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House Bill 4829 extends AFMA for 5 years more

Department of Agriculture key officials discuss during the second hearing of HB 4829.

The House Committee on Agriculture has recently approved House Bill 4829 extending the Agriculture and Fisheries Modernization Act (AFMA) for five more years. This is the result of the two house hearings held on 30 July and 6 August 2002, at the Mitra Building, House of Representatives, Quezon City.

The hearings were headed by House Committee Chair Alfredo G. Marañon and attended by Department of Agriculture key officials headed by Secretary Leonardo Q. Montemayor along with the undersecretaries and assistant secretaries.

AFMA or Republic Act No. 8435 was enacted in 1997 to empower the agriculture and fisheries sectors towards sustainable development. As stated in Section 112 of AFMA, a total of Php 20 billion was appropriated as initial funding for the first year of the implementation of the agriculture and fisheries modernization program. Moreover, an additional amount of not less than Php 17 billion should be appropriated for AFMA every year thereafter. However, there has been non-compliance as to the budgetary requirements of AFMA since 1998 as Undersecretary for Administration and Finance Jocelyn Bolante emphasized before the Committee. According to him, although huge amounts have been appropriated for AFMA, actual releases of budget fell short.

AFMA was not implemented on the first year of its effectivity because the budget provided for in the law was not included in the 1998 General Appropriations Act. He then presented the amount that was appropriated and the actual releases for AFMA since its implementation in 1999.

see House Bill 4829, page 6

INSIDE...

World Summit 2002

Sustainable development on center stage

On 26 August- 04 September 2002, leaders of more than 100 countries, journalists, industry and NGO representatives, and some tens of thousands of delegates convened for the World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa. The WSSD is the offshoot of the historic 1992 UN Conference on Environment and Development (UNCED) held in Rio de Janeiro where a number of important conclusions relating to sustainable development were reached. In this event, two major conventions were signed – the Convention on Climate Change and Convention of Biological Diversity. It is also where the so-called Agenda 21 was agreed upon by the participating governments. The Agenda 21 is a

see Sustainable development on, page 4

SCIENCESCOPING

Knowing more about CGIAR

To fully appreciate something, one must have a profound knowledge of that thing. It is not a thing actually that I am referring to but an international event that will place the country in the world map. We will be hosting the Consultative Group of International Agricultural Research (CGIAR) Annual General Meeting (AGM), 28 October to November 1 this year. So, I took the liberty to search for information to share so that before this event happens we have a working knowledge of what this international group is all about.

For a bit of history, the rapid population growth two decades after World War II would eventually lead to world food shortage. The responsibility to tackle this problem fell on the United Nations Food and Agriculture Organization (UN FAO) and the solution tried was to introduce production technologies used by countries that had high levels of productivity to countries that had low productivity. Somehow, this did not work. Theodore W. Schultz, who later won the Nobel Prize on agricultural development, postulated that the peasant farmers can make an efficient use of available resources within their environment if they were given productivity enhancing high pay-off inputs. The emerging perspective was for agricultural technology to be location specific and a more effective use of the resources available to the small farmer. This insight shaped the response of the international community to food crises in the 60s to 70s.

In 1969, the Rockefeller Foundation, Ford Foundation, World Bank, FAO and the United Nations Development Programme and a number of economic assistance agencies in developing countries held consultations that led to the creation of CGIAR in 1971. At this time, there were already four international agricultural research centers established by Rockefeller and Ford Foundations, namely, the International Rice Research Institute (IRRI) in the Philippines, Centro Internacionale de Mejoramiento de Maiz y Trigo (CIMMYT) in Peru, Centro Internacional de Agricultura Tropical (CIAT) in Colombia, and International Institute of Tropical Agriculture (IITA) in Nigeria. These four research centers constituted the first members of this new international agriculture research system. CGIAR was formally formed in 1971.

