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ICRISAT shares watershed mgt approach for Asia drylands

Dr. Suhas P. Wani, ICRISAT principal scientist on watershed management

Dr. Suhas P. Wani, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) principal scientist on watershed, lectured on the watershed management approach his research team used in various dry areas in Asia.

The Bureau of Agricultural Research (BAR), through its Knowledge Management Division (KMD) sponsored this seminar on *Sustaining Agricultural Productivity and Incomes in the Drylands of Asia* at the Bureau of Water and Soil Management (BSWM) Convention Hall, Elliptical Rd., Diliman, Quezon City on 21 July 2004.

Dr. Wani discussed the innovative participatory consortium approach watershed model used by ICRISAT in its research. He related the different methods they used in farm-based rainwater conservation, soil and water conservation, integrated pest management, integrated nutrient management, income-generating agri-horticultural and vegetable system, and other income-generating activities to help increase the farmers' productivity and income.

The lecturer concluded that the current model of the ICRISAT-led consortium's integrated watershed management, "seems to have very high potential for bringing favorable changes in the drylands of the semi-arid tropics." He said that on-farm watershed managed through community participation could sustain productivity of dryland and holistic systems approach through integrated watershed management resulted in sustainable increased farm productivity.

A special guest in this seminar was ICRISAT Director-General William D. Dar, one-time BAR director and DA secretary. Dr. Santiago R. Obien and Dr. Danilo P. Baldos, BAR senior technical adviser on institutional development and seed systems, respectively, were the reactors during the seminar. Dr. Obien later moderated the open forum. KMD Head Angel Morcozo gave the closing remarks.

The KMD, the organizer of the seminar series, is tasked to process technologies and information from various sources and develop these into knowledge products for the Bureau's clients. One of these strategies in communicating knowledge products to the public is through seminars. The KMD seminar series provides a vehicle for technologies to be presented and shared by researchers with the public and BAR's clients. *(Likha C. Cuevas)*

INSIDE...

BAR and stakeholders aim at a UNDP project

The Bureau of Agricultural Research (BAR), in its bid to clinch a project with the United Nations Development Program (UNDP), met with its national stakeholders to discuss their respective roles in the proposed project entitled, ***"Sustainable Conservation and Utilization of Indigenous Crops and Wild Relatives"*** at the Bureau of Soils and Water Management (BSWM) Hall, July 22.

The premise of the biodiversity conservation project is to have the genetic resources from the sprawling biodiversity around preserved and stall the rapidly vanishing number of species from extinction. This 7,100-island archipelago is home to over 39,000 species of plants and animals, where 67% of these is endemic to the country.

However, being blessed with such agro-biodiversity is the challenge of

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SUCCESS STORY

A lady sheep raiser

by Virginia A. Duldulao

"It is difficult to go up the mountains at this time, so why don't you visit a sheep farm," suggests Mr. Edito Bañares, the Cagayan Valley Integrated Agricultural Research Center (CVIARC) manager when I tell him my desire to feature a successful community in Nueva Vizcaya.

That would be interesting, I say to myself, so we do not attend the last paper presentation at the pre-inhouse research review for the day where I am serving as evaluator and off we go to Alibago, Ilagan. "We," is Dr. Anita Asuncion, officer-in-charge of CVIARC-Ilagan Breeding Station, Sergio Darang, and me.

When we stop at a gate after getting inside a narrow road lined with paper trees at both sides, our vehicle stop and I try to step out but they tell me to stay put. A gate is opened and we travel a little more to reach two big poultry houses, a vehicle parked at the side, piggery pens, a rest house and behind it, a big house.

We are met by a gracious and lovely, young lady. I think she is the daughter of the sheep farmer.

"Meet Magnolia Medina, our successful sheep raiser," introduces Annie. I cannot believe what my eyes are seeing. It is only when Grace (her nickname) begins talking knowledgeably about sheep that I accept who she is.

"We started with goats but they are difficult to maintain," says Grace. "When I visited a friend's farm, she gave me a pair of sheep. This pair went with the goats to graze. My husband and I began observing them. Unlike the goats that keep on moving and eating anything along their path, the sheep stayed in one place until they finish eating the grass to the last morsel. The sheep are okay, he said, and bought two dozens from a friend in Cagayan. They began to multiply and there is no mortality. We never slaughter sheep even during important occasions, except when they meet accidents and have broken legs. We started on sheep farm in 1997 and now we have about 360 heads," explains Grace as she brings us to the sheep's shed made up of an open permanent structure that has a second floor.

I am amazed. I have not seen as many sheep in my life. And they are not like what I have seen before with the dirty fleece. Among them is one as big as a young calf standing majestic.

"That's the Katahdin, which the Medina family bought from us," Annie points. I remember early in the day when she presented her paper, the Katahdin is a good breed to produce the meat type. They bought it for P15,000. Females are sold at P9,000.

As if guessing the question I am about to ask, Grace explains that at the onset of the rainy season, sheep grow their fleece and this is shed off as soon as the weather becomes hot. This is a climate adjustment mechanism of this animal. Unlike goats that run under the shade when there is rain, the sheep can tolerate rain so they keep on grazing. They only practice cut and carry when the rain is heavy.

The males and the females are mixed together. The ewes give birth twice a year and so with the Medina's target of 500 females before they start selling ewe is not far because they now have 360 that are mostly females. They sell about 200 males a year at about P2,000 per head, so that gives them about P400,000, and the expense is only for one sheep tender at P1000 per month and for dewormers to keep the ruminants healthy. There is no capital for food since they just graze around the 100-hectare area. In fact, the land is about 200 hectares but only half of it is being used.

One cannot imagine how this intelligent 33-year old city-bred (she is from Quezon City near SM North) manages her time. They have two offices for drug testing and licensing in Ilagan, a piggery (also in the farm), five kids, with the two eldest already taller than she is, (she married at 18) to take care of. Of course, Mr. Anton Medina, her rancher husband who is at the same time an economist helps her whenever he can because he holds office in Manila. They leased a 1000 ha pastureland in another town of Isabela and they have 130 heads of cattle and 20 horses.

"My in-laws love animals," she says.

"I have all the time," she says when asked where she gets all her stamina and time. "I have people who help me in the farm and in our offices. People come and buy our products here and the farm needs are delivered, like, we buy 30 sacks of feed at one time direct from the distributor who delivers the feeds here. I can even sleep inside my vehicle, beside the poultry house, or even under the trees so I know what is happening to the animals. They may be giving birth which needs immediate attention."

Grace was quick to point out that they would not be as successful with their sheep farm were it not for the technical assistance of the DA, from grasses to pests management and breeds. The pay-off for the Medinas and the DA was an award given to their entry in a festival, the **Most Outstanding Ewe**. Maybe, this is only the beginning as one observes the kind of relationship that prevails between this enterprising lady and the officers and staff of the DA.■

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Should we label GM foods?

NEWS FEATURE

BAR Director William C. Medrano delivering his opening remarks during the symposium on GM labeling organized by DA-STAG.

