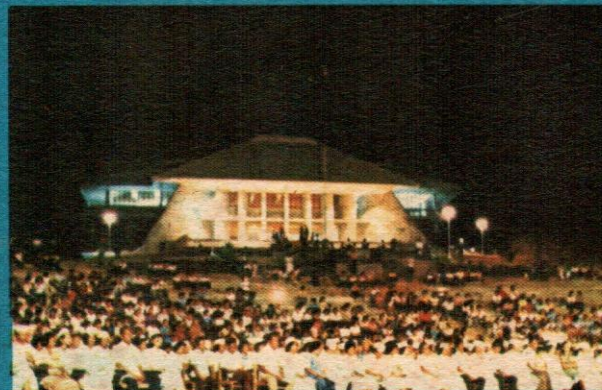
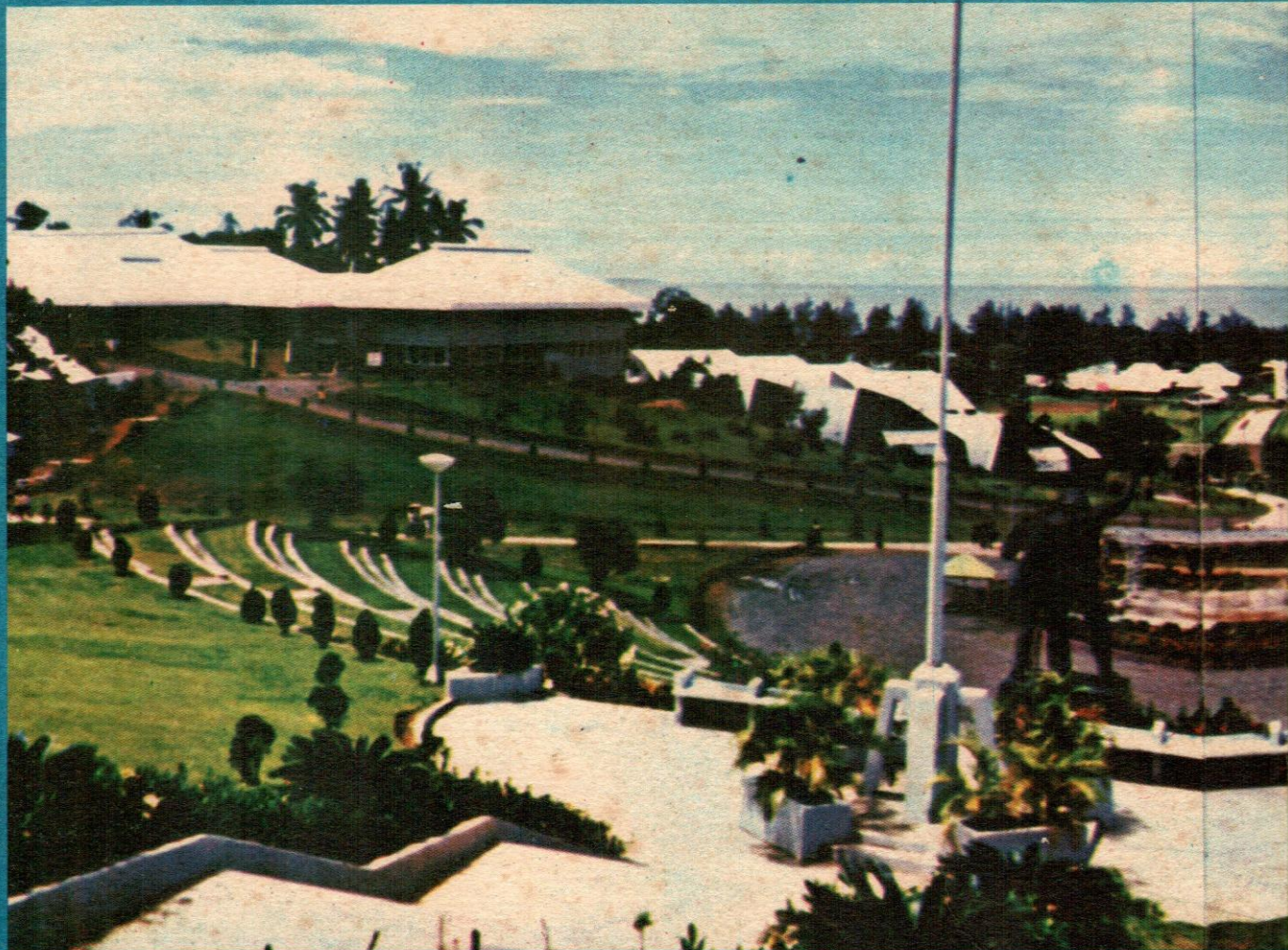


MOVING TOWARDS
EXCELLENCE
IN INSTRUCTION,
RESEARCH, AND EXTENSION
FOR AGRICULTURAL
AND RURAL DEVELOPMENT

1983 ANNUAL REPORT



VISAYAS STATE COLLEGE OF AGRICULTURE
Baybay, Leyte Republic of the Philippines



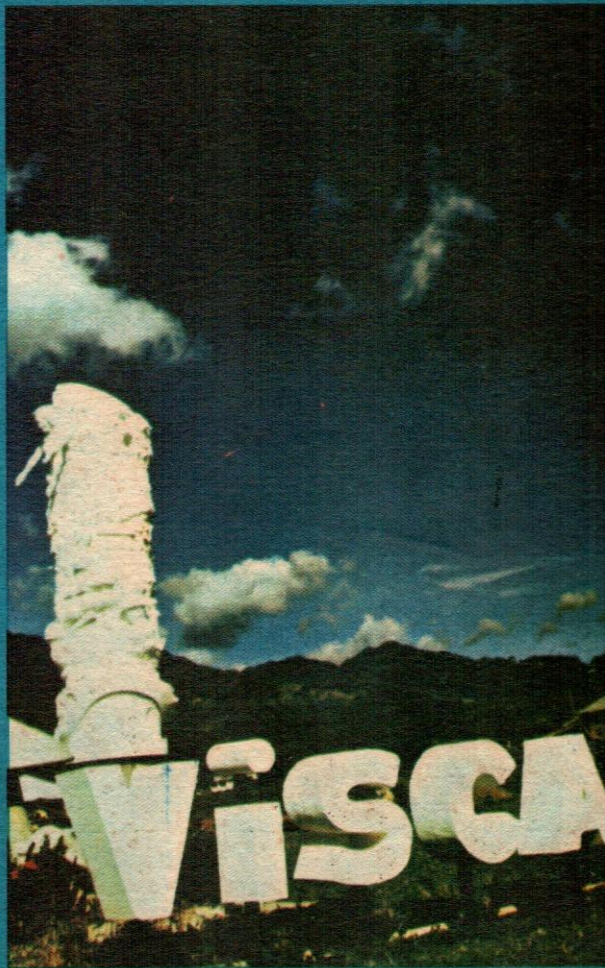
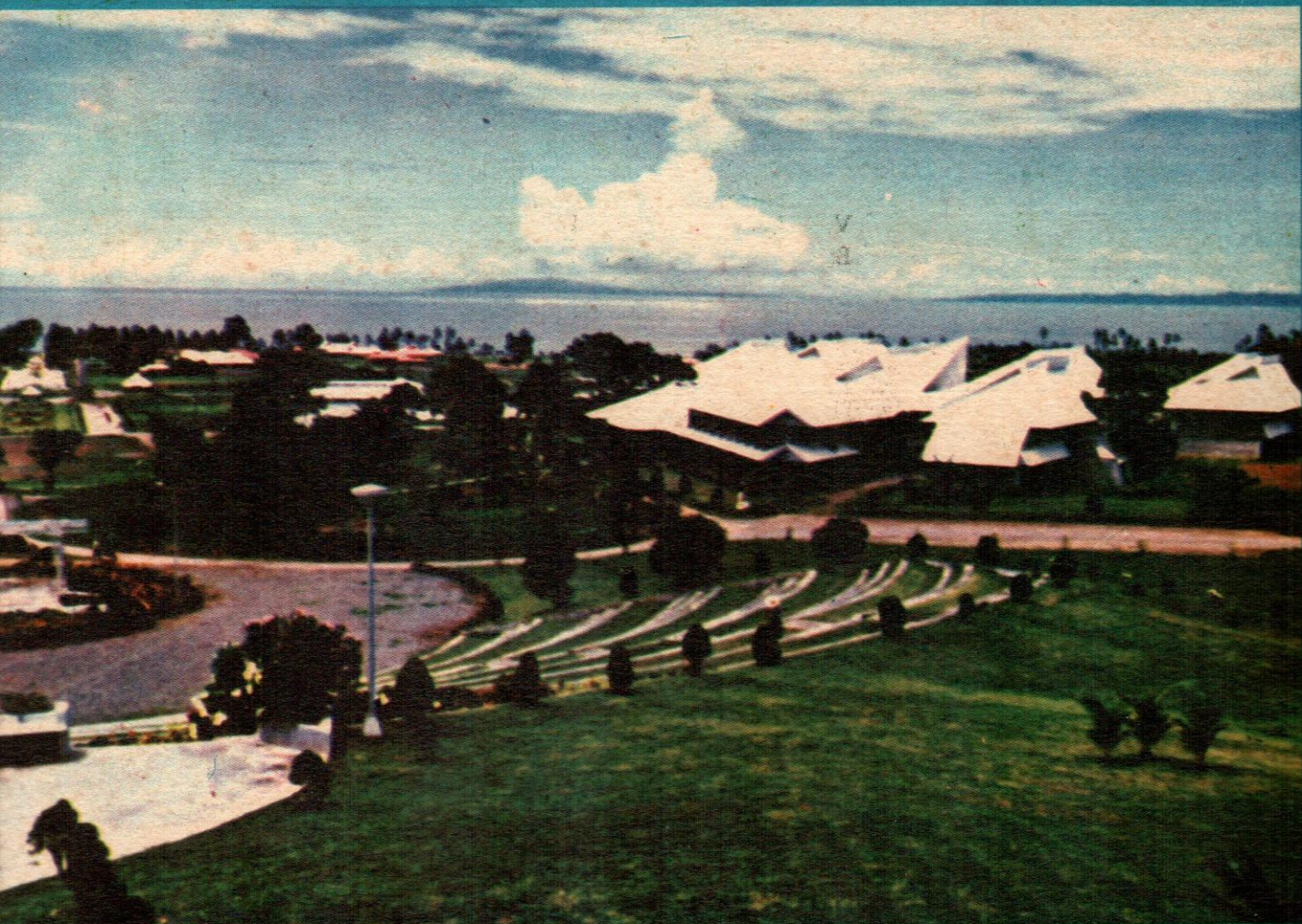
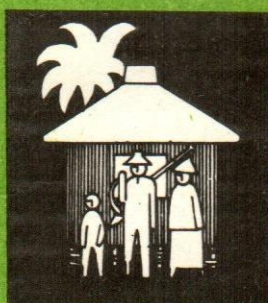


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VISAYAS STATE COLLEGE OF AGRICULTURE

Baybay, Leyte 7127
Philippines

OFFICE OF THE PRESIDENT

October 1, 1984

Hon. Jaime C. Laya
Chairman, ViSCA Board of Trustees and
Minister of Education, Culture and Sports
Metro Manila

Sir:

I wish to submit to you and the members of the Board of Trustees of the Visayas State College of Agriculture the Annual Report of the College for Calendar Year 1983 in compliance with the Department Memorandum Circular No. 55, series of 1978 of the Ministry of Education, Culture and Sports.

Very truly yours,


F. A. BERNARDO
President



Calendar Year 1983: In Retrospect

EXECUTIVE SUMMARY

Nineteen-hundred and eighty-three marks the 9th year of ViSCA's existence as a chartered state college of agriculture — nine years of frenzied activity and bold ascent from obscurity into a premier agricultural college committed to enhance the

quality of life of the small Visayan farmers.

Year 1983 unfolds meaningful achievements of the Visayas State College of Agriculture. Despite the economic pressures besetting the country, which tend to decelerate

college operations, further development on campus has been evidently marked by the continuous growth in the number and quality of staff members, the rising of more buildings, the acquisition of additional facilities, and the expansion of equally vital instructional, research and extension programs. These endeavors make ViSCA today the fastest growing institution of higher learning in agriculture in the country. In short, the year in review accords a pretty good year for ViSCA as it spans another significant milestone in its quest for excellence in rural and agricultural development. ViSCA's 1983 accomplishments as the regional agricultural college (RAC) for the entire Visayas are highlighted as follows:

Graduate and undergraduate programs refined and expanded

As a result of ViSCA's continuing assessment of its curricular offerings in relation to the needs of the region,



a new graduate degree program leading to the degree of Master of Agricultural Development (M. Ag. Dev.) was implemented by the college in SY 1983-84. This new program which was actually a revision of the Master of Agricultural Development Education (MADE), covers at present six major fields: Agricultural Education, Agricultural Extension, Plant Protection, Entomology, Plant Pathology, and Agronomy. Also, three major fields in the bachelor's degree program were laid open by the academic staff for revision to become separate degree programs. These include the recension of the BSADE major in Development Communication into Bachelor of Science in Development Communication, BSA major in Agricultural Chemistry into Bachelor of Science in Agricultural Chemistry, and BSHE major in Food Science into Bachelor of Science in Food Science. However, the approval of such revisions, while still being subjected to further review, has

been withheld to make sure that the training of students would truly reflect the needs of the region.

Extramural program for masteral studies initiated

To increase the accessibility of graduate education to staff members of schools and other agencies in the region whose employees may not be able to leave their respective stations to pursue advanced degrees, ViSCA initiated activities for the implementation of an extramural studies program under the New Zealand Bilateral Aid Programme to the Philippines. This innovative program is a distance learning approach which utilizes the facilities of mass media for instructional purposes, thus allowing a student to take up graduate courses at ViSCA without necessarily leaving his job.

Library materials collection boosted

Responding to the growing needs of the ViSCA academic community,

the library expanded its collection through the acquisition of more learning tools in the form of books, journals, and audio visuals. In 1983, the ViSCA library collection received a boost with the \$200,000 grant from the Farming Systems Development Project for Eastern Visayas (FSDP-EV) to purchase books and subscribe to journals relevant to farming systems development. Added to this was another grant of ₱188,000 from the National Science and Technology Authority (NSTA), enabling ViSCA to acquire about 180 titles of books on physics, chemistry, statistics, biology, and computer science. As of December 1983, the ViSCA library has a total collection of 34,296 volumes of books, periodicals, serials, theses, and dissertations.

Student enrolment increased

While most agricultural state colleges and universities in the country have reported a decline in student admission to agricultural courses,



ViSCA has increased its student population in both tertiary (graduate and undergraduate) and secondary programs. In the first semester of SY 1983-84, a total of 2,111 students were enrolled or a growth of 12.0 percent from the enrolment figure of 1,885 students of the same term in the previous year. This increase was attributed to a selective but democratic student admission at ViSCA which allowed financially needy but deserving students the opportunity to pursue college education. The expansion of the graduate degrees and offerings also contributed to the increase of student enrolment.

Outstanding crop of graduates produced

Since the conversion of ViSCA into a state college, it has continually produced outstanding graduates. In SY 1983-84, a total of 17 students graduated with high academic honors: 16 **cum laudes** and 1 **summa cum laude**. In addition, forty graduates (93.0 passing percentage) in the Bachelor of Science in Agricultural Engineering successfully passed the licensure board examination given by the Professional Regulation Commission (PRC) in Manila. Of the top ten placers released by the PRC, five of the examinees are ViSCA graduates copping the 2nd 4th, 5th, and 7th places. Moreover, the graduation of the 6 second batch of graduate students in the Master of Science in Agricultural Development Education (MSADE) and the Master of Agricultural Development Education (MADE) has added significance to the 1983 output of ViSCA's instructional program.

Student financial assistance program expanded

To help lighten the financial bur-

den of the students, ViSCA continued expanding its financial assistance program to poor but deserving students in the region. For the year 1983, a total of 926 students or 43.9 percent of the total student population were recipients of the various scholarships and grants-in-aid programs sponsored by ViSCA and other government and private agencies/organizations. The beneficiaries also include the teachers of agricultural schools and extension workers of government agencies in the region who are taking graduate studies in ViSCA.

Student involvement in institution building increased

Worthy of mention among the accomplishments of the college in the area of student development are the advances made in motivating students to participate actively in institution building. Student leaders and a good number of upper classmen demonstrated signs of growing maturity through their interest and desire to participate in resolving student problems and discussing issues of national concern. Student organizations, with the support of the Office of Student Affairs, conducted trainings in topics of self-awareness and growth, leadership, and a series of lectures and symposia on values.

Staff technical competence strengthened

Aside from its wide ranging and quality curricular programs, academic excellence in ViSCA can also be gauged by its highly-trained faculty and staff members. Towards the end of 1983, thirty-nine staff members reinforced the total work force of the college. Thirteen of them (4 with Ph.D. degrees and 9 with Master's degrees) were returning scholars

while twenty-six (2 with Ph.D. degrees, 4 with Master's degrees, and 20 with B.S. degrees) were new recruits. As of December 1983, ViSCA has a total of 284 academic teaching and non-teaching staff, 45 of which are holders of doctorate degrees, 121 with masteral degrees, and 118 with B.S. degrees.

More funding agencies for staff development tapped

In an effort to continuously upgrade the academic and technical competence of the staff, fellowship, scholarships, and short-term training program were always made available to the staff by tapping more local and international funding agencies. As of December 1983, a total of 12 agencies were supporters of ViSCA's staff development program. Local sources include the Philippine Council for Agriculture and Resources Research and Development (PCARRD), National Science and Technology Authority (NSTA), Philippine Developmental Scholarship Program (PDSP), and the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA). Foreign benefactors, on the other hand, comprise the Agricultural Development Council (ADC); the Asian Institute of Technology (AIT) of Bangkok, Thailand; Colombo Plan of Australia; Massey University of New Zealand; International Development Research Center (IDRC) of Canada; the Japanese Society for the Promotion of Science (JSPS) of Japan; the University of Idaho of Idaho, USA; and the Farming Systems Development Project for Eastern Visayas (FSDP-EV) with support from the United States Agency for International Development (USAID). With these, a total of 66 staff members were on graduate studies pursuing either doctoral or



masteral degrees, not to mention those who were sent for short-term training sponsored by some of the aforementioned agencies.

Faculty and staff participation in short-term training intensified

Participation of ViSCA administrators, teachers, and scientists/researchers in regional, national, and international conferences and study tours intensified in 1983. This participation consisted of paper presentation, training, observation, and finalization of agreements on institutional linkages. The staff attended short-term trainings conducted not only within the country but also abroad such as the AAACU seminar-workshop at Kuala Lumpur, Malaysia; study tour and training at CIMMYT in Mexico; educational trip and training at Massey University in New Zealand; short-term training at Instituto de Ciencia y Tecnologia in Agricolas, Guatemala; observation trips at the Indian Council of Agricultural Research in India; international symposium at the Netherlands; observation trip and training at Costa Rica and Hawaii; training-workshop at Kasetsart University in Bangkok, Thailand; conference workshop at Nairobi Kenya; and short-term training at Tropical Products Institute in United Kingdom.

Faculty and staff involvement in college governance enhanced

Faculty and staff participation in college governance manifested itself in the free discussion of issues and problems that helped in the formulation of pertinent policies and guidelines. In 1983, a series of conferences and consultations among the administration, faculty members, and other em-

ployees were conducted as a distinct mark of sharing management thus, underscoring each specific function and responsibility together with the desired rights and privileges. Such staff activity also enhances the mission of the college towards achieving the goal of rural and agricultural development.

Budget for research increased

The 1983 budget for research was more than doubled compared to that of 1982, due to the success of the Philippine Root Crop Research and Training Center (PRCRTC) in obtaining a separate Key Budgetary Inclusion (KBI) in the 1983 Appropriation Act. The launching of the FSDP-EV, whose support comes from the National Economic and Development Authority (NEDA) and from the United States Agency for International Development (USAID), also augmented ViSCA's research funds.

College research and development program accelerated

With more funds available for research plus the return of scholars and the recruitment of additional manpower, ViSCA accelerated its research activities in various areas of disciplines and commodities. In 1983, the significant output of the three research centers and academic departments of the college are as follows:

Philippine Root Crop Research and Training Center (PRCRTC)

- * Building up of germplasm collection for use in crop improvement program which now consists of 2,295 accessions; 823 sweet potato, 438 cassava, 653 yam, 375 taro, and 6 pongapong,
- * Production and development of technologies for extending the usefulness and availability of quality root crops in the market

throughout the year.

- * Production of root crop-based soy sauce and root crop flour as substitute for wheat flour.
- * Production of cassava/sweet potato-based delicacies, including the so-called Delicious S.P., a product that resembles and tastes like dried slices of mango which offers a tremendous market potential.
- * Fabrication and demonstration of the use of solar dryer for root crops and coconut with technical assistance of visiting staff from the University of Idaho.
- * Development of farm tools and equipment such as convertible plows, fertilizer applicator, and cassava lifters and diggers. These have been tested in the farmer's field.

Regional Coconut Research Center (RCRC)

- * Establishment of a laboratory for embryo and tissue culture to accelerate progress in coconut improvement.
- * Identification of two dwarf x tall hybrids to be included in the multilocation trials in cooperation with PCARRD, PCA, and IIA. These crosses are Camotes x Baybay Tall and Tacunan x Baybay Tall. It should be noted that based on PCA trials conducted in Zamboanga, the Baybay Tall coconut variety proved to be the best high-yielding local variety. A report of PCA also showed that ViSCA is now conducting about one-third of coconut research in the country in various areas of discipline such as in breeding and genetics, multiple cropping, physiology, tissue culture and biochemistry, agronomy and soils, and by-product utilization for fuel.
- * Implementation of a community-based rural development program with support from the Philippine



Coconut Research and Development Foundation (PCRDF). This project involves the mobilization of local people and local resources in coconut areas to achieve economic progress. Various aspects of the coconut industry, including processing and utilization of products and marketing are included. Intercropping is also incorporated in the project to provide additional income to the farmers.

Center for Social Research in Small-Farmer Development (CSR-SFD)

- * Conduct of sociological and economic studies on various fields that could improve family living and community development.
- * Evaluation of socio-economic projects, including the assessment of KKK projects implementation in Eastern Visayas.
- * Conduct of ethnographic studies on the effects of social intervention and planned change in rural communities.
- * Implementation of a pilot project on participatory research on upland farming systems in Land Bank estates in San Isidro, Leyte in cooperation with the Ministry of Agriculture and the Land Bank of the Philippines.

Academic/Technical Departments

- * Implementation of 124 research studies, 19 of which were completed in 1983 and 105 are still ongoing. The areas of research cover varietal improvement, cultural management practices, farming systems, crop protection, resources utilization and management, processing techniques, design and development of farm tools and equipment, and socio-economics.
- * Development of new root crop-based snack items which are now ready for piloting. These include binagol, yema, fudge, cookies, and dehydrated sweet potato.

- * Implementation of a long-term varietal improvement program on corn, abaca, and root crops. As a result of this concentrated effort, three new sweet potato varieties, namely; VSP-1, VSP-2, and VSP-3 were approved and released by the Philippine Seed Board for farmer's use.
- * Establishment and operation of the ViSCA Feed Mill which specializes in the formulation of root crop-based commercial animal feed.

Extension and community development program intensified

Extension and community development continued to be ViSCA's concern in 1983. In order to have an effective way of delivering useful information emanating from research and to cover a wide variety of clientele, ViSCA focused on non-formal education, technical assistance, and information dissemination. The important achievements along these lines are the following:

- * Conduct of 18 non-formal trainings geared towards gaining or improving skills in agricultural production and other economic productivity of the target clientele.
- * Distribution of planting materials of approved sweet potato varieties, fruit trees, and vegetables to farmers, researchers, and extension workers.
- * Establishment of field trials of various commodities to serve as demonstration plots under farmer's field condition.
- * Dispersal of 25 female breeder cattle and 17 goats under its Animal Dispersal Program.
- * Implementation of Plant Protection Clinic which diagnoses pest problems and prescribes control measures.

- * Dissemination of information through the production and distribution of technoguides, bulletins, leaflets, and farm news to farmers, farmer-leaders, researchers, extension workers, agriculture teachers, and to mass media personnel.
- * Revitalization of the mobile theater project, an organization of village-acting troupes to interpret plays and other folk form with developmental messages.
- * Dissemination of information through the ViSCA radio station, DYAC, on farm tips and guides for improved family living in rural communities as well as information on prices of farm products.

Vital infrastructure projects completed

Buildings and facilities also reflect the capabilities of the college to attain its avowed goal of contributing to agricultural and rural development. Thus, despite the pressing economic difficulty in 1983, ViSCA intensified its effort in completing vital infrastructure projects, among which are the Library (Phase II), Administration Building, International Guest House, Farm Products Outlet, Chemical Storage Building, Home Science Building, Animal Science Building, FSDP-EV Duplex House, Security Outposts, Waiting Sheds, Student Cooking Dormitory, Mall (Phase I and II), Experiment Station Fence, Foot Bridge, River Control and Water Drainage System, Campus Perimeter Fence, Circumferential Road, Street Curb and Gutter, Bicycle Lanes and Fire Hydrants, and Hilltop Amphitheater.

Still under construction as of December 1983 are the Gymnasium, Library Building (Phase III), Agro-Reforestation Building (Phase



11), Bachelorette's Quarter, FSDP-EV Training Dormitory, Physical Education Building, and remodeling of the Social Hall.

Agricultural and rural development activities held on campus

The selection of ViSCA as venue of key regional, national, and international activities that are related to agricultural and rural development bears on the growing stature of the college. These activities include the:

- * International symposium on root crop production, processing and utilization held on November 10-15. This symposium was attended by some 30 scientists and researchers from Japan, Malaysia, Thailand, Bangladesh, and the Philippines. It was sponsored by ViSCA, NSTA, UPLB, and the JSPS.
- * Seminar-workshop on institutionalization and internalization of linkages between the Ministry of Agriculture (MA) and the Regional Agricultural Colleges (RAC) held on December 8-10. This workshop, sponsored by ViSCA and PCARRD, dealt with the problem of improving the interface between research and extension. It was attended by heads of government and private research and training agencies, including presidents of leading agricultural state colleges and universities in the Philippines.
- * National symposium on coconut-based farming systems held on June 1-4. Sponsored by ViSCA, PCARRD, and PCRDF, the symposium was participated in by some 70 coconut specialists and researchers from all over the country to assess the present technology on coconut-based farming systems as well as identify potential research areas for the

benefit of small coconut farmers.

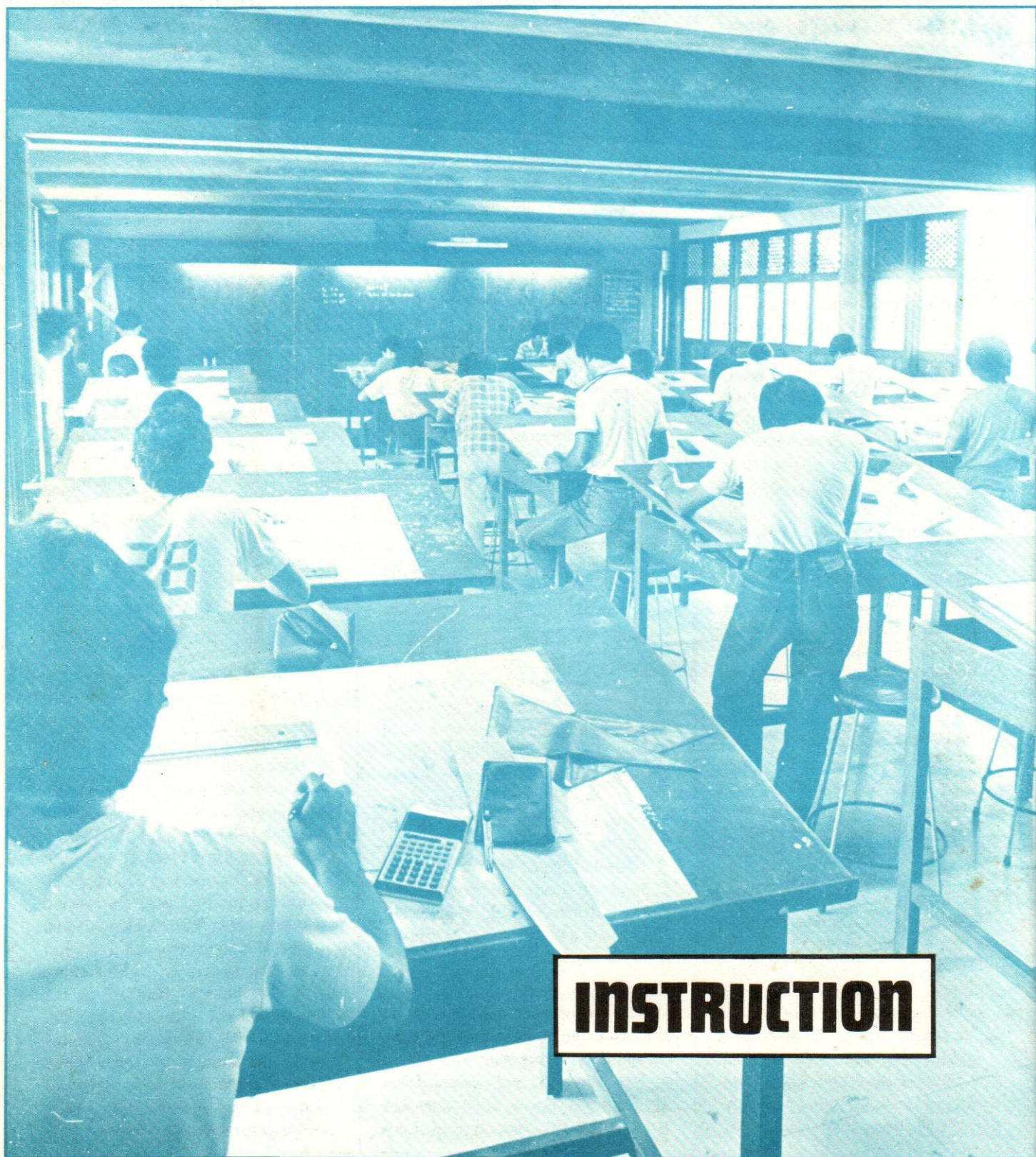
- * Seminar-workshop on broadcasting for rural development held on April 18-27. The seminar, which ran for 10 days, was sponsored by the German Foundation for International Development (DSE) and the Broadcast Production and Training Center of Cebu City. The theme of the gathering was "Teaching Agricultural Subject: The use of radio programs in agricultural extension".
- * Institutional officers specialization training program on agribusiness held on January 17 - February 6. This was sponsored by SEARCA and the Farming Systems Development Corporation (FSDC). Participants of the training were the Institutional Officers of Western, Central, and Eastern Visayas regions.
- * Thirty-third annual convention of the Philippine Society of Agricultural Engineers (PSAE) held on April 28-29. The convention had for its theme "Agricultural Engineers in Support of Integrated Area Development".
- * Conference-workshop of administrators of agricultural, agro-fisheries, and agro-industrial schools held on September 3-5. Participants of this conference-workshop, which came from the three regions of the entire Visayas, discussed the problems in their respective areas and gave suggestions on how they could make their curricular programs more relevant and attuned to perceived regional needs.

