

The SEARCA DIARY



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A Publication of the Southeast Asian Regional Center
for Graduate Study and Research in Agriculture

SEARCA Board commends Center's progress

The SEARCA Governing Board (GB) commended Dr. Arsenio M. Balisacan, director, and the Center's staff for the activities undertaken by SEARCA in FY 2005/2006.

Occasion was the 52nd GB Meeting held in Singapore on 6-8 Sep 2006, whose opening ceremony was keynoted by H.E. Rear Admiral Lui Tuck Yew, Minister of Education of the Ministry of State of Singapore (see page 8 for related story).

Dr. Balisacan's report on SEARCA's progress vis-à-vis the Center's Eighth Five-year Plan was among the major agenda items discussed by the Board in its meeting. As mandated by SEARCA's Enabling Instrument, the GB, which is the Center's highest policymaking body, reviews and evaluates annually the progress and situation of SEARCA for the past fiscal year.

The other items included: (1) report on core programs and activities in FY 2006/2007, (2) update on the Center's Consulting Services, (3) financial and investment reports and recommendations, (4) personnel reports and recommendations,

(5) budget proposal for FYs 2007/2008-2009/2010, (6) internal audit report, and (7) report on the highlights of the 41st SEAMEO Council Conference held on 22-23 Mar 2006 and the annual SEAMEO Center Directors Meeting held on 17-19 Jul 2006.

Among the GB's major actions were its approval of the Center's accomplishment report, financial and external audit reports, three-year budget proposal, revised investment guidelines, and staff salary adjustment.



SEARCA Governing Board: (standing from left) Dr. Tan Teck Koon, Singapore; Dr. Chan Nareth, Cambodia; Dr. Moehammad Munir, Indonesia; Mrs. Pengiran Hajah Rosidah Binti Pengiran Haji Metussin, Brunei Darussalam; Dr. Prasit Jaisil (representing Mr. Veerasak Wongsonbut), Thailand; Mr. Thongphanh Kousonsavath, Lao PDR; Dr. Gil C. Saguiguit Jr., deputy director for administration, SEARCA; Dr. Luis Rey I. Velasco, Philippines; (seated from left) Dr. Dang Kim Vui, Vietnam; Mr. Tin Htut Oo, Myanmar; H.E. Rear Admiral Lui Tuck Yew, minister of education, Ministry of State, Singapore; Dr. Arsenio M. Balisacan, director, SEARCA; and Dr. Wahdi Yudhi (representing Dr. Edilberto C. de Jesus), deputy director for programme and marketing, SEAMEO Secretariat

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SEARCA Board / from page 1

To further sharpen SEARCA's implementation of its five-year plan, the GB asked SEARCA to conduct a mid-term review of the plan, identifying clear indicators of success of the Center. It likewise encouraged SEARCA to further exploit information and communication technologies to disseminate as well as provide access to useful information to the various stakeholders and clients of the Center. It also urged the Center to participate in the activities of the other regional groupings for greater synergy in development work.

In addition, the GB confirmed the memoranda of understanding and agreement of SEARCA and the



(L-R) Mr. Tin Htut Oo, SEARCA Governing Board member from Myanmar; H.E. Rear Admiral Lui Yew Tuck, minister of education of the Ministry of State, Singapore; and Dr. Arsenio M. Balisacan, SEARCA director

regular staff appointments made in FY 2005/2006.

Dr. Balisacan expressed his appreciation to the GB for the many ideas and suggestions given during the meeting. "I have always looked forward to

receiving the Board's collective wisdom on the various concerns and challenges faced by SEARCA, and the Board meeting in Singapore did not disappoint me," he said.

The next (53rd) GB Meeting will be held in Thailand. (LLTallafer)

SEARCA intensifies knowledge extension through exhibits

SEARCA believes that exhibits strengthen knowledge exchange, thus the Center's participation in the 28th Annual Scientific Meeting (ASM) exhibit of the National Academy of Science and Technology (NAST) and Bañamos Festival's Tuklas Agham (Discover Science).

The exhibits served as a venue not only to showcase the Center's role in agriculture and rural development but more importantly to extend knowledge to information-seeking individuals.

Held last 12–13 July at the Manila Hotel, Manila, Philippines, this year's ASM had the theme "The Century of Biology." ASM is the leading forum for the presentation of research findings and information on science and technology. It culminated

in the formulation of policy recommendations for action of concerned agencies and institutions in the Philippines.

For this exhibit, SEARCA displayed and gave free copies of its publications as well as promotional materials on SEARCA scholarships, fellowship, research, thesis, and travel grants. Regarded as the biggest gathering of scientists, policymakers, public and private sector leaders,

academicians, and students, the two-day event was jam-packed. There was a huge demand for the Center's knowledge products particularly those on biotechnology and biodiversity.

According to teachers, SEARCA posters are appropriate visual aids for their lectures while students said the studies and policy briefs provide rich information for their technical papers.

SEARCA intensifies / to page 10



SEARCA exhibit during the National Academy of Science and Technology's 28th Annual Scientific Meeting held last 12–13 July at the Manila Hotel, Manila, Philippines

SEARCA produces leaders, winners

Consistently producing award-winning fellows and executives is one of the areas where the Center proves its excellence.

Filipino SEARCA fellow is Outstanding Young Scientist

Dr. Maria Genaleen Q. Diaz, a Filipino SEARCA fellow, was recently recognized as an Outstanding Young Scientist (OYS) of the Philippines by the National Academy of Science and Technology (NAST).

She was conferred the award on 13 July 2006 at the Manila Hotel, Manila, Philippines.

Dr. Diaz was recognized for her research on the genes of coconut and macapuno (a variety of coconut with soft, sticky, and chewy meat), which may yield new benefits to health, economy, and environment.

Instituted in 1980, the OYS Award is conferred by NAST to recognize Filipino scientists younger than 40 years old for their outstanding contribution to science in their respective fields of specialization.

Dr. Diaz is currently an assistant professor at the Institute of Biological Sciences, University of the Philippines Los Baños (UPLB). She completed her PhD in Genetics at UPLB in 2002 under the German Academic Exchange Service–SEARCA scholarship.

Other OYS awardees among SEARCA fellows are Dr. Rodolfo P. Cabangbang, Dr. Portia G. Lapitan, and Dr. Arsenio M. Balisacan, current SEARCA director.

Dr. Cabangbang was awarded in 1982 in recognition of

his resourceful studies and achievements in plant breeding, foremost of which are the development of a locally adaptable early maturing, high yielding and common insect pest-resistant variety of cotton, and a screening procedure in cotton breeding that has shortened its variety development from five to three years. He used to teach at the Department of Agronomy, UPLB.

