



## Stakeholders sign pact on rice sufficiency

**R**ice farmers from 73 rice producing provinces in the Philippines and key officials from the Department of Agriculture (DA), Department of Agrarian Reform (DAR), the National Food Authority (NFA), Philippine Rice Research Institute (PhilRice), and the International Rice Research Institute (IRRI) drafted a "rice pact" to push for reforms promoting rice sufficiency in the country while protecting the welfare of rice farmers.

The rice pact consists of three parts: the development of a "master plan" for the rice industry; the review and realignment of credit and other support services that would benefit rice farmers; and the review of rice production enhancement programs being implemented by the government.

The master plan will serve as a blueprint or a comprehensive plan on how to achieve rice self-sufficiency in 2004 and global competitiveness in the year 2004 to 2010.

Held at the Philippine Social Science Center (PSSC) auditorium in

Commonwealth Avenue, Diliman, Quezon City on 28-31 May 2003, the summit included a two-day exhibit showcasing various rice products from all over the country and field trips to IRRI and University of the Philippines Los Baños (UPLB) in Laguna and PhilRice in Nueva Ecija.

DA Secretary Luis Lorenzo, Jr. gave the keynote speech while Mr Romeo Royandoyan, executive director of the Philippine Peasant Institute (PPI), delivered the closing remarks. The Summit was organized by the PPI and some non-government organizations (NGOs) involved with the rice sector.

The summit consisted of plenary and workshop discussions followed by an open forum or dialogue. Experts tackled important issues and problems in the rice sector such as public and private sector investments, rice liberalization and trade, rice production technologies, seed and intellectual property rights (IPR), biotechnology, income diversification, gender issues and DA/ Local Govern-



ment Unit (LGU) extension work.

Mr Rudy Galang, head of the Monitoring and Evaluation Section (MES), Mr Domingo Caliwag, research coordinator of the Regional Programs Section (RPS) and Ms Karen Salandanan, rice network coordinator of the National Programs Section (NPS) of the Bureau of Agricultural Research (BAR) attended the summit. *(Junelyn S. de la Rosa)*

*Source: Conference kit/ handout for National Rice Summit participants and Rice farmers seek new pact with the government, May 30-31 BusinessWorld Internet Edition*

## BAR, PCARRD tackle decreasing R&D budget

**T**he Bureau of Agricultural Research (BAR) and the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) met with the presidents and heads of various scientific and professional organizations on 29 May 2003 at the CERDAF Boardroom to discuss and immediately address the

decreasing R&D investments in the country. The meeting was an offshoot of the recent 60% drop in BAR's budget, which resulted to the deferment of various agriculture and fisheries R&D projects. The group tackled means and ways to resolve the problem of scarce resources and their big impact on the R&D system as a

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## Another way of looking at Bt corn

If you dangled two bundles of corn, one with foot-long ears with big and uniform grains and the other has short ones with worm-eaten cobs and small grains, to an emaciated farmer clothed in threadbare shirt and short pants that have seen better days and told him he has to choose one, which bundle do you think will he select?

Then tell him that the better one is Bt corn while the other is like the variety he is presently growing, does he still choose the better one? Surely, but then he asks what is Bt corn. Then tell him the facts.

Bt comes from the first letters of the words *Bacillus thuringiensis*, the common soil bacteria where the gene making protein toxic to a target insect is obtained and transferred to a certain variety of corn to make it Bt corn. This toxin makes the

Bt corn resistant only to lepidopterous pests like the Asian corn borer (ACB). We call this selective toxicity. No harm is done to humans, fish, wildlife, and beneficial insects. This toxin has been present in Philippine soils for centuries that it has become part of its natural ecology.

We can go further by citing the damage done by the ACB. Once this insect pest attacks corn, the plant can no longer recover or regenerate its damaged part. Findings of studies show that even just one borer per plant can cause 6 % yield loss. Imagine the destruction caused by ACB on a hectare of corn plants if this insect pest is not controlled. Besides, it is a safer alternative to chemical pesticides. Of course, we all know the harmful effects of chemical pesticides not only on humans but on the environment as a whole.

Why so much fuss on Bt corn?

It is a biological time bomb waiting to explode? There is the risk of stomach and colon cancers, allergies, poisoning of the soil, possible appearance and spread of new or more virulent strains of infectious agents and the killing of non-targeted organisms? Bt corn, like any other genetically modified organism or GMO, is subject to regulation by government depending on use. If planned for crop production, environmental, food, and feed safety, data are generated from laboratory and field trials and are reviewed by independent scientists. The environmental safety of a particular Bt corn for crop production is established by studying the available information on outcrossing with wild relatives, weediness potential, secondary and non target effects on humans, other vertebrates, beneficial insects, and on biodiversity and the presence of a mitigating measure to prevent the rapid evolution of insect resistance to the Bt protein. The food and feed safety considerations include level of dietary exposure, comparative nutritional composition of forage and grains and toxicity and allergenicity of the plant's expressed novel protein.