ViSCA's significant contribution to the well-being of the people and their communities recognized

The research and development efforts of ViSCA in 1983 were not left unrewarded. Among those signi-

ficant contributions that gained recognition and were cited with awards by some entities are:

- * An award of appreciation given on June 30 by the Province of Southern Leyte in recognition of the valuable and humanitarian service that the college had rendered in preparing the Province for the implementation of the Local Resource Management Project; for its rehabilitation work in the ravaged agricultural areas of the province after being hit by typhoon; and for its contribution to the over-all development of farming technology in Southern Leyte.
- * The Philippine Agricultural Economics and Development Association (PAEDA) presented a special award to ViSCA on June 10 in recognition of its valuable and augmented efforts on research promotion, planning, and implementation; its vital role and involvement in updating expertise and training of various agency personnel and farmers; and its indispensable role in providing technical backstop on programs and projects for economic uplift and self-sufficiency of small farmers in the Visayas region.
- * A scientific paper on the promising sweet potato varieties developed at ViSCA through the Department of Plant Breeding and Agricultural Botany was adjudged one of the ten best papers presented during the 14th national annual scientific meeting of the Crop Science Society of the Philippines (CSSP) held on May 1-2 at the International Rice Research Institute (IRRI) in Los Baños, Laguna. Months later, three high yielding sweet potato varieties were approved by the Philippine Seed Board for release to farmers.



INSTRUCTION



Curriculum Development



A core group of academicians steers ViSCA's academic programs toward the development of manpower needed in the region.

Objectives/Targets

- * To offer only programs/major fields that are relevant to the needs of the country and for which the college has adequate staff expertise, library materials, and laboratory facilities.
- * To evaluate critically the strength and the relevance of the existing graduate and undergraduate programs so that the training of the students would best suit the manpower needs of the region.
- * To pursue vigorously the preparation and improvement of course syllabi to enhance the teaching and learning performance of the teachers and students, respectively.

Accomplishments

• Seeing the need for more strengthening of some of the existing curricular programs so that the services made are contributory to the educational and economic needs of the region, four old degree programs

(1 masteral and 3 bachelor's degree programs) were studied by the academic staff for revisions. As a result, the Master of Agricultural Development (M.Ag.Dev.) with majors in Agricultural Education, Agricultural Extension, Plant Protection, Entomology, Plant Pathology, and Agro-

nomy was approved and implemented by the College in SY 1983-84 which subsequently abolished the Master of Agricultural Development Education (MADE). Three bachelor's degree programs, still in the hands of the College Curriculum Committee, are undergoing revision to become: the Bachelor of Science in Agricultural Chemistry (BSAC); Bachelor of Science in Development Communication (BSDC); and the Bachelor of Science in Food Science (BSFS).

The revision of the MADE into M.Ag.Dev. was prompted to expand its specialization in both social and technical fields. The intention of this revised program is to serve teachers of agro-industrial schools and extension workers of government agencies who want to update their competencies in teaching and rural development work. Soon to be offered, in addition to the aforementioned fields, are Agricultural Economics, Horticulture, Animal Science, and Language Teaching for Agro-Technical Schools. On the other hand, the revision of the three B.S. degree programs was necessary to enrich the curricula with more essential courses. Transforming just a major field into a separate degree program enhances the training of students since they can take more units that are relevant to their fields. Such changes will also increase the employability rate of the graduates.

• With the implementation of the new M.Ag.Dev., ViSCA's curricular offerings in SY 1983-84 consisted of three masteral degrees with 6 major fields, 8 bachelor's degrees with 19 major fields, and two 2-year technician courses. The academic departments that were directly involved in the offering of degree and non-degree programs during the



school year in review are as follows:

Department of Agricultural Development Education

- * Master of Science in Agricultural Development Education (MSADE) with majors in Agricultural Education and Agricultural Extension
- * Master of Agricultural Development (M.Ag. Dev.) with majors in Agricultural Education and Agricultural Extension
- * Bachelor of Science in Agricultural Development Education (BSADE) with majors in Agricultural Education, Agricultural Extension, and Development Communication

Department of Plant Protection

- * Master of Science (M.S.) with majors in Plant Protection, Entomology, and Plant Pathology
- * Master of Agricultural Development (M.Ag.Dev.) with majors in Plant Protection, Entomology, and Plant Pathology
- * Bachelor of Science in Agriculture (BSA) with major in Plant Protection

Department of Agronomy and Soil Science

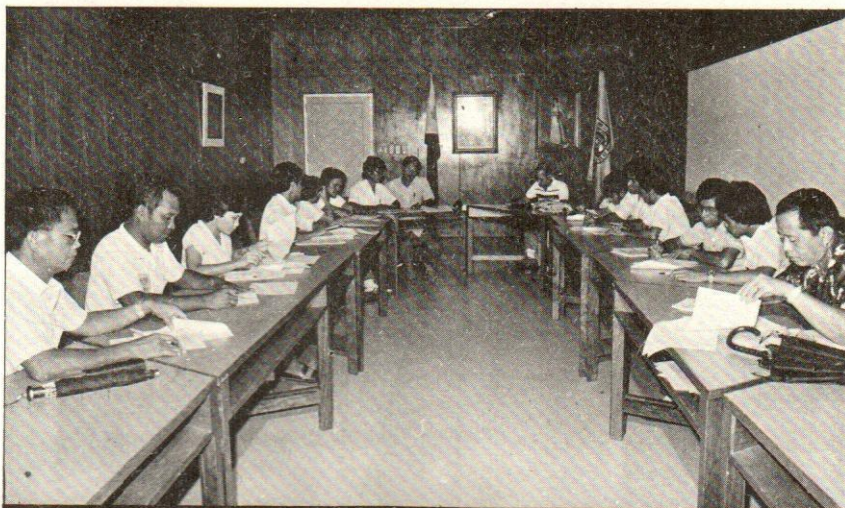
- * Master of Science (M.S.) with major in Agronomy
- * Master of Agricultural Development (M.Ag.Dev.) with major in Agronomy
- * Bachelor of Science in Agriculture (BSA) with majors in Agronomy and Soil Science

Department of Home Science

- * Bachelor of Science in Home Economics (BSHE) with majors in Secondary Home Economics Teaching, Elementary Home Economics Teaching, and Home Economics Extension
- * Home Economics Technician Course (HET)

Department of Forestry

- * Bachelor of Science in Forestry (BSF) with majors in Forest Resource Management and Forest



Proposals to implement new curricular programs are intensively reviewed by department heads and other concerned academic staff.

Biological Science

- * Forest Ranger Course (FRC)

Department of Horticulture

- * Bachelor of Science in Agriculture (BSA) with major in Horticulture

Department of Agricultural Engineering and Applied Math

- * Bachelor of Science in Agricultural Engineering (BSAE)
- * Bachelor of Science in Experimental Statistics (BSES)

Department of Agricultural Economics and Agribusiness

- * Bachelor of Science in Agriculture (BSA) with major in Agricultural Economics
- * Bachelor of Science in Agribusiness (BSAB) with majors in Business Management and Crop Enterprise Management

Department of Animal Science and Veterinary Medicine

- * Bachelor of Animal Science (BAS) with majors in Animal Production and Animal Health

Department of Plant Breeding and Agricultural Botany

- * Bachelor of Science in Agriculture (BSA) with majors in Plant Breeding and Agricultural Botany

The other academic departments not mentioned above such as the Department of Arts and Letters and

the Department of Physical Education were not offering any degree programs. However, being service department, they played important roles in providing the basic courses/subjects in the social sciences and humanities and physical education, respectively. The Department of Agricultural Chemistry and Food Science did not also offer any degree program during the school year 1983-84 because the BSA major in Agricultural Chemistry was temporarily suspended due to the study leave of key faculty members and the plan to offer the new B.S. in Agricultural Chemistry.

• Another important accomplishment that the college can boast of in its curricular programs is the development of the extramural program for masteral studies. In an educational needs survey conducted by the Massey/VisCA Extramural Team in late 1983, data showed that rural development workers in the Visayas are in need and desirous to avail themselves of such program to upgrade their professional competencies in teaching and extension work. This program, once implemented, is an innovative distance



A ViSCA faculty member receives from a Massey University official a certificate of participation in a workshop on the extramural program.

learning approach which utilizes the facilities of the mass media for instructional purposes; thus, allowing students to enrol in graduate courses at ViSCA without necessarily leaving their respective jobs.

- As to the preparation of teaching materials that could help improve the quality of teaching, a number of academic departments were able to improve old materials and produce new outlines, syllabi, and other teaching aids. Worthy of mention among them are the Department of Agricultural Economics and Agribusiness which was keen on making 22 outlines, 17 syllabi, 14 teaching aids for the teaching of agricultural economics and agribusiness courses; the Department of Horticulture for the production of 2 new and 7 revised syllabi for horticulture courses; the Department of Arts and Letters for initiating the preparation of the draft of "A New Approach to Freshman English", an experimental textbook for English 11 and 12; the Department of Plant Protection for the revision of the two course outlines for teaching Plant Protection and Pest Control; and the Department of Physical Educa-

tion for formulating 3 syllabi and a number of handouts for the teaching of courses in sports, dance and athletics.

Shortfalls

- Although the aforementioned three bachelor's degree program (BSAC, BSDC and BSFS) have been targeted for offering in the 1983 Development Plan by SY 1983-84, the college failed to meet the projection because of various factors. The predominant reasons for such failure were: first, the delay of the department concerned in the finalization of the curricular contents of the proposal itself; second, the delay of the College Curriculum Committee in the revision of the general education courses which would also affect the curricular contents of the proposal; and third, the limited number of staff to handle new courses while some faculty members were out on study leave.

- As also reflected in the 1983 Development Plan, the M.S. in Animal Science and the M.S. in Horticulture were envisioned to be offered in SY 1983-84. However, implementation of such programs was withheld until the revision of the curricu-

lar contents of the proposal to conform with the newly approved non-thesis Master of Agricultural Development (M.Ag.Dev.)

- There were other curricular revisions cited in the 1983 Development plan which did not materialize during the period in review. These are the revision of the existing BSADE into the Bachelor of Science in Agricultural Education (BSAg.Ed.) with majors in Teaching Crop Production, Teaching Animal Production, and Teaching Agricultural Economics. The major field in Agricultural Extension of the BSADE was also cited in the same plan to be integrated in the BSA curriculum. However, the Department of Agricultural Development Education which was responsible for the curriculum revision of this program could not finalize the proposal before the approved revision of the general education courses.

- Printed also in the Plan was the aim to reorganize some academic departments, among which is the fusion of the Department of Agricultural Development Education and the Department of Home Science into the Department of Rural Development Education and the reorganization of the Department of Arts and Letters into the Department of Social Sciences and Humanities. Again, this intention failed to materialize as plans were subjected to further study.

- Other academic departments such as the Department of Animal Science and Veterinary Medicine and the Department of Agricultural Economics and Agribusiness were able to make some minor revisions in the course description and contents of their curricula. However, these have not yet been instituted, pending the action of the College Curriculum Committee.



Student Development



ENROLMENT

Objectives/Targets

Having been selected as the regional agricultural college for the entire Visayas, ViSCA is expected to accomplish the following objectives/targets as far as enrolment is concerned:

- * To admit majority of its students that would come from the provinces of Western, Central, and Eastern Visayas.
- * To accept a little more than 1,000 freshman students or a total of 2,455, including those who belong to the higher years in both the college and high school.

Accomplishments and Shortfalls

Table 1 compares the actual enrolment figures of ViSCA and the target set forth in the development

plan for SY 1983-84. Analysis of the data revealed that in spite of the aggressive recruitment program through an information campaign by a team

of academic staff in the big cities and towns of Eastern and Central Visayas and part of Northern Mindanao, ViSCA's actual enrolment for freshman students was only 845, short of about 16.2 percent from the target of 1,008 students. When viewed from the overall student population, ViSCA also failed to meet its target. It has only a total of 2,111 students, 14.0 percent shy of the projected 2,455 students. This shortfall is due to the fact that a number of freshman applicants were not admitted for not meeting the admission requirement. ViSCA requires college freshman students to have either a high school grade point average (GPA) of 80 with a passing NCEE or an NCEE of 80 with passing high school grades.

This setback, however, was compensated when the enrolment figures are compared with the previous school year. While most state colleges and universities had decreases in their student enrolment, ViSCA experienced an unprecedented increase in both the three levels of instruction over SY 1982-83 (Table 3).. Enrolment in the graduate program indicates an increase of 19.4 percent; in the four/five year degree program, 10.7 percent; in the two-year technician courses, 105.1 percent; and in the high school, 6.6 percent or an overall increase of 12.0 percent of the previous year.

As to the distribution of students by origin, ViSCA, as expected, got most of its students from the three regions of the Visayas (91.6 percent). In school year 1983-84, 75.6 percent of the students came from the Eastern Visayas; 14.6 percent from Central Visayas, and 1.4 percent from Western Visayas. Since ViSCA is also extending its mission of edu-



cation to other places of the country, a total of 8.4 percent of the students came from Luzon and Mindanao (Table 2).

GRADUATES

Objectives/Targets

The general objective of ViSCA in its instructional program is to produce quality leaders and professionals who could supply the manpower needs of the region in the fields of forestry, agriculture, and rural development. For SY 1983-84, ViSCA expected to turn out a total of 411 graduates distributed to the following programs;

<i>Programs</i>	<i>Projected Number of Graduates</i>
Masteral Program	23
Four/Five-Year Degree Program	233
Two-Year Non-Degree Program	39
High School	105
Total	411

Accomplishments/Shortfalls

The number of students who completed their respective degrees at the end of SY 1983-84 was practically below the projection. The target was not quite realistic as only 295 students graduated compared to the projection of 411 (Table 4). Except for the B.S. in Agricultural Engineering, B.S. in Agribusiness, and the B.S. in Forestry which exceeded their respective targets, all other programs were far short of the expectation especially degrees in the masteral program and the two 2-year technician courses which deviated 82.4 and 87.2 percent from their respective targets. In-depth examination of the records of college graduates in SY 1983-84 also reveals that only 63.8 percent completed their degrees on time, 22.3 percent delayed by 1 or 2 se-

Table 1. Comparison of Actual and Target Student Enrolments (SY 1983-84)

Degree Program	Freshman Students			Overall Students		
	Target	Actual	% Excess (Short)	Target	Actual	% Excess (Short)
Advanced Education						
M.S. in Ag.Dev. Ed.	30	18	(40.0)	60	39.	(35.0)
M.S. in Plant Prot.	10	2	(80.0)	13	2	(84.6)
M.S. in Entomology	10	1	(90.0)	18	6	(66.7)
M.S. in Plant Path.	10	2	(80.0)	13	3	(76.9)
M.S. in Agronomy	15	27	80.0	25	27	8.0
Master in Ag. Dev. Ed.	4	—	(100.0)	7	4	(42.9)
Master in Ag. Dev.	—	5	—	—	5	—
Sub-Total	79	55	(30.4)	136	86	(36.8)
Higher Education						
<i>Degree Programs</i>						
BS Agriculture	199	120	(39.7)	455	329	(27.7)
BS Ag. Dev. Ed.	61	86	41.0	163	213	30.7
BS Home Econ.	45	57	26.7	100	112	12.0
BS Ag. Eng'g.	133	109	(18.0)	373	299	(19.8)
BS Agribus	77	81	5.2	235	212	(9.8)
B Animal Sci.	60	29	(51.7)	138	121	(12.3)
BS Forestry	74	37	(50.0)	159	126	(20.8)
BS Expt. Stat.	15	8	(46.7)	33	32	(3.0)
BS Ag. Chem	10	—	(100.0)	10	—	(100.0)
BS Food Sci.	10	—	(100.0)	10	—	(100.0)
Sub-Total	684	527	(22.9)	1,676	1,444	(13.8)
<i>Non-Degree Programs</i>						
Home Econ. Tech.	25	42	68.0	40	44	10.0
Forest Ranger	20	28	40.0	31	36	16.1
Sub-Total	45	70	55.6	71	80	12.7
Secondary Education						
Ag. Science Cur.	200	193	(3.5)	572	501	(12.4)
Grand Total	1,008	845	(16.2)	2,455	2,111	(14.0)

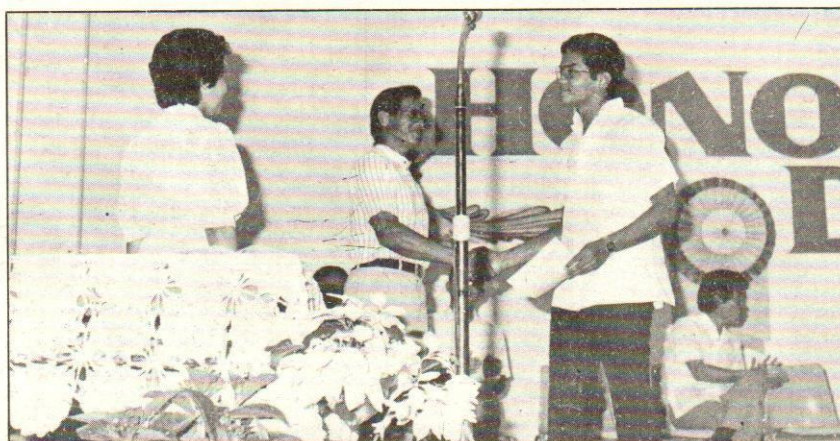
Table 2. Distribution of College Students by Place of Origin (Based on the first semester enrolment)

Place of Origin	SY 1983-84 (in percent)		
	Graduate	Undergraduate	Total
Eastern Visayas	3.9	71.7	75.6
Central Visayas	0.7	13.9	14.6
Western Visayas	0.1	1.3	1.4
Luzon	0.4	1.0	1.4
Mindanao	0.3	6.7	7.0



Table 3. Comparison of Current (SY 1983-84) and Previous Year (SY 1982-83) Enrolments

Degree Program	Freshman Students			Overall Students		
	Previous Year	Current Year	% Increase (Decrease)	Previous Year	Current Year	% Increase (Decrease)
Advanced Education						
M.S. Ag. Dev. Ed.	10	18	80.0	31	39	25.8
M.S. Plant Prot.	3	2	(33.3)	3	2	(33.3)
M.S. Entomology	4	1	(75.0)	8	6	(25.0)
M.S. Plant Path.	2	2	—	3	3	—
M.S. Agronomy	24	24	12.5	24	27	12.5
Master Ag. Dev. Ed.	3	—	—	3	4	33.3
Master Ag. Dev.	—	5	—	—	5	—
Sub-Total	46	55	19.6	72	86	19.4
Higher Education						
<i>Degree Programs</i>						
BSA	98	120	22.4	338	329	(2.9)
BSADE	52	86	65.4	171	213	(24.6)
BSHE	43	57	32.6	79	112	41.8
BSAE	100	109	9.0	303	299	1.3
BSAB	53	81	52.8	177	212	19.8
BAS	30	29	(3.3)	103	121	17.5
BSF	49	37	(24.5)	115	126	9.6
BSES	4	8	100.0	18	32	77.8
Sub-Total	429	527	22.8	1,304	1,444	10.7
<i>Non-Degree Programs</i>						
HET	11	42	281.8	16	44	175.0
FRC	15	28	86.7	23	36	56.5
Sub-Total	26	70	169.2	39	80	105.1
Secondary Education						
Ag. Science Cur.	189	193	2.1	470	501	6.6
Grand Total	691	845	22.3	1,885	2,111	12.0



Rex N. Bernardo, a consistent university scholar, receives his certificate of academic excellence during honors convocations.

mesters, and 13.9 percent extended by 3 semesters or more. Unfinished thesis work was the predominant reason for not completing degrees within the prescribed duration. These constraints, however, could be counter-balanced when viewed from the quality of graduates that ViSCA has been producing. Evidence of this is the fact that since ViSCA's conversion into a state college, it has turned out a great number of students with high academic honors. In SY 1982-83, ViSCA produced 19 **cum laudes** and 1 **magna cum laude** while in SY 1983-84, it graduated 16 **cum laudes** and 1 **summa cum laude** who finished his degree within two years and one semester. The performance of B.S. Agricultural Engineering and B.S. Forestry graduates also continued to record not only a high passing percentage in the licensure board examination but also occupied prestigious places among top-ranking examinees. In September 1983 alone, 40 out of 43 (93.0 percent) graduates passed the licensure board examination for professional agricultural engineers. Of the top ten placers released by the Professional Regulation Commission (PRC), five from ViSCA copped the 2nd, 4th, 5th, and 7th places. On July 20, 1983, 9 ViSCA graduates passed the licensure board examination for professional foresters which was given in Manila.

Also, in April 4, 1983, a doctorate degree in Development Education (honoris causa) was conferred upon Dr. Manuel S. Alba, Minister of the Budget, in recognition of "his various scholarly works in development education and management, his competence in formulating and implementing national education plans, and the concrete support he has abundantly given toward the de-



velopment' of numerous colleges and universities in the country.

DROPOUTS

Objectives/Targets

While nothing on the projection of student dropouts has been written in the 1983 Development Plan, it is implied however that ViSCA has to reduce the dropout percentage of the previous year as its objective/target for SY 1983-84. The past year records a total of 18 dropouts or 1.27 percent of the total enrolment in the graduate and undergraduate programs. The high school, on the other hand, had 36 dropouts or 7.66 percent of its total student population.

Accomplishments/Shortfalls

Comparison of current and previous records point out that ViSCA has succeeded in reducing the percentage of student dropouts. In SY 1983-84, the college incurred only a total of 13 dropouts as compared to the 18 dropouts of SY 1982-83. This reduces the rate from 1.27 percent in the previous school year to 0.81 percent in the current year. The high school also experienced the same dropout decrease from 7.66 percent in SY 1982-83 to 5.39 percent in SY 1983-84. The success of such reduction was attributed to the tutorial classes conducted by some student organizations and the strengthening of the "Catch On" program instituted by both the College and the High School for incoming freshmen to strengthen students' foundation in the basic subjects such as in Mathematics and Sciences. Two other major factors accounting for reduced dropout rates are: (1) a close follow-up to help solve student's individual problems conducted by the guidance counselors and (2) more scholarships and financial assistance to poor but deserving students.

Table 4. Comparison of the Actual Number of Graduates and Targets (SY 1983-84).

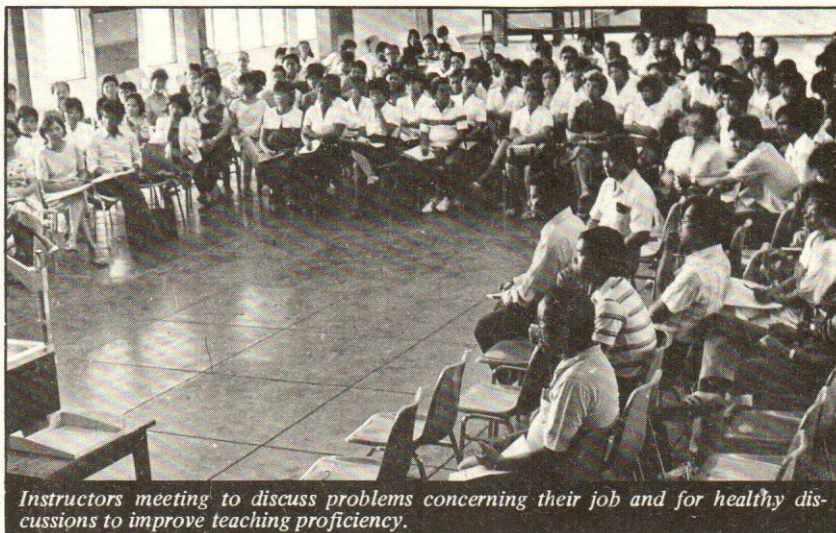
Degree Program	Target	Actual	% Excess (Decrease)
Advanced Education			
M.S. in Plant Prot.	4	—	—
M.S. in Entomology	8	—	—
M.S. in Plant Path.	4	—	—
M.S. in Ag. Dev. Educ.	15	5	(66.7)
Master Ag. Dev. Educ.	3	1	(66.7)
Sub-Total	34	6	(82.4)
Higher Education			
<i>Degree Programs</i>			
BSA	81	60	(25.9)
BSADE	48	34	(29.2)
BSHE	13	9	(30.8)
BSAE	30	32	6.7
BSAB	35	43	17.1
BAS	19	18	(5.3)
BSF	7	16	128.6
BSES	—	6	—
Sub-Total	233	218	(7.3)
<i>Non-Degree Programs</i>			
FRC	19	—	—
HET	20	5	(75.0)
Sub-Total	39	5	(87.2)
Secondary Education			
Ag. Science Cur.	105	66	(37.2)
Grand Total	411	295	(28.2)



Minister of the Budget Manuel S. Alba delivers an address after he was awarded a Doctorate in Agricultural Development (*honoris causa*) by the College.



Faculty Development



Instructors meeting to discuss problems concerning their job and for healthy discussions to improve teaching proficiency.

Objectives/Targets

The general objective of ViSCA in the area of faculty and staff development is to have a pool of technical experts who could man the three major functions of the College in instruction, research, and extension. For the year 1983, it hopes to:

- * Recruit additional staff members whose areas of specialization are badly needed by the college.
- * Hire substitute instructors to take over the workload of staff members who are on study leave to pursue either masteral or doctoral degrees.
- * Send additional staff members for advanced studies within the country and abroad.
- * Send staff members for short-term training and observation-study tours to leading agricultural colleges and universities and research institutions in the country and abroad.

Accomplishments/Shortfalls

Professional Strength

One of the visible and meaningful accomplishments of ViSCA in its 9 years of existence as a state college of agriculture is the continuous growth of manpower resources. As of December 1983, ViSCA has a total of 284 staff members, 71.1 percent of whom belongs to the academic

departments, 17.6 percent to the research and training centers, and 11.3 percent to the high school. Based on educational qualification, the number of staff is even more significant considering that out of the 284, forty-five have Ph.D. degrees, 121 with master's degrees, and 118 with B.S. degrees — number which registers the largest concentration

of agricultural scientists in the Visayas, and the second largest in the country next to U.P. Los Baños (Table 5). The increase in number is attributed to the recruitment of additional staff members whose fields of specialization are needed to strengthen some programs considered weak at the moment.

Hiring of substitutes also increased the strength of staff members. This is necessary to take over the loads of those who were sent officially by the college to pursue masteral and doctoral programs which was also one obvious reason why there was a continuous increase of staff members with advanced degrees. In 1983, 13 staff members returned to ViSCA after completion of their graduate studies (Table 6). This is far below the projected number of 34 staff members expected back during the year in review for teaching and research assignments after earning advanced degrees. As cited by the scholars, the most common reason for the delay in completing degrees was the need for more time to finish their theses.

Academic Staff Workload

As the regional agricultural college for the entire Visayas, ViSCA does not limit its responsibility to developing quality academic programs in the region. The College has to perform meaningful research and conduct useful extension programs geared towards rural and agricultural development. Thus, although it appears that ViSCA has too many staff members with only few students, work assignments of staff are computed not only in terms of teaching load but also in the amount of time spent for basic and applied research in addition to rural development activities. In SY 1983-84, the workload units of the 13 academic depart-



ments of the College reached 2,890.57 in the first semester and 2,891.71 in the second semester with the Department of Agricultural Development Education and Department of Agronomy and Soils Science registering the highest average workload units of 27.64 and 29.10 per staff member, respectively (Table 7). The numbers have overshoot the maximum workload units of 25 per staff member per semester. The Department of Agricultural Chemistry and Food Science, on the other hand, has the lowest number of workload with an average of a little more than 14.0 units per staff member during the first and second semesters. The reason for such a low workload was the reduction of teaching assignments due to the suspension of the BSA major in Agricultural Chemistry curriculum.

Scholarships/Fellowships

Despite the attainment of a critical mass of 40 staff members with Ph.D. degrees and 100 with master's degrees, the college still continued to send staff members for further advanced studies because of its expanded academic and research programs. ViSCA's strategy for the selection of staff members to pursue graduate studies was made on the basis of a staffing pattern that gives emphasis to the balanced distribution of staff expertise among the needed fields of specialization. During the year 1983, a total of 66 staff members were on study leave, 31 of whom were pursuing doctoral degrees and 35 taking masteral degrees (Table 8). The FSDP-EV, a project jointly funded by USAID and the Philippine government, currently supports the ViSCA's staff development program. Aside from ViSCA, local assistance comes from PCARRD, IRRI, SEARCA, PDSP, and NSTA while foreign supporters

Table 5. Degree Profile of the ViSCA Staff By Departments and Research Centers as of December 1983.

Department/Center	Ph.D.	Degree M.S.	B.S.	Total
Academic Departments				
Ag. and Soils Science	1	7	8	16
Ag. Econ. and Agribus	2	8	7	17
Ag. Dev. Education	9	9	1	19
Ag. Chem. and Food Science	2	6	9	17
Ani. Sci. and Vet. Med.	5	6	8	19
Home Science	2	5	4	11
Ag. Eng'g. and App. Math	1	13	13	27
Horticulture	2	4	4	10
Arts and Letters	5	4	6	15
Forestry	1	4	5	10
Ag. Bot. and Plt. Brdg.	3	5	4	12
Plant Protection	5	15	3	23
Physical Education	—	1	5	6
Sub-Total	38	87	77	202
Research and Training Centers				
PRCRTC	3	11	11	25
RCRC	2	2	5	9
CSR-SFD	2	5	9	16
Sub-Total	7	18	25	50
High School				
Ag. Science Cur.	—	16	16	32
Grand Total	45	121	118	284

include the ADC and AIT of Bangkok, Thailand, Colombo Plan of Australia, and IDRC of Canada.

The scholars' delay in the completion of their studies was one of the shortfalls of ViSCA as this set back the timetable for the full implementation of the staff development program. Studies show that the average number of years for the ViSCA fellows to complete a Ph.D. degree was 3 years and 8 months. So far, the shortest extension given was one month while the longest extension was 3 years. On the other hand,

the average number of years for ViSCA scholars to complete a master's degree was 2 years and 4 months. The shortest extension allowed was 1 month and the longest was 1 year.

Short-Term and Non-Degree Training

Since the staff members of ViSCA comprise the second leg of the tripod upon which the college stands, staff training through attendance to regional, national, and international conferences, seminars, and workshops and even study tours within the country and abroad were likewise



Table 6. Assignment Distribution of Staff Members Who Have Completed Advanced Degrees in 1983.

Department/Center	Ph.D.	M.S.	Total
Academic Departments			
Ag. Econ. and Agribus.	1	1	2
Home Science	1	—	1
Ag. Eng'g. and App. Math	—	2	2
Horticulture	1	—	1
Plant Protection	1	—	1
Ag. Chem. and Food Sci.	—	2	2
Sub-Total	4	5	9
Research and Training Center			
PRCRTC	—	3	3
High School			
Ag. Scie. Cur.	—	1	1
Grand Total	4	9	13

Table 7. Summary of Workload Units of Academic Staff in Each Department for SY 1983-84

Department	1st Sem SY 1983-84		2nd Sem SY 1983-84	
	TWU	AWU	TWU	AWU
Agronomy and Soil Sci.	237.57	26.40	232.78	29.10
Plant Protection	339.11	24.22	362.35	25.88
Ag. Bot. and Plt. Brdg.	113.18	18.86	158.05	22.58
Ag. Econ. and Agribus.	221.60	20.15	197.87	24.82
Horticulture	161.08	26.85	173.69	24.81
Ag. Chem. and Food Sci.	147.74	14.77	145.77	14.56
Ani. Sci. and Vet. Med.	278.32	21.41	275.17	21.17
Ag. Eng'g. And App. Math	346.32	21.65	363.00	22.69
Ag. Dev. Education	304.03	27.64	273.75	24.86
Home Science	168.05	24.01	184.41	23.05
Arts and Letters	278.93	24.25	251.96	20.99
Forestry	175.46	19.50	163.40	20.42
Physical Education	119.18	19.86	109.51	18.25
Total	2,890.57	289.57	2,891.71	293.19
Average	222.35	22.27	222.44	22.55

given top priority. In 1983, a total of 87 short-term trainings were participated in by the staff, 74 of which were held within the country and 13 in different places abroad. Staff participation consisted of either presenting a paper or participating actively if not just being observers. The titles of trainings are as follows:

Held Outside the Country

- * Asian seminar-workshop on agro-forestry Kuala Lumpur, Malaysia
- * Seminar-workshop and training in farming systems research methodology, Cornell University, Ithaca, New York, USA
- * Short-term training on nutrition surveillance, Cornell University, Ithaca, New York, USA
- * Study tour and training on corn breeding, CIMMYT, Mexico
- * Educational trip to Massey University, Massey University, New Zealand
- * Short-term training on farming systems, Instituto de Ciencia y Tecnologia, Agricolas, Guatemala
- * Short-term training on livestock production systems, Cornell University, Ithaca, New York, USA
- * Observation trips on cassava processing in Thailand and research monitoring studies at the Indian Council of Agricultural Research, India
- * Symposium on symbiotic nitrogen fixation, Noordwijkerhout, the Netherlands
- * Observation trip in farming systems research and development, Cornell University, New York, Costa Rica, and Hawaii
- * Training-workshop on livestock economics Bangkok, Thailand
- * Short-term training for development-oriented research in agriculture, the Netherlands
- * Workshop on fast growing nitrogen fixing trees, Nairobi, Kenya



Table 8. Degrees Pursued by ViSCA Staff On Study Leave in 1983.