Dr. Lapitan and Dr. Balisacan were conferred the award in 1992. Dr. Lapitan was recognized for her pioneering works on the biology of forest tree seeds which have identified the causes of the poor quality seeds used in reforestation as well as methods by which these can be overcome. She is currently an associate professor at the College of Forestry and Natural Resources, UPLB. On the other hand, Dr. Balisacan was recognized for his outstanding researches on the economics of agriculture and rural development as well as on income distribution, which have substantially improved the understanding of the nature, causes, and consequences of rural poverty in the Philippines.

SEARCA fellow named 2006 Outstanding Sillimanian

A Filipino SEARCA fellow is one of the 10 recipients of the Outstanding Sillimanians Award conferred by Silliman University, a private university in Central Philippines and the oldest U.S.-established university in Asia. He is Dr. Alexander G. Flor, professor and dean at the Faculty of Information and Communication Studies, University of the Philippines Open University and adjunct professor at the Knowledge Science and Technology, University of Honolulu, Hawaii, USA.



Dr. Maria Genaleen Q. Diaz with her OYS Award



Dr. Alexander G. Flor

The Outstanding Sillimanian Award is presented to Silliman University alumni who embodied excellence and the university's ideals "Via, Veritas, Vita" (The Way, the Truth, and the Life) in their respective professions. Since Dr. Flor obtained his bachelor's degree from Silliman University in 1975 and his MS and PhD degrees in Development Communication from the University of the Philippines Los Baños (UPLB). He completed his doctorate in 1987 as a scholar of SEARCA–German Academic Exchange Service (DAAD). Two years later, he pursued Fulbright Postdoctoral fellowships in informatization at the East-West Center Institute of Culture in Honolulu; visual anthropology at University of Southern California, USA; and policy sciences at George Washington University, USA.

From 1976 to 2000, Dr. Flor served with the faculty of UPLB College of Development

SEARCA produces / to page 14

THE POLICY AGENDA

(Editor's note: The true worth of research and human resource development can be seen when their results are used to create the desired impact. As SEARCA continues to spearhead programs and projects seen as vital to poverty reduction and food security in the region, it also strives to translate these efforts into policy recommendations and directions. The SEARCA Diary continues The Policy Agenda, a series of policy briefs and articles that provides a venue for the articulation of policy directions, shaping of agricultural research, and provision of inputs to process and regulatory framework development, comparative studies, and policy formulation and design.)

Fishpond farming in the Mekong Delta: Policies for polishing

The Mekong Delta offers the Vietnamese people constant flow of waters for their fish, rice, fruit, coconut, and vegetable farms. Originating from Tibet, it traverses through six countries: China, Myanmar, Thailand, Laos, Cambodia, and Vietnam.

The river, measuring about 25,000 square miles, crosses the border of Cambodia and divides into many outlets, popularly described by locals as Cuu Long or the Nine Dragons.

These nine dragons seem to spew waters forming a huge fertile river, from where the Vietnamese folks derive their family food and fund.

The ponds along the Mekong River in the Vietnam portion provide Vietnamese with fish. At a closer look, this resource (the fish), according to researchers from Can

Tho and Wageningen Universities, can be neatly integrated with livestock and agro-forestry systems.

However, researchers see some risks even in a well-integrated system. A major risk is the resulting pollutants from the practice of aquaculture, livestock, and agro-forestry culture that affect the environment. Also, food safety from the pond to the plate was one of the hot topics discussed in a three-day symposium sponsored by Can Tho and Wageningen Universities.

According to Dr. Anders Dalsgaard, fish coming from waters contaminated with livestock and human fecal matter may be infected with parasites that can become a threat to human health. Research data to back up this issue may be used by the academe to influence policymakers to draft policies that will protect the interest of both the consumers and the fish industry sectors. The fertilization of fishponds with fecal matter is of great interest for environmental reasons: if not used in ponds it will be discharged directly to the river.

the resource persons, cited that the Vietnamese government is currently looking at policy regulations aimed at "safeguarding a healthy environment with a high biodiversity." Xuan said that in the interest of economic development, the local government must provide resources from which the growing population can make a livelihood. For the farm households the short-term provision of food and cash has the largest priority. Food safety, economy, and policy regulation have to be thought of thoroughly as part of the political dynamics, which are usually overlooked by researchers.

This leads to the next issues of extension and adoption. In the context of social issues, "What will encourage fisherfolk to adopt fish pond farming technology?" was one of the questions indirectly asked.

Biting the bait

Dr. Shouqi mentioned that a well-balanced diet could reduce environmental pollution. True, but is this diet within the buying capacity of the fisherfolk? On the other hand, how can fisherfolk be integrated to the global economy, when usually, they are small, their operations are marginal, and in terms of competitive advantage, they cannot even paw at par with the commercial giants who control the quality and quantity in the exporting arena.



Finding the right policy mix

Related to this, Dr. Vo Tong Xuan, one of

Fishpond / to page 14

SEARCA director opens 5th Asia-Pacific agricultural policy forum

The Fifth Asia Pacific Agriculture Policy (APAP) Forum was held in Cheju National University, Jeju, South Korea on 14–15 September 2006.

The APAP Forum began in 2002 with the main objective of fostering cooperation on agricultural development issues among Asia-Pacific countries. It is currently chaired by Dr. Sang-Mu Lee.

This year's meeting was sponsored by the Ministry of Agriculture and Forestry of South Korea, Cheju National University, and Korea Fisheries Infrastructure Promotion Association. It was organized jointly by the APAP Forum Organizing Committee, Korea FAO Association, National Agricultural Cooperative Federation, Jeju Special Self-Government Province, and Global Agriculture Policy Institute.

Speaking at the opening ceremony, Dr. Arsenio M. Balisacan, SEARCA director and concurrent secretary-general of the APAP Forum, said that in support of the APAP Forum's objective, the discussions of the annual forum have consistently focused on the World Trade Organization/Doha Development Agenda (WTO/DDA) negotiations in the context of Asia-Pacific agriculture and rural development, and the various aspects of the agriculture sector that are significantly affected by these negotiations. He noted that the Fifth APAP Forum gave importance to food system development and agri-food industries, a sector that is fast growing and rapidly changing in both structure, system, and modalities, as well as the prospects of the WTO/DDA negotiations on agriculture.

"We are doing these discussions in the context of the recent suspension of the DDA negotiations, prompted by the unchanging positions taken by the negotiators. We recognize the potential setbacks this suspension could cause particularly to developing countries. Hence, we truly hope that this 'time-out' would be a short one, and that the negotiations would soon be back on track, progressing from where they have left off," said Dr. Balisacan, a recognized development economist in East Asia.