Today, this global network has 16 members mostly located in developing countries. In addition to those already mentioned are the following: Center for International Forestry Research (CIFOR, Indonesia); Centro Internacional de la Papa (CIP, Peru); International Center for Agricultural Research in the Dry Area (ICARDA, Syrian Arab Republic); International Center for Living Aquatic Resources Management (ICLARM, Malaysia); International Center for Research in Agroforestry (ICRAF, Kenya); International Crops Research Institute for Semi-Arid Tropics (ICRISAT, India); International Food Policy Research Institute (IFPRI, U.S.A.); International Livestock Research Institute (ILRI, Kenya); International Plant Genetic Resources Institute (IPGRI, Italy); International Service for National Agricultural Research (ISNAR, Netherlands); International Water Management Institute (IWMI, Sri Lanka); and West Africa Rice Development Association (WARDA, Cole'd'Ivoire).

So far, the largest global scientific network and the leading international organization for public sector agricultural research for food crops of the world's poor, CGIAR has 58 partner-members with the Philippines as one. Its mission is to contribute to food security and poverty eradication in developing countries through research, partnership, capacity building and policy support promoting sustainable agricultural development based on environmentally sound management of natural resource. In keeping with change, CGIAR's objectives varied at different periods. In 1971 to 1980, its main research objective was to grow more food especially cereals to feed the world's burgeoning population. In 1981 to 1990, conservation was the main thrust and the keyword was sustainable development with focus on poverty eradication, protecting diversity, including our land and water resources.

Poverty is a formidable enemy to fight. CGIAR was not able

see Sciencescoping, page 3

KARI Asst Dir and group briefed at BAR

(From left to right) Mr. Isaya Sijali, BAR Dir. Eliseo Ponce, Mr. Patrick Gicheru, Dr. George Ayaga, and Dr. Jane Wamuongo

Dr. Jane W. Wamuongo, assistant director for soils and water management of the Kenya Agricultural Research Institute (KARI) and her group visited the Bureau of Agricultural Research (BAR) recently as part of their four-day "Study Tour on Agricultural Research System: A Focus on Soil and Water Management". The study tour was funded by the SEAMEO Regional Center for Graduate Study and Research in Agriculture (SEARCA).

Kenya became a member of the Consultative Group on International Agricultural Research (CGIAR) in 1995, and hosts two CGIAR centers, namely, the International Centre for Research in Agroforestry (ICRAF) and the International Livestock Research Institute (ILRI), which are both based in Nairobi. KARI is the institutional partner of CGIAR in Kenya.

Dr. Wamuongo was escorted by her team composed of: Dr. George O. Ayaga, head of the Soil Fertility Plant Nutrition Research Programme, Mr. Patrick T. Gicheru, head of the Kenya Soil Survey, and Mr. Isaya V. Sijali, head of the Irrigation and Drainage Research Programme.

Along with BAR Director Eliseo Ponce, Regional Programs Division (RPD) Head Rustico David welcomed the KARI delegation. They were briefed on how the Bureau operates. A short forum was conducted. Among questions asked by the group were on: 1) how the Bureau generates funds, 2) how the mandate of BAR differs from that of the Philippine Council for Agriculture, Forestry, and Natural Resources Research and Development (PCARRD), 3) the organizational structure of BAR, 4) role of the private sector in R&D, and 5) how the Bureau operates and implements its programs.

After the short presentation and discussion, the team toured the Bureau's different offices to be briefed them on how the divisions operate. *(Rita T. dela Cruz)*

Two new regions created; country's total regions now 17

The country's regions are now up by one from 16 with the splitting of Region IV. By virtue of Executive Order No. 103, Region IV-A and Region IV-B have replaced Region IV, while the province of Aurora is now part of Region III.

Known as CALABARZON, Region IV-A now includes Batangas, Cavite, Laguna, Quezon and Rizal. Region IV-B known as MIMAROPA includes Mindoro Occidental, Marinduque, Mindoro Oriental, Palawan, and Romblon.