The Philippines, particularly the Department of Agriculture (DA) through the Bureau of Plant Industry (BPI), has not been amiss in this responsibility. We, too, have set our own criteria. The National Committee on Biosafety was created to assure the public that before the release of any crop or product of biotechnology, it has to undergo a rigid screening and testing before its approval. There are public deliberations on proposed national guidelines, policies and other safety measures. The drafts are circulated to non-government organizations, professional societies, academe, research organizations and regulatory agencies asking for written comments and for public consultations. The National Academy of Science and Technology (NAST) conducts public meetings. DA Administrative Order No.

87 established a risk assessment procedure that follows international guidelines.

If a survey is made now on how many know about Bt corn, perhaps only one out of ten would be aware but does not even understand what it is all about. Awareness does not necessarily mean understanding. The anti-Bt corn rallies and hunger strikes are, in themselves, advantageous in creating public acceptance of the technology. There are many institutions and groups that are keeping the public aware of GMO, particularly Bt corn, as there are also groups mostly religious and non-government organizations countering the efforts through rallies, propaganda materials and hunger protests. Some would look at these two opposing forces as unproductive because what one is promoting, the other is destroying; what one tries to build, the other tries to topple down. On the contrary, these social movements, with one opposing the other, will in the end produce a more informed and enlightened public because the pros and cons of the issue are tackled and discussed openly. So, why don't we take a more enlightened look at Bt corn?

The first annual national corn symposium was conducted early this

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## Aquaculture congress is Philippines' biggest ever held

This May, aquaculture players from both the government and private sectors came together for the 1<sup>st</sup> Philippine Aquaculture Congress and Exhibition (PACE) in Bacolod City. The Bureau of Agricultural Research was one of the participants in the Cruz Aquaculture Corporation- and UP Aquaculture Society, Inc.- organized event.

Quoted as, "the biggest ever technology event in Philippine aquaculture to date," the three-day congress featured a marathon presentation of over 50 lecture topics and 25 research papers in mariculture, shrimp farming, processing, and marketing. Likewise, over 30 trade exhibitors showed their latest products,

equipment and services.

According to PACE Director Philip Cruz, the Philippines has steadily dropped in ranking in world aquaculture production, being 4<sup>th</sup> in 1985 to 11<sup>th</sup> at present. If aquaculture players fail to act together now, Cruz warned, the country might not have an aquaculture industry to be proud of given the fast pace and high-end technology that the country's competitors are working on.

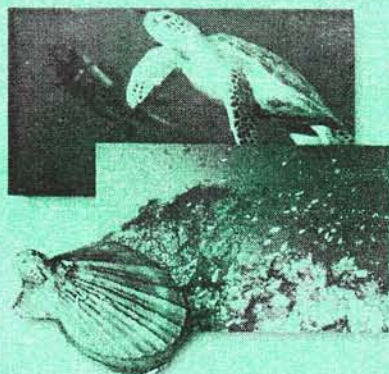
Cruz claims that the Philippine aquaculture industry has failed to put into effective commercial use the extensive experience and technology already generated and being continually generated.

"This is why we have organized PACE. With the theme 'One sea, one industry,' PACE (is) to be primarily a platform for promoting the commercialization of progressive technologies, enhancing the exchange of ideas, and encouraging the different sectors to work together," Cruz said.

"The private sector should take a lead role in promoting the growth and development of the aquaculture industry...only when the private sector is strong and united can government realize its role in supporting the industry," Cruz added.

Bacolod City Mayor Joy Valdez, Dagupan City Mayor Benjamin Lim, UP Aquasoc President Arlene de la Vega, SEAFDEC Chief Rolando Platon, and PCAMRD-DOST Exec. Director Rafael Guerrero, Jr. were some of the special guests of the event. *(Thea Kristina M. Pabuayon)*

## Agri-Aqua fair showcases products, technologies



As part of the month-long Farmers and Fisherfolk Month, the Agribusiness and Marketing Assistance Service (DA-AMAS) through the Department of Agriculture (DA) spearheaded the Agri-Aqua *Tiangi* and Machinery Fair at the DA grounds from May 5-30, 2003. The Bureau of Agricultural

Research (BAR), other DA bureaus and attached agencies, and the different regional clusters participated in the fair, showcasing the various agricultural products and the latest innovations in agricultural and fishery technology. Agriculture Secretary Luis P. Lorenzo Jr. led the ribbon-cutting ceremonies, officially opening the trade fair and machinery exhibit.

On May 5-9 exhibitors were from Cluster 1, composed of Regional Field Units (RFU) I, II, III, and Cordillera Administrative Region, Cotton Development Administration (CODA), Philippine Coconut Authority (PCA), National Tobacco Administration (NTA), Bureau of Plant Industry (BPI), Sugar Regulatory Administration (SRA), National Agriculture and Fishery Council (NAFC), Bureau of Agriculture and Fisheries Product Standard (BAFPS),

and the High Value Commercial Crops – Project Management Office (HVCC-PMO).

Cluster 2 was in charge of agri-fishery exhibit on May 12-16. The cluster is composed of: RFU IV-A, IV-B, V, National Food Authority (NFA), Philippine Rice Research Institute (PhilRice), Bureau of Soils and Water Management (BSWM), Fertilizer and Pesticide Authority (FPA), Bureau of Postharvest Research and Extension (BPRE), National Nutrition Council (NNC), and Grain PMO.

