



lsu
annualreport
2002



Office of the President

Leyte State University

6521 Visca, Baybay, Leyte, Philippines

3 APRIL 2003

Her Excellency
President Gloria Macapagal-Arroyo
Republic of the Philippines
Malacañan, Manila

Through: Hon. Ester A. Garcia
Chairman, Board of Regents
Leyte State University

Madam:

May I have the honor to submit the Annual Report of the Leyte State University (LSU) for CY 2002.

This report highlights the achievements of the University in line with the institution's undying zeal and commitment to agricultural and rural development. Though written in a nutshell, it, nevertheless, shows the unity and solidarity of the university constituency in realizing the goals of LSU.

Let me convey my profound gratitude for your generous and continuing support to LSU's growth and improvement.

Very truly yours,


PACIENCIA P. MILAN
President



VISION

LSU as center of excellence in education and research in agriculture and allied fields in the Visayas.

PANGLANTAW

Ang LSU mao ang sentro sa kahanas sa edukasyon ug pagpanukiduki bahin sa agrikultura ug sa ubang susamang pagtuon dinhi sa Kabisayaan.

MISSION

Attainment of the highest quality of human capital and scientific knowledge for the sustained growth and development of agriculture, fisheries, forestry, and agro-industries.

KATUYOAN

Pagkab-ot sa pinakataas nga kalidad sa pagpalambo sa kahibalo ug kasinatian sa siyensiya alang sa tunhay nga pag-ugmad sa agrikultura, pangisda, kalasangan, ug mga industriyang pang-agrikultura.

Foreword

The year 2002 was another meaningful and fruitful year of the Leyte State University (LSU) in its conscious effort to enhance agricultural development, especially in the Visayas regions. The year was likewise marked by great challenges in view of the perplexing financial problems and the need to strengthen the university's foundation for further institutional growth in terms of its instruction, research, extension and production functions.



Amidst all odds, however, LSU has proved its mettle and has realized its plans for the year. It has survived the financial crunch by enhancing institutional revenues, drumming up support from external sources, and straightening out its financial management system. It has restructured its curricular programs in order to provide students strong academic background, hone their abilities to think and use knowledge, and stimulate their desire for continuous and lifelong learning. It has given top priority in the improvement and modernization of its equipment and facilities to boost instruction and research. Likewise, it has impressed among the faculty the value and importance of quality performance, continuous drive for academic excellence, and intellectual productivity and dynamism. Moreover, it has continued performing its role in the protection and management of the country's natural resources.

The LSU accomplishments and institutional accolade are the products of hard work, initiative, and creativity of its faculty, staff, and students, as well as the unswerving assistance of the government and other program supporters and benefactors. Thus, the university expresses its gratitude and appreciation to them as the unsung heroes behind its noble feat.

In the years ahead, LSU shall rev up its efforts, renew its zeal to effectively carry out its role as contributor to the country's socio-economic development, and unceasingly seek spiritual guidance in all its plans and endeavors.


PACIENCIA P. MILAN
President

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The Leyte State University (LSU) was selected by the Department of Science and Technology, through its Advanced Science and Technology Institute (DOST-ASTI), as one of the two institutions in Region 8 to become part of the Philippine Research, Education, and Government Information Network (PREGINet), a digital network to facilitate information access/linkage/sharing among affiliated government institutions, especially DOST attached agencies.

LSU was awarded a Plaque of Recognition by the Professional Regulation Commission through the Board for Foresters as the Second Best Forestry School in the country.

The LSU Reserve Officer Training Corps (ROTC) Unit maintained its title as the Best ROTC Unit in Eastern Visayas by topping the Regional Annual Administrative/Tactical Performance Evaluation (RAAPE) conducted on February 17, 2002.

LSU, through its bakery, received the Leyte BAHANDI Sales Excellence Award for generating a total of P12.5 million cash and booked sales during the 9th BAHANDI Regional Trade Fair at SM Megatrade Hall in Mandaluyong City, Metro Manila on September 12-16, 2002.



The LSU ROTC Unit during the Regional Annual Administrative/Tactical Performance Evaluation.

INSTRUCTION

LSU graduates continued to show commendable performance in the different licensure examinations. In the Licensure Examination for Chemists, Miss Euve E. Ubaldo copped 5th place and two others also passed the exam. In the Licensure Examination for Agricultural Engineers, Mr. Florante T. Bande and Mr. Dennis B. Jomoc copped 5th and 8th places, respectively, with an institutional passing rate of 70%.

Four new courses and one diploma course were offered in the LSU Main Campus and two in external campuses. These were the BS Chemistry, BS Computer Science, B of Secondary Education (with 3 major fields), and B of Elementary Education, and Diploma in Physical Education in the LSU Main Campus; and BS Information Technology - Isabel Campus and B of Secondary Education and B of Elementary Education - Alangalang Campus.

RESEARCH AND DEVELOPMENT

Out of 200 research projects implemented, 165 were ongoing projects and 35 were completed.

LSU added more accessions to its germplasm collection, thus accruing a total of 2,009 root crop accessions, 744 abaca accessions, 41 coconut accessions, and 14 species of native trees.

The Philippine Root Crop Research and Training Center (PhilRootcrops) based at LSU-Main Campus developed six new root crop varieties, as follows: cassava - NSIC Cv-22 (KU-50) and NSIC Cv-21 (SM 818-1); sweetpotato - NSIC Sp-25 (JK 018); and taro - NSIC G-6 (GS-377), NSIC G-7 (GS-382), and NSIC G-8 (GC-396). These new rootcrop varieties were approved and released for national adoption by the National Seed Industry Council (NSIC).

The abaca stripping machine of the National Abaca Research Center was adjudged as the lone finalist for PCARRD's 2002 *SINAG* Award (Outstanding Technology Commercialization).

EXTENSION

LSU's extension activities included trainings, distribution of planting materials and pamphlets/reading materials, technical assistance, fabrication of processing machines, participation in exhibits and flower and garden shows, analysis of soil and plant samples, etc.



Students of the Non-Formal Education Accreditation and Equivalency (NFE-AE).

Eight beneficiaries of the Agri-Entrepreneurship and Functional Education Program (AEFEP) for high school out-of-school youth passed the Non-Formal Education Accreditation and Equivalency (NFE A & E) Test conducted in Sogod, Southern Leyte on May 12, 2002.

DASS distributed to farmers a total of 689 copies of pamphlets on corn, rice, mungo, peanut, soy bean and soil sample collection in Cebuano version and 170.5 kg. of corn, upland rice and mungo seeds as planting materials, while the DOH distributed - 1,185 copies of leaflets, handouts, brochures and training guides on ornamental/cutflower/vegetable and fruit production, and 21.28 kg of vegetable seeds and grafted planting materials of fruit trees.

Technical assistance in various forms were provided by the different units of the university: PhilRootcrops - root crop production, processing of ubi food products and commercialization of ubi enterprise; NARC - abaca production, pest control, waste utilization, and post harvest processing of abaca; NCRC-V - coconut production, processing/processing enterprise and coconut-based farming systems; FARMI - trainings in forages for natural resource management in collaboration with FSP, ICRAF-Visayas and CBRMP; ISRDS - formulation/preparation of integrated proposals, capability building and trainers' training; ITE - ecological monitoring of the marine sanctuaries, conducting community dialogue and preparing environmental education module; MMDC - production of development drama, developmental video, power point presentations, and design/development of information brochure; BIDANI - implementation of health and nutrition project and barangay development plans, BMIS and PDNR and marketing and delivery of Nutripak; DOE - farm record keeping; DBM - project proposal preparation; DFST - processing and development of

ethnic food, fruits/vegetables, root crop, meat, and dairy; DASS - analyzing soil and plant tissue samples and providing soil and fertilizer recommendations; DPM - control of rice black bugs; DAS - livestock/swine production and management and artificial insemination of swine; DOH - ornamental production and management, cultflower cultivation, and vegetable/tree production; DDC - desktop publishing, development of audiovisual aids and campus journalism; COF - rehabilitation of watershed and trainings on human resource knowledge and skills.

GENERAL ADMINISTRATION

LSU signed agreements with the following foreign and local agencies to formalize institutional collaborations: University of Gottingen, University of Hohenheim, and Akademie Fur Natur-und Umweltschutz, in Germany - graduate study scholarship and technical collaboration with NARC and ITE; Mie University, Japan - student exchange; Jet B AgriFood International Inc. - fruit food product processing; Haribon Foundation for the Conservation of Natural Resources - to use the rainforestation farming technology of ViSCA-GTZ Ecology Program; and Lim-ao Integrated Farmers for Empowerment (LIFE) - to adopt LSU's food processing technologies and tap its technical expertise on ginger powder and tea processing; National Irrigation Authority-Region 8 - training assistance;

The Office of Student Affairs (OSA) took charge of students' guidance and counseling, testing, scholarship and placement, dormitory housing, and recreation. It facilitated the University programs on student scholarships/ assistantship, student insurance and student loans. It presented awards to academic scholars and organizations during the Honors and Awards Convocation.



LSU President Paciencia P. Milan met the new Rector of the University of Hohenheim (UH), Dr. Hans-Peter Liebig during her official visit to Germany.



MOA signing of the Haribon-LSU rainforestation partnership.

The Library received a total of 2,290 print and non-print materials which included 1761 books, 108 serials, 21 VHS tapes, 37 CD-ROMs, 5 VCD, 10 statistical diskettes, 326 theses/dissertations/case studies/special problem, and 22 terminal reports/training manuals.

The Infirmary served the University constituents and the neighboring barangays by conducting seminars on preventive health care. It also served the students, faculty/staff and their dependents through the following services: consultation - 4,700; physical examination - 4,435; immunization - 245; dental services - 783; laboratory examination - 783; and other services - 2,185.

AWARDS EARNED



Dr. Monina M. Escalada posed with her St. Andrews Prize Medal during the awarding ceremony.

Dr. Monina M. Escalada, head of LSU's Department of Development Communication and Dr. K. L. Heong, IRRI entomologist and Rice IPM Network coordinator, won the *St. Andrews Prize for Environment 2002* as authors of the paper "Motivating Rice Farmers to Reduce Insecticide Use" during the St. Andrews Prize Seminar on May 9-10, 2002 in Scotland. The award was given to the most deserving practical environmental idea that combines good science, economic reality and political acceptability.

Dr. Lutgarda S. Palomar, head of LSU's Department of Food Science and Technology (DFST), was cited as one of the Filipino women-scientists in the new book "*Outstanding Filipino Women Research Managers and Scientists in Agriculture and Natural Resources*" published by the Philippine Council for Agriculture Resources Research and Development (PCARRD).

Dr. Andresito D. Acabal was featured in *Bibliographie MARQUIS 6th* edition of *Who's Who in Science and Engineering*, USA and became a member of the American Association for the Advancement of Science, USA.

Dr. Antonio L. Acedo, Jr. received the *Manuel V. Quisumbing Award* for his outstanding contribution to postharvest research and extension given by Postharvest Training and Research Center (PHTRC) on November 12, 2002 during the first National Symposium on Postharvest Horticulture. He was also awarded the AFMA Best R & D Paper (unpublished category) by DA-BAR during its 14th National Research Symposium. He likewise served as a visiting scientist for one month at King Mongkut's University of Technology (KMUTT), Bangkok, Thailand from June to July 2002.

Three professors of the Department of Pest Management received awards from the Pest Management Council of the Philippines (PMCP) during its 33rd annual convention held at Grand Men Seng Hotel, Davao City on May 8-10, 2002, namely:

- Dr. Ruben M. Gapasin - *Pest Management Award 2002*
- Dr. Lina T. Villacarlos - *Most Outstanding Entomologist in the Academe* (Instar III).
- Dr. Lucia M. Borines - *Best Paper Award in Plant Pathology* for her dissertation "Bacterial Blight Resistance Gene Pyramids on Maintainer

Lines of Rice (*Oryza sativa*) and co-author of the Best Poster Paper Award in Plant Pathology entitled "Development of Xa-Gene Pyramid Lines with Durable Resistance to Bacterial Blight"

Dr. Lelita R. Gonzal received the *Achievement Award in Research Management* from the Crop Science Society of the Philippines (CSSP) on April 25, 2002 in Bohol in recognition of her significant contribution to crop science through research management and institution building.



Dr. Canesio D. Predo of the National Abaca Research Center (NARC) received the following awards from DA-BAR on November 28, 2002 in Quezon City: *DA Secretary's Award* for the paper published in ISI journal, *BAR Director's Award* for the paper published in local refereed journal, and *AFMA Best R & D Paper Award* for quality unpublished paper in agriculture.

Dr. Antonio L. Acedo, Jr. (2nd from right) posed with the other awardees during the anniversary celebration of the Postharvest Horticulture Training and Research Center (PHTRC).

Prof. Lolito C. Bestil of the Department of Animal Science received the *Best Paper Award* from the Philippine Society of Animal Science on Oct. 23-25, 2002 at Marriott Hotel, Cebu City.

Dr. Bimbo T. Mandras, Prof. Elsie Salamat and Mr. Arnulfo Almeroda were accredited as certified pesticide applicators after attending a training on that kind of professional endeavor.

Dr. Ruben M. Gapasin was granted one-year professorial chair by the Philippine Agriculture and Resources Research Foundation, Inc. (PARRFI).

CENTER OF EXCELLENCE SUPPORT

LSU received the CHED Center of Excellence support during the year in the amount of P4.5M for the upgrading of facilities and library holdings, staff and curricular development, production of teaching materials and related expenses. The remaining balance as of December 2002 amounted to P431, 409.15.

ALUMNI SUPPORT

Through the years LSU alumni supported the school through generous donations of equipment, books and other appliances. The recipients of donations were the following: *Balay Alumni* - colored television set, office tables, etc; University Library - books; Department of Economics - computer and printer.