A year ago, anti-GMO campaigners rallied against the approval and commercialization of GM foods in the country. It caused heated arguments and debates between and among the scientific community, farmers, public, and private sectors. It got even more intense when *Bt* corn was finally introduced and tested in experimental fields of General Santos City. Some farmers asked the government to stop the commercialization of *Bt* corn citing some alleged harmful effects to human health and the environment. But recognizing that most of the supposed "harmful" effects were brought about by misinformation and provoked by private companies with hidden motives, the national government, through the Department of Agriculture-Bureau of Plant Industry (DA-BPI), approved the commercialization of *Bt* corn in December 2002.

The Philippines is the first Asian country to authorize the commercial production of a GM food crop but it has yet to pass labeling laws covering biotechnology products.

Is there a need to label GM foods?

This was the main question during the one-day symposium organized and facilitated by the DA-Secretary's Technical Advisory Group (STAG) held at the Bureau of Soils and Water Management (BSWM) Convention Hall, Elliptical Road, Diliman, Quezon City on 16 July 2004. Staff from DA-attached agencies and staff bureaus, scientists and researchers from University of the Philippines Los Baños (UPLB), International Rice Research Institute (IRRI), Syngenta, Pioneer, Monsanto, ISAA, and US Department of Agriculture (USDA) participated in the activity.

The symposium was conducted to help policymakers decide whether GM food labeling should be allowed in the country, given the technical aspects of food labeling and its cost implications. This is a big concern not only for our food producers i.e., farmers and processors but most especially, the consumers. Dr. Saturnina C. Halos, chair of the biotechnology advisory team of DA, presented the technical aspect of GM food labeling focusing on its biotechnology principle, human safety evaluation, and GM detection in food.

Meanwhile, Dr. William C. Medrano, director of the Bureau of Agricultural Research (BAR), one of the lead agencies sponsoring the activity, provided the opening remarks. According to him, appropriate labels on GM foods, which are significantly different from their conventional counterparts, could help alert consumers of their differences in terms of nutrition, allergenicity, and toxicity. Therefore, labeling could address some of the basic concerns of most consumers thus safeguarding public health against any potential risks, he said. He also mentioned that although 'informed choice' is good for consumers, there is also a need to study its socio-economic implications since GM labeling would incur additional expenses for the country.

Issues to consider in GM labeling

According to Mr. Augusto de Leon, team leader of the GM Food Labeling Team and one of the invited resource persons during the symposium, the issues surrounding GM food labeling is wide-ranging and complex particularly because "product labeling" does not simply entail putting labels on packaged food products. There are several processes and factors involved, especially its economic costs. He mentioned that the type of GM food labeling adopted by a country has significant impact not only to its domestic and international trade but to its agricultural and food production as well. That is why, he said, there is an imperative need to study carefully the GM labeling options available to developing country like the Philippines with utmost consideration to its national interest.

In the mandatory GM labeling, Mr. de Leon pointed out two important points in case the Philippines adopts the labeling standard: one, it should follow food safety measures and two, it should harmonize with the international standard setting and provide possible policy options for the country.

He stressed that a careful analysis of the international and domestic food supply chain and trade practices provides an understanding of the market and social forces that play important roles in the logistics involved to source out raw materials, and their primary production, processing and distribution as finished food products. For mandatory GM food labeling, differentiation of the product is said to be the emerging sole practical and internationally accepted method to obtain GM-free products from farm to factory to market retail.

Cost implications of GM food labeling

One of the negative aspects in setting up a labeling system is the additional costs

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that may arise from this process. At present, GM crops/foods and non-GM crops/foods are often mixed together during harvesting, storage or processing. It would be necessary to establish a system to segregate these crops along the food supply chain, especially when the market would like to source out for non-GM food products. Hence, additional cost would be incurred to establish and maintain segregation systems. Moreover, the detection and identification of GM foods require sophisticated laboratory tests, which in turn, might also incur additional cost for the industry.

Another issue is the cost of compliance. If food labeling would incur additional cost, it could eventually affect the food cost, which in the end could shift the burden to the consumers. Policies on the labeling of GM foods differ from country to country and are still evolving.

According to Mr. de Leon's report, a price increase of 10% for certain food items would have a material effect on the volume of purchase which could further aggravate the dismissal record in the eradication of malnutrition among Filipinos.

Viable options for a progressive labeling policy

Bearing in mind the socio-economic implications of GM food labeling in the country, Mr. de Leon proposed a more viable option to adopt a progressive labeling policy involving three phases over a well-defined implementation period.

The first phase of regulation involves the voluntary negative labeling for GM-free products to enable manufacturers and importers to label their products in accordance with their target domestic market. To complement this policy, there will also be an immediate imposition of mandatory labeling in cases where: 1) genetic modification resulted in distinct changes in composition of the product, 2) the food produced cause allergic response, and 3) intended use of GM derived food is different from existing counterpart food.

The second phase is the preparation for compliance with the emerging international labeling standards under existing multilateral agreements like the Codex Committee on Food Labeling (CCFL), Cartagena Protocol on Biosafety, and the World Trade Organization (WTO).

The third phase involves the formal adoption and actual implementation of the international labeling standard. At this stage, the country has to have the institutional

capacity to conform its domestic labeling policy to the established international standards.

Mr. de Leon mentioned that through this option, it would allow policymakers to observe trends in global agricultural production and international trade. Through this, domestic labeling policies would be responsive to the global trends in production and trade and gives the government enough time to build institutional capabilities to effectively implement its policies. Likewise, it would allow the private sector to adjust its corporate plans. *(Rita T. dela Cruz)*

Source:
"The cost implications of GM food labeling in the Philippines" by Augusto de Leon, Abraham Manalo, and Fe Cielo Guilatco with supplemental technical reports by Nina Gloriani-Barzaga. This is a socio-economic impact study conducted for the Philippine Bureau of Food and Drugs (BFAD)

Grants for Development-Oriented Projects

German Technical Cooperation (GTZ) commits PhP798 million-grant for development-oriented projects

The German Technical. Cooperation (GTZ), Germany's frontliner in international development, has announced in its website that the agency's grant commitment to the country, worth **Euro11.4 Million (or P798 million),** shall focus on high-impact, development projects aiming to reduce poverty in the rural areas.

Four priority areas/strategies to reach this goal were mentioned. They are: 1) Environmental Policy, Protection and Sustainable Use of Natural Resource, 2) Economic Reform and Market Development, 3) Water, Sanitation, and Waste and, 4) Health and Population

On the green sector, GTZ's future projects will focus mainly on environmental conservation and management of forests, marine, and coastal environments. Special attention shall be given to the Visayas region.

The GTZ has been working with the Philippine government for over 30 years. Based from the agency's 30-year experience in implementing projects, there are 2 key elements for sustainable development: **community participation** and the **people's enthusiasm to handle responsibilities themselves.** It has observed that a **tripartite arrangement** is an effective approach in the success of regional development projects. The involvement and sense of ownership of the **people and people's organizations (POs)** in the projects, with the support of **government agencies (GAs)** and **non-government organizations (NGOs),** is an effective formula for the success of GTZ-sponsored projects.

BAR is looking for partner organizations to initiate the tripartite arrangement, an approach preferred by the GTZ. As partner in development, BAR will offer its expertise on farming systems and agricultural technologies, project development and international collaborations, and its pool of scientists, experts and researchers.