On May 19-23, Cluster 3 featured the best products of the Visayas Regions by RFU VI, VII, and VIII. BAR had its Vision/Mission visual display and distributed copies of *BAR Chronicle*, *BAR Legal Mandate*, and various research, development and extension (RDE) network newsletters.

☞ see Agri-Aqua fair... page 7



## BAR strengthens OFRs

Despite the recent 60% cut-off in the R&D budget, Bureau of Agricultural Research (BAR) Director William C. Medrano announced that the Bureau will double the 2003 budget for on-farm research (OFR). The announcement was made during the 2<sup>nd</sup> Quarter Regional R&D Meeting on 14 May 2003 at the Alhambra Hotel, Bacolod City.

The increased appropriation for OFR is part of the seven point RDE agenda of Director Medrano, which he laid down when he took over the directorship of BAR in February 2003. This is also part of BAR's effort to accelerate technology promotion so that new knowledge and technology generated

from research could be put to use immediately.

This year alone, BAR has allotted P39.8 million for the conduct of OFR, a big amount compared to last year's appropriation of P19 million only. Out of the P39.8 million, P35 million pesos is allotted for agriculture OFRs while the remaining P4.8 million for fisheries in the regions.

According to Director Medrano, it is through these OFRs that the Bureau can directly create an impact on the productivity of farmers and fisherfolk and likewise strengthens the research and extension linkage. He emphasized the urgency of bringing newly generated



technologies to the target clientele because, according to him, technology adoption is the only proof that research has been timely delivered.

His initiatives to strengthen technology promotion is consequential to DA Secretary Luis Lorenzo's agenda to raise farmers income, generate employment and achieve food sufficiency to benefit first and foremost the resource-poor farmers and fisherfolk. (*Rita T. dela Cruz*)

## Philippine agriculture open academy kicks off

The Philippine government has invested substantially on information and communications technology (ICT) infrastructure over the recent years. This infrastructure is now harnessed to modernize agriculture in the country, particularly in strengthening research-extension-farmer linkages for wider agricultural research and extension impact.

As a start-up activity to generate awareness, appreciation, and understanding on the use of ICT and distance learning in Philippine agriculture, the "Leapfrogging Research-Extension-Farmer Linkages for Agricultural Modernization in the Philippines" seminar-workshop was held at the Philippine Rice Research Institute (PhilRice) Science City of Muñoz, Nueva Ecija on May 8-9, 2003. Dr. Esteban Godilano, Mr. Winston Tabada, and Mr. Ricarte Castro of the Information and Communications Technology Section

(ICTS) represented the Bureau of Agricultural Research (BAR).

This workshop-seminar laid the groundwork for the establishment (through a series of capacity-building activities) of an Open Academy for Philippine Agriculture. Virtual extension-education aims to provide better alternative to leapfrog research-extension-farmer linkages in the Philippines.

Other participants of the seminar-workshop were from the Department of Agriculture (DA) – Office of the Secretary, DA Regional Operation Group (ROG), DA – Regional Integrated Agricultural Research Centers (RIARCs), DA – Agricultural Training Institute (ATI), PhilRice, Philippine Council for Agriculture, Forestry, and Natural Resources Research and Development (PCARRD), University of the Philippines Los Baños (UPLB), UP Open University, Central Luzon State University, Nueva Ecija Local Government Unit (LGU),

Winrock International, International Rice Research Institute (IRRI), International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Philippines' Research Education, and Government Information Network (PREGINET), and farmer-leaders.

The seminar-workshop enabled participants to explain the role of ICT and distance learning in leapfrogging research-extension-farmer linkages to modernize Philippine agriculture; appreciate, adapt, and apply experiences of various national and international institutions in ICT and distance learning; and discuss and plan the establishment of an open academy for Philippine Agriculture.

Topics discussed during the seminar workshop were: PREGINET, DA's National Information Network, ICT Infrastructure and E-extension initiatives at PhilRice, The Rice

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## Visayas sustainable agriculture workshop held

The Visayas-wide Consultative Workshop on Philippine Sustainable Agriculture program was held at the Agricultural Training Institute (ATI), Banga, Aklan on May 28-29, 2003. This is the second regional consultation workshop on sustainable agriculture. The first regional consultation for Luzon was held at the Philippine Rice Research Institute (PhilRice) in Batac, Ilocos, Norte on May 20-21, 2003.

This workshop is part of a series of consultative meetings on the "Philippine Sustainable Agriculture Program (PSAP)" proposed by the Task Force on Sustainable Agriculture. This Task Force is composed of Department of Agriculture (DA)-recognized non-government organizations (NGOs) and people's organizations (POs) that include: Philippine Network of Rural Development Institute, Inc. (PhilNet RDI); Philippine Rural Reconstruction Movement (PRRM)' Pambansang Kilusan ng mga Samahang Magsasaka (PAKISAMA);

and Social Action Center (SAC) – Tarlac. The group initially met with concerned program directors and heads of bureaus/attached agencies of DA for a planning workshop at PhilRice in Muñoz, Nueva Ecija on March 20-21, 2003 to discuss the proposal.