Department/Center	Degree		Total
	Ph.D.	M.S.	
Academic Departments			
Agronomy and Soil Sci.	2	5	7
Ag. Chem. and Food Scie	2	4	6
Ag. Eng'g. and App. Math	4	3	7
Ag. Econ and Agribus.	1	2	3
Horticulture	—	3	3
An. Science and Vet. Med.	2	3	5
Plant Protection	5	1	6
Ag. Bot. and Plt. Brdg.	4	1	5
Ag. Dev. Education	5	—	5
Arts and Letters	—	1	1
Forestry	—	3	3
Home Science	—	2	2
Sub-Total	25	28	53
Research and Training Centers			
PRCRTC	3	3	6
CSR-SFD	3	2	5
Sub-Total	6	5	11
High School	—	2	2
Grand Total	31	35	66

Held Within the Country

a. Department of Horticulture

- * Farming systems research methodology, ViSCA, Baybay, Leyte
- * Coconut 1983 and Thereafter, Cagayan de Oro City
- * Annual seminar-workshop of the Society for the Advancement of the Vegetable Industry, La Trinidad, Benguet
- * Hilly land development workshop, Lahug, Cebu City
- * 14th annual scientific meeting of the Crop Science Society of the Philippines, IRRI, Los Baños, Laguna
- * Coconut-based farming systems, ViSCA, Baybay, Leyte

- * Training for trainers on integrating nutrition into agriculture, ViSCA, Baybay, Leyte
 - * Integrated root crops symposium for Southeast Asia, ViSCA, Baybay, Leyte
 - * Program assessment extension guidelines, UPLB, College Laguna
 - * Third PCARRD-ViSCA coordinated review and evaluation on completed and on-going researches, ViSCA, Leyte
- b. Department of Agricultural Engineering and Applied Math*

- * Third national convention of the Philippine Society of Agricultural Engineers, ViSCA, Baybay, Leyte

- * Seminar on Nutrition, ViSCA, Baybay, Leyte
- * National assembly of computer education and training MEC, Tacloban City
- * Training on data collection, ViSCA, Baybay, Leyte
- * International symposium on root crops, ViSCA, Baybay, Leyte
- * Training on computer programming, ViSCA, Baybay, Leyte
- * Training on biogas digester, Maya Farm
- * Training on bio-energy and operation and in using anaerobic digestion of farm wastes, Maya Farm

c. Department of Ag. Botany and Plant Breeding

- * 14th annual meeting of the Crop Science Society of the Philippines, IRRI, Los Baños, Laguna
- * Southeast Asian international symposium on root crops, ViSCA, Baybay, Leyte

d. Department of Agronomy and Soils Science

- * Training on farming systems research methodology ViSCA, Baybay, Leyte
- * National root crop production training course, ViSCA, Baybay, Leyte
- * Crop Science Society of the Philippines annual scientific conference, IRRI, Los Baños, Laguna
- * Seminar-workshop on the formulation and pasture research and development program, PCARRD, Los Baños, Laguna
- * Institutionalization and internalization of linkages between the Ministry of Agriculture and regional agricultural colleges, ViSCA, Baybay, Leyte
- * Symposium on coconut-based farming systems, ViSCA, Bay-



bay, Leyte

- * Third PCARRD/VICARP coordinated review and evaluation of ongoing and completed researches, ViSCA, Baybay, Leyte
- * Cover cropping technology, ViSCA, Baybay, Leyte

e. Department of Home Science

- * Training on enterprise development, ViSCA, Baybay, Leyte
- * Educational trip to food factories, Mountain State Agricultural College, La Trinidad, Benguet and Baguio City
- * Seminar on Farming systems Research, ViSCA, Baybay, Leyte
- * Annual convention of the Philippine Association of Nutrition, PICC, Manila
- * Regional seminar-workshop on integrating nutrition into agriculture, ViSCA, Baybay, Leyte
- * Solar dryer construction and food processing of tropical crops, ViSCA, Baybay, Leyte
- * Ethnographic fieldwork method, ViSCA, Baybay, Leyte
- * Population projection seminar, NEDA, Tacloban City

f. Department of Animal Science and Veterinary Medicine

- * Training on artificial insemination, Philippine Carabao Research and Development Center, UPLB Los Baños, Laguna
- * Training on goat production National Rural Life Center, Dasmariñas, Cavite
- * 20th annual convention of the Philippine Society of Animal Science, PICC, Manila
- * National science fair and quiz, UPLB, Los Baños, Laguna
- * Integrating nutrition into agriculture curriculum, ViSCA, Baybay, Leyte
- * International symposium on root crop production and utili-

zation, ViSCA, Baybay, Leyte

- * Symposium on coconut-based farming systems, ViSCA, Baybay, Leyte
- * 1st Inter-Asia and Pacific goat production and management seminar-workshop, SEARCA, UPLB, Los Baños, Laguna
- * The role of A. I. on livestock production in Southeast Asia PCARRD, Los Baños, Laguna
- * Integrating livelihood projects in educational institutions programs, ViSCA, Baybay, Leyte
- * Fifth regional agricultural research symposium, Iloilo City

g. Department of Plant Protection

- * Training on entomology in the cropping systems IRRI, Los Baños, Laguna
- * Crop Science Society and Pest Control Council annual conferences, IRRI, Los Baños, Laguna and Regent of Manila
- * Annual conference of the Federation of Institutes for Marine and Fisheries Sciences, Davao City
- * International symposium on root crop, ViSCA, Baybay, Leyte

m. Department of Arts and Letters

- * National congress on the state of language education Manila
- * Consultative conference on social science, Asian Institute of Tourism, Quezon City
- * Second consultative conference Davao Insular Hotel, Davao City
- * Consultative meeting with communicators to come up with communicative terms applicable to development communication in regard to print and broadcast media, BPTC, Cebu City
- * Comprehensibility and acceptability of Filipino English in its annual convention, UP Dili-

man, Quezon City

- * Third Philippine-linguistic congress, Faculty Center Hall, U.P. Diliman, Quezon City
- * Third national symposium on Philippine folklore – Diliman, Quezon City
- * Seminar-Demonstration on Effective Teaching of History in the Collegiate Level – Divine Word University, Tacloban

h. Department of Agricultural Economics and Agribusiness

- * Farming systems research methodology, ViSCA, Baybay, Leyte
- * Seminar-workshop on recent development in mathematics Cebu City
- * 29th PAEDA annual convention, Metro Manila
- * Integrating nutrition into agriculture, ViSCA, Baybay, Leyte
- * Training in microcomputer ViSCA, Baybay, Leyte
- * Seminar on regional planning and management in cooperatives, Tacloban City
- * National Symposium on fruits and nuts, Baguio City

i. Department of Agricultural Development Education

- * The Sondeo an alternative rapid rural appraisal methodology, Tacloban City
- * Agricultural Education/Agricultural Extension as a chosen career, ViSCA, Baybay, Leyte
- * Farming systems research methodology, ViSCA, Baybay, Leyte
- * Technical services delivery training course, ViSCA, Baybay, Leyte
- * Seminar on interview aspect for farmer participants, ViSCA, Baybay, Leyte
- * Philippine Association for Graduate Education annual conference, Xavier University,



- Cagayan de Oro City
- * Regional re-echo seminar-workshop, ViSCA, Baybay, Leyte
- * Socio-economic and communication research project workshop, UPLB, Los Baños, Laguna
- * Seminar-workshop on campus journalism, ViSCA, Baybay, Leyte
- * Seminar on the responsibility of farmer-leaders in rural development, ViSCA, Baybay, Leyte
- * Mid-level technical skill training in extension programs UPLB, Los Baños, Laguna
- * Seminar-workshop on research methodologies, UPLB, Los Baños, Laguna
- * 3rd PCARRD/VICARP coordinated review of ongoing and completed researches, ViSCA, Baybay, Leyte
- * Symposium on coconut-based farming systems, ViSCA, Baybay, Leyte

j. Regional Coconut Research Center

- * The Coconut: 1983 and thereafter, Cagayan de Oro City
- * Symposium on coconut-based farming systems, ViSCA, Baybay, Leyte
- * Use of microcomputers ViSCA, Baybay, Leyte
- * Annual conference of the Crop Science Society of the Philippines, IRRI, Los Baños, Laguna
- * Managerial course on coconut wood utilization, San Ramon, Zamboanga City
- * Workshop on mechanism and strategy of implementation of PFSRDP, Calamba, Laguna
- * Workshop on coconut water and sap utilization, Makati, Metro Manila
- * Workshop on pilot hybrid farm

development and management Candahug, Palo, Leyte

- * Observation trip to the Philippine Coconut Authority in San Ramon, Zamboanga City
- * Technical course on coconut wood utilization, San Ramon, Zamboanga City

k. Center for Social Research in Small Farmer Development

- * Seminar-workshop on livelihood enterprise development for educational institutions, University of Life, Metro Manila
- * Computer programming and research data processing MICROCHIPS, Cebu City
- * Training on farming systems research methodology, ViSCA, Baybay, Leyte
- * Training in ethnographic field work methods, ViSCA, Baybay, Leyte
- * Seminar on computer operations, CPU, Iloilo City
- * National conference on research in the uplands, SEARCA, Los Baños, Laguna
- * National consultation program on rural community participation
- * Solar drying and food processing of tropical crops, ViSCA, Baybay, Leyte
- * Computer programming and operations, ViSCA, Baybay, Leyte
- * Basic computer concepts Agricultural Research Center, U.P. Los Baños, Laguna
- * Training on the use of microcomputers in data processing ViSCA, Baybay, Leyte
- * Seminar on database management, KAISHA Education Center, Cebu City
- * First national social science congress, Philippine Social Science Center, Quezon City

- * Social Science research and training conference, U.P. Los Baños, Laguna

l. Philippine Root Crop Research and Training Center

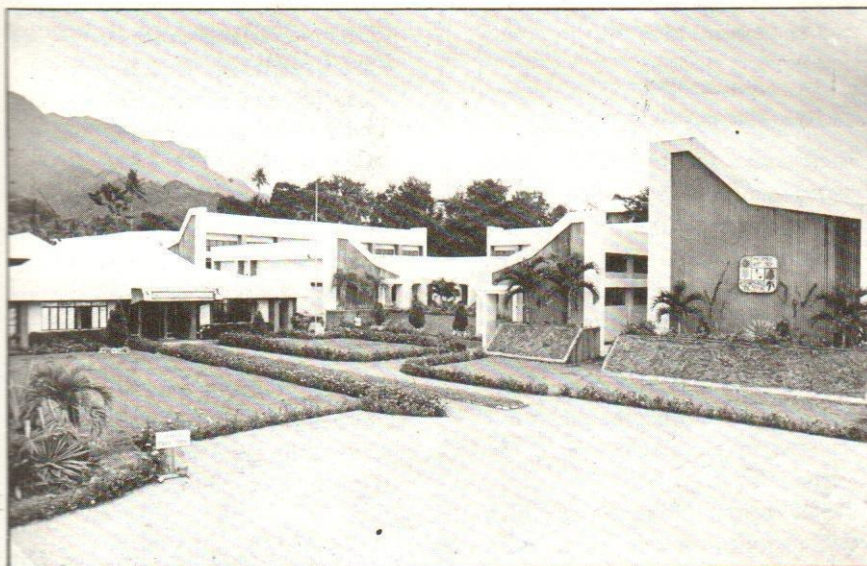
- * Training course on solar dryer construction and food processing, ViSCA, Baybay, Leyte
- * National root crop cooperative testing program consultation meeting, ViSCA, Baybay, Leyte
- * Planning-workshop on the national plant genetic resources program of the Philippines, CEC, UPLB, College, Laguna.
- * International training Course on root crop production and utilization, ViSCA, Baybay, Leyte
- * International seminar on root crops in Southeast Asia (ISRC-SEA): production and utilization, ViSCA, Baybay, Leyte and UPLB, Laguna
- * Solar drying and food processing of tropical crops, ViSCA, Baybay, Leyte
- * 14th annual scientific meeting of the Crop Science Society of the Philippines, IRRI, Los Baños, Laguna
- * 14th annual Pest Control Council of the Philippines conference Regent of Manila Hotel, Manila
- * 3rd PCARRD-VICARP coordinated review of ongoing and completed research projects, ViSCA, Baybay, Leyte
- * SEARCA-UNDP root crop production and utilization training course, ViSCA, Baybay, Leyte
- * Workshop on production and processing tools and equipment for root crops, PCARRD, Los Baños, Laguna
- * World food week symposium on recent advances in food protection and preservation, Metro Manila



RESEARCH



Philippine Root Crop Research and Training Center



Objectives/Targets

- * To develop high yielding, good quality and pest resistant varieties of sweet potato, cassava, gabi, and other root crops.
- * To develop improved production and harvesting techniques and effective cropping systems for root crops.
- * To undertake investigations in controlling pests and diseases attacking root crops and their by-products.
- * To conduct studies on modern processing, postharvest handling, marketing and utilization techniques for human food, animal feed, and industrial uses.
- * To provide training to farmers, students, specialists, and extension workers on production postharvest handling, processing, and utilization techniques.
- * To disseminate improved varieties and release up-to-date information on production, post-harvest handling, processing, and utilization techniques.

Accomplishments

As in the past years, the activities of PRCRTC in 1983 were carried out by the Center's staff in collaboration with the researchers of the various technical departments of the college,

some staff members of the Ministry of Agriculture and Food, and a few academic institutions in various parts of the country. During the period in review, greater research thrusts were placed on the development of su-

perior varieties, ways of reducing postharvest losses and production and processing cost, and development of new products or uses aimed at creating commercial demands for root crops to encourage farmers to increase and sustain their production.

Varietal Improvement

A great amount of staff time and material resources has been devoted to the building up and maintenance of the germplasm collection for use in crop improvement programs of the Center. Accessions of this germplasm have local, national, and foreign sources. These are planted in groups in the PRCRTC germplasm nurseries. Collections and studies on this germplasm are actively pursued.

Sweet Potato

- * The existing germplasm consists of 823 accessions collected locally and abroad.
- * A program for varietal improvement of sweet potato in the Philippines is spearheaded by Dr. F. A. Saladaga in the Department of Plant Breeding and Agricultural Botany. To date, the program has developed three varieties which have been approved by the Philippine Seed Board. These varieties were named VSP-1, VSP-2, and VSP-3. These have gained recognition and acceptability by the farmers and the industrial sector.

Cassava

- * A total of 438 germplasm collections were maintained and new F_1 cassava hybrids from CIAT were introduced and tested at PRCRTC.
- * PRCRTC has established linkage with the Centro Internacional de Agricultura Tropical (CIAT) at Cali, Colombia, on matters of cassava research through the direct involvement of Dr. Kazuo Kawano, a cassava breeder from



CIAT, based at Thailand, who is concurrently in charge of the Asian Cassava program.

- * Two hundred forty (240) promising F_1 hybrids from CIAT were selected out of 2,200 hybrids. Subsequently, 119 new selections out of 240 were made from a single row trial. This second set of selected materials is further planted in plot trials.
- * A set of 5,500 F_1 hybrids seedlings from CIAT is set up and to be harvested in 1984 for further selection.
- * Several hybrids of cassava for PRCRTC were harvested and promising entries were further tested in general trials.
- * Starch content of the germplasm collection based on the dry weight basis ranges from 30 to 90% and 7 to 33% by fresh weight basis.
- * Evaluation of promising cassava for shade tolerance is in progress.
- * Hybridization block was established and breeding operation has taken place.

- * The national cooperative techniques testing for root crops was launched and 10 cooperating stations for cassava throughout the country were identified. To date six entries in PRCRTC are included in 8 testing sites. Six other entries came from UPLB. Harvest date will be early 1984.
- * Entries for advance trial and promising hybrids are likewise planned to be planted in the identified cooperating stations.

Yam

- * Fourteen (14) new accessions were added to the PRCRTC yam germplasm collection making the total number to 653. Out of these collections, 498 were *D. alata* (ubi) while the rest belonged to the species *D. esculenta* (tugui), *D. pentaphylla* (lima-lima), *D. hispida* (nami) *D. bulbifera* (abobo) and *D. rotundata*. These are maintained in single row plots in the field.
- * Three regional trials on ubi and two regional trials on tugui were

set up in 3 stations (PRCRTC, BES and RES). Seven entries of ubi were found to have significantly higher yield (27.92 - 41.94 t/ha) than the check variety (22.5 t/ha).

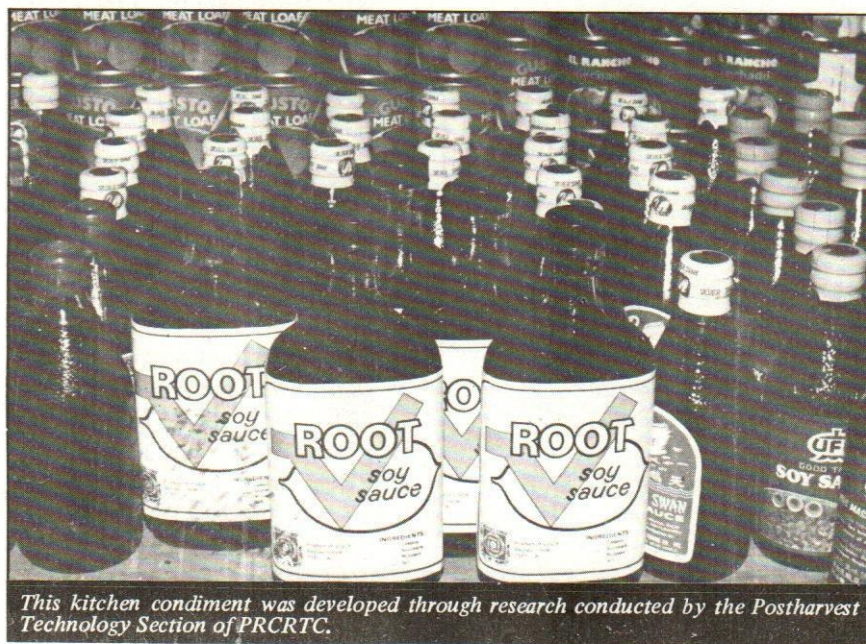
- * For the national cooperative testing project for root crops, 14 entries of ubi were set up in PRCRTC and BES, Ubay, Bohol. Seven entries were set up at RES Babatngon and another set of seven entries at PRCRTC.
- * Seven entries of tugui for regional trials were set up at RES Babatngon and PRCRTC while another set of 5 entries were planted at BES, Bohol, and RES, Babatngon.
- * In addition to regional entries, several entries of ubi were sent to UP La Granja and AES, Tabaco, Albay for multiplication.
- * Promising accessions in the regional trials will be evaluated by the Philippine Seed Board Root Crop Working Group before release.

Taro

- * Taro germplasm has a total of 375 accessions including those obtained from Hawaii. These were characterized and maintained in the field in the single row of 10 plants per accession.
- * The identified promising accessions of taro from general trial are now in multiplication phase for inclusion in the Philippine Seed Board Trial otherwise known as the regional testing for root crops. Eight entries were identified and will be set-up at CSSAC, Camarines Sur; MSAC, Mt. Province; Bohol; Claveria; Cagayan de Oro; and VISCA by 1984.

Pungapong (*Amorphophallus* sp.)

- * Germplasm collection of this particular aroid has been started last year. Less variability has been observed probably because this crop is not widely grown. There



This kitchen condiment was developed through research conducted by the Postharvest Technology Section of PRCRTC.



are six accessions at present in the nursery.

- * These six accessions are being propagated.
- * Further studies are being lined-up for this crop particularly in the production aspect.

Production

Cassava

- * A simple technology was tried by manipulating plant population in cassava i.e., increasing plant density from 13,333 plants/ha to 20,000 plants per ha and 40,000 plants per hectare. At the highest plant population level, significantly more stakes for planting materials were produced. High population planting is favorable in producing more stakes for planting materials.
- * Results showed that intra-plot intercropping of cassava with legume is more advantageous than the inter-row intercropping scheme.
- * Results were obtained indicating that intensity in land preparation does not have any significant influence on the growth and yield of cassava, sweet potato and gabi.
- * Off-barring of cassava 2 weeks after planting, followed by hand-weeding within row at three weeks after planting and hilling-up at 5 to 7 weeks after planting, is a profitable postplanting cultivation.

Taro

- * Off-barring of gabi 2 weeks after planting (WAP) and hilling up plus hand weeding at 4 to 6 WAP is the most appropriate technique.
- * Mulching was found to be very advantageous for the growth of gabi during the dry season. Rice straw mulch helped reduce soil temperature and suppressed rapid moisture loss from the soil favoring growth and yield of gabi.

- * Plant population of 53,333 bring about high yield than 40,000 and 26,667 pph although individual corms are reduced in size under high population level.

Yam

- * Bush beans were found to be growing well when simultaneously planted with yams. Yield is not at all affected by intercrop.
- * Staked yams yielded better than non-staked.
- * High N application (120 kg/N/ha) did not influence the yield of tugui. Seedbed preparation, i.e., ridge, flat, mound, furrow and hole did not show any influence on the yield of yam.

Pest Management

- * Results of the studies on critical period for weed control in upland and lowland gabi using two planting distances and different duration of weed control indicated no significant effect of plant spacing on yield. The data also suggested that the first 8 weeks

from planting is the critical period of weed control in gabi.

- * No substantial results have been observed yet on the study about methods for control of postharvest disease of root crops.

Engineering

Design and development of tools for production of root crops at the farm level

- * Activities of this project include the improvement and modification of fabricated tools such as the plow with its other accessories like ridger, digger, tool harrow, hand wheel cultivator and cassava lifter.
- * Sets of developed tools were field tested for acceptability of the farmers in towns of Dulag, Capoocan and Matalom. However monitoring on the acceptability tests of tools was inadequate due to some travel constraints and the cost of travel was high. Furthermore, no reliable clue for the acceptability of the tools was given by the farmers because the duration of field



A researcher of the PRCRTC Engineering Section explains to visiting scientists how to operate this root crop processing machine.



testing was not sufficient for them to draw their own conclusions. On the other hand, some tools that were introduced to the farmers were unoperational and unfit to local condition. These tools will be improved and modified according to suggestion of the farmers.

- * Several improvements were made on the introduced tools. The plow beam was reduced in weight and the plowshare was redesigned. The tooth harrow was further modified. Its frame and the cassava lifter handle were replaced with wood to reduce weight. Testing of these tools was done at nearby farms.

Design and development of root crop dicing-device for homebased industry

- * Three types of design were made. One kind of design has been completely constructed and preliminary testing was made; however, it was found out to be not yet efficient so it is being improved. This is because root crops especially cassava require greater force for the dicing operation, so the cutting blade must be of good quality

Post Harvest Technology

Post-Production Technology Research Development for Cassava and Sweet Potato in the Philippines

- * Cassava roots could be kept longer either in soil storage or box storage (packed with moist sawdust or sand) without affecting the quality of the roots.
- * Sweet potato roots could be stored in any storage structure either made of nipa, cogon, bamboo or coconut leaves without affecting the quality of the roots. All roots intended for storage should be however free from damage. If damaged, the roots should be cured prior to storage.

Storage Technology of Fresh Root Crops

- * Pruning the cassava plants 2 to 3 weeks before harvest significantly reduced the vascular discoloration and incidence of decay.
- * Cassava and sweet potato roots could be stored better in 0.01 mil than in thicker polyethylene bags. Rotting is reduced in thinner polyethylene bags than in thicker ones.
- * Isolation of the organisms causing rot was undertaken. Of the isolated organisms, 50% belonged to the genus **Botrydiplodia**. It was followed by **Rhizopus** and **Macrophomina**. Pathogens like **Aspergillus**, **Sclerotium**, **Fusarium** and other microorganisms were considered weaker pathogens since it would take longer time for them to establish infections in their hosts.

Post Production Characteristics of Sweet Potato Genotypes Produced from Biparental Crosses and Polycrosses

- * Out of the 670 hybrids, 86 of them were resistant to shrivelling and moderately resistant to decay, sprouting and greening.
- * Thirty-two (32) hybrids had high dry matter content (40-50%) and 16 had very low (20%). The rest had medium dry matter content (30-39%).
- * VSP-2 had the highest protein content (5.4% dry weight basis while V₃-101 had the lowest (0.69%).
- * All the hybrids had a wider range of total carotenoid content (151.8 mg/100 g fresh wt) as expected because of their difference in color.
- * Organoleptic test showed 4 hybrids were highly acceptable and 110 hybrids were not acceptable (scores were less than 5.0). The rest were rated slightly and moderately acceptable.

Pre-Harvest Factors Affecting the Quality of Cassava and Sweet Potato at Harvest and Storage

- * The total yield (ton/ha) of sweet potato roots (BNAS-51) was not significantly affected by fertilization due to water logging.
- * The total sugar was lower in roots fertilized with 30-0-0 and the control (0-0-0) than roots fertilized with 30-0-60 and 30-0-0 kg NPK/ha. Starch content was higher in roots fertilized with 90-60-30, 30-0-60, and 90-60-60 kg NPK/ha than roots fertilized with 30-0-30, 30-30-30 and 30-30-0 kg NPK/ha. Starch content decreased during the storage with a corresponding increased in sugar content.
- * Decay incidence was more pronounced in the roots harvested from plants receiving higher fertilizer levels than the control (no fertilization).
- * Sweet potato grown at Ipil, Zamboanga del Sur lost more weight than roots harvested at ViSCA and MSAC after 19 days of storage. Higher visual quality rating and lower decay incidence were observed in roots harvested at ViSCA and Ubay, Bohol than roots harvested at MSAC.

The Relationship Between Morpho-anatomical Features of Root Crops (cassava, sweet potato, gabi and ubi) and their Effects on Storage Shelf-Life

Fresh cassava roots showed compact periderm layer composed of the phellem cells and suberized-walled part (s), increased formation of corks cells (with irregular shapes), and came narrow until no intercellular spaces appeared. Curing process was completed when 20 to 30 layers of compact narrow cork cells were formed. These usually appeared after 13 days in the soil storage. Some of the experiments are ongoing.



Regional Coconut Research Center



Objectives/Targets

The 1983 activities of the Regional Coconut Research Center of VISCA were aimed towards the attainment of the following objectives:

- * To develop hybrid coconut that are productive, early bearing, and resistant to insect pests and diseases.
- * To develop suitable cultural and management practices for the optimum production of coconut.
- * To develop suitable coconut-based cropping systems for the optimum utilization of areas under coconut.
- * To develop village-level technology for the utilization of coconut by-products/parts as sources of fuel.
- * To disseminate appropriate technology aimed to help the small Visayan farmers derive more income from their coconut land.

Accomplishments

There were 24 studies conducted by the center in 1983. Nine of those were under four projects while the rest stood as individual studies. In terms of discipline, 6 studies were on breeding and genetics, 4 studies on multiple cropping, 4 studies on physiology, tissue culture, and biochemistry, 7 studies on agronomy and soils, and 3 studies on by-product utilization for fuel. All of the

studies carried out during the year in review are still going on in 1984. Hence, no significant findings nor new technology can be mentioned in this report. It can be said that most of the planned targets/objectives for 1983 had been achieved although some shortfalls were met due to various causes. For those studies that were conducted within the VISCA campus, failure to completely achieve the planned targets could be

attributed to the delay in the procurement of supplies and materials for research and the lack of necessary equipment at the center. For those that were conducted off-campus, failure was due to the long drought during the first half of the year, limited existing areas (coconut farms) that are suitable for experiment, and the farmer's skepticism to offer his coconut farm for experiment purposes.

For purposes of recording the center's accomplishments, the following are its activities, including some initial significant developments in its coconut research:

Breeding and Genetics

Breeding for improved varieties of coconut in Eastern Visayas

- * Data on field growth of seven dwarf coconut cultivars were gathered at 30 and 36 months after planting for the younger batch. Camotes cultivar was observed to be superior in vegetative growth than the others.
- * The effects of fertilizer treatments on field growth of the cultivars were also monitored. Marked differences were only observed between the control and the fertilized palms.
- * The initial trunk appearance and first spathe emergence of the palms were also recorded. Slight variations were observed in the age of palms at initial trunk appearance and at first spathe emergence.
- * Continuous monitoring of the incidence of insect pests was done during the year. The most common insect pests were **Rhinoceros** beetles, leaf folders and lace bugs.
- * Kudzu was planted in the area to help minimize the growth of weeds.



Utilization of heterosis

- * Pollination activities are still continuing. In 1983, a total of 765 pollinations were done. These include eight different dwarf x tall crosses, namely: YD x Bay, LKY x Bay, BBO x Bay, CCN x Bay, Cam x Bay, TAC x Bay, OD x Bay, and Cat x Bay. There was no pollination done in Albuera palms.
- * Performance of the field-planted hybrids grown under 3 levels of fertilization was evaluated. Although it is quite premature at this stage of the study to discuss the effects of fertilization on the hybrids, the data gathered warrants its discussion. It is obvious from the results that some hybrid crosses respond favorably to higher level of fertilization while others settle for the minimum rate. RCRC-2, RCRC-3, RCRC-4, and RCRC-6 for instance showed bigger girth size, increased plant height, and had faster leaf production rate when fertilized at a higher rate compared to seedlings of the same crosses but receiving lower fertilizer rates. In contrast, RCRC-1 and RCRC-5 tended to perform favorably at lower fertilizer rate.
- * Reaction of hybrid crosses to prevalent insect pests and diseases in the area was also observed. In 1983, the **Rhinoceros** beetles were the most destructive pests damaging many of the seedlings of RCRC-4 and RCRC-6, but very few in other hybrid crosses and Baybay tall seedlings were affected.

Collection and characterization of local and introduced coconut cultivars/hybrids

- * Seventeen towns of Southern Leyte were explored for seednut collection following a previously planned outright collection pro-

cedure. Seednuts were collected from plant populations or trees that appeared to be distinct from those that are existing in RCRC's coconut gene bank. The collected seednuts were initially classified into 8 cultivars namely: Cuyamis, Dajili, Limbajon, Pilipog, Lananon, Agtaon and Ogis. Generally, the common tall cultivar grown is referred to as simply "Lubi".

