWE U. AQUINO, Ph. D
ANGELA E. OBNIAL
MARIKO M. RAMOS
RUDYARD R. ROXAS
Contributing Writers

RICARDO G. BERNARDO
Print Manager

JULIA A. LAPITAN
VICTORIA G. RAMOS
Circulation

VIRGINIA A. DULDULAO, Ph.D
Editorial Consultant

RODOLFO L. GALANG
OIC, MISD

NICOMEDES P. ELEAZAR, CESO IV
Adviser

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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.

For subscription and questions, please contact:
Applied Communication Section
Management Information Systems Division (MISD)
Bureau of Agricultural Research
Department of Agriculture
3/F RDMIC Bldg., Visayas Ave., cor. Elliptical Rd., Diliman
Quezon City 1104

Tel. nos. 928-8505 local 2043-2044
Fax: 927-5791 or 927-0227
E-mail: misd-acs@bar.gov.ph

Articles are also available online. Visit BAR Online at: http://www.bar.gov.ph

Dir. Eleazar receives recognition as past LDC executive director

BAR Director Nicomedes P. Eleazar

The Livestock Development Council (LDC) celebrated its 30th anniversary recently at the BSWM Convention Hall by recognizing outstanding livestock and poultry programs and its past directors by giving awards and citations, respectively.

As one of its past directors, BAR Director Nicomedes P. Eleazar was recognized for his stint as deputy executive director from 2000-2001. He was recognized for his exemplary performance in effectively sustaining the initiatives under the Ginintuang Makamasa Livestock Program. Mr. Joell H. Lales, DA-BAR senior executive assistant, received the award on his behalf.

Highlights of activities included an inspirational message delivered by Department of Agriculture (DA) Secretary Domingo F. Panganiban; awarding ceremony for Outstanding Livestock and Poultry Program; and recognition ceremony for LDC past directors.

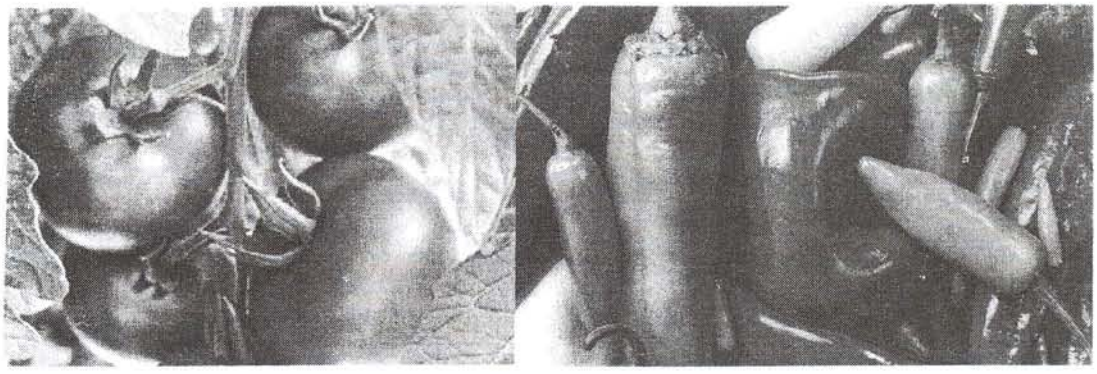
Secretary Panganiban, in his inspirational message, challenged the people behind LDC's success to exert more effort in sustaining the growth of the livestock industry. "After 30 years, the people behind LDC and its partners such as the Bureau of Animal Industry (BAI) and the different livestock private agencies have a long way to go," he said.

"The DA family must continue to formulate, monitor, and evaluate government policies and programs to sustain the growth in this P180 billion livestock industry," he further challenged. He encouraged the building of alliances with stakeholders through dialogue and consultation.

The awards for outstanding livestock and poultry program include the various significant programs implemented under the GMA Livestock program, namely: 1) Outstanding LGU in the Artificial Insemination Program; 2) Outstanding Production Center by an RFU; 3) Outstanding LGU in the Barangay Livestock Breeding Loan Program (BLBLP); 4) Outstanding Rural Bank in the Multi-Livestock Development Loan Program (MLDLP); and 5) Outstanding RFU in Waste Management Program for Livestock (Swine).

The LDC is one of the councils under the DA mandated to link the government with the private sector, specifically the livestock industry. *(Angela E. Obnial)*

AVRDC surveys Philippine tomato, pepper viral diseases



Staff of the Asian Vegetable Research and Development Center (AVRDC) The World Vegetable Center technical staff, Dr. Venkateshan and Ms. Yen-wei Wang recently visited the Philippines to assess the condition of the tomato and pepper crop protection and production management in the country.

The visit, in coordination with the Technology Commercialization Unit (TCU) and the International Relations Unit (IRU) of the Bureau of Agricultural Research (BAR), was a follow-up activity of last year's visit of the AVRDC staff – Dr. George Kuo and Ms. Mandy Lim who informed BAR that the tomato and pepper leaves samples collected were infected with viruses. To resolve the incidence of these viral diseases and determine genetic diversity of the pathogen, Dr. Sylvia Green, AVRDC virologist, and Dr. Chien-an Liu, biotechnologist, informed BAR that they will conduct a survey of viral diseases in major tomato and pepper production sites. The survey conducted is part of the global disease assessment being done by AVRDC. The countries included are Philippines, Vietnam, Thailand, Laos, Taiwan, Malaysia, and countries in South Africa and Latin America.