SEARCA director / to page 12

RP Biofuels Act seen to boost infra facilities, secure feedstock supply

The Philippine Department of Energy (DoE) secretary expressed optimism about the country's recently passed Biofuels Act.

In a forum on biofuels held on 7 August 2006 in Bacolod City, Philippines, DoE Sec. Raphael Lotilla said that the Act, which was approved last 12 October, would set mandatory market and standards to jumpstart private sector investments in production and infrastructure support facilities and will establish a policy framework and support facilities to ensure security of feedstock supply and investments in supply infrastructure.

The said Act mandates a minimum blend of 1 percent biodiesel immediately upon the effectivity of the implementing rules and regulation (IRR) and 5 percent bio-ethanol within two years from IRR effectivity into all diesel and gasoline fuels for motor transport.

The forum generated a strong interest from the private sector, academe, and other stakeholders in Negros Occidental, Central Philippines, the country's major producer of sugarcane from which bioethanol could be derived. Petron, an oil company in the Philippines, has committed to buy the entire ethanol production of San Carlos Bio-energy Project in

Negros Occidental. In context with these ongoing developments, the forum discussed issues on efficiency, sustainability, competitiveness, and net gains of converting the use of existing mills from production of sugar into ethanol. The local production of alternative fuels such as sugarcane ethanol, jatropha, and coco biodiesel is expected to ease the burden of spiraling oil prices and dependency on imported fuel.

The Philippine Economic Society, headed by SEARCA Director Arsenio M. Balisacan, organized the forum in partnership with the Institute for Negros Development, University of St. La Salle. (JCSugui)

Exec forum on NRM in globalizing Asia in the offing

After the success of the first Executive Course on Natural Resource Management (NRM) in a Globalizing Asia last 8–12 May, SEARCA and the International Plant Genetics Resource Institute (IPGRI) are preparing for its second offering.

Dubbed “Executive Forum on NRM in a Globalizing Asia,” the course will be slightly reoriented from training to a forum that will serve as a learning platform among decision-makers in NRM. SEARCA and IPGRI are collaborating with the Center for International Forestry Research (CIFOR) in organizing this forum tentatively scheduled on 4–8 June 2007 in Bogor, Indonesia.

Participating leaders and decision-makers in NRM in the region are expected to exchange experiences and insights on its current trends, issues, and challenges toward enhancing the region’s capacity to develop and implement policies and programs in NRM research and development and academics. The forum will feature the participation of leading regional experts in the field and will anchor discussions on various NRM case stories in Southeast Asia. Top-level executives working on NRM projects and programs are expected to participate in this forum.

Through teleconferencing last 10 August, Dr. Arsenio M. Balisacan, SEARCA director; Dr. Percy E. Sajise, IPGRI regional director; Dr. Doris Capistrano, CIFOR director for forests and governance; and Dr. Maria Celeste H. Cadiz, SEARCA training manager, discussed modalities, curriculum development, and other details of the forum. (MHViray)

Stakeholders learn risk communication in biotech

For four days, policymakers, scientists, academe, information officers, media, and industry and community leaders learned and practiced the science and art of risk communication to contribute toward informed decision-making in biotechnology adoption.

Communication principles and skills were taught in the “Biotech Issues and Communication Workshop: Enhancing Communication Skills on Biotechnology” held on 4–7 September 2006 in Makati City, Philippines.

The 44 participants came from Indonesia, Kenya, Malaysia, Philippines, Thailand, United States, and Vietnam. They shared their country experiences in biotechnology communication, and discussed various issues on crop biotechnology and developed messages that would

help toward better understanding of these concerns. Of particular importance was the need to pay attention to non-verbal communication cues. The workshop was complemented by interactive visits to a farm that grows Bt corn, Round-up Ready corn, and stacked corn (Bt/RR corn) at Pililia, Rizal, southeast of Manila, Philippines; contained experiments on Bt-eggplant and papaya ringspot virus-resistant papaya at the Institute of Plant Breeding, University of the Philippines Los Baños; and briefings on golden rice project at the International Rice Research Institute.

The workshop was organized by the International Service for the Acquisition of Agribiotech Applications and SEARCA Biotechnology Information Center with support from the U.S. Grains Council. (SPTababa)



Dr. John Bennett (inset) of IRRI discusses drought responsiveness of rice by using microscopy and molecular biology during the UPLB symposium on molecular biology and biotechnology held on 4 August 2006 at SEARCA.

University of Hawaii, SEARCA lay ground for cooperation

The University of Hawaii at Manoa (UHM) and SEARCA opened up opportunities for education, training, and research collaboration by entering into a Memorandum of Understanding (MOU) on 25 August 2005.

Signed by UHM Interim Chancellor Denise Konan and SEARCA Director Arsenio M. Balisacan, the MOU recognizes that the two institutions have complementary objectives in the areas of sustainability science, risk management, and disaster management. The MOU was favorably endorsed by the college deans and center directors of UHM.

Prior to MOU signing, Dr. Balisacan and Dr. Arnulfo G. Garcia, SEARCA Research and Development Department

manager, had a series of dialogues with scientists, professors, and senior researchers of UHM on 25–26 August.

The two institutions plan a follow-up activity involving a roundtable discussion in November 2006 to pin down specific activities and work plan in the MOU, and develop a concept paper for an international conference on sustainability science.

This initiative was conceived with active support of Dr. James Roumasset, professor at UHM's Department of Economics. (AGGarcia)



Ms. Denise Konan, UHM interim chancellor, with Dr. Arsenio M. Balisacan, SEARCA director

CARD-CMDI, SEARCA ink accord

SEARCA recently signed a Memorandum of Agreement (MOA) with the Center for Agriculture and Rural Development–Mutually Reinforcing Institutions Development Institute, Inc. (CARD-CMDI) to collaborate in conducting an experts' meeting in agricultural microfinance.

Dubbed "Regional Experts' Consultation Meeting on Overcoming Obstacles to Agricultural Microfinance in Southeast Asia," the event will be held on 15–16 February 2007 in Manila, Philippines. It will be spearheaded by SEARCA's Training Department.

The meeting is envisioned as a platform for exchanging views among experts and practitioners, and toward formulating policies and action advancing agricultural microfinance in the region. It will focus on risk management, regulation, and supervision specifically of credit unions and cooperatives, and governance and sustainability of microfinance institutions. Specifically, the meeting hopes to come up with recommendations or options in widening the frontiers of agricultural microfinance and to initiate a network of experts and practitioners who will advance agricultural microfinance in Southeast Asia.