During the Visayas-wide consultative workshop, Mr Leonardo Rosario of PhilNet RDI and Mr Roldam Paraguison of PRRM, presented PSAP to the workshop participants. Ms Teresita de Quiros (Consultant, NGO Desk, Office of the DA Secretary) talked about the workshop objectives and mechanics. Participants from Regions VI, VII, and VIII presented their workshop output and these were synthesized by Ms. Esperanza Dacanay of the Bureau of Soils and Water Management (BSWM).

Mr. Angel Morcozo of the Knowledge Management Division and represented the Bureau of Agricultural Research (BAR) in the workshop. (Likhá C. Cuevas)

### Philippine agriculture...

Knowledge Bank (brokering rice science into practice using appropriate ICT), The Tomahawk Technology (the backbone in agriculture), ICT application in information and delivery service (the PCARRD experience), Pinoyfarmers.com, potentials of distance learning in modernizing Philippine agriculture, and the open academy for Philippine agriculture. There were also workshops for participants and the outputs of each

were presented before the closing program and awarding of certificates.

ICT capacity building is to help strengthen the potential of ICT in modernizing the country's agriculture by linking researchers, extensionists, and farmers. ICT, with distance learning and other innovative extension-communication approaches, builds a critical mass of people communicating and learning together even across great distances, facilitating technology utilization, support delivery, social mobilization, and empowerment. (Likhá C. Cuevas)

### Sciencescoping...

year and all sectors of the corn industry were explicit in saying that the big corn deficit in the country could be solved using biotechnology. The benefits that would accrue to the corn farmer if he used Bt corn include: more profit through higher yield, less input, and less post production losses; stable yield thus, a stable income; longer storability through less kernel damage; less exposure to harmful chemicals; and planting flexibility. We would then have a food or feed that is: cleaner through less organic contaminants and microorganisms; safer because of less pesticides used and less mycotoxins; cheaper in the long run; and more nutritious.

Let us not be laid back by comments and issues we do not fully understand. Credible scientists from eight countries including the Philippines and European Union have made independent safety assessment of the Bt corn MON 810 and all have agreed on its safety on health, to animals and human, and to the environment.

Could there be more vigilant and health conscious people than those living in developed countries? And yet they have allowed the planting of Bt corn for food. Unconsciously, we have been consumers of this Bt corn. Your crunchy corn chips contain Bt corn. Can we still be hypocrites?

Global surveys show that consumers are not as fastidious about GM foods as before. This does not mean that they are no longer concerned, only that they have more information and understanding of the technology. Like any other innovation, the initial high concern would settle down as soon as more is learned about the technology. In the UK, US, and Australia, GM foods have become their lowest food concern priority. They are now more concerned on food poisoning, growth hormones, pesticides, and human tampering.

With all the fuss created on Bt corn, could the Philippines be far behind? (VAD) ■



The word success could mean different things to us. Most people measure success by the amount of money in their pockets while some quantify it by the achievements they were able to pull off in life. Some simply measure it through emotional gratification—as long as they are happy and contented, it's already a big achievement, they say.

But for Dr. Paisal M. Abdul or *Pai* to his friends, success is a personal thing and he measures it both by achievements and personal fulfillment.

In 1999, the Bureau of Agricultural Research (BAR) granted him a scholarship through the Institutional Development Grant (IDG) given to the Department of Agriculture-Autonomous Region of Muslim Mindanao Integrated Agriculture Research Center (DA-ARMMIARC), his mother institution.

Dr. Eliseo Ponce, who was then the director of BAR, set an amount under the IDG for ARMMIARC to strengthen its institutional capability and a small appropriation, was also appropriated for their human resource development (HRD).

ARMMIARC is a young institution and it needs all the support it can get. *Pai* was the first beneficiary of that HRD program and became one of BAR's first scholars to be awarded the grant in 1999.

*Pai* finished his studies after enrolling in 2000 at the University of Southern Mindanao (USM), Kabacan, Cotabato City. He was given choices of schools and universities for his doctorate but he opted for USM to be near his hometown and his mother agency. On April 11, 2003, he was conferred a doctorate degree in Extension Education (minor in Seed Technology), making him the first PhD holder in ARMMIARC.

Born in Datu Piang, Maguindanao Province, *Pai* has always hungered for new knowledge. He took his A.B. Economics at Notre Dame University, Cotabato City. He was also awarded a diploma in Agricultural Economics at the University of the

## On the road to success

by Rita T. dela Cruz

Philippines Los Baños (UPLB), College, Laguna. He was not satisfied with a B.S. degree and a diploma course so he pursued and finished his M.S. in Agricultural Economics in Kasetsart University, Bangkok, Thailand also through a scholarship grant.

He has been affiliated with DA since his early 20's and has been working in ARMMIARC as assistant to the RIARC manager for agriculture program. Now that he has the doctorate degree, *Pai* strives to double his effort in serving his institution in restructuring and implementing their programs.