Interested parties may visit our website, www.bar.gov.ph, for more details, or you may contact:

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BAR co-sponsors IYR stamp design contest

As part of the celebration of the International Year of Rice (IYR) this year, the Department of Agriculture - Bureau of Agricultural Research (DA-BAR) sponsors, together with the Philippine Postal Corporation (PhilPost), Department of Education (DepEd), Commission on Higher Education (CHED), and the United Nations Information Center (UNIC), the *International Year of the Rice National Postage Stamp Design Contest*. This contest is open to all students in elementary, high school, and college levels (public or private) and submission of entries is extended until August 20, 2004.

The theme for the artworks to be submitted is *"Ang Palay ay Buhay"* or "Rice is Life", which is the chosen theme for the IYR declared by the United Nations this year. The IYR aims to affirm the need to heighten awareness of the role of rice in poverty alleviation and malnutrition. The UN saw a need to focus the world's attention on the role rice plays in providing food security.

Entries must be made on a white illustration board and should be in a vertical format size 8 3/4 inches x 11 1/2 inches. The artwork must be accompanied by a write up or interpretation of the theme and design. It must be written legibly on an A4 size bond paper and must not be less than 100 words.

Artworks must be done manually using crayola, pastel, or watercolors. Computer-generated artworks are not allowed. There are no restrictions in the colors to be used in the artworks. All artworks must be originally done by the artist. The contest committee has the right to test the winning artist on the originality of his/her artwork.

The name and address of the artist, together with the name of the school and region, should be attached at the back of the illustration board. The design shall not incorporate the postage stamp theme or the numbers representing the denomination or year of issue.

Entries must be placed in a brown envelope and must be mailed through Domestic Express Mail (DEMS) or registered Mail to IYR 2004 National Postage Stamps Design Contest Committee, Marketing and Business Development, Philippine Postal Corporation, 1000 Liwasang Bonifacio, Manila. Entries through private couriers will be disqualified.

The first prize winning entry will be featured in the stamps, which will be launched in October 2004. All artworks submitted shall automatically become the property of PhilPost. The winning entry for the Elementary category will receive P15,000 and a UN recognition and special commemorative frame; P20,000 and a UN recognition and commemorative frame for the High School winner; and P25,000 and a UN recognition and commemorative frame for the winner in the College level.

DA-BAR will shoulder the third prize for the Elementary, High School, and College levels. *(Likha C. Cuevas)*

A look at...

"The price in the market fluctuates. Sometimes the price is high, and sometimes it is low. *Hindi naman puro hirap lang ang buhay ng magsasaka, eh. Ang solusyon lang talaga sa problema ay tiyaga at pagtitiwala sa mga tulong ng kinauukulan. Tingnan mo ako, masaya ako ngayon dahil sa tulong nila*", he concludes. ■

BAR and stakeholders...

NEWS

preserving the country's indigenous resources. Biodiversity is being threatened by both human and natural factors. This puts the valuable genetic resources of the country at risk of extinction.

This prompted BAR to propose a project that seeks to put up a national system for sustainable conservation and utilization of plant genetic resources for food and agriculture. The study will first focus on banana, abaca, root crops like ube, gabi, and indigenous vegetables.

The other stakeholders are the Department of Environment and Natural Resources (DENR), Department of Agrarian Reform (DAR), Department of Health (DOH), the DA-attached agencies, and representatives from the local government units from Regions I, III, IV, V, VII, XII, and the Cordillera Autonomous Region (CAR).

Each region presented its respective regional initiatives in conservation and utilization of the crops mentioned.

BAR Director William C. Medrano stressed the importance of working with the local farmers and communities in this endeavor.

"The farmers are the primary custodians of most of the earth's remaining bio-diversity. They hold the key to the conservation and proper use of this biodiversity. We can only be behind them in providing the support and inspiration." he said.

Deborah Landey, UNDP resident representative assured her audience the results of the project will be used as that base for the formulation of national policy and systems development for *in situ* conservation of agro biodiversity and for land use planning. She further said that the project is an important modality to facilitate the mainstreaming of biodiversity conservation and sustainable use within production systems.

On their part, stakeholders from the regions expressed support for the project, at the same time, sought help in establishing livelihoods activities for the indigenous people in their respective regions *(Ma.Lizbeth J. Baroña)*

FEATURE

Saving Asia's delicate watersheds

Today, more than ever the semi-arid drylands in Asia or the semi-arid tropics (SAT) are in a precarious condition. It is estimated that 1.4 billion people from 55 developing countries depend on them for food and livelihood thus, putting too much pressure on these fragile ecosystems. Moreover, the future paints a grim scenario of water scarcity, famine, and poverty in these areas which experts project will be home to most of the 1.1 billion population increase in the next 15 years.

To avert such a disaster of global proportion, scientists from the International Crop Research Institute for the Semi-Arid Tropics (ICRISAT) proposed the Watershed Management Approach. They are optimistic that the approach that is essentially a mixture of new holistic initiatives will be an effective model in bringing positive change and sustaining the drylands and billions of dryland dwellers.

According to Dr. Suhas Wani, ICRISAT's natural resource management scientist, poverty in the drylands is a result of soil degradation and declining agricultural productivity. He said that to effect change in the drylands, one needs to focus on the watershed since it is the smallest land unit or microcosm which can be managed and sustained by the community.

The Watershed Management Approach or Model which is a product of lessons learned in past watershed-based researches consists of 11 important components: 1) farmer-participatory approach, 2) use of new science tools for management and monitoring, 3) a holistic system's approach, 4) technical backstopping from a consortium of institutions of on-farm watersheds, 5) a micro-watershed within the watershed where farmers strategic research with guidance from scientists, 6) low-cost soil and water conservation measures and structures, 7) amalgamation of traditional knowledge and new knowledge for efficient management of natural resources, 8) emphasis on individual farmer-based conservation measures to increase productivity and conservation of soil and water resources, 9) technology evaluation by farmers, 10) continuous monitoring, evaluation, and refinement of options by stakeholders, and 11) empowerment of community and individuals and strengthening village institutions for managing natural watersheds.

The new model emphasizes an integrated approach in key areas such as water management, nutrient management, pest management, and crop management. For instance, there are methods to manage water resources that are a very important commodity in the SAT areas. Examples of *in situ* conservation of rainwater includes landforms, tillage, bunding and vegetative barriers, continuous contour trenches and staggered trenches, green manuring, crop residue incorporation and wasteland development while grassed waterways, gully plugging, silt traps, recharging pits, and storage tanks are some *ex situ* rainwater conservation practices.

Another key component of the model is integrated nutrient management and part of the package is using plants that contain high nitrogen such as *Gliricidia,* pigeonpea as biofertilizers to improve the fertility of the soil. To effectively manage the pests in SAT areas, the scientists recommend environmentally and economically sound practices such as biocontrol and indigenous practices. For integrated crop management, the ICRISAT scientists also recommend the use of crop varieties that enable double-cropping, high value crops, as well as drought-tolerant varieties.