CARD is a group of mutually reinforcing institutions dedicated to ultimately empowering the poor by upholding the core values of competence, culture of excellence, family spirit, stewardship and simplicity. It envisions building a sustainable financial institution owned, managed, and controlled by landless rural women. It is committed to providing continued access to financial services to an expanding client base by organizing and empowering landless rural women. CMDI is one of the institutions under CARD.

Signatories to the MOA were Dr. Arsenio M. Balisacan, SEARCA

CARD-CMDI / to page 15

Singaporean minister draws attention to emerging diseases, food-borne hazards, agri-biotechnology

A senior official of the Singaporean Government underscored the increasing challenges to Southeast Asia brought by emerging diseases and food-borne hazards, and to agri-biotechnology's great potentials to address them.

Speaking at the opening ceremony of the 52nd SEARCA Governing Board Meeting held in Singapore on 6 September 2006, H.E. Rear Admiral Lui Tuck Yew, Minister of Education of the Ministry of State, said the prevention, detection, and control of emerging diseases and food-borne hazards will become increasingly challenging. He stressed the need for vigilance to preempt the threats posed by the use of new chemicals and drugs in food production and the increasing incidence of food-poisoning outbreaks and animal diseases that can be passed on to humans.

However, Minister Lui pointed out that today's technological advances present possibilities to address these challenges. "Agri-biotechnology offers the greatest potential to improve agriculture in this millennium," he said. Because of this, he batted for strengthened collaborative research among industries, tertiary institutions, and research institutes to develop new products such as animal vaccines and superior varieties of plants and seafood to secure food sources.

The Singaporean official challenged SEARCA to give attention on these concerns as

"...addressing the needs and concerns of the agrarian part of society is an appropriate and effective developmental response..."

part of its programs to address food security. He cited that Asia is home to a large percentage of the world's 1.1 billion poor, about two-thirds of whom live in rural areas where access to education, infrastructure, technology, and finance is acutely limited. Moreover, they are dependent on agriculture and agriculture-related industries for employment and income.

"Therefore, addressing the needs and concerns of the agrarian part of society is an appropriate and effective developmental response, and should be accorded high priority by governments and development organizations," Minister Lui stressed. He added that although Singapore's development path has differed from most of its Asian neighbors, Singapore nevertheless acknowledges the importance of agriculture. This is evidenced by the fact that, despite land scarcity, about 3 percent of Singapore's land area is devoted to agriculture today.



H.E. Rear Admiral Lui Tuck Yew, minister of education, Ministry of State, Singapore

Minister Lui recognized the achievements of SEARCA's programs over the years, which, he said, have helped produce leaders in the agriculture sector and shape the agricultural research and policy directions in Southeast Asia. He urged SEARCA to be innovative and dynamic in addressing the challenges, as well as in seizing the opportunities offered by rapid technological changes and globalization, so as to enhance the agricultural competitiveness and natural resource management of Southeast Asia.

Moreover, he rallied support for the Center, stressing that "the success of SEARCA will be the success of Southeast Asia." (LLTallafer)

Singaporean agriculture primer launched

The Singapore volume of SEARCA's Southeast Asian Agriculture and Development Primer Series was launched on 6 September 2006 in Singapore during the opening ceremony of the 52nd SEARCA Governing Board Meeting held in this city-state.

The launch was officiated by H.E. Rear Admiral Lui Tuck Yew, Minister of Education of the Ministry of State, who was also the keynote speaker during the meeting's opening ceremony.

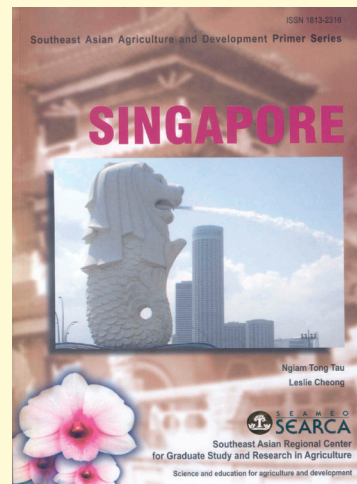
The publication was written by Dr. Ngiam Tong Tau, a veterinarian by profession, who had been at the helm of Singapore's agriculture and veterinary developments from 1984 until his retirement in 2005, and Mr. Leslie Cheong, a biologist and presently director of the Food Supply and Technology Department of the AgriFood and Veterinary Authority (AVA) of Singapore.

The primer presents the state of agriculture in Singapore and its contribution, albeit modest, to the country's economy. Of particular interest are the structural and policy changes that were put in place by Singapore in the face of the changing agriculture environment, as well as the country's attempt to develop a farming industry considering its land and sea space limitations, and the strategies employed to sustain the industry.

This farming industry focuses on hen eggs, marine/freshwater fish, vegetables (leafy vegetables and bean sprouts), orchids, and ornamental fish. The strength of Singapore's agriculture in these

commodities could be gleaned from the following:

*Its five hen-egg layer farms produced a daily average of 920,000 eggs, which meet about 30 percent of Singapore's consumption requirements. All the farms are free of Salmonella enteritidis infection. Two of the layer farms have environmentally controlled houses, which can keep



up to 50,000 birds per house. *Through net cage fish farming starting in 1975, Singapore cultures both finfish (e.g., sea bass, snappers, and groupers) and shellfish (e.g., mussels, oysters, lobsters, and crabs). In 2005, the fish farms produced 5,280 mt of finfish, crustaceans, and mollusks, accounting for 5.7 percent of local consumption. In 2003, the government established a Marine Aquaculture Centre to research on hatchery technology, breeding and closing of the breeding cycle

of various tropical finfish, and farming of such fish in deep net cages.

*Singapore has 63 vegetable farms occupying 114 hectares. About 87 percent of these use soil cultivation (i.e., protected cultivation in netted houses) or hydroponic systems.

*Singapore is a major exporter of quality cut orchids, accounting for 15 percent of the world market (valued at S\$19.7 million in 2005); it is regarded as the birthplace of cut orchid trade. It has more than 80 free-flowering orchid varieties grown on 310 hectares of land in Agrotechnology Parks. The flower farms employ intensive cultivation and attain high productivity through skilled labor, use of automated fertigation

systems, robotic agricultural sprayers, and tissue culture.

*Singapore is now the world's top exporter of ornamental fish. In 2005, it exported \$90.9 million worth of ornamental fish to 79 countries, accounting for 19 percent of the world market share. This trade

is carried out by 123 licensed exporters. Seventy local farms produced about 50 percent of the export volume in 2005. They culture a total of 359 varieties of freshwater ornamental fish.

