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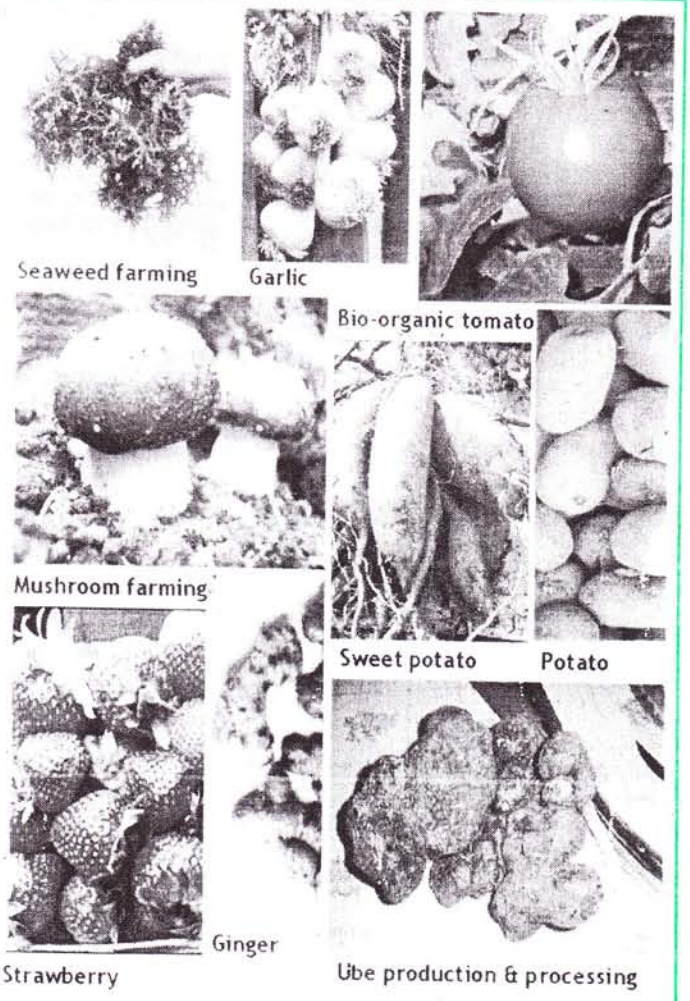
BAR launches 26 commerciable technologies



The Bureau of Agricultural Research (BAR) headed by Dir. Nicomedes P. Eleazar, in a recent orientation and workshop on Technology Commercialization (TechCom), affirmed the commitment of BAR to launch 26 technologies ready for commercialization and adoption by farmers and fisherfolk.

These technologies are identified from consultations with the agriculture and fisheries sectors nationwide and are focused on commercializing the priority commodities in each region. During the workshop, the participants, which included technical advisers and representatives from different regions who have expertise in technology commercialization, identified the mature technologies of their respective provinces. Moreover, the general guidelines and process of technology commercialization that will be adopted by the program were agreed upon with BAR staff and officers present during the activity.

Ready for take-off

In response to this large-scale project, the BAR team on National Technology Commercialization Program (NTCP) began its regional field visits, starting with Region 1 and CAR, to validate mature technologies that hold potential for expansion and economic development.

In its first foray, the team conducted field visitations and briefings with technical experts as well as farmers and fisherfolk in various points of Pangasinan, Ilocos Norte, and Benguet. The team was able to identify and validate technologies on the bases of social acceptability, technical feasibility, marketability, environmental soundness, and political participation. The validated mature technologies are the following: seaweed farming (Pangasinan); use of giberellic acid (GA3) and organic fertilizer for garlic (Ilocos Norte); bio-organic (tomato) farming (La Trinidad, Benguet); sweet potato, potato, ginger, strawberry, and ube production and processing (La Trinidad, Benguet); and mushroom production (La Trinidad, Benguet).

