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New DA Sec to fast track agri and fisheries dev't

With only 17 months to lead the Department of Agriculture (DA), newly appointed secretary Luis P. Lorenzo, Jr. promises to fast track the development of the agriculture and fisheries sectors by implementing core programs that directly benefit and improve the lives of small farmers and fisherfolk.

Lorenzo revealed this during his speech at the turnover ceremonies for the DA headship led by outgoing Secretary Leonardo Q. Montemayor on December 9 at the DA office.

The new DA secretary's programs are anchored on three goals: to raise farmers'/fishermen's income; to generate employment; and, to achieve greater food sufficiency and stable prices in basic commodities.

Lorenzo was quick to add, however, that although these goals have been a part of every DA secretary's agenda in the past, he will strive to be different by ensuring that there are more actions than words, and that farmers and fisherfolks in the countryside truly benefit from these actions.

True to his sworn agenda, Lorenzo says he has already consulted with small farmer groups in an effort to find out what their needs and aspirations are. He added that he hopes to continue this consultation process, but also emphasized the need to "quickly move into an implementation paradigm at field level,...implementing and modifying solutions" along the way.

May Dating na, Aksyon pa!

This is the new battle cry of Lorenzo in implementing his 17-month agenda. Given this limited time, Lorenzo proposes three priority targets. These are: to raise productivity, income and employment in basic commodities of rice, corn, fish, and vegetables consumed by ordinary Filipinos; to achieve stable food prices in these basic staples; and, to create a healthy policy environment to spur growth in other sectors, including those which can tap export markets.

To make these targets feasible, the new DA secretary has lined up a number of policies for implementation. Topping these is the anti-smuggling campaign, to be led by Gen. Jun Esperon of the Presidential Security Group (PSG), together with the Bureau of Customs.

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BAR turns over ICT equipment to regions, DA agencies

The Bureau of Agricultural Research (BAR) has turned over information and communication technology (ICT) equipment to the Department of Agriculture (DA) regional offices and DA agencies in a ceremony during the 15th BAR Anniversary celebration on November 28, 2002.

All 15 DA regional offices in the country, Bureau of Plant Industry (BPI), Bureau of Animal Industry, (BAI) and the Philippine Tropical Fruits Research Institute (PhilFruits) received a total of 134 personal computers (PCs), 18 laptops, 18 iMacs, 18 switch, Baseline 3COM Superstack Hub, 17 HP Laserjet 1200, 15 net servers, 13 CD writers, 6 digital duplicators, 6 design plotters, and 3 scanners. Six MS Office Premium 2000, five Corel Draw 10, and four Adobe Pagemaker software were also given to the regions and DA agencies.

This turn over of ICT equipment is part of the Agriculture and Fisheries Research and

see BAR turns over... page 5

SCIENCESCOPING

The taro for chips finds its way

Unofficially, I got an assignment in my trip to Hawaii – to bring to the country the taro bred in the name of Dr. Santiago R. Obien or SRO, one time PhilRice director and now a senior technical adviser at BAR. The taro was bred by Dr. Ramon dela Peña, a Pangasinense, friend and classmate of SRO at UPLB (class '58) and in graduate school (University of Hawaii) who chose to settle in Hawaii after his studies for some reasons. He is now professor emeritus at the University of Hawaii at Manoa where he retired but he still works as consultant at the Wailuha Homestead in Kauai.

The taro, of the chips type, was dedicated to SRO during his retirement testimonials two years ago. SRO gave me instructions on how to bring home the taro but to find the breeder, he told me to use the telephone. And worse, how to go to the breeder who lives in another island, he was of no help. He only flashed the winning smile, which means, you've got to bring home the taro. Having worked with him for many years, I knew he was bent on having the taro brought to the Philippines. And his emails kept coming with the message, "come home", "come home", "come home" which is short of saying, "bring home the taro".