Food and agriculture in Singapore is under the purview of the AVA. The AVA is the national authority on food safety and agriculture, and is mandated to ensure a resilient supply of safe food to safeguard the health of animal and plants and facilitate agri-trade. (LLTallafer)

Other exhibitors were the Philippine Rice Research Institute; Biotechnology Coalition of the Philippines; Crop Life Philippines; Philippine Council for Industry and Energy Research and Development; Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD); Emilio Aguinaldo College; Mapua Institute of Technology; Omnibus Bio-Medical Systems; Arnichem Corporation; Alteredmed Corporation; Santeh Feeds Corporation; and HIPRA Philippines, Inc.

SEARCA together with some member agencies of the Los Baños Science Community (LBSC) Foundation, Inc. such as the Bureau of Plant Industry, Department of Science and Technology-Region IV, Ecosystems Research and Development Bureau, Forest Products Research and Development Institute, International Rice Research Institute, PCARRD, Philippine Council for Aquatic and Marine Research and Development, University of the Philippines Los Baños (UPLB), National Institute of Molecular Biology and Biotechnology, Institute of Plant Breeding, and the Agricultural Mechanization Development Program, again joined the Tuklas Agham (Discover Science) Exhibit from 13 to 15 September 2006 at the D.L. Umali Hall, UPLB in celebration of the Bañamos, a yearly festivity hosted by the municipality of Los Baños, Laguna, Philippines.

Similarly, hundreds of guests, teachers and students alike,

SEARCA ADSS

The weekly **SEARCA Agriculture and Development Seminar Series (ADSS)** continues to be a venue for dynamic and vibrant discussion of scientific findings, research results, and perspectives within the purview of agriculture and development. It has had high-profile researchers and practitioners from the academe, government, and industry as resource persons. **Open to the public and held at the Center every Tuesday at 4 p.m.**, the ADSS is attended by students, academics, scientists, and other members of the Los Baños community and beyond. The following were the seminars held from **July to September 2006**.

| Date | Topic | Speaker |
|--------------|--|--|
| 4 July | Are NGOs Still Relevant? | Ms. Marissa Camacho-Reyes, Executive Director, Jollibee Foundation |
| 11 July | Dietary Changes and Their Health Implications in the Philippines | Dr. Corazon V.C. Barba, Professor, Institute of Human Nutrition and Food, College of Human Ecology, University of the Philippines Los Baños (UPLB) |
| 18 July | The Very Core of It: The Rapu-Rapu Mining Issue | Mr. Charles Avila, Vice Chairperson, Rapu-Rapu Fact Finding Commission (RRFC), and Dr. Aloysius Baes, Commissioner, RRFC |
| 25 July | Building Capacities and Networking in Participatory Development Communication in Natural Resource Management: The Isang Bagsak Southeast Asia Experience | Dr. Ma. Celeste H. Cadiz, Manager, Training Department, SEARCA |
| 1 August | The Social Diffusion of Influence: Exploring the Role of Group Interactions on Communication Campaign Effects | Dr. Clarissa David, Asst. Professor, College of Mass Communication, UP Diliman |
| 8 August | Spatial Integration of Rice Markets in Vietnam | Dr. Nguyen Thi Duong Nga, Lecturer, Hanoi Agricultural University, Vietnam |
| 15 August | Biotechnology in the Philippines: Hopes, Dreams, and Reality | Dr. Benigno D. Peczon, President and CEO, Biotechnology Coalition of the Philippines |
| 22 August | Economy-wide Effects of an Avian Flu Outbreak in the Philippines | Prof. U-Primo E. Rodriguez, College of Economics and Management, UPLB |
| 29 August | Exploring Regional Community-based Natural Resource Management (CBNRM) Policy Advocacy in Asia: Sharing, Learning, and Improving through Action Research | Mr. Robert W. Solar, CBNRM Policy Advocacy Specialist, Regional Center for Asia, International Institute for Rural Reconstruction |
| 5 September | Improving Human Nutrition through Iron-Biofortified Rice: Opportunities and Challenges for Action | Ms. Angelina Felix, University Researcher, Institute of Human Nutrition and Food, College of Human Ecology, UPLB |
| 12 September | Development of a Small-scale Processing System for the Production of Semi-refined Carrageenan | Dr. Arnold R. Elepaño, Associate Professor, Agricultural and Bio-process Division, Institute of Agricultural Engineering, College of Engineering and Agro-industrial Technology, UPLB |
| 19 September | Recovery of Growth Hormones from Coconut Water Using Micellar-enhanced Ultra Filtration | Dr. Ernesto del Rosario, Professor, Institute of Chemistry, College of Arts and Sciences, UPLB |
| 26 September | Agricultural Policy and Adoption of Research | Dr. Sandy Cuthbertson, Senior Consultant, Center for International Economics, and Dr. Jeff Davis, Program Manager, Policy Linkages and Impact Assessment, Australian Centre for International Agricultural Research, both in Canberra, Australia |

University Consortium offers thesis grants

The Southeast Asian University Consortium for Graduate Education in Agriculture and Natural Resources is offering thesis grants for school year 2006–2007.

The Consortium provides a limited amount of funds to assist ongoing graduate students of any of the Consortium members and associate members in the preparation and production of thesis/dissertation manuscript. Each grant is up to US\$500.

The Consortium members are Institut Pertanian Bogor and Universitas Gadjah Mada in Indonesia, Universiti Putra Malaysia in Malaysia, Kasetsart University in Thailand, and University of the Philippines Los Baños in the Philippines. The Consortium associate members are University of Queensland in Australia, University of British Columbia in Canada, and Georg-August University of Göttingen in Germany.

To qualify for the grant, the thesis/dissertation of the applicant must be in line with the Consortium's strategic priorities, namely: sustainable management of natural resource systems; food and agriculture policy; biotechnology in agriculture; food and health; information and communication technology, bioinformatics; and data management in agriculture.

To date, 173 Consortium students have availed of thesis grants.

SEARCA initiated the Consortium in 1989 to promote mutually beneficial cooperation among agricultural universities in

the region. Specifically, the Consortium enabled its members to utilize more fully and efficiently the scarce resources and expertise available in each country for top-quality graduate education and research. It also stimulated free sharing and exchange of information, facilities, and expertise among agricultural universities in the region. The Consortium has provided yet another avenue through which SEARCA could enhance agricultural human resources in Southeast Asia.

Since 1989, SEARCA has served as University Consortium secretariat. (LLDDomingo)

SEARCA has 4 new fellows

Four SEARCA scholars from Cambodia, Myanmar, and Vietnam have recently joined the ranks of SEARCA fellows.