LSU'S ALLOTMENTS, EXPENDITURES AND BALANCES, CY 2001 AND 2002
(In Thousand Pesos)

FUNCTION	ALLOTMENT		EXPENDITURE		BALANCE	
	2001	2002	2001	2002	2001	2002
CURRENT APPROPRIATION						
A. Instruction Services						
1. Advanced Education	8,350.00	8,948.00	8,216.90	8,925.00	133.10	23.00
2. Higher Education	134,895.50	75,168.00	129,491.20	74,289.00	5,404.30	879.00
3. External Campuses	6,622.00	48,915.00	6,903.70	50,507.00	-281.70	-1,592.00
B. Research Services	30,524.00	34,268.00	31,159.90	34,215.00	-625.90	53.00
C. Extension Services	8,688.00	9,323.00	7,649.00	9,361.00	1,039.00	-38.00
D. Auxiliary Services	9,464.00	10,999.00	10,485.60	11,030.00	-1,021.60	-31.00
E. General Administration and Support Services	37,393.20	42,307.00	42,030.20	41,601.00	-4,637.00	706.00
F. Productivity Incentive Bonus	1,158.00	-	1,158.00	-	-	-
G. Building and Structure	-	-	-	-	-	-
H. Capital Outlay/Equipment	-	1,000.00	-	1,000.00	-	0
I. Foreign-Assisted Project	-	-	-	-	-	-
TOTAL	237,094.70	230,928.00	237,094.50	230,928.00	0.20	0

CURRICULAR OFFERINGS

GRADUATE PROGRAM

MS Botany was offered effective first semester of SY 2002-2003.

UNDERGRADUATE PROGRAM

The following courses were offered in the Main-Campus effective first semester of SY 2002-2003: Bachelor of Science in Chemistry (BSChem), Bachelor of Science in Computer Science (BSCS), Bachelor of Elementary Education (BEEd), Bachelor of Secondary Education (BSEd) with major fields in Mathematics, Biology-Chemistry, and Physical Education, Health, Music and Arts (PHEM).

New courses offered in the External campuses were the following: Bachelor of Science in Information Technology (BSIT) - Isabel Campus; Bachelor of Secondary Education (BSEd) major in Mathematics and Bachelor of Elementary Education (BEEd) - Alangalang Campus.

The Business Management and Crop Enterprise Management as major fields of specialization under the BS Agribusiness (BSAB) course were phased out on November 11, 2002 per BOR Resolution No. 108 series of 2002.

The National Service Training Program (NSTP), a modification of the old Reserve Officer Training Corps (ROTC), was offered effective 1st semester of school year 2002-2003.

NON-DEGREE PROGRAM

The Diploma in Physical Education (DPE) was offered effective Summer of 2002.

CURRICULUM DEVELOPMENT

UNDERGRADUATE PROGRAM

The revised BS Development Communication curriculum was offered starting 1st Semester of SY 2002-2003 with the addition of Educational Communication Technology as a major field of specialization.

The proposed revision of the curriculum for Plant Genetic Resources and Plant Breeding as a major field under the BSA program was approved and will be implemented for the incoming junior major students.

The six-year straight Doctor of Veterinary Medicine curriculum was revised to accommodate the CHED mandated courses and to satisfy the TPAAE requirements for the number of units in some courses. The revised curriculum was approved by the University Academic Council.

The proposed revisions of the BSAB curriculum and BSFT program were approved by the College Academic Council and are now being reviewed by the University Curriculum Committee. The revisions included the CHED-mandated general education courses and other new major courses.

The proposal to revise the BSA program across all major fields had passed the College Curriculum Committee and soon will be endorsed to the University Curriculum Committee. The proposal included incorporation of CHED-mandated courses as well as realignment of courses to prepare the students for the licensure examination for agriculture.

The proposal of the Department of Family and Consumer Science (DFCS) to offer Technology and Home Economics as a major field under the BSEd and BEED curricula was submitted to the College of Education.

DFCS also drafted a proposal to offer short-term modular courses on Care Giving, Food and Beverage Service Attending, Room/Hall Tending, Garment Sewing and Soft Furnishing Construction to replace the HET curriculum.

The BS in Agricultural Engineering curriculum was revised to incorporate the general education courses mandated by CHED.

SECONDARY EDUCATION PROGRAM

The LSU Laboratory High School, with the assistance of the College of Education, submitted to the University Curriculum Committee its proposal to revise the Agricultural Science Curriculum to include new subjects like Research I & II, Computer I & II and Calculus with Analytic Geometry to give students a good preparation for tertiary education.

ENROLMENT PROFILE

During the school year 2002-2003, the LSU-Main Campus had a total enrolment of 4,187 students. This included 275 graduate students (21 PhD and 254 MS/MAgDev); 3,863 undergraduate; and 49 in the non-degree program (Table 1).

The LSU-Main Campus Laboratory High School had a total enrolment of 489 which approximated and complied with the 500 maximum limit.

GRADUATES

The LSU-Main Campus turned out 616 graduates in its different curricular programs during its 49th Collegiate Commencement Exercises: 25-graduate degree program (2PhD, 13 MS, 8 MAgDev, 2 MEd); and 591 in the undergraduate degree program (176 BSAgEd, 78 BSHE, 67 BSA, 59 BAS, 56 BSAB, 37 BSF, 19 BSDC, 15 BSAE, 14 BSFT, 11 DVM, 10 BSS, 7 BSAC, and 14 HET). Four graduated with *magna cum laude* and 37 as *cum laude* honors.

TABLE 1. MAIN-CAMPUS STUDENT ENROLMENT BY DEGREE, FIRST SEMESTER SY 2001-2002 AND SY 2002-2003

COURSE	1 st Semester 2001-2002	1 st Semester 2002-2003
GRADUATE		
PhD	27	21
M. S.	133	121
M. Ag. Dev.*	141	126
M. Ed.	11	7
SUB-TOTAL	312	275
UNDERGRADUATE		
Doctor of Veterinary Medicine (DVM)	101	191
Bachelor of Animal Science (BAS)	449	372
BS in Agriculture (BSA)	578	548
BS in Agribusiness (BSAB)	549	585
BS in Agricultural Chemistry (BSAC)	66	41
BS in Agricultural Engineering (BSAE)	204	176
BS in Agricultural Development (BSAgDev)	83	61
BS in Agricultural Education (BSAgEd)	807	463
BS in Development Communication (BSDC)	151	137
BS in Food Technology (BSFT)	113	146
BS in Forestry (BSF)	206	164
BS in Home Economics (BSHE)	372	310
BS in Statistics (BSS)	115	103
BS in Biology (BSB)	114	164
BS in Chemistry (BSC)	Not yet offered	34
BS in Computer Science (BSCS)	- do -	70
Bachelor of Secondary Education (BSEd)	-do-	94
Bachelor of Elementary Education (BEEd)	-do-	204
SUB-TOTAL	3,908	3,863
NON-DEGREE		
Home Economics Technician (HET)	72	49
SECONDARY EDUCATION	465	489
GRAND TOTAL	4,757	4,676

* Extramural enrolment is included

The LSU-LHS turned out 95 graduates during its 72nd Commencement Exercises. Four marched "With High Honors" and 26 "With Honors".

SCHOLASTIC PERFORMANCE

SCHOLARSHIPS AND FINANCIAL ASSISTANCE

Thirty-two (32) graduate students enjoyed scholarships/assistantship grants from SPREAD - 13, LSU - 9, DA-BAR - 6, FAPE - 1, FIDA - 1, CHED - 1, and LSP-CSC - 1.

Six hundred forty-one (641) undergraduate students enjoyed scholarships/grants from LSU - 168, LSU grants-in-aid - 298, and other agencies - 175.

One hundred seventy-seven (177) high school students enjoyed LSU scholarships: Full - 5, Partial -142 and Honorific - 30.

PROFESSIONAL LICENSURE EXAMINATION PERFORMANCE

The LSU Main Campus graduates performed well in the 2002 Professional Licensure Examinations with two topnotchers for Agricultural Engineers - 5th and 8th places and one copped 5th place for Chemists (Table 2).

TABLE 2. PASSING RATE AND NUMBER OF TOPNOTCHERS IN PROFESSIONAL LICENSURE EXAMINATIONS

EXAMINATION	Top 10 Rank	Institutional Percentage	National Percentage
Veterinary Medicine	-	60.0	42.90
Foresters	-	50.0	29.49
Agricultural Engineer	5 th & 8 th	70.0	49.20
Teachers			
- Agricultural Education	-	67.42	34.00
- Home Economics	-	68.42	35.91
Chemists	5 th	75.0	50.53

STUDENTS AND ALUMNI ACHIEVEMENTS



Dr. C.B. Batoy (Dean of Students) and Dr. M.K. Palomar (Vice President for Academic Affairs) handshaking an academic scholar during the Honors and Awards Program on February 20, 2002.

- Erik-Ray Matthew S. Palomar won 1st place and 3rd place in the Philippine Statistics Quiz Regional Elimination and Provincial Level held at NEDA Building, Candahug, Palo, Leyte on November 14 and 11, 2002, respectively, and represented the region in the national level.
- The following college students of the Main Campus were recognized during the Honors and Awards Convocation on February 20, 2002: Rolly G. Fuentes - Leadership Award; Jaime Gallentes - Endeavor Award; and Perly Cortes and Jonathan C. Torres, Jr. - Special Award.
- Miss Jo Marie U. Bacusmo, a BS Chemistry II, student won 1st place in the oratorical contest during the Regional PASUC Cultural Festival held at LNU, Tacloban City on May 10-11, 2002.
- Miss Eva Marie C. de los Reyes, a BS Chemistry I student, won 1st place and 5th place during the Philippine Statistics Quiz-Provincial Level and Regional Elimination on Nov. 11 and 14, 2002, respectively.
- Miss Rachel G. Po, a Doctor of Veterinary Medicine (DVM) student, ranked 2nd place and 49 other DVM students passed in the Meat Inspector Examination jointly conducted by the Civil Service Commission (CSC) and the National Meat Inspection Commission (NMIC).
- Ms. Shalom P. Mula and Mr. Adrian Ybañez, BS Development Communication and Veterinary Medicine student, respectively, were sent to Mie University, Kamihama, Thu, Japan to attend the International Education Program on Global Tetrallema on Dec. 3-23, 2002 sponsored by the Association of International Education, Japan and UNESCO.

- Mr. Ian Navarette, MS student of the Department of Agronomy and Soil Science, conducted laboratory work for his masteral thesis at the Martin Luther University, Germany with support from the German Exchange Service (DAAD) in Bonn.
- Ms. Evelyn V. Labado of the Department of Food Science and Technology won the VEAM Environmental Songfest and Mr. Rodney Perez won 3rd place during the Statistics Quiz Show.
- The following LSU-LHS students won in the different regional and local competitions:
 - Jeela Acedo, April Rose Fulache and Ryan Beverlo Pascual - 1st place; Nuha Mei Malaki, Angelo Jay Noriel and Jun Benedict; and Val Anthony Borines, Jan Jacob Glenn Jansalin and Michale Anthony Regis - tied for 2nd place, Intel Regional Science Fair Competition held at Tacloban City on December 16-17, 2002
 - Eva Marie de los Reyes, Ma. Teresa Pama, Emily Luna, Amel Karen Filipino, and Quenstein Lauzon represented Region 8 in the National Intel-Science Fair held in Manila on March 5-8, 2002.
- Robelyn Tortillas, 2002 LSU graduate, won the Best Undergraduate Thesis Award in Weed Science given by the Pest Management Council of the Philippines (PMCP) during its 33rd annual convention held at Grand Men Seng Hotel, Davao City on May 8-10, 2002.
- Three alumni received awards during the 14th National Research Symposium held at the Bureau of Soils and Water Management Convention Hall in Diliman, Quezon City on November 27-29, 2002:
 - Mr. Fabio G. Enriquez - BAR Director's Award (R & D papers published in an international refereed journal)
 - Mr. Arnulfo P. Malinis - AFMA Outstanding R & D Paper Award (Downstream Unpublished Category)
 - Ms. Ma. Gina V. Maramara - AFMA Best R & D Paper Award (Upstream Unpublished Category)

STUDENT WELFARE AND ACTIVITIES

GUIDANCE SERVICES

The Guidance Services Section of the Office of Student Affairs (OSA) continued to implement strategies in support of student services such as orientation; psychological assessment for vocational guidance, counseling, admission/readmission; increase of stipend of scholars; recognizing academic scholars and organizations during the 2002 Honors and Awards Convocation; solving academic deficiency problems; leadership training; student assistantship/loans; student insurance; counseling/consultation; placement and follow-up of graduates; etc.

STUDENT HOUSING

The 21 student dormitories and cottages (college students - 18; graduate students - 2; high school - 1) of the University accommodated 51.6% of the total student enrolment from January to December 2002.

STUDENT LOUNGE AND RECREATION CENTER

The Student Lounge served as a venue for students to study, play chess/ dart games, and guitar playing while the Recreation Center served the students through sports, like billiard and table tennis.

STUDENT ACTIVITIES

Veterinary medicine graduating students had their exposure in five different veterinary fields: small animal practice - Makati Dog and Cat Hospital, Makati City, Metro Manila; wildlife management - Manila Zoological Garden, Malate, Metro Manila; wildlife practice - Protected Animal Welfare Bureau (PAWB), Department of Environment and Natural Resources, Elliptical Road, Quezon City; equine practice - Modomo Veterinary Practice and Trading, Sta Ana, Metro Manila; and diagnosis of different diseases - Philippine Animal Health Center, Visayas Avenue, Diliman, Quezon City.



Students during their laboratory class in Plant Protection 21 doing a survey on pests of rice.

The different student organizations conducted varied activities which included social, tutorial, quiz show, essay writing contest, service, fund raising, skills demonstration, etc. (Table 3).

FACULTY STRENGTH AND DEVELOPMENT

A total of 258 faculty members (106 Ph. D., 108 MS, and 44 BS) facilitated the instruction activities of the LSU-Main Campus. Fifty-one of them were detailed in research centers, 5 on secondment to other government offices, and 8 on sabbatical leave.

Ten faculty members pursued advanced studies (6 for PhD and 4 for MS) with scholarship grants from the German Academic Exchange Service (DAAD) Scholarship Program, John Allwright Fellowship (University of Queensland, Australia), SEARCA, Monbusho, PCASTRD, and LSU Financial Assistance.

The academic staff of the Main Campus attended different trainings/ seminars/ conferences during the year in review: 52 international, 124 national, 105 regional, and 159 local (Table 4).