To increase the incomes of the dryland dwellers while protecting the environment, the scientists proposed converging micro-enterprises with activities in the watershed. Some technologies that were introduced to improve incomes were: vermicomposting, preparation of biofertilizers, improved fodder production, fish or prawn culture, raising poultry, and planting trees.

In this study, the scientists used the Adarsha watershed as a benchmark model. The income-generating activities implemented in the Adarsha watershed were: village seed banks, poultry rearing, preparation of animal feed, composting using cow dung, fodder waste and weeds. With the increased incomes, the Adarsha residents need not go to the cities to look for jobs during off-farm season. Another important activity in the Adarsha watershed was the preparation of village-based seed banks and rehabilitation of common grazing/wastelands and participatory biodiversity management. Farmers planted custard apple (*Annona spp*) on the bunds, *Gliricidia* saplings on the borders of the wasteland, and other fruit trees to improve the wastelands and increase biodiversity in the watershed.

Today, the Adarsha watershed is greener with a 71-hectare increase in vegetation, groundwater level has increased (around <3 m), there are sufficient water-harvesting structures, and reduced run-off and

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A look at a successful CPAR cooperator

by Ma. Lizbeth J. Baroña

FEATURE

As our vehicle plowed its way through the muddy road leading to our farmer cooperator in Mexico, Pampanga, I spotted him standing in the middle of his cornfield. There should be nothing wrong with his presence there, except that it was raining hard. "Does he work even on a weather like this?" I asked our guide and resource person from the Pampanga provincial agriculturist's office, Muriel Cacilala. She nodded smiling.

Earlier when I walked into the provincial agriculturist's office, a conspicuous whiteboard that held names I surmised were farmers' names caught my attention. One name was written way above the rest. "That is Antonio Gomez. He was the successful one", Ms. Cacilala said.

The CPAR cooperator

The rapport between the extension team and Mang Antonio was evident with the way the team talks about him and his success. As Mang Antonio approached us, one of them exclaimed, "He took Vandolph with him!"

Vandolph turned out to be Mang Antonio's carabao, which carried him from the middle of his farm to where we were huddled under the rain beside his goat pen.

"My family's life before CPAR came was difficult", farmer Antonio Gomez shared.

Raising and sending 10 children to school while living off from a marginally productive land was the root of Mang Antonio's problem. With the CPAR, he realized his production activities had been wrong.

"They tested my soil, and found that the fertilizer did not match the needs of my soil. I have actually been using the wrong fertilizer for my soil type. They recommended basal fertilization, and my harvest doubled after that," he said.

After the first cropping, Mang Antonio harvested 200 cavans of yellow corn from an approximately two hectare-land. He earned close to P100, 000 after selling his product in the market. From the income, he decided to buy a hand tractor.

The fate of the tractor has become the favorite tale of the extension workers at the PA office: The tractor was stolen from his farm one December night last year. But the loss did not dent the spirits of Mang Antonio. After the incident, he went on to buy two hand tractors to replace the lost one. This episode, in essence, describes the success of Mang Antonio with the help of the CPAR project.

"That stolen tractor was my first purchase from the income I got after the technologies were introduced to me," shared Mang Antonio in Tagalog. "But I do not feel bad about it now, I have two new ones!" he shared.

His wife used what's left of the money to put up a small store and whatever income from the store helps because they are sending five more children to school

"Apart from growing corn, we recommended that he also go into livestock. The initial input were 25 chickens and two goats," Ms. Cacilala said.

Faith in the system

Convincing farmers to be cooperators in the CPAR project was not easy.

"Most of them do not want to gamble their traditional ways to try the new practices we recommend," Ms. Cacilala explained.

Mang Antonio was a different story. He was at first hesitant to work with the project, not because he was unconvinced of the good it will bring him, but because he was not sure if he could keep his end of the bargain in the project. They have to pay the inputs after harvest time, in cash or in kind.

The hesitation gave the signal to the extension workers that they have found the right cooperator in Mang Antonio. Ms. Cacilala deduced that since he was initially concerned that he could not pay them meant that he is one who takes responsibilities seriously.

Asked why he finally agreed to work with Ms. Cacilala's team, Mang Antonio said, "I did not go to school. They did so they must know."

He explained that he is also doing his part in convincing his fellow farmers to work with the project. He was made a resource person in different meetings with farmer organizations testifying to the benefits of CPAR. He said he want his fellow farmers to succeed like he did.

"I told my fellow farmers that we may have the experience but sometimes we need new technologies," Mang Antonio confided.

His proactive outlook in life may have helped Mang Antonio accept the help offered by the project. He explains that he does not expect to have good harvest or good income all the time. He understands that there are times when circumstances work for and against the farmer in the field or in the market.

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EPMR team turns over final evaluation report to BAR

Dr. Feliciano Calora, team leader of EPMR, turns over copies of final evaluation reports to BAR Director William C. Medrano.

Dr. Feliciano Calora, team leader of the External Program and Management Review Office (EPMR) team, submitted the final reports of Phase I (review of R&D projects of SCUs), Phase II (review of R&D projects of DA staff bureaus and attached agencies), and Phase III (review of CPAR/OFR of 15 regions) during a simple program held on 12 July 2004 at the CERDAF Conference Room, ATI Bldg., Diliman, Quezon City. Each of the report consists of two volumes: Volume I contains the main body of the report and Volume II the appendices.

During the turnover, Dr. Calora discussed some of the highlights of the reports and how the report was done. He mentioned that the report indicated which projects funded by BAR are 'commerciable' or are considered for utilization, those that are meant to be re-examined for further research follow-up for completion and those that are considered for future funding when funds are available.

Dr. Calora reported that out of the 172 projects reviewed in Phase I, 40.1% are commerciable, 41.3% have substantial results, and 18.6% have less substantial results.

Meanwhile, BAR Director William C. Medrano who provided the opening remarks, extended his congratulations to the EPMR team for completing the report and mentioned the importance of this information to BAR and how these could be a valuable basis for the coming Strategic Planning Workshop. He also encouraged everyone to read the documents and make good use of this important information particularly in charting new directions for BAR.

For now, EPMR is continuing the last phase of the project wherein they will evaluate BAR projects that were implemented by other agencies/ institutions and identify which are ready for use by the farmers and other clients. *(Rita T. dela Cruz)*

Web news

Measures for importing GM corn in South Africa
(http://http://www.isaaa.org/kc)

Cheaper and quicker gene identification
(http://www.jic.ac.uk/staff/giles-oldroyd/index.htm)

GM plants to be used to create vaccines
(http://news.bbc.co.uk/1/hi/sci/tech/3887517.stm)

GM crop acreage in US to increase in 2004
(http://usda.mannlib.cornell.edu/reports/nassr/field/pcp-bba/acrg0604.txt)

Hybrid rice seed facility opened
(http://www.da.gov.ph)

RP's 2Q rice harvest to hit 2.57M metric tons
(http://www.da.gov.ph)

Saving Asia's...

soil loss. Moreover, results of the project have shown a doubling in the farmers' net returns from rainfed cereal crops. The average per capita of the Adarsha farmers was 3400 rupees as compared to 1900 rupees for farmers who live outside the watershed. Thus, the scientists are optimistic that the Watershed Management Model has the potential to change the environment and the lives of farmers for the better in dryland communities. With the right technical support from local government and institutions, the scientists are positive that farmers can empower themselves and look towards a better future with their children. *(Junelyn S. de la Rosa)*

Source: Sustaining and increasing productivity and incomes in the drylands of Asia: The Watershed management approach by SP Wani, TJ Rego, P. Pathak, A. Ramakrishna, TK Sredevi and KV Padmaja of the International Crops Research Institute for the Semi-Arid Tropics, Patancheru, Andhra Pradesh, India

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ICRISAT shares watershed mgt approach for Asia drylands

Dr. Suhas P. Wani, ICRISAT principal scientist on watershed management

Dr. Suhas P. Wani, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) principal scientist on watershed, lectured on the watershed management approach his research team used in various dry areas in Asia.