It was found that the linkage of the farmers and fisherfolk with the local government unit is one of the critical aspects in the process of developing technology, a point also underlined by Director Eleazar. The validation of the team also paved the way for their identification of relevant concerns and stumbling blocks in the development of the technologies for

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IN THIS ISSUE

EDITORIAL

TechCom: The prize of SATISFACTION

by Marlowe U. Aquino, Ph.D.

As soon as I set foot in our new office building after three years and a half of schooling, I was swamped with greetings and cheers, all saying "Congratulations! Welcome back, doctor!" and "How is the new doctor?" Well, in humble reply, I said, "Thank you! You are part of my success and let us enjoy our time together." These were simple and kind words from friends who believed that I could obtain my degree.

The first word that came into my mind after the first week greetings was – **SATISFACTION**. Needless to say, the word became very complex in context yet simple to understand. In time, the word was accompanied by other words which now have collectively become the guiding principles of what our team in the National Technology Commercialization Program (Tech Com) is practicing.

SA – **S**elf **A**ssessment in order to draw strength from others. Even under intense academic battle, we did not forget this most important factor when working with our colleagues and clients. Reflective processing and internalization of what transpired during a day's work is needed – what we do, what we say, how we act, why we do it, and what we need to understand. The reflection part comes at the end of each day which makes it worthy and justifiable.

TIS – **T**rust **i**n **S**ervice. Based on the responsibility placed on our team, we made it a point to trust each other without reservations. As I shared this with the rest of the team, we developed and strengthened the essence of teamwork. Of course, one must orchestrate to make ends meet to accomplish a given task or assignment. In so doing, every accomplishment was an added commendation to the team. Not to forget, this must be done 24/7 not only during program implementation but through the day as we extend and deliver the services our clients need.

FAC – **F**lexibility in **A**ction with **C**are. Action-driven program was our focus in Tech Com. Every activity must be treated with utmost care. Activities must be supported by strong direction and guidance from technical experts who assist the team. Our director provided the overall management with a device to monitor the program status and progress. With the tool at hand, flexibility was observed and practiced. This early, we are already practicing close monitoring so that our plans can be implemented to the fullest especially during the planning stage of technologies for packaging, promotion, demonstration, and piloting. At the same time, to produce quality products, technologies must be flexible and open to modifications to meet the requirements of the clientele and technology users for increased production and profit.

TI – **T**imely **I**mplementation. Adhering to the flexibility aspect of our plans and activities, technologies and services must be delivered and implemented appropriately. Similar to what mature technologies require, it must be provided in a timely manner complete with detailed activities, guidelines, and strategies of implementation. Activities must be aligned within specific timeframes so that scarce resources and services will be fully utilized with agreed and acceptable interventions from partner institutions, people, and the community as a whole.

ON – **O**pportunity in **N**urturing. Technology commercialization provides an opportunity to nurture capability and capacity building of individuals involved (users and adopters as well as facilitators involved). Basically, training on how technologies are assessed will equip the researchers, extensionists, and other technical staff with the skills to do the evaluation. Packaging and production of technology promotional materials will develop the abilities of individuals involved and, towards the end of the line, technology takers and users will be able to attain optimum production and increased income.

Given these considerations, **"SATISFACTION"** of every involved individual is our concern. Needless to say, if we want to make the Technology Commercialization Program successful, we must satisfy our clientele.

The challenges as we face the emerging activities are tremendous. However, if we remind ourselves that we have a responsibility to improve the living conditions of the small farmers, fisherfolk and small-holder enterprise, only then can we strongly announce to the world that the working philosophy of the technology commercialization–Making Technology Work for Agriculture, Fishery, People, Industry and Community—is a reality.

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Unifying the bangus industry towards global competitiveness

DA-BAR joins Bangus Congress

(L-R) Dagupan City Mayor Benjamin Lim and wife, Ms. Celia Limand, Leyte District Remedios L. Petilla, and DA Usec Cesar Drilon

Dagupan City, Pangasinan– Bangus or milkfish has been known for centuries as a fish that swims its way to the seas of warm waters along the continental shelves and around islands in the Indo-Pacific. In the Philippines, we have been enjoying the fish for its milky and tasty flesh, most when grilled (*inihaw na bangus*), or cooked in tamarind (*sinigang*).