The AVRDC mission accompanied by Ms. Digna Sandoval of TCU surveyed the provinces of Nueva Ecija, Tarlac, Pangasinan, Benguet, Batangas, Laguna, Cebu, General Santos, and Davao. Other tomato and pepper production areas in Ilocos region and Northern Mindanao provinces were surveyed in December 2005.

Knowledge of the diseases affecting these crops in the Philippines will make the varietal testing of promising vegetable varieties more effective. The results of the survey will be communicated to the BAR and concerned agencies for proper and appropriate action. Also, the survey led AVRDC and BAR to strengthen their partnership in vegetable R&D, crop production and system management, knowledge exchange and management, and capability enhancement. *(Marlowe U. Aquino, Ph.D)*

NRM seminar tackles food linkage to ecosystem

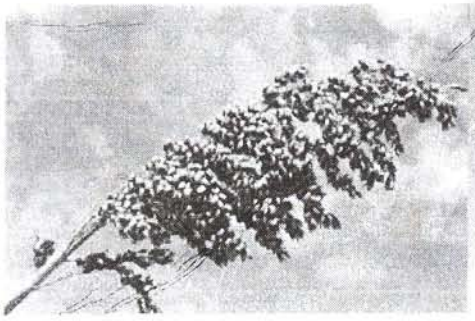
A seminar on natural resources management (NRM) was recently organized by the International Society for Southeast Asian Agricultural Sciences (ISSAAS) – Philippines. Co-sponsored by De La Salle University (DLSU) Professional School - Makati and the Agricultural Systems Cluster of the University of the Philippines Los Banos (UPLB), it was held on 21 April 2006 at Rm 2501 25/F Yuchengco Tower II, RCBC Building, Makati City. The seminar tackled the holistic view of managing natural resources to address issues on food production and the deterioration of the ecosystem. This is the first of a series of seminars attended by Dr. Teodoro S. Solsoloy and Dr. Marlowe U. Aquino, both active members of ISSAAS-Philippines.

There were two topics discussed by technical experts in the field of environmental science, forestry and natural resources. These were *"When our tree becomes only your tree; what happens to it?; what happens to us?* by Dr. Ben Malayang, senior fellow of the Development Academy of the Philippines and *"Emerging trends in natural resources management: Implications to food security"* by Dr. Rodel Lasco, Philippine coordinator of the International Center for Research in Agroforestry (ICRAF).

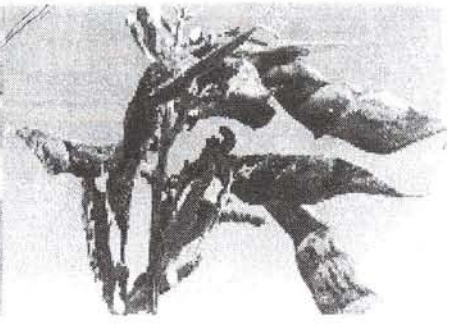
Dr. Malayang's paper focused on the use of natural resources as a common good or its being privatized for exclusive use depending on who has access to the resource. In his presentation, he emphasized two conclusions (hypotheses) which triggered further discussions: a) privatization triggers social losses, it makes society worse off and assumes "non-equal condition," b) society may gain from privatization but only if it has

Δ *see NRM seminar on page 6*

Sweet sorghum and pigeon pea technologies commercialized



sweet sorghum



pigeon pea

After the launching and initial field day of sweet sorghum and pigeon pea commercialization projects at the Mariano Marcos State University (MMSU), Batac, Ilocos Norte, cooperating and partner agencies in Regions I, II, III, and CAR had a project priority orientation and planning workshop on 27-28 April 2006. The workshop aimed to systematize the implementation strategies of sweet sorghum and pigeon pea commercialization, improve information and knowledge exchange activities through trainings and seminars, and technology transfer and commercialization.

Dr. Heraldo Layaoen of MMSU is the overall coordinator of the projects, "Commercial Production and Utilization of Sweet Sorghum" and "Commercial Production and Utilization of Pigeon Pea." MMSU serves as the model site. Interventions and project strategies will be replicated in the identified provinces of Ilocos Norte, Ilocos Sur, La Union, Isabela, Cagayan, Kalinga, Abra, Nueva Ecija, Tarlac, and Pampanga for the full implementation of the project.

Sweet sorghum like sugarcane is rich in sugar. But compared to sugarcane which takes 12-16 months to mature, sweet sorghum's gestation period is only four months. Ethanol, a cheaper source of fuel, is the valuable product derived from processing sweet sorghum. Once ethanol is combined with diesel, it is converted as "gasohol." Sweet sorghum can be used as animal feed after extracting ethanol.

Meanwhile, pigeon pea thrives well on different soil types. Preferably 10-15 plants are planted on one square meter of land. After 110-120 days, pods are harvested. Pigeon peas are commonly grown for its seeds. *(Maria Noriza Q. Herrera and Marlowe U. Aquino, Ph.D)*

Livestock technology packages gain boosts

The growing concern to strengthen the livestock industry particularly the Philippine water buffalo (carabao) got positive boosts particularly its commercial value during the recent 13th Philippine Carabao Center (PCC) anniversary celebration on 3-5 April 2006, the Science City of Muñoz, Nueva Ecija. This was highlighted during BAR's Technology Forum. Related topics such as intellectual property, technology packaging, commercialization, and entrepreneurship were also included.