TABLE 3. ACTIVITIES OF THE DIFFERENT STUDENT ORGANIZATIONS, SY 2002-2003

ORGANIZATION	ACTIVITIES UNDERTAKEN	AWARD RECEIVED
Vet SS	Dog Show, Rodeo, Phil-Veterinary Week, anti-rabies vaccination campaign, alay linis, stray dog catching	1 st Place Course-Related Organization
DECSO	Assisted in the conduct of screening for BSDC freshmen and orientation; produced the 2002 Farmers' Field Day radio spots; assisted station DYAC and PICRO in the media coverage during the LSU anniversary; assisted the Culture and Arts Center and Socio-Cultural Affairs Committee in the production of Miss LSU 2002 beauty pageant; assisted the committee on Pinaka-Contest; assisted the LSU Waste Management Committee in gathering baseline data regarding waste management problems in LSU; and alay linis	2 nd Place Course-Related Organization
VICHEMSO	Annual Chemistry Week celebration, orientation program, acquaintance party/induction of officers, alay linis and papaya planting, tutorial sessions, seminar on GMO/creation science, donated CD to LSU Library and pulse unit and printed circuit board (PCB), white gift giving to indigents of Brgy. Guadalupe, Baybay, Leyte	3 rd Place Course-Related Organization
D'AGEMS	Acquaintance and induction, junior orientation, booth making, tutorials, alay linis, and Christmas party	
SABS	SAVALEX fund raising, alay linis, acquaintance/Christmas party, tribute/get-together, booth making, sponsors Spot Trading Seminar	
PAFT (Student Chapter)	Acquaintance party, quiz show, booth making, selling of food products and tickets, convocation, Christmas bazaar, put up Periodic Table and other classroom/laboratory visual aids	
PSAE-Student Chapter	Tutorial classes in Physics and Mathematics	
HES	Cooking and handicraft skills demonstration to pupils of Grades 5 & 6 of Guadalupe Elementary School and women, produced and distributed bookmarks with nutrition slogans to elementary pupils and production/posting of posters promoting better nutrition, induction/acquaintance party, celebration of HES Week, general cleaning of the department and its surroundings, and participated in the processing of INSUMIX for the cooperative in Damulaan	
SAS	Helped in the preparation for the PhilSAN 16 th Outreach Technical Seminar; coordinated with the department for the holding of the "Invational Redeo"; donated 75 heads of ducklings in the Duckery Project	
VIHOS	Co-sponsored flower and garden shows, tree planting, honing of skills in asexual propagation of horticultural crops	
APBM	Sponsored quiz show and essay writing contests, alay linis, and assisted in distributing seeds of corn and rice during the LSU anniversary	
FFPCC	Managed the department nursery and garden; purchased some books; provided funds to renovate the room utilized as mini-library of the college	
AES	Assisted in distributing snacks to farmers during the LSU anniversary	
SBO (LSU-LHS)	Helped the administration by hiring a laborer to maintain the cleanliness of all comfort rooms and worked for the cleanliness and sanitation of the whole high school campus including the beach area	

TABLE 4. TRAININGS ATTENDED BY FACULTY

Dept/College/Center	International		National		Regional		Local	
	Trng.	Participants	Trng.	Participants	Trng.	Participants	Trng.	Participants
College of Agriculture								
DPM	6	8	21	30	5	6	10	39
DAS	-	-	4	7	3	11	12	21
DOH	2	2	10	11	2	2	2	2
DDC	4	4	3	3	1	1	8	11
DASS	2	2	2	5	-	-	2	9
DFCS	-	-	1	5	1	6	5	14
DGRPB	1	1	2	2	13	13	5	5
College of Engineering & Agri-Industries								
DAE	-	-	2	2	3	3	3	3
DBM	-	-	-	-	-	-	3	4
DCST	-	-	2	2	1	1	1	1
DOE	2	2	4	4	4	4	7	7
DFST	1	1	2	2	3	3	13	22
College of Vet. Medicine	4	8	4	7	-	-	6	12
College of Arts & Sciences								
DoPAC	-	-	-	-	2	2	19	20
College of Education	-	-	4	4	12	18	8	22
College of Forestry	1	1	10	17	2	2	3	10
SUB-TOTAL	23	29	71	101	52	72	107	202
Research Centers								
FARM	5	5	11	12	5	5	5	5
ISRDS	6	7	8	11	5	6	3	4
ITE	6	13	2	3	11	24	-	-
MMDC	-	-	-	-	-	-	7	9
NARC	4	4	7	9	-	-	7	13
NCRC-V	1	1	-	-	1	1	7	8
PhilRootcrops	7	8	16	32	12	16	10	10
SUB-TOTAL	29	38	44	67	34	52	39	49
External Campuses								
Alangalang Campus	-	-	2	2	5	5	3	3
Isabel Campus	-	-	5	5	6	7	2	30
Tolosa Campus	-	-	-	-	5	6	4	5
Villaba Campus	-	-	2	3	3	3	4	13
SUB-TOTAL	-	-	9	10	19	21	13	51
GRAND TOTAL	52	67	124	178	105	145	159	302

LIBRARY SERVICES

ACQUISITIONS

The LSU University Library has a total of 56,028 accessioned volumes of books. During the year, it acquired 2,290 print and non-print materials: books - 1,761; serials - 108; 21 VHS tapes; 37 CD-ROMs; VCD - 5; statistical diskettes; theses/dissertations/case studies/special problem - 326; and terminal reports/training manuals - 22.

LIBRARY DONORS

Donors to the library consisted of the following individuals, organizations, agencies, and foundation: Rotary Club of Makati through Mr. Mike Zosa - 319 volumes of reference books for college, high school and elementary students; International Association for Young Children Foundation and International Student Foundation - 28 volumes of general reference books, like almanacs, encyclopedias and dictionaries; Dr. Yoshikane Kawasaki of the Department of Applied Chemistry, Osaka Institute of Technology, Japan through Dr. Alice M. Acabal - 7 journal titles with a total of 90 volumes on chemistry; and De La Salle University through Ms. William San-Andres Frias - 153 titles of the collection of Philippine Upland Research Center (PURC).

COLLABORATIONS

The Leyte State University and the Center for Agriculture in the Tropics and Subtropics of the University of Hohenheim (UH) and the Akademie Fur Natur-und Umweltschutz in Germany, signed agreements on the granting of a DAAD-UH Scholarship for the graduate study in Germany of Mr. Marlito Bande, staff of the Institute of Tropical Ecology of LSU and for the continued UH-LSU faculty and student exchange program.

The academic collaboration in postharvest science and technology was pursued as part of the existing agreement between the King Mongkots University of Technology Thonburi (KMUTT) in Bangkok, Thailand and LSU.

The LSU College of Forestry had a partnership agreement with the University of Goettingen, Germany on the offering of a joint-Master of Science in Forestry degree program and the scholarship of Mr. Anatolio N. Polinar and with the John Alright Scholarship Program through the Australian Centre for International Agricultural Research (ACIAR) and the University of Queensland which gave the college the opportunity to send Mr. Nestor O. Gregorio to pursue a master's degree.

LSU and Mie University (MU), Japan signed a General Agreement and Memorandum of Understanding (MOU) for Student Exchange.



LSU President Paciencia P. Milan exchanged documents with Dr. Hitoshi Obata, Dean of Faculty of Bioresources, Mie University to symbolize the LSU-MU Academic Cooperation and Exchange.

ACQUISITIONS

The College of Agriculture acquired video grabber with editing card, letter tray, air conditioner, illuminator (multi-position optic), laboratory binocular microscope, 2 pieces mouse with pad, 2 units camera, 2 units calculator, 2 units TV coder, 5 units stand fan, 6 units computer, 50 pieces monobloc arm chairs, 160 pieces arm chairs, six-layer cages of 24 cages/unit (1 cage can accommodate 3 layers), mini cold storage room, table wares for the canteen, re-upholstery of sala set, office tables and chairs.

The College of Arts and Sciences acquired 29 inches television set, TV life view encoder, electric fan, digital analytical balance, CD player and modem.

The College of Education acquired a computer and printer.

The College of Engineering and Agri-industries acquired the following: UPS, cordless phone, water purifier, electric furnace, Karaoke, grass cutter, electric oven, electric range, refrigerator, scanner, printer, laptop computer, water current meter, laboratory oven, photocopier, LCD projector, overhead projector, projector screen, plastic binding machine, basic electronic tool kit, multi-tester, and microphone; two units each of air conditioner, wireless microphone, microphone stand, surveyor steel tape, and AVR, 80 pieces monobloc armchairs, 3 units computers, 6 units hand level, 20 units computers for workstations, Pentium IV computer as server, and hub for Local Area Network (LAN).

The College of Forestry acquired multi-media projector, binder, scanner for mimeographing machine, notebook computer, air conditioning unit, television set, photocopier, water dispenser, telephone, Nikon camera, heavy duty AVR; 2 pieces office tables; 3 units each of overhead projector, desktop computers, projector screen, computer table, and UPS; and 80 pieces plastic chairs.

The College of Veterinary Medicine acquired chest freezer, pH meter, colony counter, electric dual dehorner with moste, Karaoke donated by Veterinary Student Society, microscopic video camera, television, 2 units pressure cooker, and 3 units overhead projector.

LSU-Alangalang Campus purchased one unit each of UPS, computer table, calculator, heavy duty puncher and stapler, calculator, counterfeit money discerner, heavy duty air pump; 2 units each of computer and electric stand fan; 4 units steel storage cabinet; 5 units steel filing cabinet; and 11 units wheel barrow with rubber tires.

The LSU-Isabel Campus acquired 5 computer tables, data switch, counterfeit money detector, glass lectern, computer for file server, networking hardware & peripherals, and protection equipment for computer and peripherals, 2 units computer, 3 units printer, 25 units workstation computer, 98 books, chemicals and equipment for Biology laboratory, and cabinets for Chemistry laboratory.

LSU-Tolosa Campus acquired 1 unit each photocopier, electric organ, colored printer, cell phone; 3 units grass cutter, and 3 units telephone.

LSU-Villaba Campus purchased computer table, computer chair, grass cutter, library facilities, donated by the Japan-Philippines Friendship Association Foundation, Inc. and other equipment like binocular microscope, compound microscope and simple microscope.

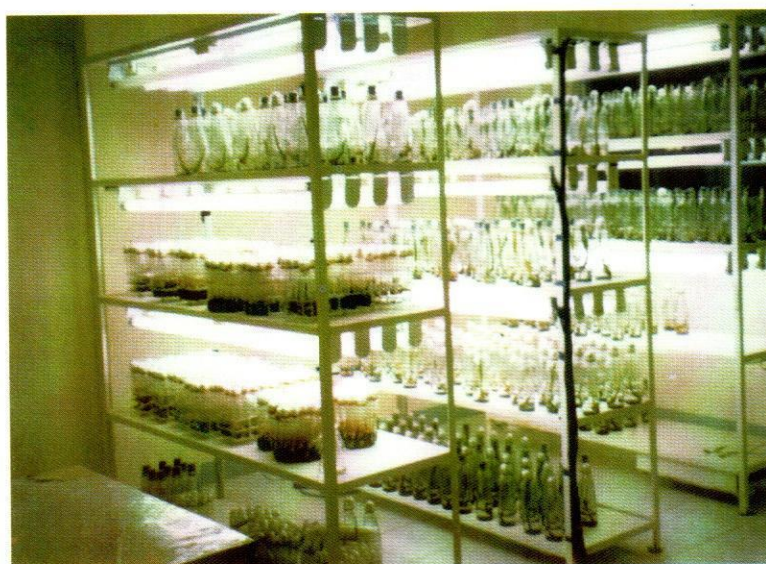
LSU implemented a total of 200 research projects during the year in review.

TECHNOLOGIES/INFORMATION FOR DISSEMINATION

- Ubi Taho
- Nutri-cool
- Yam Spread
- Yam Beverage
- SP-tomato paste
- Ubi Fried Chips
- Makapuno Leather
- Makapuno Delight
- Sweetpotato Pickles
- Ubi Pastillas\Ubi Tart
- Makapuno Meat Loaf
- Makapuno Meat Burger
- Improved portable abaca stripper
- Production of Ubi using Minisett
- New sweet potato, cassava and taro varieties
- Development of quality food products from yam
- Modified/optimized processing techniques in ubi powder
- Bacteriocin-producing organisms in fermented grates from Muslim Mindanao
- Adaptability of selected fruit trees (mango, szincum, rambutan and durian) under marginal hilly lands
- Coconut hybrids, RCRC 1 to RCRC 9 with their respective cultural management practices



Mixed Vegetable Pickles (top) :
Macapuno Meatloaf (bottom) .



The Makapuno Laboratory
of the NCRC-V.



Pineapple production technology under coconut plantation (top);
LSU Cocofresh water beverage (bottom)

- New Makapuno genotypes, VMAC 1 to VMAC 4 with their respective cultural management practices
- RCRC smoke copra dryer with corresponding copra drying techniques
- Guarte indirect copra dryer for white copra production with corresponding copra drying techniques
- RCRC coconut shell charcoal technology
- NCRC-V in vitro technique for makapuno and coconut seedling production
- Coconut seedling production technology at the nursery
- Pineapple production technology under coconut plantation
- Black pepper production technology under coconut plantation
- Selected fruit trees production technology under coconut plantation
- Bottled buko juice (CocoFresh) production technology
- Coconut husk decorticator with processing techniques
- Vinegar production technology from coconut water

EQUIPMENT/TECHNOLOGY/INFORMATION FOR PATENTING

- Food Crop Chips Flourmill - a flourmill adapted for converting dried cassava, sweetpotato, ubi, banana and other food crop chips into powdered materials with softness and texture equivalent to wheat flour for baking.
- Abaca Twisting and Twining Machine
- Curing Process of Sweetpotato Pickles
- Process and Formulation of Makapuno Leather
- Process and formulation for the Production of Makapuno Delight
- Process and Formulation for the Production of Makapuno Meat Burger
- Process and Formulation for the Production of Makapuno Meat Loaf

GERMPLASM COLLECTION

- The PhilRootcrops obtained additional accessions for its germplasm collection to make a total of 2,009 accessions consisting of 910 accessions of sweetpotato, 322 cassava, 388 yam, 303 taro, 35 arrowroot, and 51 yambean. Most of these accessions were maintained in the field and a few were maintained *in vitro*.

