

*Handwritten:* 1983  
**SECOND DECADE OF INSTITUTIONAL DEVELOPMENT**

## **ANNUAL REPORT**

**MOUNTAIN STATE AGRICULTURAL COLLEGE**  
**La Trinidad, Benguet**

**1983**

**FORTUNATO A. BATTAD**  
**President**

SECOND DECADE OF INSTITUTIONAL DEVELOPMENT

ANNUAL REPORT

MOUNTAIN STATE AGRICULTURAL COLLEGE  
La Trinidad, Benguet

1983

FORTUNATO A. BATTAD  
President

Republic of the Philippines  
MOUNTAIN STATE AGRICULTURAL COLLEGE  
La Trinidad, Benguet

August 10, 1984

His Excellency Ferdinand E. Marcos  
President, Republic of the Philippines  
Malacañang, Manila

Thru: Honorable Jaime C. Laya  
Ministry of Education, Culture  
and Sports  
Manila

S i r :

I have the honor to submit the Annual Report of  
this College for 1983.

May I take this occasion to express my sincere  
thanks for giving me the opportunity to head this College  
as a means to serve the Province of Benguet in particular  
and the Region and the New Republic in general.

Very truly yours,

FORTUNATO A. BATTAD  
President

Copy Furnished:

1. Minister, Ministry of Education and Culture
2. Members, Board of Trustees
3. MECS Representative for State Colleges  
and Universities
4. PASUC Office, Ministry of Education and Culture

/itw

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MOUNTAIN STATE AGRICULTURAL COLLEGE  
La Trinidad, Benguet

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Board and College Secretary

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## SECOND DECADE OF INSTITUTIONAL DEVELOPMENT

Annual Report  
1983

### Overview

The Mountain State Agricultural College, under an Officer-in-Charge from January to October and with a new President from November to December continued its pace of academic growth during the school year under review.

The most significant event that happened during the year was the coming of His Excellency Ferdinand E. Marcos on December 3, 1983 to induct Dr. Fortunato A. Battad as President of the College who was appointed effective October 1, 1983 (Figure 1). Since the Liberation (1946) to the present, this was the only occasion that the President of the Republic visited the College.

Among the gains achieved in the areas of concern in the College within the period were:

1. Completed and maintained the agro-forestation project with an area of 30 hectares planted to Arabica coffee;
2. Establishment of a Tissue Culture Laboratory for orchids and other flowers;
3. Expansion of the citrus project in the main campus from 0.7 to 1.3 hectares;
4. Successful introduction of two strawberry varieties with better quality of fruits compared to the "old varieties";





Fig. 1. Dr. Fortunato A. Battad takes his oath of Office as President of the Mountain State Agricultural College before His Excellency FERDINAND E. MARCOS at the College Auditorium on December 3, 1983. Others in the picture are: (from right to left) Atty. Luis Lardizabal, Governor Ben Palispis of Benguet, Deputy Minister Herminigildo Dumlao of the DECS, Mrs. Lina M. Battad, and Assemblyman Andres A. Cosalan. Behind Mrs. Battad is Minister Jose P. Aspiras.

5. Expansion of outreach potato program in mid-elevation and lowland areas; and
6. In physical and infrastructure development, several projects were completed/started during the period under review as follows:

#### Completed Projects

- Bailey bridge No. 1 across the Balili river with 10 ton capacity.
- Root Crop Auditorium with indoor basketball court.
- One 2-storey dormitory each for boys and girls with 200 students capacity.
- Coffee Processing building at Ampasit.
- Agro-forestation nursery at Ampasit.
- Agro-forestation machinery shed.
- Concreting of agro-forestry quadrangle.
- Basement of the processing building.
- Concreting of 150 meters road in the main campus.

#### On-Going Projects

- One poultry house at Ampasit with 1000 broilers capacity.
- One 3-pen piggery house at Ampasit for fattening 18 heads capacity.
- Two 2-bedroom staff house in the agro-forestry compound.
- Bailey bridge No. 2 across the Balili river 10-ton capacity.
- One 3-classroom building for agro-forestry at Ampasit.
- Fencing of boundary in Ampasit with interlink wires.

- Deepwell drilling and installation of water pump in Ampasit.
- One 2-storey with basement administration building.
- One 4-classroom building for animal science.
- One laboratory and seed storage building for Plant Science.
- One 2-storey 7-classroom elementary building (Phase 1).
- Sports Complex Auditorium with indoor basketball court.

Projects for Construction in 1984

- Phase II of Food Processing Complex (concreting of sidewalk, landscaping and construction of a water tank).
  - Grandstand for the Sports Complex.
  - Roofed bleachers.
7. In instruction, emphasis was focused on balancing of theory and practice towards total application of subjects learned whether in written or spoken communications and actual planning and field operations. This was carried out through frequent and cordial supervision, maximum utilization of all available resources (manpower, equipment, field and buildings), and expansion of outreach non-formal education program.
  8. Basic and applied researches were pursued for the development of highland farming, most especially on conservation of resources and greater utilization of rain-fed areas.
  9. Extension was carried out through technician and farmer's training, field demonstration and direct farmer's field visit and advise.

All these accomplishments were made possible with the cooperation of all concerned in the College and in the community and

the concern of the Ministry of the Budget that provided the funding of all projects, including equipment and capital outlay. Above all, the National Leadership has provided the inspiration, the driving force and the vision for the total development of MS&C in particular and the country in general under the New Republic.

Details of the accomplishments of each unit of the College could be gleaned from the main body of this report.

CHAPTER I

INSTRUCTION

A. Faculty

There are 229 faculty members which compose the total teaching force of the College and is expected to increase to cope with its expanding curricular program.

1. Academic rank	Number
Professor	10
Associate Professor	4
Assistant Professor	47
Instructor	99
Assistant Instructor	<u>69</u>
Total . . . . .	229

2. Degrees

a. Ph.D./Ed.D.	18
b. MS	41
c. MA	39
d. BS	<u>111</u>
Total . . . . .	229

B. Enrolment

The enrolment in the different levels of instruction for the year under review are presented hereunder.

## Enrolment by level, curriculum and term

	<u>Summer</u>	<u>1st Sem.</u>	<u>2nd Sem.</u>
1. Graduate	144	155	166
2. Undergraduate			
BS in Agriculture	396	633	574
BS in Forestry	90	185	
BS in Home Technology	125	210	205
BS in Animal Technology	50	106	
BS in Ag. Engineering	48	121	103
BS in Agr. Education	417	637	595
BS in Agri-Bus Mgmt.	<u>76</u>	<u>138</u>	<u>133</u>
Total . .	1,202	2,030	1,889
3. Post Secondary			
Agri-Mechanics	-	53	53
Agri-Forestry	7	17	13
Dressmaking	-	9	2
Food Preservation	-	7	-
Baking	-	-	<u>7</u>
Total . .	7	86	75
4. Secondary			
Vocational Agriculture & Homemaking & Special Agricultural Sciences Education	-	588	588
General Curriculum	-	<u>550</u>	<u>550</u>
Total . .		1,138	1,138
5. Elementary	-	<u>851</u>	<u>851</u>
Grand Total . .	1,323	4,260	4,119

## 6. Summary of enrolment by levels

<u>Level</u>	<u>Summer</u>	<u>1st Sem.</u>	<u>2nd Sem.</u>
Graduate	144	155	166
Undergraduate	1,202	2,030	1,889
Post Secondary	7	86	75
Secondary	-	1,138	1,138
Elementary	-	<u>851</u>	<u>851</u>
Total	1,323	4,260	4,119

## 7. Scholarships - A total of 418 students enjoyed scholarships during the period under review.

<u>Agencies</u>	<u>Total</u>
a. Mt. State Agricultural College	
KONTAD	29
Glee Club	30
Student Assistantship	38
School Paper	5
Academic Scholars	4
Band (Rondalla)	49
CMT	<u>14</u>
Sub-Total . . .	169
b. National	
NISGP	33
SEGEAP	12
Sponsoring Agencies	
- DBP	19
- SSS	13
- GSIS	47
- PNB	46
- LBP	46
University of Life	8
PVA	5
MSAF	2
NFAC	2
Local Government Code (Dept. of Barangay Officials)	<u>51</u>
Sub-Total . . .	233

c. Local	Total
Baguio-Benguet Foundation	2
Petron, Baguio-Benguet	2
BIBAK	7
MSAC Alumni Association	3
Dangwa Tranco, Inc.	<u>2</u>
Sub-Total	16

#### Summary of Scholarships

Agencies	Total
MSAC	169
National	233
Local	<u>16</u>
Grand Total	418

#### C. Graduates

1. Tertiary. The data include graduates as of March, summer and October 1983.

<u>Curriculum Programs</u>	<u>March</u>	<u>Summer</u>	<u>Oct.</u>	<u>Total</u>
MS	17	-	2	19
BSA	103	25	15	141
BSAE	44	27	26	97
BSMT	12	4	4	20
BSF	15	7	3	25
BSA Eng'g	41	5	6	52
BABM	10	2	2	14
BSAT (DVM)	<u>11</u>	<u>-</u>	<u>1</u>	<u>12</u>
Sub-Total				380

2. Post Secondary

Agri-Mechanics	27	-	-	27
Agri-Forestry	13	-	-	13
Dressmaking	-	-	9	9
Food Preservation	-	-	7	-
Baking	<u>-</u>	<u>-</u>	<u>-</u>	<u>7</u>
Sub-Total				56



## 3. Secondary

Vocational Agriculture	55	-	-	55
Home Economics	39	-	-	39
Special Agricultural Science	9	-	-	9
General Curriculum	<u>89</u>	<u>-</u>	<u>-</u>	<u>89</u>
Sub-Total				248

4. Elementary	<u>119</u>	<u>-</u>	<u>-</u>	<u>119</u>
Grand Total				803

D. Accomplishments, Problems and Recommendations by  
Departments

## 1. Graduate Studies

There are seven (7) existing graduate programs as follows:

MS in Agricultural Education  
MS in Extension Education  
MS in Rural Development  
MS in Home Technology  
MS in Agricultural Economics  
MA in Practical Arts  
MS in Agriculture major in:

Agronomy	Horticulture
Animal Science	Plant Pathology
Botany	Soil Science
Entomology	

## a. Enrolment and graduates

The offering of MS in Rural Development increased the enrolment in the Graduate School by 5.07% of the previous year. The number of enrolment and graduates during the three (3) terms are indicated:

Term	Number of Enrolment	Number of Graduates
Summer 1983	114	-
1st Semester 1983-84	155	2
2nd Semester 1983-84	166	11
Total	435	13

b. Graduate work

There were 2 graduates during the first semester, none during the summer, and an estimate of eleven (11) graduates during the second semester 1983-84. The names and titles of theses of the two graduates during the first semester are:

Gonzales, Fernando (MS in Agriculture major  
in Horticulture)

"Breaking Dormancy of Gladiolus and Induction  
of Flowering with Calcium Carbide Treatment."

Gaces, Gonzalo (MS in Agriculture major in  
Animal Science)

"Performance of Growing-Fattening Pigs Fed  
with Commercial Feed Plus Unlimited  
Rice Bran and Some Green Forages."

c. Innovations introduced

- 1) Compilation of Thesis Abstract from 1973 to 1983 is now in the printing press.
- 2) A Graduate School Bulletin of Information was printed and made available for distribution.

d. Problems

- 1) Low rates per hour of professors
- 2) Inadequate books, equipment and journals

e. Recommendations

- 1) Implement the new rate per hour of professors as provided by the Budget Circular
- 2) Purchase more books, journals, and equipment

2. Undergraduate Studies

a. Department of Plant Sciences

1) Instruction

As in the past years, instruction was carried out with vigor and enthusiasm to provide more effective approaches in the dissemination of technical and scientific knowledge to students. It was also carried out with some flexibility to meet situational cases and the degree of receptivity of students to gain knowledge. One strategy considered to be important was the balance of theory and practical application in the teaching of the major courses.

The subjects offered and the number of students enrolled per subject during the period are shown in Table 1.

TABLE 1. Subjects offered within the calendar year  
(2nd sem.) 1982-83 and 1st Sem. (1983-84)

Second Semester SY 1982-1983

SUBJECT	No. of Sections	No. of Students
Plant Science 11	8	209
Plant Science 12	2	48
Plant Science 13	7	167
Agronomy 30	2	40
Agronomy 31	1	12
Agronomy 60	1	37
Agronomy 90	1	11
Agronomy 99	1	24
Horticulture 40	3	86
Horticulture 50	1	14
Horticulture 70	1	39
Horticulture 75	1	10
Horticulture 99	1	29
TOTAL	30	726

First Semester 1983-1984

SUBJECT	No. of Sections	No. of Students
Plant Science 11	8	164
Plant Science 12	8	179
Plant Science 13	4	59
Horticulture 20	1	26
Horticulture 21	1	13
Horticulture 40	1	23
Horticulture 50	2	40
Horticulture 70	1	20
Horticulture 75	1	29
Horticulture 99	1	13
Agronomy 30	1	18
Agronomy 31	1	18
Agronomy 60	1	17
Agronomy 80	1	25
Agronomy 90	1	14
Agronomy 99	1	7
TOTAL	34	665

During the 2nd semester of 1982-1983, 13 subjects were offered with a total of 23 sections and 726 students, excluding 76 thesis students which were handled by 15 faculty members.

In summer 1983, there were no subjects offered to students except Hort and Agro 100 for the undergraduate thesis students.

During the first semester of school year 1983-1984, 16 subjects were offered with a total enrolment of 665 students, excluding 68 thesis students. There were 15 faculty members who actually taught with a faculty/student ratio of 1:45.

#### Faculty-student performance

Out of the 726 students enrolled in various subjects during the 2nd semester of school year 1982-83, 84.79% or 615 passed, 3.71% or 27 students failed in some subjects, while 11.5% or 84 got incomplete grades.

In the 1st semester of school year 1983-84, 86.62% or 576 students passed all their subjects, 2.25% or 15 failed in some subjects, 3.91% or 26 students had incomplete grades, 5.41% or 36 students had no grades because of no examination permits, while 1.81% or 12 students dropped at pre-midterms for personal reasons.

The common causes of incomplete grades were non-completion of course requirements and no final examination, while no grade was due to non-submission of examination permits.

Within this period covered, 33 BSA horticulture/agronomy majors graduated.

The percentage of passing increased from 84.79% observed in the 2nd term of school 1982-83 to 86.62% in the first semester of 1983-84, a sign of academic improvement.

Collective effort is being exerted in the department to further achieve scholastic excellence and to reduce the number of failing students through:

- a) Upgrading of course syllabi to suit the need of the times;
- b) Closer supervision of instruction through faculty conferences, individual student guidance and make-up classes; and
- c) Faculty development programs in terms of professional and vocational courses.

## 2) Research

The department was engaged in research work particularly on ornamental, vegetable, fruit, plantation and agronomic crops to develop more viable and workable technologies

for highland farming.

Researches undertaken were either research projects funded by MSAC and other agencies or undergraduate and graduate theses. The funded researches completed and on-going during the period under review are as follows:

<u>Title of Research</u>	<u>Researcher(s)</u>	<u>Funding Agency</u>
A. Completed researches		
1. Response of Cabbage to Boron Application	P.B. Alipit	BPI*
2. Nitrogen Fertilizer Study on Cabbage and White Potato	P.B. Alipit	FERMAP*
3. Variety Performance Trials on Crucifers	F.T. Bawang & L.B. Victor	MSAC - PCARRD
4. The Influence of Ripening Season on Quality by Satsuma Orange and Japanese Summer Grape Fruit	A.C. Tipayno	MSAC
5. Adaptability Trial of Washington Navel Orange in La Trinidad	A.C. Tipayno	MSAC
6. Effect of Intercropping Baguio Beans and Garden Pea on Initial Growth of Four Citrus Cultivars	A.C. Tipayno	MSAC
7. Growth and Flower Improvement of <i>Chrysanthemum Morifolium</i> as Affected by Growth Retardants & Supplementary Lighting (Project)	B.D. Ladilad	MSAC

\*Planters Products, Inc.

\*\*Fertilizer Marketing Company of the Philippines.

<u>Title of Research</u>	<u>Researcher(s)</u>	<u>Agency</u>
a) Effect of the Different Kinds of Growth Retardants on the Growth & Flowering of Mums	B.D. Ladilad	MSAC
b) Comparative effects of the different frequency of growth retardants application on the flowering of mums	B.D. Ladilad	MSAC
c) Comparative Effects of the Time of Irradiation on the Growth and Flowering of Mums	B.D. Ladilad	MSAC
8. MSAC Orna-Flori-Research and Development Program		
a) Production and Marketing of Highland Ornamental Crops		
1) Cost & Return Analysis of Chrysanthemum under Glasshouse	B.D. Ladilad	MSAC - NFAC
2) Cost & Return Analysis of Chrysanthemum under Field Conditions	B.D. Ladilad A.G. Ladilad	MSAC
9. Technology "Packing Project" Chrysanthemum Production in the Highland	B.D. Ladilad A. Lopez	PCARRD
10. Flower Induction and Seed Production on Chinese Cabbage, Cauliflower, & Carrots	P.E. Toledo	MSAC
11. Nutritive Evaluation and Adaptation of Solarum Nodifolium	P.E. Toledo	MSAC



<u>Title of Research</u>	<u>Researcher(s)</u>	<u>Agency</u>
12. Growth and Flower Improvement of Chrysanthemum Morifolium as Affected by Growth Retardants and Supplementary Lighting	B.D. Ladilad	MSAC
a) Effect of Lamp Placement on the Growth & Flowering of Mums	B.D. Ladilad	MSAC
13. MSAC Orna-Flori-Research & Development Program		
a) Production & Marketing of Highland Ornamental Crops		
1. Cost and Return Analysis of Potted Mums under Glasshouse & Field Environments	B.D. Ladilad A.G. Ladilad	MSAC - NFAC (MA)
2. Cost and Return Analysis of Anthurium	B.D. Ladilad A.G. Ladilad	MSAC-NFAC (MA)
3. Cost and Return Analysis of Roses	B.D. Ladilad F.R. Gonzales	-do-
4. Cost and Return Analysis of Shasta Daisy	- do -	-do-
b) Variety Trials on Chrysanthemum	B.D. Ladilad A.G. Ladilad	-do-
c) Variety Trials on Carnation	B.D. Ladilad A.G. Ladilad F.R. Gonzales	-do-
B. On-going researches		
1. Adaptability Trial of Satsuma, Mandarin and Japanese Summer Grape Fruit in Some Lowland and Upland Areas	A.C. Tipayno	PCARRD

<u>Title of Research</u>	<u>Researcher(s)</u>	<u>Funding Agency</u>
2. Influence of Rootstock on Drought Resistance of Some Citrus Cultivars	A.C. Tipayno	MSAC
3. Influence of Soil pH on the Quality of Grape Fruit Juice	A.C. Tipayno	MSAC
4. Effect of Planting Material on the Performance of Passion Fruit	A.C. Tipayno	MSAC
5. Effect of Bending and Defoliation on the Flowering and Fruiting of Pomo Beauty Apple	- do -	-do-
6. Influence of Frequency of Watering and Anti-Transpirants on the Growth and Yield of Sweet Peas	V.D. Alejandro	MSAC
7. Influence of Frequency of Watering and Growth Retardants on the Growth and Yield of Sweet Peas	- do -	MSAC
8. Collection and Evaluation of Endemic Orchids (highlands)	- do -	MSAC
9. Radish, Pechay and Mustard Seed Production	D.P. Padua	MSAC-IPB
10. Mutation Breeding on Garden Pea & Snap Bean	- do -	-do-
11. Variety Performance Trials on Solanaceous Crops	P.E. Toledo	MSAC
12. Flower Induction and Seed Production on Chinese Cabbage, Cauliflower and Carrots	- do -	-do-

<u>Title of Research</u>	<u>Researcher(s)</u>	<u>Funding Agency</u>
13. Nutritive Evaluation and Adaptation of Solanus Modifolium	P.E. Toledo	MSAC
14. Growth and Flower Improvement of Chrysanthemum Morifolium as Affected by Growth Retardants and Supplementary Lighting	B.D. Ladilad	-do-
a) Effect of Lamp Placement on the Growth and Flowering of Mums	- do -	--do-
15. MSAC Orna-Flori-Research and Development Program		
a) Production and Marketing of Highland Ornamental Crops		
1. Cost and Return Analysis on Potted Mums under Glasshouse and Field Environments	B.D. Ladilad	MSAC-NFAC (MA)
2. Cost and Return Analysis on Anthurium	B.D. Ladilad A.G. Ladilad	-do-
3. Cost and Return Analysis on <del>Gosa</del>	B.D. Ladilad F.R. Gonzales	-do-
4. Cost and Return Analysis on Shasta Daisy	A.G. Ladilad F.R. Gonzales	-do-
b) Variety Trials on Chrysanthemum	A.G. Ladilad B.D. Ladilad	MSAC-NFAC (MA)
c) Variety Trials on Carnation	A.G. Ladilad F.R. Gonzales	-do-
16. Nutrient Uptake and Dry Matter Production at Different Stages of Growth on White Potato	L.B. Victor R.D. Colting A.A. Herrano	MSAC

<u>Title of Research</u>	<u>Researcher(s)</u>	<u>Funding Agency</u>
17. Yield Evaluation of AVRDC* Cultivars of Chinese Cabbage	L.B. Victor A.A. Hermano	MSAC
18. Adaptability Test of AVRDC* Cultivars of Tomato	- do -	-do-
19. Intercropping Corn with Vegetables in Rainfed Areas	- do -	-do-

### 3. Extension

#### a) Seminar/Workshop

Faculty members of the department were tapped from time to time to deliver lectures or invited as participants in various seminars in the domestic fronts to disseminate new technologies developed along their field of expertise. Some of these seminars are as follows:

<u>Title of Seminar</u>	<u>Participant</u>	<u>Date</u>
1. SAVI Annual National Convention	V. Alejandro P. Padua P. Toledo	March 1983
2. National Fruit Crop Seminar/Workshop	D. Padua	April '83
3. Regional Science Fair and Quiz	D. Padua	Sept. '83
4. National Seminar/Work- shop on Fruit Crop Production and Develop- ment	U. Tipayno	June '83

<u>Title of Seminar/ Workshop</u>	<u>Participant</u>	<u>Date</u>
5. National Workshop on Genetic Resources of the Philippines	A. Tipayno	July '83
6. Consultative Workshop on Fruit Industry Development	A. Tipayno	Sept. '83
7. Consultative Workshop on Fruit Industry Development	A. Tipayno	Sept. '83
8. Seminar/Workshop on Ornamentals (MA, Region I)	B. Ladilad (Lecturer)	Aug. '83
9. Seminar/Workshop on Ornamentals (BAlx, Region I)	A. Ladilad (Lecturer)	Oct. '83
10. Summer Course for Teachers and Students (Special Arrangement)	A. Ladilad (Lecturer)	May '83
11. Quarterly Seminar on Ornamentals (PCARRD, BPI)	B. Ladilad, F. Gonzales (Lecturer)	Sept. '83
12. Dynamics of Research	P. Toledo	Nov. '83
b) Technology packaging and dissemination		
1. Technology Packaging on Chrysanthemum "Chrysanthemum Production in the Highland"	B.D. Ladilad (Author)	
c) Others		
1. Faculty members are also extending free consultations to vegetable, fruit and flower growers in Region I based on their technology needs.		
2. Faculty members with expertise in floriculture are frequently invited as judges during garden shows in Baguio and in Vigan, Ilocos Sur		

## Faculty and Staff

The department has 18 faculty members. Out of this number, two have Ph.D. degrees, nine have Masters of Science degrees, and the rest with BS degrees. Of the 18 members of the teaching staff, two are professors, nine are assistant professors, two are instructors and four are assistant instructors.

There are twelve (12) members of the supportive staff: two research assistants, one clerk-typist, one research aide and eight laborers.

### d) Problems encountered

The following problems were met within the year:

1. Inadequate **laboratory** rooms for students in the department;
2. Lack of laboratory equipment needed to meet the instructional needs of the students;
3. Absence of **Field-Research-Operation-House** for the department to serve as field office, store-room for supplies and equipment, workroom for thesis students and shed house for packing and dripping;
4. Inadequate library facilities especially technical journals;
5. Lack of technical manpower to meet the required number for a massive R and D program for the

development of S and T in the area.

e) Recommendations

To further improve instruction and to produce quality graduates needed to meet the demands of the future, laboratory facilities and equipment should be provided for students' use together with the field-research-operation-house which will help a lot in the student-faculty field work.

In order to bring about quality instruction and to carry out relevant researches, the minimum technical manpower requirement of the department as shown in Figure A should be gradually increased in a three (3) year period from the present skeletal force as shown in Figure B.

o. Department of Biology

1) Introduction

On January 11, 1982, the former Biological Science Department was divided into two units: The Department of Crop Protection (Entomology and Plant Pathology) and the Department of Biology (Botany, Zoology, Microbiology, and Genetics). The latter offers at present a degree program in Agricultural Botany.

Figure A. Faculty and Staff to meet the minimum requirement for S & T Advancement in Crop Production

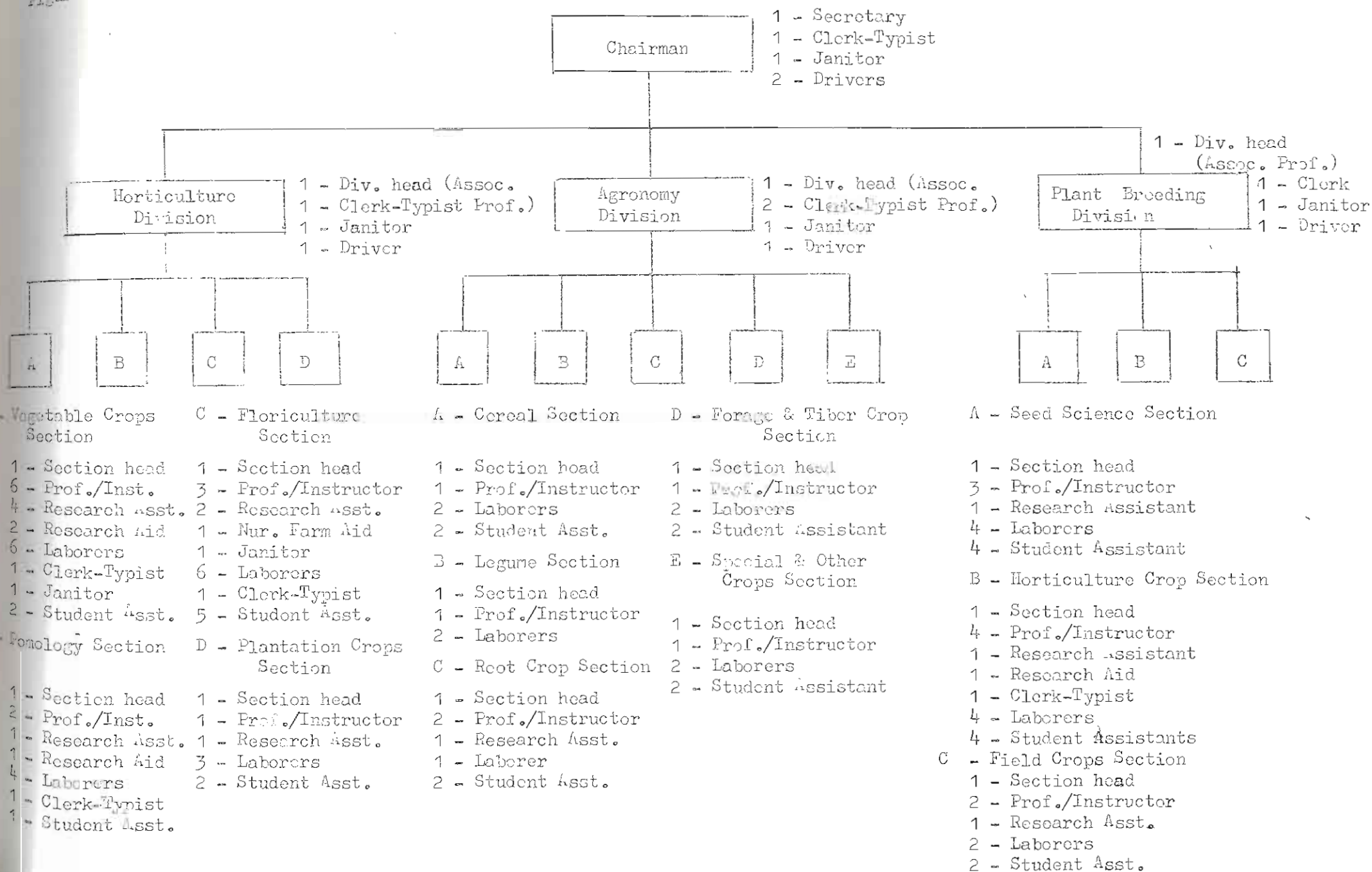
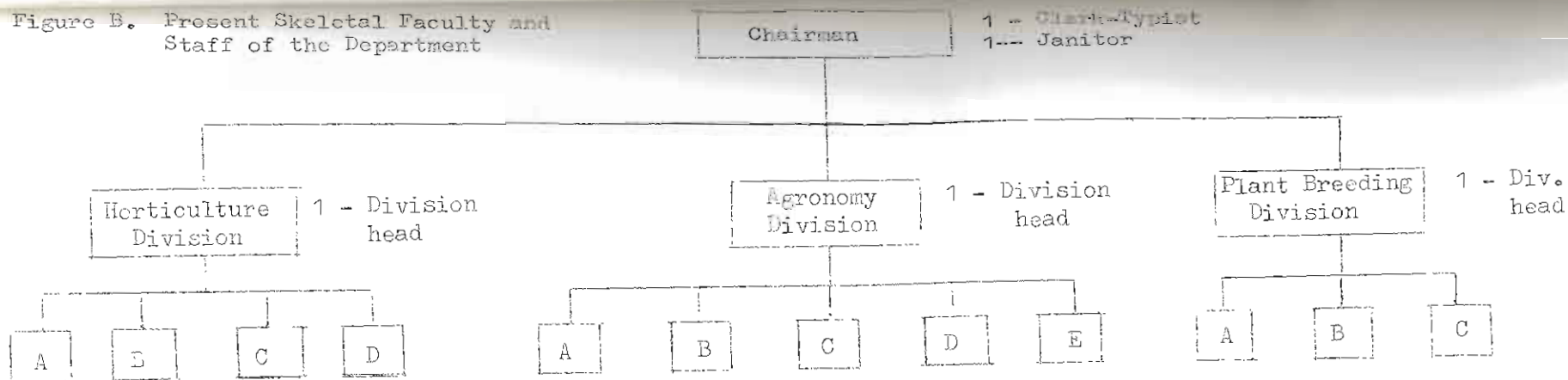




Figure B. Present Skeletal Faculty and Staff of the Department



1 - Clerk-Typist  
1 - Janitor

- A - Vegetable Crops Section
  - 1 - Section head
  - 3 - Asst. Prof./Instructors
  - 2 - Research Asst.
- B - Pomology Section
  - 1 - Section head
  - 1 - Asst. Prof./Instructor
  - 2 - Laborers
- C - Floriculture Section
  - 1 - Section head
  - 2 - Asst. Prof./Instructors
  - 1 - Research Asst.
  - 1 - Nursery Aid
  - 1 - Janitor
  - 6 - Laborers
  - 5 - Student Assistants
- D - Plantation Crops Section
  - 1 - Section head

- A - Cereal Section
  - 1 - Section head
- B - Legume Section
  - None
- C - Root Crop Section
  - 2 - Instructors\*
- D - Forage & Fiber Crop Section
  - None
- E - Special & Other Crops Section
  - None

\* With Root Crop Center

- A - Seed Science Section
  - None
- B - Hort. Crop Section
  - 1 - Prof./Instructor
- C - Field Crop Section
  - None

Subjects offered and enrolment for:

Second Semester  
(1982-1983)

First Semester  
(1983-1984)

<u>Subject</u>	<u>Enrolment</u>	<u>Subject</u>	<u>Enrolment</u>
Zoology 11	157	Zoology 11	439
Botany 11	13	Zoology 12	18
Botany 12	318	Botany 11	503
Botany 13	28	Botany 12	57
Botany 111	6	Botany 13	16
Botany 131	4	Botany 151	2
Botany 161	3	Botany 190	1
Microbiology 11	<u>40</u>	Microbiology 11	<u>225</u>
TOTAL	569		1,261

Faculty and staff of the department

The department has a total of 12 personnel distributed as follows:

Assistant Professor	-	1
Instructors	-	5
Assistant Instructors	-	2
Laboratory Aide	-	1
Clerk Typist	-	1
Research Assistant	-	1
Laborer	-	1

Student performance

Second Semester (1982-1983)

<u>Subjects</u>	<u>Passed</u>	<u>Failed</u>	<u>Incomplete</u>	<u>Dropped</u>	<u>Total</u>
Zoo 11	66%	28%	3%	4%	157
Bot 11	45%	31%		23%	13
Bot 12	47%	22%	11%	7%	318
Bot 13	94%	3%	3%		28
Bot 111	84%		16%		6
Bot 131	75%			25%	4
Micro 11	95%	5%			40

First Semester (1983-1984)

<u>Subjects</u>	<u>Passed</u>	<u>Failed</u>	<u>Incomplete</u>	<u>Dropped</u>	<u>Total</u>
Zoo 11	67%	18%	5%	3%	439
Zoo 12	95%			5%	18
Bot 11	85%	8%	7%	4%	503
Bot 12	63%	23%	5%	8%	57
Bot 13	100%				16
Bot 151	100%				2
Bot 190	100%				1
Bot 199	100%				1
Micro 11	55%	10%	32%	4%	225

## Faculty and personnel development

The following faculty members were recipients of thesis assistance:

- a. Mrs. M.P. Cadeliña - Masteral thesis assistance in the amount of ₱3,000.00 was granted on June 10, 1983.
- b. Mr. M.A. Balcita - Masteral thesis assistance in the amount of ₱2,000.00 was granted in September 1983.