On 28 April 2005, the 2nd National Bangus Congress and Exhibition was marked with an exhibition by sponsors and a forum of guest speakers on the bangus industry and its aquacultural advances. As one of the exhibit sponsors, the BAR contingent headed by Ms. Digna Sandoval (section head of PDD), Ms. Julia Lapitan (assistant head of MISD), Ms. Ella Dejelo, Ms. Angela Obnial, and Mr. Joel Lales (executive support staff of the Office of the Director) celebrated with the Dagupaeños who also sought to wrest the Guinness Book of World Record award for longest barbecue grill from Turkey, this time using *"inihaw na bangus."*

The Bangus Congress and the exhibit were opened with a ribbon cutting and official declaration of the affair. Department of Agriculture (DA) Undersecretary Cesar M. Drilon, representing Secretary Arthur C. Yap, and Bureau of Fisheries and Aquatic Resources (BFAR) officials along with City Mayor Benjamin Lim and his wife, Celia, announced the official opening of the Congress.

The two-day forum focused on recommendations for the industry and the unification of policies that would influence the sustainability of bangus production in the country. In turn, the sustainability would pave the way towards the export market where bangus has very strong possibilities for success.

Usec. Drilon, in his keynote speech, lauded the bangus industry in constantly standing up and ably unifying the industry's sectoral groups for global competitiveness. He cited the DA's efforts in sustaining the bangus production by classifying it as one of the priority commodities in tune with PGMA's 10-point agenda of generating local jobs and "making bangus, a wage good, as affordable and as available at all times".

Being true to its promise of bringing success to the bangus industry, Usec. Drilon explained that the DA has developed the bangus roadmap and his already focused on expansion of production areas to increase bangus output. These were done to improve the overall aquaculture scenario. The Undersecretary laid down the cards and challenged the industry players to team

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NEWS

BAR and ACIAR approach to linking arms: "Perfect Match"

In the partnership approach proposed by BAR and ACIAR, program and project priorities will be identified to "harness capabilities of both partner groups." An exploratory meeting was carried out last March 18 at the RDMIC Conference Room with Australian Centre for International Agricultural Research (ACIAR) Research Program Manager, Mr. Barney Smith, and Philippine Country Manager, Ms. Cecille Hondrado. Presiding over the meeting was BAR Director Nicomedes Eleazar. Also present were BAR's Project Development Division staff, Dr. Amy Kagaoan (PDD chief), and Ms. Salve Ritual and executive support staff, Mr. Joel Lales (senior executive assistant) and Ms. Angela Obnial (communications specialist).

The meeting aimed for collaboration between the two agencies. "We came to develop more projects in the Philippines," Mr. Smith said. However, the program manager explained that the proposed projects should be able to improve efficiency in both countries' agriculture industry, specifically, the agribusiness sector.

ACIAR develops its relationship with its country partners in terms of matching projects that are also relevant to Australia's developmental goals especially on the sustainability part. Among these goals, there is a "natural mix of opportunities" that could be developed and sustained through sharing of networks between the two countries.

BAR is looking into projects on technology commercialization that would complement ACIAR's project development goals. ACIAR recommended developing two to three priority projects in the Philippines that would also be beneficial to the Australian government. The DA regional offices that could match ACIAR's project priorities are also being encourage to propose collaborative projects with ACIAR. *(Angela E. Obnial)*

Eastern Visayas unveils priority commodities for 2005

Abaca (*Musa textilis*) topped the list for Eastern Visayas's 2005 priority commodities for research and development. The region, composed of the scenic Leyte and Samar islands, is currently the country's leading producer of abaca fibers. It contributed 40% of the country's total abaca fiber production from 1994 to 2003. However, pests and diseases attacking the industrial crop decrease the output and incomes of the abaca farmers. R&D tries to solve this problem by developing pest management techniques to control the diseases at an early stage.