- NARC collected 20 additional abaca accessions from Leyte, So. Leyte and Bukidnon, making a total of 744 abaca accessions in its germplasm collection.
- NCRC-Visayas had 41 coconut accessions.
- ITE Forest Nursery collected 14 species of native trees.

SIGNIFICANCE OF COMPLETED RESEARCHES

- **Improvement of the Productivity of Abaca Grown Under Coconut with the Use of Leguminous Cover Crops**

Covercropping abaca with *Calopogonium muconoides* and *Desmodium ovalifolium* significantly increased the number and width of abaca leaves and produced longer and bigger stalks compared to other treatments. From 62 to 70 months after planting (MAP), abaca plants covercropped with *C. muconoides* and *D. ovalifolium* significantly produced higher fiber yields compared to abaca without covercrops and abaca plants covercropped with *C. muconoides* consistently produced the highest total fiber yields/hectare/year from 60-70 MAP. Moreover, yield of coconuts (64 and 67 MAP of abaca) was higher in plots with abaca and covercrops compared to coconuts alone.

At 61 and 67 MAP, plots covercropped with *D. ovalifolium* significantly produced the highest biomass. *C. muconoides* also produced significantly higher biomass compared to *C. pubescens* which was found to be very sensitive to shading.

Covercropping had no significant effect on the organic matter content of the soil. However, abaca plot with covercrops consistently showed higher %OM compared to control plot. Soil in plots covercropped with *D. ovalifolium* and *C. muconoides* had significantly higher total mass volume of stable aggregates at >2mm size fraction.

- **On-Farm Fertilizer Trials Using the Biological Fertilizer Scheme for Corn**

The experiment was conducted in two sites, namely: San Isidro, Sagbayan, Bohol and Union, Mahaplag, Leyte. In both sites, the results showed that the introduced biological fertilizers (Bio-N and Mykovam) could be used provided they would be combined with minimal amount of soluble inorganic fertilizers. In these trials, they were used with 45-30-30 kg N-P₂O₅-K₂O per hectare.

- **Characterization and Assessment of Agroecological Resources Utilization and Management in Corn Areas in San Isidro, Sagbayan, Bohol and Union, Mahaplag, Leyte**

Documentation of some parameters related to agroecological resources utilization and management was done. Soil resources were fully utilized by farmers in both sites. Corn production was usually done during rainy season because water was a problem during dry season. However,



NCRC-V coconut dehusker.



this problem was remedied by observing proper timing in the planting of corn. The farmers became aware of the advantage of using high yielding corn varieties and observed the suitability of some introduced technologies to their environment; hence, most of them adopted these corn varieties.

UPDATES OF ON-GOING R & D PROJECTS

- **Assessment of *in vitro* Growth Performance of Embryos of Three Different Coconut Types Using the COGENT Upgraded Protocol for Coconut Embryo Culture**

COGENT liquid medium (CP) and LSU's mY3 solid medium were used as *in vitro* germination media for 10-11 month old embryos from the three different coconut types, namely: Albuera Dwarf (ALD), Baybay Tall (BAY), and F2 Coconiño x Makapuno (CÑO x MAC). Germination rate of coconut embryos was generally higher in LSU mY3 solid medium with a mean of 90% germination across coconut types while the mean germination rate in COGENT medium was 63.6%.

Development of germinating embryos was also faster in mY3 solid medium and the embryos produced was generally normal. On the other hand, germination of embryos in COGENT medium was generally slow with a number of abnormalities like abnormal orientation of developing shoots and roots. Shoots sometimes did not develop fully when oriented sideward as these were suppressed by the test tube wall. Embryos germinating downward had both shoots and roots oriented in the same downward direction which caused problem during subculturing.

ALD and BAY coconut types were both normal in terms of meat endosperm characteristics but they had lower germination rates compared to hybrid makapuno. The three coconut types had higher germination rates in mY3 than in CP with the hybrid makapuno having 100% germination in the former medium.

- **Development and Commercialization of Makapuno-based Dried Food Products**

Laboratory experiments were conducted to develop makapuno-based dried food products using a solar tunnel dryer. Several products were developed using a mixture of makapuno meat with other crops, like cassava, sweet potato and pineapple. The procedures of producing the said products were established while preliminary results of the sensory evaluation indicated a promising results in terms of taste, color and aroma. As of this writing, a small scale laboratory dryer was being fabricated for use in the standardization of the drying process of the different products.

- **Field Testing of LSU-developed New Makapuno Genotypes**

Both VM₁ and VM₂ palms had good growth with mean leaf production of 4 in three months in all replications. The palms in replication I had more than 60 cm trunks while mean girth size was about 1.5 m in VM₂ and 1.3 in VM₁. Palms in Replications II and III were shorter with smaller girth sizes since they were younger than those in replication I.

Among the VM₁ palms, 84.4%, 34.6% and 15.4% were already flowering/bearing in replications I, II and III, respectively. Initial harvest produced 202 nuts from early bearing palms.

Few VM₂ palms had reached the flowering stage. In replications I and II, 44.8% and 10.1% of the palms, respectively, had flowered and 2 nuts were harvested while replication III palms were still in their juvenile stage.

Weight of dehusked makapuno nuts ranged from 500 to 1052g in VM₁ and 664-1014 in VM₂. One hundred seventy embryos from the said makapuno nuts were inoculated *in vitro* for seedling production.

- **Inventory of Commercially Important Invertebrates in Leyte and Samar**

Sixty-four (64) commercially important invertebrates were identified in 15 fishing grounds in Leyte and Samar. Approximately 89.4 tons per month of commercial invertebrates were harvested in both areas, in which blue crabs (*Portunus pelagicus*) contributed around 32.4 tons per month followed by cuttlefish (*Sepia sp.*) and squid at 12.5 and 12 tons per month, respectively. Among the fishing grounds, San Bernardino Strait and Samar Sea had the highest number of species (24) of commercial invertebrates, while Guiuan had the highest catch volume (17.7 tons/month). The most common species in public markets, coastal barangays and in fishing grounds were blue crabs and squid. Two species (the pen shell *Pinna sp.* and hammer shell *Malleus malleus*) were noted to be distinctly abundant in Western Samar, while the spider conch *Lambis lambis* was distinctly abundant in Eastern Samar. *Paphia textile* (nylon shell) was reported to be harvested year-round in Leyte-Leyte. The most threatened species were the blue crabs

(*P. pelagicus*) and ear abalone (*Haliotis asinina*) due to the presence of processing plants, destructive gear used and the presence of more traders. The most expensive invertebrates (up to PhP20,000/kg) were large cowries (*Cypraea* species). Also expensive were lobsters (*Panulirus* sp.), triton shell *Charonia tritonis* and ear abalones (*H. asinina*) with a price range of PhP176-275/kg. For the export market, the most expensive were sea cucumbers (*Holothuria* spp. & *Stichopus horrens*) (PhP310-375/kg), followed by *Panulirus* sp. (PhP275/kg) and abalone *H. asinina* (PhP245/kg).

Based on the overall ranking, the top most commercially important invertebrates in Leyte and Samar were *Portunus pelagicus*, *Haliotis asinina*, *Panulirus* sp., squid, *Holothuria* spp., *Sepia* sp., *Stichopus horrens*, *Trochus* spp., *Pinna* sp., *Paphia textile* and *Lambis lambis*. The chosen target species for detailed investigation were *Portunus pelagicus*, *Haliotis asinina*, *Paphia textile* and *Lambis lambis*. Field sampling sites for these target species were Guiuan (for *P. pelagicus*, *H. asinina* & *L. lambis*) and Biliran Strait (for *P. textile*).

The fishery monitoring sites for the four target species were Calbayog, Catbalogan, Guiuan, in Samar and Tacloban, Abuyog, Palompon, Carigara, Catmon, Leyte-Leyte, Ormoc, Bato, Maasin and Dawahon in Leyte.

Leyte and Samar can still boast of at least 64 species of marine invertebrates with local and export market value. Strongly exploited species such as abalones and blue crabs should be given more detailed investigation to find ways to sustainably exploit and manage them and prevent fishery collapse. Species with great potentials as food such as the nylon shell (*P. textile*), spider conch (*L. lambis*), the pen shell (*Pinna* sp.) and the scallop (*A. japonicum*) should be studied not only for sustainable management but also for enhanced marketing and product development.

- **Isolation and Chromatographic Separation of Fungitoxic Components from Selected Botanicals as Biocon Agents Against Major Fungal Pathogens of Rootcrops**

Antifungal components extracted from asyang, saluyot, ginger, ampalaya and olasiman were found to retard the growth and development of *Sclerotium rolfsii*, *Sphacetoma batatas* and *Xanthosomas manihotis*, the major fungal pathogens of rootcrops.

Phytochemical analysis showed that ampalaya, ginger and kamantigue contain flavonoid cardinolides and bufadienolides. Olasiman contains tannins and polyphenolic compounds. Ethylacetate dichloromethane (1:1) solvent system resulted in a good separation of bioactive components.



Marine resource assessment in Ambao Sanctuary at Hinunangan, So. Leyte.

- **Isolation and Evaluation of Bioactive Constituents from Selected Botanicals as Biofungicides Against Three-Fungal Pathogens of Rootcrops**

Selected botanical extracts were found to have either fungicidal and fungistatic properties and were able to inhibit or arrest the growth of *Botryodiplodia theobromae*, *Colletotricum gloeosporioides*, and *Phytophthora colocasiae*, the fungal pathogens of sweet potato, yam, and taro, respectively.

Toxicity test showed that asyang acetonetic and ethanolic extracts were mildly toxic to mice recorded in a 7-day observation period.

- **Nutritional Status and Fertilizer Needs Assessment of Selected Fruit Crops**

Developed a spraying schedule for insecticides/fungicides for the control of insect pests and prevention of fungal diseases to ensure setting and retention of mango fruits.

Introduced fruit bagging at 55-60 DAFI as a feasible and essential practice for the production of quality mango fruits and introduced multi-K (13-0-46) as a more potent flower inducer in mango. The project was able to establish an estimate on the cost and return of mango fruit production. Adoption of mango orchard owners of the refined mango flower induction and fruit management technology resulted in increased mango production of existing trees from practically nil to as much as 280-300 kg/tree from 10-12 years old and 1 ton/tree for 18 year-old trees. The project was able to convert idle marginalized lands into mango orchards. Some 300 hectares of new mango plantations were monitored in the last 5 years. Mango was included in the High Value Commercial Crop (HVCC) program especially in the plant now-pay-later scheme.

Introduced ethel for more uniform pineapple flower induction and as pre-harvest spray for uniform fruit ripening.

- **Performance Evaluation of Fruit Trees in Marginal Hillylands**

The most promising species of fruit trees under the acidic hillylands of Southwestern Leyte in their corresponding order were mango, mandarin, jackfruit, and rambutan, while for the marginal and calcareous conditions of Ormoc were mango, mandarin, jackfruit and lanzones.

- **Development of Tractor-Drawn Sweet Potato Harvester**

The project developed a tractor-drawn sweet potato harvester with the following features: cutting device - to cut the sweet potato vines, digger of the tubers, and lifter and conveyor. Initial results revealed that the cutting device could chop the vines at the top of the tuber but not those that run on the sides and the digging approach and suction angle had been optimized to minimize damaged tubers.



Tractor-drawn sweet potato harvester fabricated by the PhilRootcrops.



Processing center for Herbal Medicine at FCIC, Baybay, Leyte.

- **Improvement of the Processing of Medicinal Plants at the Franciscan College of Immaculate Conception (FCIC)**

A processing building for medicinal plants was being constructed as of this writing at the FCIC and the following processing equipment were fabricated: Lorena cooking stove, grater for ginger, mechanical cutter for leaves and bark of trees, presser for juice extraction from medicinal plants, and solar-biomass dryer for medicinal leaves. LSU, through the efforts of Dr. Roberto C. Guarte, assisted this project with funding from CAROLSINGERS' CAMPAIGN KINDERMISSIONSWERK* BDKJ, Aachen, Germany.

- **Development and Improvement of Post-Harvest Technologies for Abaca Processing for Village Use**

An improved NARC portable spindle stripper was developed with clutching system for safe removal of entangled abaca fiber and replaced leaf spring with coil spring for durability. Tests showed that the capacity slightly increased due to non-interference of operation when fibers tend to entangle with the spindle. Field testing was underway when this report was written.

COLLABORATIONS

LSU entered into memoranda of understanding/agreement with the following institutions:

- Jet B Agri Food International, Inc. (August 14, 2002) - on fruit food product processing wherein LSU's Department of Food Science and Technology (DFST) shall conduct contract research on the effects of preservative and sugar on the sensory and shelf-life characteristics of processed fruits, and provide the technology and skills in enterprising while the Jet B Agri Food International, Inc. shall make use of DFST's fruit processing technology and skills, develop the needed feasibility studies and production plans for the training and commercial operations of the DFST-developed fruit processing technology, and fund DFST's research and related expenditures.



MOA signing of the LSU-Jet B Agri Food International Inc. on research for fruit food product processing.

- Center for Agriculture in the Tropics and Subtropics of the University of Hohenheim (UH) and the Akademie Fur Natur-und Umweltschutz - on technical collaboration with the National Abaca Research Center (NARC).
- Haribon Foundation for the Conservation of Natural Resources - to use the rainforestation farming technology of the then ViSCA-GTZ Ecology Program (now Institute of Tropical Ecology of LSU) as model for its country-wide forest conservation drive.
- Lim-ao Integrated Farmers for Empowerment (LIFE) in Kananga, Leyte - to adopt the University's food processing technologies and tap its technical expertise on ginger powder and tea processing. Ginger powder (salabat) is a powdered, sugared extract from ginger used for making ginger drink, while ginger tea is a non-sugared drink from the powdered fiber residue.