## 2) Research

On-going researches:

- a) Some Physiological studies on Sweet Pea by L.G. Lirio
- b) MSAC Vermiculture Project by E.C. Bestre
- c) Research on Foliar Fertilizer application for Sweet Pea - Department Project Study

## 3) Extension

- a) Botany division: Identification of Plant Specimens and Their Uses
- b) Microbiology division: Microbial Analysis of Water Samples

- c) The department participated in the inter-school quiz content held at UP College of Baguio in February 1983.

4) Supportive accomplishments during the year

a) Academic programs

- Laboratory manuals for Botany 11, Botany 12, Zoology 11 and Microbiology 11 were prepared and bound for students' use.
- Cabinets for zoological specimens were constructed. The zoology group had a field trip to collect zoological specimens which were displayed in the newly established Zoology Museum.
- A culture cabinet for bacterial culture in Microbiology 11 is being constructed.
- More plants are collected for the Arboretum project being developed by the botany instructors and students.

b) In-service training for faculty members

<u>Title</u>	<u>Name of Participants</u>	<u>Date attended</u>
1. Buklod Ng Mga Kabataang Kawaní, MSAC Yunit	M. M. Balcita A. G. Moldez D. B. Ronaldo	July 21, 1983
2. Orientation and Organization Seminar of the Buklod ng Mga Kabataang Kawaní, MSAC Yunit	D. B. Lonado	June 17, 1983

<u>Title</u>	<u>Name of Participants</u>	<u>Date Attended</u>
3. 18th Annual Seminar-Workshop of Society for the Advancement of Vegetable Industry	L.G. Lirio D.B. Lonaldo	March 3-5, 1983
4. The Evaluation of Performance of Faculty Members	L.G. Lirio D.B. Lonaldo	April 12 - 14, 1983
5. In-service Training for Statistics	D.B. Lonaldo	1st Sem. 1983-1984
6. The Dynamics of Research	M.A. Balcita M.P. Cadoliña J.J. Josue E.C. Bestre A.C. Moldez L.G. Lirio	Nov. 7, 1983
7. Annual Convention of the Radio-Isotope Society of the Philippines	L.G. Lirio	January, 1983

c) Problems

1. Lack of properly equipped laboratory rooms
2. Insufficient technical faculty members to handle courses, especially the major subjects in botany both in the graduate and undergraduate level
3. Inadequate supportive staff

d) Recommendations

1. Purchase of the much needed equipment for both instruction and research, e.g., distilling apparatus, muffle, furnace, oven, etc.

2. Recruitment of technical personnel
  3. Hiring of a full time janitor for the department
  4. Hiring of one student assistant or laborer to maintain the project
  5. a) Encourage faculty members to attend seminars and workshops
  - b) Provide incentives and motivation for the faculty to go into specialized fields of learning, e.g., Botany, Zoology, Microbiology, in the form of scholarships, assistantships, promotions.
- c. Crop Protection Department

1. Instruction

The Department of Crop Protection plays a significant role in the implementation of curricular programs offered by the College, particularly in the undergraduate program in Agriculture (BS Agriculture). Involvement in the graduate level is also extensive and the graduate staff participate in practically every program in the biological sciences as well as in the crop and animal sciences through formal course offerings and graduate committee memberships.

## Subjects offered and number of students

Table 1 shows the subjects offered and the number of students in each subject during the period covered by this report. In the second semester 1982-1983, there were 10 courses offered with a total of 25 sections and 498 students. There were 9 faculty members who actually taught. Faculty-student ratio was 1:55.

In summer 1983, Entomology 11, Plant Pathology 11 and Plant Pathology 110 were offered with a total of 71 students.

Table 1. Subjects offered during the fiscal year and the number of students enrolled in each subject

Subjects	Second Semester 1982-1983	
	No. of Sections	No. of Students
Entomology 11	9	141
Entomology 150	1	13
Entomology 180	1	11
Entomology 200	1	2
Plant Pathology 11	8	276
Plant Pathology 130	1	14
Plant Pathology 150	1	10
Plant Pathology 170	1	10
Plant Pathology 180	1	13
Plant Pathology 200	1	8
Total	25	498

Subjects	Summer 1983	
	No. of Sections	No. of Students
Entomology 11	1	12
Plant Pathology 11	2	50
Plant Pathology 110	1	9
Total	4	71

Subjects	First Semester 1983-1984	
Entomology 11	4	207
Entomology 120	1	16
Entomology 130	1	12
Entomology 140	1	12
Entomology 160	1	15
Entomology 199	1	6
Entomology 200	1	8
Plant Pathology 11	1	20
Plant Pathology 120	1	16
Plant Pathology 140	1	19
Plant Pathology 160	1	16
Plant Pathology 199	1	2
Plant Pathology 200	1	5
Total	16	354

In the first semester of school year 1983-1984, 13 subjects were offered with a total enrolment of 355 students taught by six faculty members. Faculty-student ratio was 1:59.

#### Faculty-student performance

Of the 498 students enrolled in various subjects in the second semester of school year 1982-1983, 66.47% or 331 passed, 12.45% or 62 students failed in some subjects, 15.96% or 79 students got incomplete grades in one to two subjects, and 2.81% or 6 students dropped the course.



However, in summer 1983, 90.14% or 64 students passed all courses and 8.45% or 6 students got incomplete grades.

In the first semester of school year 1983-1984, 72.39% or 257 students passed, 5.06% or 18 students failed, 12.68% or 45 students got incomplete grades and 6.45% or 23 students dropped one of their courses.

The three most common causes of incomplete grades were non-completion of requirement, no examination permit and no final examination and quizzes.

Within the period covered by the report, 11 BSA major in Entomology and Plant Pathology graduated.

Several steps were done to improve academic excellence and reduce the number of failing students:

1. Production of course outline and syllabi to guide the students;
2. Closer supervision of instruction through faculty conferences, individual student guidance and make-up classes; and
3. In-service trainings, seminar/workshops held on and off campus attended and participated in by faculty members.

### Faculty Members

There are 11 faculty members in this department, four of whom are on study leave. One of them is abroad pursuing his Ph.D. at the University of Adelaide, Australia. The other faculty members are at UP Los Baños; two are pursuing their Ph.D. and one is pursuing his M.S.

One of the faculty members finished her Ph.D. in Plant Pathology at UPLB and officially reported for duty last summer, 1983. In addition to this, one from the Entomology Division completed all the requirements for the degree of Masters of Science in the first semester of 1983-1984.

The present academic ranks and educational attainment of the faculty members of this department are shown in Table 3.

Table 3. Present academic ranks and educational attainment of faculty members

Name	Academic Rank	Educational Attainment
Luciana M. Villanueva	Assoc. Professor	Ph.D.
Sergia P. Milagrosa*	Asst. Professor	M.S.
Janet S. Luis*	Sc. Res. Sp. III	Ph.D.
Esteban B. Okiew*	Asst. Professor	M.S.
Lita H. Colting	Instructor	M.S.
Eulogio V. Cardona, Jr.	Instructor	B.S.
Aurora F. Bulacao	Instructor	B.S.
Nora P. Lucero	Instructor	B.S.
Bonnie S. Light*	Instructor	B.S.
Bernard S. Tadawan	Asst. Instructor	B.S.
Aguncion B. Layoad	Asst. Instructor	B.S.

\*on study leave

## Faculty development

In-service trainings, seminars/workshops were held on campus and attended by the faculty members during the year (1983).

<u>As Participant</u>	<u>Title of Training</u>	<u>Date Attended</u>
Lita M. Colting	Symposium on Strain Improvement in <u>Agaricus bisporus</u>	Jan. 31, 1983
	Lecture on Strawberry	Feb. 28, 1983
	18th Annual Seminar/Workshop of the Society for the Advancement of Vegetable Industry in the Philippines	March 3-5, 1983
	Seminar-workshop on the Evaluation of Work Performance of Faculty Members	April 12-14, 1983
	Orientation and Organizational Program of Buklod ng mga Kabataang Kawani	June 17, 1983
Luciana M. Villanueva	Packaging Research and Development Program for the Highlands	Oct. 24-25, 1983
Bernard S. Tadawan	18th Seminar-workshop of the Society for the Advancement of Vegetable Industry	March 3-5, 1983
	Orientation and Organizational Seminar of the Buklod ng mga Kabataang Kawani	June 17, 1983
	Dynamics of Research	Nov. 7, 1983
	Seminar-Workshop in Statistical Design and Analysis	June-Oct., 1983

<u>As Resource Person</u>	<u>Title of Training</u>	<u>Date</u>
Lita M. Colting	Status of Postharvest Crop Protection in the Highlands	March 5, 1983
	Postharvest Insects and Their Control	July 7, 1983
Luciana N. Villanueva	Dynamics of Research	Nov. 7, 1983
Bernard S. Tad-awan	The Status of Postharvest Crop Protection in the Highlands	March 5, 1983

In-service trainings, seminars/workshops held off campus were attended and reported by faculty members during the year (1983).

<u>Name of Participant</u>	<u>Title of Training</u>	<u>Date Attended</u>
Lita M. Colting	PAE 20th Anniversary and Dean L.B. Uichanco Memorial Symposium at PCARRD, College, Laguna	Feb. 23, 1983
	14th Annual PCCP Convention at Regent of Manila	May 4-8, 1983
Sergia P. Milagrosa	12th International Course on Plant Protection - Wageningen, The Netherlands	July 16- Nov. 4, 1983

## 2. Research

Research in the department emphasized basic and applied aspects in response to the country's need for food production. The department, likewise, devoted part of its resources to the biological studies of insects and pathogens as well

as other basic aspects of entomology and plant pathology. These basic studies are fundamental for the instruction, research and extension programs of the department.

Faculty members who did not have researches concentrated on thesis advising. However, majority of the faculty members have researches, some of which are funded by MSAC, PCARRD and other agencies. The list of completed and on-going researches during the period including the title, researcher and funding agency is shown below.

Completed researches

<u>Title of Research</u>	<u>Researcher</u>	<u>Funding Agency</u>
1. Seasonal Abundance/Succession/ Identification of Sweet Pea on Insect Pests	E.V. Cardona	PCARRD
2. Evaluation of Insecticides for the Control of Diamond Backmoth of Cabbage	E.V. Cardona	CIBA- GEIGY
3. Preliminary Study in the Pest Management of Selected Highland Vegetables, Cut- flowers and Fruits	L.M. Colting	MSAC- NRCP
4. Screening of Insecticides Against <i>Plutella Xylostella</i>	L.M. Colting	MSAC- CYANAMID
5. Fungicide Screening Against Potato Late Blight	S.P. Milagrosa	HOLST (Phil) Inc.

<u>On-going Researches</u>	<u>Researcher</u>	<u>Agency</u>
1. Biology Studies on the Insect Pests of Sweet Peas	E.V. Cardona	MSAC- PCARRD
2. Insect Pest Management of Sweet Potato in the Highlands	L.M. Colting	PCARRD
3. Studies on Insect Pests of Stored Products (Highland Crops)	L.M. Colting	PCARRD
4. Evaluation of Insecticides Against Strawberry Mites	E.V. Cardona Jr.	Shell Chemicals
5. Seasonal Abundance Succession/Identification of Insect Pests on Some Selected Vegetables and Fruit Crops Grown in the Highlands	E.V. Cardona Jr.	PCARRD
6. Studies on the Soft Rot/Disease of Cabbage, Chinese Cabbage and Lettuce	L.M. Villanueva	PCARRD
7. Study on the Biology and Control of Nematodes Attacking Celery and Tomato in the Highlands	L.H. Villanueva	PCARRD
8. Identification, Isolation and Purification of Plant Viruses Attacking Crucifers and Cucurbits in the Highlands	A.F. Bulacso	PCARRD
9. Efficacy of Various Nematocides for the Control of Root-knot and other Plant Parasitic Nematodes Attacking Irish Potatoes & Tomato	L.M. Villanueva	FMC
10. Evaluation of ETH 1 + 2 Pheromone Trap Under Field Condition	L.M. Colting	None

<u>On-going Researches</u>	<u>Researcher</u>	<u>Agency</u>
11. Efficacy Test on Pine Trees by-Products to Control Bean Weevil Under Storage Conditions	L.M. Colting	None
12. Re-evaluation of Economic Threshold Level of Potato Tuber Moth Under Field Conditions	L.M. Colting	None
13. Preliminary Survey on Insect Pests and Diseases of Carrots	L.M. Colting	None
14. Epidemiology Potato Late Blight	L.M. Villanueva (Co-researcher)	NCPC

### 3. Extension

The department operates a crop protection clinic to service clientele not only in the upland but the Cordillera as a whole. It gives free diagnosis to plant growers who encounter pest and disease problems in their field, orchard or garden. The clinic serves as the extension arm of the department, and already served 25 clientele within the period covered by this report. At present, there is no permanent staff of the clinic on a full time basis. The faculty members without teaching load in a certain period of the day are therefore assigned to take charge of the clinic.

Aside from the Crop Protection Clinic, all faculty members performed extension jobs such as resource speakers in seminars/workshops and in the preparation of handouts when necessary.

#### 4. Problems and recommendations

##### 1. Inadequate facilities

- a) To date, both departments, Biology and Crop Protection, utilize the same preparation room including facilities herein due to inadequate room, equipment, materials and supplies.
- b) The reading materials are not sufficient.

##### 2. Need for faculty development program

##### 3. No clerk-typist and janitor

##### 4. Need for a separate crop protection clinic office furnished with necessary equipment and supplies

##### 5. Non-compliance of students in bringing specimens to class, and the need for maintaining pure culture of isolated pathogens

#### Recommendations

1. Provide a separate preparation room with a laboratory aide and furnished with equipment and supplies specified in the departmental needs carrier submitted.



2. Acquire up-to-date references and other reading materials in crop protection as indicated in the departmental needs.

3. Hire a clerk-typist and janitor.

4. Hire a laboratory aide to collect the needed specimens, maintain pure culture and at the same time take care of the preparation room

d. Soil Science Department

1. Instruction

a) Graduates

1) BSc major in Soil Science - 14

2) M.S. major in Soil Science - 3

Most of the BSc major in Soil Science graduates went to their home provinces where they are employed as teachers or extension workers. Some are presently doing part-time jobs and others are employed as research assistants.

2. Student enrolment

<u>a. Courses Offered - Summer 1983</u>	<u>No. of Enrolment</u>
Soils 11	34
Soils 12	57
Soils 20	7
Soils 60	2
Soils 99	3
Soils 100	12

b. Courses Offered    1st Semester    No. of Enrolment  
   1983-84

Soils 11	244
Soils 12	112
Soils 30	19
Soils 40	26
Soils 50	22
Soils 70	12
Soils 99	8
Soils 100	5

c. Courses Offered    2nd Semester    No. of Enrolment  
   1983-84

Soils 12	174
Soils 20	20
Soils 60	14
Soils 99	2
Soils 100	10

3. Improvement of teaching

The following steps were implemented to improve the teaching skills of the faculty:

- a) Distribution of students in each section was equalized as much as possible.
- b) The use of visual aids in lecturing was encouraged. These included charts, graphs, pictures or sketches.
- c) Make-up classes were held whenever the need arose. Teachers provided consultation every now and then.
- d) Students were encouraged to actively participate in the discussion by creating an informal classroom atmosphere.

- e) Chemicals ~~and~~ laboratory manuals for thesis/  
laboratory classes were procured.
- f) Course syllabi and laboratory manuals were  
revised.

i.

#### 4. Faculty and staff development

##### a) Attendance to trainings

Julie Tukaki - attended a 3.5 month training  
program on vegetable growing in the  
Netherlands from September 15 to  
December 20, 1983.

##### b) Scholarship

Rogelio D. Colting is presently on study  
leave, working on his Ph.D. (Soil  
Science) at UPLB which started during  
the 2<sup>nd</sup> semester 1983-1984.

##### c) Academic and Non-academic staff members

working towards their MS/MA on their own

<u>Staff</u>	<u>Degree Sought</u>
1. Jara, Abraham I.	MS (Soil Science)
2. Jaravillo, Pedro T.	MS (Soil Science)
3. Pandosen, Magdalena D.	MS (Soil Science)
4. Dona, Victoria S.	MA (Extension)

#### 5. Other achievements

All the teaching faculty/staff attended  
and participated in one or more of the following

conferences, workshops, seminars, training programs, correspondence course, etc.:

<u>Title</u>	<u>Participants</u>	<u>Place/ Date</u>
1. The Dynamics of Research  (Resource Speaker) . . .	J.G. Balaoing R.B. Castillo A.L. Jara P.T. Jaramillo M.D. Pandosen V.S. Dona T.M. Merestela	MSAC/Nov. 7 1983
2. The Evaluation of Work Performance of Faculty Members	J.G. Balaoing R.B. Castillo P.T. Jaramillo T.M. Merestela	MSAC/April 12-14, 1983
3. SAVI 18th Annual Seminar Workshop	J.G. Balaoing R.B. Castillo T.M. Merestela E.K. Mamaril	MSAC/Mar. 3-5, 1983
4. 3rd PCARRD-HARC Coordinated Review on On-Going and Completed Researches	J.G. Balaoing T.M. Merestela	MSAC/April 20-22, 1983
5. 14th Annual Scientific Meeting of the Crop Science Society	T.M. Merestela	IRRI, Los Baños/ May 2-4, 1983
6. Packaging Research and Developing Program for the Highlands	T.M. Merestela	MSAC/Oct. 24- 25, 1983
7. Land Use Planning	J.G. Balaoing A.L. Jara	MSAC
8. 20th UPLB-PCARRD Workshop on Design and Analysis of Experiments	M.D. Pandosen	MSAC/Mar. 21- April 14, 1983
9. Seminar Workshop on "The Divine Principle"	R.B. Castillo	Hyatt Terraces/ Baguio/Sept. 11, 1983
10. One Year Session of Bible Correspondence Course	R.B. Castillo V.S. Dona	July 1982- August 1983
11. Orientation and Organiza- tion Seminar of the Buklod ng Mga Kabataang Kawani.	M.D. Pandosen T.M. Merestela	MSAC/June 17, 1983

<u>Title</u>	<u>Participants</u>	<u>Place/Date</u>
12. First In-service Training on Social Statistics and Experimental Designs	V.S. Dona P.T. Jaramillo	June 17, 1983 MSAC

## 2. Researches Undertaken (on-going)

<u>Title/Researcher</u>	<u>Funding Agency</u>
1. Establishment of Farming/ <sup>Systems</sup> Involving Semi-Temperate Fruit Trees and Vegetables on Sloping Areas of Banguet (J.B. Balaoing)	MSAC-PCARRD
2. Effect of Different Rates of Wuxal on the Growth and Yield of Onions (J.G. Balaoing and P.T. Jaramillo)	None (Department Research)
3. Response of Sweet Peas to Different Kinds of Foliar Spray (J.G. Balaoing & P.T. Jaramillo)	None (Department Research)
4. Studies on <u>Rhizobium-Pisum Sativum Symbiosis</u> - (T.M. Merestela)	MSAC
5. Soil and Water Management Studies in Agro-Forestry Areas (T.M. Merestela)	MSAC
6. Effect of Liming and Inoculation on Sweet Peas (L.K. Mamaril)	MSAC
7. Growth and Yield of Irish Potato as Affected by Different Kinds of Liquid Fertilizers (J.G. Balaoing & P.T. Jaramillo)	None (Department Research)
8. Response of Onion to Different Kinds of Liquid Fertilizers (J.G. Balaoing & P.T. Jaramillo)	None (Department Research)

<u>Title/Researcher</u>	<u>Funding Agency</u>
9. Response of Sweet Pea to Different Rates of Growth Regulators, G.A. and IAA (A.L. Jara)	None (Department Research)
10. Intercropping Studies on Some Vegetables in the Highlands (A.L. Jara)	None (Department Research)

#### Publications

1. R.B. Castillo

Evaluation of Test Methods for Boron Determination in Soil and Plant Tissue. (Submitted to MSAC Journal for release in December 1983).

2. J.G. Balacing and R. B. Castillo

Nitrogen Fertilization - Weed Competition in White Potato (Submitted to MSAC Journal for release in December 1983)

3. J.G. Balacing and P.T. Jaramillo

Effects of Different Rates and Kinds of Organic Matter on the Growth and Yield of White Potato, Highland Express - July-September, 1983.

4. P.T. Jaramillo and J.G. Balacing

Effects of Frequency of Watering, Rate and Time of applying Fertilizers for Potato. Highland Express - July-September 1983

5. J.G. Balacing and P.T. Jaramillo

Response of Different Varieties of White Potato to Levels of Potassium. Highland Express July-September 1983.

### 3. Extension

#### a) Soil/Tissue Testing Center

The main output of the Center was the analysis of soil and tissue samples submitted by farmers and extension workers. A minimal amount was charged per element. The funds generated were utilized to buy immediate supply needs of the laboratory.

- b) Some faculty members served as resource speakers/consultants in workshops and training programs.

### 4. Major Problems and Recommendations

#### a) Problems

1. The most serious problem encountered was the insufficiency of fund for the purchase of chemicals, glasswares and equipment to satisfactorily support the instructional activities.
2. Office and laboratory rooms are not enough for facilities and students.
3. The laboratory rooftop leaks during rainy days.
4. The greenhouse needs immediate repair.
5. There is no projection room, growth chamber, and drying chambers for better teaching and processing samples.

b) Recommendations

1. The instruction, extension and administration activities of the department should be fully supported from MSAC funds.
2. There is a need for a maintenance man to take care of the repairs of equipment and apparatus in the laboratory.
3. The administration should provide funds for yearly selective promotion of faculty and administrative personnel.

e. Veterinary and Animal Sciences

The department is composed of two divisions: Animal Husbandry and Veterinary Science.

1) Instruction

Efforts to improve instruction were made in terms of faculty development, curriculum development, improvement of the animal projects, preparation of teaching aids, acquisition of more supplies and laboratory equipment.

a) Faculty development

Faculty development efforts were categorized into study programs and in-service training programs. Study programs included those leading to other degrees either on scholarship



or under one's initiative and personal expense. In-service training programs, on the other hand, included seminars, workshops, conferences, and the like.

Table 1. Faculty pursuing study program

	M.S.	Ph.D./Ed.D.
Veterinary Science Division	3	-
Animal Science Division	2	2
Total	5	2

#### In-service trainings

In-service trainings attended by some faculty members:

<u>Seminars/Workshops</u>	<u>Month/Day</u>
1) Swine Production and Management	July 31, 1983
2) PSAS Animal Science Congress	Nov. 18-19, 1983
3) Regional Science Conference	October 1983
4) Integration of Nutrition on Agricultural Curriculum	Nov. 20-26, 1983
5) Seminar/Workshop on Artificial Insemination at the UPLB	

The department chairman attended the following seminars as resource speaker:

- 1) Package of applicable technology on swine production - Sta. Barbara, Pangasinan.

- 2) Package of applicable technology on swine production - Currimao, Ilocos Norte
- 3) Package of applicable technology on feeds and feeding of cattle and goats-RTC-RD, La Trinidad, Benguet.
- 4) Technical delivery course for swine and poultry for Region 3 - RTC-RD, La Trinidad, Benguet.
- 5) Technical delivery course for swine, Sta. Barbara, Pangasinan.
- 6) Technical delivery course for field workers, Sta. Barbara, Pangasinan

#### Curriculum development/improvement

- Offered the second year of the new course in Doctor of Veterinary Medicine
- Upgraded and revised courses of studies and syllabi
- Introduced innovative teaching in animal science
- Upgraded the requirements for students majoring in Animal Science

#### Supervision

The department chairman and division heads conducted regular informal supervision of the faculty members. Dialogues with the students were also conducted.

The animal projects were regularly visited and offered suggestions.

Faculty members were provided a supervisory folder each in the department office.

#### Co-Curricular Organizations

There are two recognized co-curricular organizations in the department, namely:

- The Veterinary Science Club
- The Animal Science Club

These organizations aim to help the department obtain equipment apart from developing leadership, socialization and other activities.

## 2. Research

Research activities were carried through the following:

- The specialization of faculty members on commodity areas for research was defined (see Appendix 1);
- Four (4) research proposals were submitted to PCARR;
- Twenty-eight (28) graduates, major in Animal Science, were advised regarding their theses problems, likewise BSAT graduates were helped on 11 senior problems.

## 3. Extension

Extension in the Department were:

- The A.I. Service in MS&C was expanded and intensified;
- The veterinary extension services of the department were activated and operationalized.

## 4. Production status of the animal projects

The cattle project

Inventory of Stocks: October 30, 1983

Black Holstein cows	3
Black & White Holstein	3
Jersey cows	3
Bulls	2
Calves	6
Brahmans	<u>2</u>
Total . . .	19

Financial Status as of September 30, 1983

1981 Collection	₱13,405.50
Expenses	9,500.00
1982 Collection	18,100.00
Expenses	<u>9,308.35</u> <u>8,791.65</u>
	₱12,697.15
1983 Collection	1,000.00
Expenses	<u>18,492.10</u> ( <u>17,791.10</u> )
	(₱ <u><u>4,794.95</u></u> )

The figure above shows that the cattle project did not perform very well this year. There was a heavy mortality among the adult animals attributed

largely to malnourishment on account of the transfer of site and heavy parasitism although the immediate cause of their deaths varied.

No physical improvement was done in the cattle project which was partly due to the low priority given to the project in terms of financing.

#### The swine project

##### Financial Statement as of October 31, 1983

<u>Month</u>	<u>Expenses</u>	<u>Sales</u>
January	₦2,990.50	₦2,780.00
February	2,927.00	736.00
March	2,458.35	1,040.00
April	2,734.14	1,300.00
May	2,795.00	1,100.00
June	2,888.00	900.00
July	2,743.00	2,410.00
August	3,100.00	2,060.00
September	2,940.00	400.00
October	3,196.00	600.00
	<hr/>	<hr/>
Total	₦28,771.99	₦13,326.00

##### Inventory and Value of Stock as of November 1, 1983

<u>Class</u>	<u>No. of Heads</u>	<u>Total Value</u>
Active boar	2	₦ 8,000.00
Culled sow	5	3,500.00
Lactating sow	1	1,500.00
Pregnant sow	1	1,500.00
Bred gilt	7	14,000.00
	<u>11</u>	<u>4,400.00</u>
Total	27	₦ 32,900.00

The financial statement above shows that the swine project lost during the year. However, if the value of the stocks will be considered, there is a net worth of ₱17,454.00

#### The poultry project

The financial status of the poultry project from December 31, 1979 to September 30, 1983 is hereby reported. December 31, 1979 collection

(JCD) . . . . .	₱12,720.30
Less: Expenses . . . . .	<u>                    -</u>
	₱12,720.30
December 31, 1980 Expenses (JCI)	<u>17,274.00</u>
	₱14,353.70
1981 Collection . . . . .	₱45,316.40
Expenses . . . . .	<u>(85,484.15)</u>
	₱100,037.85
1982 Collection . . . . .	102,230.00
Expenses . . . . .	<u>₱165,162.35</u>
	₱162,970.20
1983 Collection . . . . .	12,159.00
Expenses (September 30 (₱29,636.70)). . . . .	₱180,456.90

As can be seen, the poultry project has really been quite well-supported by the College.