Three of the four new fellows graduated from the University of the Philippines Los Baños (UPLB) and one from Universiti Putra Malaysia (UPM).

Mr. Koy Ra, a Cambodian, finished his PhD in Forest Resources Management with dissertation titled "Species-site Compatibility Analysis Using Pair-wise Comparison Approach with GIS (Geospatial Information System) for Logged-over Areas in Kraya Commune, Santuk District, Kampong Thom Province, Cambodia." Mr. Ra is currently deputy director at the Division of Academic Affairs of the Royal University of Agriculture (RUA) in

Phnom Penh, Cambodia.

Mr. Pheak Sothea, another Cambodian, completed his MS in Community Development with thesis titled "People's Extent of Empowerment in Two Communes under the Seila Program in Kampong Thom Province, Cambodia." Mr. Sothea is currently secretary and lecturer at the Faculty of Agricultural Economics and Rural Development at RUA. Ms. Nguyen Thi Duong Nga, a Vietnamese, obtained her straight PhD in Agricultural Economics with dissertation titled "Spatial Integration of Rice Markets in Vietnam." Ms. Nga is currently lecturer at Hanoi Agricultural University in Vietnam.

On the other hand, Ms. Mi Chan Mon from Myanmar graduated from UPM with the MS in Agricultural Biotechnology. Her thesis is titled "In Vitro Propagation and Mutation Induction of *Dendranthema grandiflora* (Tzvelev.)." Ms. Mon is currently Supervisor at the Myanma Perennial Crop Enterprise in Yangon, Myanmar.

Of the fellows who recently completed their graduate programs, Mr. Ra, Ms. Mon, and Ms. Nga were supported by the German Academic Exchange Service (DAAD). Mr. Sothea was supported by the ASEAN Foundation.

To date, SEARCA has a total of 987 fellows (421 PhD, 566 MS). Of these fellows, 1 is from Brunei Darussalam, 22 from Cambodia, 250 from Indonesia, 12 from

SEARCA director / from page 5

He said that one good news in the midst of the DDA negotiations' suspension has been the consensus reached by the Task Force on Aid for Trade, which has recognized the importance of Aid for Trade as "a tool to help developing countries integrate more fully into the multilateral trading system and to provide them with increased trade opportunities as a way to enhance

growth prospects and reduce poverty." However, Dr. Balisacan underscored the acknowledgment that Aid for Trade is not and cannot be a substitute for the development benefits that will flow from a successful Doha Round.

"This (i.e., a successful Doha Round)," Dr. Balisacan said, "is our impetus for continuing on with our discussions, with the desired end-result of being able to provide science-based

policy recommendations to our respective governments to promote the Doha Development Agenda."

The opening ceremony was graced by the minister of agriculture and forestry of South Korea, the governor of Jeju Special Self-Government Province, and the secretary-general of Afro-Asian Rural Development Organization. (LLTallafer)

Rice book/ from page 16

right people, the market, and the management, then the rice industry will finally find its day," conveyed Sen. Magsaysay in his keynote speech during the conference.

The senator believes that rice and farm are always looked upon as

impoverished sectors. Until now, the Philippines, according to him, remains to be a seat of poverty, with roughly 50 percent of the Filipinos below the poverty level. Despite these, Sen. Magsaysay looked at the issue of attracting capital for agriculture. As it is, the Philippine government has been striving to help out and extend

subsidies to the agriculture sector to take the poor farmers out of their plight.

Sen. Magsaysay encouraged the private sector's active involvement and minimal intervention from the government, other than resource provision. According to him, this

Rice book/ to page 14

Thesis abstracts / from page 13

The study showed that higher margin could be obtained by raising native chickens under free-range system without shelter provision. It also identified the constraints to production as poor genetic potential, seasonal availability of feeds, lack of vaccination and medication program, and disorganized marketing.

Land Suitability and Fertility Capability Evaluation of Land Reform Area in Maha Sarakham Province, Thailand



Soontaree Boonme
Thailand
Universiti Putra Malaysia

Land suitability evaluation is one of the most effective methods for agricultural land use planning as it evaluates the suitability of land for a specific crop. The study area was 2,915.81 hectares (ha) located in Khok Phuk Kut and Pong Deang Forest, Maha Sarakham Province, Northeast Thailand. The study involved the creation of Fertility Capability Classification unit and land suitability maps using Global Positioning System and Geographic Information System as well as grouping soil series into soil clusters based on their physical and chemical properties (by cluster analysis). Conformity of land suitability and present land use was also considered. The base maps of administrative boundary, topography, climate, soil series, and present land use were collected.

Results of the study showed that both topsoil and subsoil in the study area were loamy sand (S) or sandy loam (L). Their fertility constraints were high rate of infiltration, low water-holding capacity, low nutrient capital reserves (k), and Al-toxicity (a).

Furthermore, the study showed that more than 90% of study area was used for agriculture: 1,485.43 ha (50.94%) for cassava cultivation and 1,235.99 ha (42.39%) for paddy, while forest comprised 6.65% of the area. However, 2,905.97 ha—or almost the whole area studied—was unsuitable for transplanted, direct-seeded, and upland rice and only marginally suited to cassava. Meanwhile, 2,882.24 ha was found suitable for sugarcane and only 23.43 ha was not suitable for sugarcane. The fertility constraints found were soil texture or structure.

SEARCA intensifies / from page 10

from neighboring towns came to view the exhibit—a parallel scenario when SEARCA took part in LBSC National Science and Technology Week Exhibit last 26–28 July at the Baker Hall, UPLB. (LGSoliven)

Isolation, Serologic Identification and Antibiotic Sensitivity Testing of Salmonella Species in Poultry



**Lotis Monsales-Balala
Philippines
University of the Philippines
Los Baños**

The study aimed to isolate and identify the serotypes and determine the antibiotic sensitivity patterns of Salmonella isolates from 325 poultry samples. Poultry meats, eggs, and cloacal swabs were sampled to isolate Salmonella by conventional method and serotype them by using specific typing sera. Antibiotic sensitivity test was performed through the Kirby-Bauer method.

Results showed that the total Salmonella recovery rate was 4.92% (16/325), 9.3% (14/150) of which was isolated from meat samples and 2% (2/100) from cloacal swab samples. Salmonella was not detected in egg samples. There was no significant difference (p -value=0.40) in the number of Salmonella isolates from the Calamba and Los Baños public markets. Among the meat types, the breast and wing had greater number of isolates (10%) compared with the thigh (8%), but the difference was not significant (p -value=1). Only 4% of the cloacal swab samples were positive for Salmonella.