In addition to abaca, the following commodities make up Eastern Visayas's RDE Program:

Corn

Identification of location specific varieties through adaptive yield trials.
Use of bagasse and other waste materials for organic fertilizer shall also be explored.
Development of suitability maps using GIS.

Jackfruit

Adaptation and field testing of fruitfly control technologies.
Adaptation trial on pruning for fruit development

Swine (Pork)

Assessment of genetic improvement scheme for backyard pig raisers.
Assessment of alternative contract growing scheme.

Small Ruminants (Chevon/Mutton)

Evaluation of genetically improved small ruminants for productivity and carcass quality.
Assessment of alternative contract growing scheme.

The prioritization of commodities is part of the ongoing Regional Consultation on Agriculture and Fisheries R&D Priorities spearheaded by BAR's Program Development Division. The output of RFU 8 is an example of the current emphasis of RDE effort seen at the regional level. Each region shall craft an RDE Program based on its integrated RDE program (RIRDEAP) and DA Goals 1 & 2. The premise is simple: Identify the problem, let RDE provide the solution, and validate at the field.

Participants from the research station, farmer industry advisory committee, local government units, and the private sector shared their valuable ideas and recommendations during the consultation meeting. Several concerns were raised by the farmers, ranging from the reduction of marketing layers like middlemen (*viajeros)* and checkpoint briberies, to rice importation. RFU 8 Regional Executive Director Leo Cañeda provided various explanations for the issues raised.

The BAR Team, headed by Dr. Carmencita Kagaoan together with five technical experts and selected staff, conducted the consultation on 2005 April 1-2 at Tacloban, Leyte. They also visited various farms and interacted with small farmers to get a first hand account of the conditions in the field. RIARC Manager Rufino Ayaso and some EVIARC staff accompanied the team in their visits. *(Carmela B. Brion)*

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sustainable agriculture. Quality of processing and packaging are the most glaring shortfalls of marketing of the products generated which cannot compete with the widely commercialized products of the big industries.

Strategic level

Given this, the team developed a sound framework of program strategies that will fit the needs of commercializing location-specific technologies. Dr. Bessie Burgos, an expert on TechCom, who has closely coordinated with BAR for this program, emphasized that all strategies should revolve around identifying products or services the technology will lead into, defining the market and target users, and ensuring that efforts are directed towards translating everything to peso values.

Techno Forum

Director Eleazar meanwhile ordered the TechCom team to make field visitations to other regions for this month. This is in line with the upcoming technology forum to be held in May 2005 with the simultaneous launching of eight technologies ready for commercialization. The validated technologies from Region 1 and CAR, namely, garlic, strawberry, potato, and tomato production and processing shall be launched together with banana, carabao milk and dairy products, organic chicken, and bangus production and processing. This activity is a chance for the Bureau to interact not only with scientists and researchers, but also with the farmers and fisherfolk who are the end users of the NTCP outputs. The TechCom team is also planning to invite stakeholders and representatives from different industries who can be of big help in realizing the full potentials of these technologies. *(Miko Jazmine J. Mojica)*

Region I, CAR adhere to DA's twin goals

Responding to the Department of Agriculture's adopted Goal 1 (develop idle lands for agribusiness) and Goal 2 (reduce prices of wage goods in the market), the Bureau of Agricultural Research (BAR) together with its technical experts in different fields, held a consultation on commodity priorities for R&D with Region I and Cordillera Administrative Region (CAR) on 5-7 April 2005. This is the second in a series of consultations that will be conducted throughout the 15 regions.

The consultation meeting was set to specifically identify priority researchable areas in Region I and CAR, validate the commodity-specific problems of the farmers in the field, identify which of these technologies have high potential for commercialization, and seek ways to enhance participation of various stakeholders from planning to implementation of RDE agenda. The ultimate premise of the consultation is, not only to develop a sound, well-focused agenda and programs for each region, but also to prevent the duplication of researches.