ACQUISITIONS

- PhilRootcrops purchased electronic weighing scale, thermocouple sensor, 1 set Finn Micropipettes, 1 piece EPPENDORF Micropipette, 2 printers, 4 monitors, 2 CD Writers, 3 conditioners, 3 computer tables, and 2 complete set Pentium 3 computers.
- NARC purchased 1 unit each of generator, rotary shaker, lathe machine, fax machine, computer, abaca pulper, and handmade paper dryer and expanded its fabrication shop.
- NCRC-Visayas acquired through the support of DA-BAR and other agencies the following equipment: 1 unit each laminar flowhood, photomicroscope, analytical balance, top loading balance, magnetic stirrer, soil moisture tester, pipettors, autoclave, oxyacetylene with tanks, hose, gauges and accessories, digital weighing scale, table type circular saw, dual function tachometer, fast cutting Jig saw kit, 14" cut off saws, deep cut band saw, fat extractor, mechanical convection oven, datalogging vane thermoanemometer, modular homogenizer system, incubator, color meter, vacuum dessicator, Gauss Tesla meter, digital radiometer, analytical balance, digital vacuum gauge, Mitsubishi adventure, scanner, laser jet printer, overhead projector, automatic camera, 2 airconditioners, and 4 Pentium IV computers.
- FARMI purchased 1 set of computer and 2 printers.
- ITE acquired water pump and 6 culture tanks
- MMDC purchased CD writer, tripod with dolly, upper horizontal light, focusing light, spotlights, emergency lights, screen filter, hard disk, motherboard, video card, computer monitor, and new sets of curtains.



Some of the newly acquired NCRC-V equipment and facilities: Mitsubishi Adventure vehicle (top), autoclave (middle) and oxyacetylene accessories (bottom).

- The Geographic Information Service (GIS) of the Leyte State University received one unit HP DesignJet 500PS Printer/Plotter from the Department of Agriculture through its Bureau of Agricultural Research (DA-BAR). Other donations of DA-BAR to the university included 5 units of personal computer system.

TABLE 5. R AND D BUDGET, CY 2002

Funding Agency	Budget (P)
A. LSU-Funded (Direct Cost)	12,422,872.00
B. Locally-Funded	
DA-BAR	518,827.44
PCRDF	46,000.00
PHILRICE	325,860.00
CHED-ZRC	283,250.00
DENR-7	430,000.00
RHRDC-8	50,000.00
CIRDUP-DA	600,000.00
SUB-TOTAL	2,253,937.44
C. Foreign Funded	
TECHNOVA, INC., Japan	159,125.80
GSBS-NU	420,025.40
IFS	200,000.00
UPWARD	178,500.00
IPGRI	149,325.60
IRRI/BAR	50,000.00
ISAAA/PCARRD	80,000.00
IRRI	76,998.50
ACIAR	5,574,349.17
GTZ/EURONATURE	346,940.00
SUB-TOTAL	7,235,264.47
GRAND TOTAL	21,912,073.91

FIGURE 1. NO. OF R AND D PROJECTS/STUDIES BY DISCIPLINE, CY 2002

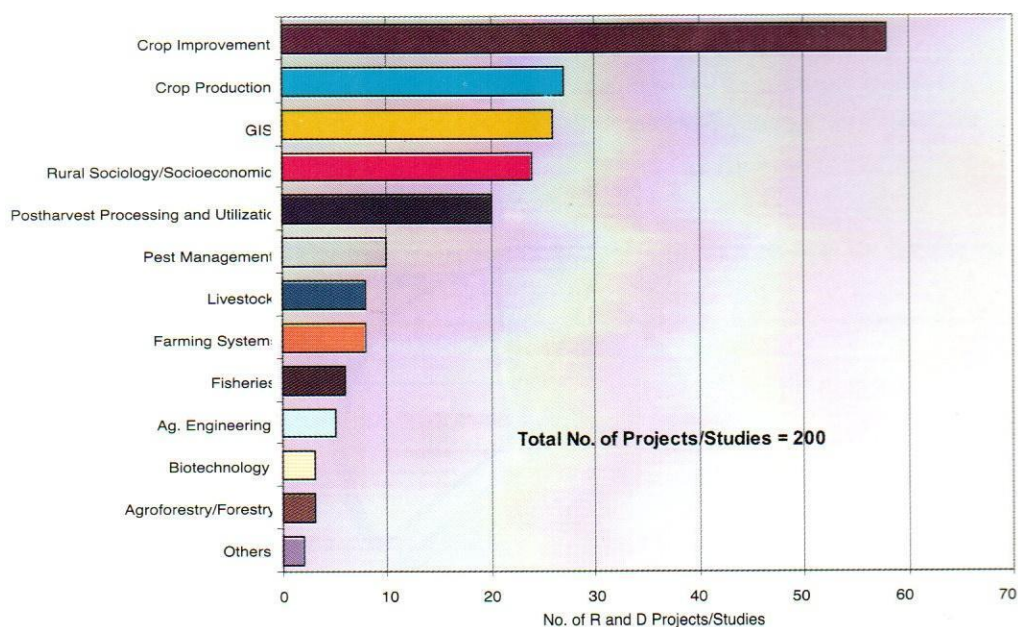


FIGURE 2. NO. OF R AND D PROJECTS/STUDIES BY COMMODITY, CY 2002

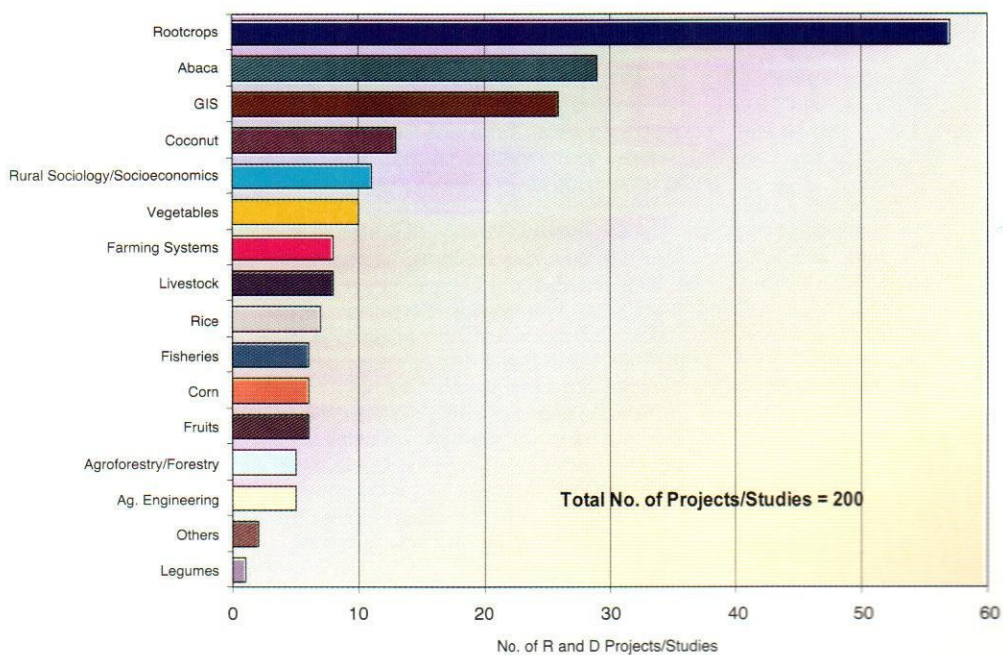
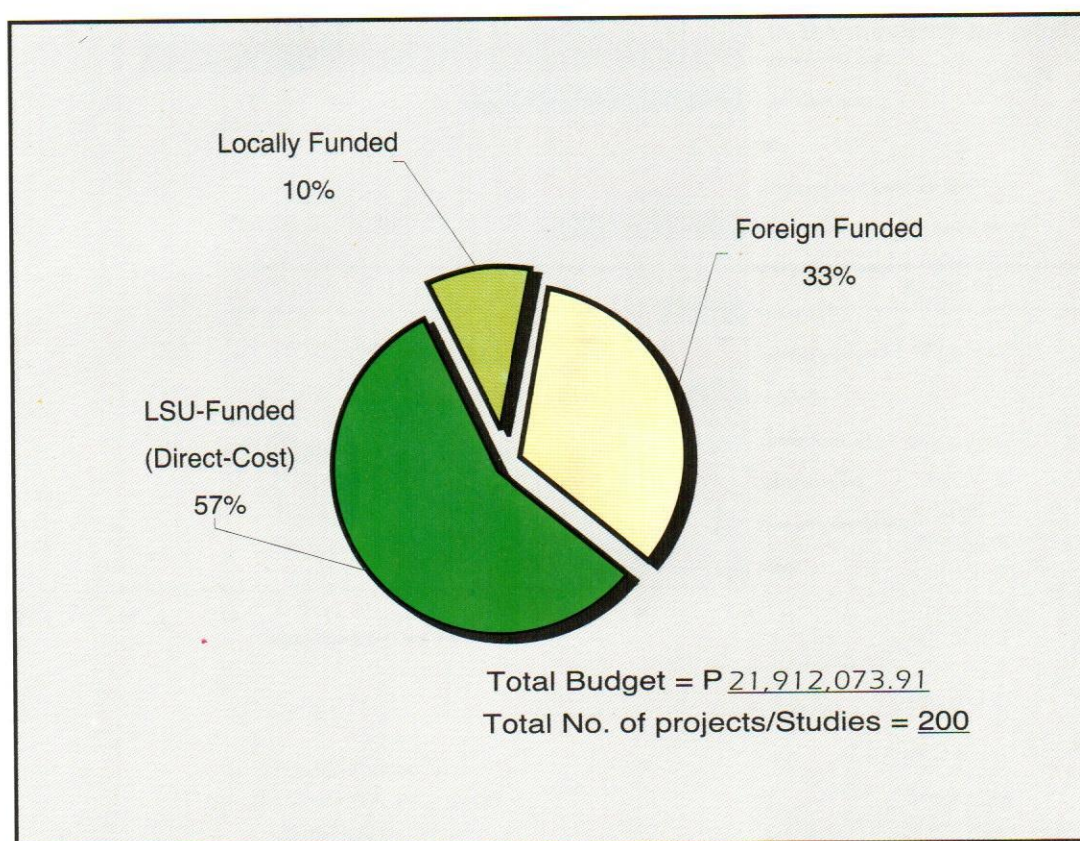


FIGURE 3. R AND D BUDGET, CY 2002



EXTENSION ACTIVITIES

TRAININGS

The different departments, colleges and centers conducted trainings, seminars, workshop, briefings to the different clienteles in their respective fields of specializations (Table 6).

TABLE 6. TRAININGS CONDUCTED/SERVICES RENDERED BY DEPARTMENTS/CENTERS, CY 2002

DEPT/CENTER	TITLE OF TRAINING	TYPE OF CLIENTELE	NUMBER OF PARTICIPANTS
PhilRoot-crops	Modernizing ubi production; ubi mini-sett propagation; rootcrop production, processing, utilization and enterprise development;	Farmers, house-wives, CARE staff, factory workers, LGU staff, DA employees	113
NARC	Nature and control/prevention of bugtok, bunchy top and mosaic diseases; abaca fiber production enhancement program; soil sampling, fertilizers and fertilization; farmers' field school on abaca production and pest management; project proposal preparation on abaca disease management; maintenance and operation of portable stripping machine; farmers' forum; briefings on various aspects of abaca	Farmers, students, teachers, LGU officials, technicians, pupils, businessmen, parents	854
NCRC-Visayas	Coconut/makapuno technologies, coconut production and processing, embryo culture	Farmers, students, instructors, youth, LGU officials, Gov't. employees,	356
FARMI	Forages for natural resource management, developing forage technologies, facilitators'/trainors' training, goat/fruit crop/mango production, agricultural researchers on OFR,	Farmers, LGU officials, entrepreneurs, Agricultural technicians	570
ITE	Fish catch monitoring, rainforestation farming, biodiversity assessment, nature trekking, environmental education, review project report and make recommendations, solid waste management, water analysis, open water diving	Students, Professors, LGU, MENRO, DENR staff, farmers	550
ISRDS	Trainors' training on GAD mainstreaming; strengthening the socioeconomic research capability of Region 7 RDE network; youth and sexuality, life skills; survey sampling for social science researchers; formulation of research design and implementation; action planning for OSY, high value commercial crops; learners' orientation program and individual learning; extension management; forum on war, women and violence, meetings of local consortium; entrepreneurship and business planning; engendering agricultural extension follow-up socio-economic capacity building	GAD core group, MAO & ATs, teacher, students, OSY, POs, NGOs, researchers, LGU officials, MSWD officers, managers, DepEd NFE coordinators, technologists, IMs, parents, AEFEP partners	730
MMDC	Audiovisual aids for classroom use, course syllabi preparation, poster making workshop, Power Point presentations, desktop publishing	LSU faculty/ staff, students	121

DEPT/CENTER	TITLE OF TRAINING	TYPE OF CLIENTELE	NUMBER OF PARTICIPANTS
DASS	Chemical safety for laboratory workers	Students	36
Department of Animal Science	Refresher course on livestock production, swine production and management, artificial insemination, breeding care & management of large ruminants housing pasture and feeding, swine breeding, feeding and housing of poultry, agri-entrepreneurship and functional education program	Farmers, hog raisers, agricultural technicians, extension agents of DA and LGU, out-of-school youth	620
Department of Development Communication	Desktop publishing; development of audio-visual aids for classroom use; report preparation and presentation; campus journalism; visual arts guild; training for teachers teaching seminar courses; on-farm research implementation	Students, faculty, pupils, extension workers, researchers, student artists	340
Dept. of Family and Consumer Sciences/ BIDANI	Advocacy; orientation on BIDANI concept, MTAC organogram and BIDA component; sectoral planning for BIDP and AIP on BIDANI strategy; BMIS orientation; technical back-stopping to Municipal/City Nutrition Council; participative domiciliary nutrition rehabilitation; improvement of INSUMIX and marketing	LGU staff, Barangay Council, mothers, children, SK members, BHW, midwives/nurses, barangay residents	2,570
Dept. of Genetic Resources & Plant Breeding	Seed selection, varietal improvement, corn breeding, agronomic characteristics of corn varieties, current trends in agri-based industries, farm scientist training	Marginal farmers, staff, students, LGU officials	360
Department of Horticulture	Ornamental/anthurium/rose/cutflower/organic vegetable/indoor plant production and management; bonsai culture	Housewives, youth, employees, teachers, growers, farmers and technician	787
Dept. of Business Management	Swine production & management; project proposal preparation; refresher course on livestock production and management; fruit and vegetable processing; entrepreneurship for CWTS-NSTP; entrepreneurship and business planning; enterprise development of Buray peanut brittle industry;	Entrepreneurs, coop members, farmers, students, technicians, OSY, producers/ traders	1170
Department of Economics	Capability building & management, desktop publishing for extension, team building and planning, review class	Graduates, DA personnel, government employees	135
Department of Food Science and Technology	Processing and development of ethnic food; meat processing; entrepreneurship development; ubi technology; fruits and vegetable processing; rootcrop processing and utilization; dairy processing; bakery and bakery enterprise; good manufacturing practices; cassava processing/ utilization	Farmers, extension workers, housewives, LGUs, extension trainers, ubi growers	166
College of Forestry	Soil & water conservation, upland farming, forest ecology, agroforestry, socio-economic research method, community resource management framework, smallholder forestry planning	Farmers, employees, faculty, research staff of DENR/PCARRD/ DA/LSU, LGU officials	269



Philippine Tarsier (*Tarsius syrichta*)
at Mt. Pangasugan, LSU campus.