Exactly two weeks in Hawaii, my two nephews with the older one with his wife, my daughter and myself were at the Lihue airport much ahead of the schedule but there was a delay in the flight so we had plenty of time to banter about ***Mission: Taro.*** *We agreed that that taro is special. We arrived in Kauai late in the evening but even then we noticed that it is as rural as the rural areas in the Philippines except for its paved and wide roads and the beautiful houses which we finally saw in the morning since there were some parts along the highway that are not lighted at night. The hospitality of our host was so warm that we felt we were in our own homes. And yes, I used the telephone, as instructed, to know how we would be going to find Dr. Dela Peña early the next day. It was easy for us to find him for his family is well known in Kauai. A UPS man (he distributes mails and packages) mapped out for us the route to his place.*

We found the taro breeder and his wife Lita, a nurse, in their work clothes among their plants that it was difficult to believe they are the couple who are so well-known in Kauai. A son was also in his orchid nursery. We learned that he sells orchids through the internet. Their three-acre farm surrounds their house and is planted to different plants and trees. There were goats, geese, ducks, and chickens. A big area at the back of the house is planted to red ginger where the buyer does the harvesting of the flowers and supplies them to hotels. It was my first time to know and see white pepper. They have kava plant from the South Pacific that is used as alcoholic drink when boiled or fermented. Its root is the source of a ceremonial drink. They have the fig that Arabs eat in the desert. The branches of their ponkan trees seem to break with ripe fruits. In fact, many have fallen to the ground and rotting that I remember those who cannot even taste this fruit for lack of money to buy it. The van we rented at the airport that served as our service vehicle became heavy with breadfruit, guava, pomelo, avocado, and ponkan which our women companions picked to their heart's content. We felt we had known the Dela Peñas for a long time exchanging jokes while seated on the rug in their living room. But over and above all these, we got the prized taro with us.

*By the way, taro/kalo (**Colocasia esculanta**) or gabi to us, is nothing new neither is it a new crop. It is the life of the indigenous Hawaii people. In fact, they believed that it was the first thing that was born and humans afterward. The first settlers brought with them 10 varieties from which more than 300 varieties were developed with 87 recognized officially. Taro grows well in tropical Africa, West Indies and the Pacific nations. The Philippines, too, had been growing gabi for a long time. According to Dr. Dela Peña, who spent his sabbatical leave at the Visayas State College of Agriculture (ViSCA) now Leyte State University (LSU) in 1976, the country has more than 100 taro varieties.*

Taro can be grown throughout the year and is cultivated both in the uplands as high as 4,000 ft and in marshy land irrigated by streams. It grows best in a warm and moist environment with supplemental irrigation. For the upland taro, the soil

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Meet the new DA Secretary

A "breath of fresh air" invigorates DA

by Maria Rowena S.A. Briones

The new Department of Agriculture Secretary, Luis Lorenzo Jr. is known as a dynamic and socially committed business leader in the country. He chairs the Lapanday Holdings Corporation, the Philippines' major exporter of banana and other agricultural produce in Asia.

Through his leadership, he was able to generate employment in the agricultural sector—employing more than 15,000 people. According to him, the role of a CEO is really to become a change agent: meet the needs of the consumers and lead the people in achieving their goals.

No less than President Gloria Macapagal-Arroyo asked him to join her cabinet—first as Presidential Adviser on Job Creation and as Secretary of the Department of Agriculture on December 9.

Sec. Lorenzo brings with him lessons he learned in the business sector to the Department that stewards the agricultural sector in the country. In one interview, Lorenzo stated that, "the success of a business investment is not complete without the accompanying improvement in the quality of life not only of its employees but of the larger community as well."

Lorenzo is taking a bold leap of faith leading the DA in synergizing the agricultural sector. He believes that the government has a potent role "in expounding and directing the relationship between people and private business, local and foreign capital, government officials and communities, and strong and weak regions."

He cites his father for teaching him to have faith in people. Sec. Lorenzo also believes in the power and process of building consensus and arriving at a win-win situation.

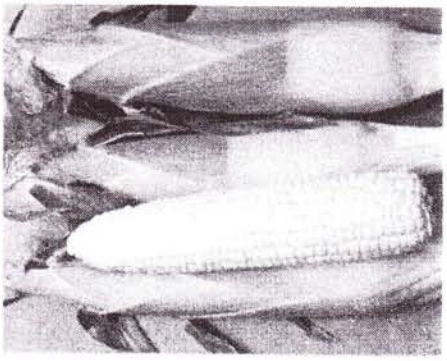
Sec. Lorenzo has a Bachelor's and Master's degrees in Business Management from the Ateneo de Manila University and the Wharton School of the University of Pennsylvania, respectively. He is a member of various businesses, academic and civic organizations. Foremost among them is the Philippine Business for Social Progress, Mindanao Business Council and the Makati Business Club. Sec. Lorenzo had also been recognized for his excellence and

integrity as a business leader.