Discussed during the consultation were the DA Goals and the Regional Integrated Research, Development, and Extension Agenda and Program (RIRDEAP). The participants sought to identify from hereon the priority commodities of the regions in common with a list of national commodities.

Among the identified common priorities for fisheries RDE in Region I were: bangus, tilapia, and seaweeds *Gracilaria, Caulerpa, Eucheuma,* and *Porphyra*. For agriculture RDE, the common priority commodities that were identified are: rice, corn, onion, garlic, tomato, eggplant, mango, and banana.

For fisheries RDE in CAR, the common priority is tilapia. For agriculture RDE, the common priorities are: tomato, potato, cabbage, carrot, banana, mango, citrus, coffee, poultry, swine, rice, and corn.

Present during the consultations were representatives from RIARCs, BFAR, DA, and private sectors from the two regions. The pool of experts included: Dr. Rey Velasco for crops, Dr. Louie Divinagracia for agribusiness, Dr. Catalino dela Cuz for fisheries, and Dr. Roberto Rañola for economics. *(Rita T. dela Cruz)*

GIS orientation for DA execs

In the effort to introduce the marvels of the Geographic Information System (GIS) technology to the Department of Agriculture family, Dr. Esteban Godilano, BAR's expert on GIS, gave executives from the Department's staff bureaus, attached agencies, and banner programs an orientation on GIS on 13 April 2005 at the Apacible Hall of the DA Building. Present were the heads of the Agricultural Training Institute, Bureau of Agricultural Statistics, Cotton Development Administration, Bureau of Agricultural and Fisheries Products Standards, National Agriculture and Fishery Council, National Dairy Administration, Philippine Fisheries Development Authority, Fiber Industry Development Authority. National Food Authority, Sugar Regulatory Administration, National Nutrition Council, and the GMA Livestock Program.

BAR Director Nicomedes P. Eleazar gave a brief opening remarks expressing his optimism that the executives present would find favor in GIS technology and incorporate it in their programs.

Dr. Godilano's presentation demonstrated how GIS technology could be used to determine the areas in the country which could be safely tapped for agriculture use with respect to environmental considerations. He also explained how the technology works through assembling, storing, manipulating and displaying geographically-referenced information to gain a whole new perspective on existing data, usually presented and studied in tables and columns, for accurate decision-making. He explained that GIS separates information in layers, and then overlays or compares multiple feature layers of information.

Dr. Godilano also enumerated other concerns and how GIS can be fully taken advantage of, which are: a) targeting and analyzing poverty, b) characterizing production environments, c) data integration for farm management, e) data and map output for tactical extension programs, f) insurance claim assessment, g) distribution network management for agribusiness, h) agriculture research prioritization for strategic planning, i) determining and mapping yield gaps, j) spatializing agronomic modeling, k) geo-referencing crop biodiversity, l) mapping strategic agro-industrial zones, m) precision agriculture, n) coastal resources mapping and monitoring, o) disaster prediction, and p) management of agriculture monitoring and evaluation activities.

A private company that specializes in geospatial technology also conducted a demonstration on the practical uses of the technology. *(Ma. Lizbeth J. Baroña)*

FEATURE

OFR: corn-based farming increases farmers' income

by Ma. Lizbeth J. Baroña

Researchers at the Department of Agriculture- Central Mindanao Integrated Agricultural Research Center in Region XII, through the On-Farm Research (OFR) program, developed a corn-based farming program for farmers in Sta. Cruz, Tampakan and El Nonok, Banga in South Cotabato, and in Kalaong Maitum and Lutay, Malungon in Sarangani. The researchers conducted community-based approaches to gain insight on the bio-physical and socio-economic characteristics, resource utilization and management, and identification of problems and opportunities in existing farming systems in the area, which helped in the formulation of an agricultural plan for the community.