- * Since July, RCRC agreed to adopt PCA's method of coconut preprospection. In this method, a sample population was identified for every 10 km linear distance. Coconut populations with more or less uniform stand of more than 100 trees were chosen. With this procedure, the whole Sub-province of Biliran including the small islets around it were visited. Eight sample populations were chosen. From each population, data on nut characters, floral characters and number of leaf scars per meter were obtained. The sets of data collected from three of these populations were subjected to Mahalanobis' Test to identify distinct populations. The Baso and Salawad populations were identified as distinct from each other and from the existing Babybay Tall population in ViSCA. One hundred fifty seednuts were then collected from Salawad for planting.
- * All collections are being maintained in a newly established nursery of RCRC. A number of seedlings from the first collection trips in Southern Leyte were already planted in the field.

Characterization of local and introduced coconut cultivars/hybrids

- * Nine cultivars were observed in the nursery. However, only four of them had more than ten

germinated seednuts and these were the only ones considered in estimating the number of days from seed bed setting to seedling emergence. The data varied from 33 days for Aromatic to 64 days for Dajili.

- * Data on floral characters were gathered from twelve fruit-bearing accessions. Slight variation among cultivars were seen in days to spathe opening and duration of pollen shedding. Considerable variations were observed in length of rachis, length and number of spikelets, number of buttons per inflorescence and duration of stigmatic receptivity.
- * Nut component analysis was done for seven fruit-bearing accessions. Variability exists in all the parameters considered in the study. Baybay Tall had the highest copra yield per nut. Among the dwarfs, Tacunan gave the highest meat and copra per unit yield while Coconino and Orange Dwarf gave the lowest.

Catigan, on the other hand, showed the highest fruit quality value (FQV) indicating that it had the most desirable distribution of accumulated dry matter in nuts. It had the highest proportion of meat to the whole nut.

Cytology of selected coconut cultivars

- * The meiotically active stage of inflorescence of each cultivar was determined using a newly opened spathe as the reference. It was observed that the third unopened one was generally, the meiotically active stage. In Baybay Tall and Yellow Dwarf cultivars, the meiotically active stage is the next younger spathe (4th).
- * Chromosome counting was started in seven cultivars. Except for Coconino, the dwarf cultivars were



observed to exhibit the narrow ranges in chromosome number compared with Baybay Tall. Furthermore, they also had higher frequencies of occurrence of cells with the normal chromosome number.

Generally, most of the cells observed showed normal chromosome pairing at diakinesis. Abnormal pairing, however, was also present in all cultivars examined.

Chromosomal aberrations were also identified and their frequencies determined. The most common disorder observed in the meiotic cells of seven coconut cultivars under study was the presence of late congregating chromosomes in varying numbers at metaphase I. Baybay Tall showed a lesser degree of occurrence of late congregating chromosomes compared with the dwarfs. It was also observed that the most common form of late congregating chromosomes was a bivalent.

Based on the data on chromosome numbers, it appeared that

most of the late congregating chromosomes failed to divide equally or not at all before cytokinesis. The unsynchronized isolation would often result in uneven distribution of chromosomes among meiotic daughter cells. This is one of the causes of pollen sterility.

Other aberrations such as multi-plates or irregular spindle orientation at Metaphase I and irregular cytokinesis were also seen in dwarf cultivars. The frequency of their occurrence will be considered in the latter part of this study since they could also significantly affect the quality of pollen produced by the coconut cultivars being examined.

Only two samples from two cultivars were studied for pollen fertility. Tacunan had 91.7 percent fertile pollen while Catigan III-2 had 85.3 percent.

The potential use of growth characters to differentiate authentic hybrids from illegitimates

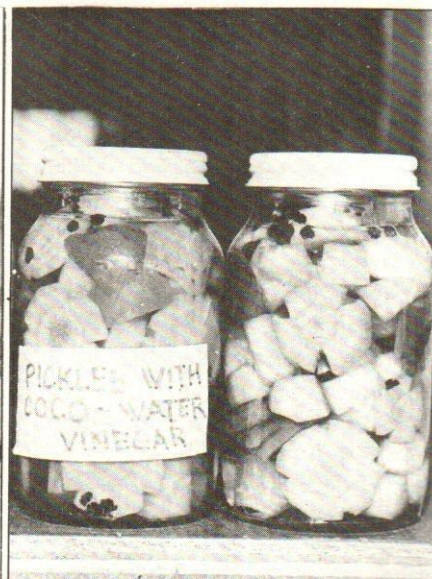
Sixty (60) seednuts each of Coconino (CCN), Lingkuranay

(LKY), Tacunan (TAC), CCN x BT and TAC x BT were used in this study. For OD and OD x BT, only 36 seednuts each were sown due to unavailability of seednuts at the start of the study. Seednuts were equally distributed to 3 replications with the exception of OD and OD x BT which had only two replications.

Each seednut was sown in the germination bed and labeled accordingly. Standard practice in raising coconut seedlings was followed for all treatments.

Germinated nuts were counted in all treatments and percent germination of 4 hybrid crosses were compared to their female parents. Higher percentage of germination was observed for OD x BT compared to its female parent. The dwarf cultivars, TAC x LKY, gave value higher than their hybrid counterparts while no apparent difference between CCN and CCN x BT was observed.

Number of days from sowing to shoot emergence was also recorded. The result showed that all



The RCRC Director briefs visitors on the use of coco by-products for production of charcoal (left) and vinegar (right).

hybrid crosses except TAC x BT were early germinators.

Similarly, girth circumference and seedling height were recorded. Two months from shoot emergence, the following observations were made: Girth size was observed to be bigger in the hybrid seedlings. Also, seedlings of hybrid crosses were taller than their female parents except for LKY x BT. Seedlings of LKY were slightly taller than the hybrid cross, LKY x BT.

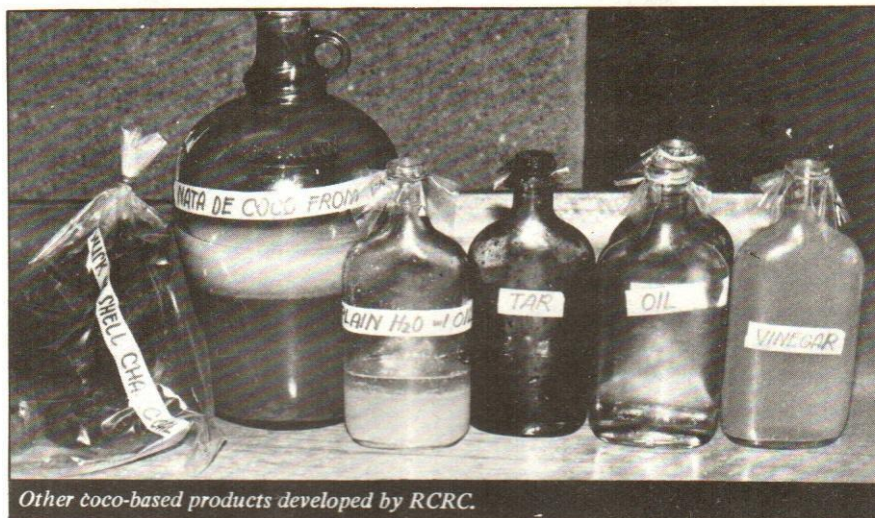
Multiple Cropping

Cultural and management studies in coconut

- * Green corn and/or mungo were planted under coconut on June 15, 1983 for the first cropping and rice on September 14, 1983 for the second cropping. This was the third replication for green corn and/or mungo and the fourth for rice.
- * Rice under coconut gave very low yield in 1983 largely due to the very high percentage of unfilled grains per panicle. As a consequence, a negative profit from rice crop was incurred. Further, results also showed that solid green corn planting (CP₂) gave the highest total net profit, P 4,520.63/ha. A cropping combination of green corn and mungo with conventional tillage after rice (CP₁) ranked next to CP₂ although its total net income was only P 775.13 per hectare. Both CP₃ and CP₄ had negative total return because of the poor yields of green corn and/or mungo and rice during the first and second croppings, respectively.

Intercropping coconut with some selected annuals in Eastern Visayas

The implementation of location testing of promising annual crops was only started in June due to



Other coco-based products developed by RCRC.

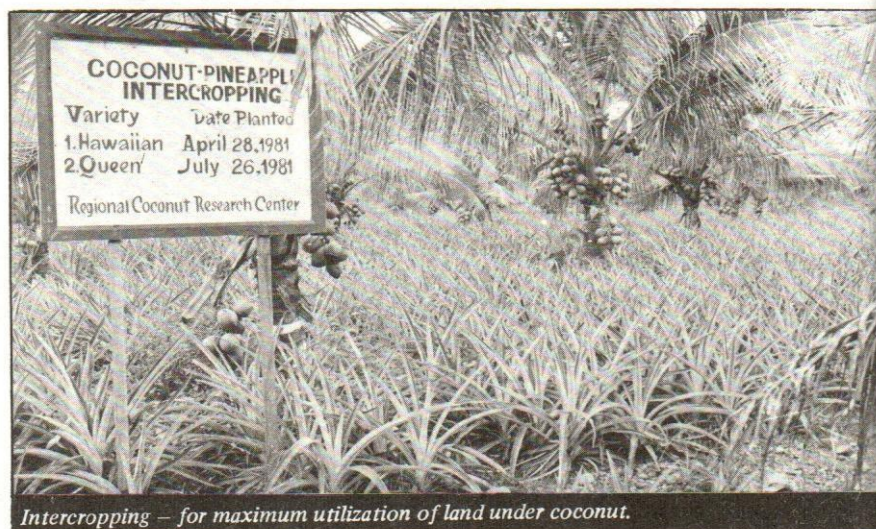
drought that occurred from January to May.

- * Mungo — CES ID-1 showed promising yield under Hilongos and Tanauan conditons. Under Bontoc conditions, its yield was reduced by more than 50 percent although it was still higher than the yield obtained from CES ID-21.
- * Sweet potato — Only BNAS 51 was tested due to non-availability of other cultivars. Its yield was very low due largely to excessive rain during the growing season.
- * Peanut — Four promising peanut varieties were tested in Tanauan. The yields of all cultivars were

very much decreased|mainly because of excessive rain.

Development of crop logging technique for coconut in Eastern Visayas

- * Results of tissue analysis revealed that N, K, and Cl of the leaves increased as the rates of ammonium sulfate and potassium chloride application were increased. Further, leaf Na content was decreased with increasing rates of fertilizer application. This was expected since K and Na are known to play similar physiological roles in the plant.
- * The moisture content of coconut leaves did not appear to have been



Intercropping — for maximum utilization of land under coconut.



influenced by rates of fertilizer application.

Coconut intercropped with pineapple

Activities done under this study were on the identification and establishment of the experiment on February 11, 1983. No initial findings yet. Care and maintenance work such as fertilizing, spraying of chemicals and spot weeding were done and the data on plant height were recorded.

Effect of ethrel and calcium carbide application on flower induction of pineapple

No data has been collected yet since the plants were still at the vegetative stage as of December 1983. Only yield data will be gathered for this study.

Yield response of ratoon and main crop of pineapple to levels of fertilizer application and number of suckers retained after harvest

So far, the activities made in this study are on the establishment of the experiment. Pineapple suckers were secured, fertilizers, herbicides and fungicides were applied and the plant height was gathered.

Intercropping coconut with some perennial crops in the Sab-a Basin areas

- * A suitable coconut farm in Alang-alang, Leyte was identified and chosen. This area represented only one replication. Identification of two other areas is going on.
- * Cacao, coffee, papaya and ipil-ipil seedlings were being raised for planting in other locations.
- * Experiment in Alang-alang, Leyte (Rep. 1) was started in September 1983. Cacao, coffee, pineapple and ipil-ipil were already planted.

Physiology, Tissue Culture, and Biochemistry

Coconut embryo culture and organogenesis

Mature embryos (10-11 months Old) of local cultivars, e.g. Baybay

Tall, Taçunan, Catigan, Bilaka Bohol, Camotes, Orange Dwarf, Yellow Dwarf, Coconino, Albura, and Lingkuranay were inoculated for both **in vitro** seedling formation and callus induction. Embryos of other cultivars namely: Zamboanga, San Ramon, Tagnanan, Laguna, Aromatic, Bago-Oshiro and Makapuno collected from PCA-Zamboanga Research Center and Davao Research Center were also germinated **in vitro**.

Response of embryos to culture conditions varied considerably from one cultivar to another. Development of shoot and root in germinating embryo was not synchronous and it seems that there was no definite pattern of development even among embryos of one cultivar inoculated in the same batch. Remedy treatment have been given to embryos with either poor shoot or poor development.

Sequential transfer of cultural embryos from liquid to two solid media at 6- and 8-week intervals was reported to be optimal for complete plantlet development. However, it was observed in this study that the majority of cultures need to be transferred from liquid-solid-liquid-solid medium for complete development. Experiments are being conducted to optimize the sequence and time intervals of transfer from one medium to another. Despite the mentioned problems, a number of **in vitro** seedlings are ready for potting at the present time.

Callus formation was observed on embryos cultured on medium containing 1ppm 2,4-D and 0.1 ppm GA_3 . Initially, the embryo enlarged radially and there were longitudinal corrugations on the surface. The embryo continued to increase in size and more proliferations occurred to deepen the corrugations. Finally,

the whole structure became disintegrated. Subculturing following this stage favored adventitious root formation with prominent root tips and profound root hairs. Rooted cultures were transferred to shoot inducing medium. However, only pre-existing shoot apex became green with fairly well-developed lead primordia. No adventitious shoot formation has been observed so far.

Combinations of GA_3 and 2,4-D at various concentrations were tested. Result showed that 2,4-D applied at 1 and 5ppm concentrations appeared to be toxic to the cultures especially in the absence of GA_3 . Increasing GA_3 concentrations e. g. 0.1, 0.5, 1.0, 5.0 ppm seemed to favor shoot development while increasing 2,4-D concentrations from 0.1, 0.25, 0.5 to 1.0 ppm in combination with GA_3 promoted root development. However, it is interesting to note that cultures on medium with a combination of low to moderate level of GA_3 and 2,4-D developed a prominent mass of spongy tissue at the joint between shoot and root. Primary roots were also commonly observed in many cultures. A similar pattern of callus formation was consistently observed on embryos cultured on medium containing 0.1 ppm GA_3 and 1ppm 2,4-D. However, as compared with that of CAM and BBO embryos, the growth of callus on BT embryos was quite slow.

Development of indicators for yield prediction at early growth stages of coconut

Various factors affecting NRA in leaf tissues of coconut seedlings were investigated. Among these are (a) time of sampling, (b) pre-soaking medium, (c) assay medium, (d) assay temperature, (e) time-course of NRS, (f) size of sample, (g) leaf position, and (h) pH profile of NRA.

Coconino, seedlings of 6-10



months old were used in the investigation. Results obtained indicate that:

- * NRA varied significantly with sampling times during the day;
- * Addition of SDS and Chloramphenicol, to the presoaking medium, reduced NRA;
- * NRA was significantly higher when assayed at 40°C compared to room temperature;
- * NRA increased linearly as the number of leafdiscs used was increased from 45 to 90; beyond this NRA declined. Interestingly, NRA from whole leaf discs and that from sliced leaf discs (at the same number) was closely parallel at 14 and 16 hours of incubation;
- * Statistical analysis showed that NRA was not significantly different among samples collected from leaves of different positions from the youngest to the most mature opened leaves. However, NRA varied considerably when samples were collected from the same leaf position but of different seedlings.
- * NRA increased linearly from 10 to 20 hours of incubation; after that, NRA started declining.
- * Preliminary study on pH profile of NRA indicated that the peaks of activity were at pH 7.0 and 8.0. Further studies are being conducted to verify whether or not nitrate reductase has isozymes and at what pH NRA would have the highest peak.

In situ seedlings of various cultivars namely, Catigan, Tacunan, Orange Dwarf, Coconino, Bilaka Bohol, Baybay Tall are being reared at RCRC nursery and are ready for NRA determination.

Biochemical approach to diagnosing N and K requirements of coconut

- * Palms were fertilized twice with $(\text{NH}_4)_2\text{SO}_4$ and KCl, each time

using half of the yearly rate of fertilization.

- * Matured nuts were harvested at 45-day intervals, and nuts were processed into copra. Data on nut yield and copra per nut as affected by increasing levels of N and K fertilizers were also collected. Generally, it was noted that there was an increase in copra yield in 1983 compared to that in the previous year (1982). This was because of an increase in nut yield (number of nuts) but not in weight of copra/nut. In 1982, a higher weight of copra/nut was recorded. The long drought affected the palms, so much so that smaller nuts were produced. In spite of this, unfertilized palms gave the least copra weight per nut.

that 7:00am sampling of leaf number 14 for 25-year old tall coconuts would give maximum activity for endogenous nitrate reductase with a presoaking of 24 hours in buffer medium. The assay hour is one (1) hour.

For induced activity of the enzyme, verification of the procedure has to be done. However, the results were not as expected. It was expected that the induced NRA should have been higher than the endogenous NRA, instead, the reverse was found.

- * Samples of coconut water were also collected twice a year for the analysis of peroxidase and polyphenol oxidase activities. These oxidizing enzymes are believed to be negatively correlated with K



To develop outstanding coconut varieties is the ultimate goal of the RCRC Tissue Culture Section.

- * Several experiments were conducted in the laboratory to standardize the assay procedures for endogenous nitrate reductase activity and induced nitrate reductase activity. It is therefore concluded

in coconut water. At this point no comparison can be made. Data for the analysis of K in coconut water is not available. The result showed that the activities of both enzymes increased tremend-



ously compared to their activities 6 months after fertilization.

Evaluation of the relative merits of synthetic and natural hormones on fruit set and fruit development of dwarf coconut

Forty (40) palms of Tacunan (dwarf) were selected and labeled for the study. Five (5) palms were used to represent each treatment. The following observations were made based on the three replications 15 weeks after the application of treatments:

Inflorescences of Tacunan sprayed with 2,4-D at 30 ppm have the highest fruit set value of 45.05 percent, i. e. more buttons were counted in a bunch. A mixture of 2,4-D and coconut water at 30 ppm concentration gave result comparable to that of the control. Other treatments gave lower fruit set percentages than the control. Statistical analysis at this stage of collection showed highly significant differences among treatment means. It can be deduced at this point that 2,4-D is implicated in fruit set and fruit abscission of Tacunan inflorescences.

The highest polar and equatorial circumference measurements were observed in inflorescences treated with IBA at 30 ppm and its mixture with coconut water, meaning bigger and rounder nuts were observed on palms sprayed with these treatments.

Agronomy and Soils

Effects of periodic hedge cutting of ipil-ipil, madre de cacao and kudzu on the yield of coconut

* Madre de cacao and the kudzu-treated palms gave more nuts and copra production than those palms without any leguminous crop (control) during the period from January to November 1983. Planting of leguminous crop, regardless of species, did not improve the weight of copra per nut.

* Data on herbage yield of each leguminous crop, thickness of the meat and soil and tissue analysis were being consolidated and tabulated.

Comparative field trial of hybrid/cultivars grown under ViSCA conditions

- * A tree of YMD x WAT produced 16 bunches per year compared to 14 bunches per year of Dumano.
- * On the average, 4.19 nuts of YMD x WAT gave 1 kg of copra compared to only 2.73 nuts of Dumano.
- * A hectare of YMD x WAT was computed to produce 3.36 tons of copra compared to only 1.41 tons of copra for Dumano

Effects of organic and inorganic-N on the productivity of coconut grown on four important soil types in Leyte

- * The planting of kudzu and ipil-ipil was delayed until July because of the long drought. Three harvests were made on experimental palms in Sogod while only two harvests were done on experimental palms in Burauen.

Response of low yielding coconut trees in Barangays Cabalasan and Bubon to ammonium sulfate, potassium chloride and dolomite application

- * First gathering of the data was done on November 15, 1983, hence no initial development in this study could be reported as of December 1983.

UPLB coconut breeding project: Field performance trial of coconut hybrids and cultivar

- * Within fertilizer levels, differences in all growth characters among entries were noted. Within entries, the effect of fertilizer levels on growth characters was not clear.
- * Certain hybrid crosses started to flower during the year. It appeared that hybrid crosses COCO3YD and HGT/TAG were most precocious. Their precocity appeared to be associated with

their faster rate of leaf production.

Field performance of three imported hybrids of coconut grown under ViSCA conditions

- * Data on trunk height and leaf production of each hybrid were taken once every six months. The annual leaf production of the hybrids was higher this year than the previous year. YMD x WAT cross was still the tallest among the three.
- * The latest bearing NRC x WAT palm was observed to have its first spathe emergence at 4 years and 4 months after field planting.
- * Two batches of nut samples from the hybrid populations were subjected to nut component analysis. The first batch was harvested in June and was sent to PCA for analysis. The second batch was harvested in August was analyzed in ViSCA two days after harvest.

GDE x WAT gave the highest copra yield per nut while YMD x WAT had the lowest in both batches. NRC x WAT had a little higher fruit quality value than GDE x WAT.

- * Eight harvests were done during the year. GDE x WAT gave the highest nut and copra yield per hectare closely followed by NRC x WAT.

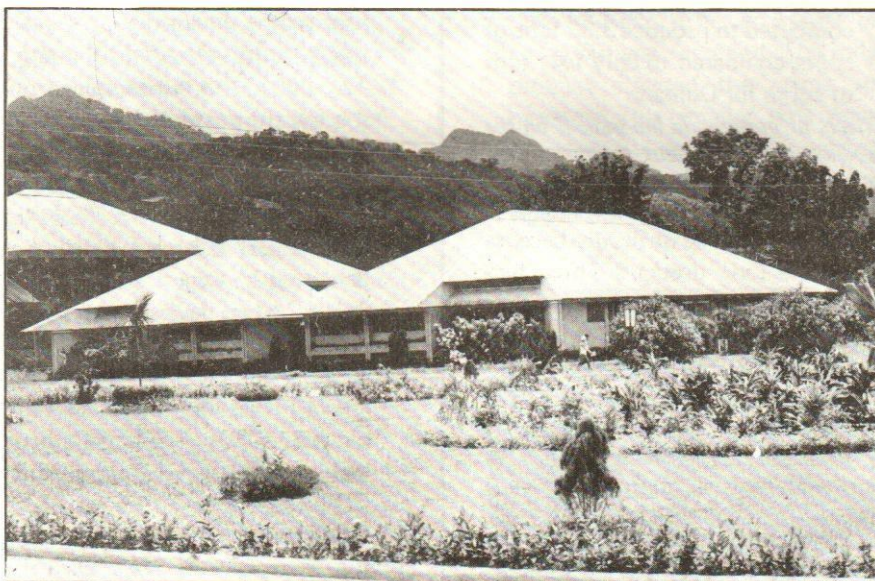
By-Product Utilization for Fuel

Briquette production from coconut by-products/parts

- * A prototype of the briquetting machine was developed. Initial tests showed that the machine is worth further testing and modification.
- * A drum kiln was fabricated. Charcoaling tests using different parts/materials from coconut have been underway.
- * Clayey soil and cassava flour at different proportions have been tried as binder of briquettes.



Center for Social Research in Small-Farmer Development



Objectives/Targets

- * To increase the rural people's access to and efficiency in the use of resources and services to maximize production and profit.
- * To conduct short-term training courses to advance knowledge in social research and enhance development among students, social science researchers, agency heads, and other entities.
- * To extend support services on research design and statistics, instrumentation, and computer programming to improve the rigor and the efficiency of resource utilization in conducting social research by the College and other private as well as public agencies.
- * To extend consultancy services in a wide range of expertise to other entities interested in small farmer development.
- * To collaborate with the Agricultural Education and Agricultural Extension Department in offering graduate courses on social research and small-farmer development.

Completed Researches

In-Service Training Needs of Rural Development Workers in the Visayas

Significant Findings:

The rural development workers in the Visayas were mostly males, graduates of agriculture courses, and had extension work experience of less than 10 years.

Farm and home visits and informal discussions were the most frequently used and found most effective of the extension methods. Despite the many setbacks in extension work, many of the RDWs found their jobs satisfying.

Their clients were mostly farmers and housewives. Most of the clientele believed that rural development activities were done to help the people, and a significant number considered the RDWs in their barangays to be very effective or moderately effective.

The training needs of the RDWs included both social and technical skills. Specifically, these included agricultural and related skills in farm management, livestock production, cooperative development and cottage industries. Besides these, they also needed training programs in human relations, extension methods and techniques and communication skills.

Training Needs of Coconut Farmers in Eastern Visayas

Significant Findings:

Only a few of the farmers in Eastern Visayas had attended trainings on coconut farming conducted by the Philippine Coconut Authority and the Regional Coconut Research Center in ViSCA.

These farmers learned and adopted a number of coconut farming practices suited to their needs and within their means.



Attendance in trainings influenced the adoption of the technology taught but did not significantly increase coconut production and income.

The majority were interested in attending trainings on various aspects of coconut farming such as fertilization, pest and disease control, use of improved coconut varieties, replanting, soil analysis and chemical weeding, copra price standardization, and credit availment.

An Assessment of Samahang Nayon in Leyte

Significant Findings:

The number of non-functional Samahang Nayon in Leyte far exceeded the functional and semi-functional ones.

The primary motivation of the barangay people in joining the Samahang Nayon was self-centered rather than group-centered.

The perceived causes of failure of some Samahang Nayons were: lack of capable, honest and devoted leaders; indifference and non-cooperation of SN members; inability to pay loan dues; lack of training; misuse of funds; inadequate logistical support of fieldworkers; presence of similar associations competing with the SN; large area of coverage; and too many tie-up programs for the fieldworkers.

An Assessment of Credit of Coconut Farmers in Leyte

Significant Findings:

The coconut farmers of Leyte had a marked preference for non-institutional credit sources. The non-institutional sources, according to preferences were: middleman, store patronized, friends and relatives, and landlords. This non-institutional lender and farmer-borrower relationship operated on the principle of reciprocity. Transactions were done on a personal and informal basis generating much goodwill and closer

relationships between the lender and the borrower. These elements of personalism and reciprocity seemed to be lacking in the more formal credit institutions.

Most coconut farmers were good borrowers. The failure of some to pay their loans was attributed to their misuse of credit. Loan funds were used in non-income generating ventures such as payments for subsistence needs. Thus repayment of loans were taken from farm income further reducing the amount for the off-season needs of the farmers.

Communication of Farm Technology to Small Farmers in Leyte

Significant Findings:

Personal sources such as neighbors, friends, relatives and extension workers were highly credible and preferred sources of farm information. Besides personal sources, radio was the most prevalent source of information. Magazines, comics, newspapers, pamphlets and television were also used although limited by their availability and the literacy level of the farmers.

However, extension agents and other personal sources were preferred over the other media sources for information on crop and animal production. Furthermore, mass media information sources were mainly for recreation, relaxation and enjoyment rather than for getting relevant information.

The Rural Poor of Kansungka, Baybay, Leyte

Significant Findings:

Sharecroppers and landless agricultural workers comprised a majority of the population in Brgy. Kansungka. These farmers produced barely enough to survive. Labor was underutilized due to land scarcity and lack of employment opportunities. Income of women from "pangahag" (gleaning), rice planting, weeding, harvesting and wages from do-

mestic jobs contributed a significant share to the household income.

Productivity and farm income among the various tenure groups varied significantly. Non-farm manual workers were better off than those who depended solely on income from the land.

Participation in policy-making activities through involvement in organizations was very low. Farmers did not have much choice as to what organization to affiliate with since they did not decide what organizations should be organized in the barangay.

The Decision Making Roles of Rural Women in Eastern Visayas

Significant Findings:

Women made joint decisions with their husbands in agricultural activities. These decisions were generally implemented by their husbands.

Their input in making and implementing decisions on income-generating projects, community activities, marketing of products, and use of income from income-generating projects were, however, low.

Consumer Preferences for Root Crops in Region VI and Region VII: A Descriptive Analysis

Significant Findings:

Sweet potatoes, plantain bananas, cassava, taro, rice and corn were the five alternative food crops consumed by households in Region VI and Region VII when major staple foods were not available. Among these, plantain bananas, sweet potatoes and cassava were frequently consumed.

Lower income groups tended to eat plantain bananas more than sweet potatoes, while higher income groups did the opposite. Cassava was also commonly eaten by lower income people.

Although people preferred sweet potato, it was not frequently consumed compared with plantain because it was relatively more expen-



sive. Consumers got their supply of sweet potato from the open market, direct from farmers, from their own production and, from relatives and friends. Most households served sweet potato in boiled form and as "ginata-an". Common sweet potato products included: potato chips, "camote cue", sweets and candies and cakes.

Ongoing Researches

Field Level Technology and Utilization of Services and Resources of Upland Corn Growers in Eastern Visayas

Two hundred upland corn growers in Northern and Southern Leyte were interviewed to determine their production practices and the factors related to their field level technology. The extent of utilization of available resources and services for upland corn production were also assessed. Physical, economic, socio-political and demographic factors were studied as they relate to the field level technology and the level of utilization of services and resources.

Resulting Publications:

- * Corn Production Practices and Beliefs Among Upland Farmers in Northwestern Leyte
- * Response and Services Utilization for Upland Corn Production in Northwestern and Southern Leyte

The Filipino Carabao Raisers: Some Sociological and Economic Studies, 1983

One hundred fifteen carabao raisers from each province: Iloilo, Bohol and Leyte were interviewed to obtain information that would illustrate the role of the family in raising the carabao; the utilization of community services and resources and the level of technology employed in the maintenance and reproduction of carabaos. Case studies of backyard carabao raisers and different types of farmers as to cropping system were conducted to get a holistic view of the situation.

Resulting Publications:

- * The Role of Family Members in Carabao Raising in the Visayas
- * Factors Associated with Farm Level Technology in Carabao Raising in the Visayas
- * Cultural Value and Beliefs Associated with Carabao Raising in the Visayas
- * Economic Contribution of Carabao to the Farm Household and Economic Productivity Analysis



CSR-SFD Director explains to Land Bank officials the Center's program on developing the agricultural estates in San Isidro, Leyte.

Socio-Economic Analysis of Rural-Based Organizations in Eastern Visayas

Policy makers, change agents, officers and members of the Samahang Nasyon, Rural Improvement Club, Anak Bukid, Farmer's Association, Agrarian Reform Beneficiaries Association, and the Barangay Integrated Services Association in Eastern Visayas were the respondents of this study. The survey determined the RBO's activities; identified the members' needs and expectations; and the factors internal to the organization (e. g., leadership and member's attitudes) which could affect the attainment of organizational objectives.

Resulting Publication:

- * Rural-Based Organizations: How effective Are They in Meeting the Needs of their Members?

The Kilusang Kabuhayan at Kaunlaran (KKK) Projects in the Visayas

Naturalistic research techniques and the survey method are used for data collection and analysis. Interviews with KKK program implementors and participants determined the different problems encountered in planning, implementing, and monitoring KKK projects. The study also

dives into the cost of the KKK projects to the government and the private sector participants. It, likewise, involves the application of comprehensive methods of evaluation to measure the social impact and cost-benefit of the KKK projects in the Visayas.