#### Goat project

At present, there are 14 heads of goats belonging to the College. No sales have been made yet.

### Rabbitry project

The number of bucks, does, and youngs total 60. So far, no sales were reported.

## 5. Problems and Recommendations

The following have been the perennial problems of the department and efforts were exerted to solve them:

- a) Inadequate water supply;
- b) Very limited pasture land area;
- c) Poor location of the animal projects brought about by the expanded housing community in Balili, La Trinidad;
- d) Delays in the processing of vouchers for supplies;
- e) Lack of vehicle for transporting feeds and stocks;
- f) Non-inclusion of livestock as a priority commodity in the College;
- g) Lack of sufficient animals, including laboratory animals, in the various projects to meet the TPAE standard;
- h) Lack of laboratory equipment, especially in the Veterinary Science Division;

- i) Very poor performance of the animal production projects; and
- j) Absence of nutrition laboratory for analyzing feedstuffs.

#### 6. Recommended solutions

- a) Operationalize deep well No. 3 to supply water to the projects;
- b) Provide water tanks in the projects;
- c) Allocate funds to develop the proposed pasture area at Wangal, La Trinidad, Benguet;
- d) Rotate the project managers on the basis of their performance;
- e) Offer incentives to good managers;
- f) Provide new housing for laying house and broiler houses;
- g) Relocate the site for the animal projects for commercial purposes;
- h) Maintain the present site only for instructional purposes;
- i) Grant cash advances to the project managers to enable the purchase of feeds and other supplies as they are needed;
- j) Provide a van exclusively for use by the animal projects under the department;



- k) Include poultry and livestock as a priority research commodity of the College;
  - l) Purchase sufficient animals, including laboratory animals, for the various animal projects to meet the TPAE standards; and
  - m) Appropriate funds for the establishment of a nutrition laboratory to serve Benguet and Region I.
- f. Agribusiness and Economics
- 1) Instruction

#### Enrolment

There was an increase in enrolment over the previous enrolment of 112 during the school year 1981-1982 based on these data:

Summer 1982-1983	- 76
First Sem. 1983-1984	- 138

#### Graduates

As of March 1983, there were 10 Agribusiness graduates distributed as follows: summer 1983 (2); first semester (2) and the second semester (6).

#### Faculty

With two instructors on study leave the department has four (4) instructors, and

one (1) assistant instructor left to teach.

#### Faculty development

Two faculty members are on scholarship, namely:

Mrs. Herminia A. Francisco - Philippine Council for Agriculture and Resource Research Development scholar for Ph.D.

Miss Fe. F. Dacanay - Xavier University graduate assistant for M.S. in Agricultural Economics

Mrs. Darlyn D. Tagarino has just finished the Master of Business Management at the University of the Philippines while the rest of the instructors are pursuing masteral degree programs.

#### Curriculum development

The Agribusiness curriculum is in the process of revision.

#### 2) Research

An on-going research is being conducted by Mr. and Mrs. Leopoldo N. Tagarino on "Resource Utilization, Farmer's Expectation and Risk Aversion in the Highlands."

"Farm Level Survey on Postharvest Storage Practices & Containers in the Highlands" - Luke Cuangey.

## 3) Problems and recommendations

## Problems

1. Need for improving the Agribusiness and Economics curriculum
2. No space provided for animal management practice of agribusiness students
3. Lack of tools/equipment for use in the agribusiness projects

## Recommendations

1. Revise the curriculum
2. Provide a space, in coordination with the animal science department, for animal management practice students
3. Purchase tools/equipment for the agribusiness projects

## g. Agricultural Engineering Department

## 1) Instruction:

The Agricultural Engineering Department is now in its 8th year of existence in the College. It has graduated ninety (90) students with the degree of Bachelor of Science in Agricultural Engineering, three (3) of whom were Cum Laude.

For the period under review, the department in the performance of its trilogy functions which are instruction, research, and extension had the following notable accomplishments:

- a) It graduated 46 students with the degree of B.S. Agricultural Engineering; 42 in April 2, 1983, and 4 in June, 1983.
- b) It catered to the needs of its B.S. Agricultural Engineering students as well as BSA, BSAE, and BABM students by way of offering the required courses in Agricultural Engineering. There were 784 students enrolled in the different courses offered by the department during the period under review.
- c) Course outlines were upgraded during the early part of the semester. Handouts were likewise distributed to students to augment the lectures given during regular lecture hours.
- d) A review class in agricultural engineering was organized for prospective examinees in the Agricultural Engineering Board

Examinations last September 26-30, 1983.

A total of 22 MSAC graduates participated in the review classes which started on May 16, 1983 and ended on June 26, 1983.

- e) A field trip to the Hydro Laboratory and Crop Processing Units of the U.P. CEAT in Los Baños as well as the Machinery Unit of the IRRI was carried out on October 7-8, 1983 for the senior engineering students to supplement the lectures in the classroom.
- f) The summer farm practice requirement of students was formally linked with some government agencies in the region with the signing of a memorandum of agreement between the MSAC Engineering department and NIA as well as FSDC regional office last summer. In this agreement, MSAC will have the priority over the other educational institutions within the region to assign students to these agencies according to their needs. Training of the students during the 3-day period of their farm practice becomes the sole responsibility of the cooperating agency.

- 2) Researches were made along the major fields of agricultural engineering, especially in crop processing and farm machinery, such as peanut sheller, coffee sheller, and screw pump.
- 3) Problems and recommendations

Some problems encountered by the department during the period under review were lack of funds for travel and lack of laboratory equipment in some subjects especially in Hydraulics and Water Management.

#### h. Home Technology Department

- 1) Instruction

In nine months of the year 1983, the Department of Home Technology has successfully improved its programs on instruction, research and extension, as well as production.

The department offers three major fields: HT Education, Food Industries and Practical Arts. A total of 162 students enrolled in the first semester of 1983-1984 and increased to about 205 enrollees in the second semester.

The Home Technology Department has 11 faculty members, one of whom went on study leave for her MS degree.

Steps undertaken to improve instruction:

- Revision of different course outlines/ syllabi;
- Revision of laboratory manuals;
- Consultation periods for students outside their class schedules;
- Scheduled educational field trips of weaving and knitting classes to observe and acquire latest trends in handicrafts;
- Acquisition of books and pamphlets for references;
- Acquisition of some kitchen utensils through donations;
- Soliciting textbooks from students and from FAHP organizations; and
- Acquisition of the following equipment by the laboratory classes: particularly five (5) floor looms for weaving classes, one (1) unit of can sealer, plastic sealer, electric mixer and other new laboratory equipment.

Seminars/In-service training

<u>Participant/s</u>	<u>Title of Seminar/Training</u>
Rosa C. Abastilla	36th Annual Convention and Symposium Forum on Vital Issues in Nutrition in the Mid 80's, PICC, Manila on July 21-22, 1983
Rosa C. Abastilla Epifania G. Acas	National Home Economics Seminar at Phil-Am Life Auditorium, Manila on August 24-25, 1983

<u>Participant/s</u>	<u>Title of Seminar/Training</u>
Rosa C. Abastilla	National Conference on Nutrition and Dietetic Education Retrospects and Prospects sponsored by the Council of Deans/Heads of Universities and Colleges of Nutrition and Dietetics at UP Alumni Hostel, Diliman, Quezon City on October 18-21, 1983
Rosa C. Abastilla	National Consultation Work Conference on Practical Arts in Southern Luzon Polytechnic College, Quezon City, October 26-28, 1983
Rosa C. Abastilla	Council of Deans/Heads of Home Economics, 12th Annual Convention Conference, Nov. 11-12, 1983 at the University of the East
Jane K. Avila Lory C. Balaoing	Consultation on Food Processing Research, PCARRD, Los Baños, on September 15-16, 1983
Rosa C. Abastilla	12th Annual Convention of the Phil. Society of Dietitians and Nutritionist at Asian Institute of Tourism
Rosa C. Abastilla Josefina R. Alonzo Elvira Untalan Epifania G. Acoas Paz Lacanaria	Post Graduate Course in Nutrition and Dietetics on Food Service Management sponsored by the Nutrition Dietitian Asso. of the Phil. Venus Park Hotel, Baguio City May 17, 1983
Lory C. Balaoing	Workshop on Packaging Research Development Program for the Highlands, MSAC-HARC, Oct. 24-25, 1983
All HT Faculty	Seminar-Workshop on the Evaluation of Work Performance of Faculty Members, MSAC, April 12-14, 1983



<u>Participant/s</u>	<u>Title of Seminar/Training</u>
Rosa C. Abastilla Josefina R. Alonzo Jane K. Avila Elvira Untalan Epifania G. Añas Victoria Tumbaga	Nutrition Seminar at Benguet Capitol, July 9, 1983
Josefina R. Alonzo Jane K. Avila Lory C. Balaoing Paz Lacanaria Elvira Untalan	Seminar on Paggamit ng Pilipino Bilang Midyum ng Pagtuturo sa Antas Tersiyarya, MSAC, August 11, 1983
Rosa C. Abastilla Josefina R. Alonzo Jane K. Avila Elvira Untalan Epifania G. Añas Victoria Tumbaga	Population and Sex Education Seminar at the Benguet Capitol, September 19, 1983
Josefina R. Alonzo Epifania G. Añas Paz Lacanaria Victoria Tumbaga Elvira Untalan	Seminar on Silk Reeling sponsored by MRIDC held at PTRI-SRTC on July 29, 1983
Jane K. Avila Lory C. Balaoing Teodora Z. Monroc Erlinda Tolentino	Consultative Workshop on Fruit Industry Development for Benguet and Mountain Province, MSAC, November 10-11, 1983
All HE Faculty	Seminar-Workshop on "Dynamics of Research", MSAC, November 7, 1983
Erlinda Tolentino	Seminar on Statistics and Physics July to October 6, 1983
Romedios Garcia	Community Nutrition - a scholarship for 17 months

The department also offered non-formal education classes in Food Processing and Dress-making during the 1st semester and courses in

Baking, Native Cookery and Food Processing during the second semester.

2) Programs on research

- Research on Banana Catsup was started last Sept. 1, 1983
- Research proposal on Vegetable and Fruit Juice production was submitted for evaluation and approval by the Director of Research
- Survey on Nutritional Attitude was started by the Pop/Nut students (on-going).
- Survey questionnaires concerning attitude of customers of the Food Processing Center were distributed (on-going).

3) Extension Services

- Campaign on breastfeeding was conducted by Home Nursing and Child Care class through the radio
- An article on nutrition by Miss Victoria Tumbaga was also aired on the radio.
- The Herbal Garden which is a project of students under Miss Elvira Untalan is being developed.

- Thirty students graduated from non-formal education classes in Baking, Dressmaking and Food Processing.

#### 4) Other activities

The Future Agricultural Homemakers of the Philippines had the following activities:

- Sponsored a concert in the Capitol Auditorium with a net profit of ₱623.00;
- Maintained the beautification and cleanliness of the surroundings of the Home Tech buildings;
- Started a food production project at the back of the Food Processing Center with camote as the main crop.

#### 5) Problems encountered by the department

- Lack of spacious laboratory rooms for big classes;
- Need for bigger lecture rooms for big classes;
- Lack of facilities for the practice house of the Home Management students;
- Inadequate library books for students; and
- Inadequate processing equipment/materials for the laboratory classes.

#### 6) Recommendations/suggestions

- A Practice House building with adequate equipment and facilities should be built
- Bigger rooms should be provided to accommodate more students

- Laboratory equipment and materials should be centralized
- The following equipment/materials are badly needed:

refrigerator	- 1 unit
freezer	- 1 unit
pastry blender	- 4 pieces
cookie and pastry press	- 4 sets
decorator kit	- 4 set each of square, round, pie plate, rectangular pans
punch bowl	- 12 cups and dipper
strainers	- 4 pieces
sauce pans	- 4 pieces (qt. size)
enema outfit	- 1 piece
cups, saucers, glasses, spoons, forks	

- The following books needed:

- Marriage for Moderns by Bowman	- 2 copies
- Food Service Careers by Cornelius	- 3 copies
- Food Service in Industry and Institution by Stokes	- 3 copies
- Practical Cooking and Baking for Schools and Institutions by Amendola Joseph	- 3 copies
- Management for Modern Families by Gross, Crandall and Knoll	- 2 copies
- Toward Effective Teaching by Rivera F. Zambrano G. 1980	- 6 copies
- How to Manage a Restaurant or Institutional Food Service by John M. Stokes	- 2 copies
- Advances in Food Research (latest edition)	- 5 volumes
- Nutritional Evaluation of Food Processing by Harris, et al	-
- Fundamentals of Food Processing Operation by Heid and Joslyn (latest edition)	

- Fruit and Vegetable Juice Processing (latest edition) by Tressler
- Sterilization in Food Tech. by Ball (latest edition)
- Food Products Formulary (Vol. 1) by Komarich Tressler and Long
- Thermobacteriology in Food Processing (2nd ed) by Stumbo, 1973
- Food Products Formulary (Vol. 3) by Tressler, Woodroof, 1976
- Principles of Sensory Evaluation of Food by Amerunc, Maynard, et al. 1965
- The Biochemistry of Fruits and Their Products (Vol. 1 - 1970, Vol. 2 - 1971) by Hulme, A.C.
- Plant Pigments, Flavors and Textures of Selected Compounds - 1979 by Eshim, Michael

i. Department of Forestry

1) Subjects offered and enrolment:

<u>Summer 1983</u>	<u>No. of Students</u>
Wood Structure and Identification	3
Dendrology	7
Forest Conservation	5
Timber Harvesting	5
Forestry Practicum	25
 <u>First Semester 1983-1984</u>	
General Botany	73
Plant Physiology	30
Forest Entomology	36
Forest Dendrology	38
Forest Genetics	14
Forest Conservation	27
Social Forestry	20
Forest Product Utilization	30

<u>First Semester 1983-1984</u>	<u>No. of Students</u>
Wood Products Utilization	44
Wood Structure Identification	27
Log and Lumber Grading	5
Technical Writing	70
Geology & Forest Soils	46
Forest Policy and Administration	31
Forest Economics and Finance	32
Timber Harvesting	26
Multiple-Use Forestry	31
Timber Harvesting	26
Multiple-Use Forestry	31
<u>Second Semester 1983-1984</u>	
Forest Botany	65
Tree Morphology and Taxonomy	59
Introduction to Forest Ecology	41
Forest Engineering	44
Forest Laws and Regulations	40
Communication Process	20
Forest Pathology	20
Forest Mensuration	30
Silviculture II	26
Watershed Management	30
Log & Lumber Grading	19
Forest Wildlife Management	13
Forest Business Management	26
Wood Physics and Mechanics	26
Forest Ecology (Advance)	22
Aerial Photo-Interpretation	5

## 2) Staff Profile

Instructor	- 3
Asst. Instructor	- 4
Laboratory Aide	- 1
Clerk-typist	- 1
Laborer	- 1
Student Assistant	- 1

## 3) Accomplishments during the Year

### 1. Instruction

- Improvement of the curriculum with the incorporation of subjects given more weight in the Forester's Board Examination.
- Updating of syllabi in practically all subjects in forestry patterned after the revised syllabi of UPLB College of Forestry.

- Printed laboratory and lecture manuals in bound form.

#### Laboratory Manuals

- General Botany
- Forest Botany
- Forest Ecology
- Forest Pathology
- Forest Genetics
- Forest Geology and Soils

#### Lecture Manuals

- Dendrology
  - Wood Physics and Mechanics
  - Tree Morphology and Taxonomy
  - Forest Products
  - Timber Harvesting
- Held make-up classes (situational)
  - Held a field trip for Dendrology students at UPLB
  - Held a month long review sessions (Summer 1983) which contributed in the passing of 29 graduates out of 58.
  - Printed a 5-volume reviewer (Forester's Board Examination) for regional distribution authored by Foresters Francisco N. Bibal and Paquito P. Untalan
  - Instituted team teaching to improve instruction.

#### b. Extension

- Received visitors from different forestry institutions here and abroad in coordination with Prof. Benjamin Dimas.

#### c. Projects

- Establishment of a reading room in the Department
- Collection of partial specimens in Pathology, Entomology, rock samples, and projects in timber harvesting

- Improvement of forestry nursery and dissemination of seedlings to different departments of the college and private individuals during tree planting;
- Coordination of tree planting activities of the College.
- Coordination with FORJ head and staff for the preparation of a developmental program on the department's reservation at Wangal, La Trinidad, Benguet

#### d. Problems

The main problem of the Department is still strategic in nature. It lies on the requirements that should be met in line with the minimum standards for the Bachelor of Science in Forestry prepared by the Technical Panel of Agricultural Education as per MECS Order s. 1979. (Copy attached with the Annual Report).

In summary the department must meet the following minimum standard within two years starting 1984.

#### Physical Facilities and Equipment

- School Building
- School forest at least 100 ha. for research and instructional purposes
- Quality of output (at least 50% should pass the board exams)



Summary of Laboratory Equipment/Materials for  
Acquisition

Compound microscope	- 4 units
Herbarium cabinets	- 4
Bunsen burner	- 1
Hydrometer	- 1
pH meter	- 1
Screen house	- 1
Dissection kit	- 1
Soil sterilization	- 1
Sieves	- 2
Light meter	- 1
Analytical balance	- 1
Pruning tools	- 10
Vain gauge	- 1
Evaporation pan	- 1
Soil Auger	- 1
Soil thermometer	- 1
Torsion balance	- 1
Wood lathe with complete acces- series	- 1 set
Grinder	- 1
Complete carpenter tools	- 5 sets
Saw set	- 1
Chainsaw	- 1
Vises	- 5 sets
Jack plane	- 2
Brick saw	- 1
Turning saw	- 1
Saw clamp	- 1
Power saw	- 1
Axe	- 5
Wood borer	- 1

## j. Agricultural Education and Extension

## a) Instruction

Table 1 shows the subjects/courses offered with their corresponding enrolment for the first and second semesters, 1983-1984.

Table 1. Subject and enrolment

Subjects	Description	Enrolment	
		First	Second
Educ 11	- Educational Psychology	Under	39
Educ 13	- Educational Sociology	Social	53
Educ 14	- Principles of Education	Science	130
Educ 15	- Test, Measurement and Evaluation	-do-	30
Educ 16	- Educat'l & Voc'l Guidance	-do-	32
Educ 17	- Child Growth & Dev.	-do-	40
Educ 19	- Phil. Educat'l System	-do-	27
Ag Ed 21	- Methods of Ag Ext. Educ.	178	112
Ag Ed 22	- Rural Sociology	75	24
Ag Ed 23	- Voc't'l Educ. in the Philippines	45	89
Ag Ed 24	- Principles & Methods of Teaching Under Social Science		84
Ag Ed 25	- Adm. & Sup. of School and Home Project	108	106
Ag Ed 26	- Actual Observation and Participation	40	67
Ag Ed 27	- Student Teaching	40	67
Ag Ed 99	- Seminar in Agric'l Educ.	40	67
Methods 11	- Methods & Techniques of Teaching Communication Arts	56	44
Methods 12	- Methods & Techniques of Teaching Social Studies, Mathematics, Health and Science and Music	43	57

Con't... Table 1

Subjects	Description	Enrolment	
		First	Second
Ag Ext 31	- Program Planning, Implementation and Evaluation	83	42
Ag Ext 41	- Agric'l Com. & Audio Visual Aids	72	47
Ag Ext 51	- Adult Education and Rural Development	56	41
Ag Ext 61	- Problem of Socio-Econ Development	39	49
Ag Ext 71	- Agricultural & Rural Development	58	48
Ag Ext 81	- Research Methodology	9	5
Ag Ext 91	- Field Exposure		5
Ag Ext 99	- Seminar in agricultural Extension	41	28
Ag Ext 100	- Thesis	18	16
Sub-Total		1,001	1,349

Table 2 shows the summary of enrolment for the degree of Bachelor of Science in Agricultural Education for school year 1983-1984.

Table 2. Summary of enrolment

Year Level	MALE		FEMALE		TOTAL	
	1st Sem.	2nd Sem.	1st Sem.	2nd Sem.	1st Sem.	2nd Sem.
First Year	36	38	147	146	183	184
Second Year	22	25	102	90	124	115
Third Year	25	25	110	108	135	133
Fourth Year	24	20	142	129	166	149
Fifth Year	9	9	20	11	29	20
Total	116	117	521	484	637	601

Table 3. Faculty members and personnel

Name	Degree	Position
Dr. Eriberto C. Alonzo	Ph. D.	Professor
Prof. Dominador S. Garin	M. S.	Asst. Professor
Prof. Salvadora C. Serrano	M. A.	Asst. Professor
Mrs. Luz C. Debad	M. S.	Instructor
Mr. Alfredo Rigonan	B. A.	Instructor
	Ag. Ed.	
Mrs. Olga C. Dangwa	M. S. Ed	Instructor
Mrs. Sonia M. Celino	M. A. Ed	Asst. Instructor
Miss Perlita Fernandez	M. A. Ed	Instructor
Mr. Aurelio P. Taclan	B.S.M.E.	Asst. Instructor
Miss Josefina Lacanaria	B.S. Psycho	- do -
Mrs. Mary Joy Rapuso	BSC Accounting	Clerk I
Mrs. Carmen Guitelen		Janitress
<u>Supporting Staff</u>		
Dr. Cipriano Consolacion	Ph.D.	Professor
Prof. Nora J. Claravall	M. A.	Asst. Professor
Prof. Revelina Z. Fabro	M. S.	Asst. Professor
Miss Viola Pilay	Under-graduate	Student Assistant

Table 4. In-service training

Name	Title	Level	Place/Date
Dr. E. C. Alonzo	Agric'l Program in the NECS	Nat'l	Mambuson, Capiz Feb. 11-18, 1983
	Passage 2nd Biennial Conference	-do-	PAC, Oct. 27-28 1983
	Integrating Nutrition with Agri-culture	Reg'l	CLSU, Nueva Ecija Nov. 20-26, 1983

Cont.... Table 4

Name	Title	Level	Place/Date
Prof. D.S. Garin	Introductory to Divine Principles	Reg'l	Hyatt Terraces, Baguio City Sept. 11, 1983
	PASSAGE 2nd Bien- nial Conference	Nat'l	PAC, Pampanga Oct. 27-28, 1983
Prof. S.C. Scerrano	First Aid	Local	MSAC, La Trinidad, Sept. 24, 25 & Oct. 1, 1983
	PASSAGE 2nd Bien- nial Conference	Nat'l	PAC, Pampanga Oct. 27-28, 1983
	Bamboo Technology Inventory Training	Reg'l	DMMSU, La Union Nov. 2-6, 1983
Mrs. L.C. Debad	Participatory Ap- praisal System	Insti- tution- al	MSAC, La Trinidad April 12-14, 1983
	Symposium on High- land Farming System	-do-	MSAC, La Trinidad April 14, 1983
	Participatory Stra- tegies on Country- side Development	-do-	UP - Feb. 24-26, 1983
	PASSAGE 2nd Bien- nial Confernece	-do-	PAC, Pampanga Oct. 27-28, 1983
	Bamboo Technology Inventory	Reg'l	DMMSU, La Union Nov. 2-6, 1983
Mr. A. Rigonan	Reg'l (Asian) Training on Social Lab. & Technology Transfer Management	Reg'l	SEARCA Headquarters College, Laguna May 9-27, 1983
Mr. A. Rigonan	Seminar on Non-Con- ventional and Renewable Energy Sources	Reg'l	DMMSU, La Union Nov. 25, 1983

Con't.... Table 4

Name	Title	Level	Place/Date
Ms. P. Fernandez	Gawaing Kapulungan sa Pilipino	Inst'l	Pambansang Aklatan May 30-31, 1983
	Uliting Seminar sa Paggamit ng Pil. -do- Blg. Midyum ng Pagtuturo ng mga Piling Asignaturang Agham Panlipunan		MSnC, La Trin. August 11, 1983
	Seminar/Symposium on Philosophy		U.E. Manila Oct. 24-25, 1983
Mrs. S. M. Celino	Language-Testing Sem.-School Level	Inst'l	MSnC, La Trin.
Mr. A.P. Taclan	Symposium-Sem. on Philosophy		U.E. Manila Oct. 26-28, 1983

## Other activities undertaken:

- Upgraded and prepared course syllabi
- Participated in socio-cultural activities, on and off-campus

## Student practice teaching

The basic objectives in the training of student teachers are to:

- Develop the proper attitude, traits and qualities necessary for teachers to possess.
- Become knowledgeable in the art of handling large groups both inside and outside the schoolroom.
- Develop positive social qualities needed in the teaching career

In the second semester 1983 particularly January, 1983, there were eight (8) male student teachers and 66 females or a total of 74. All of them passed the in-campus and the off-campus teaching.

In the first semester, there were eight (8) male student teachers and 32 female or a total of forty (40) student teachers. All finished the training in-campus and off-campus student teachings.

High percentage of graduates of the Department who took the National Board Examination for teachers passed with high ratings.

Extra-curricula and co-curricular activities:

The Future Agricultural Educator's Society, an organization of students taking up Bachelor of Science in Agricultural Education, was reorganized. The society is now engaged in various fruitful social, economic and cultural activities.

The faculty and staff including students participated in various socio-cultural and socio-economic activities in the College and in the community namely:

- Sports and athletics - local, regional and national.
- Scouting

- Student organization
- Community services
- Tree planting
- Ground improvement

## 2) Extension services

The extension services of the Department are tied up with the Department of Extension and Continuing Education of the College, of the faculty and non-teaching staff. Department members rendered services actively as lecturers in various seminars and training programs.

## 3) Problems

- Lack of orientation to research and extension activities
- Poor physical plant such as offices and classrooms
- Lack of instructors in Agricultural Education subjects

## 4) Recommendations

- More training in research and extension
- Better/wider offices for faculty members and staff
- More classroom for the students
- Urgent need for one instructor major in Agricultural Education



## k. Department of Languages

## 1) Subjects offered

<u>Summer 1983</u>	<u>No. of Students</u>
English 12	15
English 13	105
English 14	45
Pilipino 11	91
Pilipino 12	90
Pilipino 13	29
P.I. 11	140
Spanish 11	86
Spanish 12	110
Spanish 13	84
Spanish 14	<u>74</u>
Total . . .	803

First Semester

English 11	557
English 13	277
English 14	145
Pilipino 11	296
Pilipino 12	183
P.I. 11	52
Spanish 11	188
Spanish 12	130
Spanish 13	189
Spanish 14	<u>100</u>
Total . . .	2,117

Second Semester

English 11	23
English 12	447
English 13	5
English 14	51
English 16	16
Pilipino 11	83
Pilipino 12	248
P.I. 11	249
Spanish 11	199
Spanish 12	177
Spanish 13	157
Spanish 14	<u>192</u>
Total . . .	1,847

## 2) Number of Faculty and Other Personnel

Regular faculty . . . . .	19
1 - Professor	
1 - Associate Professor	
7 - Assistant Professors	
10 - Instructors	
On leave . . . . .	4
3 - personal leave	
1 - on scholarship	
Clerk . . . . .	1 (casual)
Student Assistant . . . . .	1
	<hr/>
Total . . . . .	25

## Accomplishments during the year

## 1. Curricular Improvements

- Enrichment of existing syllabi in English  
    Pilipino and Spanish
- Construction of instructional materials in:

- a) English 12 - English For Forestry  
    completed in August, 1983.
- b) Spanish 13 - Workbook

- Provision for Consultation Hour

The Department Schedule was posted  
outside the Department for students to  
see their teachers' free time.

## 2. In-service training for faculty members

- a) National Congress on the State of  
    Language Education in the Philippines  
    Philippine Normal College, Jan. 21-22,  
    1983 - Esther R. Hufana  
            Carlota V. Lubrica

- b) Ikatlong Kumperensya ng Pambansang Samahan sa Wika

Tema: "Ang Mabisang Pagtuturo ng Pilipino sa mga Rehiyon Di-Tagalog" - Mariano Marcos State University Batac, Ilocos Norte, April 14-16, 1983  
Official Delegate: Edith Guitilen

- c) PAIT Annual Convention - U.P. - Diliman College Education. May 3-5, 1983  
Theme: "Language Learning for a Purpose"  
Official Delegates:

Bonifacio A. Minong (English)  
Adeline C. Degsi (Pilipino)  
Esther R. Hufana (Chairman)

On Official Time:

Florencia C. Victor (Pilipino)  
(Thru Dept. funds) Elizabeth Lacamento  
Esther Gonzales  
(English)

- d) Gawaing Kapulungan sa Pilipino  
Paksa: "Mabisang Paggamit ng Pilipino bilang Midyum ng Pagtuturo"  
Pambansang Aklatan, Metro Manila - May 30-31  
Official Delegates: Carlota V. Lubrica  
Adeline C. Degsi  
Florencia C. Victor

- e) General Assembly & Symposium Forum of the Council of Department Chairmen for English - FEU, Studio Theatre, August 26-27, 1983  
Official Delegate: Esther R. Hufana

#### Faculty Personnel Development

1. Barbara P. Santos - on scholarship grant by IEDCO (Language Education Council) at PNC for a Certificate in Applied Linguistics, Second semester, 1983-1984
2. Rosendo S. Gualdo - Defended his masteral thesis at the Baguio Central University on October 29, 1983

3. Carlota V. Lubrica - Dissertation for Ed.D. in progress at the University of Baguio
4. Esther T. Gonzales - MA thesis in English Linguistics in progress at the Saint Louis University
5. Florencia C. Victor - finished academic requirements for M.Ed. (Pilipino) at U.P. Diliman
6. Mr. Dimas P. Wandit - finished academic requirements for M. in English Linguistics at Saint Louis University
7. Emma B. Keith - pursuing her Ph.D. in Education, Saint Louis University

#### Researches Undertaken to Improve Instruction

1. "Qualifications of Language Teachers and their Teaching Competencies as Perceived by Students"  
 Esther R. Hufana  
 Proponents: Dimas P. Wandit  
 Bonifacio A. Minong
2. "Qualities of MSJC College Teachers that are Desired by MSJC College Freshman, School Year 1983-1984"  
 Proponents: Emma B. Keith  
 Bonifacio A. Minong
3. "Spanish Morphological and Semantic Borrowings of Pangasinan, Ibaloi and Kankanaey"  
 Proponents: Remegio E. Mource, Jr.  
 Josefina D. Botacion  
 Rosendo S. Gualdo
4. "Maubingang Pag-aaral sa Bisa ng Pag-unawa ng Mga Mag-aaral sa Pilipino sa Pamanagitan ng Teknik na Pagbasa at Pakikinig sa Taong 1983-1984"  
 Proponent: Florencia C. Victor

Extension Service of the Department

## 1. Seminar-workshop on Language Testing

Participants: Language Teachers (Eng. &amp; Pil.)