Why the DA Secretary is a respected businessman and cabinet member can be gleaned from his short speech during the turnover ceremonies last Dec. 9. " I wish to be different by doing less talk and more action and I will make sure that our actions will reach the heart of the countryside," he said.

References:
http://www.makatinvest.org/speak002a.html; Inquirer News Service (19 Aug. 2001) CEO adopts Dad's formula in running agri-based firm by Christine Gaylican; Philippine Daily Inquirer (11 Dec. 2002) New DA Chief vows to cut rice imports by Gerald Lacuesta

Increasing the...



obtained. The application of 60 kg/ha of phosphorus in combination with chicken manure at 2.5 t/ha on limed ultisol produced already acceptable yields and a high MRR value of 601.84 %. This implies that continuous use of phosphorus and chicken manure is effective in improving the productivity of ultisols.

Concluding Statements

Can the ultisols for corn be made more productive? Can we increase the present corn yield in the country? With adequate agricultural management, the millions of hectares of ultisols in the country can be made productive. With the new varieties of corn and the appropriate technologies, the present 2.93 t/ha average yield for yellow corn can even be doubled. ***(Virginia A. Duldulao)***

*(Popularized from the study, "Organic and phosphorus fertilization of corn (**Zea mays L.**)on limed ultisols by Lapoot, C.R., L.V. Duna, J. B. Salvani, L.A. Ramos and C.C. Maghanoy,Jr., Dalwangan, Malaybalay City, Bukidnon.*

104 outstanding R&D papers highlight 14th NRS

A total of 104 outstanding R&D papers was awarded recently as the Bureau of Agricultural Research (BAR) concluded its 14th National Research Symposium (NRS). Winners were awarded a total of more than Php 5 million cash prizes for generating outstanding researches that could improve the agriculture and fisheries.

The entries for the NRS centered on the theme: "*Securing the future with our genetic heritage in agriculture*. This year, more papers were submitted to the symposium with 53% increase for papers vying for the awards.

This year's entries totaled to 213 R&D papers. Papers were evaluated by a panel of judges representing the type and field of research. The evaluating team for the crop science upstream research included: Drs. Wilfredo Barraquio (UPDiliman), Florendo Quebral (UPLB), Teresita Espino (UPLB), Arcadio Quimio (UPLB), and Ernelea Cao (UPDiliman). Downstream researches were evaluated by: Drs. Henry Samonte (UPLB), Calixto Protacio (UPLB), Candida Adalla (UPLB), and Arturo Gomez (UPLB). For the animal science group (upstream and downstream), evaluators were: Drs. Eduardo Torres, Jezie Acorda, Cledualdo Perez, and Vicente Momongan, who are all from UPLB. Evaluators for the fisheries and marine sciences were: Drs. Tereso Abella (CLSU), Augusto Serrano (UP Visayas), Rogelio Juliano (Coastal Management Center), Loureeda Darvin and Mr. Rolando Edra (PCAMRD). Meanwhile, three experts form UPLB, namely, Drs. Ofelia Bautista (PHRTC), Delfin Suministrado (CEAT), and Ponciano Madamba (CEAT) evaluated the entries for agricultural engineering processing and postharvest. Lastly, the group that evaluated the papers for socio-economics included Drs. Arsenio Balisacan, Aida Librero, Virginia Cardenas, and Corazon Lamug.

Criteria for evaluation include: scientific significance (30%), quality of science (30%), relevance to AFMA (20%), and presentation/visual impact (20%). Entries that garnered a rating of 80% and above were chosen as finalists.