Resulting Publications:

- * The KKK: Problems in Planning, Implementing and Monitoring
- * Beneficiaries' Perception of the KKK Projects in the Visayas
- * Socio-Economic Impact of the KKK Projects in the Visayas

Case Studies of Marginal Farmers in Three Depressed Municipalities of Southern Leyte

The study uses ethnographic research methods such as participant observation. The field researcher systematically and objectively records his daily observations. Three types of observation notes are made:

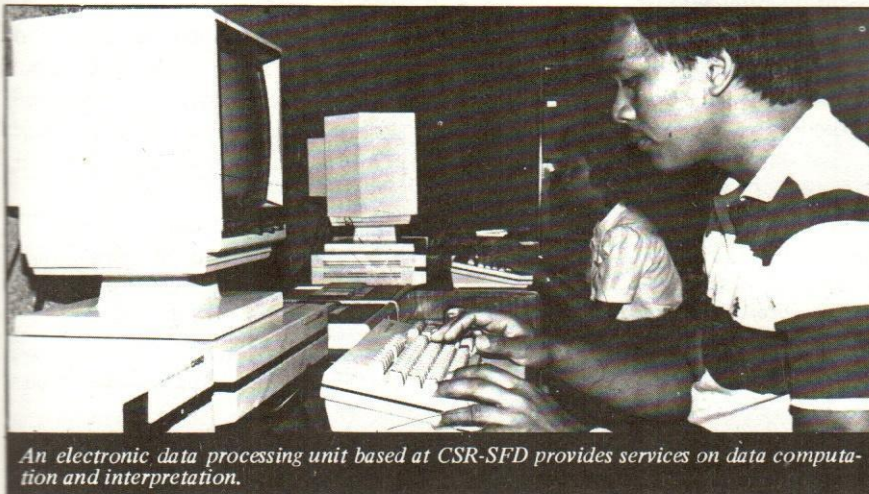


the observation notes which chronicled the behavior or activity being observed as it happens; theoretical notes where the researcher recorded his interpretations of the behavior or the inferences he draws from the observation notes; and, the methodological notes where the researcher records what he intends to do further with the observation — whether

ment the survey data. Data will be analyzed using descriptive statistics, general linear models and other correlational statistics.

Resulting Publications:

- * The Role of Family Members in the Production and Processing of Root Crops in the Visayas
- * Beliefs and Value Systems Associated with the Production



An electronic data processing unit based at CSR-SFD provides services on data computation and interpretation.

or not it still needs to be followed up, and where and how to verify. These notes include socio-economic data, aspirations, life satisfaction, perceived problems, coping mechanism, attitude towards government programs, and attitude towards subversive elements.

Resulting Publication:

- * Profiles of Poverty: Case Studies of Marginal Farmers in Depressed Municipalities of Southern Leyte.

Family Dynamics of Small-Scale Root Crop Production and Processing in Eastern and Central Visayas

A survey is used to determine the participation of family members in decision making and their roles in small-scale root crop production and processing, and the family values associated with the existing farm level technology.

Case studies of selected small-scale root crop producers comple-

ment the survey data. Data will be analyzed using descriptive statistics, general linear models and other correlational statistics.

- * Processing Techniques of Root Crops in Eastern and Central Visayas

Museum of Indigenous Farm Technology

This project is a continuing endeavor. It involves the collection, annotation, accessioning, cataloguing and analysis of artifacts, extensive library research, and publication of monographs. Collection will be conducted in two ways: household collections and archaeological diggings. Phase I involves collection of household artifacts in Cebuano and Waray-speaking areas of Leyte. Archaeological diggings are done in identified archaeological sites. Artifacts — collected and dug-up will be put on exhibits from time to time.

Resulting Publications:

- * Salient Features of P. D. 374

- * A Catalogue of Initial Acquisition of the Museum of Indigenous Farm Technology
- * Preliminary Analysis of Artifacts Found in Baybay, Inopacan, Hindang, and Hilongos Archaeological Sites of Leyte

Socio-Economic Impact of Agricultural Support Services Project (ASSP) in the Visayas

The analysis of the socio-economic impact of the different ASSP components will be done on institution and farm levels. Institution analysis will be addressed to agencies involved in generating technology. Farm level analysis will assess impact on small farmers of the technologies generated, verified and disseminated.

The study shall also include inventory of existing physical and human resources utilized in carrying out the functions of the ministry. Comparative analysis of utilization, cost, manpower, efficiency, accuracy, among others, will be made on before-and-after ASSP basis. A before-and-after analysis of data development will be made to determine the changes in data base for planning, efficiency/accuracy of data gathering, processing and analysis.

Resulting Publications:

- * The Agricultural Support Services Project (ASSP): Its Socio-Economic Impact in the Visayas Region
- * An Analysis of the Impact of ASSP on the Research Capability of the Ministry of Agriculture and the Active Research Stations in the Visayas
- * Implementing the ASSP: Problems at the Institution and Farm Levels in the Visayas

The Social Dynamics of Planned Change: An Ethnographic Study of Selected Villages in Leyte, Philippines

The study is being undertaken in six villages of Leyte. It aims to describe the physical settings of the villages, the culture patterns, social



interaction processes, and people's reaction to planned social change. Research activities are limited to two social settings: lowland and upland.

The implementation of planned change is a cooperative effort of the field staff, the cooperating agencies, and the villagers. Benchmark studies guide researchers in determining the extent of the changes occurring in a particular village. Participant-observation, keeping of ethnographic records and photo documentation depicting the activities of the people are some of the major strategies to study each social group. A series of evaluation will be done from time to time in order to assess the progress of the project.

Resulting Publications:

- * Modifications in Traditional Labor Arrangements in Harvesting and Threshing Rice as a Consequence of the Introduction of Small Rice Threshers in Kansungka and its Neighboring Villages
- * Attitudes and Perceptions of Shifting Cultivators of the Bureau of Forest Development (BFD) Integrated Social Forestry Program (ISFP) for Upland Farmers
- * Who is a Shifting Cultivator: A Social and Economic Profile
- * Access to Farm and Non-Farm Sources of Income Among Landless Workers in Some Barangays of Western Leyte
- * Landlessness: The Case of Kansungka, Baybay, Leyte
- * Catering to Sectoral Concerns in a Small Village: Development Experiences of the Kansungka Upland Farmers Association

Factors Affecting the Adoption Level of Corn Production Technology and the Status of Repayment Among the Corn Production Credit Recipients in Selected Municipalities of Cebu and Bohol

The survey of 151 credit recipients in Cebu and 75 in Bohol determines the physical, demogra-

phic, technical, political, and economic situations that may influence the adoption of recommended corn production practices and the level of credit repayment. Furthermore, three cases of M-77 borrowers in Cebu and four M-55 borrowers in Bohol are studied. Information from these cases supplement the findings of the survey.

Resulting Publications:

- * Social, Economic, Political, and Physical Factors Affecting the Adoption of Corn Production Technology in Cebu and Bohol
- * Case Studies of Corn Production Credit Repayment Delinquency in Cebu and Bohol

Responses to Socio-Economic Pressures of Marginal Hillside and Upland Root Crop Producers in Eastern Visayas

This study will determine the root crop farmers' socio-demographic profile, the existing economic and social pressures and their coping behavior to meet those pressures. Data will be collected through structured interviews with marginal root crop producers in Eastern Visayas.

Resulting Publications:

- * Economic Behavior of Marginal Hillside and Root Crop Producers in Eastern Visayas
- * Kinship: Attitudes and Perceptions of Marginal Hillside and Root Crop Producers Towards Reciprocal Relations in Rural Villages in Eastern Visayas
- * Rural Crime: Incidence and Control Among Marginal Farms and Root Crop Growing Communities in Eastern Visayas

Traditional Celebrations Among Marginal Hillside and Upland Root Crop Producers in Eastern Visayas: Who Conforms and Why
San Isidro Rural System Development Project (SIRSDP) Socio-Economic Benchmark Study

The study was conducted at the four pilot barangays covered in the

SIRSDP in San Isidro, Leyte. The survey was composed of two parts. The first tried to determine the demographic characteristics of the farm households in the project area; occupational skills of farmer respondents; indices of living; nutrition; health and sanitary practices; and perceptions towards life and living conditions in general. The second part focused on the farmers' resources such as land, labor utilization, farm implements; poultry/livestock raised; availment and repayment of cash and non-cash credit for household and farm use; and other sources of income.

Resulting Publication:

- * A Socio-Economic Profile of Four Barangays in the Landed Estates of San Isidro, Leyte

Backyard Swine Raisers in Eastern and Central Visayas: Some Sociological Studies

A survey was conducted to determine the distribution of work responsibilities among the family members and their decision making prerogative, the existing field level technology, and the utilization of available resources and services for swine production and maintenance. The existing beliefs and value systems will also be examined in the light of the different production practices. On the other hand, case studies of selected backyard swine raising household were undertaken to expatiate and substantiate the information gathered from the survey.

Resulting Publications:

- * Family Labor Allocation in Backyard Swine Enterprise in the Visayas
- * Beliefs and Value Systems Associated with Field Level Technology of Swine Raisers in the Visayas
- * Case Studies of Selected Backyard Swine Raisers in the Visayas



Academic Departments



Objectives/Targets

- * To conduct researches that will lead to an increase in food production through better land utilization, better cultural management techniques, better animal production techniques and effective pest control measures.
- * To conduct adaptability tests for the different priority crops in the region.
- * To evaluate the market performance of crops and livestock and poultry in the Visayas region.
- * To conduct researches on food utilization and processing of animal and plant products.
- * To conduct feasibility studies on the utilization of farm waste products for feeds and energy substitutes.
- * To develop tools, machineries, and facilities using indigenous sources of energy for increased food production and utilization.
- * To conduct studies on prolonging storage life of farm products.

Accomplishments

Department of Agricultural Engineering and Applied Mathematics

The Department has only three faculty members who are actively involved in research and 7 others are on contractual basis. In spite

of the overloading problem among the faculty, they were still able to conduct 9 ongoing researches and prepare 19 research proposals for the year 1984.

For student research, 34 were conducted and 22 simple machines/

gadgets were constructed and evaluated. It is hoped that more appropriate and efficient machines could be developed out of the many good ideas from the students.

Ongoing:

- * Design and development of a mechanically aerated storage system and drying abaca fiber powered by wind and water.
- * Testing, evaluation, and improvement of the sun drying practices of abaca fiber in Eastern Visayas region.
- * Utilization of septic tank as a biogas digester.
- * Development and evaluation of a solar collector for drying root crops for food and feed.
- * Establishment of a biogas production pilot project in ViSCA.
- * Studies on water used by crops under different management and environmental conditions in Eastern Visayas region.
- * Design and development of portable animal powered abaca spindle stripping machine.
- * Design and development of animal powered coconut oil extractor.
- * Design and development of abaca dryer.

Department of Agricultural Development Education

Eight regular staff of the Department were actively involved in research activities. In 1983 eight researches were completed and 6 are still ongoing.

Completed:

- * Socio-economic analysis of RBO's in Region VI and VII
- * An appraisal of the training needs of rural development workers in the Visayas.
- * The OSY and unemployed adults in the municipality of Baybay; benchmark information and training needs.
- * Benchmark survey of cropping patterns of the six FSDP-EV



sites.

- * A survey of the educational needs of rural development workers in the Visayas.
- * Benchmark survey: barangay-based rural development program for small coconut farmers in Leyte, Phase II
- * Factors associated with farmers' technological changes in the farming system
- * Backyard piggery production in Eastern and Central Visayas: some sociological studies.

Ongoing:

- * Communication and clientele participation in income generating projects
- * Case studies of backyard carabao production
- * Transmitting validated research findings on coconut and root crops in Leyte through farm demonstration and visits and through radio
- * Evaluation of training programs under PCRDF-Project L'
- * Barangay-based rural development program for small coconut farmers in Leyte Phase II
- * Socio-economic study of farming communities in Eastern Visayas

Department of Plant Breeding and Agricultural Botany

A total of 14 research personnel are actively involved in research. Of these, 6 are regular staff and 8 on contractual basis. Majority of these personnel are directly involved in sweet potato varietal improvement. To further strengthen the research capability of the department, an internship training abroad was undertaken by two personnel. One was sent to CIMMYT, Mexico for a 6-month training from June to November 1983 on corn varietal improvement program; and the other was sent to AVRDC, Taiwan to undergo a 5-month training on new

technologies in sweet potato research from October 1983-February 1984. In research, the corn and abaca program of the Department has been firmed up with expected further support from agencies outside of ViSCA. However, commodity-wise, its research program is centered on root crops specially sweet potato. The research staff has embarked on a long term varietal improvement program on sweet potato. And as a result of this concerted effort three new sweet potato varieties, namely: VSP-1, VSP-2, and VSP-3 were approved and released by the Philippine Seedboard in May 1983 with subsequent enthusiasm from farmers, bankers, and businessmen to acquire and plant the new varieties.

A new project was also crystallized in the early part of 1983 entitled: "White Corn Improvement Project" with the hope of developing new white corn varieties for farmers' use.

Completed:

- * Physiology of cassava and sweet potato: studies to identify physiological parameters to high yield.

Ongoing:

- * Sweet potato varietal improvement program in the Philippines
- * White corn improvement projects for Central and Eastern Visayas
- * Abaca varietal improvement project

Department of Agricultural Economics and Agribusiness

Besides instruction and extension activities, staff members of the Department are also expected to undertake research. As of December 1983, there were 6 ongoing research studies funded by different agencies and 13 others were proposed. To cope with the different research activities of the Department, 6 research staff were recruited during

the year to assist the 7 regular staff.

Students, likewise, conduct research in their fields of specialization in partial fulfillment of the requirements for the degree. During the year, there were 8 completed and 25 ongoing student research studies. Of the 8 completed researches 2 were on socioeconomics; another 2 on production and management; 2 on case studies/analysis and the last 2 on income and expenditure patterns.

Ongoing:

- * Needs assessment survey (KKK)
- * The impact of agrarian reform program on productivity, employment and income distribution in selected areas of the Visayas
- * Economics of carabao production in Iloilo, Bohol and Leyte
- * Economic tests for profitability and alternative uses of sweet potato
- * Farm trials on semi-continuous cassava production
- * Supply potential of cassava, sweet potato and other feed ingredients for the ViSCA Feed Mill

Department of Arts and Letters

More staff of the Department are now involved cooperatively on a projected DSE funded program which has a research component, namely, "Maximizing Student Output in Basic Freshman Courses Through an Anchor Group and Workshops on Effective Teaching Methodologies and Localized Instructional Materials".

By maximizing the performance of the department staff who are working on ViSCA and PCARRD research projects, the department could accomplish more programmed tasks built around a tighter timetable although the staff could not attend any inservice training in research. To remedy the situation the

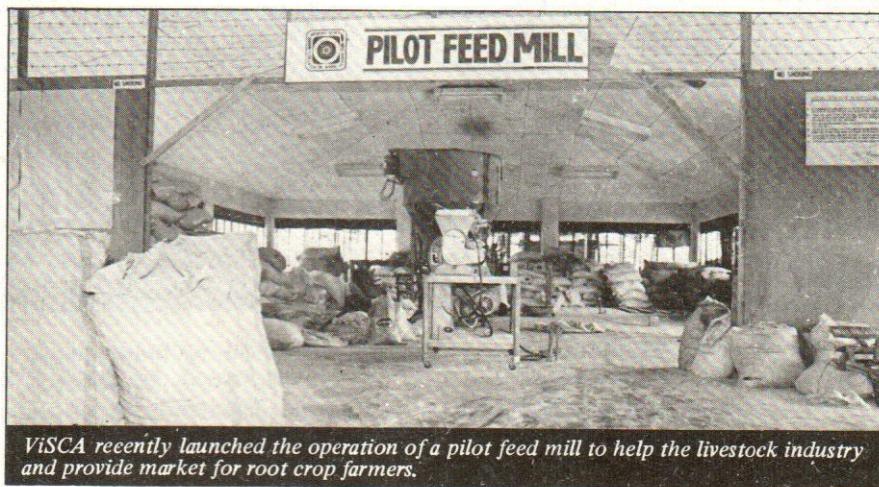


project leader had to provide ample guidance and assistance to the research staff. Although the request to reduce the load of staff doing research was approved, teaching activities still outweighed research which means generously sparing

tions..

Completed:

- * Formulation of testing readability guide
- * Determining leadership indicators and communication tasks of sociometrically chosen farmers



ViSCA recently launched the operation of a pilot feed mill to help the livestock industry and provide market for root crop farmers.

extra time for the latter activity. The Department was also able to distribute terminal reports to interested ViSCA units and research offices outside ViSCA including La Salle, Ateneo and UPLB. DAL research had been cited by Dr. G. Castillo and had aroused the interest of the PCARRD review panel including Dr. Dagot of PNC. Four research proposals had been completed in the areas of Humanities and Social Sciences, specifically on teaching-learning, instructional materials prototyping, literacy, and needs of social sciences and humanities program in agro-technical schools. However, these still require redirection and reorganization as suggested by prospective funding agencies outside PCARRD. Apparently, staff participation in research had increased specially those pertinent to department disciplines. A handful of articles on languages teaching and communication had also been written for national and local publica-

- * Variables that picture reality, affect living conditions and influence aspirations

Ongoing:

- * Transmitting validated research findings on root crops and coconut to users of research in Leyte

Department of Animal Science and Veterinary Medicine

A total of 6 regular staff were actively involved in research. The research of the Department concentrated on the utilization of sweet potato (damaged and undamaged by weevil) as feed for poultry and swine. It started on PCARRD-IDRC funded project on Utilizing Banana Plants as Feed for Cattle and Carabaos; one ViSCA-IFS-funded study on Village-based Agro-livestock research-extension, and one ViSCA funded project on Utilizing Mature Coconut Meat as Feed for Ducks.

Ongoing:

- * Performance of pigs with indigenous feedstuff at barangay level

- a. Growth response of growing finishing pigs with farmers' ration (kitchen refuse) and two levels of fresh grated coconut and banana trunk as main component of the ration
- b. The reproductive performance of graded gilts fed with farmers' ration, fresh grated coconut and banana stalk as main component of the ration

- * Evaluation of the performance of broilers fed with cooked and raw weevil-infested and non-infested sweet potato tubers
- * Supplementing banana stalks with legumes forage for cattle and carabaos
- * Village-based agro-livestock research extension approach
 - a. Recycling manure of goats fed with ipil-ipil as feed for muscovy ducks
- * Utilization of mature coconuts meat as feed for ducks
- * Pasture management under coconuts
 - a. Nutrient recycling in a coconut community
 - b. Characterization of the ecological and microbiological environment under coconut grass community
- * Cultural management studies under coconuts
 - a. Effect of different fertilizer rates on the herbage yield of selected forage crops under coconut
- * Reproductive performance of gilts fed with cooked sweet potato as a basal ingredient in selected farms in Leyte
- * Feeding management of gilts
- * Verification/substitution of corn with root crops for swine ration
- * Livestock and its interrelationships with other sub-systems; livestock management and inven-



tory survey

- * Identification and chemical evaluation of selected promising indigenous feedstuff

Department of Agronomy and Soil Science

There are 11 regular and 12 contractual research staff in the Department. The regular staff averaged 10 workload units in research. Including the research assistants/aides, they have attended 10 inservice trainings/seminars/workshops/conferences.

The Department conducted 21 ongoing researches in 1983 and 9 studies are proposed for 1984. Of the ongoing researches, 10 are in root crops, 3 in corn/sorghum, 2 in rice, 1 in legume, 2 in agroforestry, and 3 in vegetables. Most of them deal on cultural management (fertilizer, variety, weed control, and soil improvement) while some cover cropping systems and agroforestry. There are 13 researches funded by PCARRD and IDRC, 6 by PRCRTC, 2 by NAS, 1 by NAAP, and 3 by the department. The most serious problem encountered by researchers is the unpredictable weather condition. Delayed procurement of supplies and materials had been solved by making cash advances and buying own needs whenever possible.

Ongoing:

- * Effect of ipil-ipil as organic fertilizer on root crops
 - a. Effect of application of ipil-ipil herbage on cassava
 - b. Effect of application of ipil-ipil herbage on sweet potato
 - c. Effect of application of ipil-ipil herbage on gabi
 - d. Effect of application of ipil-ipil herbage on ubi
- * An agronomic approach to reconditioning marginal hilly areas for root crop production
 - a. Effects of widths of ipil-ipil



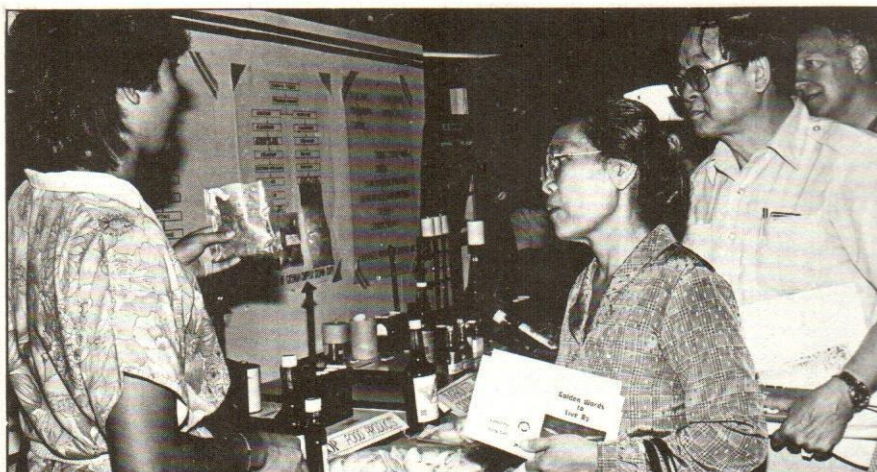
Cultural management of crops are still studied to provide alternative technologies to farmers.

buffer strip on the yield of root crops

- b. Cropping system for root crops in marginal hilly areas
- c. Effects of fertilizer levels on the continuous monoculture cropping of root crops in between ipil-ipil strips in marginal hilly areas
- d. Effects of green mulch at different slopes on the yield of root crops in marginal hilly areas
- * A comparative study on the effects of four animal manures on the growth and yield of cassava and on the bulk density of soil
- * The use of foliar fertilizer on root crops and their economic consideration (cassava and sweet potato)
- * Utilization of three industrial waste products as fertilizer and soil conditions for corn production
- * Weed control studies for corn and sorghum in the Visayas
- * a. On-farm evaluation trial at different methods of weed control for corn in the Visayas
- b. On-farm evaluation trial of different methods of weed control for sorghum in the

Visayas

- * NPK requirement of DMR # 2 in three (3) soil types of Sab-a Basin
- * The effect of zinc fertilizer on the growth and yield of rice planted in flooded and peat soils
- * Advanced trial of lowland irrigated rice
- * Diversification of agricultural production in Eastern Visayas
 - a. Verification of selected farming systems technology
- * Weed control of selected vegetables in the Visayas
 - a. Critical period to frequency of manual weeding on the growth and yield of vegetables
 - b. Critical weed control for maximum vegetable production
 - c. Chemical weed control in vegetables
- * On farm studies on spatial arrangement of root crops and succession of legume intercrops
 - a. On farm studies on spatial arrangement in cassava (*L. Manihot esculenta* Crantz) and succession of legume intercrops
 - b. On farm studies on spatial arrangement in taro and succession of legume intercrops



Processing and utilization of root crops and coconut and their by-products have been given emphasis by ViSCA.

Department of Agricultural Chemistry and Food Science

The Ag. Chemistry section of the Department started and finished one research study in 1983, while the Food Science section completed 2 projects with four still ongoing projects. The Department had two regular and six contractual research staff with an average workload of 60 percent on research for each regular staff. Some staff are doing full-time research.

Completed:

- * Development and improvement of some selected root crop products
- * Acceptability of baked products and snack items using root crop flour as wheat flour substitute
- * Development of chips from taro and cassava

Ongoing:

- * Development of new snacks and dessert products from root crops
- * Coconut-based products processing and acceptance studies
- * Clarification of coco-water vinegar and determination of its shelf life
- * The incorporation of coconut and other local products in swine-

ration designed for subsistence farmers

Department of Home Science

In spite of the heavy teaching responsibility of the staff in the Department due to the absence of two faculty members on study leave, one large ongoing project on the "Family Dynamics of Small Scale Root Crop Production and Processing in Eastern and Central Visayas" and four ongoing studies kept all regular and the junior staff involved. Eight research proposals are awaiting funding and more likely to start in 1984 or 1985. More technical research are expected to be undertaken in the future due to the availability of better facilities for research in the Department. A staff member's completion of a master's degree will boost the Department's capability to venture into more social science research.

Ongoing:

- * Family dynamics of small scale root crop production and processing in Eastern and Central Visayas
- * The Filipino carabao raisers; sociological and economic studies, 1983
- * Fresh miki noodle from compo-

site cassava, wheat and soybean flour

- * Utilization of dehydrated root crops in main dishes
- * Development of new snacks and dessert products from root crops

Department of Horticulture

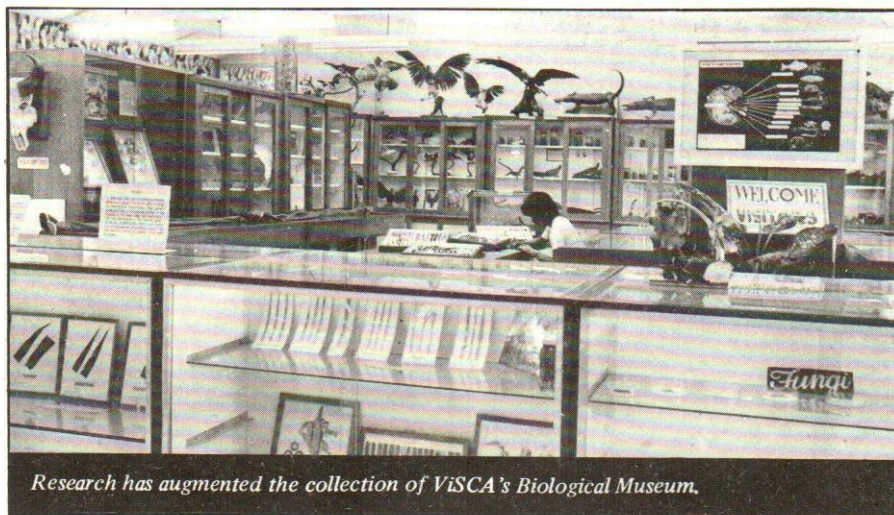
The Department had a total of 15 research personnel in 1983. Of these, 5 were regular and 10 on contractual basis. There were 21 ongoing research studies being conducted in the Department on different commodities – 5 on vegetables, 7 on plantation crops and 9 on abaca. Research proposals on different commodities were also submitted to different agencies for funding. Three proposals were on vegetables, 3 on abaca, 2 on plantation crops, 2 on root crops and 1 on ornamentals.

One staff member of the Department had 2 publications in connection with her Ph. D. dissertation, while 2 researches conducted outside ViSCA were also published by the Department.

The Department is in charge of maintaining and managing College projects which are utilized for instruction, research and extension. The projects include: pomology, abaca, banana, vegetable, cacao, and floriculture. Although possessing a good potential to generate income, these projects brought in very minimal income in 1983 because of the long dry season (December to May) which adversely affected the growth and yield of plants.

Ongoing:

- * All Philippine coordinated vegetable evaluation trial (cucurbits)
- * Cultural management of vegetables in the Visayas
- * Identification and development of potential cropping system for selected vegetables in the Visayas
- * Critical period and frequency of



Research has augmented the collection of ViSCA's Biological Museum.

manual weeding on growth and yield of vegetables

- * All Philippine-coordinated vegetable evaluation trials on solanaceous crops
- * Effect of storing stalks at different durations on fiber recovery and tensile strength of abaca
- * Growth, yield and development of abaca grown under coconut
- * Performance evaluation of abaca varieties on hilly areas of Sab-a Basin under specific rate of fertilizer application
- * Establishment and maintenance of regional abaca gene bank
- * Intercropping giant ipil-ipil shade trees planted at varying distance with abaca as cultural management practice
- * Production of grain legumes as companion crops to newly established abaca
- * Regional abaca cultivar and progeny testing
- * Comparative effects of madre de cacao and ipil-ipil as hedge and shade trees in abaca-based cropping systems in sloping areas
- * Comparative effects of anii and ipil-ipil as shade trees and madre de cacao and ipil-ipil hedges as source of O.M. in marginal hilly

abaca land

- * Breeding for yield and disease resistance of cacao
- * Nutritional and fertilizer requirements of promising cacao clones under coconut
- * On farm demonstration test of cacao under coconut
- * Nutrient status of coconut pasture community
- * Cultural management studies of coconut in Eastern Visayas
- * Barangay-based rural development among coconut farmers in Eastern Visayas
- * Effect of lime fertilizer and inoculant on the establishment of ipil-ipil under red acid soil

Department of Plant Protection

The Department had the biggest research staff in the college aside from PRCRTC. It had thirty-five research assistants and aides assisting the teaching staff in the various projects and studies conducted in the Department. During the year 1983, the Department conducted 17 projects on root crops, coconut, vegetables, rice and marine fisheries. Most of the studies (20) under these different projects were funded by PCARRD; 3 studies

by RCRC; 2 by ViSCA; 2 by VFR and 1 by NFAC. Of these different studies, 6 were either completed or terminated. These six studies were funded by PCARRD and the International Commission for the Development of Underutilized Plants (ICDUP). For 1984 funding, 5 proposals consisting of 21 studies were submitted to different agencies for funding. For 1983, undergraduate students completed 10 researches in entomology and 2 in plant pathology. There are 4 ongoing researches in entomology, 3 in plant pathology and 1 in weed science being conducted by undergraduate students. Likewise, graduate students are undertaking 4 ongoing researches in entomology and 2 in plant pathology.

Five scientific articles reporting the results of researches conducted by staff members were published in scientific journals such as *Annals of Tropical Research* and the *Philippine Entomologist*. A contribution to a basic biological textbook published by the National Research Council of the Philippines was also solicited from a staff member and the manuscript had been accepted for inclusion therein.

Completed:

- * Development of control measure for some coconut pests and diseases in Eastern Visayas using natural enemies
 - a. Monitoring the incidence of coconut diseases and insect pests and their natural enemies in Leyte and Samar
 - b. Biology and mass rearing of important lepidopterous pests of coconut and their parasites
 - c. Effects of intercropping young coconut trees on incidence of insect pests and diseases
- * Parasite of sweet potato weevil and their potential for biological



control

- * Studies on the insect pests and diseases of winged bean in the Philippines
- * Small operations in industrial entomology: beekeeping and silk culture

Ongoing:

- * Abaca maladies in the Visayas
 - a. Etiology of stem twisting, a new problem of abaca
- * Varietal screening of abaca to corn weevil
- * Utilization and suitability of abaca waste as substrate for mushroom cultivation
- * Biological control of some important insect pests of coconut
 - a. Effectivity of the parasites of slug caterpillars for biological control
 - b. Identification of the natural enemies of the coconut leaf miner and their potential for biological control
 - c. Evaluation of the efficiency of baculovirus as biological control agent for rhinoceros beetle.
- * Studies on the population dynamics of rhinoceros beetle, **Oryctes rhinoceros** L. in established and newly replanted coconut
- * Studies on the insect pests and microorganisms affecting copra
 - a. Biological studies on the important insect pests attacking copra
 - b. Evaluation of insecticides for the control of copra pests
 - c. Identification of molds and other microorganisms affecting copra and their control
- * Weed flora associated with coconuts in Eastern Visayas and their control
 - a. Ecological survey and identification of weeds associated with coconut in established plantations



Seminar participants learn from researchers the proper techniques in root crop production.