The Bureau of Agricultural Research (BAR), through its Knowledge Management Division (KMD) sponsored this seminar on *Sustaining Agricultural Productivity and Incomes in the Drylands of Asia* at the Bureau of Water and Soil Management (BSWM) Convention Hall, Elliptical Rd., Diliman, Quezon City on 21 July 2004.

Dr. Wani discussed the innovative participatory consortium approach watershed model used by ICRISAT in its research. He related the different methods they used in farm-based rainwater conservation, soil and water conservation, integrated pest management, integrated nutrient management, income-generating agri-horticultural and vegetable system, and other income-generating activities to help increase the farmers' productivity and income.

The lecturer concluded that the current model of the ICRISAT-led consortium's integrated watershed management, "seems to have very high potential for bringing favorable changes in the drylands of the semi-arid tropics." He said that on-farm watershed managed through community participation could sustain productivity of dryland and holistic systems approach through integrated watershed management resulted in sustainable increased farm productivity.

A special guest in this seminar was ICRISAT Director-General William D. Dar, one-time BAR director and DA secretary. Dr. Santiago R. Obien and Dr. Danilo P. Baldos, BAR senior technical adviser on institutional development and seed systems, respectively, were the reactors during the seminar. Dr. Obien later moderated the open forum. KMD Head Angel Morcozo gave the closing remarks.

The KMD, the organizer of the seminar series, is tasked to process technologies and information from various sources and develop these into knowledge products for the Bureau's clients. One of these strategies in communicating knowledge products to the public is through seminars. The KMD seminar series provides a vehicle for technologies to be presented and shared by researchers with the public and BAR's clients. *(Likha C. Cuevas)*

INSIDE...

BAR and stakeholders aim at a UNDP project

The Bureau of Agricultural Research (BAR), in its bid to clinch a project with the United Nations Development Program (UNDP), met with its national stakeholders to discuss their respective roles in the proposed project entitled, ***"Sustainable Conservation and Utilization of Indigenous Crops and Wild Relatives"*** at the Bureau of Soils and Water Management (BSWM) Hall, July 22.

The premise of the biodiversity conservation project is to have the genetic resources from the sprawling biodiversity around preserved and stall the rapidly vanishing number of species from extinction. This 7,100-island archipelago is home to over 39,000 species of plants and animals, where 67% of these is endemic to the country.

However, being blessed with such agro-biodiversity is the challenge of

see BAR and stakeholders ...page 5

SUCCESS STORY

He grows citrus the scientific way

by Virginia A. Duldulao

We reached a big two-storey wooden structure that looks like a lodging house in a prairie after a bumpy ride negotiating a zigzagging road that climbs along mountainsides and ravines from the town of Solano, Nueva Viscaya, the fog thinning as if afraid of our intrusion as we approached the highest altitude.

We, is Cely Miranda, citrus project coordinator of Region 2, Arthur, our driver and me. Three hours earlier we were debating whether we proceed to Malabing or not. If it rains we could not come down and would stay in the Valley for the night. I prayed hard we would proceed. I strongly desired to meet the 'king of citrus' in northern Philippines.

"You look Japanese," I immediately commented as he met us in his citrus farm.

"Yes, and I work like a Japanese ever since I started growing citrus," was Mr. Alfonso Namujhe, Jr.'s answer. "I applied for this land in 1964. Malabing Valley was an open settlement for people displaced by the Ambuklao and Binga Dam projects but the Benguet people preferred to stay in Dupax (another municipality of Nueva Vizcaya). The first commissioner of the Commission on National Integration was Judge Dolongan, a Kiangan, so he brought in people from our place to occupy this place. I just graduated in high school. My mother and I came here; my father who was a teacher and my other siblings stayed behind. My mother who was a forward-looking woman thought that the younger children (am one of them) would not have any inheritance if we stayed together in Kiangan. I applied for this land as a homestead. The requirement was to clear the land (was able to clear two hectares), improve it for one continuous year, and apply for the title. I saw the potential of this place and I was inspired to pursue college. I took up agriculture, major in animal husbandry determined that I would come back and develop it." Mr. Namujhe reminisced.

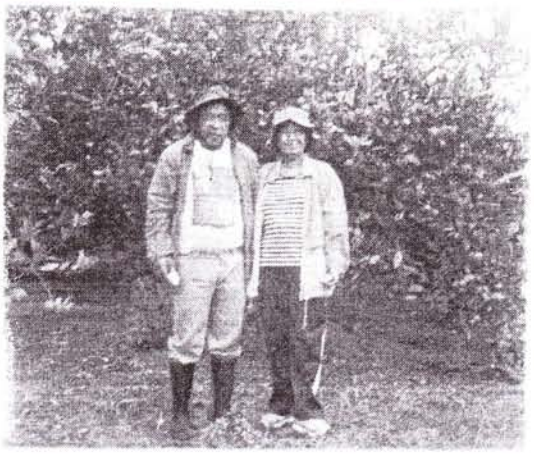
"And now, the people of Malabing speak of you like you are a god," I told him my observation the other day when I talked to members of the Malabing Cooperative.

"Is that so?" he laughed. "It was hard work," he continued. "I had to learn many things before embarking on my project. I worked as farm manager and later as feed mill quality control officer at Monterey in Laguna. It was there that I learned about management and it was also there where I met my wife, also an agriculture graduate and a native of Tiaong, Quezon," he intimated.

"I started learning and researching everything about citrus. I went to PCARRD for a citrus technology because I had to grow citrus scientifically. How can we ever succeed if we don't do things scientifically? My sister in Australia who was going to finance my first three-year operation required me to go there and learn everything there was to know about citrus growing. When I returned I brought with me different scions plus the technology. Maintaining an orchard is not as easy as planting bananas. You need time, money, effort and skill to grow citrus and the life span of the orchard depends on your maintenance."

It is citrus time. Some heavy-laden branches (I was able to count 13 fruits in one branch) are provided support for them not to break.

As if guessing my next question, Mr. Namujhe said, "I apply chicken manure right after the harvest season. One month before the flowering stage, I apply urea and two months before ripening, I put complete fertilizer for color change and potassium for sweetness."



The citrus king and the author

"And have you shared your technology to the other farmers?" I asked him.