Winners were awarded according to two categories, published and unpublished. There was a total of 72 papers awarded under the *published category* out of which, 32 were awarded the BAR Director's Award (RFRDCs) and 40 were given the DA Secretary's Award. The BAR Director's Award is given to selected papers published in local refereed scientific journals receiving P20 thousand each. Papers published in international refereed scientific journals received P30 thousand each. Winners of the DA Secretary's Award were selected papers published in an Institute for Scientific Information Journal and received P50 thousand cash for non-UP/SEAFDEC authors and P10 thousand cash for UP/SEAFDEC authors.

Under the *unpublished category*, 32 papers won the awards out of which, 20 were awarded the AFMA Outstanding R&D Paper and 12 were awarded the AFMA R&D Paper. The AFMA Research Paper Award for unpublished papers is given to identify research results relevant to the attainment of the objectives of the AFMA. It also acts as a medium for evaluation and critiquing to improve promising papers intended for publication purposes. Winners of the AFMA Outstanding Paper Award received P20 thousand and a trophy while winners of the AFMA R&D Paper Award received P5 thousand and a certificate.

The NRS is a yearly event, which is being coordinated by BAR. It initiates the celebration of the National R&D Week, which is observed every first week of October as stated in Proclamation No. 382 series of 2000. *(Rita T. dela Cruz)*

New DA Sec...

Second in line is the campaign for better private sector visibility and cooperation with small farming and fishing industries. Accordingly, these private and public sector collaborations will pave the way for faster development of small entrepreneurs and businesses. The third policy initiative will be the restoration of proper safety nets to protect small, medium, and large domestic producers from the progressively freer import trade. These would entail "re-channeling collected tariffs to affected food sectors and making local products more cost-efficient and of better quality." Lastly, Lorenzo hopes to address the issue of insufficient resources of national line agencies. As part of the solutions, he says that there should be continuous collaborations with the local government units and the private sector, and a constant openness for creative solutions.

Sigla't yaman sa kanayunan!

For Lorenzo, the success of this agenda would only come when farmers and fisherfolks from the countryside truly see and experience DA's efforts. To do this, DA shall invite governors, mayors, and congressmen to organize agricultural programs. Second, DA shall "adopt the 'CORD' system" where the DA heads will each adopt a cluster of provinces. These provincial teams shall focus on three key crops per province, in this case, rice plus two other important products, and be in charge of their measurable targets for 17 months. Likewise, the provincial teams shall identify model farmers to be trainers and coordinate private sector cooperations for additional support.

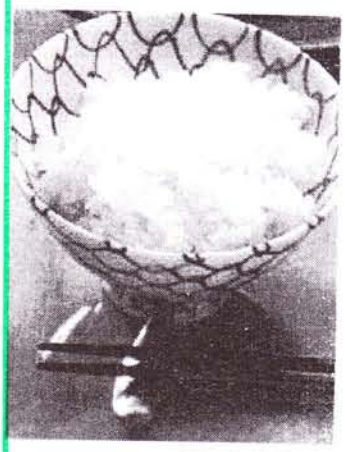
In providing the necessary financial and technical assistance, DA shall give priority to small farmers or fishermen organizations by province, city, and town. In line with this, Lorenzo has already proposed that a small farmer and fisherfolk desk be set up in the DA, as well as in the local government units.

Lorenzo expressed a lot of confidence in this particular program, citing the success of the hybrid rice program in generating jobs and in increasing yield in six model examples from farmers in Isabela, Davao, Pampanga, and Surigao del Sur. According to him, President Arroyo's hybrid rice program has successfully increased the income of the farmers from by P10,000-30,000 and their yield from six to eight tons per season. "By working with small farmers and the private sector, we will multiply these type of successful models in the countryside," Lorenzo said.

Finally, the new secretary called for teamwork among all DA constituents and government officials. "God willing, we will put aside our individual differences and work as one team in the field, hand in hand with governors, mayors, congressmen, PAOs, MAOs and ATs, helping principally the rural farmer and fisherfolk to better their life." *(Thea Kristina M. Pabuayon)*

Source: Sigla't Yaman sa Kanayunan: A speech by Luis P. Lorenzo, Jr., Dec, 2002.