- b. Ecological survey and identification of weeds associated with coconut plantations
- c. Weed succession studies in coconut plantation
- d. Comparison of the three weed control methods on the yield of coconuts
- * Pest management scheme for corn: integrated control measure for corn downy mildew
- * Integrated approach for the control of corn borer
- * Screening of rice selections for resistance to insect pests and diseases
 - a. Loss in yield due to major diseases of sorghum
- * Identification, biology and efficiency of the natural enemies of major pests attacking root crops
 - a. Biology and efficiency of natural enemies attacking spider mites of cassava and sweet potato
 - b. Identification of the natural enemies of important taro insect pests and their potential for biological control
- * Studies on the economic threshold level of important diseases of major root crops
 - a. Effects of bacterial blight on the yield and yield component of cassava
 - b. Losses in yield caused by taro mosaic virus infection
 - c. Injury level of sweet potato to brown blight diseases
- * Sweet potato plant resistance to insect pests and diseases
 - a. Sweet potato plant resistance to insects
 - b. Sweet potato plant resistance to diseases
- * Yield losses of root crops due to four major insect pests
 - a. Estimation of yield losses in cassava due to spider mites
 - b. Yield of sweet potato as affected by varying levels of weevil population
 - c. Reduction in yield of sweet potato attacked by leaf folders
 - d. Effects of damage by chinese grasshopper at different stages of growth on the yield of taro
- * Biology and control of the major insect pests of selected vegetables in the Visayas
 - a. Biology and control of important insect pests of cucurbits (squash, patola, upo, watermelon and ampalaya)
 - b. Biology and control of im-



portant insect pests attacking solanaceous plants (eggplants, pepper, etc.)

- * Biology and ecological study of marine invertebrates in Eastern and Central Visayas
 - a. Survey of the invertebrate fauna in coastal waters of selected areas in Leyte
- * Biology and ecology of blue crab, *Neptunus pelagicus* in Leyte and vicinity
- * Arthropod fauna of Mt. Pangasugan and vicinity
- * DPP Biological Museum — improvement of agriculture-related and general reference collections

Farming Systems Development Project-Eastern Visayas (FSDP-EV)

Objectives/Targets

The long term goal of the project is to improve the well-being of the small farmers in rainfed upland areas of Region VIII. Its short-term objective is to develop a farming systems research methodology which could generate agricultural technologies appropriate to the biophysical and socio-economic circumstances of the farmers in the region, and to disseminate these technologies to the intended end-users.

Accomplishments

The Farming Systems Development Project-Eastern Visayas (FSDP) is a cooperative project of the Ministry of Agriculture (MA), the Visayas State College of Agriculture (ViSCA) and the farmer cooperators in Region VIII. Its funding is provided by the National Economic and Development Authority (NEDA), MA, ViSCA, and the United States Agency for International Development (USAID). The Cornell University provides technical assistance and training for its project staff.

Cropping pattern trials were con-

ducted by the project staff and farmer cooperators in six locations, namely: Bontoc (So. Leyte), Matalom, Villaba, Jaro (all in Leyte), Basey, and Gandara (Samar). ViSCA plans and implements back-up research to support these on-farm trials. Despite the drought which severely caused the delay of the conduct of the cropping pattern trials (delayed for six months), the project pursued the training, organizational development, planning and implementation of other activities, i. e., preparation of the manual procedures for field research trials and data analysis and preparation of the abstract bibliography of farming systems related research conducted by thesis students and staff.

The cropping pattern trials in the six sites were started in July and the first crops were harvested in September and October. ViSCA had started working on some back-up research projects while plans for the additional projects which are to be implemented in January 1984 had been completed. Dr. Rogelio Jaime and Mrs. Leonila Parilla were working with the site economists and economic researchers, while Drs. Tully Cornick and Joseph Metz, Jr. supervised the socio-economic survey in the six research sites. More than 500 families were interviewed. The survey will provide information which can be used in the future for evaluating the impact of the project on farmers' families in the target sites. It will also aid in understanding the constraints to introducing new technology. The data are being analyzed.

A livestock survey which was conducted by Dr. Oscar Posas, two MA staff and research assistants was completed. Its main objective was to obtain information from the farmers in the target sites, their types

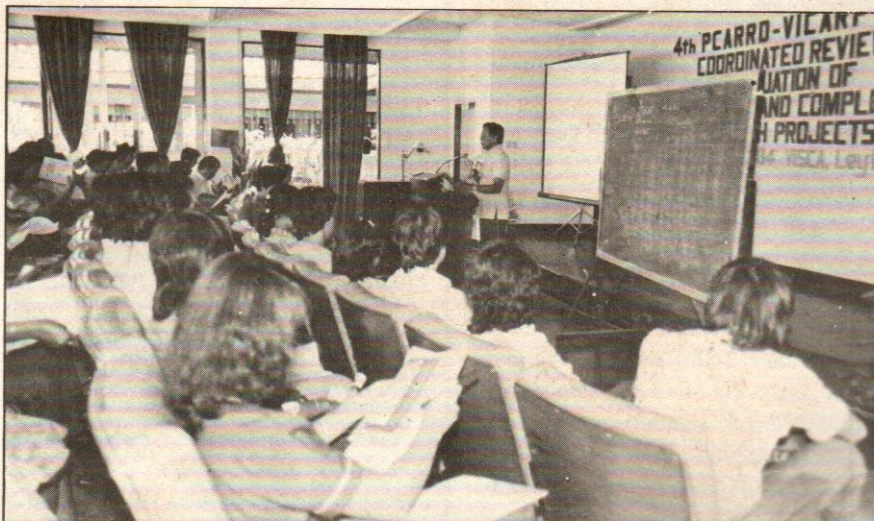
and numbers of livestock, management practices and problems met in livestock raising. Working with Drs. Cornick and Metz, site economists and site researchers, Mrs. Parilla collected market price data of farm produce at local market in the six sites. These data will help in understanding the price relationships among commodities and potential for increasing production and marketing of various crops. The project of Mr. Zosimo de la Rosa on varietal screening and small quantity seed multiplication was meeting the need of the different sites for planting materials like:

- Upland Rice (UPL Ri-5)
- Corn (Improved Tiniguib)
- Mungbean (Pag-asa # 1, # 2, # 3)
- Peanut (Moket and BPI-P9)

Different varieties of the above crops had been collected and were screened by segregating the off types and studying the yield performance of each variety. A multi-storey demonstration plot with an approximate area of about 300 sq. m. had been established. The crops being grown were pomelo, banana, pineapple, upland rice, mungbean, and corn. Almost all the ipil-ipil seeds planted in the ipil-ipil based cropping patterns were provided by ViSCA. The same was true with the pineapple planting materials. The varieties of sweet potato developed by DPBAB of ViSCA were being introduced to the cropping pattern trials with sweet potato as one of the crops in the pattern. Mr. Nestor Gloria established trials on the effect of lime, fertilizer (16-20-0) and inoculant in the establishment of ipil-ipil under red acid soils in Bontoc and Matalom. On the other hand, Prof. Sergio Abit established the ipil-ipil pineapple-based cropping patterns at Gandara within the SRMU office site.



Visayas Coordinated Agricultural Research Program



All agricultural and natural resources research in the Visayas are reviewed and evaluated annually.

Now on its 5th year of existence, VICARP continues to pursue its goal of developing, improving and verifying production and postharvest technologies for the small Visayan farmer. It has also been developing and implementing strategies for technology packaging, dissemination, and utilization through seminar-workshops, trainings, publications, exhibits, broadcasting, field day, and information retrieval exchange, and dissemination.

Agricultural and Natural Resources Research

Root crops and fiber crops, specifically abaca, are national research responsibilities of VICARP. Regional responsibilities cover coconut, cereals, vegetables, beef/chevon, forage, pasture and grassland, poultry, agri-

cultural engineering, farming systems, soil and water resources management, applied rural sociology, and macroeconomics.

Realizing the dearth of research on fisheries and marine resources in the region, ViSCA strengthened its research program on fisheries. Agro-

forestry research has also been intensified with the objective of developing hillside farming schemes.

Forty-seven researches were completed in 1983 while about 250 are still ongoing. Fifty-six new researches are programmed for 1984 while 67 are proposed for 1985. Research funds for 1983 come from various sources amounting to about 11 million pesos. These sources include PCARRD which granted over half of the total allotment, PRCRTC, IDRC-PCARRD, ViSCA, NAS, MA-BPI, Land Bank, PCRDF, KABSACA, NSTA and FiDA.

Third PCARRD-VICARP Coordinated Review of Completed and Ongoing Researches

The ACU of VICARP helped facilitate the monitoring of researches for review and evaluation, provided audiovisual services in all the commodity-based sessions, and documented the highlights of the research review.

A total of 193 research projects and studies were reviewed and evaluated on May 11-13, 1983. Of this number, 47 are completed researches while 146 are ongoing. The year's research review was able to initially identify technologies ready for dissemination, research-generated information for extension and technologies that need further testing and verification. Likewise, it had also determined significant findings.

Action Research Projects

Realizing the urgent need to channel to end-users the technologies developed at research centers, VICARP launched its action research projects with the involvement of the end-users themselves.

Root crop production and processing tools developed by PRCRTC were evaluated by farmers for



modification; rural women were involved in evaluating improved food and snack items; and root crop farmers were tapped as sources of tubers for a root-crop based feed mill.

Experiment Station Development

The experiment areas at ViSCA were fenced and provided with irrigation canals. Stone-lined canals and ditches were constructed to drain excess water. Available land was apportioned based on the needs of research centers/departments.

Staff Development

The ViSCA scholars (36 ongoing) come from the academic departments and the ViSCA-based centers, namely, PRCRTC, NARC, RCRC, and the CSR-SFD.

Although the number of Ph.D. and M.S. scholars of MA is quite small (9 ongoing), there are a number of MA staff pursuing short-term and diplomate courses to answer the urgent need of MA to upgrade the technical competence of its staff for technology extension.

In addition, VICARP staff attended several other short courses, trainings, seminar-workshops, etc. as participants, coordinators, resource

persons, presentors of scientific papers or consultants. These activities bring about not only improved competence but also a harmonious working relationship with other agencies involved in agricultural and rural development.

The Research Management Unit of VICARP

- * Consolidated the 1983 mid-year and year-end reports and submitted them to PCARRD.
- * Coordinated the delivery of new research equipment from PCARRD and the inspection of previously acquired equipment.
- * Monitored the status of the experiment station and infrastructure development.
- * Prepared the ViSCA Research Annual Report
- * Prepared and submitted to PCARRD the status report of the budgetary appropriations for research and the quarterly audited financial reports.
- * Monitored the budget releases for and the financial status of the different research projects.
- * Monitored the status of all researches for review and evaluation.

The Applied Communication Unit of VICARP

The Applied Communication Unit of VICARP has played its role in technology and information dissemination by continuing its major activities and by launching new projects. Most of these undertakings are bordered on the production aspect of applied communication which include reproduction, photography, exhibits, production of broadcast materials among others.

• VICARP News and other Publications

The VICARP News is the official quarterly publication of VICARP which highlights the activities of the agencies within VICARP. It includes a popularized reporting on the research-generated technologies and is printed in offset. Copies are given free to agencies involved with VICARP, to the national network of research centers, and to all Municipal Agricultural Officers in the towns and cities of Central and Eastern Visayas.

Other publications published by VICARP agencies are the Visayas Farm News Service, commodity-based production bulletins, Annals of Tropical Research, official MA publication "Grow", The Radix, Research and Extension Report, Brochure on New Sweet Potato Varieties, Plant Pest Clinic Advisory Bulletins & Popular Technology Series.

• Technology Packaging for Countryside Development

This is an interagency (PCARRD, MA, ViSCA, LSBDA, etc.) project which aims at producing commodity-based production bulletins for farmers.

• Field Day for Farmers and Rural Women

Launched in 1983 during ViSCA's 59th Anniversary celebration, the field day showcased village-level



A researcher presents his project to a panel of subject matter specialists for review and evaluation.



technologies developed by ViSCA's technical departments and research centers. Booth exhibits and method demonstrations as well as actual planting designs and techniques were presented to the field day visitors in highly understandable language. (i.e. Cebuano) and in the simplest form to achieve high comprehension among the audience. The private sector and the BPI participated in the flower and garden show. Planning, coordination and management were provided by the ACU of VICARP. The field day will be an annual activity of VICARP.

• **VICARP Exhibits**

Pictures, posters and specimens are displayed in permanent booths by respective exhibitors (research departments and centers). The ACU prepares and maintains a general VICARP exhibit and coordinates all the activities related to the exhibits. The ACU also sends exhibit materials on loan to requesting parties or actually supervises the exhibits displayed outside ViSCA (i.e. Tacloban and Manila).

• **Photography and Slides Collection**

These activities are constantly done by the ACU to support its exhibits, publications, and slide-tape presentations. The ACU maintains a file of catalogue of its photographs and slides.

• **Scientific Literature and Library Services**

The Scientific Literature Service is based at the ViSCA library for proper cataloguing. It provides research information materials for researchers and students and facilitates acquisition from PCARRD of some research literature upon request. Meanwhile, the ACU maintains a minilibrary for its collection of exchange publications, research terminal reports, theses and other

agricultural references.

• **DYAC-ACU Linkage**

The ACU coordinator is VICARP's linker to ViSCA's radio station, DYAC, after he was trained on the basics of radio broadcasting. Presently, ACU's linkage with DYAC is characterized by informal exchange of information with the ACU providing publications as references for broadcast.

• **Farming Systems Research and Development Project**

In Eastern Visayas, the FSDP-EV utilized the services of the ACU during the location review and evaluation of the project and in the national seminar-workshop on the implementation of the Philippine Farming Systems Research and Development Project. Research-generated technologies of the FSDP-EV will be packaged with the assistance of the ACU as proposed by PCARRD and FRSRI.

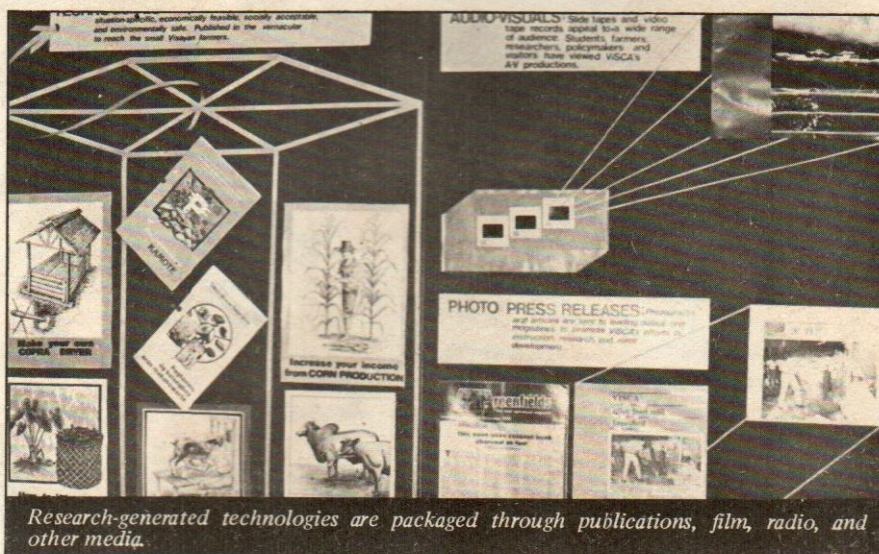
• **Standing Functions of ACU**

Other functions assigned to the ACU include:

- * Facilitation for audio-visual needs of VICARP seminars, trainings and workshops
- * Photography services for re-

search projects

- * Editing of VICARP research reports
- * Consultation service for department/center-based publications regarding format, style and layout
- **In 1983, the ACU staff attended the following trainings and workshops to improve competence:**
 - * Developing Technical and Communication Skills in Technology Packaging. January 16-21, 1983. RTC-RD, MSAC.
 - * Short Course in Photography. April 18-29, 1983. UPLB.
 - * Seminar-Workshop on the Implementation of the Philippine Farming Systems Research and Development Project. August 24-25, 1983. Los Banos.
 - * Seminar-Workshop on Campus Journalism. February 1983. ViSCA. ACU Coordinator was resource speaker on "Publication Design" and "Typography".
 - * Fourth Regional Youth Science Camp. August 21-24, 1983. Ormoc City. ACU coordinator was resource speaker on "Writing the Scientific Paper".

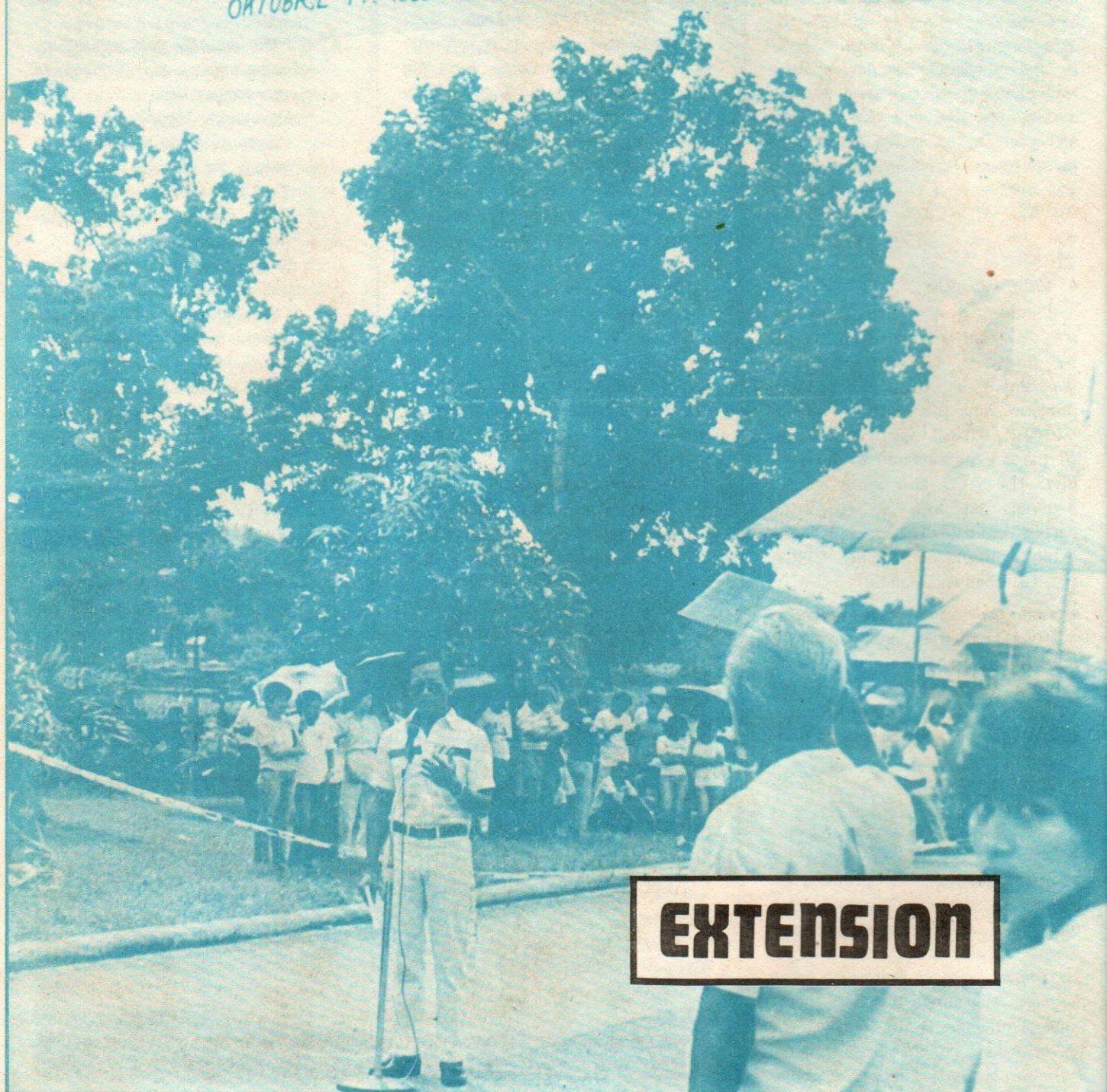




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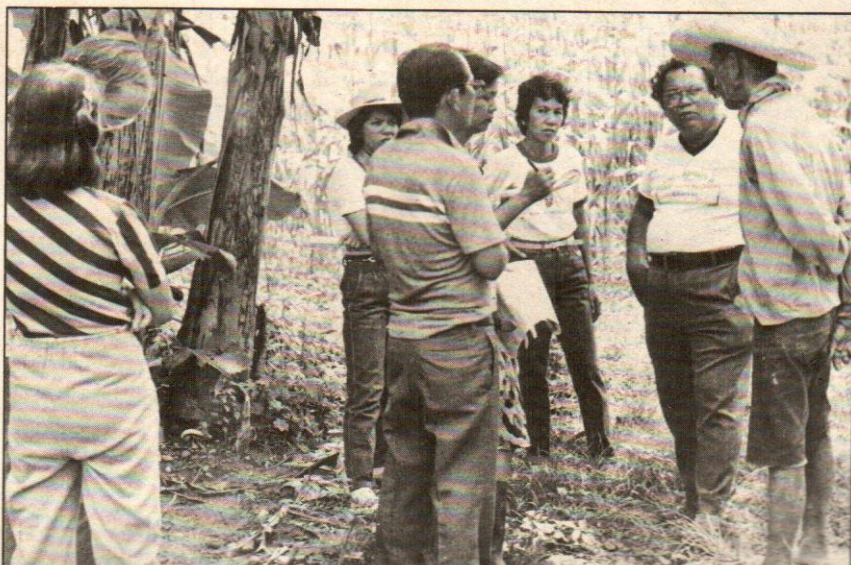
ADLAW SA MGA MAG-UUMA OG MGA KABADAYEN
Tema: Teknolohiya alang sa Banikanhong Kaugmaran
OKTUBRE 14, 1983

Visca, Baybay, Leyte





Extension Program Development



On-farm evaluation of introduced technologies helps design or improve extension strategies.

Objectives/targets

- * To package and disseminate useful information from research findings for application by the end-users or clientele through print, radio broadcast, and other forms of communication.
- * To conduct training programs to improve and upgrade the capability, efficiency and effectiveness of the ultimate users of new knowledges or technologies.
- * To provide technical assistance to different government agencies, development workers, and rural organizations on technical and specialized subject matter areas in agriculture and rural development.
- * To verify different technologies developed by the College's academic departments and research centers to determine their appropriateness under varying socioeconomic and physical conditions.
- * To strengthen the linkages among the different agencies in the region to maximize the use of limited resources and increase the effectiveness of government programs for rural development.

Accomplishments

Department of Plant Breeding and Agricultural Botany

The extension and community services extended by the Department come in various forms. The staff served as one of the lecturers in training programs and provided information to visitors such as extensionists and farmers on activities that the director of extension and research may assign from time to time. The Department launched a massive extension program which involves extending of planting materials of new sweet potato varieties (VSP-1, VSP-2, and VSP-3) that are free of charge to small farmers. More than 3,000 farmers had already availed of these planting materials. Other big corporations such as the Victorias Milling Corporation and the Sagay Sugar Central in Negros Occidental, Lorenzana Food Industries, Inc., and Ex-Governor Juan F. Trivino of Camarines Sur had availed of the planting materials. Thousands of hectares had been planted with these new sweet potato varieties and favorable feedback had been generated with big hopes for economic returns. Several trials of sweet potato varieties in farmers' fields are being maintained in various localities in the province of Leyte particularly in Baybay, Dulag, Julita, Ormoc, and Matalom and in Sogod, So. Leyte to serve as demonstration plots under farmer's field condition.

Department of Agricultural Development Education

The Barangay Integrated Rural Development (BIRD) project was able to conduct several trainings in CY 1983. A training in skill development of garden growers was conducted for the adult farmers in Barangay Gabas. This was followed by a training course on plant propagation and nursery management conducted for the farmers, house-



wives, and OSY's of Barangay Patag, Gabas, and Guadalupe. Another training conducted under this extension project was the training on potential income generating enterprises for the farmers, housewives, and OSY's of Barangay Kilim and Buenavista. The project also constructed Barangay Communal Nursery Centers in Barangay Gabas and Guadalupe to provide a marketing outlet for propagated plants. It sponsored the ViSCA Flower and Garden Show '83 in cooperation with the Department of Horticulture. BIRD also participated in the Agro-Industrial Fair during the town fiesta of Baybay while the BIRD officers of Barangay Guadalupe conducted an observation tour on a successful RDS consumers coop at Paglaum, Sab-a Basin. In 1983, the project held field trip to the Hilongos Credit Cooperative, Inc. (HCCI) with the residents of Barangay Bobon and Buenavista as the clientele. There, the HCCI manager gave a lecture on the different aspects of cooperatives and conducted an actual observation on cooperative operations.

The Department offered technical assistance to different kinds of clientele. It conducted a training for FFP-FAHP-FFPCC officers of both high school and college on the revision of existing constitution and by-laws of the FFP organization. The SP members and other city government officials at Calbayog City were given a lecture on the preparation of an Agricultural Development Program. Other accomplishments of the Department in the same year included two leadership trainings for the residents of Barangay Buenavista, Bobon and Cabalasan. In these trainings, participants were taught the importance of good leadership. Another training course on the Integration of Nutrition

in Agriculture was conducted for the faculty members and heads of ACAP schools in Eastern and Central Visayas. Still another training conducted was on the use of different simple motions following parliamentary procedures which was participated in by ViSCA high school students.

For its information dissemination activity, the Department had two publications, namely; the ADE Quarterly which served the ADE staff, students, alumni, cooperating teachers and extensionists; and the Visayas Farm News Service which is a bi-monthly publication serving farmer leaders, extension workers, MA personnel, Vo-Ag teachers, agriculture writers and broadcasters in the Visayas. The DevCom section photo exhibit which is done every semester also served the faculty, staff and students at ViSCA, and sometimes guests and visitors of ViSCA.

of one teaching handbook on rice production which is helpful to the agricultural teachers in the Visayas; (3) gathering of background information data on the clientele (the OSY and unemployed adults) of the Rural Development School on the Air (RDS-Air); (4) providing support to the second VATSA (Visayas Agro-Technical School Association) Agricultural Education Nutrition Conference Workshop in terms of facilitative staff and supplies and materials used for hand-outs; and (5) sponsoring a seminar-workshop on campus journalism for the juniors and sophomores of ERHS students, where they taught the trainees the concepts of journalism, its forms and styles.

Department of Agricultural Engineering and Applied Mathematics

While the Department was interested to do something in extension, the work was not very significant because no appropriation was



Farmer groups are motivated to participate actively in projects intended to improve their well-being.

Other activities of the Department included: (1) constructing skills training center for out of school youths (OSY) and adults who constructed a nursery shed for ornamental plants; (2) reproduction

set aside for extension activities. However, assistance had always been extended by the Department to farmers and other individuals on such matters as acquisition of water rights for irrigation purposes, publi-



cations of some research results, crop drying and other services available at the DAEAM.

Department of Horticulture

Some staff members of the Department served as resource speakers in 5 seminars, workshops and training conducted by the Regional Training Center for Rural Development (RTC-RD) and other departments, namely:

May 17, 1983 – Abaca Production and Culture for Bontoc and Southern Leyte Farmers.

June 9-11, 1983 – Farmer Training on Crop Management Practices for Rice, Corn, Legumes and Vegetables.

July 9, 1983 – Consultation with Farmers at Barangay Kansungka.

Aug. 4, 1983 – Consultation on rural development projects and vegetable production.

Oct. 4, 1983 – Vegetable Production in Tabango, Leyte

The Department was also involved with other extension activities, such as production and distribution of planting materials of fruit trees and vegetables, on-farm demonstration trials on horticultural crops, and publication of bulletins, as well as pamphlets on horticulture.

Department of Agricultural Economics and Agribusiness

Besides instruction and research activities, staff members of the Department were also encouraged to undertake extension projects. In response to this, all members of the teaching staff were actively involved in the different extension activities during the year 1983. Two staff members were involved in the San Isidro Rural Estates Development. Another member of the staff was involved in the Barangay Integrated Development Project. During the CY 1983, some staff of the Depart-

ment acted as resource speakers in trainings conducted by PRCRTC, RTC-RD, KKK, FSDP, SEARCA, and other agencies on topics related to Agricultural Economics and Agribusiness Management. One of the several extension projects implemented in 1983 was the periodic dissemination of prices. This project gave information to the farmers regarding prices of prime commodities which was aired weekly over the station DYAC in ViSCA. Another extension project of the Department was on Farm Record Keeping which was conducted at the different FSDP research sites. Three staff members were involved in this project who visited each site for at least three times; first, to conduct the training; second, to check the farmer's progress; and third, to determine problems encountered by the farmers in the process. During the year, the Department was able to sponsor two cooperative education seminars. One was held in October 8 which was participated in by the Department's academic research staff as well as some cooperative members, and the other one was held on December 9 which was participated in by selected farmers of neighboring barangays. In the same year a project feasibility preparation workshop was conducted wherein a staff member of the Department was a resource speaker.

Department of Animal Science and Veterinary Medicine

The extension and community services extended by the Department in CY 1983, included animal dispersal. Eight head of female breeder cattle were dispersed to farmers, 9 head (8 females and 1 male) to the Leyte National Agricultural College (LNAC) in Villaba, Leyte and 3 cattle to Baybay farmers. Likewise, 17 goats and an additional 5 cattle were dispersed, bringing the

total animals dispersed to 42. Problems were encountered on the dispersed goats but the cattle were performing very well. The Department also assisted in the laboratory analysis for the patients at the ViSCA Infirmary which totalled 39 cases, namely: urinalysis, 26; fecal analysis, 6; hematology, 6; and 1 water analysis in Hindang. Another extension project was providing feeds at the Department to animal raisers in the vicinity of the campus at ₱5.00 to ₱15.00 per bag, less the prevailing prices in town.

Improvement of carabao was emphasized by the Department. With the receipt of frozen buffalo semen from the Philippine Carabao Research and Development Center (PCRDC) and Holstein semen from NABC, Alabang, the Carabao Improvement Program through artificial insemination (A.I.) was launched within 10 kilometer radius of ViSCA with 76 prospective cooperators. The frozen semen from the PCRDC included 85 straws of Nili-Ravi (Jhajji-30; Karela-25; Bhola-15; Kheena-15;) and 25 Murrah (Sunnil-10; Vikran-5; Nakul-5). However, the program was done in limited scale because of inadequate thermostype container of liquid nitrogen and partly because the animals were to be brought to the Department for A.I.

Major students in Animal Health were also involved in doing health services for animal raisers in ViSCA vicinity. This included vaccination of dogs on campus against rabies. Some staff of the Department also assisted in four training programs of the RTC-RD in 1983. During the 59th Anniversary, they put up exhibits for the Farmers Field Day.

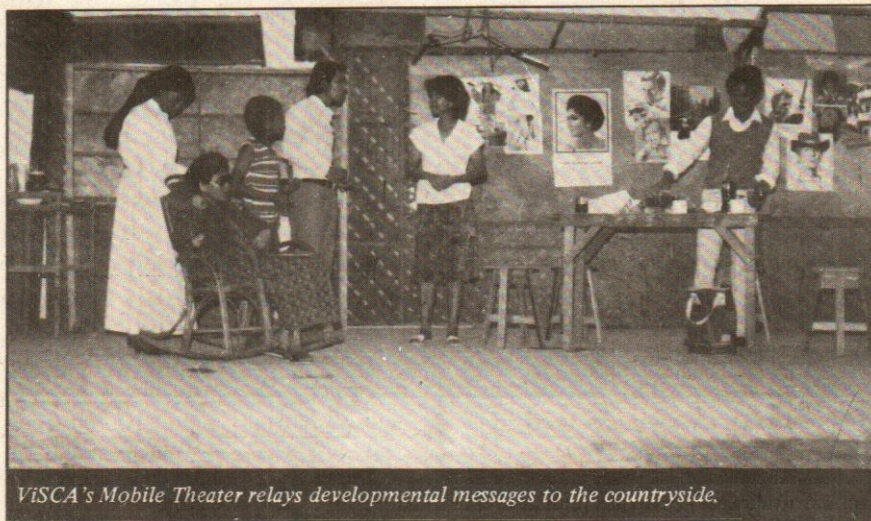
Department of Home Science

Although the Department's capability to do extension work was not fully utilized due to heavy teaching



responsibilities of its staff, a number of extension activities were realized in 1983. The Department conducted 10 trainings/seminars/workshops on nutrition, energy management, family life, and various technical skills for ViSCA students and staff, administrators and teachers from other institutions in Eastern and Central Visayas and for rural people and community leaders in some villages in Leyte. To name a few of the skills training for the rural families aimed at augmenting income through income generating skills were a training on bag making skills for the rural

in their general ways of living, staff members of the Department served as resource speakers of the clientele. The Department was also able to develop a prototype of coconut milk extractor with 50-55% efficiency. However, testing was not done because the researcher was on a study leave. A fuel stove was also developed by the Department which could reduce fuel consumption and increase cooking efficiency. Finally, the Department translated recipes on root crops into Cebuano. During the 1983 anniversary celebration of ViSCA, the staff distributed the mul-



ViSCA's Mobile Theater relays developmental messages to the countryside.

women of Barangay Kabalasan on April 15 to May 15 and a skills training on bamboo and coconut crafts for the clientele from Sogod, Southern Leyte from January to February 1983.