- a) MSAC Laboratory High School
- b) Voc-ag High School (MSAC)
- c) Elementary Lab. School (MSAC)

Consultants/Lecturers:

- 1) Remedios K. Taguba - MECS Div. Office  
"The Place of Testing in the School Program"
  - 2) Natividad V. Lacambra - MECS, Div. Office  
"Pointers in the Construction of Teacher-Made Tests"
  - 3) Arsenia D. Mamaril - Department of Languages  
"Evaluation and Interpretation of Test Results"
  - 4) Esther A. Hufana - Chairman, Dept. of Languages
    - a) "Linguistics and Language Testing"
    - b) "Reverbalizing and Paraphrasing"
    - c) "Cloze and Maze Tests"
    - d) "Testing Reading Comprehension"
    - e) "Testing Speaking: Recognition Techniques"
  - 5) Florencia C. Victor - Department of Languages  
"Testing Listening Comprehension"
  - 6) Edith G. Guitilen - Department of Languages
    - a) "Testing Speaking: Production Techniques"
  - 7) Benifacio A. Minong - Department of Languages
    - a) "Testing Vocabulary"
    - b) "Dictation: A Test of Proficiency"
  - 8) Elizabeth M. Lacamenta - Department of Languages  
"Testing Grammatical Structures"
  - 9) Esther T. Gonzales - Department of Languages  
"Testing Writing"
2. Uliting Seminar: "Paggamit ng Filipino Bilang  
Midyum ng Pagtuturo ng mga Asignaturang Agham  
Panlipunan sa Lutas Tersiyarya"

Resource Speakers:

- Carlota V. Lubrica - "Mga Basahang Legal sa Paggamit ng Filipino sa Pagtuturo ng mga Asignaturang Agham Panlipunan"

Florencia C. Victor - "Mga Suliranin sa Paggamit ng Filipino sa mga Kursong Pangguro"

Adeline C. Degsi - "Mga Suliranin sa Paggamit ng Filipino Bilang Midyum sa Pagtuturo ng mga Assignaturang Igham Panlipunan"

### Extra-curricular and Co-curricular activities

1. Quest for Miss Languages  
March 9, 1983 NPRCRTC Convention Hall

2. Linggo ng Wika Celebration  
Symposium on "Pilipinismo sa Wikang Filipino"  
NPRCRTC Convention Hall, August 31, 1983  
Edith B. Guitilen - Symposium Coordinator

#### Symposium Speakers:

- 1) Edith B. Guitilen - "Pilipinismo sa Wikang Filipino: Landas sa Pambansang Pagkakaisa"
- 2) Dimas P. Wandit - "Pilipinismo sa Wikang Filipino: Isang Instrumento sa Pagpapahalagang Moral at Ispiritual ng mga Mamamayan"
- 3) Carlota V. Lubrica - "Pilipinismo sa Wikang Filipino: Daan sa Pagkakaisa ng Mag-anak"
- 4) Adeline C. Degsi - "Pilipinismo sa Wikang Filipino: Saligan ng Pag-unlad ng Sambayanan"
- 5) Diego Dumayis - President, Supreme Student Council. "Pilipinismo sa Wikang Filipino: Kasangkapan sa Pagkakaisa sa mga Paaralan"
- 6) Florencia C. Victor - "Pilipinismo sa Wikang Filipino: Hagdan sa Paguumalad ng Pangkabuhayan ng Bansa"

3. Literary Contest

PES (Filipino, English, Spanish) Festival  
Theme: "Campus Activism"  
September 29, 1983, NPRCRTC Convention Hall  
Josefina D. Botacion - PES Chairman  
Contests:

#### Writing Activities

- a) Oration (English, Filipino)
- b) Essay (English, Filipino, Spanish)
- c) Poetry (English, Filipino, Spanish)
- d) Skit (English, Filipino)
- e) Slogan (English, Filipino, Spanish)

Problems and Recommendations

1. The administration should come up with a faculty development program by academic department.
2. Extension programs of non-technical departments should also be funded even if target audiences or clientele are within or outside the College.
3. Since the Department of Languages is one of the biggest academic departments in the College, there is a need for one more clerk.
4. The Supply Office has not given the Department's request for an additional typewriter.

1. Department of Social Sciences

1) Instruction

The Social Sciences Department is a service department with the trilogy function of research, instruction and extension for higher education.

a. Enrollment

<u>Summer 1983</u>	<u>Number of Students</u>
Education 11	62
Education 13	65
Education 14	79
Education 15	45
Education 16	52
Education 17	14
Education 19	62
Education 25	22
Pol. Science 11	50
Economics 13	79
Music	18
Total . . .	<u>548</u>

<u>First Semester</u>	<u>Number of Students</u>
Education 11	182
Education 13	92
Education 14	147
Education 15	113
Education 16	55
Education 17	10
Education 19	152
Education 24	82
Economics 13	73
Pol. Science 11	246
Social Science 10	76
Social Science 11	46
	<hr/>
Total . . . .	1,247

<u>Second Semester</u>	<u>Number of Students</u>
Education 11	82
Education 13	63
Education 14	121
Education 15	55
Education 16	33
Education 17	39
Education 19	26
Education 24	81
Economics 13	75
Political Science 11	163
Social Science 11	49
	<hr/>
Total . . . .	787

Number of faculty and other personnel

Faculty (regular)	5
Part-time instructors	17 as of November 15, 1983
Clerk (Permanent)	1
Student Assistant	1



## 2) Accomplishments

## Curriculum improvements

- Updated and enriched course syllabi
- Constructed instructional materials, i.e. retrieval charts, graphs and even handouts
- Provided consultation hours for students

## In-service training for faculty members

- Gawaing-Kapulungan sa Filipino - Pambansang Aklatan, Mayo 30-31, 1983 attended by Dr. Luzviminda A. Villamater and Miss Perlita J. Fernandez; Ulitinang Seminar sa Paggamit ng Filipino Bilang Midyum ng Pagtuturo ng mga Asignaturang Agham Panlipunan sa Torsiyarya - MSAC Little Theater, August 11, 1983 - Dr. Luzviminda A. Villamater, Bb. Perlita J. Fernandez mga Tagapanayan at Prof. Artemio T. Laking, Tagapag-ugnay
- Seminar/Pakitang-guro "Pagtuturo sa Filipino" - De la Salle University, Agosto 12-13, 1983
- Seminar on Filipino Psychology of Filipino Farmers," CISU, Muñoz, Nueva Ecija, Manila, October 26-28, 1983

## Faculty development

For professional growth, the following are working on their M.S./Ed.D. and Ph.D. degrees on their own:

Taclan, Aurelio P. is scheduled to defend his undergraduate thesis for the degree of Bachelor of Science in Agriculture and has earned 15 units for M.S. in Agricultural Education at MSAC.

Singa, Evelyn B. is writing her MS thesis in Agricultural Extension at MSAC.

Laking, Artemio T. has earned 21 units leading to Ed.D. at Baguio Central University, Baguio City

Fernandez, Perlita J. has earned 39 units in Ph.D. at Saint Louis University, Baguio City

Villamater, Luzviminda A. (Chairman) has recently earned her Ph.D. in Education first semester SY 1983-84 at Saint Louis University, Baguio City.

2) Research undertaken to improve instruction

The department action research entitled "Students' Difficulties in Classroom Participation" is being tabulated and interpreted.

3) Extension services

- a. In the Uliting Seminar sa Paggamit ng Filipino Bilang Midyum ng Pagtuturo ng mga Asignaturang Agham Panlipunan sa Antas Tersiyarya hold at MSAC Little Theater on August 11, 1983, Miss Perlita J. Fernandez and Dr. Luzviminda A. Villamater were Tagapanayam, Prof. Artemio T. Laking was Tagapag-ugnay, and Mrs. Evelyn B. Singa was Kasapi
- b. In the echo seminar on "Psychology" of the Filipino Farmer" and seminar symposium on Philosophy held at MSAC Social Sciences Department Office on November 23, 1983, Prof. Artemio T. Laking, Miss Perlita J. Fernandez, Mrs. Evelyn B. Singa, and Mr. Aurelio P. Taclan were speakers.

4) Co-curricular and extra-curricular activities

- a. Kapitan ng Agham Panlipunan (KAP), an organization of the Social Sciences Department, was formed. During the organizational meeting, on July 22, 1983, the following were designated KAP advisors: Miss Perlita J. Fernandez and Mrs. Evelyn B. Singa.

- Dramatic group adviser - Miss Perlita Fernandez
- Debate group adviser - Mrs. Evelyn Singa
- Planning and Management adviser - Prof. Artemio T. Laking
- Social Graces group adviser Dr. Luzviminda A. Villamater

b. During the Cultural Night of the Visayan Summer, May 14, 1983, Dr. Luzviminda A. Villamater was the Chairman of the Cultural Show and Miss Perlita J. Fernandez was a dance participant.

5) Other matters

- Prof. Artemio T. Laking was designated Chairman of the Social Sciences Department effective November 15, 1983
- Dr. Luzviminda A. Villamater was designated Associate Dean, Institute of Arts and Sciences.
- Miss Perlita J. Fernandez and Mr. Aurelio P. Taclan were reassigned to the Institute of Teacher Education.

m. Mathematics-Physics-Statistics Department

1) Instruction

Second Semester, 1982-1983

<u>Subjects Offered</u>	<u>No. of Students</u>	<u>Passed</u>	<u>Failed</u>	<u>Dropped</u>	<u>Inc.</u>
Math 10	5	5			
Math 11	50	41		3	6
Math 12	441	371	29	19	22
Math 15 (25)	17	13			4
Math 20	19	18			1
Math 24	15	13		1	1
Math 26	21	18			3
Physics 11	363	182	62	8	12
Physics 12	11	9	1		1

<u>Subjects</u>	<u>No. of Students</u>	<u>Passed</u>	<u>Failed</u>	<u>Dropped</u>	<u>Inc.</u>
Stat 11	62	39	4	14	5
Stat 14	11	10		1	
Stat 151	4	2			
Stat 155	3	2			
Stat 156	2	2			
Stat 190	6	6			
Stat 199	5	5			

## Summer 1983

Math 11	35	34			1
Math 12	61	55			6
Math 141	7	7			
Physics 11	48	45		1	2
Physics 12	45	44		1	
Stat 11	30	26		1	3
Stat 190	2	2			

## First Semester, 1983-84

Math 10	44	38		1	5
Math 11	522	413	26	28	55
Math 12	9	6	1		2
Math 13 (23)	49	36		2	11
Math 15 (25)	17	13			4
Math 16 (26)	10	8		1	1
Math 141	32	31			1
Physics 11	94	84	1	3	6
Physics 12	186	164	17	1	4
Physics 13	16	13		1	2
Stat 11	92	74	1	6	10
Stat 12	20	14		2	4
Stat 147	2	2			
Stat 151	3	2			
Stat 154	3	3			
Stat 190	1	1			
Stat 199	1	1			

## Faculty members and other personnel

- 1) Marcos A. Buliyat - Department Chairman  
(M.A.T. Physics) Ed.D. Dissertation in progress
- 2) Marilyn B. Toledo - M.A.T. Mathematics
- 3) Jonathan A. Bayogon - MS Physics
- 4) Solvacion Z. Beligan - MS Statistics

- 5) Edna A. Chua - MS Thesis in progress  
(Mathematics)
- 6) Concordia B. Aquitania - MA Thesis in  
progress (Education)
- 7) Conchita J. Perez -- BSE Math-Physics
- 8) Remedios C. Pascua - BS Math
- 9) Carlos Luma-ang - Part-time Instructor  
(MS Education)
- 10) Amelia M. Acena - BSBA Accounting (Clerk)
- 11) Eleuterio M. Acena - Student Assistant  
(BAEd IV MSAC)

#### Accomplishments during the year

- Statistical evaluation, correction and  
analysis of students' thesis and researches
- Student evaluation of instructors and  
professors in the department
- Regular and informal conferences among  
faculty members of the department
- Activation of Applied Math Society
- Faculty members as SCAAP officers and members

#### Faculty development

- 1) Seminars/workshops and conventions attended  
by faculty members
  - Seminar workshop in agricultural physics  
sponsored by UPLB, AUIDP, NSTA -  
May 22 to June 3, 1983
  - Seminar workshop in physics sponsored by  
Philippine Association of Physics  
Instructors - April, 1983
  - Convention on radioisotopes sponsored by  
the Radioisotopes Society of the Philip-  
pines, Baguio City, April 1983
- 2) Faculty members presently enrolled in gra-  
duate education
  - Edna A. Chua, conducting her MS thesis  
in mathematics, MIQU, Manila

- Consorcia D. Aquitania, conducting her MS thesis in education, University of Baguio, Baguio City
- Marilyn B. Toledo, enrolled in Ed.D. Saint Louis University, Baguio City
- Marcos A. Buliyat, conducting his dissertation for Ed.D., Saint Louis University Baguio City

#### Problems

- Inadequate laboratory equipment and materials
- Inadequate reference books in statistics
- No calculators for use in statistics
- Inadequate number of department staff to handle the course offerings of the department
- Need for safekeeping, custody and proper maintenance of physics equipment and materials in the laboratory

#### Recommendations

- Purchase of essential materials/equipment for the physics laboratory; calculators (preferably programmed) and reference books in statistics.
- Lighting facilities of classrooms should be improved; appropriate blackboards should be installed and new chairs should be provided.
- An additional instructor should be hired in the department instead of part-timers
- A laboratory aide should be hired to attend to the custody and constant maintenance of physics and statistics equipment and materials.

#### n. Department of Chemistry

##### 1) Instruction

The Department of Chemistry has 9 faculty members, a laboratory aide, a clerk, and a

janitor. Two faculty members are still on study leave; hence, two part-time teachers from the VO-AG were detailed to help in instruction.

#### Accomplishments

- The existing syllabi in chemistry subjects were enriched
- Syllabi for the new chemistry courses were prepared
- Lecture and laboratory manuals were prepared
- A few laboratory apparatus, some chemicals and 2 laboratory rooms were acquired
- A science quiz and a seminar-workshop on research were sponsored

#### Faculty development

<u>Faculty</u>	<u>Scholarship</u>	<u>Agency</u>	<u>School</u>
Thelma Villanueva	MS Chemistry	NSTA	CEU
Danilo Licudine	MIT Chemistry	NSTA	De La Salle University

Both Mr. Licudine and Miss Villanueva are at present working on their thesis.

#### In-service training program activities

<u>Faculty</u>	<u>Training Program</u>	<u>Place</u>	<u>Date</u>
All Faculty members	The Dynamics of Research	MSAC	11/7/83
Louisa Pladio	1st In-service Training on Social Statistics and Experimental Design	MSAC	7-19 to 10-6-83

Faculty	<u>Training Program</u>	<u>Place</u>	<u>Date</u>
Aileen Corpuz Marie Mioten	Orientation and Organizational Seminar of the Buklod ng mga Kabataang Kawani	MSAC	7-17-83
Evelyn Dimas	Performance Evaluation Seminar	MSAC	1-20-83
	Evaluation of Work Performance of Faculty Members	MSAC	4-12-83
Thelma Villanueva	Chemical Change Experimental Approach	SLU	5-8-83

#### Recommendation

- 1) The following should be purchased
  - laboratory equipment and chemicals
  - books that were requisitioned but not yet bought.
- 2) Employ a student assistant to help the laboratory aide service all the laboratory classes.

#### o. Agricultural Mechanics Department

##### 1) Instruction

##### a. Data on students, faculty and staff

- Graduates as of April 1983 - 27 regular students
- Graduate as of December 1983 - 50 OSY students
- Enrolment as of June 1983 - 50 regular students
- Faculty and staff line-up:
  - 1 - Dept. Chairman      1 - Mechanic
  - 2 - asst. Instructors   1 - Lab. Aide



One-year Agri-Mechanics course with the following areas of skills training is offered

- Farm power and machineries
- Welding and metal craft
- Rural electrification

## 2) Research

There is an on-going instructional research and fabrication of shop and farm equipment, such as:

- Potato harvester for highland farming
- Coffee pulper
- Coffee roaster
- Portable forge
- Varied hand tools

## 3) Extension

Extension services included:

- Plowing services to research and production farm areas
- Auto repairs involving the community made a shop income of ₱1,345.00
- Sheet metal craft course was offered in coordination with the MSAC extension service center and NWC

## 4) Problems

1. The scope of agricultural mechanics is quite broad yet it is offered in ten months.
2. There is lack of technical faculty members
3. There is inadequate financing for instructional supplies equipment and facilities.
4. Instructional and laboratory rooms are lacking

## 5) Recommendations

1. It is recommended that the subject areas of Agricultural Mechanics be upgraded and split into four separate and specific trade and agri-mechanics courses such as:
  - Diesel Mechanics and Farm Machinery Operations instead of Farm Power and Machinerics
  - Auto-Mechanics instead of General Shopwork.
  - Electronics Technician instead of Rural Electrification
  - Furniture and Cabinet Making instead of Home Conveniences and Facilities
2. Three plantilla positions should be provided for:
  - One diesel mechanics instructor
  - One electronics instructor
  - One wood working instructor

The creation of more trade courses and the hiring of more technical instructors are very important in meeting the MDCS Order No. 38, s. 1982 on the "Minimum Standards for Diploma of Industrial and Engineering Technician Institute", which is to be implemented within the next two years.

3. A full amount of P30,000.00 has to be allocated to the Department for supplies and equipment as was previously agreed on in the previous academic and administrative council meeting.
4. There is need to appropriate an amount from the infrastructure funds for a 15x25 meters expansion of the Agri-Mechanics building and for the repair of the old garage building.

p. Vocational and Agricultural Science Education  
Department

1) Enrolment

Science Curriculum	<u>Male</u>	<u>Female</u>	<u>Total</u>
First year	20	18	38
Second Year	6	16	22
Third Year	4	11	15
Fourth Year	5	11	16
Sub-Total . .	<u>35</u>	<u>56</u>	<u>91</u>

Vocational Agricultural Curriculum

First Year	116	0	116
Second Year	72	0	72
Third Year	71	0	71
Fourth Year	<u>65</u>	<u>0</u>	<u>65</u>
Sub-total . .	324	0	324

Homemaking Curriculum

First Year	0	56	56
Second Year	0	45	45
Third Year	0	33	33
Fourth Year	<u>0</u>	<u>39</u>	<u>39</u>
Sub-total . .	0	173	173

2) Scholarship

Students enjoying various types of scholarship

- Cad scholarship - The Corp Commander (free tuition)
- Special Agricultural Science Students

First Year	- 38
Second Year	- 22
Third Year	- 15
Fourth Year	<u>- 16</u>

Total 91

## - SEGBAP Grantees

First Year	- 1
Second Year	- 0
Third Year	- 0
Fourth Year	- <u>1</u>
Total . . .	2

## 3) Academic and Support Personnel

Teaching Staff	- 33
Clerk	- 1
Janitor	- <u>1</u>
Total . . .	35

Note: 1 Substitute  
2 Detailed

## 4) Promotions

- Two (2) teachers were elevated to College Instructors
- Two (2) became permanent
- One (1) was elevated from assistant instructor to instructor
- Three (3) temporary to permanent
- Two (2) instructor to Asst. Professor

## 5) Professional Growth of Teachers

In-service Trainings	Attended by
1. Seminar on Organic Farming for Strawberry	8
2. Seminar on Foods	1
3. Seminar on the Use of Silk Fabric	1
4. Seminar on the latest trend in the Teaching of Philippine	1
5. Seminar on the Modern Teaching of Mathematics, English, Social Studies and Science	4
6. Study grant (training in Japan)	1
7. The rest of the faculty are going to school on their personal expenses	

6) Educational qualifications of teachers in the department

MA/MS - 6  
BS - 27

7) Positions held by teachers in the department

Assistant Professor - 6  
Instructor - 20  
Assistant Instructor - 10

8) Change of Assignment

From high school to college- 2

9) Intra- and Extra-curricular activities

- a. Press Conference - Rated the best School (Division level) Paper
- b. Scouting - Participated actively (Prov'l level) in this occasion
- c. Athletics - Got the general championship (boys) (Prov'l level) ship (boys)
- d. Athletic Intramural Meet in the department and FFP-FAHP Convention

10) Farming Program

- a. Created the following projects
  - FFP-FAHP Project
  - Administration Project
- b. Expanded the area of the strawberry project

11) Home-making Program

- a. Management of the high school canteen was returned to the high school H.E. teachers

12) Problems

- a. English classes
  - low comprehension among first year students
  - lack of reference books

b. Social Studies classes

- Few textbooks in Social Studies
- Absence of Filipino and Social Studies books in the library

c. Science classes

- Few books for Science I
- No books for Science II
- Few laboratory books for Science I
- Laboratory materials/apparatus are inadequate

d. Home Economics classes

- Leaking roof of the Home Management building
- Inadequate space for lecture and laboratory

e. Mathematics classes

- No textbooks in Mathematics
- No equipment for P.E. classes

f. Farm Mechanics classes

- Inadequate tools for the Farm Mechanics classes

g. Agriculture classes

- Inadequate supplies, materials and equipment for the administrative project

h. Principal's Office

- There is a need for one (1) typewriter

13) Suggestions

- a. Could the College not do something to make the above mentioned needs available?

## p. General Secondary Laboratory Department

1) Enrolment: Boys - 250  
 Girls - 316  
 Total 566

## 2) Accomplishments:

- a. Teachers reported June 1-3, 1983 to update syllabi and made diagnostic tests administered to students before classes started.
- b. Prof. Juliet Bagano was chosen one of the ten (10) outstanding teachers of Baguio-Benguet sponsored by Fines City Lions Club on June 19, 1983.
- c. Several teachers and students attended seminar workshops on the local, provincial, regional and national levels.

<u>Name of Seminar</u>	<u>Participant</u>	<u>Place/Date</u>
Science Seminar-workshop	M. Lacamen	DMMMSU/July 1-4 1983
Seminar on Science Advisership sponsored by Benguet Division	R. Dongbo D. Mayos L. Fernin H. Lacamen	July 18-19 1983
Seminar on Drug Abuse Prevention	C. Alciso H. Bolinto F. Zarate A. Cawat	Shalom House
Leadership Training	5 students	SSC-MSAC
Science Club Month Seminar-workshop	D. Mayos C. Dimas	Cagayan de Oro City
Practical Arts Seminar	P. Adanglao	Quezon Province Oct. 25-27, 1983
Children's Museum and Library, Inc. Seminar	L. Cotiw-an 5 students	Teachers Camp, B.C. Oct. 21-27, 1983

<u>Name of Seminar</u>	<u>Participant</u>	<u>Place/Date</u>
Seminar-Workshop on Language Testing	L. Bell N. Mayos	Dept. of Languages Oct. 24-25, 1983
Division of Benguet Seminar on Science and Language Teaching	N. Mayos L. Cotiw-an M. Lac-amen R. Dongbo L. Fermin	Nov. 7-11, 1983

- d. Nutrition Month celebration sponsored by the H.E. teachers with contest activities related to nutrition on July 29, 1983.
- e. Two students won 1st and 2nd places under Mrs. F. Gualdo on August 1, 1983 during the Nutrition Slogan Contest sponsored by the Province.
- f. Won several places during the Academic Olympics in Essay Writing Contest sponsored by the Baguio YMCA on September 16, 1983 as follows:
- 1st place (Essay Writing) - Gary Acod
  - 2nd Place (Oration) - Andrew Bayating, Jr.
  - 3rd Place (Oration) - Richard Montes
- g. Participated in the Boy Scout Encampment at the Government Center on October 5-8
- h. Regional Science Fair and Quiz held at San Carlos City on October 24-27.
- i. National YMCA Academic Olympics at Manila, Nov. 4. Two students represented Baguio-Benguet YMCA Chapter. Gary Acod won 1st place in Essay Writing while Andrew Bayating, Jr. was 11th place in oration
- j. Three students won during the Provincial Quiz Bee sponsored by the Province on Nov. 11, 1983.
- Richard Montes - 1st Place (English)
  - Ruby Bell - 1st Place (Pilipino)
  - Cesar Masaday - 2nd Place (Science)
- k. Organization of the PWA with Mr. Robert Cirilo as President



## 3) Problems

- a. A balance of 18,000.00 for the WSAC Mini band instruments has yet to be paid.
- b. Non-students entering the campus bother our students.
- c. Inadequate textbooks in English and Science
- d. Lack of shop tools for industrial arts students.

## q. Elementary Laboratory Education Department

## 1) Instruction

## a. Enrolment

The enrolment in the Department of Elementary Education as shown in Table 1 is 446 boys, 417 girls, a total of 863. Due to the substandard size of most of the classrooms, the policy of the Department was to accept from 25 to 30 pupils per class. However, the pleadings of parents resulted in an average of 36 pupils per class for 24 sections in Grades I to IV.

Table 1. Enrolment school year 1983-1984

Grade	S e c t i o n								T o t a l	
	R o s e		L i l y		C a m i a		D a h l i a		M	F
	M	F	M	F	M	F	M	F		
I	20	13	16	19	19	16	24	16	79	64
II	14	14	17	13	16	12	16	15	63	54
III	17	23	17	21	18	19	19	13	71	81
IV	19	17	16	20	17	18	17	19	69	74
V	20	16	22	16	23	18	20	20	85	72
VI	19	18	21	17	20	18	19	19	79	72
TOTAL									446	417 = 863

Priorities considered for enrolment are:

1. They should have been pupils of the school immediately prior to enrolment.
2. They are children of faculty members of MSAC
3. They are not listed as delinquents in the area because of misdemeanor, poor attendance, theft, etc.
4. They are permanent residents in the immediate neighborhood.
5. "First come first served" is observed in case the quota per class has not yet been filled.

Fees collected during the enrolment period are the following:

- \$1.00 - per family head
- 5.00 - per pupil
- 1.00 - BOT-ID card

The first two fees were set by the PTA and are submitted to the PTA Treasurer as PTA fund.

b. Graduate

Graduates for school year 1983-1984 included 79 boys and 72 girls, a total of 151 pupils. More than 50% of them planned to enrol at the VO-AG or the General Secondary Laboratory School of MSAC

c. Scholarship grants

The upper 10% of the grade six pupils participated in the Scholarship Testing Program leading to the secondary level.

Some elementary school pupils were included in the Foster Parents Plan: hence, the Department was given the privilege of requesting textbooks from this agency.

d. Faculty

The elementary personnel consist of the following:

- 4 Grade I Class Adviser - all female
- 4 Grade II Class Advisers - all female
- 4 Grade III Class Advisers - all female
- 4 Grade IV Class Adviser - one male and 3 females
- 4 Grade V Class Advisers - all female
- 4 Grade VI Class Advisers - all female
- 3 Home Economics teachers and canteen management
- 1 Music teacher - 5 sections
- Librarian and clinic teacher 1
- 1 Industrial Arts teacher - Grade IV
- 1 Gardening teacher - Grade V
- 1 Remedial Reading teacher - Grade IV - VI
- 1 Pilipino teacher

e. Curriculum and guidance

Assist in

- receiving, checking and filing school forms in coordination with the school clerk
- coordination of all grade coordinators in the accomplishment of school forms
- innovation of curriculum
- provision of guidance to pupils with major problems concerning school discipline
- coordination of action research activities for the solution and improvement of school needs with regard to school populace
- preparation and administration of testing program for pupil measurement and evaluation

## f. Property

Assist in

- receiving, recording and distributing materials of instruction and other supplies
- looking into class supplies and needs of instructional materials and inform office of such needs
- formation of policies regarding the safe-keeping, borrowing and unkeep of such
- possible acquisition to replenish need

## g. Physical plant

1. Prepare a work plan for the maintenance, cleanliness and safekeeping of school building and equipment.
2. Administer minor repairs of such
3. Report and recommend for major repairs and for improvement and safekeeping of other equipment
4. Receive record and distribute school equipment
5. Submit annual report on accomplishments

## h. Gardening and landscaping

1. Prepare and designate a work plan for year-round activities for grades involved in gardening
2. Set the rules and guidelines for the maintenance of this plan in coordination with class adviser.
3. Design the beautification of landscape and the assignment of zones for maintenance of cleanliness and unkeep of plants

## i. Pupil government

1. Prepare a set of rules and policies of the Department related to:
  - organization
  - constitution
  - dissemination

2. Coordinate with the plans of school activities in relation to the maintenance of safety, discipline, attendance and cleanliness.
3. Disseminate to the public and proper authority the development.

#### Faculty development

Observations reveal that there is a need to raise the quality of instruction especially among the newly employed and young teachers. Every opportunity is given them to improve through in-service training and study program either on-campus or sponsored by other educational agencies, government or private.

During the year, three (3) teachers had permits to study at the Baguio Central University; three others are working on their thesis in the same university. Three instructors were given assistance by the College; two of them are finishing in MSAC while one finished in the University of Baguio.

Personnel development in the Department is in the form of training programs and in-service seminars sponsored by the school itself, other departments in the College and the province.

## Curriculum development

In 1981, it was observed that although the curriculum was "work-oriented curriculum", the only difference from the ordinary one followed by the elementary schools of the MECS was the addition of a subject called "work-oriented activities." Further observation revealed that it was only an extension of work education to be in consonance with the work-oriented curriculum.