Based on the questions raised and discussions made during the affair, Philippine carabao production and processing technologies were put to test alongside appropriate activities including technology assessment, valuation and preparation of promotion, and investment plans. Carabao technologies were promoted through culinary arts with processed dairy and meat products by participating schools. Students with their culinary skills made use of these products to showcase the developed technologies. The use of packaged technologies on dairy and meat products led stakeholders and technology takers to be aware of the latest available technologies for entrepreneurial activities.

In addition, up-to-date research and development activities on carabao are now the top priority of PCC. These include biotechnology and bioengineering to improve the genetic make up and the production of quality stocks, knowledge management, and the production management systems improvement. Incidentally, activities and actual experiences of local carabao raisers were written in a book entitled, "Changing Lives – Beyond the Draft Carabao" by Dr. Sosimo M. Pablico. The book is a living testimony of what our local carabao industry went through with the support of the PCC's research and development, technology transfer, and management. All this led to stronger partnerships and fostered cooperation, teamwork, and complementation among carabao stakeholders and key players. *(Marlowe U. Aquino, Ph.D.)*

Workshop validates project logframe on income and market development

Participants discuss their logical framework during the validation workshop held at Monte Vista Hotspring Resort, Pansol, Calamba, Laguna on 27-29 April 2006.

The validation workshop on Farm Income and Market Development Project's (DFIMDP) cluster logical framework was held on 27-29 April 2006 at Monte Vista Hotsprings and Conference Resort in Pansol, Calamba, Laguna. The objective of the workshop was to validate the logical framework (logframe) of each cluster vis-à-vis the overall DFIMDP logframe.

The DFIMDP is divided into four clusters, namely: market development, planning and budgeting, technology, and quality assurance. The Agriculture and Fisheries Information System (AFIS), Agribusiness and Marketing Assistance Service (AMAS), Bureau of Agricultural Statistics (BAS), Information Technology Center for Agriculture and Fisheries (ITCAF), and National Agricultural and Fishery Council (NAFC) belong to the market development cluster while the Budget, Field Operations Service, Financial Management Service, Planning Service, Policy Research Service, and NAFC belong to the planning and budgeting cluster.

The technology cluster is composed of the Agricultural Training Institute (ATI), Bureau of Agricultural Research (BAR), and Bureau of Postharvest Research and Extension (BPRE) while the quality assurance cluster is composed of agencies, namely: Bureau of Agriculture and Fisheries Product Standards (BAFPS), Bureau of Animal Industry (BAI), Bureau of Fisheries and Aquatic Resources (BFAR), Bureau of Plant Industry (BPI), Fertilizer and Pesticide Authority (FPA), and National Meat Inspection Committee (NMIC). The four clusters focused Regional Field Units (RFUs), Regions VI, VII, X, and CAR, were present during the workshop.

The general concepts and elements of the logframe were discussed on the first day of workshop. The logframe provides bases for monitoring plan progress and for evaluating the achievements of the project. The Agriculture and Fisheries Modernization Plan draft logframe for 2006-2010 and the DFIMDP results monitoring framework were presented to guide each cluster in the preparation of their own logframe.

The group agreed that the project's goal is to enhance the competitiveness and market-orientation of the agriculture and fishery sectors. The four component purposes were discussed in the plenary session. For the market development cluster, the component purpose is to improve access to comprehensive, timely, and reliable agriculture and fishery market information and services. The regulatory cluster aims to strengthen safety and quality assurance system for market development while the technology cluster would like to develop and promote market-linked technologies and processes. The planning and budgeting cluster strives to improve policy environment conducive to private sector-led investments. Specific outputs and activities of each cluster were also presented to the group. The output of the workshop was presented to the members of the DFIMD Project Advisory Board before submitting it to the World Bank for its concurrence.

Approved by the World Bank in 2004, the DFIMD project is to stimulate rural growth and farmer income by enhancing the competitiveness of Philippine agriculture and fisheries through market-oriented and private sector-led investments. The duration of the project is four years. *(Mariko M. Ramos)*

DA senior researchers train on rubber disease

The Bureau of Agricultural Research (BAR) and the Philippine Rubber Board, Inc., (PRBI) sent one senior staff each from the Regional Field Unit 12 (RFU) and Autonomous Region of Muslim Mindanao Integrated Agricultural Research Center (ARMMIARC) of the Department of Agriculture (DA) to join the first batch of 10 trainees on effectively managing rubber disease. The "Training on *Corynespora* leaf disease of *Hevea brasiliensis* (rubber) and its management" was held from 17-29 April 2006, Trivandrum, India.

The two DA staff were: Mr. Chito Leoncito dela Cruz, agricultural center chief III at DA RFU 12 and Mr. Siya Belongan, research center manager of ARMMIARC.

Mr. Dela Cruz has BS and MS degrees in agriculture major in plant pathology and agronomy, respectively, both from the University of Southern Mindanao, Kabacan, Cotabato. He has been working at DA-XII since 1997 and prior to that he was associated with the former Ministry of Agriculture and Food Region 12. He led in the implementation of various projects on rubber including the adaptation trial on ethrel applied on mature *Hevea* trees and adaptation trial of *Robusta* clones under upland rolling areas.