Some staff members served as consultants/resource persons on interior decoration, resource planning and management, enterprise development, food preservation and craft techniques for other departments of the College and student organizations. Likewise, in order to disseminate appropriate technologies gained through research to the rural people and to help effect positive changes

tiplied recipes to farmers and housewives.

Department of Arts and Letters

The Department staff added extra efforts to revitalize the mobile theater concept by an all-staff-involvement with departmental supervision, but delimiting the extent of their extension project. A play entitled "Look Away Stranger" was written for prospective change agents and open to translation in Cebuano for staging in nearby barangays. In 1983, two plays were staged for entertainment on campus, namely: "Polished Pebbles," an operetta and

"The World is an Apple," a one-act play. The Department acquired some materials and stage props for the mobile theater operation in the DAL extension project. It has conducted informal surveys in barrios to guide the selection of appropriate venues for stage presentations. A proposed literacy program with a research-based project had been held aside for further improvement. IDRC had suggested the actual preparation of the data gathering instruments even before approval of the proposal and adding to it a sharper in-depth focus. There is a strong prospect of writing development plays in English for translation into Cebuano since appropriate plays to suit the objectives of the production staff are not available. However, this requires conditions that inspire writing for the grassroots such as deloading of routine tasks, free typing services, generous time to commune with the muses, and visits to barangays.

Department of Agronomy and Soil Science

There were 11 staff members of the department who were involved in extension activities. The average extension workload of the staff was 1.25. In 1983, the Department was able to give technical assistance to farmers on how to collect soil samples from the field and how to roughly diagnose common nutrient deficiency symptoms. However, the number of samples analyzed were below the targeted figure due to lack of necessary supplies and chemicals for the analysis attributed to inadequate funding. The Department also prepared and distributed to farmer clientele data sheets on soil sampling including historical background of the area. Seeds of Improved Tiniguib (a corn variety) and mungbean were distributed and sold to farmers, extensionists and researchers. Leaf-



lets on how to grow corn, peanut and mungbean were also distributed by the Department to the farmers.

Non-formal education and technical assistance were extended by the Department to the clientele through farmers meetings, short-term trainings and seminars. In 1983, seminars on "multiple cropping" and cultural management of corn, rice and legumes were conducted through the request of the farmers of Hibunawan and San Isidro. Technical assistance to farmers on various aspects of crop production were also extended to interested clientele. The Department also established off-campus verification trials on crop production and cultural management of corn, rice, sorghum, legumes, root crops and cropping system approaches in farmers' fields which served as demonstration plots for the farmers, extensionists, and technicians.

Physical Education

Starting in CY 1983, the Department has undertaken extension services which consisted of bringing sports and recreation activities to the grassroots level in nearby barangays.

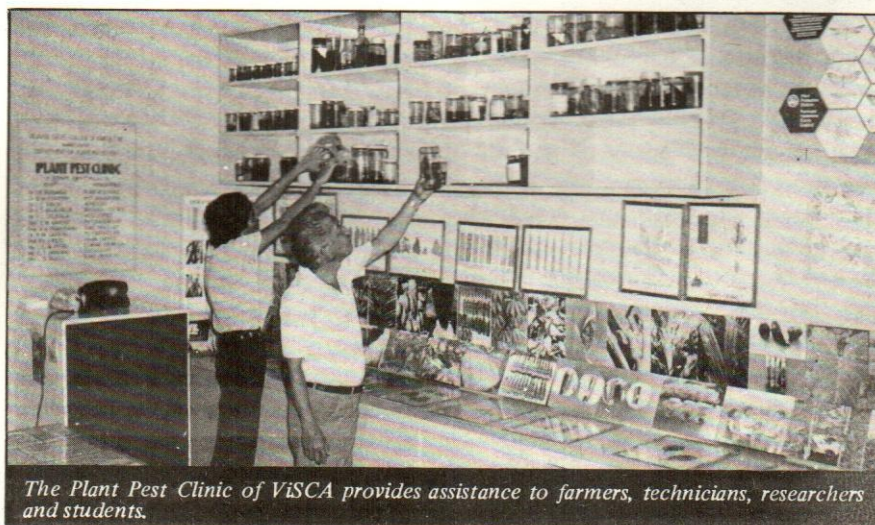
Department of Plant Protection

The Department continued to carry on its extension program through the dissemination of useful research-derived information and techniques to extension agents and directly to rural folks. Different extension activities were undertaken in the year 1983.

As an extension arm of the Department, the Plant Pest Clinic had earnestly served 308 clientele consisting of researchers, farm technicians and farmers in the diagnosis of pests problems and prescribed control measures. Twelve of the

faculty specializing in various plant protection-related disciplines worked together as a team in providing diagnostic services to the said clientele regarding pest problems. Another activity was the training on Identification and Control of Household Pests conducted on April 18, 1983 involving 40 housewives. This training enabled housekeepers to know some insects commonly pestering the household and taught them with the available techniques and ways of avoiding and/or eliminating the said pests. For the year's information and dissemination drive, writing bul-

on the control of locusts and army worms of rice and corn that became serious pests of cereals in Leyte during the middle part of the year. Public exhibits were put up in two occasions by the Department staff featuring varied research findings in plant protection specifically on identities of pests and diseases and biological control. In addition, the Biological Museum featured two special exhibits in line with its public environmental science awareness drive. One dealt on poisonous plants and venomous animals, and the other on the geophysical features,



The Plant Pest Clinic of ViSCA provides assistance to farmers, technicians, researchers and students.

letins, participating in radio programs and public exhibits were undertaken. The technical bulletins regarding disease management of cassava bacterial blight and sweet potato stem and foliage scab, considered the most destructive disease in the country, were produced by the Department to help meet the need for an integrated disease control system. A popular bulletin on pesticides was also produced to keep the farmers fully aware of the potential health hazards associated with improper handling of pesticides. Two staff members were invited to talk over DYAC, the college radio station,

biota, and economic importance of plants and animals of the Camotes Sea. Some 1,608 visitors, most of whom were students and teachers, viewed these exhibits.

Regional Coconut Research Center (RCRC)

In the CY 1983, the Center was able to establish demonstration farms and maintain existing crops grown under coconut like cacao, coffee, papaya, banana, pineapple, black pepper, gabi, lemonsito, etc. During the year, the Center improved and reproduced 6 coconut technoguides at 100 copies each and distributed these to interested individuals, es-



pecially the farmers. The technoguides prepared were the following: Make Your Own Copra Dryer; Let's Produce Good Copra; 7 Steps to Grow Coconut Seedlings; Mag-abono Kita Sa Atong Lubi; Magbuhat Kita ug Kaugalingong Landahan sa Kopras; and Magbuhat Kita ug Maayong Kopras. However, the technoguides reproduced were of poor quality; so the Center felt the need to improve the quality by having them printed and not simply mimeographed for the farmers. Currently, there is a need to translate English technoguides into the local vernacular.

Throughout the year, the Center conducted several skills trainings on coconut by-products utilization upon the request of interested groups/organizations in Regions 7 and 8. The following trainings were carried out during the year: one training was conducted at Southern Leyte School of Arts and Trades; six trainings on toddy, vinegar and charcoal making and oil extraction through wet process were conducted in the barrios of Bobon and Cabalasan, Baybay, Leyte; and five trainings on by-product utilization with emphasis on food items were

conducted at different venues, namely: ViSCA; San Francisco, Camotes, Cebu; Romualdez Experiment Station, Babatngon, Leyte; Buenavista, Baybay, Leyte; and Mahaplag, Leyte.

Philippine Root Crop Research and Training Center (PRCRTC)

The year 1983 had been quite eventful for the PRCRTC for it had prided itself with several outreach programs for an effective technology transfer to its target clientele — the root crop farmers and the root crop industry. Five training courses with agriculture, industrial, and socio-economic impact were undertaken. These are as follows:

National Root Crop Production Training Course

Held from May 29 to June 5, the training course aimed to provide the technical as well as the practical aspect in root crop production to agronomists, agricultural extensionists, technicians, and pest control officers. Twenty eight participants from the Ministry of Agriculture and Food (MAF), other government agencies like the BFD and MLGCD, and the private sector attended the course.

Training Course on Solar Dryer Construction and Food Processing of Tropical Crops

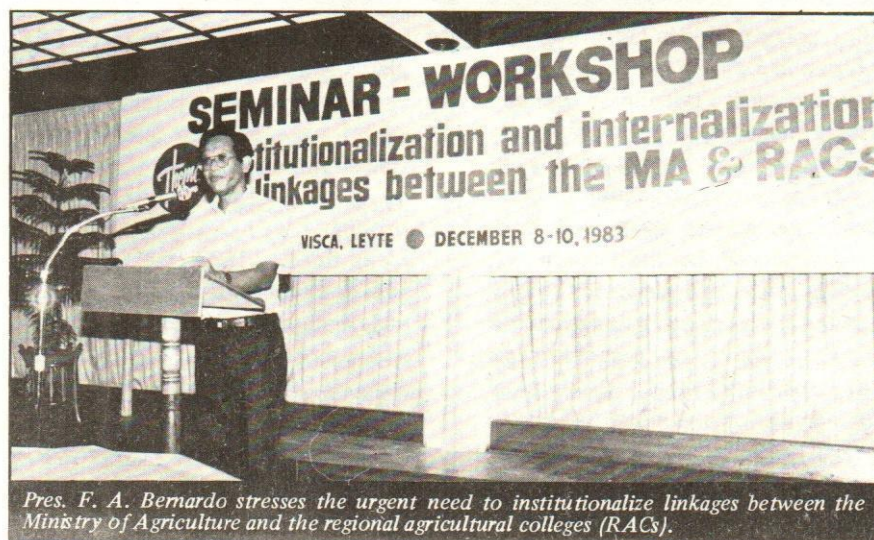
The training course had two phases. Phase I was the training of engineers, home economists, and extensionists on solar dryer construction and processing at ViSCA from July 11 to August 6. Phase II, on the other hand, was the training of rural families on solar dryer construction and processing by the people trained in Phase I in the three identified barangays of San Isidro, Bobon, and Cabalasan from August 8 to 25. There was a total of 82 participants which developed some viable commercial products as a result of the training like camias prunes, papaya candies, dehydrated coconuts, root crops (Cassava, sweet potato, and gabi) flour and cookies, dried mangoes and leathers, dried spices and vegetables, root crops cubes, and many others which were packed, reconstituted or cooked and baked for human consumption.

First Farmer Training Course on Postharvest Handling and Storage of Root Crops

The course was conducted at ViSCA on February 2-4 with the objective of training farmers on postharvest handling and storage of root crops. Nineteen farmers from Leyte attended the training course who would become cooperators for the storage technology dissemination in their respective areas.

Farmer Training Course on Root Crop Production and Processing

Ten farmers from Santa Elena, Tacloban City were participants of the course held on November 28-29. The objectives were to train farmers on new root crop production and processing technology and to disseminate information on the utilization of root crop chip products.



Pres. F. A. Bernardo stresses the urgent need to institutionalize linkages between the Ministry of Agriculture and the regional agricultural colleges (RACs).



Second Farmer Training Course on Postharvest Processing and Storage

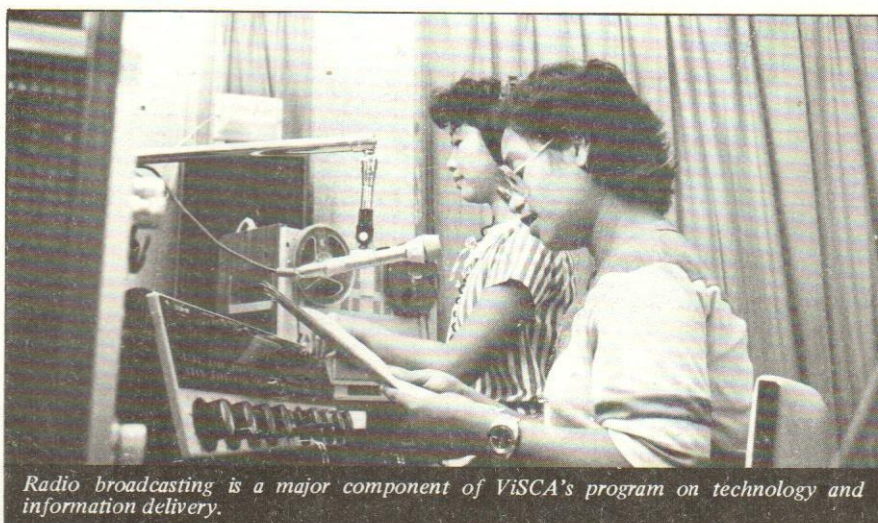
Held on December 10-11, the course was conducted in Kawayan, Leyte to train farmers in postharvest handling and storage of root crops. The training course attracted 34 participants who are farmers of cassava and sweet potato in the area.

Aside from the aforementioned training courses, the Center's staff also conducted lectures and demonstrations to 300 farmers in St. Bernard, Southern Leyte and 100 farmers in Barangay Cabalasan 60 farmers in Barangay Bobon, and 30 farmers in Barangay Can-ipa, all of Baybay, Leyte. Exhibits of root crop production tools, processing and drying equipment, and publications were likewise shown during the Field Day for Farmers and Rural Women in October 14. Planting materials of recommended root crop varieties were also distributed to the farmers during the affair.

ViSCA Radio Station, DYAC

The year 1983 marked the second year of service of the ViSCA Radio DYAC to rural communities in the Visayas — assuming a supportive role in the total development efforts designed to uplift the well-being of the Visayan farmer and his family. DYAC performs this role through the dissemination of useful agricultural and rural development-oriented information.

The primary service area of DYAC is Eastern Visayas, a region composed of five provinces and one sub-province. However, the topography of Region VIII prevents the Radio Station from reaching all these areas, a situation also true to other radio stations in the region. Nevertheless, feedback from listeners and actual



Radio broadcasting is a major component of ViSCA's program on technology and information delivery.

monitoring indicate that DYAC's signal is the clearest and strongest in the western part of Leyte as well as its southwest portion. The current location and power of its transmitter also enable DYAC to reach majority of the provinces in Central Visayas and some portions of Western Visayas. Feedback from listeners also indicates that DYAC can be heard in some parts of Mindanao.

The program of DYAC in 1983 was a transition from a news-music format to the magazine-format as it continued its quest along the lines of its avowed mission. Thus, broadcast operations in 1983 involved a program mix of news, general entertainment, homemaking, farm commentaries, and other programs. Operating 16 hours daily from 6:00 AM to 10:00 PM, DYAC carried three major newscasts in the vernacular scheduled at 7:00 AM, 12:00 Noon and 7:00 PM. These news programs featured local, regional, national, and international news. For a time, DYAC carried hourly newscasts but were terminated in view of the lack of personnel to sustain.

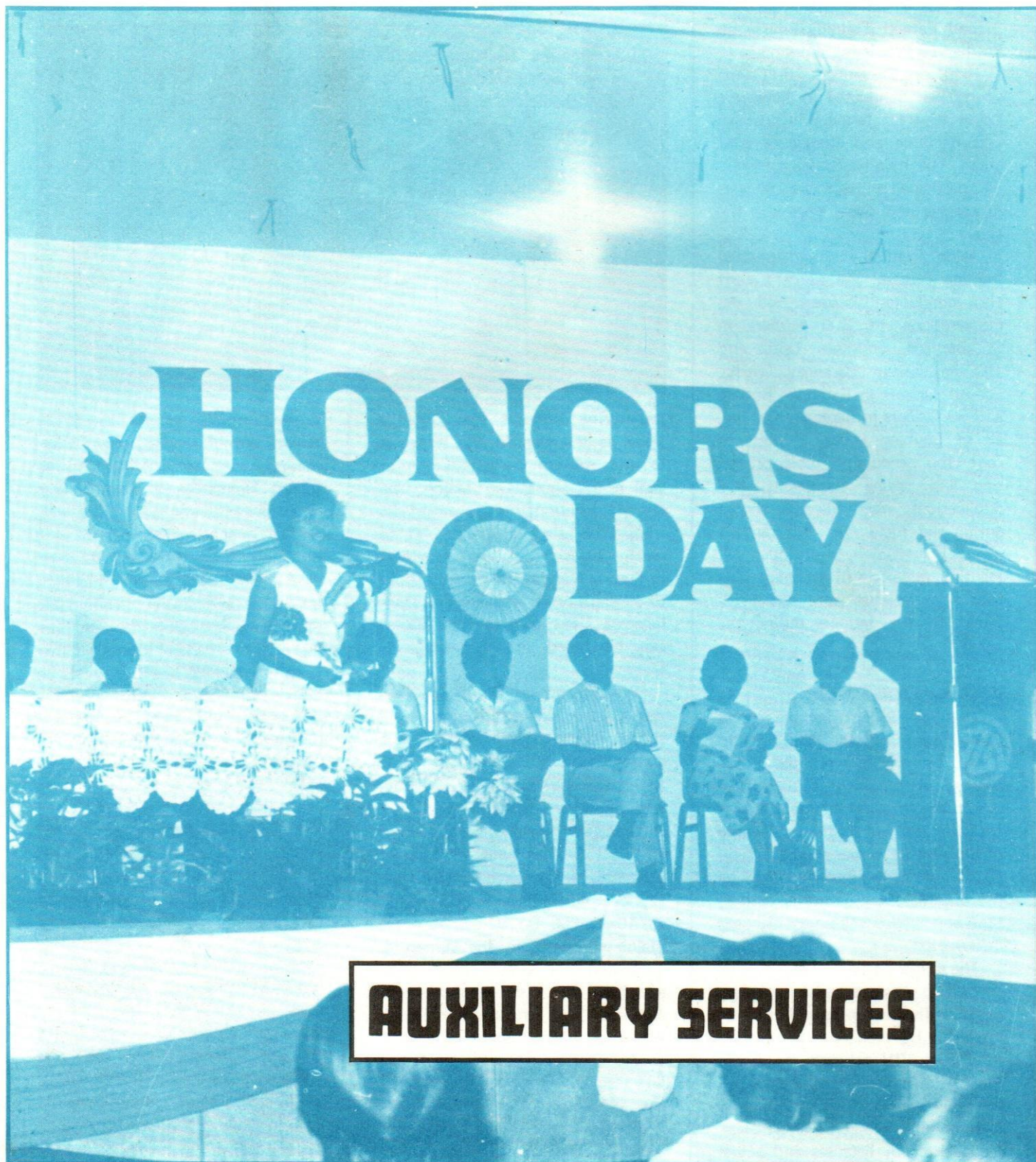
General entertainment programs highlight musical pieces, human

interest stories, science news, historical accounts, population information, and items of general interest. Homemaking program consists of household and thrift tips, family management, health and nutrition, child care, and local recipes. Farm commentaries highlight applicable agricultural technologies, farm news, applicable research findings, and market prices. Other programs include one that treats on human relation and personality development, a weekly inspirational program, a classical hour, and a variety program. Public service announcements are carried out in practically all programs.

ViSCA Radio DYAC is also intended to serve as laboratory for training in radio broadcasting work. Thus, in 1983, five Development Communication majors underwent a two-week on-the-job training as part of their course requirement. Government line agencies have also made use of DYAC as a vehicle for the dissemination of important plugs on their programs and activities. These agencies include the Ministries of Agriculture and Food, Agrarian Reform, Human Settlements, Health, and the Ministry of Justice.



Auxiliary Services



AUXILIARY SERVICES



Office of Student Affairs



The College Union building provides space for the Office of Student Affairs, student lounge, and halls for pastime activities.

Objectives/Targets

- * To assist students adjust to the new environment and help solve educational, psychological, emotional and social problems by providing thorough guidance and counseling services and financial assistance.
- * To develop students to become responsible leaders and good followers by providing significant co-curricular and extra-curricular activities.
- * To help the students in their needs for comfortable living conditions for study and relaxation by furnishing them good housing program.
- * To provide the economically poor but deserving students in the region greater access to educational opportunities at ViSCA through scholarships and grants-in-aid.

Accomplishments

Guided with the objectives set forth above, the Office of Student Affairs (OSA) endeavors to assist students in attaining their academic aspirations through the total development of their personalities. The office provides a set of year-round challenging activities on personality, citizenship, leadership, and other

developmental programs that could help mold the students into well-rounded persons.

Guidance and Counseling

As a support program to the development of the student while in school and in preparation for him to become a catalyst of change, guidance and counseling services were continuously given to the

students. To reach as many clientele and to maximize the efficiency of the OSA personnel, individual and group counseling approach were used as a work scheme. The venue for such services were the 17 dormitories and the offices of the guidance counselors to make the counseling session private. Sometimes, counseling was included in student organization meetings and during informal gatherings among the students.

During the period in review, individual and group counseling services were provided to 1,100 students; psychological testing to 400 students and employees; career guidance to 245 students; and freshman orientation to 540 students. Profiles of personal, social, emotional, and leadership needs of students are established which could be utilized for varied purposes — counseling, research, and programming of student developmental activities.

Student Organizations and their Activities

The core of student activities outside their more serious academic pursuits consists of programs designed by OSA in the cultural, recreational, and socio-political aspects aimed at discovering and developing student's abilities, talents, and potentials. The activities along this line are in the fields of music, drama, debates, and oratorical contests. The students also engaged in projects and activities designed to promote not only the welfare of the studentry, but also the relation of the college with the community. Spearheading the activities were the 4 class organizations with 1,395 members, 12 departmental or course-related organizations with 912 members, 12 greek-letter societies with 264 members and 6 other service organizations with 380 members.



Within this context, the students showed in their own ways noteworthy undertakings such as in the areas of cooperative work, beautification and cleanliness, food production, poster-making, and choral contests. During the 59th anniversary day of the college, the students also put up exhibits, garden show, and bazaar, and sponsored some cultural programs. In the aspect of physical fitness and sports development, teachers and students alike saw action in various ball games and athletics both in intramurals and invitational games with other schools.

Financial Assistance

The specific accomplishments of ViSCA in granting monetary assistance to students are summed up in Table 9. The data reveal that in SY 1983-84, a total of 3,510 students were beneficiaries of various forms of financial support, a 54.6 percent increase over the 2,270 students who had been benefited by the same program in the previous year. The breakdown of the current data discloses that 22.8 percent of the total students were awarded scholarships and 21.1 percent were recipients of the grant-in-aid program sponsored by ViSCA, other government agencies, as well as student and private organizations. The rest of the grantees took advantage of work-study grants and the emergency-loan fund offered by the College.

Student Housing and Accommodation

Housing of students is another dimension of OSA's concern for student welfare and development. In 1983, eleven cooking dormitories and six non-cooking dormitories were available with a total occupancy rate of 1,215 students. Since these dormitories could not accommodate all the student population, freshman students are given the first priority

Table 9. Distribution of Students Given Financial Assistance for the School Year 1983-84 (1st Sem.)

Type of Assistance	Level			Total School
	Graduate	Undergrad	High	
Scholarship Program				
1. ViSCA Scholarship (Full, Partial, ACES, and Honorific)	3	205	63	271
2. Other Government Scholarships (STATE, PhilSuCom, NSTA, NFAC, PDSP, MECS, PTC-RD, PCARRD, and Others)	16	48	—	64
3. Private Scholarship (COCOFED, Rotary, BFI, and SNPL)	—	146	—	146
Sub-Total	19	399	63	481
% to total enrolment	0.9	18.9	3.0	22.8
Grant-In-Aid Program				
1. ViSCA Funded (Free and Reduced Fees, Sangguniang Bayan, CMT and Varsity and Dance Troupe Members)	—	407	—	407
2. Privately Funded (SSFRC, Cocofed Students Organization, and others)	—	38	—	38
Sub-Total	—	445		445
% to total enrolment	—	21.1		21.1
Other Financial Programs				
1. Student Assistantship	—	982	146	1,128
2. Student Loan Fund	—	1,471	—	1,471
Sub-Total	—	2,453	146	2,599
Grand Total	19	3,297	209	3,510



in the housing program. To provide maximum learning and development opportunities to the residents, wholesome dormitory activities were provided to them such as in the conduct of open houses, games, cooperative works, and monthly socials which also include stage plays, literary-musical, and beauty contests. And as a result, transformation can readily be observed not just in the manner the students are charging the development of their respective dormitories but also in the way they cooperate in various inter-dormitory programs and projects.

In the first semester of SY 1983-84, a total of 1,051 students were accommodated in the dormitory. However, this number is 13.5 per-accommodated in the dormitories, occupancy rate because some students preferred to stay outside so that they could save some amount and cook their own food. Other students also were staying with their relatives in the staff houses. The major projects undertaken during the year to improve housing condition included screening, renovation/remodeling, and putting up of additional cooking facilities.

Information Dissemination

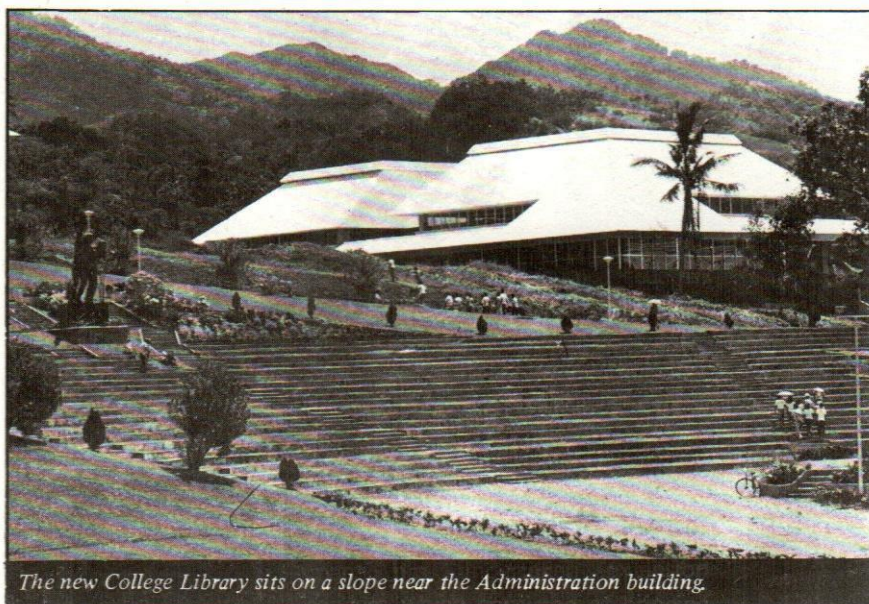
Another function of the OSA is the task of conducting information campaign throughout the provinces of the Visayas and part of Northern Mindanao. The purpose of such campaign is to inform the students and parents of the wide ranging academic programs of the college and some financial benefits that could be enjoyed by a student studying at ViSCA. For the school year 1983-84, eight teams were sent out for the purpose covering a total of 163 high schools in Bohol, Negros Oriental, Cebu, Samar, Leyte, Misamis Oriental, and Surigao del Norte.

Features of ViSCA's scholarship and grant-in-aid programs include the following:

Classification	Requirements/Qualifications	Privileges
Full Scholar	— GPA of 1.00 – 1.45 in the previous term provided that he has no failing grade and carries regular academic load	— Free comprehensive fees, ₱350.00 monthly allowance, and ₱50.00 book allowance
Partial Scholar	— GPA of 1.451 – 1.75 in the previous term provided that he has no failing grade and carries regular academic load	— Free comprehensive fees, ₱250.00 monthly allowance, and ₱50.00 book allowance
ACES Scholar	— High School GPA of at least 85 and has passed at least 15 units in the college accreditation examination	— Free comprehensive fees, ₱400.00 monthly allowance, and ₱200.00 book allowance
Honorific Scholar	— High School valedictorians and salutatorians	— Free comprehensive fees and ₱100.00 monthly allowance
Academic Grantees	— GPA of 1.751 – 2.00 in the previous term provided that he carries a regular academic load and has a family annual gross income of ₱7,000 or below	— Free comprehensive fees, ₱100.00 monthly allowance, and ₱50.00 book allowance
	— GPA of 1.751 – 2.00 in the previous term provided that he carries a regular academic load but whose family annual gross income is more than ₱7,000	— Free comprehensive fees
Low-Income Grantees	— Junior and senior students with a family annual gross income of ₱7,000 or below provided that he has no failing grade in the previous term	— Free comprehensive fees
	— Junior and senior students with a family annual gross income of more than ₱7,000 but not over ₱12,000 provided that he has no failing grade in the previous term	— One-third free of the comprehensive fees
Sangguniang Bayan Members	— Children of Parents who are members of the Sangguniang Bayan	— Free comprehensive fees
Sports and Athletics Grantees	— Members of the College Varsity team and Dance troupe	— Free comprehensive fees



Library



The new College Library sits on a slope near the Administration building.

Objectives/Targets

- * To acquire extensively and continuously library resources that are supportive of the college's programs in instruction, research and extension.
- * To organize and to service these resources in the most efficient and effective manner to the satisfaction of the library clientele.
- * To effect optimum utilization of the resources by providing bibliographic and current awareness services to the ViSCA academic community.
- * To preserve important records of endeavor for posterity.

Accomplishments

Orientation Program — is the regular activity of the library scheduled at the beginning of the first semester for college and high school students. However, in SY 1983-84, only high school students were given such services because of some other work pressure that needed immediate attention of the library staff. During

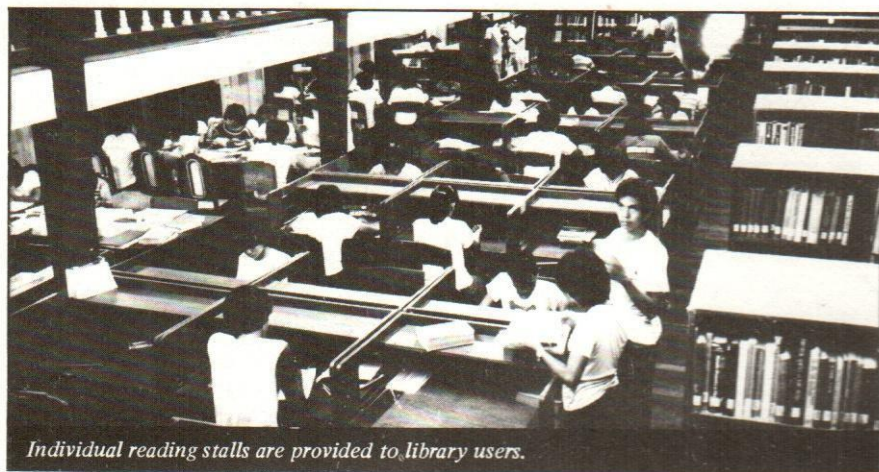
the orientation program, students were given instruction on library rules and procedures especially on how to borrow and handle books. A guided tour around the library was also conducted introducing to them the different library resources, arrangements, and uses of various collections available. A library handbook was likewise distributed to

them and a film show was presented to give them the first hand information on the Dewey Decimal Classification System, the use of card cataloging, and the proper way of caring library materials.