### 1. New curriculum program

In school year 1982-83, efforts were made to introduce activities where transfer of learning could be effected in the home. The initial difficulty was in the teaming up of teachers for the different activities to be taught to diversified sets of pupils, taking into consideration their inclinations and interest. The program brought about favorable pupil output which was appreciated by the parents although it was a little taxing on the teachers.

At the start of the school year 1983-84, the regular curriculum was followed

with a slight difference. The PRODED was used in Grade I and the departmentalized system of instruction was used in Grades III to IV.

## 2. Upgrading existing curricula

The latest approach to upgrading curricula is the New Elementary School Curriculum (NESCOO brought to the elementary teachers through the PRODED, an educational reorientation program. Although state colleges were not involved in the training, efforts to include the four Grade I teachers in the training were accepted by the AFCS and therefore the PRODED is presently implemented in the Grade I classes. The Department plans to take advantage of every opportunity in Benguet to train other grade teachers in the new program.

## Publication

The second semester brought forth a department school newsletter, "The Spring", put up by the pupil government under its adviser. Pupils from Grades IV to VI were trained and the newsletter is expected to be out at the end of every grading period.

## Supervision

Supervision, the main objective of which is to aid the teachers for quality of teaching, involves clinical intervention where the formal means of supervision is done in the classroom and conferences may be group or individual in nature. Group conference is held when most of all instructors are involved. Individual conference is carried out right after the observations or informally whenever the need arises.

Teachers are encouraged and guided to structure their room in such a way that it is conducive to learning.

## Problems and recommendations

### a. Problems

- Substandard rooms
- No shop building
- Lack of gardening tools
- PRODED- lack of PRODED materials for the second semester

### b. Recommendations

- Restructuring room division based on original plan
- Putting up more buildings to accommodate displaced sections
- Allocation of a shop building or the return of the former shop building to the Department
- Approval of requisition made earlier
- Requesting the administration to secure needed books



### 3. Instructional Facilities and Student Services

#### a. Health Services

##### 1) Objectives

- Promotion of health
- Prevention of diseases
- Diagnosis and treatment of diseases
- Prevention of complication of diseases
- Rehabilitation

##### 2) Accomplishments

##### 1. Medical Services

- Total number of students treated - 1,408
- Total number of faculty and/or employee treated - 652
- Total number of dependents treated - 191
- Total number of referred cases - 59
- Cases found by systems
  - 1. MEENT - 461
  - 2. Cardiovascular - 90
  - 3. Respiratory - 815
  - 4. Gastrointestinal - 244
  - 5. Reproductive and Genito-urinary - 85
  - 6. Integrumentary - 115
  - 7. Skeleto-muscular - 210
  - 8. Nervous system - 8
- Communicable diseases found
  - 1. Influenza - 143
  - 2. Measles - 3
  - 3. Chicken pox/herpes zoster - 10
  - 4. Scabies, fungus, eczema, etc - 55
  - 5. Hepatities - 2
  - 6. Typhoid fever - 10
  - 7. PTB suspects/complex - 8
  - 8. mumps
- Accidents encountered in form of wounds, burns, confussions, sprains, etc. - 194

. Dental Services

1) Number of patient inspected	-	407
2) Number of patients found with defects	-	405
3) Number of patients treated	-	291
4) Number of patients given prophylaxis	-	49
5) Number of teeth extracted:		
- permanent teeth	-	229
- temporary teeth	-	12
6) Number of teeth filled		
- Filled with permanent filling	-	50
- Filled with temporary filling	-	127
7) D M F Survey		
- No. of permanent teeth found decayed	-	1,590
- No. of permanent teeth found missing	-	614
- No. of teeth found filled	-	135
- No. of temporary teeth found decayed	-	48

Problems encountered

Facilities needed:

- 1) Sterilizer and/or autoclave for clinic instruments like syringe, cotton balls, gauze and suturing set
- 2) Linens to replace soiled and worn-out blankets, bedsheets, pillows and pillow cases
- 3) Refrigerator for storing vaccines and other easily spoiled medicines like lozenges and suspensions
- 4) Curtains to provide privacy to students during physical examination at the start of every term
- 5) Mini-surgical set for simple excisions

Lack of personnel

- 1) A student assistant to maintain cleanliness inside the clinic and its surroundings
- 2) A medical technologist to do simple laboratory exams

Suggestions

- 1) Urgently needed equipment/apparatus should be purchased like sterilizer, autoclave, refrigerator and mini-surgical set.

- 2) The clinic should be provided with new linens and curtains

b. General Services

- 1) Accomplishments

- Fabricated office tables, typewriting tables, shelves and cabinets
- Repaired and restructured classrooms, laboratory rooms, employees quarters including the cottage of the College President
- Repaired 50 ME installation of the water supply plumbing system including the installation of booster pumps at the RSDC building and President's cottage
- Repaired 50 ME installation of electrical power system of the College
- Repainted some rooms and cottages
- Constructed temporary kitchen, bathrooms, and toilets used by athletes during the provincial meet

- 2) Ground and Sanitation

- Levelled ground behind the Administration Building and the ground between the Library and Agri-business building.
- Mowed the grass from time to time.
- Maintained cleanliness of buildings, roads and grounds including the national highway fronting the College.

- 3) Others

- Coordinated the procurement of assorted tree seedlings from the Bureau of Forestry, Baguio City which were planted by the students at the watershed in Balili
- Coordinated the preparation of the Root Crop Au-Gym for different activities sanctioned by the Administration
- Prepared sign boards

## 4) Recommendations

- The integrated landscape plan of the College campus should be hurried up.
- Ornamental plant bank be established to supply plants for beautifying the campus
- Additional personnel for landscaping and lawn maintenance should be hired.

## c Electrical &amp; Plumbing Section

## 1) Staff

Maximo A. Del-amen - Mechanical Plant Operator  
 Pedro Dinulong - Electrical Aide  
 Rogelio C. Begonia - Electrical Aide  
 Modesto U. Gonzales - Senior Electrician

## 2) Accomplishments

Installation of the following

- Auditor's cottage - light and water system
- IPB Greenhouse - lighting system
- Cattle barn - electrical system
- Floriculture project - light and water system
- RSDC Building - booster pump
- RTC-RD to the Animal Project - water main line
- Gen. Sec. Lab School and Elementary Lan - water system
- Soil-Chemistry Building - Gas, water and electrical system
- Staff housing - electrical and water system

Repair of the following:

- Bundy clocks
- Electrical microscopes
- Sound systems
- Electrical stoves
- Fluorescent lamps
- Comfort room equipment
- Faucets
- President's cottage-electrical and water system

Recommendations

- One additional plumber should be employed
- one set of plumbing tools should be purchased.

Repair and Maintenance Office

1) Staff

- Ricardo Bayongan
- Arthur Cosme
- Valentine Fontanos
- Oscar Osngao
- Clemente Larayan
- Jesse Carreon
- Baldo Menzi
- Ernesto Ligmayo
- Julian Pelitan

2) Accomplishments

a. Construction of furniture for the different departments/offices

- Tables
  - 24 pcs. office/teachers tables
  - 4 pcs typing tables
  - 4 pcs laboratory tables
- Cabinets
  - 8 pcs open cabinets
  - 14 pcs close cabinets
- Chairs
  - 5 pcs office chairs
- Constructed the toilet at the Elementary Department
- Put up the ceiling of the Marcos Type Building at the Elementary Department
- Constructed drainage canal in the College canteen
- Put up screen doors for the College canteen
- Completed the construction of glass houses in the floriculture project

b. Repair/renovation and extension

- Repaired and made an extension of the waiting shed of Laboratory High School
- Repaired and renovated the VO-AG Canteen

- Painted the interior part of the home management building
- Repaired and renovated the classroom/office of the College building
- Repaired windows of the College building
- Repaired doors and windows of the VO-AG building
- Repaired the concrete fences of the school campus
- Renovated and constructed an extension of office/bodega of the Root Crops building
- Repaired and renovated the cottage of female faculty and employees of the College
- Repaired/renovated and constructed an extension of the cottage of the College President.

### 3) Recommendations

- a. College carpenters should be in plantilla position
- b. The following should be purchased:

- 6 pcs machinist vise - U.S.
- 2 pcs Anvil 20 lbs
- 1 set portable planner
- 1 set electric grinder
- 1 set portable electric drill with one set of bit
- 1 set blower
- 2 pcs slid hammer 2" x 3" x 5"

### c. Admissions Office

The Admissions Office updates and safely keeps all academic records of students in active and inactive status from the elementary to the tertiary levels. It coordinates enrolment and prepares schedules of examination. This Office was directly supervised by the College President

but with the new set up, it will be under the supervision of the Special Assistant to the President for Academic Affairs.

There are eight (8) personnel who work in this Office; four (4) with plantilla items and four (4) casuals. It is headed by a Dean,

1) Plantilla positions

- Dr. Marcelina T. Agatep - Professor, Dean of Admissions
- Mrs. Estela U. Aquino - Registrar II
- Mrs. Victoria L. Limpin - Clerk II
- Mrs. Edna R. Tacazon - Clerk I

2) Casuals

- Miss Lourdes A. Hufana - Clerk I
- Miss Fidelia A. Galvan - Clerk I
- Mrs. Bienvenida S. Caguioa - Clerk I
- Mrs. Maria B. Vasquez - Clerk I

TABLE 1. Summary of Enrollment (1983)

COURSE	Summer			1st Semester			2nd Semester			TOTAL 1982
	M	F	T	M	F	T	M	F	T	
Degree Program:										
BSA	183	213	396	333	300	633	281	293	574	754
BSAE	65	352	417	116	521	637	114	481	595	609
BSHT	-	125	125	-	210	210	-	205	205	162
BSAEng'g	16	32	48	51	70	121	45	58	103	160
BSF	54	36	90	123	62	185	110	57	167	155
BABM	34	42	76	58	80	138	55	78	133	112
BSAT-DVM	23	27	50	47	59	106	47	65	112	101
Sub-Total	375	827	1202	728	1302	2030	652	1237	1889	2033

## B. Post-Secondary:

COURSE	Summer			1st Semester			2nd Semester			TOTAL
	M	F	T	M	F	T	M	F	T	1982
Agro-Forestry	7	-	7	17	-	17	13	-	13	37
Agri-Mechanics	-	-	-	53	-	53	53	-	53	28
Dressmaking	-	-	-	-	9	9	-	2	2	-
Food Processing	-	-	-	-	7	7	-	-	-	-
Baking	-	-	-	-	-	-	-	7	7	5
Sub-Total	7	-	7	70	16	86	66	9	75	70

TABLE 2. Scholarships enjoyed by students (1983)

Type of Scholarship	Summer	1st Sem	2nd Sem	1982	
A. National:					
NISGP		8	33	26	43
SEGLAP		2	12	9	18
SNPLP					
Sponsoring Agencies:					
DBP		1	12	19	21
SSS		1	13	3	3
GSIS		3	43	47	47
PNB		6	46	35	35
LBP			5	1	1
Sub-Total		10	119	105	107
University of Life			8	8	
PVA			5	5	5
USAF			2	2	2
NFAC			1	2	2
Local Gov't Code (Dept. of Barangay Office)			41	51	
Sub-Total		20	221	208	117



Type of Scholarship	Summer	1st Sem	2nd Sem	1982
<b>I. College:</b>				
Academic		4	3	3
ROTTED/HCT		21	29	20
(Rondalla) Band		49	49	20
Rondalla				17
Glee Club		29	30	23
School Paper		5	5	5
ROTC		14	14	11
Student Assistants	25	25	38	32
Sub-Total	25	147	168	131
<b>C. Other Agencies:</b>				
Baguio-Benguet Foundation		2	2	2
Petron		2	2	2
BIBAK		7	5	5
Alumni Association		3	2	2
Dangwa		2	2	2
Sub-Total		16	13	13
GRAND TOTAL	45	384	389	321

TABLE 3. Graduates (Tertiary Level - 1983)

C O U R S E S	Summer	1st Sem	2nd Sem
<b>A. Degree Program:</b>			
BSA	23	15	321
BSAE	27	26	182
BSHT	4	4	60
BSM	7	3	115
BSBng'g	5	6	70
BABM	2	2	23
BSAT-DVM	--	1	23
Total	66	57	799

C O U R S E S	Summer	1st Sem	2nd Sem
E. Non-Degree			
Agri-Forestry			
Agri-Mechanics			38
Dressmaking		9	
Food Processing		7	
Baking			
TOTAL		16	38

TABLE 4. Age and sex profile of College students

A G E	Summer			1st Sem*		2nd Sem			1982	
	M	F	T	M	F	T	M	F	T	
16 and below	30	58	88	51	90	141	18	33	51	50
17	59	65	124	92	183	275	69	130	199	33
18	63	88	151	107	239	346	89	205	294	220
19	51	103	154	134	261	395	98	258	356	254
20	40	56	96	125	206	331	95	225	320	551
21	25	109	134	100	131	231	105	167	272	399
22	35	143	178	63	76	139	55	89	144	186
23	22	82	104	70	58	128	49	59	108	108
24	21	65	86	14	19	33	26	41	67	93
25 and above	36	58	94	42	39	81	38	34	72	70
TOTAL	382	827	1209	798	1302	2100	642	1241	1883	2064

\* - Including Post-Secondary Courses

\*\* - Post-Secondary Courses not included

The admissions Office released the following documents:

	<u>Number of Pages</u>
Transcript of Records	1,878
Certification of Students	379

Rating cards sent to (Pupil's) parents:

Summer of 1983 167 pages  
 First Semester, 1983-1984  
 Second Semester, 1983-1984

Filled up questionnaires from:

NEDA  
 MECS  
 PCTIRD  
 Provincial and Municipal Researches  
 Individual Researches

d. Motor Pool Office (General Services)

1) Data on staff

1 - Acting Chief	- Prof. Arthur L. Paran
1 - Driver	- Mr. Alfredo Labi
1 - Driver	- Mr. Virgilio Toledo
1 - Driver	- Mr. Tenecio Amos
1 - Heavy Equipment Operator	- Mr. Lucrecio Marcos
1 - Mechanic	- Mr. Pawel Sabino
1 - Casual Welder	- Mr. Andres Padon
1 - Casual Tractor Operator	- Mr. Wilfredo Canuto

One casual employee, Mr. Tony Danglay is detailed with the Agricultural Mechanics Department as acting laboratory aide.

2) Accomplishments

Maintenance ~~and~~ operation of the following

- 2 units - open truck
- 2 units - four wheel tractor
- 2 units - Willy's jeep
- 1 unit - Lancer car
- 1 unit - Hand tractor
- 1 unit - Bulldozer, Allis-Chalmer
- 19 units - Assorted trailers, plows, stationary engines, mowers, lathe machines, and other ~~farm~~ and shop equipment.

- a) Auto repair services of the vehicles of HARC, RTC-RD and Agro-Forestation Special Project
- b) Plowing services on the research and production farm areas
- c) Fabrication of assorted farm and shop equipment

### 3) Problems

- a) There is a lack of garage space for all the college vehicles and tractors.
- b) There is lack of Motor Pool equipment and hand tools.
- c) There is need for more personnel to meet the demands for:
  - Plowing services of the large agricultural areas of MSAC
  - Transportation services needed by the different offices
  - Maintenance services of the College vehicles, irrigation pumps and the MSAC water services
  - Fabrication of audio visual aids, farm and shop equipment
  - Other extension services to the community

### 4) Recommendations

- a) Appropriate an amount of at least ₱45,000.00 from the infrastructure funds for the repair and cementing of the old garage building.
- b) Appropriate an amount of ₱30,000.00 as previously agreed upon for each office by the academic and administrative council; for supplies and equipment of the Motor Pool. Additional amount of ₱15,000.00 is also needed for the dieselization of one of the weapons carriers for use by the centralized marketing center.
- c) Re-structure the Motor Pool staff so that the line-up would be:

- One Chief of Motor Pool (addition)
- Three drivers IV
- One driver III (additional)
- One heavy equipment operator IV
- One mechanic IV
- Two mechanic III (additional)
- One welder IV (additional)
- One lathe machinist IV (additional)
- One carpenter IV (additional)
- One property custodian (additional)
- One tool keeper/utility man (additional)

e. Department of Library Services

1) Library collections acquired from  
January-December, 1983

a) Books	No. of Volumes
College	563
Secondary	342
Elementary	183
b) Theses	351
c) Pamphlets	768
d) Serial Titles	50
Gifts	36
Exchange	8
Subscription	6

2) Library Staff Output of Work

a) Technical Services	10,634
- Titles Classified	715
- Books Accessioned	1,056
- Books Pasted with date due and pockets	1,546
- Added Entries	655
- Cards typed	6,614
- No. of Periodicals indexed	48
b) Business Services	1,521
- Incoming Correspondence	132
- Outgoing Correspondence	98
- Memoranda/Circular received	36

- Books recommended for purchase	287
- MSAC students using other libraries of other colleges	88
- Students/researchers from other institutions using MSAC Libraries	386
- Current Awareness Service	4
- Library Extension Service (giving professional assistance to outside researchers)	488

## 3) Attendance Statistics of Library Users

<u>Library Unit/Section</u>	<u>Jan-May/83</u>	<u>June-Dec/83</u>
General Circulation	15,252	22,126
Reserved	28,248	37,896
Serials	14,617	15,176
Graduate School/Reference	2,823	3,324
Vo-Ag/Gen. Lab High School	17,309	25,053
TOTAL . . . . .	78,249	118,119

## 4) Circulation Statistics

Total number of books circulated	77,638
Reference (Encyclopedias, Bibliographies and Indexes, etc.)	676
Philosophy	315
Religion	109
Social Science	10,146
Language	2,029
Pure Science	23,673
Applied Science	27,055
Arts	812
Literature	2,120
History	199
Filipiniana Books	388
Fiction	85
Pamphlets	46
Theses	9,985

## 5) Major accomplishments

- a) Acquired books in the different fields specifically Pure and Applied Sciences.
- b) Increased the number of student assistantship in the library.
- c) Invited to be resource speaker/lecturer to national and local library associations.
- d) Elected Seminar Director to a national library association.
- e) Sent library staff to seminars and workshops for professional growth.
- f) Shared library resources (duplicates) with the different academic departments for the establishment of mini-libraries in their departments.
- g) Solicited light reading materials (fictions/novels) for the establishment of a reading corner/mini-library for the Supreme Student Council Office.

## 6) Major Problems

- a) Deficiencies in the present collection
  1. Books in technical agriculture, pure and applied sciences, agricultural extension, and education, and rural development.
  2. Updated technical journals in the fields of pure and applied sciences, social sciences, humanities and collateral readings for faculty members
  3. Cessation of the subscription of 40 serial titles due to unavailability of funds
  4. Audio-visual materials to supplement instructional activities.
- b) Perpetual I.D. cards used as passports for borrowing are easily torn/destroyed.
- c) Inadequate study carrels for individual research work
- d) Insufficient staff members
- e) Cramped reading areas in the Serials and General Circulation Sections
- f) Vandalism of library books and journals.

## 7) Basic Recommendations

- a) That a regular appropriation be allotted for the acquisition of needed Books and Journals in the library for faculty and student use.
- b) That the acquisition of library resources and administration of library budget to be done by the Director of Library Services
- c) That the renewal of 40 journal titles on subscription basis be given funding.
- d) That an I.D. lamination machine be acquired for the perpetual I.D. cards to last long in good condition.
- e) That study carrels both single and group be built to enhance individual research work in the library. Students prefer to stay in carrels rather than in traditional long tables.
- f) That the unfilled library positions be filled up and that professional librarians be given academic status like the librarians of other state colleges and universities.
- g) That the veranda and the second floor of the library building be converted into reading areas to accommodate library clientele.
- h) That a xerox copier be installed in the library for use of the students, and outside researchers.

## 8) Seminar-Workshops/Conferences 1983 Attended

- a) NSTA Seminar-Workshop on Design and Planning of the National Information System for Science and Technology, Manila Garden Hotel April 25-28, 1983 - official delegate (Nora J. Claravall)
- b) National Congress on Library Development- Valle Verde Country Club - May 18-20, 1983- Official delegate (Nora J. Claravall)
- c) BSA Conference on the Library: Its Educational Function- Charles Vath Library June 18, 1983 official delegates (Angelita Anongas, Lorena Paran, Julieta Biobian, Freda Ocasan, Cristita Aquino and Letecia Consolacion)



- d) Ulitin Seminar sa Paggamit ng Pilipino Bilang Midyum ng Pagtuturo ng mga Asignaturang Magham Panlipunan sa Antas Tersegaryaya - RSDC Little Theater - August 11, 1983 - Official delegate (Nora J. Claravall)
- e) Benguet Division Seminar on Organization of School Libraries - Gen. Lab., MSAC Official delegates (Lorena Paron and Luisa Cachero).
- f) BBLA Seminar on Library Management Techniques: Practical Approaches, September 24, 1983 - Charles Vath Library Official delegates (Angelita Anoñas, Julieta Biobioan, Lorena Paron, Angela Caritativo, Luisa Cachero).
- g) JLP Seminar-Workshop on Systematic Organization of Library/Information Resources- RTC-RD Complex- November 23-25, 1983 - Official delegate (Angelita Anoñas, Julieta Biobioan)
- h) Seminar-workshop of AACR<sub>2</sub> - November 24-25, 1983 - UP College Baguio<sup>2</sup> - Official Delegates: Cristita Aquino, Lorena Paron
- 9) Library Staff Members who pursue Graduate/ Undergraduate Studies at their own expense
- a) Nora J. Claravall - has earned 45 units for the Ed.D. degree, major: Educational Management, University of Baguio
- b) Angelita Anoñas - has earned 33 units for the Masteral Degree in Education, major: English, Baguio Central University
- c) Leticia Consolacion has finished academic requirements and is in the process of thesis writing for the M.S. Degree, major in Agricultural Extension, MSAC.
- d) Julieta Biobioan has earned 30 units for the BSE degree major in Library Science, Baguio Central University
- e) Cristita Aquino has earned 24 units in Library Science, Baguio Central University.

- f. Freda U. Ocsan has earned 6 units in Library Science and pursuing her BSC degree, Baguio Colleges Foundation

Extension activities by the Director of Library Services:

1. Philippine Library Association, Inc.
  - Chairman, ALAP Task Force
  - Board of Governor, 1983
  - Co-Chairman, Committee on Library Education
2. Agricultural Libraries Association of the Philippines
  - President, 1983
  - Seminar-Director
  - Resource Speaker
3. Baguio-Benguet Librarians Association
  - President, 1983-85
  - Resource Speaker
4. Benguet Division Seminar-Workshop on School Libraries
  - Lecturer
5. Lucban Elementary School
  - Guest Speaker during the National Book Week Celebration

f. Guidance and Counseling.

This Office served and guided the students in their academic pursuit and personality development.

Accomplishments

## 1) Counseling Services - College Level only

	<u>Male</u>	<u>Female</u>	<u>Total</u>
a. Drop-outs	28	36	64
b. Failures	326	579	905
c. Marriages	2	3	5
d. Emotional/Personal Problems	35	49	84
e. Absenteeism (Admission Slips Issued)	<u>49</u>	<u>74</u>	<u>123</u>
	440	741	1181

## 2) Testing Services

## a. High School Department

1. General Lab Dept	<u>Male</u>	<u>Female</u>	<u>Total</u>
- Pursue NVT - 4th yrs.	45	55	100
- DAT - 4th yrs.	46	55	101
- OLMAT - 1st yrs.	112	130	242
- PGPII - 4th yrs.	<u>37</u>	<u>60</u>	<u>97</u>
	240	300	540

## b. Vocational Agricultural Department

- Purdue NVT	112	50	162
- DAT	112	50	162
- OLMAT	196	124	320
- Science Qualifying Test	31	56	87
- PGPII	<u>59</u>	<u>48</u>	<u>107</u>
	510	328	838

## c. College Level

- OSATM	217	359	576
- SCAT	217	359	576
- Personality Batteries	<u>0</u>	<u>7</u>	<u>7</u>
	434	725	1159

## 3) Extension: Tuba Notional High School

	<u>Male</u>	<u>Female</u>	<u>Total</u>
a. PGPII	28	35	63
b. OSATMA	28	35	63
c. Purdue NLT	<u>28</u>	<u>35</u>	<u>63</u>
	84	105	189

## 4) Follow-Up Services

a. Home Visitation	13	25	38
b. Hospital Referrals/ Visitations	<u>3</u>	<u>12</u>	<u>15</u>
	16	37	53

## 5) Information Services

a. Job Placement Seminar	73	98	171
b. High School Career Orientation			
Vo-Ag	59	48	107
Gen. Laboratory	37	60	97
c. Freshmen Orientation	219	298	517
d. Study Habits Seminar			
Vo-Ag	136	74	210
Gen. Laboratory	95	83	178
e. Seminar on Testing	1	33	34

## 6) Evaluation, Research and Survey

a. Freshmen (College) Profile	Pls. see attached copy		
b. Evaluation	42	158	200
c. Survey of Geographical Origin			
	Pls. see attached copy		

## 7) Inventory

a. Personal Data Forms	280	352	632
b. Character References	<u>71</u>	<u>67</u>	<u>138</u>
	351	419	770

## CHAPTER II

## Research

## A. Research and Experiment Station

## 1. Activities/Accomplishments

The College carried out its research function with a budget release of P1,283,650. This fund was used in the implementation of the major research and development programs: integrated potato research program, garden pea coordinated research program, fruit crops research, chrysanthomum improvement, farming systems development and agro-forestation project.

Several researches were also conducted in cooperation with outside government funding institutions like PCARRD and NRCP as well as private chemical companies such as Planters Products, Inc., Fertilizer Marketing Company of the Philippines, Inc., Hoechst Far East Marketing Corporation, Cyanamid Agricultural Research Foundation, Inc.

Field and progress reports and evaluation were made by the national research commodity teams with the involvement of MSAC researchers to assess the output, constraints and needs of research under-

takings. Constant dialogues and meetings with the Research Council were also due to properly operationalize the research system.

Research proposals were also submitted to various funding agencies in line with priority research thrusts.

The following is a summary inventory of researches (January - December 1983):

<u>Commodity</u>	<u>Proposed</u>	<u>On-going</u>	<u>Completed</u>
Vegetable crops	9	4	2
Root crops	2	2	1
Ornamental crops	9	1	0
Fruit crops	8	2	0
Farming systems	2	2	0
Moriculture	0	1	0
Livestock	1	0	0
Vermiculture	1	1	0
Socio-economics	1	0	1
Ag. Education	0	0	2
Basic Tech. Research	<u>5</u>	<u>0</u>	<u>0</u>
Total	38	13	6

Completed researches in 1983 include:

Vegetable Crops

- Response of Cabbage to Boron Application - P.B. Alipit (PPI)
- Nitrogen Fertilizer Study on Cabbage and White Potato - P.B. Alipit (FERMAP)
- Variety Performance Trials on Crucifers - F.T. Bawang (PCARRD-MSAC)

Root Crops

- Crop Protection Studies on White Potato - P.B. Alipit (MSAC)

Socio-Economics

Ethnographic Studies of the Kankanaï  
(Bontoc) of Mountain Province: Impli-  
cation for Development Strategy - L.C. Consolacion  
(NRCP)

Agricultural Education

Evaluation of Various Curricula of Agri-  
cultural Schools in the Highlands - M.B. Mercado  
(NRCP)

Some Predictive Factors of College Per-  
formance: NCEE Scores, Results of  
the Entrance Test, Result of Intel-  
ligence Test, High School General  
Average, First Year College Marks  
in the Mountain State Agricultural  
College - M.B. Mercado  
(NRCP)

Apart from the conduct of researches, the RES  
released research articles featured in newspapers,  
MSAC Journal and Farm News Bulletin. Indexing and  
abstracting of researches were done. Research break-  
throughs were also disseminated via exhibits and  
demonstrations. Technology information was also  
given on request by interested individuals.

The RES monitored and coordinated the conduct  
of theses and processing of manuscripts.

2. Problems Encountered

a. Lack of research equipment and facilities,  
delayed purchase and delivery of supplies and  
materials.

b. Delayed evaluation/processing of research proposals by commodity teams/funding agencies.

c. Inadequate full time research manpower and support staff.

d. Undefined research structure/system

### 3. Suggested Solutions to Problems

a. Allocation of more funds for equipment, facilities and other resources and establishment of a research service laboratory/station; prompt delivery of supplies and materials as specified is desired.

b. Simplification of the system of reviewing research proposals by evaluators and that results of evaluation be known without unnecessary delay, providing flexibility in commodity assignment and research thrust.

c. Appointment of more regular research personnel

d. Restructuring the research organizational system of the College such that all research activities/operations be coordinated by the Research and Experiment Station.