The creation of the two new regions brings the total number of Luzon's regions to eight, Visayas three, and Mindanao six. Luzon now has 38 provinces, 55 cities, 716 municipalities, and 20,476 barangays. Meanwhile Visayas has 16 provinces, 32 cities, 376 municipalities and 11,443 barangays, while Minadanao remains with 25 provinces, 27 cities, 404 municipalities and 10,026 barangays. *(Thea Kristina M. Pabuayon)*

Source: ICTD-GIS

Sciencescoping...

to do it, not yet, thus its objective of the last decade had to be carried over to the next one. In addition, its research agenda focused on soil and water management, forestry/agroforestry development, reduced use of chemicals in agriculture, biodiversity protection and biotechnology mobilization. It holds in trust one of the world's largest collection of plant genetic resource with duplicates of the materials freely available to researchers worldwide for new genetic combinations.

CGIAR's mission is timeless and without boundary. Everybody stands to benefit from this unique global partnership. Isn't it a privilege that at one time in its history, a small but beautiful country as the Philippines played host as it again tackles the unending problems of poverty and food insecurity? VAD

ICTD joins IRRI digital extension workshop

Mr. Winston Tabada, Information and Communication Technology Divison (ICTD) officer-in-charge, participated in the workshop on, "Digital Extension Featuring the Rice Knowledge Bank," at the International Rice Research Institute (IRRI), Los Baños, Laguna.

The Rice Knowledge Bank (RKB), an Internet-based rice knowledge repository is established at IRRI to be the "world's rice information and training repository." This will be officially launched in September at the International Rice Congress in Beijing, China.

RKB was established to fill the gap between the new technologies and the transfer of these to farmers' field since the end-users fail to access these new technologies due to inadequate and underdeveloped extension services. It is the world's first digital extension service for those who provide information and support to farmers (e.g. non-government organizations). It contains a wealth of information on training and rice production. The RKB is a comprehensive digital rice production library in a breakthrough format that sets a new standard in accessing knowledge and information on rice production.

Dr. Albert Atkinson, IRRI Training and Courseware specialist, led a two-hour session on the RKB overview, contents, how to navigate the RKB, communicating with the RKB through discussion channels, using reference materials,

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Sustainable development...

global plan that contains over 2,500 wide-ranging recommendations and detailed proposals on how to reduce wasteful consumption patterns, combat poverty, protect atmosphere, oceans and biodiversity, and promote sustainable agriculture.

The Agenda 21 served as backdrop for political and government leaders during the 2002 Johannesburg Summit in formulating policies and actions to make sustainable development a global reality.

According to UN Secretary General Kofi Annan, who spearheaded the Summit, the mission of WSSD encompasses many challenges; but its goal boils down to saving the planet from ecological devastation and alleviating the lives of billions of people mired in poverty.

The World Commission on Environment and Development defines sustainable development as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. While sustainable development requires different actions from different regions all over the world, the Summit worked on participatory process, wherein the issues were debated and agreed upon during a series of national, regional, and global consultations with government and other institutions.

The Summit intergovernmental agenda were anchored on the following key action areas:

Water- provide access to at least one billion people who lack clean drinking water by providing greater financial investment and innovative solutions from the public and private sectors.

Energy- provide access to more than two billion people who lack modern energy services and facilities; reduce over-consumption; promote the use of renewable energy; and ratify the Kyoto Protocol to address climate change.

Agricultural productivity- promote the sustainable use of land and development and generation of environment-friendly technologies.

Health- provide greater access to safe drinking water; expanding basic sanitation and waste disposal technologies, and reduce air pollution especially in urban areas.

Biodiversity and ecosystem management- protect and preserve the remaining tropical forest and mangroves in the world and reverse the threat to 70 percent of the world's coral reefs and fisheries reserves.

The WSSD 2002 participants focused on turning these plans into action and fostering a high degree of cooperation among major groups by including the voices, experiences, and perspectives of a wide range of stakeholders.

Among the political declaration and implementation plans achieved in the Johannesburg Summit include:

- Recognition of ethics as being central to sustainable development
- Interpretation of bioculture diversity as embracing all living beings, including people and the way they live
- Reaffirmation of the right of people to information and to meaningful participation in decision-making.

Meanwhile, Environment Secretary Heherson Alvarez, who represented the Philippines in the Summit, called for bold and concrete action among nations that will advance the cause of sustainable development and achieve "fullness of humanity."