Meanwhile, Mr. Belongan is a product of the Mindanao State University (MSU) with a degree in BS Agriculture (agronomy) and MS Agricultural Extension from the Cotabato City State Polytechnic. He has also a diploma in agriculture (crop production) from the University of the Philippines Los Baños (UPLB) and master certificate in public administration from MSU Graduate School. He has been with ARMMIARC since 1994 and has been involved in rubber development projects especially on the establishment of demo farms and clone nurseries and distribution of rubber seedlings.

The two-week training in India focused on *Corynespora* leaf fall disease which has become a threat to natural rubber production in most rubber producing countries like Indonesia, Malaysia, Sri Lanka, and India causing significant crop loss. Efforts have been done to effectively manage this disease. One of the approved projects, "Improving management strategy in combating rubber leaf fall disease" was submitted by the Indonesia Rubber Research Institute for funding by the Common Fund for Commodities (CFC). One of the components of this project is to conduct international training for research/extension officers specifically those involved in crop protection strategies in research and management of the rubber disease. The Rubber Institute of India has been identified as the center for the training.

The training included classroom, laboratory, and fieldwork covering topics on morphology, physiology, survival and variability of the pathogen, host pathogen inter-relationship including enzymes and PR proteins in host resistance, toxin and its use in disease screening, disease-weather relationship, control measures and sustainable crop protection methods. There was also hands-on training given in the field on symptoms, spore monitoring, spraying, dusting, and integrated disease control.

The trainees are expected to strengthen their knowledge in programming future research in developing control strategies to effectively manage the rubber disease. Likewise, all participants are expected to prepare and submit a program to be implemented in their country. *(Rita T. dela Cruz)*

National peanut...from page 10

fertilizer was on flat row 30 cm x 10 cm plot.

In support of the government's commercialization program, seed stocks were distributed to farmer recipients and seed grower, and certificate of eligibilities were awarded to local government units (LGUs).

Among the immediate beneficiaries of the peanut variety trial are farmers and LGUs of the towns of Ilagan, Jones, Echague, and Angadanan in Isabela; Enrile Maddella and Iguig in Cagayan; Basco, Batanes; and Kayapa, Diadi and Bagabag in Nueva Vizcaya.

The *Asha* field trial is a partnership project of DA-BAR and ICRISAT through the cooperation of the DA-RFU 2 that aims to develop and facilitate the transfer and promotion of suitable peanut variety/technology. Aside from the Cagayan Valley region, the project aims to reach Regions 1, 3, 4, 10 and 11 by the year 2007.

NRM seminar...from page 4

a wide resource base sufficient to absorb the pressures on other resource or uses.

On the other hand, Dr. Lasco raised the importance of putting value on natural resources through relevance of rewarding upland poor environment services (RUPERS). The RUPERS make use of appropriate technologies that enhance capability building activities within the marginal or upland areas to encourage strong partnerships. This strategy builds responsibility among individuals that support the production of food and ensure activities for sufficiency and security.

Based on the two topics, information relevant and appropriate to production systems in agriculture and fisheries will be adapted for better management. In the coming months, a series of seminars will be conducted by ISSAAS to be culminated by a national conference on 26 October 2006 at APEC Center for Technology Exchange and Training for SMEs (ACTETSME), UPLB, College, Laguna. *(Marlowe U. Aquino, Ph.D.)*

Learning from the Koreans: A study visit to the land of the morning calm

by MIKO JAZMINE J. MOJICA

"I have traveled to other countries in Asia before but what strikes me most about South Korea is that, it is not a place one would expect to develop cutting-edge agricultural technology. For one thing, the country is not well-endowed in terms of agricultural resources. Only a small part of the land can be planted to crops, being mountainous and having unfavorable soils. Modernization has also reduced its croplands with conversions to housing, industrial facilities, and other infrastructure. Despite these unhappy conditions for agriculture, South Korea is a mecca for agricultural science."

Staff fromBAR and UP-Planades during the study visit to Korea. In the background is the Jansil Olympic Stadium.

This was the personal recollection of Mr. Victoriano Guiam, international relations unit head of the Bureau of Agricultural Research (BAR), during a study visit with other BAR staff to Korea on 18-25 February 2006. Mr. Guiam, together with BAR Asst. Dir. Teodoro Solsoloy, and senior BAR staff Domingo Caliwag, Leoncia del Mar, Rosalia Maranan, and Judith Maghanoy went to Korea with Dr. Marideth Bravo and Ms. Dina Magnaye of the Planning and Research Development Foundation Inc., University of the Philippines Diliman (UP PLANADES) to observe the country's agricultural activities and look for possible opportunities for R&D collaboration with the Philippines.

Korea was among the poorest economies in the world before, but now the country is at the 11th place on the world's list of most developed economies and its population of less than 50 million is mainly composed of "a relatively affluent" urban society. However, the population's transformation from a highly rural to urban society led to the decline of agriculture in the country. In 2003, agriculture's share in the country's Gross National Income was only 3.1%.

In Korea, rice dominates the crops raised and is the most protected agricultural commodity since it is also their staple food. However, their mountainous lands are mostly not arable, and rainfall is less than most of the neighboring countries that also produce rice. Because of this, they turned to livestock and fruit and vegetable production. They have made spectacular gains but these have not been enough to meet the country's demand that they resorted to importations of grains and other agricultural products.