When asked about the projects that ARMMIARC is concentrating on, he mentioned the recent announcement of BAR Director William C. Medrano regarding the doubling of OFR budget in the regions for 2003. He explained



that, "ARMMIARC concentrates on OFR and it's indeed good news that the BAR director totally supports this endeavor despite the 60% cut in their budget." He said that as of now, their Center is implementing five OFRs, two in Lanao and three in Maguindanao.

Although described as strict by some of his colleagues and subordinates, he said that he would like to be remembered as a man of action, not leaving things undone and always putting important things first in his agenda. ■

### BAR, PCARRD...

whole.

The meeting led to an open consultation and discussion on how BAR would be able to prioritize its programs given the meager investments in R&D. Listening to and presiding over the discussions were BAR Director William Medrano and PCARRD Executive Director Patricio Faylon. Among the inputs, pieces of advice, and insights shared during the discussions include: investments on projects with direct impact to the clientele, focus more on basic research, pre-determine efficient and effective directions or prioritization scheme for funding, intensification of the role of the local government units (LGUs), and strengthening the commercialization of tech-

nologies.

Another important item discussed during the meeting was, the scientific community's stand on the issue of *Bt* corn, as the debate on its rumored health and environmental implications heats up. The group noted that the issues raised against *Bt* corn and other products of biotechnology were merely products of misinterpreted scientific reports. Moreover, the continuous dissemination of this so-called "war propaganda" as Dr. Edwin Hondrade, president of Crop Science Society of the Philippines (CSSP) puts it, has consigned the public and some policy makers to ignorance and manipulation by the anti-groups that are providing funds and misinformation for this campaign. As initial move to resolve this, the group agreed in strengthening

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# Waging war against the pesky whiteflies

by Junelyn S. de la Rosa

For such a tiny insect at two millimeters, the whitefly can pack a damaging economic punch to the vegetable and ornamental industry. Whitefly is a double disaster for crops such as cabbage and *gerbera* causing serious crop losses for the direct damage on the plants and viruses it carries.

The whitefly has a short lifecycle of 18 to 30 days but its fecundity is high at about 30 to 300 eggs per female. It attacks about 500 species of plants in over 70 families. As a vector, it can transmit about 20 viruses that can cause over 40 crop diseases. The whitefly also produces a honeydew substance that promotes growth of sooty mold, which interferes with plant growth.

Among the 23 whitefly species in the Philippines, four are major pests. These are the spiralling whitefly (*Aleurodicus disperses* Russel), wooly whitefly (*Aleuothrix floccosus* Maskell), tobacco whitefly (*Bermisia*

*tabaci* Gennadius) and greenhouse whitefly (*Trialeurodes vaporarum* Westwood).

Today, whiteflies are found all over the countryside infesting a wide range of agricultural and horticultural crops. They are becoming increasingly difficult to control using chemical insecticides because they easily develop resistance and often inhabits the undersides of leaves which are difficult to spray.

Recently, scientists are turning to biological control strategies to minimize if not replace chemical control. A team of scientists from DA-RFU 7 studied parasitoids infecting whiteflies in cabbage and gerbera as well as cultural management practices used by farmers to control whiteflies.

Scientists studied two parasitoids- *Encarsia* sp. and *Eretmucerus* sp. infecting the whiteflies. *Encarsia* sp. was introduced to vegetables in the field and cutflowers in



a greenhouse and monitored for three cropping seasons. Scientists found that a continuous inundative release of the parasitoid is necessary to ensure that the whitefly population is maintained at a non-damaging level. In this study, a monthly release of 2,000 *Encarsia* parasitoid or 0.5 grams of black pupa was done for three consecutive months.

Adult *Encarsia* feeds on the honeydew and body fluids of the whitefly larvae but honey was added as a food supplement to lengthen their life span. Scientists found that parasitoids that were given honey survived longer.

Scientists also documented cultural management practices that are used by the farmers to control whiteflies. Some of these were: adjusting planting dates, planting in low infested areas, destroying infected crop residues, crop rotation, using resistant cultivars, use of yellow sticky traps and applying specific insecticides to protect other parasites, predators and pathogens of whiteflies in the field.

While these practices cannot completely eradicate the whiteflies problem, scientists say that these practices can be incorporated in a safe and sustainable integrated pest management strategy which can win the war against the pesky whiteflies. ■

Source: Evaluation of the Parasitoid Attacking Whitefly (Homoptera: Aleyrodidae) in Cabbage and Gerbera by Norma Repol and Wilberto Castillo of the Regional Crop Protection Center, Mandaue Experiment Station, DA-RFU 7 at Tel. No. 032-345-3483

## Agri-Aqua fair...

Other exhibitors were the: Bureau of Fisheries and Aquatic Resources (BFAR), Philippine Fisheries Development Authority (PFDA), Agricultural Training Institute (ATI), Agricultural Credit and Policy Council (ACPC), Philippine Crop Insurance Corporation (PCIC), Quedan and Rural Credit Guarantee Corporation (QUEDANCOR), and the Fishery PMO. Cluster 4 exhibited products

and technologies from the Mindanao Regions during the last week of May. RFU IX, X, XI, XII, XIII, and ARMM, joined the Bureau of Animal Industry (BAI), Livestock Development Council (LDC), National Meat Inspection Commission (NMIC), Philippine Carabao Center (PCC), National Dairy Authority (NDA), Bureau of Agricultural Statistics (BAS), the Livestock PMO during the last week of the Agri-Aqua Fair. (Likha C. Cuevas)



# Medrano keynotes this year's PHILARM convention

In the absence of DA Secretary Luis Lorenzo Jr., BAR Director William Medrano delivered the keynote message for this year's 13<sup>th</sup> National Convention of the Philippine Association of Research Managers, Inc. (PHILARM) held on 11-13 May 2003 at the Prominence Inn, Singang, Bacolod City. Director Medrano is currently the vice-president of PHILARM and according to the Association's bylaws he will eventually be the president in 2004.