Moreover, he stressed that, what we have been experiencing now all over the world in terms of disasters are all manmade, it is about time to save and conserve the remaining resources for future generation. *(Mary Charlotte O. Fresco)*

Reference:
http://www.johannesburgsummit.org/

Gearing up at GIEPD

by Ma. Rowena S.A. Briones

A lot of changes have been brewing at the Bureau of Agricultural Research (BAR) these days. The Impact Evaluation and Policy Division of the Bureau now has "Governance" as one of its functions. This change highlights the importance of governance. in research and development.

Dr. Eliseo R. Ponce, Director of the Bureau of Agricultural Research, agreed that this move affirms the catalytic role of BAR in ensuring that "we are improving the quality of governance among the various agriculture R&D institutions (under the Department of Agriculture)."

Governance of research and development means setting standards, defining mechanisms to be able to meet these standards and establishing a system for monitoring and assessing projects and programs. These measures ensure that goals are realized and resources are properly appropriated and utilized.

Dr. Teodoro Solsoloy, the division head of the Governance, Impact, and Evaluation Policy Division (GIEPD), explained that "the role of the division is to establish and maintain a monitoring and evaluation system for agriculture and fisheries research and development activities in coordination with DA agencies."

Thus, GIEPD will be instrumental in the monitoring and analysis of financial grants attended by BAR to R&D institutions. According to Solsoloy, this function is crucial "(Because) we have not evaluated if grant funds were used properly and whether the impacts of R&D projects were as potent as we hoped it would be."

Along with this, Theresa Medialdia, the section head for Impact Evaluation, added that they are reviewing the methodologies used for R&D impact assessment studies to be able to "come up with our own framework on the evaluation of impacts of our R&D investments."

GIEPD staff planning their divisional activities.

GIEPD is also preparing the guidelines for the conduct of External Project Monitoring Review (EPMR). Through EPMR, the Bureau hopes to facilitate an independent and rigorous assessment of research capabilities and outputs of the member institutions of the National Research and Development System for Agriculture and Fisheries.

The key result areas of GIEPD work according to the principle of interrelatedness. Improving the governance of research programs, evaluating the results of research projects and ensuring that researches are utilized by its target users put meaning into the research and development process.

These days, the limited funds for agricultural research make researches with very little impact to the farmers and fisherfolk an imprudent undertaking. Thus, "We have to look at governance as an important factor in achieving higher efficiency and effectiveness of the R&D system," Ponce reiterated.

"I am challenged about what GIEPD can do. If we perform well, we can help a lot in showing to the world the extent of what is being done in our agriculture R&D system," Solsoloy expressed.

Ponce expects no less. Says he, "We expect that GIEPD will now expand its functions and will have more focus. They will now be more efficient and effective in performing their functions and achieving their targets." ■

ICTD joins IRRI...

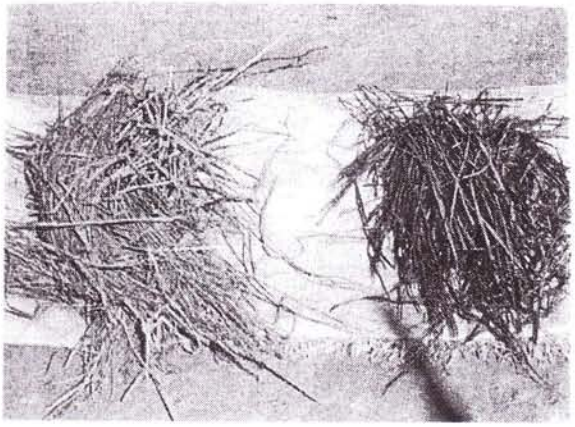
performing searches using the natural language versus the Boolean, and single source publishing.

The participants were also treated to a demonstration, talk, and a guided hands-on practice on the use of e-Learning in Agricultural Extension. Shawn Golinowski, a distance learning specialist, led the e-Learning hands-on activity. After some parting words from IRRI Director General Ron Cantrell, certificates of participation and the Rice Knowledge Bank on CD-ROM were distributed. *(Likha C. Cuevas).*

FEATURE

Rice straw maintains soil fertility

by Junelyn S. de la Rosa



By adding rice straw to the soil before planting the next crop, you can return nutrients to the soil, make the soil fertile and in the long run, cut down on fertilizers and improve the yield of your rice farm.