ANNOUNCEMENT



2004 is International Year of Rice (IYR)

The UN General Assembly announced 2004 as the International Year of Rice (IYR). The announcement was made official at the 57th Session of the UN General Assembly held on 12 December 2002 at the Food and Agriculture Organization, Rome. FAO will facilitate the event. To prepare for this global event, FAO will call a Global Consultation Meeting during the first half of March 2003 to discuss and develop the global program for the IYR.■

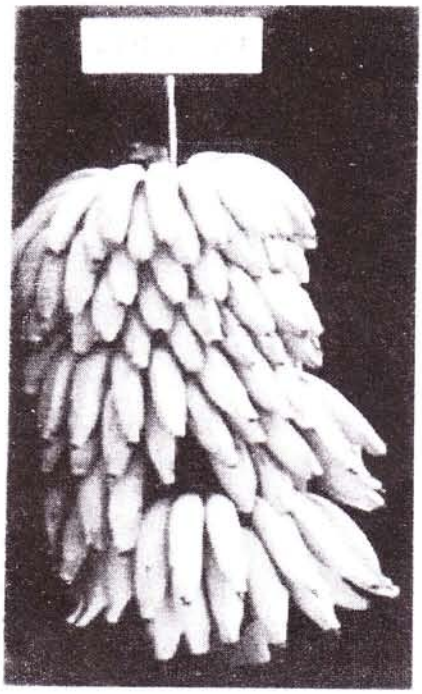
BAR turns over...

capabilities of the National Research and Development System for Agriculture and Fisheries (NaRDSAF). The Bureau's strategy is to use a range of information and communication technologies to facilitate research collaboration via electronic networks. The Agriculture and Fisheries Modernization Act (AFMA) or RA 8435 mandated the creation of a National Information Network (NIN) that links various research institutions to the DA and from the DA down to the municipal level.

From 2000 to 2001, BAR invested P52.65 million for the local area network (LAN) establishment in the Ilocos, Central Luzon, Visayas, and Mindanao clusters. In 2001, the total software investment was about P3 million and the total hardware investment was about P11.5 million.

Agricultural research is becoming a global undertaking built on research efforts at different institutional locations with ICT bringing together and facilitating joint research efforts. The AFRDIS project, in partnership with member institutions, invested in LAN connecting research institutions within the vicinity to enable sharing of information and resources. *(Likha C. Cuevas)*

A new plantain for banana growers



Banana growers in the Philippines have something to look forward to. FHIA, a new plantain that is high-yielding, has better eating qualities and is resistant to the dreaded *Black Sigatoka* and Panama disease, has been introduced in the country.

Developed in Honduras in 1987, this French type plantain or FHIA 21 has become a staple in the American tropics since its introduction. It can be eaten green, boiled, or fried into thin or thick chips or processed into marmalade and liqueurs when it is overripe. It has become popular as chips because of its texture, color, and taste. It also absorbs less oil and remains fresh and crisp longer than other banana chips.

The time from planting to flowering is between 240 and 280 days and fruits can be harvested 77 to 112 days after flowering. The second flowering is from 540 to 570 days after planting.

FHIA 21 yields bunches at 22 to 35 kg with 65 to 80 large size fingers. Each finger weighs 250 to 350 grams. Hand pruning is recommended to approximately five hands in order to obtain finger length comparable to the traditional *False Horn* plantain.

FHIA-21 grows well in well-drained loamy soils at elevations of 0 to 1200 ft above sea level. Optimum growing temperature is 28° C. Growth slows down substantially below 17° C, and stress symptoms may appear depending on the periodic duration of low temperatures.

Planting at high densities at 2500 to 3200 plants per hectare is recommended either as an annual cropping system or for a maximum of one ratoon. This system followed by periodic replanting can be more profitable than traditional, permanent stands at low density (1600 – 1700 plants /ha) to ensure higher yields at one time with minimum losses. Replanting is recommended to clean the field of nematodes and root borers, which affect yields in all plantain cultivars after the second ratoon.

Source: http://www.btcctb.org

Planting can be done in single rows at a spacing of 2.5 to 3.0 m between rows or in double rows that are 1 m apart with spacing between double rows ranging from 4.0 to 5.0 m from center to center, adjusting the density by the plant distance within the row.

Fertilization should be done based on soil analysis results. However, in average soils, 300 to 350 kg of nitrogen (N), and 250 to 500 kg of K_2O (Potassium) per hectare is recommended per year. This is based on the Sula Valley soils of Honduras where sufficient potassium is available, but could require higher amounts in soils with a less desirable nutrient balance.