Seven serotypes belonging to serogroups B, C2, C3, D1, and E1

were isolated in the study. These are *S. weltevreden*, *S. derby*, *S. newport*, *S. albania*, *S. lexington*, *S. enteritidis* PT1, and *S. enteritidis* phage type untypable. *Salmonella weltevreden* was the predominant serotype, followed by *S. derby* and *S. newport*. This is the first time that *S. albania* was isolated in poultry in the Philippines.

Most of the isolates were highly sensitive to norfloxacin (100%), gentamicin (100%), cephalothin (100%), ampicillin (97%), and trimethoprim-sulfamethoxazole (97%). Resistance was found in nitrofurantoin (100%), tetracycline (16.3%), ampicillin (3%), and trimethoprim-sulfamethoxazole (3%). All (100%) serotypes were resistant to at least one antibiotic, while 9.7% showed multi-drug resistance to nitrofurantoin, tetracycline and trimethoprim-sulfamethoxazole.

The study revealed that Salmonella continues to contaminate our food with new serotypes present including *S. enteritidis* PT1. The antibiotic sensitivity patterns of the serotypes have changed and showed that serotypes were resistant to antibiotics, particularly nitrofurantoin. It is therefore recommended that proper food handling practices be emphasized repeatedly and that antibiotics be prudently used in food animals.

Production and Marketing of Native Chickens (*Gallus gallus domesticus* Linn.) in Batangas and Iloilo Provinces, Philippines



**Sengdala Sulinthone
Lao PDR
University of the Philippines
Los Baños**

The study was conducted to examine the differences in production and marketing of native chickens between

the provinces of Batangas and Iloilo, Philippines and to identify constraints to and opportunities for improving the native chickens' production performances.

A total of 226 native chicken growers were interviewed. In Batangas, 133 farmers were sampled in 40 barangays or village in five municipalities and one city. In Iloilo, 93 growers were sampled in 39 barangays in nine municipalities and one city. A survey instrument was pre-tested in Quezon province and used to gather primary data. Key informants (assemblers, traders, retailers, consumers, local government unit personnel, Department of Agriculture and Bureau of Animal Industry personnel) were also interviewed. Secondary data were gathered from different institutions and agencies. Data gathered were encoded by using Microsoft Excel program. The Statistical Program for Social Science (SPSS 11.5) was used to determine frequencies. A simple cost and return analysis of native chicken production on free-range system was done to determine the economics of production.

Results showed that the predominant system of raising native chickens in both provinces was the free-range with and without shelter provision. Farmers preferred to raise locally available native chicken genetic groups. Native chickens were raised mainly for additional income and for home consumption. Feedstuffs such as corn, paddy rice, chopped coconut meat, rice bran, cassava, and kitchen discards, singly or in home mixed forms, were popularly used by farmers as feeds. Farmers observed low egg production and slow growth due to lack of programs for genetic improvement. High incidence of mortality was reported as a consequence of the lack of a sound flock health program, including vaccination and medication. Marketing of both live native chickens and eggs was disorganized as the prices were determined mostly by middlemen. Extension services rendered specifically for native chicken production by both the government and the private sector, including non-government organizations, are very limited.

Thesis abstracts / to page 12

SEARCA produces / from page 3

Communication. He also served as program manager of SEARCA's Knowledge Management Unit in 1998–2002.

Throughout his career, Dr. Flor has worked in Bangladesh, Bhutan, Cambodia, China, Indonesia, Lao PDR, Sri Lanka, Tajikistan, Thailand, USA, Vietnam, and the Philippines, where he serves in various intergovernmental initiatives and agencies. He has served as consultant in 59 development projects, including those of the Asian Development Bank (10), World Bank (9), United Nations Development Programme (3), United States Agency for International Development (3), and United Nations Food and Agriculture Organization (5). He has written 17 books on communication development

and widely recognized for his expertise in communication, knowledge exchange, and distance learning. Dr. Flor is listed in the 1998 International Who's Who in Distance Learning and in the millennium edition of the International Futurists Directory. He is also a member of the New York Academy of Sciences, American Association for the Advancement of Science, and International Board of Advisers of the InfoBridge Foundation based in the Netherlands.

Cambodian SEARCA fellow promoted to deputy director

Dr. Koy Ra, a Cambodian SEARCA scholar who recently completed his PhD degree, has been promoted to deputy director at the Division of Academic Affairs of the Royal University of Agriculture (RUA), Phnom Penh, Cambodia. Previously, he was head of



Dr. Koy Ra

RUA's Office of International Cooperation and Planning. Dr. Ra completed his PhD in Forest Resources Management at the University of the Philippines Los Baños in August 2006. He is the third Cambodian to complete a PhD program under SEARCA scholarship. The other two are Dr. Prum Somany and Dr. Kao Sochivi, both officials of the Department of Fisheries of the Ministry of Agriculture, Forestry, and Fisheries, Cambodia. (LLDDomingo)

Rice book / from page 12

is the time to unfetter agriculture as the overgrown but dependent adult of the Philippine government without removing financial, technological, and market support.

Book writing workshop

To ensure that the book covers every important aspect of Philippine rice economy, the chapter authors were convened

in a monograph-writing workshop last 21 August in Pasig City, Philippines.

The authors streamlined the recommendations in the book into the highest impact policy recommendations and issues, which were included in the monograph version. In attendance to this workshop were Dr. Balisacan, Dr. Mercedita A. Sombilla, Dr. Arnulfo G. Garcia, Dr. Lorna C. Malicsi, Ms. Jessaine

Soraya C. Sugui, and Ms. Arlene R. Obmerga of SEARCA; Dr. Alex Brillantes and Dr. Jose Tiu Sonco of the University of the Philippines Diliman; Dr. Gilbert Llanto and Dr. Eliseo Ponce of the Philippine Institute for Development Studies; and Dr. Sebastian of PhilRice. The team ensured that the monograph could be easily understood and appreciated by all, especially decision makers and legislators. (ARObmerga, BPJoven, and JSCSugui)

Fishpond / from page 4

There are answers brewing on the researchers' plate. Among others, the answers include feeding the pond system more than feeding the fish and intensifying volume of fish stocks in a pond, but reducing commercial feed intake of fish by letting them nibble from the ecosystem's natural food supply. This seems ideal to maintaining the ecosystem's equilibrium, but not impossible.