It is estimated that five years of adding rice straw to the soil, 25 pounds of nitrogen can be reduced from the rate of nitrogen fertilizer applied per hectare.

Researchers- Gina Pangga from the Soil Resources Institute, University of the Philippines, College, Laguna and Graeme Blair from the University of England used straw of three rice varieties, namely: Soc Nau, IR 67962 and IR 30 and incorporated them in Alfisol sandy loam soil at a rate of five tons per hectare. They examined the nutrients released by these varieties under flooded and non-flooded conditions and noted their effects on the growth of rice.

Rice plants grown under flooded conditions after adding the straw showed higher yields compared to those that were not flooded. This is because water helps the plants make full use of nitrogen. Flooding the soil can also control weeds, rice water weevil and the stem rot disease. Among the three rice varieties, Soc Nau straw had the highest nitrogen, phosphorus and sulfur- nutrients that are needed by the rice plants for growth and development. It had also the highest straw quality index (SQI).

Straw can improve soil texture and tilth, aeration and water-holding capacity, fertility and soil pH. Because rice straw is composted and not burnt, less carbon dioxide is released into the atmosphere. In the long term, adding straw reduces the need for chemical fertilizers that can damage the environment. This technology turns a problem into a solution by using formerly wasted rice straw to benefit the soil. The process fits into farmers' busy planting schedules and can help make them more independent of chemical inputs purchased externally. Instead of being unwanted and difficult to dispose of, rice straw could be recycled on the farm.

Source: Nutrient Release from Straw of Three Rice Varieties and the Impact on the Growth of Rice by Gina Villegas Pangga from the Soil Resources Institute, University of the Philippines, College, Laguna and Graeme Blair of the Division of Agronomy and Soil Science, School of Rural Science, University of New England, Armidale, Australia

House Bill 4829...

According to him, during the first year of implementation of AFMA a total amount of Php 14.9 billion was appropriated but the actual release amounted to Php 11.6 billion only.

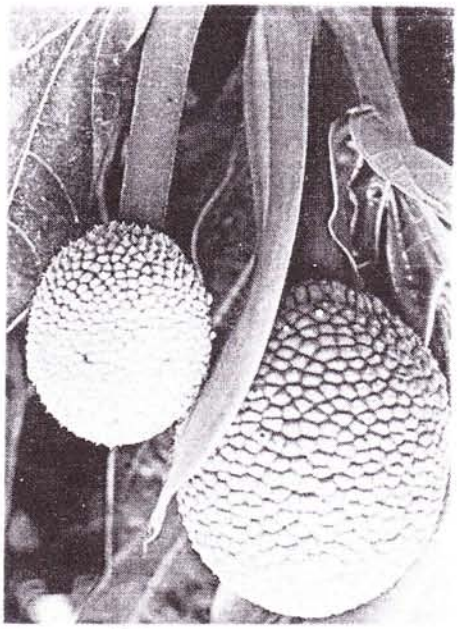
For years 2000 and 2001, the amounts appropriated were Php 20.8 billion and Php 16.1 billion, respectively. Unfortunately, the money that was released amounted to Php 16.6 billion and Php 11.4 billion only. For 2002, the appropriated budget amounted to Php 20 billion but so far the money released amounted only to Php 14.4 billion.

Undersecretary Bolante stated that the release of budget is better this year since DA has received adequate support from the Department of Budget and Management (DBM). The money released represents 70% of the total appropriation for the year.

When asked how the shortfall in the releases affected the implementation of AFMA, Undersecretary Bolante explained that there has been negative impact as there would have been more AFMA-related projects if the full amount was released annually.