NATURAL RESOURCE MANAGEMENT (NRM)

The Institute of Tropical Ecology (ITE) implemented the project on natural resource management which included the development of LSU as an Adventure Destination and Nature Park. Nearby barangays also benefited from this project through the rural enterprise development and enhancement of the capability of local stakeholders in managing and utilizing natural resources. The project had taken advantage of existing features of the park such as the tarsier sanctuary, arboretum, forest trees nursery, rainforestation farm, kakawate collection and Molave Hill. Other features incorporated in the project were the butterfly sanctuary, aviary, fernery, orchidarium, palm, valley, medicinal and pesticidal garden, duck lagoon, bromeliad kiosk, ornamental groove.

The Integrated Community-Based Coastal Zone Management for Silago Bay and two separate projects on Sustaining Local Management of Coastal Resources in Baybay and Cuatro Islas, Inopacan, Leyte were among the extension-cum-research projects which focused on strengthening the capacities of local people in conserving marine resources in northwestern Leyte waters. Livelihood activities were also pursued to provide additional income for the fisherfolks.

DISTRIBUTION OF PLANTING MATERIALS

Planting materials were produced and distributed by the following center/ departments of LSU to the different clientele at minimal cost in order to ensure continuous supply: NARC - 623 plantlets of Laylay abaca variety and 2,000 tissue-cultured plantlets; NCRC-V - 2,002 coconut seedlings of high-yielding cultivars, 20 tall homozygous makapuno seedlings, 486 banana suckers, 45 lemonsito seedlings, 50 rooted black pepper cuttings, and pineapple suckers; DASS - 67.75 kg corn, 59.5 kg upland rice, and 43.25 kg mungo; DGRPB - 1 ton of ViSCA Maize Var 2; DOH - 21.28 kg vegetable seeds; 1,991 grafted mangoes, durian, rambutan, santol, and avocado; 486 marcotted zsyncum lemonsito and tambis; 915 mango seedlings; and 50 seedlings of plantation crop.

FABRICATION OF PROCESSING MACHINES

NARC fabricated and distributed 7 portable abaca spindle stripping machines to farmers and entrepreneurs in Regions 8 and 10.

FLOWER AND GARDEN SHOWS

The Department of Horticulture organized the Annual LSU Flower and Garden Show and co-sponsored city and municipal flower and garden shows including those of Tacloban City and Baybay, Leyte.



Winning entries in the flower arrangement and garden landscape contests during the Flower and Garden Show.



EXHIBITS

Aside from maintaining the LSU-Main Campus Stationary Exhibits at the RDE Building, the following centers and department put up several off-campus agro-industrial fairs and exhibits in Alangalang, Baybay, Inopacan, Mahaplag, Leyte, Tacloban City, UPLB, and Manila: NCRC-V - 5; NARC - 5; PhilRootcrops - 8; DFST - 2. PhilRootcrops and DFST likewise displayed their products in some nationwide exhibits in Manila and UP Los Baños, Laguna.

DISTRIBUTION OF COMMUNICATION MATERIALS

About 50 different kinds of communication materials such as leaflets, brochures, technoguides and pamphlets were produced and distributed by the various departments and centers of LSU:

- DASS distributed to farmers the Cebuano version of the following pamphlets: Corn Production - 183 copies; Rice Production - 120 copies; Mungo Production - 174 copies; Peanut Production - 68 copies; Soybean Production - 48 copies; and Soil Sample Collection - 96 copies.
- DDC, through its major students and in cooperation with subject matter specialists from departments and centers, produced 25 leaflets on production of rootcrop-based food products, insect control, new varieties of rootcrops, cultural management practices of some vegetables and fruit production.

- DOH distributed the following leaflets, handouts, brochures and training guides: Ornamental Production (dendrobium, heliconia, gerberas, mums, orchid) - 365 copies; Anthurium Production - 90 copies; Rose Production - 60 copies; Cebuano version of Vegetable Production - 470 copies; and Fruit Production - 200 copies.
- ITE produced leaflets/brochures for Nature Trek, Tarsier Post Card, MPIDP and revised the ITE Brochure.
- NCRC-V produced five different leaflets on coconut and distributed a total of 135 reading materials on coconut.
- PhilRootcrops produced one leaflet on ubi production.

LABORATORY ANALYSIS FOR SOILS AND PLANT SAMPLES

DASS analyzed 603 soil samples, 272 plant samples, 7 organic materials and 1 water sample which were submitted by students, researchers, farmers, private individuals and firms and non-government organizations.

TECHNICAL ASSISTANCE

The following units of the University provided extension services to the different clientele:

- PhilRootcrops assisted in the commercialization of ubi enterprise, processing of ubi food products, root crop production and established a yam demo farm.
- NARC assisted farmers in abaca production, pest control/waste utilization, and postharvest processing of abaca.
- NCRC-V assisted farmers of Brgy. Ciabu, Monterico, Mapgap, and Zacarito in Baybay, Leyte and of Brgy. Balugo, Capoocan, Leyte on coconut production, processing and coconut-based farming systems. It also helped ARC beneficiaries in Brgy. Ciabu for the development of a sustainable coconut-based production and processing enterprises in cluster production scheme.
- FARMI collaborated with FSP, ICRAF-Visayas and CBRMP in conducting a series of trainings in forages for natural resource management in Leyte and Cebu sites.
- ISRDS assisted the Southern Leyte Provincial Abaca Development Council and SOBA & VimCon, Inc. in the formulation/preparation of integrated project proposals; trainors' training on Gender Mainstreaming for the Tomas Oppus National College core group; capability building activities for the different barangays within the vicinity of LSU.
- ITE conducted ecological monitoring of the sanctuaries in three islands of Cuatro Islas facing Inopacan and Hindang Leyte, and Pangasugan marine sanctuary; conducted an assessment of the deployed FADS in Gabas and Guadalupe; and made a simple environmental education module and community dialogue.



Dr. R.M. Gapasin, Bantay Alkoheres Project Leader, explaining to abaca farmers the effects of pests and diseases on abaca production.

- MMDC assisted development communication students in the production of development drama, developmental video, power point presentations; and assisted faculty in the design/development of the information brochure and power point presentations for seminars.
- BIDANI provided technical backstopping/facilitation to Municipal/City Nutrition Councils (M/CNC) regarding their action plan as well as strengthened partnership with LGUs in the implementation of health and nutrition project through the PDNR approach; implementation of barangay development plans, BMIS and PDNR; preparation of Annual Investment Plan (AIP); anti-drug campaign; day care program; marketing and delivery of Nutripak as well as registration of Nutripak stakeholder's association at the Department of Labor and Employment (DOLE); strengthened the MTAC & BC in the implementation of BIDANI strategy; and assisted one barangay in Albuera acquire water system facilities by linking them to a non-governmental organization.
- DASS analyzed soil and plant tissue samples submitted by farmers, students and researchers and provided soil fertilizer recommendation based on soil analyses.
- DAS assisted farmers, hog raisers and other clientele in livestock/swine production and management and artificial insemination of swine.
- DBM assisted farmers in project proposal preparation.
- DDC trained communicators/faculty, and DAR employees on desktop publishing, development of audiovisual aids, and campus journalism.
- DFST assisted farmers and housewives in processing and development of ethnic food, fruits/vegetables, root crop and meat/dairy processing.
- DOEconomics assisted farmers' organizations and entrepreneurs on farm record keeping for effective enterprise management.
- DOH assisted farmers, housewives and other clientele in ornamental production and management, cutflower cultivation, and vegetable/fruit trees production.
- DPM, through the Pest Clinic, responded to farmers' problems especially in the control of rice black bugs and the Natural History Museum served as show window for the various collection of flora and fauna of Mt. Pangasugan and elsewhere.
- The College of Forestry provided technical support to the municipality of Isabel on the rehabilitation of its watershed, technical support and consultation in the form of training to LGU-Javier, LGU-Inopacan, and FPE-supported people's organization in Paranas, Samar called KAPPAS, Inc.; and training on human resource knowledge and skills to the Forest Protection, Nursery and Plantation, and Extension Sections of the Environment Management Division of PNOC, Tongonan, Kananga, Leyte.



Native trees of the ITE Forest Nursery.

TECHNOLOGY/FARM DEMONSTRATION

Efforts were made by the different units of the university to establish techno-demo farms on various crops such as fruit trees, vegetables, abaca, yam, rice and others as show window on production technologies developed by the institution. These farms are located in some towns in Leyte and So. Leyte, in Ormoc City and in the LSU-Main campus.

- A total of twelve on-farm demonstration farms in the different parts of Leyte, of which 11 were on fruit crops and one on plantation crops were identified by the Department of Horticulture.
- The College of Forestry maintained the off-campus tree farm demonstration plots in Isabel, Inopacan, and Ormoc, Leyte in partnership with farmers and LGU personnel and through the ACIAR-funded research project.
- The College of Forestry nursery continued to function as source of planting materials for LGUs, farmers, private individuals, and government and non-government organizations in the region and nearby areas.
- The LSU-Main Campus agroforestry demonstration farm served as show-window for visiting farmers and field technicians.
- The Institute of Tropical Ecology rainforestation demonstration farm served as show case of performance of native tree species and biodiversity.

UPDATES OF EXTENSION PROJECTS

• **Integrated Abaca Extension Program**

The project carried out the following activities: information caravan regarding awareness of abaca disease called bunchy top in Brgy. Hilaan, Bontoc, So. Leyte; participated in the public hearing on the establishment of an abaca pulp processing plant in Brgy. Hilapnitan,

Baybay, Leyte; consultation with private abaca processors on the abaca fiber quality requirement; trainings on production and pest management; participating in 6 invitational agri-industrial fairs and exhibits; fabricating 5 units of portable spindle stripper for farmer-cooperatives and private sector; disposed 483 seedpieces of planting materials for research purposes and 240 seedpieces for abaca plantation in Hilapnitan, Baybay, Leyte; re-established the demonstration farm at the waterwheel area; conducting 32 briefings to 516 visitors comprising students, farmers, field technicians, GO/NGO employees, farmer-cooperatives, and rural women; visiting and monitoring established abaca areas in Calubian, Leyte and abaca nursery using tissue-cultured planting materials in Dolores, Ormoc; disease surveillance and control in abaca plantations at PNOC, Ormoc; and hands-on training on bag-making to Japanese students.

- **Development and Testing of an Integrated Approach on the Control of Gastrointestinal Parasites in Small Ruminants: Participatory Diagnosis in the Philippines**

The project came up with a training manual for farmers and technicians on goat health and management and a Farmer Field School Guide on goat health management, which was pre-tested in Balungao, Pangasinan. In all trainings, the farmer-cooperators were involved either as trainers or presentors of testimonies/experiences.

Fecal and blood sampling was continued until June 2002. Trainings to strengthen and prepare the LGU and farmer-groups for the phase out of the project were also conducted. Two LGUs were going into goat dispersal and improvement program.

- **Forages for Smallholder Project**

A total of 30 farmers in Leyte planted forages, 40 farmers in Bohol started planting forages, and 400 farmers in Cebu established forages in their farms. In all three provinces, the forages were established mainly as contour hedgerows.

A series of trainings on forages for natural resource management were conducted for farmers in Tabango, Hindang, Baybay, and Inopacan, Leyte sites as well as in Cebu and Bohol sites, which were financed collaboratively by FSP, ICRAF-Visayas and CBRMP.

- **Pest Clinic**

In order to serve its clientele better, the Department of Pest Management added in its Pest Clinic component a Mobile Pest Clinic. With the change in focus, faculty involved in extension activity will have the chance to meet farmers in the field and see the problem in the real situation.

This year's activities included: gave lectures to farmers regarding the biology, ecology and control of rice black bugs which caused so much

problem to farmers in their rice production; had farm visits to assess damage and recommend strategies to get rid of black bug problem; conducted farm visits to Ormoc City and Albuera, Leyte in response to the request of DA Ormoc for assistance to solve the problem of one farmer and to collaborate with LGU in the implementation of the Mobile Pest Clinic, respectively; conducted short lecture on the management of vegetable pests to farmers of Macrohon, So. Leyte; assisted researchers and DA staff in the identification of pest species infesting their crops and the possible solutions to the problem; and trained DA staff from Ormoc in the production of substrate for mass culture of *Metarrhizium anisopliae*, a fungus used for rice black bug control.

- **Natural History Museum**

The Museum maintained its collections of live and preserved animals and plants. At present it has a number of live animals like various species of fish, bird, a Bantam chicken, and a python. In 2002, the museum accommodated 6,081 visitors who were mostly students from different schools in Leyte and Southern Leyte.

- **Field Crop and Soil Management Extension Program**

A total of 603 soil and 272 plant tissue samples submitted by farmers, students and researchers were analyzed and seven soil fertilizer recommendations based on soil analysis were issued to farmers. During the LSU anniversary, seeds of some cereals and legumes and pamphlets on the production of some crops and soil sample collection were given free to the farmers.

- **Barangay Integrated Development Approach for Nutrition Improvement (BIDANI)**

The project accomplished the following: integration/operationalization of Municipal Technical Action Committee (MTAC) structure and function as functional machinery in the implementation of development programs in two municipalities; municipal-wide adoption of PDNR or "Sagop Bata" approach in focused municipality; operationalization of sectoral planning involving different sector/committee in coming up with the Barangay Integrated Development Plan (BIDP) and Annual Investment Plan (AIP); adoption of sanitary hygienic practices in the production of Nutripak by stakeholders; facilitated the registration of one Nutripak Stakeholders' Association at DOLE; facilitated the increased use of the Nutripak by the local government for their supplementary feeding program; Nutripak production project provided supplementary income to stakeholders; facilitated the acquisition of water system facilities to one barangay through linkage with a non-government association - Christian Service International; and encouraged more vigorous participation of mothers/women in barangay activities.