Despite Korea's minimal focus on agriculture, the BAR group noticed that its agricultural products are of high quality. Improved handling of their agriculture and fishery products increases their marketability. In public markets, wastes are managed efficiently since they are shredded right away, reducing their bulk and water content. This can only mean that good technology is being developed and utilized.

During the two-week trip, the group was able to visit several R&D institutions whose functions and activities are similar to BAR. One of these is the Korea Transfer and Training Center (KTTC) that effectively commercializes technologies from acquisition to institutionalized technology utilization. The group was briefed on the rigorous process of technology selection resulting to a high rate of technologies commercialized. The Center has also its own database of technologies that are market-oriented.

Another notable institution visited was the Korea Research Foundation (KRF) which supports non-purposive or fundamental research through a grant system which BAR is also doing. It supports "outstanding researchers, university professor-initiated R&D activities and research that leads to the industrialization of a research product." Among the foundation's thrusts is collaborative research with other countries through counterpart organizations and

Δ *see Learning from on page 8*

Learning from...from page 7

BAR Asst. Dir. Teodoro S. Solsoloy (third from left) together with staff from BAR and UP Planades interact with a Korean researcher (extreme right) from the Seoul National University of Technology during the group's study visit at the National Folk Museum.

international R&D activities initiated by Korean university professors. It does not deal with individual institutions. The group observed that although BAR and KRF have similarities in functions, KRF has a wider scope both locally and internationally.

The group visited several other institutions such as the Seoul National University of Technology - Research Institute of Construction Technology (SNUT-RITC) and the Ministry of Agriculture and Forestry - Rural Policy Bureau (MAF-RPB). What impressed the group most was the country's Rural Development Administration (RDA) which houses highly-advanced facilities like the National Livestock Research Institute.

"What I liked most in Korea was their RDA. Upon entering the building, we were accommodated and ushered to their auditorium for a brief video presentation of their organization's functions and activities. There is also an impressive exhibition hall that displays historical artifacts and modern equipment used in Korea's agriculture. This allowed us to trace the transformation of its agriculture to the present," Ms. Leoncia del Mar recounts.

In Korea's history, the country suffered much during a long Japanese occupation and the war between North Korea and South Korea. Coupled with limited agricultural resources, this prompted the Koreans to be as self-sufficient in food to be least dependent on the outside world. They developed their own technology leading to Korea's progress and full economic development beginning in the 1960s.

During the discussion of lessons learned after the visit, BAR and UP PLANADES staff were encouraged by BAR Director Nicomedes Eleazar to seek collaboration with Korea as there are many opportunities to learn from them and to avail of their assistance. The UP PLANADES is also set to draft a proposal with BAR for DA to develop research policies and agenda as well as capability-building strategies for agricultural scientists that can make us at par with Korea's agricultural progress.

Source:

1.) Mr. Vic Guiam's news compilation on South Korea's agriculture and economy sourced from different websites.

2.) BAR team's daily journal on lessons learned from visiting South Korea.

CEMIARC finetunes projects at BAR

Projects lined up for implementation by the Central Mindanao Integrated Agricultural Research Center (CEMIARC), Amas, Kidapawan City, were finetuned during a pre-implementation meeting, April 25.

The pre-implementation meeting (PIM) is in line with the Competitive Research Grant Manual (CRGM) stipulation that all projects must undergo a final review of methodology, logical framework, work plan, resource plan and budget for a more efficient conduct of research and better utilization of resources.

Three projects were reviewed: Agribusiness Development Project on Ginintuang Masaganang Ani (GMA) in DA-CEMIARC; Community-Based Upgrading of Small Ruminant (Goat) in Region XII; and Community-Based Upgrading of Native Chicken.

The proponents presented the general framework of the project and the strategies for implementation, including the proposed work plan and resource plan and budget. During the open forum, the Monitoring and Evaluation Team (MET) looked into the project comments and suggested recommendations for finetuning of project before implementation. The MET is composed of a representative from BAR's Research Coordination Division, representative from the Bureau's Expert Pool, and representatives from the regional networks.

Present during the meeting were Dr. Lorna Valdez, Dr. Reynaldo Callano, Dr. Demetrio Oria, and Dr. Cayetano Pomares, all from the University of Southern Mindanao, Mr. Rowe Celestes of the Mindanao Baptist Rural Life Center (MBLRC), and BAR's Angel Morcozo, RCD representative, and Ethyl Bulao, PIM coordinator. *(Maria Lizbeth J. Baroña)*

Sec. Panganiban...from page 1

Some of the graduate scholars of BAR's IDG pose with DA Secretary Domingo F. Panganiban during the fellowship night at the Sulo Hotel, Quezon City.

the components of BAR's Human Resource Development Program (HRDP) which is among BAR's priority areas in R&D. Employees of R&D agencies in the government are granted this privilege to pursue higher studies relevant to their current post or nature of their work. Other components of the HRDP include thesis/ dissertation assistance program, non-degree assistance program, and education program for DA scientists and researchers. The Institutional Development Section (IDS) of BAR's Program Development Division (PDD) handles the responsibilities of this program.