## 4. Summary of Completed Theses in 1983

a) Animal ScienceResearchers

Delaying Sexual Maturity of Pullets by Lighting Management and the Use of Ipil-ipil Leaf Meal

Cynthia M. Rodriguez  
and S. E. Moresto

Effects of feeding Methods and Levels of Sorghum on the Performance of Broilers

Roberto R. Roldan  
S. E. Moresto

Performance of Layers Fed with Different Levels of Mulberry Leaf Meal Fertilized with Varying Amounts of Nitrogen

Patricia M. Barcelo  
S. E. Moresto

b) Horticulture

Organic-Inorganic Fertilizer application on Multiplier Bulb Onions

Fernando C. Calibuso  
William D. Dar

Growth and Yield Performance of Multiplier Bulb Onion as Affected by Different Methods of Storage

Bernadette C. Carasi  
William D. Dar

Performance of Some Barley Lines Under Different Levels of Phosphorous

Raymundo B. Ambanloc  
F.G. Hermans

c) Soil Science

Effect of Different Levels of NPK on the Growth and Yield of Two Cotton Varieties

Romeo T. Tambua  
Rebecca Castillo

Varietal Response of White Potato to Levels of Potassium and Frequency of Watering

Susana P. Ayunon  
Rebecca Castillo

d) Agricultural Education

An Evaluation of the Master of Arts in Teaching Elementary Agriculture (MATEA) Program of Region I

Vicente Dacquel  
C.C. Consolacion

## Agricultural Education (continued)

Researchers

Utilization of Medicinal Plants  
in Municipalities of Benguet      Josefina S. Duque  
C.C. Consolacion

The Farming Operations Followed  
by MS-C/SEARCA Social Lab      Cesar F. Peña  
Farmer-Cooperators      Eriberto C. Alonzo

e) Agronomy

Response of Garden Pea to Dif-  
ferent Tillage Practices and  
Time of Filling-up      Jonathan D. Ibis  
William D. Dar

Comparative Effect of Types of  
Fertilizer on the Growth and  
Yield of Two Green Onion  
Cultivars      Lourdes Fernandez  
Franco T. Bawang

Effect of Plant Arrangement  
Designs and Fertilizer Type  
on the Growth and Yield of  
Head Lettuce      Zenaida Gonzales  
Franco T. Bawang

Improvement of Cabbage Produc-  
tion with Boron Application      James Anaydos  
P. B. Alipit

The Effect of Moisture Stress  
on the Growth Yield and Some  
Postharvest Characteristics of  
Snap Bean      Alice Panacan  
S. L. Kudan

Utilization of Waste Materials  
as Fertilizer for Chinese  
Cabbage      Pedro F. Mapalo  
P. B. Alipit

Effect of Varying Periods of  
Cold Storage in the Growth and  
Yield of White Potato      Mateo M. Estalin  
Dario D. Dampilag

Induction of Sprouting in White  
Potato with  $GA_3$  and Its Effect  
on Growth and Yield      Robert Tuguinay  
P. B. Alipit

## Agronomy (continued)

Researchers

Performance of Three Sweet Pepper Varieties Under Different Fertilizer Levels	Faustino Villanueva Danilo P. Padua
Radiosensitivity of Some Highland Vegetable Seeds	Miguel B. Viluan Danilo P. Padua
Acceleration of Growth of Celery	Johnny B. Wong P. B. Alipit
The Effect of Plot Size and Planting Depth on the Growth and Yield of Potato	Eusebio B. Sicnawa M. D. Cadatal
Effect of Time and Rates of Fertilizer on the Pod Yield and Seed Components of Snap Beans	Anita Y. Baltan Danilo P. Padua
Radio-sensitivity of Some Highland Vegetable Seeds	Esmenia Sacyaben Danilo P. Padua
Characterization and Yield Evaluation of Common Varieties of Snap Beans	Elpidio Gonzales F. G. Hermano
Effect of Physiological Age of Seed Tubers at Planting on the Growth and Yield of Two Potato Cultivars	Prosefina Meris Franco T. Bawang
Influence of Sorting Seeds in Cold Storage on the Growth and Yield of Snap Bean	Nora C. Bucao Silvestre Kudan
Effect of Training Techniques on the Growth and Yield of Two Tomato Cultivars	Racquel H. Barroga
The Effect of Rotooning on the Growth and Yield of Snap Bean and Garden Pea	Andres M. Nabus Silvestre Kudan
Postharvest Behavior of White Potato Stored Under Room Conditions in Various Packing Containers	Lourdes P. Casuga Percival Alipit

## Agronomy (continued)

Researchers

Effects of GA <sub>3</sub> and Coconut Water on Some Horticultural Characteristics of Lettuce	Gloria D. Cawalo Danilo P. Padua
Response of Garden Pea to Frequency and Concentration of Foliar Nitrogen Fertilizer	Venancio S. Abaya Danilo P. Padua
f) <u>Horticulture</u>	
Effect of Age at Transplanting and Direct Planting on the Growth and Yield of Lettuce	Grace B. Dulagan Lucio B. Victor
Rate of Green Pod Production of Garden Pea Varieties	Rosalia N. Laurean William D. Dar
Opening of Tight Bud 'Mr. Lincoln' Roses	Frolaine G. Moresto Wilma Alejandro
The Effect of Different Rates of Nitrogen on the Growth and Yield of White Potato	Adela T. Bulaglag Julio Tukaki
Effects of Different Levels of Complete Fertilizer and Spacing on the Yield of Sweet Potato	Yolando P. Degay Macario Cadatal
Evaluating the Market Quality of Cabbage and Potato During Transport	Marilyn Cosalan Franco T. Bawang
Varietal Performance of Eggplant Under Highland Condition	Arthur Botengan Pepo Toledo
The Effect of Grafting Tomato Scions on Four Irish Potato Cultivar Rootstocks	Julio N. Donato Edwin T. Balaki
g) <u>Soil Science</u>	
Effects of Different Rates of Wild Sunflower and Inoculation on the Growth and Yield of Snap Bean	Wilson Bulyawan Tessie M. Merestela

## Soil Science (continued)

Researchers

The Effect of Different Rates of Lime and Potash Fertilizer on Curd Formation of Cauliflower	Willy R. Mamaril Jose Balaoing
The Effect of Different Rates of Chicken Dung on the Zinc, Chlorine and Sulfur Uptake of White Potato	Yolanda Ragudos Julie Tukaki
Inoculation and Nitrogen Fertilization of Garden Pea on Two Selected Soils	Mario Marquez Tessie Merestela
Effects of Method of Fertilization and Some Growth Regulators on Cabbage	Beatriz Vicente Abraham L. Jara
Response of Garden Pea on Inoculation and Different Rates of Nitrogen Fertilizer	Nelicia A. Dacano Jose Balaoing
The Effect of Different Rates of Nitrogen on the Growth and Yield of Four Varieties	Ricardo Esteban Tessie Merestela
Performance of Bush Bean ( <i>Phaseolus vulgaris</i> ) on Soil Amended with Different Rates of Mine Tailings	Elmo Bumanghat Tessie Merestela
Effects of Frequency of Watering and Different Levels of Nitrogen on the Growth and Yield of Sugar Beets	Alma A. Macariola Tessie Merestela
h) <u>Entomology</u>	
Biology of Garden Pea aphid ( <i>Acyrtosiphon pisum</i> )	Lily Quintero Eulogio Cardona
A Study on the Biology of Common Cutworm ( <i>Spodoptera litura</i> Fabr.) in White Potato	Santiago Aquino Eulogio Cardona

i) <u>Botany</u>	<u>Researchers</u>
The Effect of Vernalization on Strawberry	Danilo D. Fernando L.G. Lirio
j) <u>Plant Pathology</u>	
A Survey on the Incidence and Identification of Virus Symptoms on Important Flowers in Benguet	Patricia Angadol L. M. Villanueva
Varietal Screening of Different Potato Varieties Against <u>Meloidogyne incognita</u>	Aniceta B. Flores Sergia Milagrosa
Effects of Rate of Fertilizer Application of Nematodes Infection of Cabbage	Grace D. Siloy Sergia Milagrosa
Evaluation for Varietal Resis- tance of Rice Against Rice Blast Caused by <u>Fyricularia</u> <u>oryzue</u>	Carazon D. Soriano Janot S. Luis
Identification of Plant Viruses Attacking Carrots in Benguet	Pucay L. Sabas Janot S. Luis
Fungicidal Screening Against Bean Rust ( <u>Uromyces phaseoli</u> )	Wilhelmina Puyacan Sergia Milagrosa
Assessment of Yield Loss on Potato Due to <u>A. incognita</u> and <u>P. infestant</u> Infection	Margarita M. Lalap Sergia Milagrosa
Survey and Identification of Plant viruses Attacking Table Potatoes ( <u>Solanum inbersum</u> L.) in Benguet	Pacita Gay-yaman M. L. Retuerma
Fungicidal Evaluation for the Control of Damping off Caused by <u>Phthium debaryanum</u>	Freddie T. Langpaon Sergia Milagrosa
Collection and Identification of Major Diseases of Selected Ornamentals in the Highlands	Teresita Diccion Sergia Milagrosa

## Plant Pathology (continued)

Researchers

Effect of Different Rates of  
Chicken Dung on Nematode  
Recovery in Selected Vegetable  
Crops in the Highlands

Victor T. Luazan  
Sergia Milagrosa

Evaluation of Different Rates  
of Tindik, Furadan 3G, Manicur,  
and Mecap in the Control of  
Meloidogyne in Celery

Edward B. Lee  
Sergia Milagrosa

k) Animal Science

A Study on the Performance of  
Broilers Given Earthworm Meal

Joji Ligeralde  
Sydney Moresto

Study on the Different Levels  
of Fishmeal and Brown Sugar as  
Feed Supplement for Broilers

Dexter E. Paleyan  
S. S. Arcellana

Effects of Dried Poultry Manure  
and Cassava Meal as Feed Supple-  
ment for Growing and Fattening  
Pigs

Alicia B. Nepe  
S.E. Moresto

The Comparative Study on the  
Feeding Values of Ground Yellow  
Corn, Barley and Sorghum as Feed  
Supplement for Broilers

Peter A. Namuro  
S.E. Moresto

Utilization of Vegetable Wastes  
for Pork Production in the  
Highlands

Ana Gawi  
S.E. Moresto

Response of Broilers to the Dif-  
ferent Levels of Ground Soybean  
Seed and Yellow Corn Supplement

Lim N. Ducyogen  
S.E. Moresto

Further Study on the Growth  
Response of Broilers Feeds with  
Ground Dried Sweet Potato

Michael Chumacog  
D. Q. Casiwan

The Response of Broilers to  
Different Levels of Ground  
Tapilan (Phaseolus calcaratus)  
Seeds as Feed Supplement

Arsenio B. Calawa  
S. E. Moresto

Researchers

Combination of Brown Sugar and Shrimp Meal as a Feed Supplement for Growing Broiler Chicks  
Aleander Aswigue  
S.E. Moresto

1) Animal Technology

Effect of Guava Leaves and Bark Decoction on Piglet Scours  
Gloria Siloy  
M. N. Alvaro

The Efficacy of Valium 10 as an Adjunct to Other Anesthesia in Dogs  
Fe D. Buyucan  
A. D. Magtoto

Blood Typing in Dogs Utilizing the Human Antisera A and B  
Rencee B. Manad  
M. N. Alvaro

Performance of Broiler Chicks to Different Rates of Azolia  
Jessie Jaravata  
J. M. Gawisan

A Study on the Hatchability of Liverfluke Eggs Using Pond and Tap Water Under Controlled Temperature  
Ana Jean R. Balangue  
J. M. Gawisan

The Prevalence of Blood Protozoan Parasites of Cattle in the Selected Municipalities of Benguet  
Ramon N. Anacioco  
M. N. Alvaro

Identification of Gastro-intestinal Parasites of Cattle Prevalent in Selected Barrios of La Trinidad, Benguet  
Alberto Lague  
L. M. Gawisan

Effect of Different Levels of Dried Cattle Manure as Substitute to Portions of Rice Bran in Broiler Ration  
Winston Samaniego  
A. Castrence

Performance of Broilers with Dried Ubi Roots as Feed Supplement  
Adam B. Yap  
S. E. Moresto



m) Agricultural EconomicsResearchers

- |   |  |
|---|--|
| Comparative Economics Analysis of Loans Granted by Three Rural Banks in Ilocos Sur                        | Corazon Foronda<br>Fe Dacanay          |
| The Income and Expenditure Patterns of Families in Padangaan, Besau, Mountain Province                    | Veronica C. Pio<br>Luke E. Cuanguey    |
| Marketing Practice of Furniture (aparador) Makers in Selected Barangays of Dagupan City, Pangasinan, 1982 | Laura A. Mayano<br>Luke E. Cuanguey    |
| Production and Marketing Practices of Buri Curtain Makers in Calasiao, Pangasinan                         | Maribeth Caragay<br>Fe Dacanay         |
| Socio-Economic Profile of Families in Atok, Benguet   | Jane P. Delfin<br>Luke E. Cuanguey     |
| Vocational Training Needs and Interests of Women in Basista, Pangasinan                                   | Rosario C. Resultay<br>Alfredo Rigonan |
| Service Linkages and Adaption of Innovations of Rice Farmers in the Municipality of Burgos La Union       | Constancia Abansi<br>Luke E. Cuanguey  |

n) Agricultural Extension

- |   |                                      |
|---|--------------------------------------|
| Program Planning and Implementation of Development Project by Government Extension Agencies in San Manuel, Pangasinan | Merlita Belmonte<br>C.C. Consolacion |
| The Poultry Raisers of Sagada and Bontoc in Mountain Province   | Rosemarie Laus<br>E. G. Alonzo       |
| The Role of the Local Government in the Socio-economic Development of Lingayen, Pangasinan                            | Sylvia Alimbuyao<br>E. C. Alonzo     |
| Training Needs and Aspirations of Virginia Tobacco Farmers in Batac, Ilocos Norte                                     | Genevieve Magano<br>E. C. Alonzo     |

## Agricultural Extension (continued)

Researchers

Problems and Needs of the Bureau of Agricultural Extension in the Implementation of its Development Program	Ann K. Somebang E. C. Alonzo
The Kalinga's Perceptions and Attitudes Towards the Chico River Rural Development Project in Northern Philippines	Angeline D. Pacao C.C. Consolacion
Diffusion Process of Livestock Production Technology in Sison, Pangasinan	Cecilia Olarte E. C. Alonzo
Decision-making Process Among Vegetable Producers from Barangays in Bantay, Ilocos Sur	Nelson P. Pastor E.C. Alonzo
Technologies in Agriculture and Related Fields Disseminated to Farmers in Bautista, Pangasinan	Iuzviminda Castillo L. C. Debad
Impact of Land Reform Program on Rice Production in Rosales Pangasinan	Annaliza Orpilla D. S. Garin

o) Statistics

Uniformity Trial for Lettuce Experiment	Bernard G. Malecdan Salvacion Beligan
Optimum Plot Size, Shape and Number of Replications for Pechay Experiment	Mary S. Pad-ay Salvacion Beligan

Other research activities are mentioned in the report of each department.

B. Northern Philippines Root Crops Research and Training Center

The Northern Philippines Root Crops Research and Training Center based at Mountain State Agricultural College was established as an autonomous body by virtue of PD 1107 on March 2, 1977 primarily to spearhead, coordinate, plan, conduct and monitor root crop researches and production and conduct training. The NPRCRTC is mandated to generate technologies on root crops designed to increase yield and minimize post harvest losses with the least or minimal cost input.

Presently, the Center consists of seven divisions, namely: 1) Crop Improvement Division, 2) Crop Management Division, 3) Crop Protection Division, 4) Post-harvest, Utilization and Marketing Division, 5) Socio-Economics, 6) Extension and Training Division, and 7) Administrative Division. There are 18 permanent research scientist and 14 permanent laborers manning this Center as of December 1, 1983.

1. Accomplishments

a. Production Income

Submitted to the College research/production income the amount of SEVENTY ONE THOUSAND EIGHTY ONE PESOS and 90/100 (P71,081.90).

## 2 Researches Conducted

## a. White Potato

<u>Title</u>	<u>Author</u>
Hybrid Seed Production from True Potato Seeds and Estimates of their Costs (Preliminary Trials)	Z.C. Nisperos E.O. Badol H.B. Torres
Progeny Evaluation from True Potato Seed Under Field Conditions	S.T. Gayao E.O. Sano
Progeny Evaluation from True Potato Seed for Tuberlet Production	S.T. Gayao E.O. Sano
Plant density Study from True Potato Seed for Tuberlet Production	S.T. Gayao E.O. Sano
Screening of Potato Cultivars for their Resistance to Phytophthora infestans (Late blight) at MSAC La Trinidad, Benguet	E.O. Badol L.M. Pacuz E.O. Sano
POTATEX Potato Variety Trials	E.O. Badol L.M. Pacuz E.O. Sano Z.C. Nisperos
Degeneration Study on White Potato	E.O. Badol E.O. Sano
Potato Variety Trials Under Benguet Conditions	E.O. Sano E.O. Badol
Yield Potential of Potato Varieties Using Stem Cuttings (Preliminary Study)	P.A. Dalang E.O. Sano
Comparative Study on the Yield Potential of Seedling Tuber versus Vegetative Seed Tuber of cv. Conchita	S.T. Gayao E.O. Sano

<u>Title</u>	<u>Author</u>
Cost and Return Analysis of White Potato Production in La Trinidad Valley, Dry Season 1982-1983	B.T. Gayao P. Acop
Comparative Cost and Return Analysis of Cabbage and White Potato under La Trinidad Valley Conditions	B.T. Gayao E.O. Sano
Rooting Performance of Potato Stem Cuttings of Locally Grown Cultivars under Peatmoss	E.O. Sano I. Carpio
Seed Multiplication Rate Generated from Potato Stem Cuttings	E.O. Sano I. Carpio
Plant Density Study on the Growth and Yield of Potato Stem Cuttings Compared with Seed Tuber	E.O. Sano I. Carpio
Seed Size Study on the Yield of White Potato	E.O. Sano E.O. Badol
Variety Evaluation on Breaking Dormancy of White Potatoes with Carbon Disulfide	E.V. Bayogan V.B. Salda
Insecticidal Screening against Potato Thrips	A.A. Basalong
b. Sweet Potato	
Preliminary Yield Trials of Sweet Potato Progenies in the Highlands	I. Carpio E.O. Sano
Regional Sweet Potato Variety Trials in the Highlands (Philippine Seedboard)	I. Carpio E.O. Sano Z.C. Nisperos
Advanced Sweet Potato Variety Trials Under Highland Conditions	I. Carpio

	<u>Title</u>	<u>Author</u>
c.	Taro	
	Preliminary Study on the Distance and Depth of Planting Taro in the Highlands	A.A. Basalong
	Preliminary Taro Variety Trials	E.T. Balaki
d.	Others	
	Response of Chinese Cabbage and Beans on the Different Supplementary Liquid Fertilizer	A.A. Basalong
	Technology Transfer Survey on Strawberry Production in La Trinidad, Valley, Crop Year 1982-1983	B.T. Gayao P. Acop
	Strawberry Variety Trials	E.O. Sano C.B. Guitelen
	Mulch Trial on Strawberry	E.O. Sano C.B. Guitelen
	Study of Gibberellic Acid (G <sub>2000</sub> ) on its Effect on Strawberry Runner Production	E.O. Sano C.B. Guitelen
	Strawberry Research on Crown versus Runner Utilized as Planting Materials	C.B. Guitelen E.O. Sano

#### On-Going Researches

a.	White Potato	
	Production and Consumption Survey of White Potato Farmers in Benguet	B.T. Gayao G.A. Tianza E.O. Sano
	Survey on the Status of White Potato Production in La Trinidad Valley	M.G. Delson B.T. Gayao H.C. Perez S.T. Gayao

<u>Title</u>	<u>Author</u>
Survey on the Fungicide and Herbicide Usage of Potato Farmers in Benguet	A.A. Basalong
Assessment of Losses during Harvesting of White Potato Under MSAC Conditions	E.V. Bayogan V. B. Salda
Weight Loss in Fina and Cosima Tubers During Storage	E.V. Bayogan V.B. Salda
Growth and Yield of Fina and Cosima Potatoes Stored under Dark and Diffused Light Condition	E.V. Bayogan V.S. Salda H. Torres
Effect of Maleic Hydrazide (MH) as a Pre-harvest Spray on Dry Matter Content and Sprouting of 16 White Potato Varieties	E.V. Bayogan V.B. Salda H.B. Torres
Type of Sprout Growth and Incidence of Internal Sprouting upon Removal of Growing Points at Various Lengths in Fina and Cosima	E.V. Bayogan V.B. Salda
Yield Potential of Four White Potato Varieties Grown from Sprout Cuttings	E.V. Bayogan V.B. Salda H.B. Torres
Screening of Potato Cultivars for their Resistance to <u>Phytophthora infestans</u> (Late Blight) under Two Elevations in Benguet	E.O. Badol L.M. Pacuz Z.C. Nisperos E.O. Sano
Yield Potential of TIS on Tuberlet Production	S.T. Gayao E.O. Sano
Seed Size Study from Seedling Tuber	S.T. Gayao E.O. Sano
TIS Progeny Evaluation from MSAC Crosses and Wisconsin Crosses	S.T. Gayao, Z.C. Nisperos H.B. Torres et.al.

<u>Title</u>	<u>Author</u>
Potato Variety Trials	E.O. Badol Z.C. Nisperos
Tissue Culture of White Potato	Z.C. Nisperos P.A. Dalang F.S. Balog-as
Agronomic and Economic Evaluation of Open-Pollinated and Hybrid TPS Inprogenies	S.T. Gayao E.O. Sano
Comparative Study on the Yield Potential of Seedling Tuber, Vegetative Tuber and TPS Seedling Transplant	S.T. Gayao E.O. Sano
b. Sweet Potato	
General Yield Trial on Sweet Potato	I. Carpio E.O. Sano, et al
Advanced Yield Trial on Sweet Potato	I. Carpio E.O. Sano
Varietal Evaluation on Local Varieties on Sweet Potato	I. Carpio E.O. Sano
Regional Trial on Sweet Potato	I. Carpio E.O. Sano
Preliminary Yield Trial of 116 Sweet Potato Hybrid	I. Carpio E.O. Sano
Advanced Yield Trial of 30 Sweet Potato Hybrids	I. Carpio E.O. Sano
Assessment of Losses during Harvesting of Sweet Potatoes Under MSAC Conditions	E.V. Bayogan V.B. Salda
Effect of Planting Location on Quality and Storage Life of Sweet Potatoes	E.V. Bayogan V.B. Salda
Dry Season Seed Board Trials (VLSA, UPLB, BFI & MSAC)	
General Yield Trial of Sweet Potato for the Highlands	



Collection and Multiplication of Sweet Potato  
Germplasm

<u>Title</u>	<u>Author</u>
c. Taro	
Germplasm Collection and Multi- plication of Minor Root Crops	H.B. Torres E.O. Badol Z.C. Nisperos
Preliminary Studies on the Post- harvest Characteristics of Taro Corms Grown under MS&C Conditions	E.V. Bayogan V.B. Salda
d. Other Crops	
<u>Proliminary Evaluation of Pisum</u> <u>sativum and Phaseolus vulgaris</u> Collection	Z.C. Nisperos
Variety Evaluation on Strawberry	C.B. Guitelen E.O. Sano
Labor Input Survey on Vegetable Production in Benguet	I. Acop B.T. Gayao E.O. Sano, et al
Comparative Cost and Return Ana- lysis of Competing Vegetable Cash Crops in the Highlands	B.T. Gayao E.O. Sano et al

Special Project Spearheaded by the NIRCRTC

a. IPDF-MS&C White Potato Research Program

Source of Funds: MS&C, International Potato Center (CIP)

Researches Financed/Supplemented

- True Potato Seed Studies
- TSS Hybridization
- Late Blight Trials
- Rapid Multiplication/Tissue, Culture

## b. MSAC-VISCA Root Crop Project

Source of Funds: VISCA

Researches Financed/Supplemented:

- Philippine Seedboard Regional Sweet Potato Trials
- Preliminary Sweet Potato Trials
- Preliminary Taro Trials

## c. Potato Rapid Propagation Studies by Stem Cuttings

Source of Funds (Orig.) - ICARRD

Transferred to MSAC Funding - May 1, 1983

Studies Conducted:

- Rooting Performance of Potato Stem Cuttings under Fearness of Locally Grown Cultivars
- Seed Multiplication Rate Generated from Potato Stem Cuttings
- Plant Density Study on the Growth and Yield of Potato Stem Cuttings Compared with Seed

## d. Potato Seed Pieces Storage Under Diffused Light at Two Elevations

Source of Funds: ICARRD

Transferred to MSAC Funding - May 1, 1983

Researches published in "The Philippine Agriculturist" Journal

- a. In-Ground Storage of White Potato: A Preliminary Assessment - M.J. Potts, E.O. Sano and L.M. Pacuz (Volume 65, #3)
- b. An Agro-Economic Assessment of White Potato Manuring Trials: Benguet and Mountain Provinces M.J. Potts, N.B. de los Santos, E.O. Sano and F.R. Rutab - Volume 65, #3
- c. White Potato Yield Survey - M.J. Potts, L.M. Pacuz and E.O. Sano - Volume 65 #3

## Donations Received for Root Crop Activities

<u>Item</u>	<u>Source</u>	<u>Date Received</u>
Seed Potatoes	POPALEX, W. Germany (for variety trials)	Oct. 15, 1983
Strawberry Runners	University of Florida c/o C.M. Howard (Handling costs to be paid out of production income) for multiplication purposes	February 1983
Seed Potatoes	SMC (for rapid multiplication and variety trials)	March 1983
True Potato Seeds	Ms. Kwajha (PCARRD) for trial	November 1983
Sweet Potato Cuttings	VISCA, UILB, E.I., and Local Farmers (for regional, preliminary & regional trials)	June & August 1983
Taro	VISCA, for preliminary trials	August 1983
Carrots, Cabbage and Spinach	VILMOREN, France; for trial	September 1983
Turbom	c/o L.J. Harmsworth for trial/rapid multiplication	January 1983
True Potato Progenies	CEP, c/o Peter Vander Zaag, Lima, Peru	January and July 1983
True Strawberry Seeds	C.M. Howard, Florida for trials	February 1983
Sweet Potato	AVRDC, Taiwan c/o Dr. Dar for tissue culture/rapid multiplication	November 1983

<u>Item</u>	<u>Source</u>	<u>Date Received</u>
Bio-dynamic Fertilizer	Techtrade Co., Manila for trials	November 1983
Multi-mineral Fertilizer	Anglia Ent., Manila; for trial	July 1983

Experimental Materials given-out by the N. RCRTC to  
Other Agencies

<u>Item</u>	<u>Recipient</u>	<u>Purpose</u>
White Potato Varieties	VISCA, Baybay Leyte	Variety trials
	Kevin Murray, American Peace Corp, Davao	Variety trials
Sweet Potato Cuttings	Cagayan State University	Germplasm Col- lection Breeding
	Approx. 200 household in the locality	Production
Strawberry Runners	Indonesia c/o L.J. Harmsworth	Variety trial
Taro Planting materials	BIU, Ilocos Ms. Keith, Sablan	Variety trial Production

of flowers both during emasculation and pollination, age of the flower, amount and condition of pollen and vigor of the plant.

Screening of Potato Cultivars for their Resistance to Phytophthora infestans (Late Blight) at MC-C, La Trinidad Benguet

Badol, E.O., Pacuz, L. and Sano, E.O.

Twenty-four cultivars were evaluated for their resistance to late blight disease at MC-C, La Trinidad, Benguet during the dry season (April-June 1983).

Among the 10 clones and 14 cultivars that were screened, only three were rated resistant (1-10% infection), namely: Greta, a local recommended variety, Carola and the CIP clone 573272. Other clones which included 573079, 678011, 573255, 575049, 720053, 720088 and cultivars Jessica, Marta and Santos were found to be moderately resistant. Generally, CIP clone appeared to be more resistant than the cultivars except for Greta and Carola. It was further observed that the development and spread of the disease was faster among the cultivars than the CIP clones.

Unfortunately, the area was severely infected with bacterial wilt disease such that rating was done only up to 48 DAI, and no data on yield was ever taken.

Progeny Evaluation from ~~III~~ under Field Conditions

Gayao, S.T. and Sano, I.O.

Four progenies were compared to Cosima tuber for wet season field progeny trial. Three of CIP progenies including the Cosima tuber with yields ranging from 31.1 to 34.0 t/ha were significantly different over the yield of Conchita (17.87 t/ha).

In the dry season evaluation, op Greta was included from the four previously tested progenies. The highest yield was produced by Greta (36.2 t/ha) followed by 678011 (34.6 t/ha). On the other hand, Conchita had the lowest yield (19.3 t/ha).

The yield of op CIP progenies were significantly higher as compared to Conchita for both wet and dry season trials. However, during the dry season trial, 720045 and 800938 progenies had considerably decreased in yield. Conversely, Conchita and 678011 had a marked increased in yield from 17.8 to 19.8 t/ha and 31.1 to 34.6 t/ha, respectively.

### Progeny Evaluation from TPS for Tuberlet Production

Gayao, S.T. and Sano, E.O.

Eleven progenies from Feto Seed Company, U.S.A. (Code No. 1001 to 1011), 3 CIP progenies, one CIP hybrid (Atzimbo x R 128.6) and one local open-pollinated progeny (Conchita) were planted at a density of 100 plants per square meter to evaluate their yield performance.

Results showed that the yield ranged from 1.45 to 4.0 kg/m<sup>2</sup> with the number of tubers ranging from 213 to 439 tubers/m<sup>2</sup>. The highest yield was obtained from 1003 and the lowest was produced from 1009. About 70% of the yield were considered as small size with an average weight of 20 g/m<sup>2</sup>.

### Plant Density Study from TPS for Tuberlet Production

Gayao, S.T. and Sano, E.O.

TPS plant density was conducted under glasshouse condition during the wet season (July to December 1982) to determine the optimum plant density for tuberlet production.

No significant differences in yield were observed between the two progenies tested. However, significant differences were observed on plant densities. As the

density was increased from 24 to 196 hills per square meter, the yield correspondingly increased from 2.89 to 3.84 kg/m<sup>2</sup>. Apparently, widely spaced plants produced larger tubers than plants spaced at closer density.

Preliminary Clonal Evaluation of Potato from Stem Cuttings  
Dalang, P.I. and Sano, I.O.

Based on the results gathered, B-9540-62 had the greatest number of cuttings produced with an average of 27.2 cuttings per tuber followed by B-9648-15 with an average of 23.6 cuttings. The least number was observed in B-9596-2 which had only 9.9 cuttings per tuber.

In terms of percentage of survival, clone B-9540-62 had the highest with 86% and the lowest average number of tuber of 0.88 tubers.

As to the average number of tuber produced per plant, clone B-9192-1 produced the greatest number of tuber with an average of 1.6 followed by B-9540-62 with 1.15. B-9224-6 produced the lowest average number of tuber of 0.88 tubers.

Preliminary Yield Trial of Sweet Potato in the Highlands  
Nisperos, W.C., Carpio, I. and Sano, I.O.

The preliminary yield performance of forty-six (46) hybrids of sweet potato from VISCA, Baybay, Leyte and two local varieties were evaluated under highlands



conditions. Among the forty-six entries, four (4) VISCA hybrids, namely: VISCA 2-1, 2-47, 2-45, KALBO-OY and VISCA 2-72 were found to be the top five high yielding with a yield of 52.6, 50.9, 47.6 and 40.0 tons per hectare, respectively. The others produced an average yield and the lowest yielder was VISCA 2-36 with a yield of 9.4 tons per hectare.

**POTATEX** Potato Variety Trials at MSAC, La Trinidad, Benguet (1983)

Sano, E.O., Pacuz L., Badol, E.O. and Nisperos, Z.