PHILARM is a private, non-profit, professional organization dedicated to the promotion and enhancement of the role of managers in improving and sustaining productivity in research. It was established in 9 September 1989 and has been active as a leading professional association for research management not only in the country but also in the whole Asia Pacific Region. Director Medrano has been a bonafide member of this Association for 11 years now.

According to Director Medrano, this year's theme, *Enhancing*

*Entrepreneurship and Technology Commercialization Through Innovative R&D Management* underscores the role of innovation in all R&D efforts to develop more relevant researches that will increase and sustain the development of the agriculture and fishery sectors of the country. Moreover, it exemplified the priority targets of DA Secretary's priority targets—to focus implementation of programs that have direct impact on the lives of the majority of small farmers and fisherfolk of the country.

In conclusion, Director Medrano posed two challenges to the participants of the convention. One, is to actively take part in the activities and relevant concerns to enable the drafting of a meaningful and relevant program for the agriculture and fishery sectors. Lastly, he challenged all members of PHILARM to help strengthen the partnership of the private and public sectors in R & D and be more effective in moving technologies and information to the resource-poor farmers and fisherfolk. (Rita T. dela Cruz)

## BAR, PCARRD...

media relations to provide awareness knowledge to the public. BAR, in coordination with the scientific organizations, shall produce and send series of articles to national newspapers and magazines highlighting the benefits of *Bt* corn to farmers so that people are not misinformed.

The third and last issue tackled during the meeting was the possibility of forming a coalition of scientific organizations for R&D so that the sector would have a unified voice and stand about the dwindling budget allotted for R&D. Director Medrano emphasized the importance of this coalition in establishing a better picture or scenario of R&D in the future. Corollary to this agenda, Mr. Braulio Tamayo, head of the Policy and Planning Unit (PPU) presented a manifesto rationalizing the budget for

R&D. Some changes and suggestions were made after the presentation. The manifesto will be sent to agencies concerned like the Department of Budget and Management (DBM) and National Economic Development Authority (NEDA).

Scientific societies that participated in the meeting were: Conservation Farming Movement, Philippine Agroforestry Education and Research Network, Inc., Philippine Association for Plant Tissue Culture, Organization of Researchers in Biotechnology, Mycological

Society of the Philippines, Association of Colleges of Agriculture in the Philippines, Philippine Fruit Association, Philippine Association of Entomologists, Inc., SEARCA Fellows Association of the Philippines, Philippine Association of Research Managers, Crop Science Society of the Philippines, Philippine GIS Society, Pest Management Council of the Philippines, Philippine Society for Animal Science, and Philippine Society of Agricultural Engineers. (Rita T. dela Cruz)



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## The fight against *Musa* diseases

The country's top banana and abaca experts and officials convened recently to tackle and discuss policies and management strategies for the total eradication of the most dreaded viral disease that destroyed the abaca and banana industry in recent years.

"Abaca and banana bunchy-top virus could wreak incalculable damage if left uncontrolled," said SEARCA Acting Director Djoko Suprpto in the forum on Economic Implications of Banana and Abaca Bunchy Top Disease held in Ortigas Center, Pasig City, recently.

The virus was reported to have contributed to huge profit loss among small abaca farmers particularly in Eastern Visayas where 22 of its 28 towns were badly hit by the virus. Statistics shows that of 26,374 ha planted to abaca in Samar and Leyte, about 16,737 ha were severely affected by the disease. The two provinces were declared in a state of calamity last month.

Due to the extent of damage inflicted by the virus, some local authorities in Region 8 proposed the total stoppage of abaca and banana planting in the said provinces, stressing that it usually takes nine months to two years for a badly infected field to recover.

Southern Leyte Vice Governor Eva Tomol, in her report opposed the proposal by stating that most of the farmers in the province

are fully dependent on abaca farming and it is not logical to cut their main source of living. She reported that the provincial government has already piloted a community-managed strategy dubbed "*Bantay Alkoheres*" which involves strict monitoring of abaca planting barangays infected by the disease. This helps the local government in the development of protocols and quarantine procedures suited to specific areas.

The Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) Executive Director Patricio Faylon discussed the management strategies crafted by the Fiber Industry Development Administration (FIDA), Department of Agriculture-Bureau of Agricultural Research (DA-BAR), Department of Science and Technology (DOST), and University of the Philippines Los Baños (UPLB) to rehabilitate the downed banana and abaca industry and put total control of virus spread.