Staple to 12 million Pinoys

We may be a rice-eating country in the bigger scheme of things, but there are 12 million of us who prefer white corn as staple. Apart from the human demand, our country's livestock sector's share of yellow corn demand reaches 70%. A healthy corn-livestock sector accounts for 16% of the Gross Value Added (GVA) in agriculture, involving some 600,000 farm households who depend on corn production as a major source of livelihood.

Despite the obvious importance of corn in the country's economic health, corn-farmers find themselves in a predicament because corn has the reputation of being a low-value crop and that it is highly seasonal. Also, corn production in the Philippines is insufficient. The GMA Corn Program reports in its industry situationer that the average yield was extremely low at 1.52 MT/ha in 1996 as compared to major corn producing countries, i.e., 3.15 MT/ha in Thailand, 4.04 MT/ha in Argentina, and 7.97 MT/ha in the United States. This low yield is attributed to marginal white corn areas being planted to traditional varieties.

Into the global stage

Naturally, a farmer thinks of ways to augment his measly income. Apart from providing for the demands of the country, he must also contribute in increasing the supply of corn for import, as the country commits itself to regional and international trade agreements.

Under the General Agreement on Tariffs and Trade - World Trade Organization (GATT-WTO), the country is required to provide a minimum access quota or volume for imported corn of 130,000 MT starting in 1995 and increasing to 217,000 MT in 2004 at 35% tariff. Quantities imported over these levels carry higher tariffs of 100% beginning in 1995, declining to 50% in 2004, the DA website reports.

Increasing farmer's income

Researchers at DA-CEMIARC, through the participatory rural appraisal (PRA) found out that the farmers in the Central Mindanao area are using the technology on minimum tillage or conservation tillage, natural vegetative strip, and SALT 4. Soil acidity in the area ranges 6.51 to 7.64, organic matter is low, phosphorus ranges from 3.2 to 5.2 ppm, and potassium is between 15-765 ppm. A small-scale feed mill for corn products was also developed for the farmers in El Nonok, Banga.

In Kalaong, Maitum, corn (var. Dekalb 818) was planted among mangosteen. Net income from a yield of 3,760 – 4,400 kg/ha ranged from P24,030 to P28,700. This is significantly higher than the yield they had before, which ranged between 2,500 to 3,800 kg/ha.

The researchers hoped that corn-farmers, through farming system interventions, would be able to wade through options to raise their productivity and their income. This would eventually satisfy both the everyday demands of providing food on the table at least three times a day and the corn industry of the country as a whole.

Sources:

1. *On-farm research (OFR) for corn-based farming systems in Region XII. NP Agduyeng, EA Garcia, JA Lumbao, JL Malaque, RJ Lumen, AG Garces, HH Estrella, A. Ampoda, and RO Allaga, Department of Agriculture - Central Mindanao Integrated Agricultural Research Center, Amas, Kidapawan City.*
2. *http://www.da.gov.ph*

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up with the different stakeholders in building up a strong synergistic approach to achieve cooperation among themselves. In this way, "generating fresh ideas, creating new approaches, and forging renewed commitment between and among the stakeholders" will be strengthened.

Hosted and organized by BFAR, the Bangus Association of the Philippines, Inc. (BAPI), and the Bangus Congress of the Philippines (BCP), guest lecturers from the academe, bangus industry groups and international experts actively took part in the talks about the Philippine bangus industry situation and advancements in bangus aquaculture.

The Congress was formally closed the following day by BFAR OIC Director, Atty. Reuben A. Ganaden. *(Angela E. Obnial)*

Source:http://www.seafdec.org.ph/rfmilkfish.html

Vitamin C means more eggs from ducks

by Rita T. dela Cruz

Vitamins are important to human health. This is a fact. But whether it has the same vital effect on animal health or whether their system could respond to vitamins as positively as humans do, was the subject of a local study.

Vitamin C or Ascorbic acid (AA) is one of the most important of all vitamins. This is according to the Dr. Decuypere's Vitamin Chart (2000). For humans, it is a potent anti-oxidant, an anti-inflammatory agent, anti-viral, and an immune system stimulant.