Ten Potatex potato varieties were evaluated for the first trial at the Mountain State Agricultural College, La Trinidad, Benguet during the dry season of 1983.

Among the varieties tested, Granola, Univita and Carola were the top high yielding varieties. The average varieties were Sanaa, Dunja, Nordstern and Gelda. Other varieties with low yield potential were Ilona, Plama and Jessica.

It was found that high yielding varieties possessed varietal characteristics such as being the most vigorous, resistant to plant diseases and high initial weight at planting which the average and low yielding varieties do not possess.

### Seed Size Study on the Yield of White Potato

Sano, E.O. and Badol, E.O.

Seed size significantly affect yield of white potato but the influence of variety is negligible. Small seed tubers (30 kg) at 3.2 tons per hectare with a yield of 31.41 tons per hectare significantly outyielded both small seed tubers at 1.6 tons/ha and big seed tubers (60 g) at 3.2 tons per hectare.

Based on this result, small seeds (30 g) could still be used as planting material as long as the seed rate be doubled and still could attain a higher yield.

### Variety Evaluation on Breaking Dormancy of Potatoes with "Carbon Disulfide"

Dayagan, E.V., Salda, V. B.

Twelve potato varieties were used in the evaluation of Carbon disulfide ( $CS_2$ ) as a dormancy-breaking chemical. Granola, Dunja, and Red Pontiac have dormancies less easily broken while Fina, Sanos and Univita have dormancies very easily easily broken. The  $22.5 \text{ cc/m}^3$   $CS_2$  treatment which lasted for 72 hours was 23.79 to 51.52% efficient in breaking the dormancies of the various varieties. Further a higher weight loss was obtained in the treated lot indicative of the more rapid resumption of growth in terms of sprouting. There was also a higher mean

number and length of sprouts relative to the untreated control. A high tuber eye burning which subsequently either delayed or prevented sprout growth was most visible in some varieties like Fina.

Rooting Performance of Potato Stem Cuttings of Locally Grown Cultivars under Postmoss

Sano, E.O. and Carpio, I.

Five potato varieties: Red Pontiac, Cosima, Fina, Greta and Univita were evaluated on the rooting performance of potato stem cuttings under postmoss at the Mountain State Agricultural College from May to August, 1982.

The cultivars that produced the highest number of roots per stem were Univita (44.93), Fina (43.13) while Red Pontiac gave the lowest number (33.08).

Univita gave the longest length of roots per stem (12.65 cm) followed by Red Pontiac (12.15 cm) while Fina gave the shortest length of roots (11.12 cm).

Percentage survival of potato stem cuttings among the five varieties were observed to be high. Growth performance was also observed to be vigorous.

Seed Multiplication Rate Generated from Stem Cuttings

Sano, E.O. and Carpio, I.

Two locally grown cultivars: Fina (early maturing) and Greta (late maturing) were evaluated on the rate of

seed multiplication from stem cuttings from September 1982 to April 1983.

Results showed that potato stem cuttings from Greta gave the higher yield in total weight and number of tubers but produced tubers for a longer span of time (7 months) as compared to Fina, which matured within 5 months but it gave a lower yield.

Potato tuber as planting material matured for these three to four months, while potato stem cuttings mature from five to seven months but the rate of multiplication was 12 times from Greta and 6 times from Fina in weight of tubers (kg). Rate of multiplication in number of tubers was 14 times from Greta and 6 times from Fina.

#### Plant Density Study on the Yield of Four Potato Varieties as Affected by Stem Cutting and Tuber

Sano, E.O. and Carpio, I.

Tuber and stem cuttings were compared on the yield of four potato varieties of three density levels from November 1982 to April 1983 at MSAC, Experiment Station.

Interaction effects showed no significant differences in yield per hectare, yield per hill, and number of tubers per hill. However, significant results were observed in the nature of planting material, variety and plant density level. Tuber showed higher results over stem cuttings. Cosima produced higher yield over the three

varieties and density five outyielded density one and three.

#### Cost and Return Analysis of White Potato Production under La Trinidad Valley Conditions

Gayao, B.T., and Acop P.

The cost and return analysis of white potato production during the normal planting season was studied in La Trinidad Valley from November 1982 to February 1983. An area of 1.5 hectares was planted by 17 farmer-cooperators planting an average area of 867 m<sup>2</sup> per farmer. There were three (3) common potato varieties planted, namely: Cosima, Fina and Red Pontiac.

The total input amounted to P50,417.00 or P33,500.00 input per hectare. The cost of production was broken down to: Labor (31%), Seed (30%), Fertilizer (18%), Pesticide (16%) and others (5%). The total marketable harvest on the 1.5 ha was 33,268 kg or 22.6 tons per hectare which was a normal yield in this area. The average selling price per kilo of this harvest was P1.51 or a total of P50,247 which was 0.5% (loss of P165) short of the break-even point. The break-even selling price of the harvest should be P1.52/kg. Disregarding labor cost, the break-even selling price of this harvest is P1.04 per kiló.

Results showed that 11 farmers made a profit ranging from ₦40 to ₦1,204 while 6 farmers made a loss ranging from ₦60 to ₦1,213.00.

Comparative Cost and Return Analysis of Cabbage and Potato Crop under La Trinidad Valley Conditions

Gaya, B.T. and San, B.O.

The cost and return of cabbage and potato was compared in a study conducted at the NPERCRC demonstration farm on March to May, 1983 under normal management practices. A total of 105 plots measuring 1.2 x 12.0 m were alternately planted to cabbage and potatoes of the study were as follows:

TABLE 1. Comparison of yield, cost of production and net returns

	Potato		Cabbage	
	Computed	Actual	Computed	Actual
Number of plots		53		52
Actual marketable yield		1718 kg		1878 kg
Actual Gross Sales		<u>₦6,090</u>		<u>₦4,770</u>
Computed marketable yield per ha	22.52 t		₦25.07 t	
*Actual Cost of Production		<u>3,163</u>		<u>2,201</u>
*Computed cost of production/ha	41,456		29,380	
*Average cost of production/m <sup>2</sup>	4.14		2.94	
*Actual net returns		<u>2,935</u>		<u>2,569</u>
*Actual Return on Investment (ROI)		93%		117%
*Computed break-even selling price/kilogram	1.84		1.17	

\*Before deducting marketing and depreciation costs

TABLE 2. Breakdown of cost of production

Items	Potato	Cabbage
Seeds	30%	22.7%
Fertilizers	8%	12.1%
Chemicals	13%	21.7%
Labor	40%	42.9%
Fuel/Oil	1%	0.6%

## C. Highland Agricultural Research Center

### 1. Introduction

The Highland Agricultural Research Center is a consortium of research and development agencies committed to enhance agricultural development in the highland areas of the Philippines particularly in the mountain provinces.

Accordingly, the HARC consortium is composed of thirteen (13) agencies as follows: the Baguio Experiment Station (BES) and the RP-German Seed Potato (RP-GSPP) of the Bureau of Plant Industry (BPI), the Conifer Research Center (CRC) of the Forest Research Institute (FORI), the Mountain State Agricultural College (MSAC), the Baguio Dairy Farm (BDF) of the Bureau of Animal Industry (BAIO, the Ministry of Agriculture (MA) Region I and II, the Silk Industry Development Project (SIDP) of the Philippine Textile Research Institute (PTRI), the Cordillera Studies Center (CSC) of the University of the Philippines, Baguio (UPCB), the National Economic and Development Authority (NEDA), Region I, the Philippine Council for Agriculture and Resources Research and Development (PCARRD) and the Northern Philippine Root Crops and Training Center (NPRCRTC).



On the other hand, a HIARC Secretariat based at MSAC, carries out four (4) regular programs. These are (1) the Research Monitoring Program (RMP), which oversees the progress of on-going research projects and collates formative and summative information for data processing; (2) the Regional Agricultural information Network (RAIN) which handles the development communication functions of HIARC; (3) the Research Management Development Services (RMDS), which formulates approaches toward human resources development; and (4) the Administrative Support Unit (ASU), which is concerned with the effective management of the center and assigned the custodianship of office supplies and other office properties.

## 2. Regular Programs/Activities

### Research Monitoring Program (RMP)

The Research Monitoring Program oversees, monitors and evaluates the implementation of the on-going and newly approved 1983 research projects and programs funded by the Philippine Council for Agriculture and Resources Research and Development (PCARRD) and other funding agencies.

Accomplishments

1. Inventory of on-going agency and PCARRD researches for 1983. The status of on-going researches was determined for the purpose of identifying their budgetary needs.

2. In collaboration with PCARRD, completed and on-going research study, projects, and programs were evaluated during the third PCARRD-HARC Coordinated Research Review and Evaluation on April 20-22, 1983. Highlights during the PCARRD-HARC review were the identification of mature technology for verification and utilization. Other projects and programs were also recommended for improvement and additional funding.

3. Consolidated/package the 1985 HARC Consortium Research Program Proposals for PCARRD funding.

4. Prioritized/updated research thrusts in terms of commodity assignments.

5. Presently collecting/updating abstracts of completed researches from the member agencies of the HARC consortium.

## Regional Agricultural Information Network

RAIN handles the development communication functions of HARC. Aside from its regular information dissemination activities, the RAIN also maintains a mini-library and a PCARRD-HARC Scientific Literature Service (SLS).

### Accomplishments

#### 1. Mass Media Projects

Publications - "The Highland Express" (3 issues)

"The HARC Farm Tips" (3 issues)

SAVI Proceedings

Technoguides on 2 commodities  
(Potato and Sweet Peas)

Radio Broadcast - Cordillera Farmers Hour  
(39 Broadcasts)

Media Linkages - media linkages were strengthened through occasional radio and press releases

#### 2. Regular activities

- Coordinated six (6) Symposia under the HARC Consortium Monthly activity. These symposia were: Upland Farming System, Fruit Crops, Livestock, Socio-economics, Soil Resources and Sericulture.

- Coordinated a HARC Consortium Exhibit and Farmer's Hour held on March 24-25, 1983

#### 3. Research/Information Services

- Acquired additional materials for the HARC Mini-Library

#### 4. Manpower Development

- A number of trainings and seminars were attended by HARC-RAIN Personnel.

#### 5. Other activities/developments

- Conducted a survey on the relevance and effectiveness of HARC-RAIN activities
- Assisted in various activities of the Center of HARC-RAIN activities
- Assisted in various activities of the Center
- Made an action research in Kalinga-Apayao in response to the citrus problem of the Province.
- Institutionalized inter-agency linkages with some government and private entities.

#### Research Management Development Services (RMDS)

HARC's unceasing desire to improve the professional capabilities and proficiencies of its researchers and personnel motivated the conduct of professional development courses, therefore, HARC, through the RMDS coordinated and co-coordinated a number of seminars, workshops and trainings for continuous manpower development.

#### Seminars/Workshops Coordinated/Co-coordinated:

- a. Coffee Nursery Establishment and Management - February 23, 1983 RTC-RD, MSAC, La Trinidad, Benguet
- b. Society for the advancement of Vegetable Industry (SAVI) convention - March 3-5, 1983, MSAC, La Trinidad, Benguet

- c. 20th Workshop on Design and Analysis of Experiments - March 21 - April 14, 1983 - MSAC, La Trinidad, Benguet
- d. 3rd PCARRD-HARC Coordinated Review and Evaluation of on-going and Completed Research Projects April 20-22, 1983, MSAC, La Trinidad, Benguet
- e. Orientation on Buklod ng mga Kabataang Kawani - July 2, 1983 MSAC, La Trinidad, Benguet
- f. Consultative Workshop on Fruit Industry Development Nov. 10-11, 1983 - MSAC, La Trinidad, Benguet

RMDS also designed and packaged modules for non-formal training courses for HARC researchers and other personnel.

#### Administrative Support Unit (ASU)

The ASU works on the equitable appropriation of funds for the various projects/programs of HARC, and also carries out other activities to effect an efficient management of the center towards the achievement of its research and development goals.

#### Accomplishment

1. Assisted in the different activities and projects of the center;
2. Prepared research data needed by PCARRD and other agencies;
3. Prepared the necessary papers and reports needed for the financial transactions of the center and other research projects being monitored; and
4. Made an inventory of the center's properties and assisted PCARRD in its assessment of the College's existing research laboratories.

### 3. Special Projects/Programs

#### a. Benguet-Mountain Province Technopack Project

The Technology Packaging for Countryside Development known as the TECHNOPACK is a nationwide project which aims to uplift the economically depressed areas. This is implemented through the packaging of the latest scientific technology on various commodities in the country.

The inclusion of the Mt. Province to the Benguet Technopack was formalized on June 20, 1983. To this effect, addition of Management Committee members was recorded.

The additional members are: the National Food Authority (NFA), the Bureau of Fisheries and Aquatic Resources (BFA), the Bureau of Forest Development (BFD), the National Irrigation Authority (NIA), the Cordillera Studies Center (CSC), the Sericulture Research and Training Center (SRTC), the Ministry of Agriculture (MA) - Mt. Province, the Development Bank of the Philippines (DBP) - Mt. Province, the Provincial Development Staff (PDS) - Mt. Province, the Ministry of Human Settlements (MHS) - Mt. Province, the National Science Technology Authority (NSTA), and the Farm Systems Development Corporation (FSDC) - Mt. Province.

Meanwhile, Sericulture and Moriculture were also identified as additional commodities to be packaged. This decision is responsive to the Provincial Government's quest to seek supplementary livelihood for farmers along the Benguet vegetable belt.

Another identified commodity to be packaged is goat farming. Members of its Technical Committee is still being negotiated.

b. Highland Rural Development Program (HRDP)

The Highland Rural Development (HRDP) is basically a strengthened research and extension program of the Mountain State Agricultural College such that research breakthroughs of the College will be fully utilized by the intended clients, mainly the farmers and rural folks, through a well organized and coordinated research and extension programs.

The main objective of the HRDP is to intensify highland countryside transformation through an effective technology generation, verification, and utilization scheme. To realize these objectives, the program is composed of four (4) major components, namely: (1) Research and Extension;

(2) Technology Packaging; (3) Establishment of Demonstration Farms; and (4) Training and Manpower Development.

One Village Research and Demonstration Laboratory (VRDL) per province will be established in the four provinces of the Mountain Provinces which will be done by phases. Phase I - Benguet; Phase II - Mountain Province; Phase III - Ifugao; and Phase IV - Kalinga-Apayao. Each outreach station will have an area of about 5 to 10 hectares where the major programs mentioned earlier will be based and implemented.

The first site is Natublong, Buguias, Benguet. This is about sixty-five (65) kilometers from Baguio City. The lease agreement between MSAC and the owner of the land is being finalized.

The team is also presently evaluating a second site located in Calagan, Buguias, Benguet. This is a government forest reservation, which is 105 kilometers away from Baguio City and adjacent to the Buguias Experiment Station and the projects of the Forest Research Institute.



c. Highland Agriculture Development Project (HADP)  
Cordillera Integrated Area Development Project  
(CORIADP)

The HADP is a project aimed to develop an integrated farming systems approach towards increased agricultural productivity in the highlands at the same time promote highland ecosystem conservation for sustained productivity.

The project will be funded by the Asian Development Bank (ADB) with the Ministry of Agriculture (MA) as the overall implementing agency and the Highland Agricultural Research Center (HARC) consortium as implementing arms.

The three major components of HADP are: actual implementation or demonstration farms, basic researches, and training programs.

Presently, further refinement of the project proposal is being undertaken among the government agencies involved like the inclusion of data on the production profile of the fruit industry and pasture grass in time for the final project feasibility preparation which will take effect early January, 1984.

d. Farming System R & D Program in the Highlands

A proposal entitled "Farming Systems R & D Program in the Highlands" was submitted recently to the Philippine Council for Agriculture and Resources Research and Development (PCARRD) for evaluation and recommendation to international entities for possible funding.

The program has four (4) components:

- (1) research projects, (2) establishment of pilot areas, (3) research utilization and, (4) development of research capability.

The research component revolves on the following: annual crop based farming system, crop-livestock integrated farming system, agro-forestry based farming system, soil and water resources, and socio-economics.

e. Cordillera Coffee Research and Development Program (CCRDP)

This research and development plan is an inter-agency arabica coffee development program for the Cordillera. It attempts to integrate the programs of several government and private agencies that are engaged in coffee venture, be it on production, marketing, financing, and processing into the coordinating "Umbrella body."

Agencies actively involved in coffee development include the following: the Mountain State Agricultural College, the Highland Agricultural Research Center, the Ministry of Agriculture, Regions I and II, the Ministry of Human Settlements, Regions I & II, the Bureau of Forest Development, the Provincial Development Bank of the Philippines, the Coffee Exporters' Association of the Philippines, FILIPRO Inc., and the Coffee Growers Association-Provincial Chapters.

The main components of the program are:

- (1) survey of existing indigenous technologies;
- (2) evaluation/screening of these technologies;
- (3) writing a handbook on coffee growing based on 1 and 2;
- (4) coffee technology improvement, generation and verification;
- (5) training of farmers;
- (6) cooperative development.

f. **Land Tenure and Farmer's Training Program (LT-FTP)**

A program known as the Land Tenure and Farmer's Training Program (LT-FTP) has been designed and packaged by the Igorot Community Assistance Program, Inc., (ICAP). The LT-FTP consist of two major components namely: A. Land Tenure Program and B. Farmers Leaders Training Program.

The Land Tenure Program is designed for the cultural minorities of the highlands. The said component is a continuation of a program supported by the Ford Foundation in the last two years. The preliminary objective of which is the titling of land holdings of the cultural minorities because to them, the land is life.

Farmers Leaders Training Program, on the other hand will revolve on nine-sub-components, namely: multiple cropping, agro-forestry, nutrition, sericulture and moriculture, post-harvest and food processing, mushroom culture, swine raising, cooperative development and nursery management.

#### 4. Existing Personnel

1 Professor III	1 Science Research Specialist II
2 Instructors	1 Assistant Instructor
2 Sub-asst. Instructor	
2 Research Assistants	2 Clerk-typists
1 Bookkeeper	1 Driver Mechanic
	1 Artist Illustrator

#### 5. Equipment, Furnitures and Movable Assets

##### Equipment

1 Nikon Camera	1 SHARP Double Cassette Recorder
1 Nikon Wide angle Lens	1 Table Calculator DN 1520
1 Nikon Telescope Lens	3 Typewriters, 1 Electric
1 Starblite Camera Flash	1 Gestetner Duplicating Machine
1 Petri Camera	1 SSB TWC 10's Transceiver
1 Casio Electric Calculator	Jeep tools (10 pcs.)
1 Kodak Carousel Projector	Van Tools (2 pcs.)
1 Kodak Projector Screen	4 Staplers
8 Black Curtains	1 Puncher
1 Projector Stand	1 Sanyo Tape Recorder

## CHAPTER III

## Extension

## A. Introduction

Implementation of the institutionalized extension function of the College is shared by the various technical department or offices as reflected in their report. However, its administration is centralized for effective monitoring, coordinating and evaluation purposes.

The operational objectives of the Extension Office include the following: (a) to monitor the extension projects/activities of the various academic units/departments of the College, (b) to provide a coordinating mechanism for a college-wide extension education program/project/activity, (c) to initiate a progressive program of development extension, intra- and inter-institutional linkages of the College, (d) to establish a system of information dissemination and linkages, and (e) to synthesize outcome and experiences in the conduct of extension project/activity in order to provide relevant information for policy formulation.

Extension projects are oriented toward countryside development. It included the following major categories: (a) action research, (b) supportive roles, (c) information dissemination, and (d) outreach projects.

B. Accomplishment for 1983 are briefly presented as follows:

1. Extension Projects

a. Non-degree training courses

- 1) RTCRD training courses - 1086 graduates composed of farmer leaders and field level technicians of the line ministries/agencies
- 2) MSAC-RTCRD-IARC co-sponsored training - 1851 graduates composed of professionals, technicians, researchers, farmer leaders
- 3) Agri-Forestry - 10 students enrolled in the first year, 24 students are in the second year; 11 are candidates for graduation this March 1984
- 4) Agri-Mechanics - 55 graduates in Soldering and Sheet Metal Skills training
- 5) Veterinary and animal science department - 55 livestock raisers were assisted in the insemination program of their gilts or sows; 60 livestock raisers were assisted by the animal Clinic services of the department
- 6) NPRREC training courses - conducted four separate training courses on Irish Potato for farmers in Cagayan, Benguet and Mountain Province
- 7) Home Technology Department training courses - 5 finished baking, 18 finished dressmaking, and 38 finished food processing
- 8) MSAC-NMYC skills training courses:
  - 55 completed broiler production
  - 48 completed crop and livestock production
  - 43 completed livestock and vegetable production
  - 30 completed machine knitting
  - 55 completed soldering and sheet metal
  - 33 still on going ceramics skills training

Total beneficiaries of MSAC and other agencies "non-degree" skills training courses for 1983 were - 3,488 persons

2. Information Packaging and Dissemination

a. Training manuals produced and distributed

- 1) Research methodologies - 300 copies
- 2) Rural development - 300 copies
- 3) Evaluation of agri-project - 300 copies
- 4) Program planning - 300 copies
- 5) Campaign on breastfeeding, home nursing, child care, dressmaking, baking, food processing, and nutrition

3. Action Research with built-in extension component

a. 5 research extension projects

4. Specialist support

- a. 25 college faculty involved in backstopping line ministries in various trainings, seminar-workshops, etc.
- b. 11 college faculty served as resource persons/consultants by various government/private agencies/institutions

5. Problems Encountered

Among the urgent and more serious problems encountered by the extension office included the following:

- a. Lack of skills training instructors (extension instructors)
- b. Inadequate skills training facilities and equipment, including supplies and materials
- c. No vehicle for extension services (motor vehicle)
- d. Instructors interested to render extension services could not go out because they have full-load in instruction

- e. Extension instructors going out off campus to render extension service do not receive per diem or honorarium
- f. ~~Some~~ department do not organize their extension functions

## 6. Recommendation

To be able to attain the operational goals and objectives of the College extension program, the following recommendations are made to be effected in 1984.

- a. Budget for extension services and continuing education must be properly programmed; all expense items must be approved or indorsed by the Extension Office.
- b. Technical department should organize their extension program; extension coordinators must be designated and given specific assignment.
- c. Skills training facilities and equipment as requested previously should be purchased; there should be one motor vehicle exclusively for extension services.
- d. Extension faculty/staff going out of the campus for extension services must be given per diem and/or honorarium which serves as incentives.
- e. Extension faculty should not be given full load in instruction and must not be given extra assignment that hampers his/her extension function.
- f. The requested extension staff should be hired as soon as possible in order to implement the extension function of the College.



## CHAPTER IV

## ADMINISTRATION AND SUPERVISION

## A. Fiscal Support

From January 1, 1983 to December 31, 1983, the National Government appropriated ₱18,350,818.00 for the maintenance and operation of the College for the following programs:

1. <u>Current Operating Expenditures</u>	
Advanced Education	₱ 807,777.00
Higher Education	2,624,095.00
Secondary Education	1,116,684.00
Elementary Education	578,869.00
Research	1,908,414.00
Extension Services	449,681.00
Auxiliary Services	723,726.00
General Administration and Support Services	2,791,571.00
	<hr/>
Sub-total . . . .	₱11,000,818.00
2. Equipment	100,000.00
3. Construction of Permanent Improvement	7,250,000.00
	<hr/>
GRAND TOTAL . . . .	<u>₱18,350,818.00</u>

In addition to the above support from the National Government, a total of ₱476,763.00 was received from different agencies abroad and locally for research projects as follows:

PCARRD	₱305,164.00
Institute of Plant Breeding UPLB (IPB)	- ₱59,000.00
International Potato Development Fund (IFDF)	- ₱89,100.00

## B. Personnel Recruitment and Development

A total of 42 faculty and staff members were recruited during the year including reappointments:

### 1. Recruitment

a) President	-	1
b) Associate Professor	-	1
c) Executive Assistant	-	1
d) Science Research Specialist III	-	1
e) Assistant Instructor	-	16
f) Information Editor I	-	1
g) Junior Librarian	-	1
h) Clerk	-	3
i) Chemical Laboratory Aid	-	2
j) Mechanic	-	1
k) Dental Aid	-	1
l) Nursery Farm Aid	-	1
m) Driver	-	1
n) Food Science Worker	-	1
o) Laborer	-	2
p) Janitor	-	1
q) Messenger	-	1
r) Laundry Worker	-	1

### 2. Reappointments

a) Executive Assistant	-	1
b) Asst. Instructor	-	3
c) Clerk I	-	1

3. Promotion - During the same period thirty two (32) faculty and staff members were promoted as indicated below:

<u>From</u>	<u>To</u>	<u>No.</u>
a) Professor	College Vice President	1
b) Asso. Prof.	Professor	2
c) Asst. Prof.	Assoc. Professor	3
d) Adm. Officer	Assoc. Professor	1
e) Instructor	Asst. Professor	3
f) Instructor	Chief Agric. Prod. Cocr.	1
g) Asst. Inst.	Instructor	6
h) Adm. Asst.	Administrative Officer	1
i) Records Off.	Administrative Assistant	1

From	To	
j) Cash Clerk	Disbursing Officer	1
k) Clerk II	Records Officer	1
l) Coll. Librarian	College Librarian II	1
m) Clerk I	Clerk II	1
n) Laundry Worker	Chemical Lab. Aid	1
o) Temporary status	Permanent	8

#### 4. Scholarship and Training

Several faculty members were on study leave for degree training within the year. Details of these trainings could be seen in the report of each academic unit.

Ph.D.	5
MS	4

Those pursuing Ph.D. degree are distributed in several institutions locally and abroad as follows:

Adelaide University (Australia)	- 1
UPLB, Laguna	- 2
De La Salle University	- 1
Araneta University	- 1

For non-degree training lasting from 3-10 months, 9 faculty members were trained in different fields and countries as shown below:

Vegetable Production (Japan)	- 1
Vegetable Research (Taiwan)	- 1
Flower Production and Management (USA)	- 1
White Potato Seed Production (Peru)	- 1
Plant Breeding (The Netherlands)	- 1
Seed Technology (UPLB, Laguna)	- 1
Crop Protection (The Netherlands)	- 1
Linguistic (Pilipino UP Diliman)	- 1
Linguistic English (PNC, Manila)	- 1

### C. Planning Office

The Planning and Development Office (PDO) has the function of formulating and monitoring development plans, programs, and assistance in terms of fund generating activities and external linkages. This year the Planning Office undertook, the following tasks in addition to its routine functions:

#### 1. MSAC land use management program

The program aims to utilize effectively and efficiently the College property in the Swamp, Balili and all other areas. Existing policies on this regard were revised as well as rules and regulations on farming projects, demonstrations, production and research projects.

#### 2. Plans and budget preparation

The Office coordinated the planning and budget preparation of each unit of the College for the 5-year (1985-1989) development plan.

### D. Office of Public Relations

The Office of Public Relations was created in response to the complex activities of the College.

### Operation and Function of the Office

The Office of Public Relations was set up for the following: 1) to bring to public attention through appropriate media, significant facts and events about the College and commitments toward agricultural development in this part of the country and to Region I in particular; 2) to coordinate school activities affecting the relations of the College with the general public; 3) to strengthen linkage with the mass media and other venues of information by institutionalizing its relationship through memorandum of agreements or specialized support scheme; and 4) to brief visitors about the four-fold functions of the College, and to guide them tour around the campus.

### Accomplishments:

Linkages with international as well as national institutions of learning and research placed MSAC into the limelight. During the year, distinguished visitors called on the College. Agricultural scientists from the world over visited the College. There were 181 foreign guests and 1,446 local visitors from all walks of life. The pomology and agro-forestry projects were the most frequently visited.

Problems:

The Public Relations Office needs some visual aid equipment, such as a slide projector together with its accessories and a 16" carriage PICA typewriter.

Recommendations:

More personnel and equipment should be given to the Office in order that it could service the number of anticipated visitors and guests coming to the College.

E. Management Information Services

The creation of the Management Information Services (MIS) on January 12, 1981, by virtue of MSAC Administrative Memorandum No. 1, 1981, now a response of the College Administration to make available appropriate information to the different clientele to which the College caters.

Operationally, the MIS was created: 1) to provide an efficient scheme for collecting, collating, processing, and disseminating data relative to the various activities of the College; 2) to serve as the data bank of the College on information pertinent to its activities; 3) to serve as a siphoning unit and information pipeline of all generated technologies toward the improvement of the quality of life of the former clientele of

the College; 4) to gather and interpret facts and figures about school activities needed by management and other agencies both public and private for planning, budgeting, and monitoring needs; 5) to document the highlights of school programs, projects, and activities for the use of the policy-makers and the general public.

To maintain the reputation and credibility of MSAC as a premiere institution of tertiary education, research, and training in agriculture in the Cordilleras, the MIS is mandated to perform coordinative and management role in two areas of activities, namely:

1. Documentation and Publication - This unit gathers, selects, simplifies, and interprets research findings and figures about the College. It develops and produces applied communication, public information, and special publications for the College constituents and the general public; it disseminates results of practical and applied researches through appropriate channels. Finally, it monitors applied and public communication activities within the College community and between the institution and the various extension communication agencies of the government.

2. Printing/Duplicating and Visual Aid Services. This unit provides auxiliary services to the school's

constituents: typing and mimeographing, scanning and binding, art works and photography.

#### Problems and Means of the MIS

In planning and carrying out its programs/projects, the present staff cannot cope with the increasing volume of work; hence, the increase of personnel is ardently requested. Since the office of the chief of Documentation and Publication Unit was vacated, the unit has **been** servicing the College without the unit chief for the past two years.

#### Plans of the MIS for 1985-1990

1. To collect personal data of all faculty and staff to be utilized as first input into MIS' data bank.
2. To come up with a statistical bulletin which includes pertinent data on curricular programs, enrolment, graduates, auxiliary services, scholarship, programs, personnel funding and others.
3. To continue coordinating the work of Publications and Printing Office in the production and publication and printing Office in the Production and publication of results of researches directly or indirectly undertaken by the College as well as in the publication of the MSAC Research Journal, MSAC Farm News Bulletin, MSAC Bulletin of Information, MSAC Newsletter and others.



#### F. Student Dormitories

The men's and women's dormitories were completed and occupied before the end of the year. Both dorms could accommodate 150-200 students each.