Among these measures are establishment of more tissue culture laboratories that produce disease-free planting materials; virus indexing of planting materials to rapidly identify infected plants; promotion of "*tusok*" method wherein an herbicide-treated bamboo is stuck to infected tree; screening of varieties resistant to the disease; training of banana and abaca farmers through farmers' field

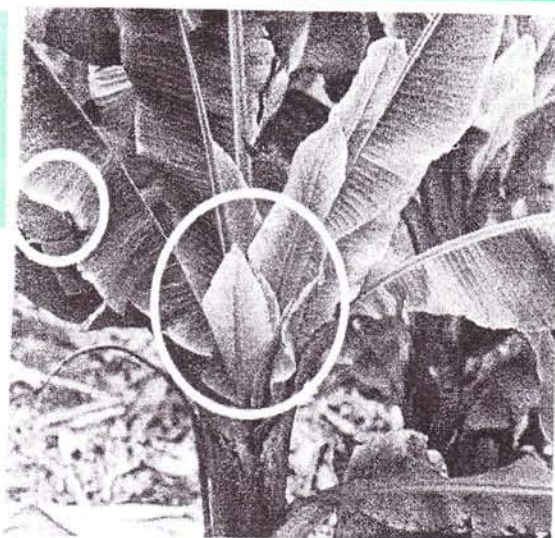


photo courtesy of <http://www.hawaiiag.org/hdoa/graphics/photo40.jpg>

school, and development of transgenic banana and abaca varieties tolerant to the disease.

According to FIDA Administrator Cecilia Soriano, the government has already established six tissue culture laboratories in Samar and Bicol and produced 17,420 disease-free plantlets for distribution to the farmers. Soriano added that FIDA has created a 10-point policy/protocol on the control and management of the disease adoptable at community level.

The government should allocate considerable budget or set special funds as immediate aid for economic recovery projects for areas considered as "hot spots" where severe incidence of bunchy-top is reported, Soriano underscored.

Banana R&D network leader Rene Espino pointed out that these strategies would not be as effective as formulated if these fail to motivate the farmers to fully participate in the program. He said that the programs should have the capacity to invoke change in the farmers' attitude while making them understand that they, too, are important partners towards the total eradication of the viral disease. (Mary Charlotte O. Fresco, S&T Media Service)



# Philippines' first tilapia sperm bank is also the world's first

by Junelyn S. de la Rosa



**T**he world's first and only tilapia sperm bank can be found in a P2 million two-storey building of the National Freshwater Fisheries Training Center (NFFTC) in the 35-ha sprawling compound of the Central Luzon State University (CLSU), Science City of Muñoz, Nueva Ecija.

Inaugurated in March by President Gloria Macapagal Arroyo, the bank holds a vast collection of tilapia germplasm from all over the world--from Israel, Singapore, Taiwan, Thailand, Egypt, Kenya, Senegal, Ghana--and the local indigenous species. The gene bank has a collection of eight strains of founder stocks of tilapia, 281 straws from the founder stocks and 480 straws of fish samples produced

through the Bureau of Fisheries and Aquatic Resources's (BFAR) selective breeding program.

Among the live specimen, the oldest strains are the 21-year old Singapore strain and the 20-year old Israel strain kept in captivity since 1982 and 1983, respectively.

The facility has a cryopreservation laboratory equipped with Kryo-10 series that controls the temperature of the specimens within the range of +30 degree Celsius to

180 degree Celsius. It has also a wet laboratory, a storage room, artificial incubation system, conference room, computer area, and a multi-purpose hall.

To preserve the specimen, the Center employs cryopreservation or quick-freezing to stop chemical processes in the cell without damaging the viability of the cells. If kept under ideal conditions, these frozen sperms could be revived and used to fertilize the tilapia eggs to propagate new founder stocks or develop strains with better and more competitive characteristics. Through the years, the collection has been used to create a tilapia strain that is ten times bigger and to improve the meat quality of the native strains.

## History of the Center

The facility was established in 1987 when the Genetic Improvement of Farmed Tilapia (GIFT) project was conducted in collaboration with the International Center for Living Aquatic Resources Management (ICLARM) with funding from the Asian Development Bank (ADB) and the United Nations Development Program (UNDP). The ten-year project produced a systematic and selective breeding program in tilapia.

In 1997, when the project was concluded, project collaborators such

see Philippines' first... page 7



The adaptability of *Gliricidia sepium* to any type of soil makes it an ideal tree for any farmer who wants to cultivate a plantation of it. It's perhaps one of the easiest growing plants one could find.

In Central America it's called *Madriado*, *Cacao de nance*, *Mata raton* or *Madre de cacao*. Here in the Philippines, it's locally known as *Kakawate*, a leguminous tropical tree that grows mostly in forests and could grow from five to ten meters tall. Although native of Central America, it has been naturalized everywhere because of its adaptability to any type of condition.

## Kakawate and its many uses

by Rita T. dela Cruz

*Kakawate* defoliates during dry season and flowers at the same time. So you could just imagine how odd-looking but beautiful *Kakawate* is during the dry season—leafless tree with nothing but branches and flowers. The flowers are pea-like with petals that are usually lavender, pink or white. It also bears fruits that look like a leathery pod and seeded.