The nutrient source is better determined by the soil analysis results after considering nutrient balance, soil acidity, base saturation and free aluminum. The amount of phosphorous (P_2O_5) requirement is not more than 100 kg per hectare per year. Most soils can usually supply this amount, but when an application is required, it is best to do it at planting time using rock phosphate or an 18-46-0 formulation. ***(Junelyn S. de la Rosa)***

Corn Research

Improving the productivity of ultisols for corn

The Northern Mindanao Integrated Agricultural Research Center (NOMIARC) at Dalwangan, Malaybalay City, Bukidnon explored the possibility of increasing and sustaining corn yield using the right amount of phosphorus and chicken manure on ultisols. It also assessed the long term changes in the soil chemical properties in ultisols grown to corn. The farmers in Region 10 grow corn mostly in this type of soil and there is a need to improve their productivity.

What is ultisol?

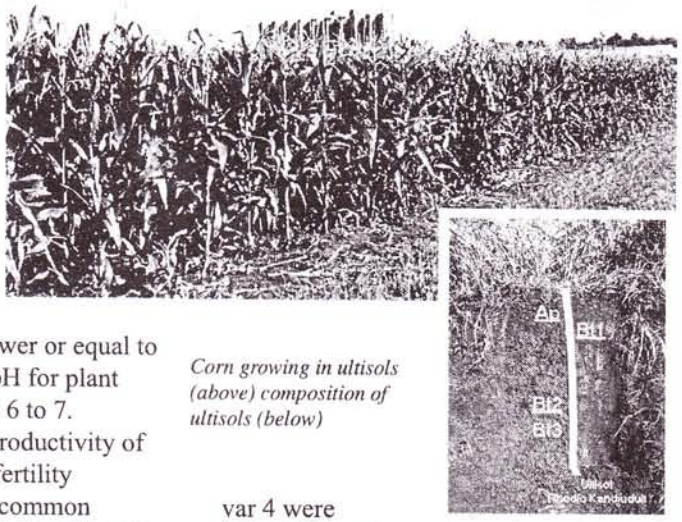
Ultisol, one of the major soils used for crop production in the Philippines, is characterized by low nutrient availability brought about by low pH, high concentrations of exchangeable aluminum and manganese, low base saturation and cation exchange capacity (CEC), low organic matter content and low available phosphorus and high fixation capacity. This type of soil is formed where precipitation exceeds potential evaporation. It is common in tropical countries like the Philippines. There are about 8,113,453 ha considered ultisols in the country, representing 27 percent of the total land area.

Ultisol is acid soil with relatively low available nutrients, one of which is phosphorus, a nutrient needed by plants in relatively big amounts. It is poorly suited for continuous agriculture without the use of fertilizer and lime but can be very productive when these inputs are applied.

Simply, ultisol is old soil and thus, needs enhancement for it to be still productive.

Fertilizers are essential to improve and sustain crop production in this kind of soil. They can either be from organic or inorganic sources. In a soil survey made in the country by the Bureau of Soils and Water Management, ultisols have pH values lower or equal to 5.0. The most favorable pH for plant growth should range from 6 to 7.

To enhance the productivity of ultisol is to have a sound fertility management program. A common practice is to apply lime to raise soil pH and NPK fertilizers to supply the nutrient requirements of the plants. But chemical fertilizers alone cannot sustain crop yields over time due to their residual effects and availability. The use of organic matter particularly chicken manure has been found to enhance the physical, chemical, and biological properties of the soil.



Corn growing in ultisols (above) composition of ultisols (below)

The Study

Researchers C.R. Lapoot, L.V. Duna, J.B. Silvani, L.A. Ramos, and C.C. Maghanoy Jr. of NOMIARC, Region 10 conducted the study on improving the productivity of corn in ultisols for three years for both wet and dry seasons. They have noted that corn production was averaging only 1.19 t/ha for white corn and 2.93t/ha for yellow in their region.