Other attendees during the hearings were focal persons who represent the specific programs of AFMA, namely, QuedanCor President Nelson Buenaflor (credit and financing), NIA Administrator Jesus Paras (irrigation), BPRE Director Ricardo Cachuela (postharvest facilities), BFAR Director Malcolm Sarmiento (infrastructure), BAR Director Eliseo Ponce (R&D), DA-AMAS Director Salvador Salacup (marketing), ATI Director Asterio Saliot (capability building), DA-ITCAF Director Roberto Villa (NIN), BSWM OIC-Director Rodolfo Lucas (SAFDZ), and BAFPS Director Gilberto Layese (product standards). It was also attended by program directors for rice, corn, livestock, fisheries, and high value commercial crops (HVCC). *(Rita T. dela Cruz)*

Growing the fruit of life



Artocapus altitis

by Mary Charlotte O. Fresco

Breadfruit is not a popular tree but history owes something from it. The tree is first known in Jamaica in 1793, when it saved many people from starvation due to five hurricanes and severe drought that almost ruined that country. Planters of the West Indies heard of this "wonderful" tree growing in the Pacific Islands that provides "bread" all year round. Explorers were persuaded to mount expeditions to collect the species. Since then, the breadfruit's common name became universal; all countries associate the fruit to "bread" or "fruit of life".

Breadfruit is not ornamental

Breadfruit (*Artocapus altitis*) is often mistaken as an ornamental tree for its beauty that stands out in any garden, grove, or yard. It grows 40-60 feet tall, with broad palmated leaves decorated with sensual, dark-green lobes (fruits), weighing up to 10 pounds each.

It is widely distributed in New Guinea, Indo-Malayan archipelago, Philippines, Hawaii and Central America.

In our country, it is known as *rimas*. It is a close relative of the jackfruit or *langka* and belongs to mulberry family, Moraceae.

Not too many Filipinos know *rimas*, except in some provinces like Laguna, Cavite, Leyte, and Bicol where *rimas* is cooked as vegetables (with coconut milk) and sometimes processed as candy.

In foreign countries, breadfruit is often baked or roasted whole and eaten ripe as fruit. Malayans peel the ripe fruits, slice the pulp and fry it in syrup or palm sugar until it turns crisp and brown.

In Brazil and Barbados, breadfruit is more popular for industrial use. The dried fruit is processed into flour and found as good substitute for wheat flour in making bread. Breads made from breadfruit flour are found more nutritious because breadfruit flour is much richer in lysine, carbohydrates, and other essential amino acids than wheat flour.

Nothing is wasted in breadfruit; even the seeds are cooked (boiled and roasted) and eaten with salt. In West Africa, seeds are sometimes made into puree since they are rich in starch.

The young or underripe fruits are boiled as feed supplements in livestock. Experiments conducted by technologists at the United States Department of Agriculture (USDA) have demonstrated that dehydrated breadfruits can constitute a highly digestible stock feed.

Propagation and culture

Breadfruits are of two types; the seedless and the seeded (the later is often referred as breadnut).

Breadfruits are best propagated through root cuttings, since tropical seeds like that of breadfruits tend to lose their viability in a few weeks and are very hard to store.

One practical and easy method of inducing suckers or shoots is by uncovering or deliberately injuring the root of matured breadfruit tree. Pruning the parent tree increases the number of suckers. For rapid multiplication, it is better to adopt root cutting of about 1 to 2 1/2 inches thick and 9 inches (22 cm) long.

In removing the sap or latex, the ends of the cuttings may be dipped into a solution of potassium permanganate- an odorless crystalline compound used as bleach. Once the latex has been removed, the cuttings are planted close together in sand to induce root growth. They should be shaded and watered daily.

Callus (plant tissues that give rise to new plantlets) start to form in 6 weeks and rooting may vary from 2 to 5 months. During this time, they can be transplanted into plastic bags containing mixture of soil and sand and are kept under mist for a week with 65% shade. The rootings should be given liquid fertilizer (NPK) and regular waterings. When the primary root system is well developed, they can now be transplanted in open field.

Young breadfruit trees should be planted in well-enriched holes of 15 in (40 cm) deep and three feet wide. The recommended distance between trees is 25 to 45 ft. Breedfruit starts bearing fruits in five years and will be productive for 50 years. Some growers find pruning convenient for stimulating new shoots and keeping the tree from being tall for ease in harvesting.