"This land is God's gift to the people. If you love your fellowmen, you should be unselfish. If you become a millionaire, let others become millionaires by sharing your knowledge. I have dreams for this beautiful and fertile land. I am now into exotic fruits, later on into cut flowers. I will integrate these farms into a recreational and educational tourist spot where one can enjoy and learn at the same time. There will be banca rides on a man-made lake at the top of the mountain."

As if guessing again my questions noticing my raised brow he said, "God is generous to us. We have the water, a good climate, unpolluted environment, and industrious people. The lodging house where you stopped is for visitors

see He grows citrus...page 5

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Seminar-workshop on new art form celebrates IYR

The National Commission for Culture and the Arts (NCCA), local government units (LGUs) of Quezon Province, International Rice Research Institute (IRRI), and the Philippine Rice Research Institute (PhilRice) are sponsoring the Outdoor Art Installation Workshop Seminar on September 14, 2004 at IRRI and University of the Philippines Los Baños (UPLB), College Laguna. This seminar-workshop, in connection with the International Year of the Rice (IYR), aims to enhance the Pahiyas celebration in Lucban, Quezon, which uses rice as the focal subject.

Outdoor art installation is a relatively new art form, which is site-specific and usually temporary or ephemeral. The arrangement of objects and use of different mediums in a creation made especially for a particular gallery space or outdoor site, to be viewed as an entire ensemble or environment. Participants of this seminar-workshop will come from the municipalities of Quezon province, which will be identified by their respective LGUs. The workshop will consist of presentations by three noted resource persons on outdoor art installation, visit to existing art installations at IRRI's *Rice World* Museum, and putting up of installation projects by participants.

The IYR 2004 is intended to achieve global awareness on the importance of rice. In the process, people will appreciate the role of the rice farmers, who, despite extreme difficulties and frustrations they encounter, they still continue to plant rice to feed the world. The organizers of the IYR Philippines envision that many activities this year in celebration of IYR could be continued in the years to come.

The national IYR steering committee is composed of: Department of Agriculture (DA) Secretary Arthur C. Yap as chairman; Department of Tourism (DOT) Secretary Roberto M. Pagdanganan and Dr. Kwanchai A. Gomez (Asia Rice Foundation executive director) as vice chairpersons. Other cooperating agencies and organizations are: the DA-Bureau of Agricultural Research (DA-BAR), Asia Rice Foundation (ARF), Asian NGO Coalition for Agrarian Reform and Rural Development (ANGOC), Commission on Higher Education (CHED), DA, DOT, Department of Education (DepEd), Department of Science and Technology (DOST), NCCA, National Food Authority, IRRI, and PhilRice. *(Likha C. Cuevas)*

BAR bids for ISO 9001:2000 certification

BAR Director William C. Medrano

With vision set on an ISO 9001:2000 certification by December 16 this year, the Bureau of Agricultural Research(BAR) formally launches its ISO 9001:2000 certification process, at the RDMIC Lobby, August 24.

BAR challenges itself

"We want to be among the world-class organizations," BAR Director William Medrano said. Being certified the International Standards for Quality Management Systems through an ISO certification will help BAR maintain client satisfaction.

To be among the world class organizations would entail greater effort on our part for better documentation, improved intra-organizational communications, and most important, is greater quality awareness, and a positive cultural change. All these, he said, would enable BAR employees and staff to become better government employees.

He also maintained that being ISO certified should ultimately be translated into serving BAR clients – farmers and fisherfolk – better. He said that this process is in the service of the national agricultural research system, and to the faming and fishing communities.

Quality from within

In his inspirational message, BAR Senior Technical Adviser Santiago R. Obien called on the "adventurous and dedicated men and women willing and eager to go on and join on the search for a new milestone in the history of BAR. We are entrusted with a beautiful, if not expensive home (referring to the RDMIC). We are entrusted the task of guiding the national agriculture and fishery research network. There are big responsibilities for which we have so much to account for. The service demanded of us is enormous and the final judge for that quality of service are the farmers and fisherfolk," he remarked.

Mr. Joseph Server, president of JSA, an independent organization hired to audit BAR for the certification process presented an overview of the ISO 9001:2000 certification process, and gave an idea of what it is expected from the BAR staff and employees as the certification process progresses. *(Ma. Lizbeth J. Baroña)*

NEWS

BAR, PCARRD support development of BPI Los Baños

The Bureau of Agricultural Research (BAR) and the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) signed a memorandum of agreement (MOA) with the Bureau of Plant Industry (BPI) to support the development of the Los Baños National Crop Research and Development Center (LBNCRDC) experimental station.

The LBNCRDC is identified as the national research center for tropical crops and ornamentals. This station was formerly known as the BPI Economic Garden and is one of the oldest stations of BPI. There has been a minimal improvement in its infrastructures since it was created in November 1931.

The project consists of three phases. Phase I to be implemented for 2004-2006 includes master development plan preparation, road networking, initial perimeter fence improvement, and initial improvement of the A.N. Eusebio Hall. Meanwhile, Phase II that is for implementation in 2006-2008 involves upgrading the Center's laboratories and greenhouses facilities, upgrading the crop production facilities and seed storage, renovation of dormitories and staff housing, and completion of the road networking. Phase III includes subdividing lots for production and R&D purposes, upgrading the irrigation and drainage system of the production area, and upgrading irrigation and drainage of the research area.

The MOA signed on 20 August 2004, RDMIC Conference Room, covers Phase I of the project. PCARRD shall provide the technical assistance, architectural plans, and financial assistance. Meanwhile, BAR shall provide the counterpart funds as well as assist in the initial planning, monitoring and evaluation of the project.

The agreement was signed by BPI Director Hernani Golez, PCARRD Executive Director Patricio Faylon, and BAR Director William Medrano. Also attending the signing were: Mr. Dennis Eusebio and Mr. Francisco Manipor of BPI-LBNCRDC, Ms. Corazon Oncullo of BPI, Ms. Eleanor Ocampo and Mr. Benedicto Simbulan, Jr., of PCARRD and, Mr. Rolly Labios and Dr. Santiago Obien of BAR. *(Rita T. dela Cruz)*

Dr. Medrano of BAR (right) signs MOA with Dr. Faylon of PCARRD (left) and Dr. Golez of BPI (center)

Grants for Development-Oriented Projects

The European Commission-Philippine Delegation commits Euro 2.6 M (P156 M)-grant for development-oriented projects for government agencies, LGUs, NGOs, business associations, universities, research institutions and other non-profit organizations. The value of grant allocations to the Philippines (July 2004-March 2005) has a minimum contribution range of P3.6M and a maximum of P16.M for every successful proposal. The cost-sharing arrangement is: EU75%, proponent 25%. Deadline for submission is 3 September 2004 and 03 January 2005.

Priority areas of collaboration are: **1) Good governance, accountability mechanisms, and civil society participation** like setting up e-government structures; public finance reform in local and provincial government; millennium development goals monitoring mechanisms in local government; involvement of civil society organizations in planning and budgeting process in local, provincial, regional, and central government; and budget analyses and alternative budgets, local and national, from civil society perspectives (ex. pro-poor, gender, children, and environment); **2) Regional economic integration** like opportunities and challenges in ASEAN integration and globalization, in particular trade and investment relations with Europe; private sector and civil society involvement in regional trade and investment decision-making processes (national and ASEAN level); and **3) Corporate governance**. Exchange of best practices between EU and Philippines in the area of corporate governance.