Lime was broadcasted on the area during the second plowing, one month before planting. At planting, half of the recommended nitrogen, all the phosphorus, potassium and chicken manure were applied in the furrows. The remaining half of the nitrogen was applied 30 days after. Two seeds of IPB var 4 were dropped in each hill but were thinned out to only one after germination. Off barring, hilling up and weeding were done 14 and 30 days after transplanting. To control corn borer, trichocards at 100/ha were applied 25 days after planting.

Results

The researchers found that applying chicken manure and phosphorus alone or with their combinations increased corn yield. Increasing the rates generally increased the yield for three consecutive wet cropping seasons but this decreased during the fourth season. They observed the same trend during the dry season crop.

The initial pH of 5.35 after the first lime application declined after three years of chicken manure application and two years without its application. But with its application, organic matter in the soil increased. Available P also increased with time while exchangeable K slightly improved.

Even without chicken manure but with high amount of phosphorus (180 kg/ha), a high yield of 5.22 t/ha was

see Increasing the... page 3

9 BFAR reg'l research centers receive institutional dev't grant

To support and strengthen the establishment of regional fisheries research and development centers (RFRDCs), nine centers under the Bureau of Fisheries and Aquatic Resources (BFAR) received a total of P0.5 million institutional development grant (IDG).

The recipients of the grant are BFAR-RFRDC Regions II, III, V, IX, XI, XII, XIII, ARMM and CAR.

The amount, which was recently approved for release by the Bureau of Agricultural Research (BAR), is programmed to aid the Centers prepare their master plan. The Master Plan embodies the functional site plan where the R&D facilities and infrastructure (laboratory buildings, staff houses, conference hall, etc. will be permanently established. Also, part of the grant will be used in the procurement of information technology equipment such as LCD projector, laptop computer, digital camera, and printer to facilitate better processing and documenting of research results.

With the awarding of the grant, the centers are expected to become more effective in the conduct of research activities and technology verification in various areas of fishery R&D in the regions.

The RFRDCs were officially institutionalized last February 2001 through Administrative Order No. 28. A RFRDC is designated in each region and mandated to undertake all R&D projects within the framework of the approved national research and development program of the country. (*Mary Charlotte O. Fresco)*

Sciencescoping...

should be well drained and friable with pH 6.5–8.5 for healthy and well formed corms. It is ready for harvest in 8 to 10 months. The varieties are for ***poi*** *(pounded taro), table or chips.*

A succulent, perennial herb, all parts of the taro are eaten. The leaves are cooked as greens (our ***laing*** *or* ***Bicol express****), the tubers baked, steamed, or cooked and mashed to make* ***poi****. When cooked with other vegetable, the tuber provides a thick and starchy broth. All parts must be cooked well in order to break down the needle-like calcium oxalate crystals present in the leaves, stems, and corms. This causes the irritating, burning and stinging sensation in the throat and mouth lining.*

The leaves contain high amounts of vitamins A, B, C as well as calcium, iron, phosphorous, thiamine and riboflavin. While the corm has less vitamins, it is an excellent source of carbohydrates. The taro, according to some Hawaiian books, has medicinal uses. When mixed with ripe noni fruit, or just by itself it can be applied topically on boils. It can be also made into a poultice for infected sores. The taro stem can stop bleeding or can be rubbed on the sting of an insect.

The SRO taro (although still unofficial) that has found its way to the Philippines should now be growing with the master himself tending it. Soon it will be for adaptation trials and for resistance to Philippines pests and diseases. There should be a way of lessening or eradicating the calcium oxalate for a pleasant eating experience. Above all, the reason for its being that of being for chips must be fulfilled. (VDuldulao)

Web NEWS

French academy of sciences says gm crops safe
(http://www.academie-sciences.fr/)

Syngenta and Diversa form R&D alliance
(http://www.syngenta.com)

DA launches P50-M coconut development zone program
(http://www.da.gov.ph)

CSIRO breeds salt-tolerant wheat
(http://www.isaa.org)

Peanut crop biodiversity for world food supply endangered
(http://www.futureharvest.org)

New research projects impending water crisis - researchers and donors launch major iinitiative to avert it
(http://www.cgiar.org)

Local farmers, local scientists among highlights of international agricultural meeting
(http://www.cgiar.org)

New lines from the maize program
(http://www.cimmyt.org)

Agricultural research for development: Moving from words to action
(http://www.cgiar.org)

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