The Natural History Museum at the Department of Pest Management.



Mothers giving their children the first serving of the pre-formulated food supplement — Nutripak, to enhance children's growth.

- **Horticulture for Environment and Livelihood Promotion (HELP)**



Training of rural women on rootcrop and vegetable processing.

The extension program included commodity crops, vegetables, fruits, and ornamentals. The program served over 1,600 beneficiaries in the form of trainings, non-formal lectures, cross visits, and on-station and on-farm demonstration farms. The beneficiaries were farmers, rural women, students and government officials and employees.

The strategies adopted in the implementation of the projects were the following: establishment of crop propagation nurseries to serve as laboratory for hands-on training as well as source of planting materials for distribution to farmers; training of farmer leaders and APTs linked to DA and local government units; establishment of demonstration areas; and production of training guides, brochures and pamphlets.

COLLABORATIONS

LSU entered into memoranda of understanding agreement with the following institutions:

- MOA on Coastal Resource Protection and Conservation (CRPC) among six (6) coastal municipalities of the fifth district of Leyte (Baybay, Bato, Hilongos, Hindang, Inopacan, and Matalom) for the protection and conservation of marine and fishery resources of the area.
- National Irrigation Administration (NIA) Region 8 in providing NIA clientele and personnel the necessary training assistance on food processing and marketing strategies.
- The Metrobank Foundation donated P 52,800 in support of the Agri-Entrepreneurship Functional Education Program (AEFEP), an extension project of the Institute for Strategic Research and Development Studies (ISRDS) of LSU.



The donation of Metrobank Foundation to the Agri-Entrepreneurship Functional Education Program (AEFEP) of LSU's Institute for Strategic Research and Development Studies (ISRDS).

OFFICE OF THE PRESIDENT

The Office of the President (OP) supervised the overall program operation of the University System and budget use.

1. The offices under the **Assistant to the President for Corporate Planning and Income Generation** organized and accomplished the following activities and reports.
 - a. The **Planning Office** consolidated the annual accomplishment reports of the different units of the university; updated and published Volume 1 of LSU Five-Year Development Plan 2002-2006; prepared the 2001 Annual Report; updated the Facts and Figures; and assisted various University committees.
 - b. The **Internal Control Unit** reviewed and audited VEFI Coconut Project; verified IGP monthly reports; conducted personnel audit at the College of Fisheries, Tolosa Campus; witnessed the inventory taking of IGP projects and the Procurement Office, public bidding of equipment and supplies, auction sale proceedings and disposal of waste materials and unserviceable properties of LSU.
 - c. The **Income Generating Projects Office** monitored the operation and performance of university projects classified as RF-IGP and Non-RF which generated a gross income of P 7.3 million which was 4% higher than the whole year operation of CY 2001; facilitated a Seminar Workshop on Plan and Budget Proposal Preparation and Commercial Accounting System for IGP managers; repaired the damaged fixtures and facilities of the different market stalls; facilitated the collection of rentals of concessionaires in the market and fast food center; and conducted periodic meetings with project managers and concessionaires.
 - **Printing Press** - printed 344,244 copies of student/laboratory manuals, LSU publications and souvenir programs, and generated a gross income of P 699,323.20.
 - **Hostel** - facilitated the completion of the construction of a native design Hostel Coffee and Souvenir Shoppe, concreting of Hostel landmark, and replacement of rusted door and changed of window grills into a French design; replaced wood tile flooring and rusted roof; repainted walls and ceilings of the lounge and lobby area; and repaired electrical wiring and some facilities, and generated a gross income of P 1,026,593.98.
 - **Guest House and Pavilion** - facilitated the repair of the Pavilion-counter, doors and windows, floor tiles, kitchen and stockroom; and repaired the doors and windows as well as put *baliw* mat in the ceiling of the Guest House. It generated a gross income of P 3,253,853.25.

2. The **Office of the University Secretary (OUS)** facilitated and took minutes of 7 Board of Regents, 10 Administrative Council, and 4 University Academic Council meetings.
 - a. The **Information Office** published and distributed 34 issues of the LSU Obelisk - a weekly publication and 2 issues of the LSU Gazette; prepared a popular leaflet promoting LSU and its programs in capsule form; wrote, edited and facilitated publication of the LSU Annual Report; attended to 103 campus visit requests; tour guided 7,064 visitors; produced and distributed copies of Office and Personnel Phonelink; edited the LSU Facts and Figures and five-year development plan; helped prepare documents required by higher offices/agencies; attended to requests of the Office of the LSU President; facilitated/organized the preparation of programs/souvenir programs of the University; facilitated the collection of campus maintenance fee from visitors for campus sanitation and upkeep; and coordinated/assisted various University committees.
3. The **Legal Office** facilitated the termination of two cases and dismissal of one case and provided secretarial services to the LSU BOR and other committees.

OFFICE OF THE VICE PRESIDENT FOR ACADEMIC AFFAIRS (OVPAAs)

With the conversion of the Visayas State College of Agriculture (ViSCA) into the Leyte State University (LSU) and the creation of six colleges in the Main Campus gave additional scope of responsibilities to the Office of the Vice President for Academic Affairs (OVPAAs). OVPAAs supervised the six colleges in the Main Campus, four external campuses, Library, Office of the Curriculum and Instructional Materials Development, Office of the Director of Accreditation and Evaluation, Office of the Graduate School, Office of Student Affairs, Open University, Admissions Office, and Registrar's Office. It accomplished the following: facilitated the approval of the modification in the composition of the University Academic Council (UAC), supervised the preparation of requested information/data by some government agencies, initiated the establishment of an accreditation display center for Forestry, Engineering and Veterinary Medicine and coordinated the selection and attendance of faculty and student participants to international conferences, exchange program, application for graduate scholarship program.

1. The **Office of Curriculum and Instructional Materials Development (OCIMD)** reviewed new and revised curricular offerings of the different units for endorsement to the University Academic Council; prepared the proposed revised Guidelines for LSU Fellowship/Scholarship Program; reviewed and endorsed applications of faculty for scholarship for graduate studies and attendance to trainings/seminars/workshop; assisted the Academic Personnel Board in formulating an effective staff development program; approved permits to give examination or move

class outside of regular schedule and application for request for change of curriculum; and recommended requests for offering of unscheduled subjects and overloading; and chaired/assisted various University committees.

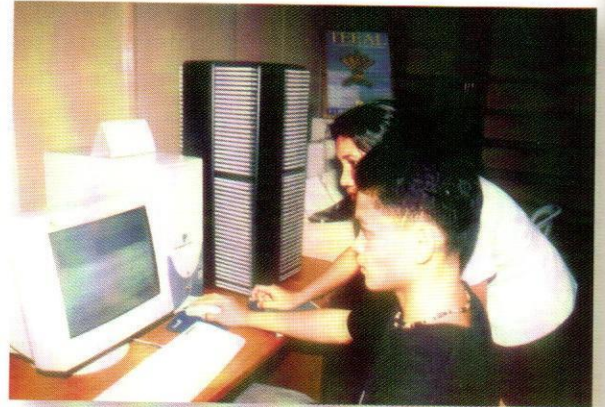
2. The **Office of the Director for Accreditation and Evaluation (ODAE)** reviewed the workload distribution and performance targets of LSU faculty members including those in external campuses; monitored and reviewed workload of part-time teachers, affiliate staff and Graduate Teaching Assistants (GTA); coordinated with proper offices in processing recommendations for faculty recruitment, development and promotion and students' evaluation of teaching performance of faculty; conducted seminar workshop on accreditation; put up an accreditation display for three resource centers: Forestry, Engineering and Veterinary Medicine; and chaired/assisted various University committees.
3. The **Office of Student Affairs (OSA)** administered and interpreted psychological tests for 1,037 students of the LSU-Main Campus and external campuses for purposes of counseling, vocational guidance, admission/readmission, research, etc.; recognized 61 student organizations and coordinated 670 student activities; managed 21 student dormitories and cottages of the University, accommodated 4,767 students (51.6%) for the whole year (1st & 2nd semesters and Summer), supervised the repairs and fabrication of dormitory fixtures, and generated a gross income of P2,009,771.05 from rental of dormitories and cottages; facilitated the increase of stipend of the full/university scholars per month and presented awards to 293 honor students and six student organizations during the 23rd Honors and Awards Convocation; facilitated the following programs with their respective number of student beneficiaries: Student Assistantship - 897; student insurance with expanded coverage to include faculty and parents - 2 students, 1 faculty and 1 parent; and the ViSCASELF Loan - 85 students; and supervised the use of Student Lounge and Recreation Center where 1,160 and 16,962 students, respectively, were able to use the said facilities.
4. The **University Library** received a total of 2,290 print and non-print materials which included 1,761 books, 108 serials, 21 VHS tapes, 37 CD-ROMs, 5 VCD, 10 statistical diskettes, 326 theses/dissertations/case studies/special problem, and 22 terminal reports/training manuals; continued the implementation of the 54 hours library services for the academic community to fully maximize use of the resources of the library; spearheaded LSU's celebration of the National Book Week with contests for students in all levels (college, high school and elementary) on on-the-spot poster making, quiz bowl, and story reading. Other activities included film showing on how to use The Essential Electronic Agricultural Library (TEEAL) and how to search on the existing database "CATALO"; launched a Computer Literature Services Section which provides services in searching for information in electronic format;



Zandro O. Perez, Vice-president of the Tau Gamma Phi Fraternity/Sorority, received the certificate as 1st place Organization of the Year Awards during the 23rd Honors and Awards Convocation.



Library staff strive to automate learning materials and systematize library operations (left) and the use of TEEAL or the "library in a box" (right).



published two issues of *New Acquisitions*, a list of newly-acquired materials; and received donations from the Rotary Club of Makati through Mr. Mike Zosa, International Association for Young Children Foundation and International Student Foundation of USA, Dr. Yoshikane Kawasaki of the Department of Applied Chemistry, Osaka Institute of Technology, Japan through Dr. Alice Acabal, and De La Salle University through Ms. William San Andres Frias, an ERHS alumna.

5. The **Office of the University Registrar** started the computerization of registration and students records using the new software; monitored 4,522 incomplete grades; verified records/deficiencies (8,817 requests); and evaluated/updated 5,200 records/checklists of students.
6. Colleges of the University
 - a. The **College of Agriculture** is composed of seven academic departments and one research institute, namely: Department of Animal Science (DAS), Department of Agronomy and Soil Science (DASS), Department of Development Communication (DDC), Department of Family and Consumer Science (DFCS), Department of Horticulture (DOH), Department of Genetic Resources and Plant Breeding (DGRP), Department of Pest Management (DPM), and Institute for Strategic Research and Development Studies (ISRDS). It actively pursued its role in the university's trilogy of functions; critically looked into the curricular offerings to make them more relevant to the changing needs and demands for professionals in agriculture and related fields; sent its faculty to trainings, seminars, workshops, symposiums, etc. to keep them abreast with the development in their respective fields; the faculty were involved in research on various commodities and disciplines and garnered awards in various competitions either local, regional, national and international levels; the faculty played active role in disseminating technologies to various clientele through their extension activities; and it received the Center of Excellence Award in Agriculture from CHED which enabled the College to upgrade its facilities and library holdings.

- b. The **College of Arts and Sciences** is composed of four departments and one research institute: Department of Biological Sciences (DBS), Department of Liberal Arts and Behavioral Sciences (DLABS), Department of Mathematics, Physics and Statistics (DMPS), Department of Pure and Applied Chemistry (DPAC), and Institute of Tropical Ecology (ITE). It continued to offer existing curricular programs, revised some programs to meet the needs of employers and to conform with mandated courses required by CHED, proposed new courses in the graduate and undergraduate programs, and offered new courses; sent faculty to attend trainings and seminars; and sponsored a cultural dance to highlight the Chemistry week celebration.
- c. The **College of Education** is composed of two departments and one laboratory high school: Department of Science Education (DSE), Department of Community Development Education (DCDE), and LSU-Laboratory High School (LSULHS). It continued to offer its existing curricular offerings in the secondary, graduate program including the Saturday classes which were conducted in LSU Alang-alang Campus and offered two new degree courses in the undergraduate program; conducted review classes for the Licensure Examination for Teachers; sent faculty to attend trainings to upgrade them professionally; and celebrated the Education Week.
- d. The **College of Engineering and Agri-Industries** is composed of five departments: Department of Agricultural Engineering (DAE), Department of Business Management (DBM), Department of Economics (DOE), Department of Computer Science and Technology (DCST), and Department of Food Science and Technology (DFST). It continued to offer the existing programs, revised some curricula and offered new programs; sent faculty to attend trainings and seminars to update their knowledge professionally. The DAE was a recipient of the Center of Excellence Performance Award in Agricultural Engineering which enabled them to acquire equipment and books and repair/improvement of classroom/facilities
- e. The **College of Forestry** is composed of two departments: Department of Forest and Wildlife Management and Conservation (DFWMC) and Department of Agroforestry (DAF). Its graduates performed well in the Forestry Licensure Examination which give LSU an honor as the Second Best Forestry School in the country; was awarded Center of Excellence in Forestry by CHED; forged agreement with the University of Gottingen, Germany regarding a joint-Master of Science in Forestry degree program offering and with the John Alright Scholarship program through the Australian Centre for International Agricultural Research (ACIAR) and the University of Queensland; created a support program for undergraduate and graduate research for forestry students through the partnership with ACIAR and University of Queensland; acquired

support for attendance of faculty members to trainings in agroforestry in both local and abroad and up-to-date teaching materials like books, journals, videos and CDs; procured modern equipment and instrument for instructional purposes through the Center of Excellence Support of CHED.