Eligible activities for this grant are: a) Conferences, seminars, and workshops; b) Training, educational and capacity-building activities; c) Research and studies; d) Media events, media products, and advocacy activities; e) Other activities that promote the image of European Union as a model of best practice

For more information (application form, budget and logframe formats and other requirements), please contact: MS ***CARMELA B. BRION***
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Much ado about ISO

FEATURE

When you buy a product or obtain service from an establishment that declares itself "ISO compliant", will you feel more assured that you are getting your money's, or time's worth? You should, because being stamped with an ISO - or International Organization for Standardization - means your money's worth complies with world-class *standards.*

Why do standards matter?

The importance of having standards can be best imagined through everyday actions that we almost never notice. When one has been walking through the same room everyday for the past decade of his life, he never notices – or acknowledges the presence of the single most important structure in the room: the wall. Try removing that wall, and it will be the first thing one will notice once he walks in.

Standards are also like walls. We only notice their presence, or acknowledge their importance if they are absent. Standards raise the levels of quality, safety, reliability, and efficiency of a product or service that is translated into benefits economically.

What is ISO?

The ISO was formed in the 1947 to unify industrial standards. It started as an international standardization in the electrotechnical field. Twenty-five countries met in London, England in 1946 to create a new international organization that "facilitates the international coordination and unification of industrial standards". In February 23, 1947, the organization's operations officially began, and ISO is born.

Today, ISO covers standardization of a huge range of products, services, and environmental management. It is now a network of standards that spans through 148 countries. Its Central Secretariat is in Geneva, Switzerland. Even though ISO is a non-governmental organization, it has member organizations that are both in the government and public sectors, all aiming at providing quality services to their clients.

Who sets the standards?

The ISO.org reports that technical committees composed of experts on loan from the industrial, technical and business sectors were asked to develop standards. These experts are also joined by representatives of government agencies, testing laboratories, consumer associations, and environmentalists. The experts participate as national delegations, chosen by the ISO national member institute for the country concerned. These delegations are required to represent the views of the organizations in which their participating experts work, and of other stakeholders.

There are currently 226 technical committees that set standards for products and services that range from cosmetics, to civil defense, to market and social research, to quality management and quality assurance.

Why do we want it?

It will give us "bragging rights" among our peer institutions. Bragging rights because we rightfully feel being "a cut above the rest". Being stamped "ISO 9001:2000 compliant" would enable BAR to satisfy – and delight clients with efficient services. The efficiency of our operation processes will entail better documentation, improved intra-organization communication, reduced re-work, and most importantly, a greater awareness for personal and institutional quality output, and a positive cultural change in a workplace. *(Ma. Lizbeth J. Baroña)*

Sources:

http://www.iso.org/iso
http://www.canberra.com/other/iso_primer.asp
www.moody-group.com

... He grows citrus...

who will stay for the night."

"It is difficult to come here," I remarked.

"The difficulty in coming here is the joy of it. If you go to heaven, it is much more difficult."

What more could I say to this philosophical citrus scientist who has singularly changed the landscape of his beautiful Malabing Valley? --*VAD*

FEATURE

Fungi: A solution to Manila's plastic woes

Today, we are living in the middle of a ticking time bomb- Manila's garbage problem. Metro Manila produces about 8,000 tons of solid waste each day and is expected to reach 13,300 tons in 2014. With the lack of a proper waste management system, the explosion of this metaphorical time bomb is a likely scenario in the near future. But, there is good news yet. Scientists from the Institute of Biological Sciences in the University of the Philippines Los Baños have found a new solution to Manila's plastic garbage- they have found fungal species that can decompose or cause plastic to rot.

Our love affair with plastics

We have a love affair with plastics. From Styrofoam cups in our favorite Starbucks café, Styrofoam containers at our favorite fast food chains, to the ever-dependable plastic bag at the grocery store- plastics are virtually everywhere. In fact, we probably use plastics hundreds of times a day without knowing it. We are all aware of the boon that plastic has brought to our lives. Unfortunately, coupled with its benefits are its disadvantages to our environment where most of them still end up as waste.

What is plastic?

Plastic is an extremely versatile synthetic material made from the polymerization of organic compounds. Polymerization is a chemical process wherein a compound or a substance is made by adding smaller molecules. They are made from finite, nonrenewable petroleum and natural gas.

While plastic products are cheap, making them is not. Plastics contain additives such as colorants, stabilizers, and plasticizers that may include toxic substances such as cadmium and lead. It is because of these substances that plastics may harm human health. For instance, plastic chemicals, such as ethylene dichloride and vinyl chloride used to produce vinyl are considered to be carcinogenic or cancer-causing. They may also trigger other health problems such as liver, kidney and neurological damage.

Getting rid of plastics

It has been said that next to diamonds, plastics are forever. This has made disposal of used plastics a cause of concern. Burning plastics is a no-no since plastic fumes can cause a wide range of ailments including skin diseases, asthma, and some forms of cancer. Burning plastics releases noxious smoke and may release cancer-causing gases into the air which people downwind have to breathe. Burying plastics with other wastes can contaminate soil and groundwater. Even recycling, widely endorsed to reduce solid wastes, does not effectively reduce the volume of used plastics.

In the Philippines, approximately 120,000 tons of plastics are generated each year, 50 percent of which end up in open dumping sites that are distributed in cities near Manila.

Biodegradation: A new way of getting rid of plastic

Scientists from the Institute of Biological Sciences in UPLB have found a new way of decomposing plastics. The new method is called biodegradation, the process of degrading waste material through the use of microorganisms such as fungi and bacteria. They isolated two kinds of bacteria- *Penicillium sp*, and *Aspergillus sp* and one type of fungi called *Xylaria sp.*

Among the microorganisms, they reported that *Xylaria* sp. performed the best in degrading the plastic sheets. In a follow-up study, the scientists found that the *Xylaria* fungus grows best at 25°C and at pH 5. These were the optimum conditions where the fungus grew vigorously using a mineral medium with 0.5% glucose and plastic strips as co-carbon source. Fifty days after incubation, the scientists reported that the plastic strips were embedded in the mycelial mat and results of scanning electron microscopy showed that there were already visible damages on the surface of the plastic strips. *(Junelyn S de la Rosa)*

Source:

1) *Isolation of Decomposer Fungi with Plastic Degrading Ability by Virginia C. Cuevas and Rodolfo Managilod of the Institute of Biological Sciences of the College of Arts and Sciences of the University of the Philippines at Los Banos, College, Laguna.*
2) *Colonization of Plastic by Xylaria sp. by Virginia C. Cuevas and Ma. Theresa Clutario of the Institute of Biological Sciences of the College of Arts and Sciences of the University of the Philippines at Los Banos, College, Laguna.*

ICRISAT, DA-BAR promote production of sweet sorghum for ethanol use

The Department of Agriculture-Bureau of Agricultural Research (DA-BAR), headed by Dr. William C. Medrano, supports and promotes the production of a newly developed sweet sorghum variety, *ICV 93046*, which can be used for the production of ethanol. The new variety is developed by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), a non-profit international research organization headquartered in India, devoted to science-based agricultural development.