Collection of library materials — was largely enriched by various sources and services. In 1983, ViSCA library was a recipient of a \$200,000-grant from the FSDP-EV for the purchase of books on farming systems and its related subject areas and a P 188,000-grant from the NSTA for the acquisition of books on physics, chemistry, statistics, biology, and other library materials related to computer science. The collection development of the library was further improved with the services made by Mr. Jan Olsen of the Albert Mann library of Cornell University, USA. Three book jobbers from the United States were also tapped for more collection development. These include the Baker and Taylor, Midwest Library Service, and the Pergaman Press. Transactions with these jobbers were made possible by Letter of Credit through the PNB and the Central Bank.

From January to December 1983, a total of 1,017 titles of various publications were received by the college through purchases and gifts from numerous sources. Among its benefactors aside from those mentioned above are the Vita Publication, the Asia Book Foundation, NEDA, PCARRD, and the Food and Agriculture Organization (FAO).

Use of library facilities— was enhanced with the increase of various reading materials. The number of times the reserve and circulation books that were charged out to college and high school students and faculty members had increased considerably



Individual reading stalls are provided to library users.

over the previous year's record. However, it may be noted that the number of clientele who were served and admitted in the library during the year in review was much lower than in 1982. This was, perhaps, because the library is quite far from the new academic buildings and dormitories and because books with limited number of copies and were recommended for class use were loaned out to faculty members who just shared the books with their students. This problem, however, is expected to be solved once the new library building in the college campus is completed and the arrival of some books purchased under the NSTA funds/

grants.

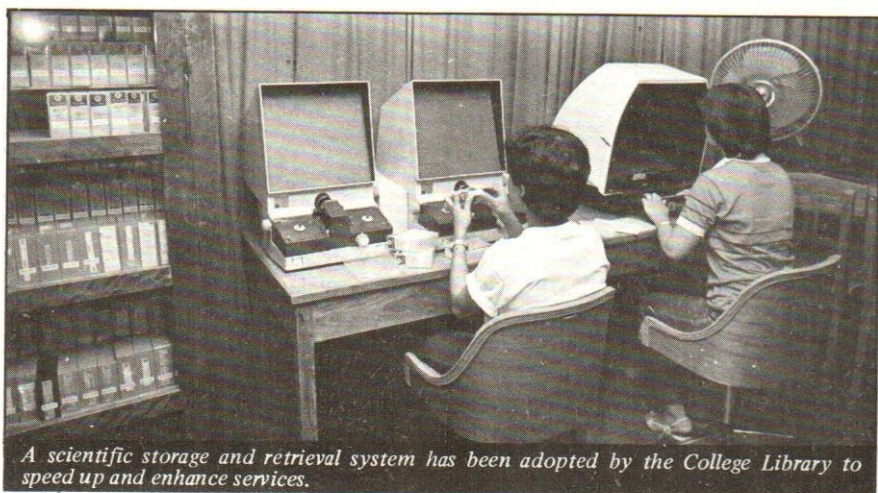
When school was in session, the library continued to operate a week-round schedule starting at 7:00 o'clock in the morning and closing at 9:00 o'clock in the evening. As in the previous years, when examinations came, night and weekend services were extended. During vacation time, the library also opened its facilities and staff services at day time to cater the needs of some employees and students who were preparing for the next term and for those conducting research work.

Publication of library materials—was a continuing activity of the library.

Lists of new acquisitions were distributed to the different departments and offices of the college which might help solve their needs for more references. Listing of serial holdings was also done by the library staff. In 1983, a total of 206 titles were received by the library as subscription, gift, and exchanges both from local and foreign sources. A subject index and key to subject to these holdings were provided for easy reference. Case studies, theses, and dissertations were likewise made available at the library. It now contains 232 entries arranged under broad subject headings. Furthermore, the Annals of Tropical Research (ATR), a technical publication of the college were distributed to the college students. This material was also sent out as an exchange material to the different agencies, societies, and other educational and research institutions both in the country and abroad.

Staff development— is also extended to the library staff by allowing them to attend a number of seminar-workshops for upgrading the level of expertise and to provide new opportunities for self-development. The following are the titles of in-service trainings participated in by the staff in 1983:

- * Seminar-workshop on computer application in libraries, Cebu City, April 9-10
- * National consultative seminar-workshop on the design and planning of the national information system for science and technology, Metro Manila, April 25-28
- * Seminar on library cooperation and resource sharing, Manila, May 18-20
- * Short training course in the use of microcomputer VISCA, Baybay, Leyte, November 21-December 16



A scientific storage and retrieval system has been adopted by the College Library to speed up and enhance services.



Infirmary



Objectives/Targets

- * To provide health care service to the ViSCA populace.
- * To prevent and control the spread and occurrence of communicable diseases.
- * To maintain an effective environmental sanitation program particularly on the water supply and waste disposal system.
- * To promote health of mothers and the normal growth and development of infants and children with emphasis on nutrition.
- * To coordinate with other agencies in carrying out some health programs.

Accomplishments

In 1983, in spite of the lack of manpower, health services were made available to the populace because the

health of the students and the school personnel is of utmost importance to the college and the people living on campus. To meet the objectives/

targets set forth for the infirmary, service schedules of staff members were made rotatingly so that the infirmary could go on a 24-hour operation. The strategies adopted during the year were on the integration of curative and preventive health care and the two way referral system which means that patients are referred to appropriate facility level in accordance with their health needs. Emphasis was on out-patient consultation of ambulatory patients and the prophylactic immunization of the populace against common communicable diseases.

As in the previous years, the health programs implemented during the period under review are the following:

Health Appraisal Program

- Annual medical and dental examination of students, faculty, and other staff members, including casual laborers.
- Follow-up and referral of those with physical and/or medical findings.

Health Care Program

- Outpatient medical and dental consultation and treatment for students and staff members and their immediate family members as well as those living in nearby barangays.
- Hospitalization at the infirmary for patients needing bedside care, and referring patients to other hospitals when a higher level of health care facilities is needed.

Health Education Program

- Information dissemination to the populace especially to the students on topics that improve and promote health in their lives and the community through publication and radio programs, small group informal discussion in the



clinics, and lectures in organized student and staff meetings.

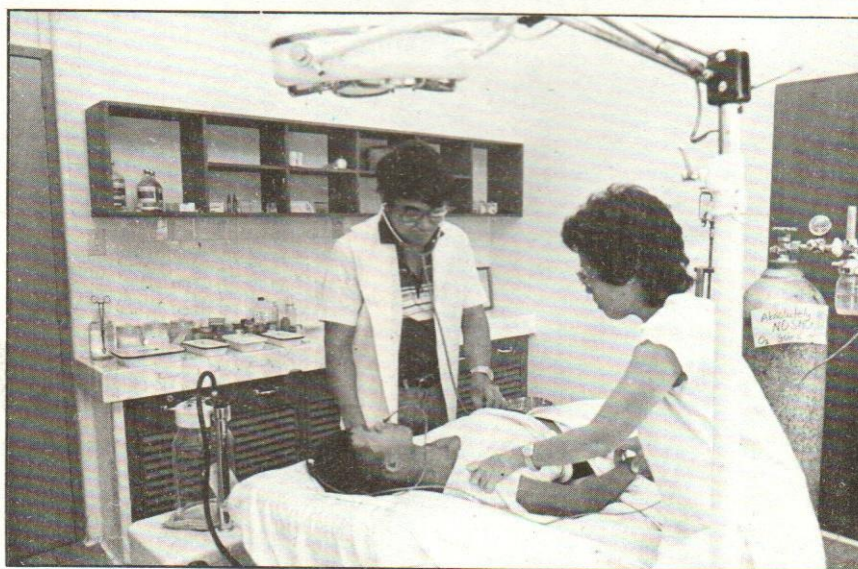
Prevention and Control of Communicable Diseases

- Periodic immunization of the school populace and residents of neighboring barangays against cholera-typhoid and other communicable diseases.
- Environmental and food sanitation campaigns and periodic inspection of student dormitories, staff cottages, school canteens, and other food establishments on campus with emphasis on sewage and garbage disposal.
- Preventive dentistry such as fluoridation, dental prophylaxis and gum treatment of elementary school children.

The specific accomplishments of the infirmary along the aforementioned programs are summarized in Table 10. It can be noted that a total of 21,170 services were rendered by the staff, 4.9 percent below the expected 19,601 services targeted to be accomplished in 1983. However, not like the other programs of the college, the shortfalls are good indications that the health status of the populace are satisfactory, paying off the above-mentioned programs of the infirmary. Nevertheless, it can be mentioned that some targets especially under the out-and the in-patient services, were not fully achieved in spite of maximum utilization of available resources and expansion of services because of the non-availability of vaccines and other medicines requested from the rural and regional health units/offices. Also, dental examination of students, was reduced considerably because only first year students, transferees, and new staff members are required for examination for record purposes.

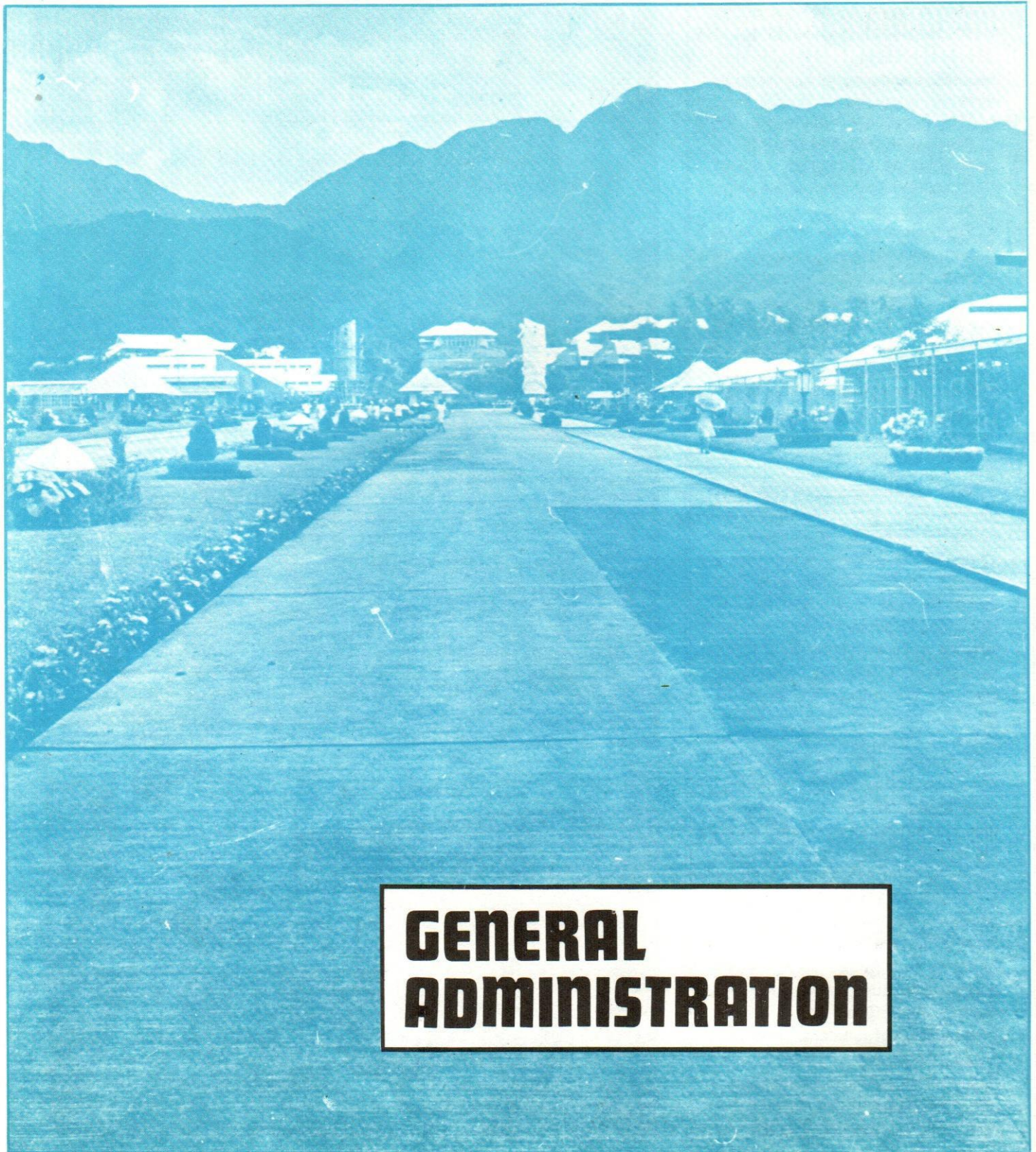
Table 10. Medical and dental services of the ViSCA Infirmary in 1983

Services	Frequency	
	Target	Actual
Medical		
Outpatient consultation and treatment of students, faculty and staff members	4,902	4,619
Outpatient consultation and treatment of staff dependents and outsiders	1,953	1,946
In-patient services to students, faculty and staff members	134	143
In-patient services to staff dependents and outsiders	56	46
Physical Examination of students for enrolment	2,200	2,225
Physical examination of faculty, staff, and new applicants	2,134	2,283
Laboratory examination of blood, urine, stool and others	1,000	1,401
Immunization of students, staff members and their dependents, and outsiders against CT, DPT, and Polio	938	925
Dental		
Dental examination of students	3,215	803
Dental examination of staff members and outsiders	1,500	1,842
Dental services on prophylaxis, gum treatment, extraction, and filled	3,138	3,368
Total	21,170	19,601





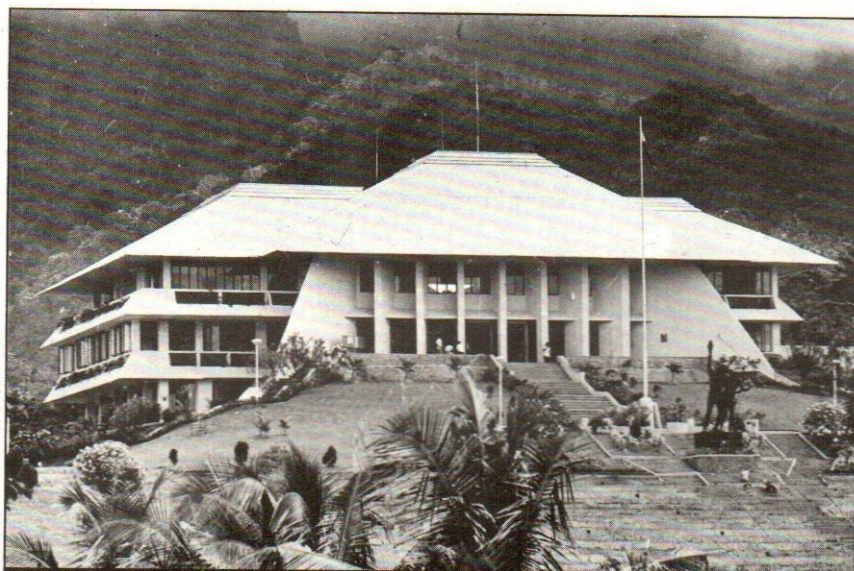
Gen. Administration



GENERAL ADMINISTRATION



Administration and Management



The new Administration building is the most imposing structure on campus.

General Administration as used in this report refers to the administrative machinery and its functions. The offices involved are those of the Office of the College President and the Office of the Vice President for Administration and all the offices/units under its supervision whose service functions are mainly supportive of the work of the different units of the college.

The main function of the administrative machinery includes planning, direction, coordination, control, and operation/implementation of the various programs and projects targeted to accomplish the objectives set forth for growth and development of the institution and its service area/region.

Guided with this principle and ever cognizant of and determined to maintain a certain level of output, the ViSCA administration endeavored to work out the objectives set for 1983.

Reorganization of ViSCA Administrative Offices

The major reorganization of key administrative offices, which started as early as the later part of 1982,

had to be continued in 1983 in order to attain the desired organizational efficiency and effectiveness. Some important changes include the following:

Planning office revived and placed directly under the President

Institutional development plans for the next five or ten years had to be considered and this work had to be minded by no less than the College President. So, the Planning Section had to be detached from the Planning and Budget Office to become an independent planning office. The head of the office is designated Assistant to the President for Planning.

Internal Control Unit (ICU) transferred to Budget Office

Some arrangements regarding fund control were tried in the past, like placing it under the Office of Business Affairs. However, the reorganization of ViSCA found no more need for the existence of the Office of Business Affairs and so it had to be abolished. In view of this development, the ICU had to be integrated with the Budget Office for proper coordination of budget and actual expenditures.

Four offices added under the Director of Extension

The dissemination of technologies and other approved farm and home practices emanating from research is a major function of the extension office. This is facilitated with the use of print media and the radio. For purposes therefore of better coordination and monitoring of this work, the head of the publication office, superintendent of the printing press, manager of the radio station, and the heads of extension projects of the academic and research centers of the college were placed under the Director of Extension.

Policies Formulated

Financial assistance to families of deceased emergency personnel

The ViSCA Board of Trustees approved a financial assistance fund



amounting to ₱ 2,000 which shall be given to family members of an emergency laborer who dies in time of duty in any of the projects of the college, provided that said deceased laborer has continuously served the college within at least six months prior to death.

Remuneration for staff members who serve as devcasters

As a remuneration for extra services rendered as devcasters, ViSCA personnel from other offices are given a certain amount of honorarium as may be determined by the radio station manager, based on the actual number of hours they spend as devcasters. These devcasters had been trained on broadcasting work and other allied activities related to radio broadcasting which was undertaken under the auspices of the DYAC management.

Honorarium for non-teaching staff members who are tapped to teach

For the benefit of students in terms of quality instruction, non-teaching ViSCA staff members may be tapped to teach in their line of specialization and are given honoraria for their services. This policy is essential especially at times when some members of the faculty would go out for long period of time, such as when they leave for study. This practice of giving honoraria has been found less expensive compared to employing substitute teachers. This also gives the college a chance to utilize its personnel to the fullest and maximize output in terms of better-informed students at the least expense.

Charges for extra use of electricity

The generation of electricity for the use of the ViSCA facilities on campus has been fully subsidized by the administration. There had

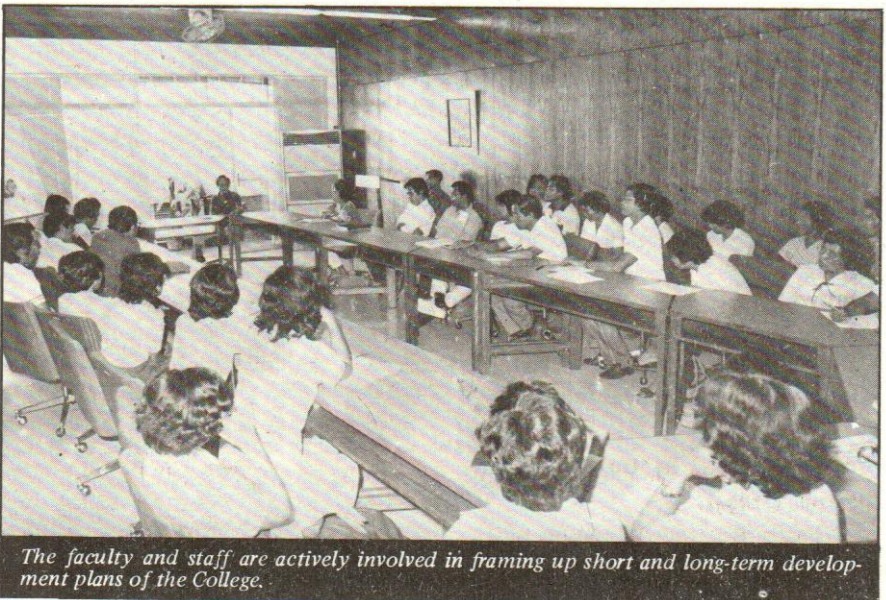


The Assistant to the President for Planning assumes the role of providing support in making development plans for ViSCA.

been no limit as to the amount of electric power that the ViSCA populace had been using. With the bigger power generators acquired, residents had been tempted to use high-wattage electric appliances until a time came when these big generators could no longer carry the excessive loads. As a result, the generating

sets were unserviceable for sometime and a sizeable amount of money was needed to put them back to operation.

To discourage consumers from the excessive use of highpower consuming appliances, the ViSCA Board of Trustees approved the imposition of electrical charges, to



The faculty and staff are actively involved in framing up short and long-term development plans of the College.



wit;
 0 – 100 kwh Free
 Next 50 kwh in excess
 of 100 kwh ₱ 1.00/kwh
 Next 50 kwh in excess
 of 150 kwh ₱ 2.00/kwh
 Next 50 kwh in excess
 of 200 kwh ₱ 3.00/kwh
 Beyond 250 kwh ₱ 5.00/kwh

Reclassification of position titles

The academic ranks/positions of the faculty members who had been on full-time research work in various research centers of the college had to be reclassified into appropriate research titles for obvious reasons. Specifically, five instructor positions were accordingly converted into research specialist titles in order to suit the kind of work they are involved in. This move also corrected the seemingly narrow teacher-student ratio which the Office of Budget and Management had been questioning.

Physical Facilities Development

As planned, various infrastructure projects were implemented in CY 1983. These include buildings of different types of occupancy, site development, and landscaping activities. Expansion of the water and electrical facilities was also done to make the newly completed buildings fully operational.

Other projects which were executed fast by some contractors were completed on schedule. However, some contractors especially those that are Luzon-based were drastically affected by the escalation of Prices to the extent that they were forced to abandon some projects.

On the other hand, the repair and maintenance of existing physical facilities showed some negative changes due to the effect caused

Table 11. Status of the Infrastructure Projects as of December 1983.

Project	Status of Completion (%)	Contract Amount (₱)	Contractor/Implementing Unit
Volatile Chemical Storage House	100.0	68,240.00	NAZARENO CONSTRUCTION
Foot Bridge from Arts and Letters to Ag. Engineering	100.0	77,700.00	NAZARENO CONSTRUCTION
Bicycle Lanes & Access Road and Fire Hydrant	100.0	921,784.64	UNIMASTER & BY ADMINISTRATION
ViSCA Mall (Phase I & II)	100.0	1,117,200.00	UNIMASTER CONGLOMERATION
Social Hall Remodeling	69.7	517,500.00	GERENT BUILDERS & BY ADM.
Curbs and Gutter	100.0	555,920.32	ACHIEVERS CONSTRUCTION & DEV., CORP.
Steel Fencing (Highway)	19.7	158,000.00	GERENT BUILDERS & BY ADM.
Obelisk (Labor Only)	100.0	53,230.00	GERENT BUILDERS
2-Unit Guard House and 2-Unit Waiting Shed	100.0	225,492.00	PROGOSONS CONSTRUCTION
20-Door Bachelorette's Apartment (Labor Only)	60.0	212,000.00	PROGOSONS CONSTRUCTION
ViSCA Farm Product Outlet	100.0	458,925.10	PROGOSONS CONSTRUCTION
Agro Reforestation (Phase II)	40.7	1,148,500.00	UNIMASTER CONGLOMERATION
ViSCA Library (Phase II)	100.0	2,040,295.00	CODILLA'S ENTERPRISES
Duplex Houses	100.0	460,000.00	CODILLA'S ENTERPRISES
20-Bedroom Training Dormitory	95.0	1,642,471.00	MASTER BUILDERS
Gymnasium	25.3	3,233,000.00	ACHIEVERS CONSTRUCTION & DEV., CORP.
Student Cooking Dormitory	100.0	3,010,000.00	BY ADMINISTRATION
New Administration Building	100.0	3,798,000.00	BY ADMINISTRATION



Table 12. Summary of the Various Job Requests Served During CY 1983

Projects	Actual	Variance	Percent Completed
Civil Works	253	189	25
Electrical	308	—	100
Plumbing & Sewerage	1,303	—	100
Mechanical	80	—	100
Furniture	130	40	67
Office Equip. Repair & Maintenance	90	—	100
Painting Jobs	67	20	70
Drafting	19	—	100
Electronic Equipment Maintenance & Sound	203	—	100

by the reduction of the repair and maintenance funds. Some motor vehicles and heavy equipment were no longer operational due to shortages of funds for repair parts. However, efforts were exerted to maintain the operational vehicles so

that the activities of the college on major and minor programs would not suffer.

Shown on Table 11 is the status of the infrastructure projects as of December 1983.

Additional water lines were also

installed and were looped to improve the water pressure in all areas of the campus. Old and defective water main and distribution lines were removed and replaced with new and thicker pipelines to insure efficient water supply of the new campus. An engine-driven pump was also assembled and installed at the pumping station. This was the solution to the water supply problem of the new campus during power interruption and during peak hours of the diesel electric plant.

On the other hand, the Mechanical Services Section had made some innovations on the motor vehicles and heavy equipment in order to get rid of some expensive repair parts. Machine shop fabrication of parts needed for various repair was given full attention. The acquisition of various machine shop equipment had helped a lot and had eliminated the problem of producing some scarcely supplied repair parts.

Efforts and concentration were also geared towards the repair and maintenance of buildings. Most of the buildings that had undergone considerable repairs were staff houses. Problems had surfaced on the financial aspect. The appropriation on repair and maintenance for buildings could not meet the needed materials and labor, hence repair works were classified according to priorities. Odd jobs in the form of job requests from various departments, centers, offices, and dormitories were also served and completed. These were intervening activities which sometimes disrupted the scheduled repair works of the Physical Plant. Shown in Table 12 is a summary of the various job requests served during the year 1983. Table 13 also shows the different projects and the corresponding areas landscaped during the year.

Table 13. Landscaping Projects in CY 1983

Project	Area (Sq. m.)
Administration Building	7,250
Home Science Building	2,025
ViSCA Mall	13,920
International Guest House	3,320
Farming Systems Duplex	2,480
Horticulture Building	2,450
PCARRD Housing	9,875
President's Cottage	50
Bachelorette's Dorm	75
Total	41,445



Financial Statement

ViSCA's operating budget depends primarily on the annual appropriation given by the national government. The College Special Account whose funds come from student fees, rentals, interests and earnings of income-generating projects

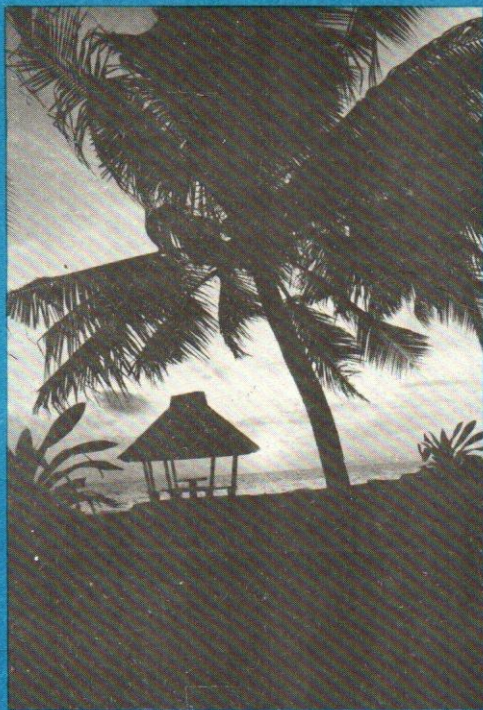
also contributed a lot to ViSCA's budgetary needs.

In 1983, ViSCA's total expenditures amounted to P 37.5 million broken down as shown in Table 14. It can be noted that ViSCA's expenses in 1983 is 17.4 percent less than the previous year's P 45.4 million. This is because of the limited amount Ap-

propriated for infrastructure projects. However, the 1983 budget for research was more than double compared to that of 1982 because of the approval by the OBM for a separate KBI for the PRCRTC. The launching of the FSDP-EV whose support comes from the USAID also augmented ViSCA's research funds.

Table 14. ViSCA's Expenditures by Programs and Projects Covering the Period January to December 1983.

Programs/Projects	Personal Services	Maintenance and Operating Expenses	Capital Outlay	Total
Instruction	P 5,447,766.50	P 1,892,000.00	P 1,610,000.00	P 8,949,766.50
Advanced Education	257,202.03	290,000.00	—	547,202.03
Higher Education	4,288,171.53	1,245,000.00	1,610,000.00	7,143,171.53
Secondary Education	902,392.94	357,000.00	—	1,259,392.94
Research	P 6,921,445.39	P 8,693,990.00	—	P 15,615,435.39
Research studies on abaca, coconut, applied sociology and socio-economics	808,445.39	404,990.00	—	1,213,435.39
Operation and maintenance of PCARRD research programs and projects	1,935,000.00	2,079,000.00	—	4,014,000.00
Philippine Root Crop Research and Training Center	1,736,000.00	2,590,000.00	—	4,326,000.00
Support to the Eastern Visayas Farming Systems Development Project	2,442,000.00	3,620,000.00	—	6,062,000.00
Extension	P 613,594.30	P 600,000.00	—	P 1,213,594.30
Auxiliary Services	P 466,150.74	P 419,999.60	P 2,635,000.00	P 3,521,150.34
General Administration	P 3,401,099.07	P 3,957,000.00	P 830,000.00	P 8,188,099.07
Equipment Outlay	—	—	P 29,116.50	P 29,166.50
TOTAL	P 16,850,056.00	P 15,562,989.60	P 5,104,116.50	P 37,517,162.10



"The attainment of ViSCA's goals and objectives and the success in the implementation of its plans and programs have greatly depended on the managerial effectiveness and the work force of the individual units of the College. It is therefore worthwhile mentioning that what has been accounted for in this report may not have been accomplished without the support of ViSCA's constituents..."

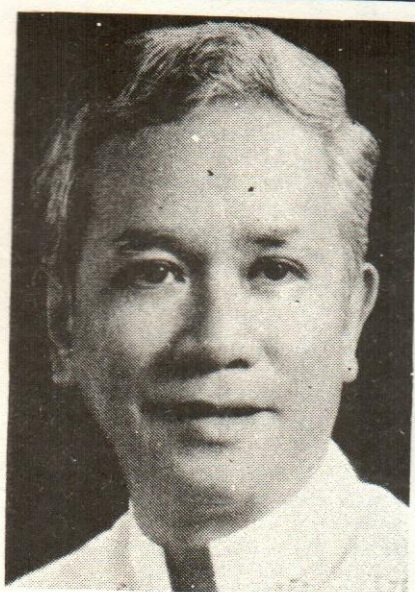
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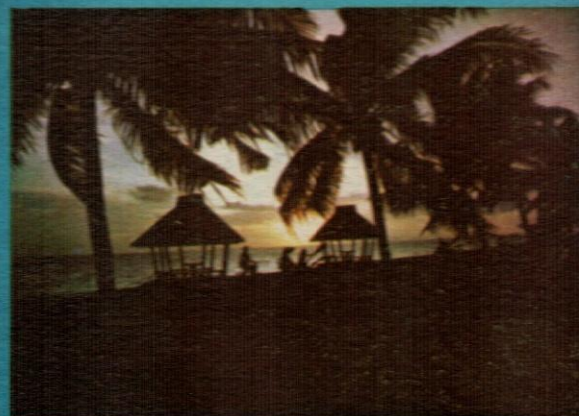
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The ViSCA Annual Report is published in English and is intended for many purposes. One, and perhaps the more important of these, is to inform the members of the ViSCA Board of Trustees, donors, collaborators, and the interested public of the highlights of ViSCA's work. Results reported herein are those achieved within the year 1983.

This report is published by the Planning Unit of the Visayas State College of Agriculture at Baybay, Leyte. The staff members contributing to its production are:

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