How about the animals? For ducks, particularly, the laying Philippine Mallard ducks *(Anas platyrhyncos* L.), vitamin C proved to be beneficial as well. Their egg production performance extended after Vitamin C was integrated into their feed diets. This was the result of a study conducted by researchers from the Ilocos Agricultural Research Center (ILIARC) of the Department of Agriculture (DA) after subjecting 160 female Mallard ducks to the "vitamin-C-test" for 58 weeks.

They were grouped into four, each with particular dietary treatment and varying levels of vitamin C in their feeds. The main objective was to improve egg production, egg quality and laying efficiency of the Phillippine Mallard ducks, specifically, those approaching one year egg production.

But first...the setbacks

As of 2004, the duck population was estimated to be around 10 million. A huge portion (7.48 million) was being raised on backyard scale while only a small part (2.37 million) was raised by commercial establishments. Although duck raising is considered a profitable business venture, it's behind other farm enterprises like chicken and swine production. In terms of economic importance, ducks are second only to chicken as source of eggs and meat.

A combination of good nutrition and proper management is essential for raising healthy ducks. But even this seemingly simple formula to productive duck raising continues to pose a challenge to local duck raisers as information on their nutrient requirements remains insufficient. New technologies on improving duck production have not been adequate. Thus, realizing the full potential of this business to hopefully earn more remains evasive.

More eggs, more income

For poultry raisers, more eggs naturally means more income. This is particularly true for ducks since they are the source of the ever-famous embryonated eggs (*balut*) and salted eggs (*itlog na maalat*), which Filipinos are becoming well known for, even abroad. *Balut*, which has Indo-Chinese equivalents, has become a favorite delicacy here that it was even featured in reality-tv shows in the US. Some are disgusted, but still a big chunk of them appreciate the unique smell and richness of the taste.

In the ILIARC research, the results showed that the body weight and egg weight of the ducks that were subjected to study did not show any noticeable change with the addition of vitamin C in their diets. However, the study indicated that the inclusions of 250 mg and 750 mg AA/kg in their feed i.e., duck layer pellets (DLP) from 58 to 69 weeks and from 70 to 81 weeks, respectively, improved the egg production of ducks.

Meanwhile, a significantly higher egg production was observed when the ducks were fed with 750mg AA/kg at 82-92 weeks. The livability of the birds was also remarkably high particularly those ducks that were fed with 750mg AA.

Lowest feed cost to produce an egg was observed from those ducks that were fed with diets without AA supplementation at 58-81 weeks while significantly lower feed cost was found for ducks with diets of 750mg AA supplementation at 82-93 weeks. In terms of egg quality, higher percentages of medium, large, and extra large eggs were observed in ducks whose diets included higher AA supplementation.

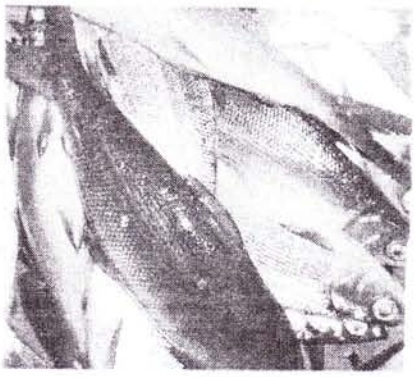
The results of the study show that vitamin C as supplements for duck feed approaching one-year egg production under confinement system, proved to be nutritionally favorable and effective. Egg production was also affected by production age but overall, optimal responses were attained at high levels of Vitamin C as supplement (750mg AA/kg of DLP).

Buying supplements for ducks might put off some farmers due to the additional cost and other expenses but they could be assured that with the benefits, these would proportionally come down.