On harvesting

Breadfruits are considered matured enough for harvesting if small drops of latex start to ooze on the fruit's surface. Matured fruits are picked using a fruit stalk with a forked stick. One should take an extra care in picking the fruits to avoid bruising or splitting that could affect the fruits' market quality and value.

Harvested fruits are packed in cartons in which they are separated individually by dividers.

see Growing the fruit, page 8

Web NEWS

Essential food resource to be reconstructed from international genebanks
http://www.futureharvest.org

Pineapple production grows 1.68 percent, export reaches $64.8 M in first quarter
http://www.da.gov.ph

Australia approves in principle entry of RP pineapples, RP expects a $50 million forex earning
http://www.da.gov.ph

Revival of biogas spells more gains
http://www.pcarrd.dost.gov.ph

Tissue-cultured mums available to farmers all year round
http://www.pcarrd.dost.gov.ph

South Africa food crisis affects more than predicted
http://www.wfp.org

Ethical considerations in food and ag-biotech
http://www.agriculture.purdue.edu/agbiotech

Growing the fruit...

The Philippines and the breadfruit

It is a little disappointing to know that no studies had been conducted yet to fully tap the potential of this indigenous plant species. Breadfruit is just one of those "neglected" and underutilized species that need to be given special attention and scientific support by the government.

Hopefully, research initiatives undertaken by concerned agencies such as the International Plant Genetic Resources Institute (IPGRI) will give proper recognition to those species that are "also" crucial for the attainment of food security and promoting economic development.

Who knows, the Philippines may be the first to place breadfruit into the mainstream of global trade.

Source:
http://www.hort.purdue.edu/newcrop/morton/breadfruit.html#Description

DA enforces new agr'l eng'ng standards

The Department of Agriculture (DA) issued recently A.O. 10 calling for the adoption of the newly drafted Philippine Agricultural Engineering Standards (PAES) by all DA offices, centers and institutions. There are three volumes of the PAES, with the first consisting of 35 standards for agricultural production machinery, postharvest machinery, engineering materials, and agricultural structures.

The PAES was developed by the Philippine Society of Agricultural Engineers (PSAE), DA, and UP Los Baños through the Agricultural Machinery Testing Evaluation Center. The Standards are based on the Bureau of Agricultural Research (BAR)-funded project "Enhancing the Implementation of AFMA through Improved Agricultural Engineering Standards" and the Bureau of Postharvest Research and Extension-funded project "Standardization of Postharvest Machinery Testing and Evaluation. The two projects started in 2000 and 1999, respectively.

As directed by DA, the PAES shall be adopted in all DA offices, including its regional field units, service units, bureaus, attached agencies and corporations. The PAES is part of the Philippine Standards for Agriculture and Fisheries Machinery developed by the PSAE, AMTEC and other DA agencies, which was developed by virtue of DA A.O. No. 11 Series of 2001.

A.O. 11 or the Implementation of the National Agriculture and Fisheries Mechanization Program directs the development of "standard specifications and test procedures of agricultural and fisheries machinery." According to the PAES authors and proponents, the creation of the

Standards are much needed since the existing agricultural engineering standards are already outdated, having been created 10 to 20 years ago.

Rigorous approval process

According to Project Leader Arsenio Resurreccion, the drafting of the PAES was a rigorous process that involved the "updating of existing Philippine National Standards, pursuance of pending draft standards, adoption of international and related standards from other engineering fields, and formulation of new standards."

The PAES were drafted according to the Rules for the Structure and Drafting of Philippine National Standards. Prior to approval, the drafted standards were circulated to not less than 50 private and government institutions for comments and suggestions, and reviewed by technical committees composed of members of both private and government institutions and offices. The draft standards were then given to the PSAE and put through a public hearing organized by the National Agriculture and Fisheries Council. All comments and suggestions from these institutions were then consolidated and considered in finalizing the standards. *(Thea Kristina M. Pabuayon)*

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