Out of the 110 scholarship slots the program has awarded from 2000 until 2005, 56 slots were allotted for PhD and 54 slots for MS degree. Seventy-five of these scholars are from DA agencies while 35 are from state colleges and universities (SCUs) which are BAR's partner-institutions. From the 50 graduates as of April 2006, 33 graduates (20 MS and 13 PhD) are from DA while 17 (4 MS and 13 PhD) are from SCUs.

In the program's selection criteria, an applying scholar must be nominated by his/her mother agency and should have already served at least two years satisfactory and continuous service as a regular government employee. A certificate of admission should also be presented from accredited state universities which are the following: University of the Philippines (UP) Diliman, UP Los Baños, UP Visayas, Ateneo de Manila University (ADMU), De La Salle University (DLSU) in Manila, Central Luzon State University (CLSU) in Nueva Ecija, Benguet State University (BSU), Leyte State University (LSU), University of Southern Mindanao (USM) in Cotabato, Mindanao State University (MSU) in Misamis Oriental, Siliman University in Negros Oriental, and University of San Carlos in Cebu.

"The degree scholarship program fulfills a part of BAR's mandate according to the Agriculture and Fisheries Modernization Act (AFMA). The UPLB Foundation, Inc., (UPLBFI) and the Philippine Rice Research Institute (PhilRice) assist BAR in administering the program.

Applicants are screened based on a set of the evaluation criteria that includes relevance to agriculture and fisheries modernization of the proposed degree to be taken, capability to complete the degree, and number of research projects/studies conducted. BAR awards the successful applicants scholar privileges in the form of school fees, monthly stipend, book allowance, travel allowance, computer allowance, relocation allowance, and thesis/dissertation allowance.

Inquiries on the scholarship may be addressed to BAR's PDD-IDS through telefax 920-0219 or trunkline 928-8505. You can also visit BAR's website at www.bar.gov.ph to download application forms. *(Miko Jazmine J. Mojica)*

Dir Eleazar...from page 1

The IRSG provides a forum for the discussion of matters affecting the supply and demand of both synthetic and natural rubber. It covers all aspects of the world rubber industry including marketing, shipping, distribution and trade in raw materials, and the manufacture and sale of rubber products.

The IRSG is the authoritative source of statistical data supplied by its member-governments and other countries and organizations on production, consumption, and trade in rubber and rubber products. It prepares current estimates and forecasts future trends; and undertakes and publishes statistical, economic and techno-economic studies on specific aspects of the industry.

Among its members are institutions both from the government and industry. Currently, 17 countries and the European Commission are contributing members, namely: Belgium, Republic of Cameroon, Cote d'Ivoire, France, Germany, India, Indonesia, Italy, Japan, Malaysia, Russian Federation, Singapore, Spain, Sri Lanka, Thailand, United Kingdom, and United States of America. Currently, the Philippines is seeking membership to the IRSG especially since rubber is one of the priorities of the Department of Agriculture (DA).

BAR and PRBI are both member-institutions of the International Rubber Research and Development Board (IRRDB) which is based in Malaysia and is this year's host for the World Rubber Summit.

Highlights of the summit sessions on global rubber include: a) material usage, availability, and substitution; b) developing tire tigers of Asia; c) latex under pressure; and d) presentation on the rubber eco project. Following the presentations was the Industry Advisory Panel (IAP) meeting. IAP was established to advise the IRSG on subjects for study and to assist the Secretariat in carrying out its work programme. Its members represent all aspects of the world elastomer industry.

The World Rubber Summit was followed by the 42nd Assembly of Nations at the Grand Plaza Parkroyal, Kuala Lumpur, Malaysia on 26-27 April and a field trip on 28 April to the Malaysian Rubber Board Research Center in Sugei Buloh, which is 30 km northwest of Kuala Lumpur. *(Rita T. dela Cruz)*

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practices. According to him, aflatoxins are naturally occurring mycotoxins (toxic substance of fungal origin) produced by *Aspergillus flavus* and *Aspergillus parasiticus*. The crops which are frequently affected by aflatoxin contamination are cereals, oilseeds, spices, and tree nuts. He said that contamination is likely when the crop is exposed to a highly humid environment over a long period of time or damaged in stressful conditions such as drought. It can also occur at all stages from production, harvest, and storage. He told the group that ICRISAT is currently studying an integrated approach for efficient technology transfer to sensitize the farmers on the proper prevention and management of aflatoxin contamination.

The breeding of pigeonpea, a nutritious crop which originated in India, was tackled by Dr. KB Saxena during the seminar. He said that pigeonpea is a good alternative source of protein both as food and fodder crop in the Philippines. Attempts to promote its production in the Philippines were done in the past but the shortage in funding saw the significant decline in its R&D. The current effort to promote the crop in the country includes the introduction of ICRISAT's newly developed breeding technology, the world's first hybrid pigeonpea. Its advantages include higher yield, suitability for intercropping, and greater drought tolerance. Aside from the excellent food and fodder qualities of pigeonpea, it also proved effective in soil conservation as was the case of China wherein pigeonpea is now planted in an estimated area of 60,000 ha.

Attending the seminar were representatives from the Department of Agriculture's (DA) attached bureaus and agencies and state colleges and universities (SUCs). Director Eleazar and Asst. Dir. Teodoro Solsoloy opened the short program prior to the seminar proper.