Sources:

1. *"Potentiality of Extending the Egg Production Performance of Spent Philippine Mallard Ducks Fed with Varying Levels of Vitamin C." Unpublished study by J.M. Datuin, M.M. Cabatbat, Jr., R. Pigao, F.B. Tamayo, and L.S. Ferrer. Department of Agriculture-Ilocos Agricultural Research Center (DA-ILIARC), DMMMSU Compd, Bacnotan, La Union.*
2. *Dr. Decuypere's Nutrient Charts at: http://www.healthalternatives2000.com/vitchart.htm*

BAR-WorldFish Center reinforces team-up to boost milkfish aquaculture technology



On its second year of implementation, the Bureau of Agricultural Research (BAR) and the WorldFish Center are looking for ways to improve and reinforce the thrust of the BAR-funded project entitled, "Dissemination and Adoption of Milkfish Aquaculture Technology in the Philippines". For 2005, the focus of the project is geared towards the continuation of trainings on milkfish aquaculture; visit and demonstration to cooperator farmers and processors in the project target area; pilot scale dissemination of prioritized technologies; and monitoring and evaluation of technology and socio-economics of cooperator farmers in target areas.

The WorldFish Center is an international, non-profit, scientific research center based in Penang, Malaysia, which was created to accelerate scientific researches for the improved production and management of fisheries resources in developing countries. While the center is responsible for the administrative and over-all management mechanisms necessary for the implementation of the project, the BAR is in charge of the provision of advice, supervisory support and the project's promotion.

According to reports, milkfish production in the Philippines accounts for 50% of the total national production of fish and shellfish from aquaculture. Yet, there has been an evident decline in its production and sustainability.

On the other hand, the growing domestic market for *bangus* as well as its expansion in the international market is seen to be the challenge that our country has to measure up to. Thus, the project's main thrust is to analyze the production, market and policy structures of the milkfish industry in the Philippines. In doing so, we will be able to identify the constraints and opportunities for the future growth of the industry with emphasis on the adoption and impact of technological development.

To enhance the implementation of the project, a semi-annual review of the activities and accomplishments during the period was conducted in February at Dagupan City, Pangasinan which is the project's main site. The baseline survey; policy and socioeconomic review and identification of constraints; and the review and screening of milkfish technologies as well as its pilot testing and dissemination were presented during the conference. BAR recommended that the project team should synchronize and integrate the project components and implement activities and decisions.

On its final year of implementation, the BAR and WorldFish Center are expecting to promote state-of-the-art milkfish technology in the Philippines and develope an effectual package of technology (POT). The three-year project that will run from April 2004 to March 2007 was sealed in a Memorandum of Agreement (MOA) signed between the Department of Agriculture (by then Secretary Luis Lorenzo Jr. and then BAR Director William C. Medrano) and the WorldFish Center (represented by Dir. Gen. Stephen J. Hall and WorldFish Center-Philippines OIC Dr. Boris Fabres) *(Miko Jazmine J. Mojica)*

Who's new at BAR

Six new faces have been added to the growing family of BAR.

Two from the Finance Unit, two from Research Coordinator Division (RCD), and one staff each from the Office of the Intellectual Property Rights (IPR) and Administrative Unit.

The two new staff from the Finance unit are: **Aldwin Frederick delos Santos** and **Anne Asuncion**. Aldwin, 24, finished a computer programming course from STI while Anne, 22, graduated from the University of Northern Philippines-Vigan. Both have taken their posts at the Accounting Section.

At the RCD are **Casey Lou Duran** and **Apolonia Mendoza**. Both of them hail from the North of the Philippines (Ilocos Sur and Isabela, respectively). Casey graduated from UP Diliman with a BS degree in Food Technology while Apolonia has a B.S. in Agriculture from CLSU and M.S. in Soil Science from UPLB.

Jayson Villamor, 28, is assigned at the IPR office. He graduated from CLSU with a degree in BS Agriculture and is currently finishing his MS in Environmental Management also from CLSU.

Philip Medina, 23, is the 'new messenger on the block'. He hails from Hagonoy, Bulacan. When asked about his expectations he said he expects to stay good and efficient in his job. *(Rita T. dela Cruz)*

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