DA-BAR signed an agreement with ICRISAT to share cutting edge technologies and other international goods related to dryland agriculture with the Philippine agricultural system.

Filipinos may not be familiar with sweet sorghum (*Sorghum bicolor*) as it is considered a minor crop here in the Philippines and is mainly used for industrial use and animal feeds. Besides having wide adaptability, rapid growth, and high sugar accumulation and biomass production potential, sweet sorghum is tolerant to drought, soil salinity, acidity, and toxicity.

In addition to the grain, the new variety of sorghum has great potential in the production of alcohol (ethanol). The sugar content in the juice extracted from sweet sorghum varies from 16-23% Brix (a measure for sugar content in liquids). The ethanol produced from sweet sorghum can be used to blend with petrol and diesel to produce *gasohol.*

During the pilot study, ICRISAT scientists found that sweet sorghum is the best alternative raw material to supplement sugarcane in ethanol production. At 5,600 liters per hectare per year the ethanol production from sweet sorghum compares well with the 6,500 liters per ha per crop of sugarcane. According to the estimates made by research partners of ICRISAT, the per liter cost of production of ethanol from sweet sorghum is 4.28% higher than from sugarcane molasses. However, the slight increase in the cost of production of ethanol from sweet sorghum is compensated by grain yield of 1 ton per hectare (which can be used as human food or animal feed) and the superior quality of ethanol. Moreover, the really significant advantage of sweet sorghum is that the production of ethanol from this crop is environment-friendly since it uses the non-molasses production technique.

The end products of sorghum (i.e., silage) have higher biological value than the bagasse from sugarcane when used as fodder for animals, as it is rich in micronutrients and minerals. It could also be processed as feed for ruminants. Moreover, the end products from sorghum are valuable as raw materials for pulp products as they contain similar levels of cellulose compared to sugarcane bagasse.

According to Dr. Dar this new variety grows in four months; sugarcane requires 11 months to grow. It also requires less water and less input as compared with other crops that are good for ethanol production.

Director Medrano saw the great potential of this technology especially now that the government is supporting and advocating the use of bio-alternatives for gasoline. In collaboration with ICRISAT, DA-BAR will support the preliminary field trials (both on-station and on-farm) of the new variety of sorghum in major dryland areas of Luzon, Visayas, and Mindanao. ICRISAT will transfer the developed varieties while BAR will mass-produce the seeds for distribution and commercialization.ICRISAT is headed by former Agriculture Secretary William D. Dar. *(Rita T. dela Cruz)*

...DA has new

program of strengthening research and development (R&D) as well as extension programs that will liberate small producers from their limited traditional knowledge to entrepreneurship.

From business and law to agriculture

Secretary Yap, 38, is said to be the youngest in the history of the Department. He is a graduate of the Ateneo de Manila University with an A.B. honors degree in management and economics and later finished law at the Ateneo de Manila School of Law.

Before joining the public service, Secretary Yap has been associated with different law firms including: *Yap, Jacinto, Jacob Law Office*; *Associate, Azcuna, Yorac, Sarmiento, Arroyo, and Chua Law Offices;* and *Balane, Barican, Cruz and Alampay Law Offices*. As member of the private sector, he was the national president of the Philippine Association of Paint Manufacturers (1997-1999).

His stint at government service started when he became the president-CEO of the Philippine International Trading Corporation (the only government-owned trading company assisting SME exporters and counter trade program implementers). In October 2002, he was appointed as the NFA administrator and concurrently chair of the Food Terminal, Inc. (FTI). He also served as the DA undersecretary for Luzon Operations and was frequently serving as DA's OIC. *(Rita T. dela Cruz)*

BAR calls for unpublished papers for 16th NRS

The Bureau of Agricultural Research of the Department of Agriculture (DA-BAR) is calling for unpublished papers for the 16th National Research Symposium to be held on 5-6 October 2004 at the Bureau of Soils and Water Management, Diliman, Quezon City.

Open to all Filipino researchers and member-institutions of the National Research and Development System on Agriculture and Fisheries (NaRDSAF), the annual symposium recognizes significant accomplishments in research and development and encourages the publication of research results by providing incentives for exemplary research performance.

The symposium is also one way of updating our reservoir of affordable cutting-edge technologies and information and encouraging more scientists to take a more proactive stance in generating technologies that could transform our farmer/fisherfolk into globally-competitive business entrepreneurs.

This year, the contest is limited to unpublished papers due to budget limitations. Qualified entries are unpublished reports of R&D projects conducted in the country from July 2003 to June 2004. Finalists of the 2-week long panel review will present their papers to compete for the AFMA Best R&D Paper Awards during the symposium.

The finalists are those researchers who will garner a rating of 80% and above during the initial evaluation before a panel of experts in their respective fields. Specific categories are: agricultural engineering, processing and postharvest, crop science, animal and veterinary science, fisheries and marine science, and policy and socio-economics. Aside from these categories, the papers are further subdivided into upstream and downstream research.

The awarding ceremonies will be held the following day during BAR's 17th Anniversary and Recognition Day at the Bureau of Soils and Water Management on 07 October 2004. *(Junelyn S. de la Rosa)*

Book on Philippine rice research soon available

A milestone in Philippine rice research will be released as part of the International Year of the Rice (IYR) 2004.

Philippine Rice Centennial: Research and Development will be launched during the Philippine Rice Research Institute (PhilRice) anniversary in November 2004. The book is at par with international standards and recognizes the Filipinos' contribution to rice research.

The book is a comprehensive guide that covers significant changes in the landscape of Philippine rice research and development (R&D). It is an informative and easy-to-read book that targets the general public along with members of the academe, researchers, and policy-makers. The book chronicles the trail of each rice research field's evolution from being science-based to market-oriented in its approach, which makes it interesting to educators and policy-makers.

The book's rich historical data shows the rice situation in the country before the arrival of rice research institutions such as the International Rice Research Institute (IRRI) and PhilRice. It also answers major questions about the Philippines' rice production (e.g. why the Philippines cannot be compared to the rice sufficiency level of neighboring countries like Thailand).

Philippine Rice Centennial emphasizes the impact of rice researches on people and communities. Each aspect of rice R&D in the Philippines is tackled: from land preparation to postharvest, trends, and paradigm shifts in management discussions to gender concerns; from the macroeconomic viewpoint down to the farmers' subsistence mentality. *(PhilRice Press Release)*

Web news

Brochures on Bt corn studies in the Philippines
(http://www.searca.org/~bic/info_kits/btcorn_feed.pdf)
(http://www.searca.org/~bic/info_kits/btcorn_insectdiv.pdf)

Swiss cabinet says no to GM crop moratorium initiative
(http://www.swissinfo.org/sen/swissinfo.html?siteSect=511&sid=5153637)

Issues hindering growth of agri-biotech
(http://www.biospectrumindia.com)

Natural biodiversity can enrich genetic base of crops
(http://plosbiology.org/plosonline/?request=getdocument&doi=10.1371/journal.pbio.0020245)

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