ICRISAT is a non-profit international research organization headquartered in India, devoted to science-based agricultural development and is one of the 15 international agricultural research institutes under the Consultative Group for International Agricultural Research (CGIAR). *(Miko Jazmine J. Mojica)*

National peanut festival: A celebration of hope

by RUDYARD R. ROXAS

A farmer with his newly harvested peanuts from the DA-RFU 2 demo field.

Officers and staff of the Bureau of Agricultural Research together with visiting scientists from the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) graced the initial staging of the "National Peanut Festival" on 12 April 2006 at the Regional Field Unit 2 (RFU 2) station in the province of Isabela.

Organizers of the event, the RFU 2 of the Department of Agriculture headed by Dr. Gumersindo D. Lasam, pushed for the staging of the celebration, come hell or high water. In this case, it was literally high water.

The event which was previously scheduled a couple of months before had been delayed due to the onslaught of typhoons during the months of December 2005 and January of this year. These flooded the demonstration field where the new peanut variety, ICGV 86564, was being tested.

Peanut stakeholders from as far as Masbate in the south and Batanes in the north trooped to the town of Ilagan, Isabela, which is 410 kilometers from Manila, to witness the launching of this peanut variety that could withstand abiotic stresses.

The large-seeded peanut, popularly known in India as *'Asha'* (meaning hope), has the potential of being a better alternative to corn, one of Cagayan Valley's prime agricultural product. *Asha* was developed in the research stations of ICRISAT in the Indian state of Andra Pradesh to withstand drought. As was observed in the trial fields of DA-RFU 2, it can also withstand severe flooding. Demo fields planted with *Asha* were submerged to flood waters during the three critical stages of the test: flowering stage (35 DAP), pegging stage (48 DAP) during the December floods, and pod formation stage (65 DAP) in January.

Despite the floods, yield obtained from eight different planting treatments using ammonium phosphate fertilizer ranged from 1.2 tons/ha (on a 30cm x 10 cm broad bed and furrow plot with two bags/ha fertilizer) to 3.458 tons/ha (on a 50cm x 10 cm flat row plot with 4 bags fertilizer). The highest yield observed with a 2 bags/ha

Δ *see National peanut on page 6*

Golden *kuhol* crusher-grinder: A cheap, gender-friendly machine

by RITA T. DELA CRUZ

The golden apple snail *(Pomacea canalicuta)*, locally known as golden *kuhol*, was first introduced into Philippine farms in 1983 with the hope of providing additional protein source for dietary improvement of many poor families. But its promising potential turned into a menace for farmers when the golden apple snail became a prolific pest on rice fields. It grows and increases rapidly, voraciously feeding on any succulent greens that include newly transplanted rice seedlings. It destroys farms, livelihood, and has become a burden to rice production.

Although considered a threat in rice production, many farmers are (again) looking at the golden *kuhol* at a different perspective. The golden *kuhol* being remarkably nutritious and easy to digest, farmers have discovered it to be a good source of supplementary feed for livestock and poultry. It stimulates fast growth and reproduction. The snail meat provides protein and energy-giving fat while the shell contains calcium, phosphorous, vitamins, and minerals. Now, a lot of farmers do not see these golden *kuhol* as a threat to the fields but rather an opportunity to improve their livelihood.

Golden *kuhol* are freshly collected from the fields, crushed, mixed with raw rice bran, and then fed right away to the animals. There are times when animals are fed with pure golden apple snail straight from the fields. Studies showed that healthier and heavier livestock are produced using this feeding scheme. Ducks fed with snail meal can attain more or less than 70% increase in egg production rate. Further, due to its high nutrition, snail meal could replace fish or meat and bone meal in broiler diets.

Opportunities abound, but farmers continue to ignore them due to the laborious and time-consuming task of manually crushing the snails. But as R&D continues to find solution to farmers' problem, researchers from the Department of Engineering and Technology of the Camarines Sur State Agricultural College led by Engr. Marife L. Pesino designed and developed a mechanically operated golden *kuhol* grinder-crusher. This machine does not only minimize laborious work of crushing but it also saves time from manually picking the snails from the fields and different farm locations. It also gives opportunity for farmers to culture golden *kuhol* in one specific area mainly for feed supplement.

Engr. Marife L. Pesino, developer of the golden kuhol crusher-grinder, demonstrates the mobility and ease of use of the machine.

The opportunity of converting golden *kuhol* into useful feeds also saves a lot of money for our farmers, as they do not have to buy expensive molluscicide to control it, making it environment-friendly. Likewise, by converting the snails into feed supplements the farmers spend less for expensive feeds for their livestock and poultry. This likewise reduces the need for imported fishmeal feeds and save the country's foreign exchange.

Generally, farm equipment and machineries i.e., tractor, water pump, fruit loader, thresher, etc., are never gender-friendly. Women and children who also work in the farm use machines that are laborious and strenuous to operate. But with the new *kuhol* crusher-grinder, which was designed and conceptualized by a lady engineer, crushing and grinding are no longer tedious as before. The machine is mobile, making it easy to transport.