- f. The **College of Veterinary Medicine** is composed of two departments: Department of Para-Clinical Sciences (DPCS) and Department of Veterinary Basic Sciences (DVBS). It prepared for the accreditation with the Technical Panel for Agriculture (TPAE) in Veterinary Medicine and Accrediting Agency for Chartered Colleges and Universities in the Philippines, Inc. (AACCUP); revised the six-year straight Doctor of Veterinary Medicine curriculum; sent faculty staff to attend trainings and seminars here and abroad; and established linkage with foreign research funding agencies.
- g. The **College of Agri-Industrial Technology** is located at Isabel, Leyte. It acquired new books, athletic equipment and laboratory facilities; offered two new courses together with the old course offerings; and strengthened faculty through attendance to trainings and seminars.
- h. The **College of Education And Agricultural Technology** is located at Villaba, Leyte. It implemented programs in accordance with administrative policies and requirements; maximized the utilization of available resources; increased the number of scholars to poor but deserving students; celebrated its 42nd anniversary as an institution; and strengthened its faculty and staff development program.
- i. The **College of Environmental and Agricultural Technology** is located at Alang-alang, Leyte. It offered two new courses in education and continued the existing curricula; created a task force to prepare a proposal for a new course in environmental management; graduates passed the Licensure Exam for Teachers with 64.7% institutional passing percentage; sent faculty to attend trainings and seminars; and held its 31st founding anniversary.
- j. The **College of Fisheries** is located at Tolosa, Leyte. It finalized a proposal to mass produce canned tuna for funding; prepared a proposal to clear one compartment of the brackish fish pond for stocking of bangus; conducted a workshop on syllabus preparation; and sent faculty and staff to attend seminar-workshops.

OFFICE OF THE VICE PRESIDENT FOR ADMINISTRATION AND FINANCE (OVPAF)

The Office of the Vice President for Administration and Finance (OVPAF) coordinated resource utilization of the University, sustained linkages with fund sources, maintained functional committees to improve service delivery system, and monitored the actual condition of basic facilities.

1. The **Office of the Director of Administration (ODA)** initiated the Security Guards' Orientation and Values Workshop and Team Building Workshops for PPO personnel, staff of LSU-Main and Tolosa Campus, and LSU-Main and Alangalang, Isabel and Villaba campuses; and proposed the conduct of a Supervisory Development Course Track I for the new batch of middle level managers.
 - a. The **Cash Division** increased the collection of University income by more than 100% as compared to the previous year; disbursed 100% of Notice of Cash Allocation (NCA) released; computerized the collection of income, student account records and preparation of reports; and introduced a system to avoid overcrowding during enrolment.
 - b. The **Human Resource Management Office (HRMO)** facilitated the renewal of 77 temporary, 73 academic and 4 non-academic personnel; facilitated the upgrading/reclassification of 46 and promoted 3 administrative staff; and changed status of 4 academic staff from lump sum to plantilla item and 2 temporary to permanent.
 - c. The **Infirmary** served the University constituents and the neighboring barangays by conducting seminars; had a quarterly inspection of 22 dormitories and 20 food establishments; and served the students, faculty/staff and their dependents and outsiders on the following services: consultation - 4,700; physical examination - 4,435; immunization - 245; dental services - 783; other services - 2,185; and laboratory examination - 783.
 - d. The **Physical Plant Office** facilitated the construction of one marine hut (beach house), 5 units garage and LSU Bakery; repaired ROTC building, laboratory/classrooms of DoPAC, DGRP, COF; renovated the space at the second floor of the old Administration building for the Procurement Office; fabricated furniture/fixtures for the different offices of LSU; facilitated the preparation of technical plans and specifications of proposed projects; maintained underground primary cable lines, cleared all primary and secondary overhead lines at the lower campus, and repaired/installed electrical wires/fixtures/electric poles; repaired water main line and installed tensioning across the Calbigaa river; attended to requests for repairs of water and sewer lines; reconditioned school bus, Hi-Ace, ambulance, and jeeps; attended to 250 requests for minor and under chassis repairs, 98 welding and 155 lathe works; and engine overhauling/repainting and body repair of vehicles.
 - e. The **Property Office** devised methods and formulated policies/procedures to ensure long serviceability of equipment and supplies and new numbering system on property/equipment per department/center/office; conducted ocular inspection and physical inventory of equipment and buildings of external campuses and



Dr. L.B. Cano oriented the participants from the LSU-Main and External Campuses during the teambuilding workshop.



Congressman Antonio Eduardo B. Nachura as the keynote speaker during the 78th Founding Anniversary Convocation of LSU on August 11, 2002.



Miss Joanne L. Daquipil and her court during the Miss LSU Pageant.



Participants of the International Seminar-Workshop on Tropical Ecology.

Congressman Antonio Eduardo B. Nachura served as the keynote speaker during the LSU 78th founding anniversary and 1st anniversary as a state university on August 11, 2002. He urged LSU to reach out to his constituents in Samar by extending its services and sharing its agricultural technologies and innovations with the people there.

Miss Joanne L. Daquipil was crowned Miss LSU 2002 on August 10 with **Miss Charmaine A. Calingacion**, 1st runner up; **Miss Vanessa C. Cator**, 2nd runner up; **Miss Em C. Oybenes**, 3rd runner up; and **Miss Karen Ivie C. Tan**, 4th runner up.

LSU accorded awards to the following individuals during its 78th Founding Anniversary Convocation Program on August 11:

- **Mr. Vertillano Relevo III** - *Entrepreneurship Award*
- **Prof. Fe L. Mantua, Mr. Pablito T. Galenzoga and Mr. Teodoro Z. Palaña** - *Mt. Pangasugan Award*, "for their faithful and dedicated service to the University."
- **Prof. Ruben B. Mercado** (Posthumous) - *Special Award*

The Best Booth winners on the different booth categories during the 78th Founding Anniversary were the following:

- LSU Student Organizations Group - **Catholic Youth United for Truth**
- LSU R & E Centers Group - **National Coconut Research Center for the Visayas**
- LSU College and External Campuses Group - **College of Engineering and Agri-Industries**
- Non-LSU and Private Companies Groups - **Municipal Agriculturist Office of Baybay**

The Cultural Center of the Philippines (CCP) through the Ballet Philippines performed a ballet presentation dubbed "SHOES" at the LSU Gymnatorium on August 15, 2002 which showcased an array of dances based on various kinds of footwear from toe shoes to sneakers, bakya and flippers.

LSU through the Institute of Tropical Ecology in cooperation with the University of Hohenheim in Stuttgart Germany and the Martin Luther University in Halle, Germany hosted and coordinated the 9th International Seminar-Workshop on Tropical Ecology held from August 26 to September 7, 2002 with 18 participants consisting of college students and faculty members from Germany, Sri Lanka, and Philippines.



Winning booths during the Farmers' Field Day.



The Department of Pure and Applied Chemistry sponsored the cultural presentations of DANHANI "a glimpse of the past" and assisted a CCP Ballet Presentation dubbed as "SHOES".

The Department of Pest Management improved its "Butterfly Garden" with the help of DPM alumni, staff and major students and constructed a new landmark in line with the change of its name.

The Department of Animal Science managed the ViFARD Piggery Project with 29 sow-level; acquired TPR chickens, breeding buck and ram, and boar and gilts from the Department of Agriculture; established range facilities for range chickens; and repair of layer and broiler houses.

Awards Received by Faculty & Staff

Name of Award	Recipient	Agency	Date
<u>INTERNATIONAL LEVEL</u>			
St. Andrew's Prize for Environment 2002	Dr. Monina M. Escalada and Dr. K. L. Heong	St. Andrews, Scotland	May 9, 2002
<u>NATIONAL LEVEL</u>			
Manuel V. Quisumbing Award for Outstanding Contribution to Postharvest Research and Extension	Dr. Antonio L. Acedo, Jr.	PHTRC	Nov. 12, 2002
AFMA Best R and D Paper Award	Dr. Antonio L. Acedo, Jr.	DA-BAR	Nov. 26, 2002
Pest Management Award for Outstanding Contribution as a Scientist and as Administrator	Dr. Ruben M. Gapasin	PMCP	May 10, 2002
Best Paper Award in Plant Pathology and Best Poster Award	Dr. Lucia M. Borines	PPS	May 10, 2002
Most Outstanding Entomologist in the Academe Award (Instar III)	Dr. Lina T. Villacarlos	PAE	May 10, 2002
Plaque of Recognition as Thesis Adviser	Dr. Lualhati M. Noriel	WSSP	May 10, 2002
Achievement Award in Research Management	Dr. Lelita R. Gonzal	CSSP	April 25, 2002
Best Paper Award	Prof. Lolito C. Bestil	PSAS	Oct. 23-25, 2002
Most Outstanding Paper Award (Unpublished Category) and Poster Award (2 nd place)	Dr. Lucia M. Borines	DA-BAR	Nov. 26, 2002
DA Secretary's Award, BAR Director's Award and AFMA Best R & D Paper Award	Dr. Canesio D. Predo	DA-BAR	Nov. 26, 2002
<u>REGIONAL LEVEL</u>			
Regional Pantas Award for Science & Research Category	Dr. Ruben M. Gapasin	VICARP	Aug. 29, 2002
Outstanding Applied Research	Dr. Bernardita P. Germano Ms. Senona A. Cesar Analyn M. Mazo Jenny Lynn F. Melgo	VICARP	Aug. 29, 2002
Best Poster (1 st Prize)	Dr. Jose L. Bacusmo Mr. Enrique B. Abogadie	VICARP	Aug. 29, 2002



Dr. Ruben M. Gapasin showing his Regional Pantas Award plaque.



Some of the awardees: Dr. Dolores L. Alcober - Academician of the Year Award (left) and Dr. Nelen P. Lambert - Best Unit Head Award (right).

Name of Award	Recipient	Agency	Date
Best Poster (2 nd Prize)	Dr. Jose L. Bacusmo Mr. Ulysses A. Cagasan Mr. Enrique B. Abogadie Mr. Federico B. Godoy, Jr.	VICARP	Aug. 29, 2002
Best Poster (3 rd Prize)	Mr. Algerico M. Mariscal Mr. Reynaldo V. Bergantin Ms. Anita D. Troyo	VICARP	Aug. 29, 2002
Certificate of Recognition as Research Adviser of High School Students, Intel Regional Science Fair Competition	Prof. Tessie C. Nuñez - 1 st Dr. Lualhati M. Noriel - 2 nd Dr. Candelario L. Calibo - 2 nd	DOST	Dec. 16, 2002
<u>INSTITUTIONAL LEVEL</u>			
Academician of the Year	Dr. Dolores L. Alcober	LSU	Aug. 11, 2002
Exemplary Researcher Award	Dr. Jose R. Pardales, Jr.	LSU	Aug. 11, 2002
Exemplary Teacher Award	Prof. Editha G. Cagasan	LSU	Aug. 11, 2002
Best Unit Head Award	Dr. Nelen P. Lambert	LSU	Aug. 11, 2002
Best Research Assistant Award	Ms. Victoria G. Palermo	LSU	Aug. 11, 2002
Best Clerk Award	Ms. Miriam M. de la Torre	LSU	Aug. 11, 2002
Best Laboratory Aide	Mr. Arnulfo M. Almeroda	LSU	Aug. 11, 2002
Best Driver Award	Mr. Manuel E. Comon	LSU	Aug. 11, 2002
Best Utility Worker Award	Mr. Armando M. Pabon	LSU	Aug. 11, 2002
Certificate of Recognition as Research Adviser of High School Students, Local Science Fair	Prof. Tessie C. Nuñez - 1 st Dr. Lualhati M. Noriel - 2 nd Dr. Candelario L. Calibo - 3 rd	LSULHS	Feb. 5, 2002
Model Employee Award	Mr. Leonilo S. Melchor	LSU-Alang-alang Campus	Sept. 4, 2002
Service Award	Obdulio R. Masendo	LSU-Alang-alang Campus	Sept. 4, 2002
Citation for Research Initiative	Lilibeth G. Miralles	LSU-Alang-alang Campus	Sept. 4, 2002



Mr. Leonilo S. Melchor as recipient of the Model Employee Award during the 31st Foundation Day of the LSU-Alangalang Campus.

Publications Authored by Faculty Members & Researchers

Author	Title	Where Published
Bergantin, R. V., A Yamauchi, J. Pardales, Jr. and D. Bolatete, Jr., 2002	Varietal Response of Cassava (<i>Manihot esculenta</i> Crantz) to Water Shortage at Early Vegetative Stage	Phil. J. Crop Sci. 27(i):3
Jahn, R., H. P. Blume, and Asio, V. A., 2002	Students Guide for Soil Description, Soil Classification and Soil Evaluation	Halle, Germany, 65pp
Noriel, L. M., 2001	Borreria G. Mey. In: Van Valkenburg, J. L. C. H. and Bunyaphatsara, N. (Editors):	Plant Resources of South-East Asia No. 12 (2) Medicinal and Poisonous Plants 2
Palomar, M. K., Y. C. Mangaoang, V. G. Palermo, and G. M. Edurise, 1999	Evaluation of Culture Media and Production of <i>Phytophthora colocasiae</i> L. and Control of Taro Blight Using Fungal Antagonists	Phil. Phytopath. 35:7-16. (Printed in 1999 but released only in 2002)
Tan, D. L. S., K. Miyamoto, K. Ishibashi, K. Matsuda and T. Satow, 2002	Comparative Analysis in the Processing of Sweet-potato Flour from Chips and from Grates. In: Proceedings of the First International Conference of Sweetpotato: Food and Health for the Future in Lima, Peru, July 26-29, 2001	Acta Horticulturae No. 583, pp 211-221
Tulin, E. E., Onoda, N., Hasegawa, M., Nosaka, T., Nomura, H., and Kitamura, T., 2002	Genetic Approach and Phenotype-based Complementation Screening for Identification of Stromal Cell-Derived Proteins Involved in Cell Proliferation	Exp. Cell Res. 272 (1): 23-31
Tulin, E. E., A. B. Tulin, and S. Ejiri., 2001	Cell-free Synthesis of Tachyplesin, an Antimicrobial Peptide from <i>Tachypleus tridentatus</i>	ATR Vol. 23, No. 2, pp. 18-33
Tulin, E. E., 2001	Effective Production of Recombinant Esterase in <i>Bacillus brevis</i> Using pH-Controlled Fed-Bath Culture	ATR Vol. 23, No. 2, pp. 1-17

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