The POND projects are currently doing this. The INREF and EU programs for Optimisation of nutrient Dynamics, or POND, intended to contribute to the development of more sustainable integrated agriculture-aquaculture farming systems with the aim of improving farm household livelihood. The research focused on fish selection, nutrient dynamics, and the role of fishponds in existing farming

systems through a concerted effort by various PhD students. Some technologies reaped from this five-year project are now ready for dissemination. The next destinations for this fishpond farming are Asia and Africa. The goal is huge—food security and poverty reduction. But one can always start small, and this means starting with fish and its home—the pond.

Fishpond / to page 15

SEARCA has new Training Department manager

SEARCA welcomed its new Training Department manager, Dr. Maria Celeste H. Cadiz, on 1 July 2006.

Dr. Cadiz is concurrently an associate professor at the University of the Philippines Los Baños (UPLB) College of Development Communication from which she served as first dean from 1999 to 2006. She brings with her a 28-year career that has been devoted to teaching, research, and practice of development communication at UPLB. She holds a PhD from Macquarie University in New South Wales, Australia, and a Master of Science and Bachelor of Science in Development Communication (cum laude) from UPLB.

She has served as project leader/coordinator in a number of nationally and internationally funded action-research programs in development communication; authored two books, a monograph, and several articles published in professional publications or presented in international and national conferences; and produced more than 40 communication materials in various media formats, from print to audiovisual.

At present, she also serves as program coordinator of the Adaptive Learning and Linkages in Community-based Natural Resource Management (ALL in CBNRM), an inter-institutional

capacity-building and networking program being developed as a regional CBNRM center of excellence supported by the International Development Research Centre (IDRC) of Canada; and its earlier phase the Isang Bagsak Southeast Asia, both through UPLB Foundation, Inc. and the UPLB College of Development Communication.

She is secretary-treasurer of the Board of Directors of the Communication for Social Change Consortium based in South Orange, New Jersey, USA; chair of the Technical Committee for Communication of the Technical Panel for the Social Sciences and Communication, Philippine Commission on Higher Education; member of the Scientific Committee of the World Congress on Communication for Development organized by the World Bank, Food and Agriculture Organization, and the Communication Initiative on 25–27 October 2006 in Rome, Italy; and Participatory Development Communication Adviser of the project “Community-driven Universal Access Solutions in Cambodia: Pilots to Policy Research,” funded by the IDRC Pan Asia Networking Program through the Ministry of Commerce, Cambodia.

Her other current affiliations include serving as one of the three Philippine representatives to the Asian Media Information



Dr. Maria Celeste H. Cadiz

and Communication Centre, Inc.; member of the Board of Directors of the Philippine Association of Communication Educators; and vice president of the Board of Trustees of the Arts Research and Training Institute for Southern Tagalog, Inc. and of the Nora C. Quebral Development Communication Centre, Inc.

Under her helm, SEARCA's Training Department is expected to strengthen its training programs aimed at participants who can create the greatest influence in the rural, agriculture, and environment sectors in Southeast Asia through the policies, research and development programs, and training initiatives of their respective countries and organizations.

Dr. Cadiz succeeds Dr. Jesus C. Fernandez, who has accepted the post of capacity-building specialist at the World Agroforestry Center based in Bogor, Indonesia, from where he backstops the Southeast Asian Network for Agroforestry Education. (NARamos)

Fishpond / from page 14

The pond may be murky and small, but don't underestimate it: underneath, there are mysterious issues that await to be unraveled by scientists. (LCMalicsi)

SEARCA has 4 / from page 11

Lao PDR, 55 from Malaysia, 14 from Myanmar, 289 from the Philippines, 4 from Singapore, 267 from Thailand, 5 from Timor-Leste, and 68 from Vietnam. (LLDDomingo)

CARD-CMDI / from page 7

director, and Dr. Jaime Aristotle B. Alip, CARD founding president and managing director. (NARamos)

Rice book offers options for polishing rice policies

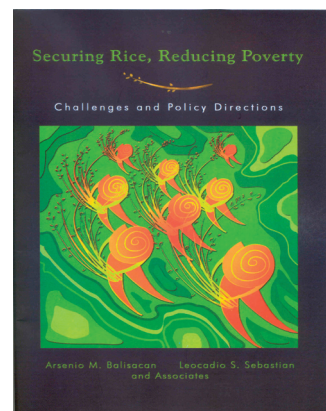
The Philippines can ensure rice security while reducing poverty, according to the book "Securing Rice, Reducing Poverty: Challenges and Policy Directions," which will be launched on 27 November 2006, SEARCA's 40th anniversary.

The book, co-published by SEARCA, Philippine Rice Research Institute (PhilRice), and the Philippine Department of Agriculture's Bureau of Agricultural Research (DA-BAR), recommends, among other things, policy reforms in terms of intensified public investment in irrigation, extension, research and development (R&D) in agriculture, particularly in rice.

Edited and co-authored by SEARCA director and professor of economics, Dr. Arsenio M. Balisacan, and PhilRice Executive Director Leocadio S. Sebastian, the book advocates strong adoption of appropriate and enabling policies that strengthen the response of rural non-farm sector to agricultural growth and sustain economic expansion. According to the authors, proper application of modern science and technology through client-responsive research and rice extension offers a pathway to sustainable rice



Authors of the rice book with Senator Ramon Magsaysay Jr. (7th from left), chair, Philippine Senate Committee on Agriculture and Food; Dr. Emil Q. Javier (5th from right), chair, Asia Rice Foundation; and Dr. Leocadio Sebastian (4th from right), the book's co-editor and executive director of the Philippine Rice Research Institute



security for an increasing Filipino population.

The book includes chapters on rural finance; managing rice extension; rice R&D; external environment, trade regimes, and policy options for rice security; constraints and opportunities in water resources and irrigation development in Philippine rice production, land reform and property rights and their implications to rice security; local governance; rice seed system, biotechnology, and nutrition; prospects and opportunities in farm sustainability and organic farming; supply chain perspective on Philippine rice industry; rice marketing and distribution in the Philippines; and food safety in rice. These chapters were written by experts in the said disciplines.

The book has an easy-to-read condensed version. SEARCA organized a public presentation

of the book's overview along with a national conference on rice. This was held last 25 September in Pasig City, Philippines and was well attended by policymakers, decision makers, rural development practitioners, researchers, mass media, and Philippine legislators including Senator Ramon B. Magsaysay, Jr., chair, Senate Committee on Food and Agriculture, and guest speaker at the conference. Dr. Sebastian of PhilRice, Director Nicomedes Eleazar of DA-BAR, and Dr. Emil Q. Javier of Asia Rice Foundation were also present.

National rice confab

"If the agriculture industry is provided with the capital, the

Rice book / to page 12

The SEARCA Diary

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