*Kakawate* is very easy to propagate and inexpensive. The tree could re-sprout very quickly after pruning. Many farmers plant them mainly to shade other perennial crops like cacao, coffee and tea. Aside from this, *kakawate* could provide a lot of uses to the farmers from its roots to its leaves. Its multipurpose use makes it a

good plant crop in agroforestry.

Since *kakawate* is a legume, it is useful for fixing nitrogen in the soil, thus improving soil quality and increasing crop yields. *Kakawate* has strong roots. It stabilizes sloping lands and reduces soil erosion. Its wood could be used as firewood, hedges, and fencing field. The leaves are rich in nitrogen and other nutrients suitable for green manure and fodder to farm animals.

But the innovative uses of *Kakawate* are not limited to fodder and firewood. Farmers have often overlooked the other important uses of *Kakawate*—as rodenticide and insecticide.

die of hemorrhagic poison. After the bait was consumed it would take one to two days before the farmers could find them dead on the fields.

Aside from its ability to kill rats, *Kakawate* is also a good insect repellent. It has same active substance that could wipe out the insects alighting on farm animals. To do this, farmers would collect the silky, young leaves of *Kakawate*, ground them and mixed them with water. The farm animal is then applied with the resulting pasty cream.

Although *kakawate* proved to be an effective insect repellent and rat



The bark of *Kakawate* is stripped and cooked with grains like corn or rice and used as poisonous bait for rodents. The advantage of *Kakawate* as bait is that the rats do not develop bait shyness that is common in using synthetic rodenticide. The *Kakawate* has distinctive aroma that could attract the rodents that eventually, with the right amount could terminate them.

The active substance in *Kakawate* is not a rapidly acting substance and needs repeated doses for it to be effective. But unlike commercially prepared rat killers, it is less lethal in case of accidents. Farmers who used *Kakawate* observed that when rats eat it, their hands stiffen and they get bloated and

killer as many farmers proved it, further research has not ensued to develop it. One huge reason is the immediate availability of commercially manufactured insecticide and rodenticide in the market which would be likely more preferred particularly in first world countries. But in third world country like the Philippines, such knowledge is important and valuable. Imagine, farmers could now obtain rat poison and insect repellent at no cost. ■

#### Sources:

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# Corn network zeroes in on budget issue

Everything else can change either for the better or for worse, but one thing is definite: projects cannot be left hanging.

This dilemma squeezed out the extent of dedication of the people in corn research, and their resourcefulness. The Network is currently working on six high impact projects (HIPs) and 14 regular projects. With total budget requirements for all projects at more than P5.5M, and with a relatively lower 2003 budget for the network, recommendations of tapping other sources of funds were discussed during the 2<sup>nd</sup> Quarterly Core Technical Meeting of the National Corn RDE Network held at the Farming Systems and Soil Resources Institute (FSSRI) conference room in the University of the Philippines Los Banos, June 21, 2003.

The financial status of the four projects of the National Corn Action Program was one of the agenda. Fast-tracking of the processing of the MOA and release of funds for the Corn Technologies Promotion and Commercialization Program was recommended. This is a joint project of the DA-GMA Corn Program and the Bureau of Agricultural Research (BAR). It will initially focus on Regions II, VIII, and X due to budget constraints.

Processing of the MOA of three other projects was also recommended. These projects are: a) On-Farm research and outreach in major white corn-growing areas, b) Technical complementation to institutionalize Farming Systems Approach (FSA) to the National and Regional Corn RDE Programs; and c) National seed production and distribution of improved white corn seeds, a Grains Sector Development Program (GSDP)-funded project.

The Farmer-Scientist Training Program (FSTP), which will end in July 31 this year requested for additional funding. Program proponent Dr. Romulo Davide was advised to submit a new detailed project proposal and budget requirement.

Capsule proposals submitted to the network were also reviewed. These include: a) Safeguarding the local diversity of traditional white corn germplasm in the Philippines; b) Knowledge-based corn yield forecasting system c) Profile of Mycotoxin in corn; d) Awareness campaign on Mycotoxin prevention and control; and e) Development, testing, and evaluation of sensors for solar radiation, air temperature, rainfall and wind measurements. Leaders of the proposed projects were requested to submit detailed proposals, budget requirements and work plans for evaluators and technical reviewers.

Network officials present in the meeting were Dr. Artemio Salazar, Dr. Romeo Labios, Dr. Emiliana Bernardo, team leader, assistant team leader, and adviser respectively; CTT members Dr. Eduardo Paningbatan for Soil Science and Dr. Reynaldo Acda for Agricultural Engineering were also present. Lot Pua, and Ana Gabatin, network staff, and Karen Salandanan, of DA-BAR, assisted in the meeting. *(Ma. Lizbeth J. Baroña, with reports from Karen Salandanan)*



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(<http://www.abcinformation.org/incubator/applications/news/uploads/CoexistencepaperBrookes2003.doc>)

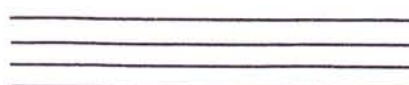
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(<http://www.agbios.com/main.php>)

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