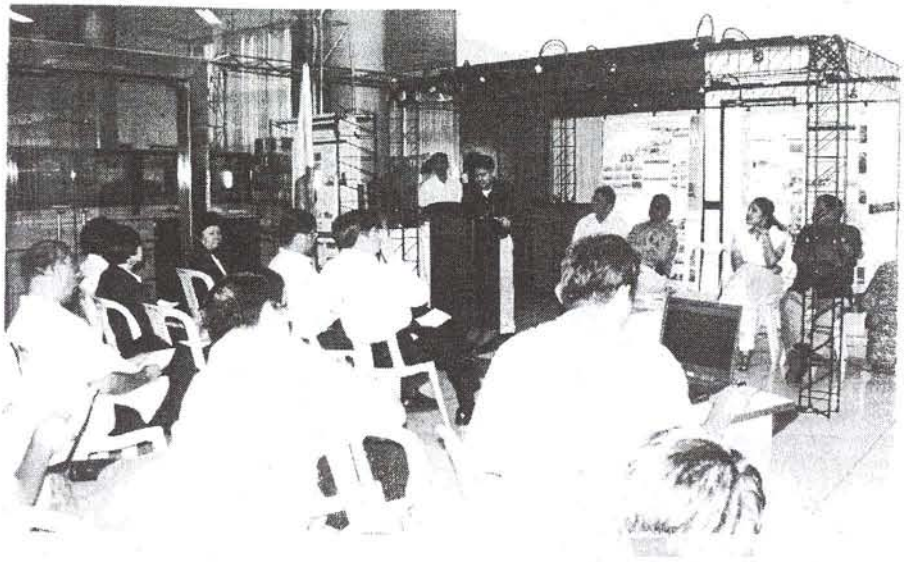
The design and concept of the crusher-grinder was based on the existing hammer mill machines used in efficiently reducing sizes of feed materials but is comparably more efficient. The machine is low-cost and affordable as it is made from indigenous materials.

The golden *kuhol* crusher-grinder has seven main parts: mainframe assembly, hopper assembly, upper rotor housing assembly, and lower rotor housing assembly. Its rotor assembly consists of a swinging and rotating hammer blades that crush and grind golden *kuhol* through a replaceable perforated screen. The design of the golden *kuhol* crusher-grinder is not only economical and environment-friendly but more important, the machine is gender-friendly.

Performance tests showed that the machine could efficiently and perfectly crush and grind golden *kuhol* when operated at 1500 rpm and 2070 rpm, respectively, with the desired particle size recommended for optimum feed digestibility.

For more information, please contact Engr. Marife L. Pesino, MSAE, RAE of the Department of Engineering and Technology, Camarines Sur State Agricultural College, San Jose, Pili, Camarines Sur, Philippines.

ICRISAT's leading scientists lecture during BAR seminar



BAR Asst. Dir. Teodoro S. Solsoloy introduces the three resource persons from ICRISAT.

The Bureau of Agricultural Research (BAR) held its third seminar of a series lined up this year. The latest seminar held at BAR, Quezon City on April 10 featured research results on groundnut improvement, aflatoxin, and pigeon pea presented by distinguished scientists from India who are working for the International Crops Research Institute for Semi-Arid Tropics (ICRISAT) led by Dr. William D. Dar, former BAR director.

The topics presented during the seminar are as follows: 1) Groundnut improvement: Looking ahead, moving forward (Dr. Aruna Rupakula); 2) Aflatoxin research at ICRISAT (Dr. SN Nigam); and 3) Pigeon pea, an alternative protein-rich food and fodder crop for Philippines (Dr. KB Saxena).

BAR Director Nicomedes Eleazar said that the project of BAR with ICRISAT on Asha peanut (a variety of groundnut popular in India) and sweet sorghum (source of ethanol) is currently implemented in Region 2 and would be implemented in four other regions in the country. A formal symbolic hand-over of India's Asha and sweet sorghum seeds to the Philippines was held recently at the Malacañang Palace between India's President Abdul Kalam and President Gloria Arroyo.

During the seminar on groundnut improvement, Dr. Arakuna said that groundnut (*Arachis hypogaea* L.), the sixth most important oil seed crop in the world, is grown in more than 100 countries with semi-arid tropics. The crop mainly caters to the poor and marginal farmers and is grown using two types of farming systems: subsistence farming (rainfed) and high-input farming (irrigated). Although production of groundnut is concentrated in Asia, Dr. Rupakula stated that R&D efforts on this crop should focus on seeking higher levels of resistance to drought leading to aflatoxin contamination and diseases such as rust and late leaf spot (foliar).

ICRISAT's leader on aflatoxin research, Dr. Nigam, said that aflatoxin contamination in crops becomes a vicious link because the simplest of solutions are never followed such as proper agronomic and agricultural

Δ *see ICRISAT on page 10*

Web news

A call to action against the threat of a stem rust pandemic in wheat
http://www.cgiar.org

NERICAs grow in number: New varieties named
http://www.warda.org/warda1/main/newsrelease/newsrel-nericasgrow-jan05.htm

Technological breakthrough towards disease-resistant chickpea
http://www.icrisat.org

Aid for seed security—advice for practitioners
http://www.ciat.cgiar.org

Climate change: The rice genome to the rescue
http://www.irri.org/media/press/press.asp?id=126

International coalition launches unprecedented effort to strengthen local rights to own and use forests and fight rural poverty
http://www.cifor.cgiar.org

Mexican farmers durable despite free-trade shocks
http://www.cimmyt.org/english/wps/news/2006/apr/mexicanfarmers.htm

Potato Park could be secondary center of origin of the potato
http://www.cipotato.org/news_index.asp

Team firms up plan for biofuel research
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