#### G. Student Organizations

Through organization students individually collectively participated actively in all extra-curricular and co-curricular undertakings in the College. This active participation of students ended the year fruitfully and well.

During the year, there were 25 recognized student organizations lead by the Supreme Student Council and the Future Farmers of the Philippines, College Chapter (FFPCC) which required the membership of all students. The Youth Community Service Club and the Kabataang Barangay which are under National organizations were organized with voluntary membership to pursue the objectives of the mother organization.

The other student organizations are Techno-Societies and Religious clubs whose members belong to a common group or field of interest.

With all these students organizations, the individual and collective activities of students were guided and well motivated. Consequently, MSAC students did not participate in any public demonstration against the system.

Some of the student organizations besides those mentioned are:

1. Mountain Collegian Staff
2. Agri-Business and Economics Society
3. Biological Science Society
4. Future Foresters
5. Glce Club
6. Soil-Science Society
7. Student Pastorate Council
8. Peer Counselors Club
9. Veterinary Science Club
10. MSAC Highland Cultural Troupe
11. Campus Crusade Society
12. Agro-Horti Society
13. Future Educator's Club
14. Animal Science Club

#### H. Land Reservation

By virtue of Letter of Instruction 1275, more or less seven hectares of titled property is released. This area cut across T.C.T. No. T. 16374 and T.C.T. No. T. 16376.

The final beneficiaries of the claimed property are still being screened by a composite committee.

#### I. Board of Trustees

The Board of Trustees held eight (8) meetings during the year. The first meeting which was held on February 17th until the 7th meeting was under the Officer-in-Charge and the 8th meeting which was held on December 6, 1983 was under the newly appointed President of the College. During the year, the Board approved/confirmed

the following Resolutions:

Series of 1983

- | <u>Res. No.</u> | <u>Subject</u>  |
|-----------------|---|
| 3               | - CONFIRMING/RATIFYING the "Revised Policy Guidelines on Faculty/Staff Housing Accommodation" pursuant to and as an amendment to Board Res. No. 42, s. 1979, as reviewed and polished by the College Planning and Development Office and the College Administrative Council, wherein the lease contract has also been made more brief and simple.   |
| 4               | - CONFIRMING the appointment of all the above-listed teaching and non-teaching personnel at rates and effective as of the dates indicated in their appointment papers.  |
| 5               | - APPROVING in principle the request of the Presidential Assistant on National Minorities for the College to share a room for office space subject to the submission of a lease contract between the two agencies for final action by the Board during its next meeting.  |
| 6               | - DEFERRING action on the request and offer to the College to be the Owner and Publisher of a book, "Process and Patterns of Writings That Sell" by Prof. Rodolfo T. Abastilla; Provided that the same may be presented again, subject to (1) the clarification of copyright ownership, (2) submission of a copy or two to the Chairman and the Members of the Board for perusal, and (3) presentation of a contract or memo of agreement between the College and the author and the Printing Press where the terms and conditions are spelled out. |
| 7               | - APPROVING the proposed Policy and Guidelines for the management and operation of both the Ladies and Men's Residence Halls subject to further refinement and/or amendment if and when all or any part of the approved rules and regulations shall need further revision or improvement. These Policy and Guidelines shall be in effect beginning with the 1983 Summer Term.   |
| 8               | - CONFIRMING/RATIFYING the Owner-Contractor Agreement entered into on the 18th day of December, 1982, at Baguio City, Philippines, by and between the Mountain  |

Res. No.Subject

- State Agricultural College, as the OWNER, represented by its Officer In-Charge, Dr. Onofre D. Corpuz, and the Renaissance Builders' Co., Inc., represented by its President and General Manager, Mr. Joaquin G. Go, as the CONTRACTOR, for the construction of the BAILEY BRIDGE No. 1, at the College Main Campus, La Trinidad, Benguet, at a contract price of ₱569,000.00, Philippine Currency, subject to the terms and conditions stipulated in the contract proper.
- 9 - CONFIRMING/RATIFYING the Owner-Contractor Agreement entered into on the 14th of January, 1983 by and between the Mountain State Agricultural College, as the OWNER, represented by its OIC, Dr. Onofre D. Corpuz, and the Gonzalo Construction, represented by its Manager, Mr. Domingo Gonzalo, for the construction of BAILEY BRIDGE No. 2, at the College Main Campus, La Trinidad, Benguet, at a contract price of ₱565,392.00, Philippine Currency, subject to the terms and conditions stipulated in the Agreement.
- 10 - CONFIRMING/RATIFYING the Owner-Contractor Agreement entered into on the 18th day of January 1983, by and between the Mountain State Agricultural College, as the OWNER, represented by its Officer In-Charge, Dr. Onofre D. Corpuz, and the C.A. VERGARA Construction of the Agricultural Science Administration Building, at Betag, MSAC, La Trinidad, Benguet, at a contract price of ₱2,480,000.00, Philippine Currency, subject to the terms and conditions stipulated in the contract proper.
- 11 - CONFIRMING/RATIFYING the Owner-Contractor Agreement made and entered into on the 18th day of January 1983, by and between the Mountain State Agricultural College, as the OWNER, represented by its Officer In-Charge, Dr. Onofre D. Corpuz, and the Currimaos Construction and Development Co., Inc. as the CONTRACTOR, represented by its President and General Manager, Mr. Steven C. Go, for the construction of the BASEMENT OF THE CAMP DORMITORY, at Capasit, Wangal, La Trinidad, Benguet, at a contract price of ₱159,800.00, Philippine Currency, subject to the terms and conditions stipulated in the basic Agreement.

Res. No.Subject

- 12 - CONFIRMING/RATIFYING the Owner-Contractor Agreement made and entered into on the 18th day of January 1983, by and between the Mountain State Agricultural College, as the OWNER, represented by its Officer In-Charge, Dr. Onofre D. Corpuz, and the Half Circle "A" Construction, as the CONTRACTOR, represented by its Manager-Owner, Mr. Cipriano Abalos, Jr., for the construction of the Deep Well of the Agro-Forestation Complex, at a contract price of ₱132,350.00, Philippine Currency, subject to the terms and conditions stipulated in the basic agreement.
- 13 - APPROVING the request of the College to add a new major: Master of Science in Rural Development, to its masteral program, effective the 1983 Summer Term.
- 14 AUTHORIZING the College to allow the Elementary Department to conduct remedial classes for graders who really and badly need such remedial measures; Provided, that definite guidelines are formulated and issued for the conduct of the same; Provided, further that the proposed honorarium or service credits for the teachers involved be left to the management, subject to availability of funds, and the usual accounting and auditing rules and regulations; Provided, finally that if the service credits is opted, the same shall be used only to offset absences due to illness. This authority shall be effective the 1983 summer sessions.
- 15 - AUTHORIZING the adjustment/upgrading of the honoraria of MSAC faculty members for teaching either under the Graduate or Undergraduate levels for overload/extra teaching during the regular as well as summer sessions, as follows: (a) Professors with Ph.D./Ed.D. degrees - ₱35.00 per hour; (b) Professors with MS/MA degrees - ₱25.00 per hour; (c) Professors with BS degrees or equivalents - ₱20.00 per hour; Provided, that the foregoing rates shall be effective the 1983 Summer Term.
- 16 - DEFERRING action on the above request, provided the same may be presented during the meeting of the Board to include all other positions as may be entitled to such benefits.

- | <u>Res. No.</u> | <u>Subject</u>  |
|-----------------|---|
| 17              | - NOTING the request for clarification on the representation/transportation, gasoline, and other allowances granted the chairman/members of the Board of Regents/Trustees, its technical committees, as well as to certain officials of such state college or university, with observation that such matters have been settled under COA Opinion No. 250, dated August 2, 1977, Memorandum Circular No. 861, dated August 27, 1975, Republic Act No. 6071, and the basic Charters of such state colleges and universities.  |
| 18              | -- APPROVING a moderate increase to the representation allowance of the Chairman/Members of the MSAC Board of Trustees at ₱650.00 each per month, including the authorized expenses of the same Board per actual meeting; whereas, the Chairman/Members of the Board's Technical Committee shall be at ₱325.00 each per month, all effective January 1, 1983, as justified in the premise above.  |
| 19              | - NOTING the desire of the constituents of the Mountain State Agricultural College for the early appointment of a College President, and, EXPRESSING AFFIRMATION to the recommendation/nomination by the Minister of Education, Culture, and Sports for the appointment of Dr. Willie C. Depositario as President of Mountain State Agricultural College, by His Excellency, the President of the Philippines, on the basis of the results and recommendation of the Adhoc Search/Screening Committee created for the purpose and chaired by Dr. Antonio G. Dumlao, BHE Director, and representative of the MECOS Minister to the MSAC Board of Trustees. |
| 20              | - DIRECTING the College and Board Secretary to furnish each Member of the Adhoc Search Committee for the selection of the successor to retired College President, Dr. Bruno M. Santos with a copy or two of the Committee report.   |
| 21              | - NOTING the receipt of the application of Dr. Rodolfo E. Ulep for the college presidency of Mountain State Agricultural College, and putting on record that the Minister of Education, Culture, and Sports, as Chairman of the MSAC Board of Trustees shall be duly informed of the instant development on the matter.   |

- | <u>Res. No.</u> | <u>Subject</u>  |
|-----------------|---|
| 23              | - APPROVING the graduation of 778 candidates from the various curricular offerings of the College as of the dates indicated for each group, subject to completion of all the academic requirements pertinent to their respective courses; accordingly, the conferment/awarding of their diplomas and/or certificates is hereby APPROVED, as presented above.                              |
| 24              | - DENYING the request of Dr. Saturnino M. Ocampo, Jr., Vice President, MSAC, and concurrently Director of the RTC-RD based at MSAC, for the further extension of his leave of absence without pay from April 1 to December 31, 1983, in the interest of public service; accordingly, the College In-Charge is directed to write him of this action.                                       |
| 25              | - APPROVING the request of Mrs. Evelyn B. Dimas for a leave of absence with pay for three (3) months, effective May 16, 1983, in connection with her travel abroad as delegate of her Church to the Provincial Synod of the same in the United States; Provided, that she submits a report on the trip and echo her experiences to the members of the faculty after her trip.             |
| 26              | - APPROVING the request of Mrs. Thelma G. Villanueva for the extension of her study leave with pay, plus a stipend of P500.00 per month for the period from June to November, 1983; Provided, that the scholarship agreement she signed with the College be annotated to incorporate this added benefits which should affect the number of years for her "return service" to the College. |
| 27              | - GRANTING the request of the Personnel Officer for an allowance of P350.00 per month, as representation and transportation, as chief of the Division; however, as to the request of the Budget Examiner, his/her expenses for the purpose shall be on reimbursable basis, and the amount should not exceed P250.00 per month, effective January, 1983.                                   |
| 28              | - DEFERRING action on the proposed faculty and staff housing plans with observations that the plans be further refined to include such details as the pro-  |

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posed agreement between the College and the personnel-awardee; that the proposed plan "B" be presented under separate cover and details with confirmation from the PaG-IBIG and/or originating bank attesting to the viability of the proposed projects.

- 29 - DEFERRING action on the Proposed Comprehensive Manpower Development Program of the College, with observation that the matter being a policy that affect the entire faculty and staff, be first reviewed by the incoming College President and further polished by the College Administrative Council.
- 30 - DENYING the request of certain college officials/employees for the reduction of their monthly rentals to the MSAC cottages; and, directing that the College In-Charge create an adhoc committee of five to study, canvass and present to the Board the actual rentals for such type, size, and number of rooms within the Baguio and La Trinidad area; Provided, that the said committee be chaired by the In-Charge himself as Administrative Officer, and that the members thereof shall be from among the personnel who are not living in the cottages of the College.
- 31 - APPROVING partial amendment to Res. No. 68, s. 1982, specifically delineating that the transportation allowance contemplated and granted to certain officials enumerated therein, shall henceforth be construed, deemed, and applied only to official travels within the City of Baguio and the Province of Benguet; that official travels undertaken outside of the above-stated places be allowed the usual and actual transportation and other expenses.
- 32 - APPROVING in principle the request to grant service credits to teachers to be involved in a seminar-workshop in the formulation and implementation of a performance rating scale for the College; Provided, that the time frame, venue, and the names and number of the teachers to be involved are presented under a project design, and that an office or administrative memorandum is issued for the purpose by the In-Charge of the College.



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- 33 - DENYING the request of Abundant Life Fellowship for permission to use certain rooms within the building complexes of the College for religious and Bible study purposes; Provided, that such request may be revived when a multi-purpose building will have been constructed in the future as planned and envisioned in the development plans of the College.
- 34 - APPROVING the study leave with pay, plus a moderate stipend of P450.00 per month, of Mr. Wilfredo B. Mina, Assistant Professor, for a Ph.D. degree in Psychology at the De La Salle University, Manila, for three (3) years, effective the first trimester of SY 1983-1984, as presented and recommended above; Provided, that in future presentations like this, the College Scholarship Committee reviews, evaluates, and pass on the merits of each request based on the College's priorities on faculty/staff development program.
- 35 - CONFIRMING/RATIFYING the (1.1) Owner-Contractor Agreement made and entered into by and between the MS&C, as the Owner, represented by the Chairman of its Board of Trustees, Dr. Onofre D. Corpuz, and the Currimao Construction and Development, Inc., as the Contractor, represented by its President and General Manager, Mr. Steven C. Go for the construction of the COMPLETION of the AGRO-FORESTATION COMPLEX, at Ampasit, La Trinidad, Benguet, at a contract price of P1,000,000.00, Philippine Currency, subject to the terms and conditions stipulated in the contract proper, as presented above.
- 35-A - CONFIRMING the appointments of the seven (7) personnel appointments presented above, to wit:  
 (a) Mr. Fiedl S. Borja, as Science Research Specialist II, (b) Mr. Abraham L. Jara, as Science Research Specialist II, (c) Miss Cecilia T. Lopez, as Senior Clerk, (d) Mrs. Virginia R. Dugat, as Clerk II, (e) Mr. Salos A. Legaspi, as Senior Security Guard, (f) Mrs. Norma P. Balacio, as Janitor, and (g) Mr. Elmer L. Pulguc, as Nursery Farm Aide, all at rates and effective as presented above.

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| 36              | - CONFIRMING/RATIFYING the (1.2) Owner-Contractor Agreement made and entered into by and between the MSAC, as the Owner, represented by the Chairman of its Board of Trustees, Dr. Onofre D. Corpuz, and the Currimaos Construction and Development, Inc., as the Contractor, represented by its President and General Manager, Mr. Steven C. Go, for the construction of the COMPLETION OF ELEMENTARY LABORATORY SCHOOL, PHASE II, at the College Main Campus, at a contract price of P700,000.00.   |
| 36-A            | - NOTING the School Calendar of the Mountain State Agricultural College for the School Year 1983-1984, as presented.  |
| 37              | - CONFIRMING/RATIFYING the (1.3) Owner-Contractor Agreement made and entered into by and between the MSAC, as the Owner, represented by the Chairman of its Board, Dr. Onofre D. Corpuz, and the Currimaos Construction and Development, Inc., as the Contractor, represented by its President and General Manager, Mr. Steven C. Go, for the construction of the MSAC CAMPUS ROAD NETWORK, at the College Main Campus, La Trinidad, Benguet, at a contract price of P500,000.00, Philippine Currency, subject to the terms and conditions stipulated in the contract proper. |
| 37-A            | - NOTING the report on the 1983 Summer enrollment in the various curricular offerings of the College with a total of 1,323 enrollees.   |
| 38              | - CONFIRMING/RATIFYING the (14.) Owner-Contractor Agreement made and entered into by and between the MSAC, as the Owner, represented by the Chairman of its Board of Trustees, Dr. Onofre D. Corpuz, and the Currimaos Construction and Development, Inc., as the Contractor, represented by its President and General Manager, Mr. Steven C. Go, for the construction of the MEN'S DORMITORY PHASE II, at the College Main Campus, at a contract price of P500,000.00, Philippine Currency.  |
| 38-A            | - DEFERRING action on the request to organize a kindergarten and nursery classes in view of the observations advanced by the Trustees in the discussions above.   |

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- 39 - DENYING the request to grant honoraria to College researchers whose total workloads do not exceed the maximum limit of 24 units per term, and DIRECTING the College to review its policy on faculty/staff workload programs in relation to the trilogy functions of the College, and RESTRICTING that the present policy of 24 units workload per teacher per term shall be maintained as the maximum on the basis of actual teaching, or any combination of instruction, research, extension, and/or administrative functions; Provided, that henceforth the Deans and the Department Chairmen shall submit to the Board of Trustees through the College President, the workload programs for each teacher every term; Provided further, that the payment of honoraria for on-going researches funded by PCARRD shall continue, but as soon as such researches are transferred to MS&C, and the funds for the purview of MS&C policy; Provided finally, that in fairness to all, no member of the faculty/staff shall be overloaded or underloaded.
- 40 - HOLDING action on the proposal to grant fee tuition fee to MS&C personnel enrolled in the Graduate School courses, as justified in the discussions above.
- 41 - APPROVING a moderate increase to the rates of honoraria of non-teaching personnel involved in summer programs, effective the Summer Term 1983, as proposed above, and as partial amendment to Res. No. 22, s. 1981 as indicated under levels "B", "C", and "D" in the inclosure to the same Resolution; Provided, that in future presentations of this nature, the list of personnel involved be furnished the Board of Trustees; Provided further, that funds for the purpose are available; and Provided, finally that this shall be subject to the usual accounting and auditing rules and regulations.
- 42 - APPROVING the request of Mr. Rogelio D. Colting, Assistant Professor, to go on study leave with pay, effective June 1, 1983 in connection with his plan to pursue a Ph.D. degree in Soil Science under the Colombo Plan Scholarship Grant, at the University

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of the Philippines at Los Baños and in Australia; Provided, that the scholar concerned makes the necessary arrangements on the scheme under which he plans to use the grant.

- 43 - APPROVING the request of Miss Manolita N. Alvaro, Instructor under the Veterinary and Animal Science Department, to go on study leave with pay, plus a stipend at ₱450.00 per month, to pursue a Master of Science degree in Microbiology at the University of Santo Tomas, Manila, effective June, 1983.
- 44 - APPROVING the study leave of Professor Faustino G. Hermano, effective June, 1983, under this condition that if without pay, he resigns from the service without prejudice to applying again if he chooses; if with pay, he signs the usual scholarship agreement with the College; Provided, that in the interest of the service, if he goes on vacation leave, the same shall not exceed the usual one-year period.
- 45 - APPROVING the study leave of absence of Mr. Franco T. Bawang, Assistant Professor under the Plant Science Department, in connection with his scholarship as a Graduate Assistant offered by the ASEAN-PHTRC at the UPLB, for three (3) years, effective June, 1983. This study leave is with pay.
- 46 - APPROVING the request of Mr. Alfredo C. Tipayno, Assistant Professor with the Agro-Forestry (Pomology) Department to study on official time during the 1983 Summer Term covering the period April 18 to May 29, 1983, at the Araneta University Foundation; Provided, his immediate supervisor can dispense of his service during the period.
- 46-A - APPROVING the request of Miss Teresita A. Palaez, D.M.D., College Dentist, to study on official time during the 1983 Summer Term for a Master of Arts in Teaching major in Health Education (Hygiene), at the Baguio Vocational National School, Teachers' Camp, Baguio City.

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| 47              | - APPROVING the request of the Chairman of the Elementary Laboratory Education Department for the three (3) of her teachers listed above, to attend summer classes in gymnastics at the BVNS from April 11 to May 29, 1983 subject to availability of funds, and the usual accounting and auditing rules and regulations, and provided that the Chairman concerned certifies to the actual attendance of her teachers in the said summer classes.   |
| 48              | - APPROVING, in the interest of the service, the resignation of Dr. Saturnino M. Ocampo, Jr., College Vice President and Director of the Philippine Training Center for Rural Development, effective April 1, 1983.   |
| 49              | - APPROVING, on recommendation of the College In-Charge the resignation of Miss ESTHER T. ALMSIN, Sales Clerk with the Home Technology Department, MSAC, effective the close of office hours, January 31, 1983.   |
| 50              | - APPROVING the request, as recommended by the College, of Mr. Luciano Asbucan and Mr. Antonio S. Naing, Announcer and Broadcast Operator respectively of Radio Station DZEQ, to be given honoraria at P100.00 and P150.00 respectively, for the services they render in the production and broadcasting of the "Cordillera Farmers Hour", a farm broadcast and extension program of the Mountain State Agricultural College; Provided, that a contract is made and entered into detailing therein the obligations of the parties thereto; Provided further, that funds for the purpose are available; and Provided finally, that this shall be subject to the usual accounting and auditing rules and regulations. The grant shall be effective April, 1983. |
| 51              | - CONFIRMING the Memorandum of Agreement between the MSAC as the First Party, represented by the Honorable Antonio G. Dumlao, BIE Director as Officer-In-Charge and the PMAIIN Foundation, Inc., as the Second Party, represented by Mr. Rolando M. Larracas, Director for Administration, for the use by the Second Party of a room in one of the buildings of   |

the First Party as office space for a minimal rental of P700.00 per month, effective May 2, 1983, under the terms and conditions stipulated in the Agreement as was earlier approved in principle by the Board under Res. No. 5, s. 1983.

- 52 - APPROVING the request of the MECS through the Director, BHE, for the MSAC to grant an assistance of P5000.00 to help defray the expenses of the Philippine-Asian Law Association conference to be held at Teachers Camp, Dagupan City on May 27-30, 1983, subject to availability of funds, and the usual accounting and auditing rules and regulations.
- 54 - CONFIRMING the Service Agreement between the MSAC and the Radio Station DZEEQ anent the production and broadcasting of the "Cordillera Farmers' Hour", a project of the ILRC based at MSAC, as approved by the Board under Res. No. 50, s. 1983, subject to the terms and conditions stipulated in the agreement.
- 55 - CONFIRMING the appointments of Mrs. Lourdes F. Estava and Mrs. Evangeline B. Wagang, as Chemical Laboratory Aide and Food Service Worker respectively, as presented above.
- 56 - CONFIRMING the Owner-Contractor entered into by and between the MSAC, represented by its Officer In-Charge, Minister Onofre D. Corpuz, through Director Antonio G. Dumlao, as the Owner, and the Renaissance Builders' Co. Inc., represented by its President and General Manager, Mr. Joaquin G. Go, as the Contractor, for the construction of the MSAC SPORTS COMPLEX (Completion), at the College Main Campus, at the contract price of P2,550,000.00, subject to work actually so performed, and the usual accounting and auditing rules and regulations of the Owner.
- 57 - APPROVING the two (2) Contracts of Professional Services entered into by and between the Mountain State Agricultural College (MSAC), as the First Party, and Mr. CLEMENCIO PAGNAS and Mr. DADING BALLEN, as the Second Parties, in connection with their services for the College involving its land-holdings, and for which the College shall pay

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them honoraria at P50.00 each per day of actual services rendered, effective upon the constitution of the Commission by the Court.

- 58 - APPROVING the official travel of Mr. SILVESTRE K. ABEN, assistant Instructor this College, to Kochi Prefecture, Japan, for a nine-month training covering the period July 1, 1983 to March 31, 1984, in connection with his training on strawberry technology, Irish potato, and cucurbits, under the sponsorship of the Government of Kochi Prefecture.
- 59 - APPROVING the grant of a monthly stipend of P500.00 for Dr. Reynaldo B. Galban, Assistant Professor, effective June, 1983, in connection with his approved study leave for a Master of Science in Public Health (Vet), at the University of the Philippines. This grant shall be good for three (3) semesters only, from June, 1983 to October, 1984.
- 60 - DEFERRING action on the proposed Tie-up between the University of Life (UL) and the Mountain State Agricultural College (MSAC) as a Learning Center for the UL HSP; Provided, that the terms and conditions are further clarified in the light of the suggested questions above; Provided further and finally, that the proposed formal Memorandum of Agreement is made and entered into and presented to the Board of Trustees for further deliberation and/or final action.
- 61 - DEFERRING action on the proposal to allow members of the faculty and staff to build their own houses within the school sites and at their own expense under certain terms and conditions; Provided, that Trustee Alabanza further go over the pro-schemes and make suggestions to the same effects; Provided further and finally that the proposal may be presented to the Board during its next meetings.
- 62 - APPROVING a stand-by authority for the OIC of the College, Mr. Lawano T. Batcagan, to designate the Dean of Undergraduate Studies, Dr. Marcelino T. Delson, as temporary In-Charge of the Office of the Vice President whose term shall be co-terminus with that of the College OIC, subject to the following provisions: Provided, that this authority shall

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be exercised in the interest of the service, if at the end of the instant, or atmost the middle of July, 1983, College President is not yet appointed by Malacañang; Provided further, that such designation shall not be taken as preference to or priority over other aspirants to the position; Provided finally, that the College President to be appointed by the President of the Philippines shall of course and by law have the prerogative to appoint a vice president of his choice, subject to the confirmation by this Board.

- 63 - AUTHORIZING the Officer In-Charge of the College Mr. Lawana T. Batcagan to claim the difference of his pay as Administrative Officer and that of the authorized salary of the College President, subject to the usual accounting and auditing rules and regulations, effective May 16, 1983 - the date he was duly designated as OIC by the Honorable Onofre D. Corpuz, Minister of Education, Culture, and Sports, and ex-officio Chairman, MSAC Board of Trustees.
- 66 - CONFIRMING the appointments of the following personnel for each item, at rates, and effective as presented in their respective appointments:  
 (1) Engr. Genaro C. Macasieb, Jr. as Instructor;  
 (2) Mr. Edwin C. Bando, as Substitute Instructor;  
 (3) Mrs. Marciana G. Paatan, as Asst. Instructor;  
 (4) Mr. Valerio R. Cosalan, as Substitute Asst. Instructor; (5) Mr. Felipe S. Comila, as Substitute Asst. Instructor; (6) Miss Maria Teresa C. Lapitan, as Information Editor; (7) Mr. Guerzon Tianza, as Substitute Asst. Instructor; (8) Mr. Jonathan D. Langbayan, as Subs. Asst. Instructor, and (9) Mr. Amado M. Domingo, as Subs. Assistant Instructor.
- 67 - APPROVING the Owner-Contractor Agreement made and entered into by an between the Mountain State Agricultural College, and the Renaissance Builders' Co., Inc. for the Extra Work for the Completion of the Food Processing Basement of the Complex, at the contract of ₱340,000.00, subject to all the terms and conditions stipulated in the Contract.



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| 68              | - DEFERRING action on the proposal to create an MS.C Floriculture Research and Development Center, with the instruction that the same be further improved and later presented after the points raised by the Board are clarified.   |
| 69              | - DEFERRING action on the proposed Performance Appraisal System of the College; Provided, that the same may be presented upon clarification and incorporation of the points indicated by the Board.   |
| 70              | - DEFERRING action on the proposed amendment to Res. No. 9, s. 1973; Provided, that the implementing guidelines may be presented later, subject to inclusion of the points raised by the Board.   |
| 71              | - APPROVING the request of Mrs. Edna A. Chua, for the extension of her study leave of absence with pay, and a moderate stipend of P450.00 per month, from June to October, 1983, subject to availability of funds and the condition that she submits a certification from MLQU that the extension is necessary and due to reasons beyond the control of the scholar.  |
| 72              | - APPROVING the requests of Mr. Rogelio D. Colting and Mrs. Janet S. Luis for a stipend of P450.00 each, per month, effective June, 1983, subject to availability of funds; for Mr. Colting, during his stint at UPLB only; and for Mrs. Janet S. Luis, from June 1983 to October 1985; Provided, that each scholar shall submit such documents as are needed showing that their study grants are approved by the sponsoring agencies or individuals, and the NEDA, in the case of Professor Colting. |
| 73              | - APPROVING the request of Miss Julie L. Tukaki to travel abroad on official time, in connection with a training grant on vegetable growing at the International Agricultural Centre, at Wageningen, The Netherlands, from August 15 to November 26, 1983, inclusive of the seven (7) days professional programme in London, England; and GRANTING her request for the College to   |

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underwrite her plane fare, round trip from Amsterdam to England, computed at \$316.00 or ₱3,476.00 in Philippine Currency.

- 74 - APPROVING the study leave of absence of Mr. Noel D. Lazo, Assistant Instructor, for three (3) years, from September 1983 to October 1986 in connection with the Graduate Research assistantship for a Master of Science degree at the University of New York, College of Environmental Science and Forestry, sponsored by the Empire State Paper Research Institute, subject to the terms and conditions stipulated in the scholarship agreement he signed with the College (MSAC).
- 75 - APPROVING proposed study leave of absence with pay of Mrs. Marlène B. Atinyao, Assistant Instructor, in connection with the scholarship grant for a Master of Agricultural Studies in Animal Production offered by the Australian Government at the University of Melbourne for a period of 12-18 months, effective early March 1984, subject to the submission of all official documents in support of the grant.
- 75-A - APPROVING the proposed official travel of Miss Estela O. Badol, SRS II, for a training grant to participate in the 13th International Potato Course at Wageningen, The Netherlands for a period of ninety (90) days, April 12 to July 12, 1984, subject to the submission of all official documents in support of the trip.
- 76 - DENYING the proposed amendment to Res. No. 39, s. 1983; However, if the College Accountant certifies that the researches transferred to MSAC are still funded by the PCARRD or CIP, and indicated under separate KBI in the College appropriations, the researchers' project/study leaders may continue to receive the same honoraria; otherwise, the original Board Resolution shall prevail.
- 77 - DIRECTING, under the premise above, that the College Officer In-Charge unravel the predicament he has created by exhausting all administrative remedies to appeal the action of the Resident

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Auditor and the opinion of the OBM, Ministry of the Budget, to higher authorities concerned, and, if not satisfied, seek the opinion of the Ministry of Justice.

- 79 - CONFIRMING the appointments and/or promotion, as the case may be, of Dr. Marvin D. Atos as Associate Professor, Mrs. Rosita G. Bawang, as Assistant Instructor, and Miss Mandy D. Kimo, as Sales Clerk, respectively for each item, at rates, under status, and effective as presented above.
- 80 - CONFIRMING the extension of the study/leave of and grant for Dr. Basito S. Cotiw-an from August 31 to November 30, 1983, as presented above; Provided, that the extension be annotated in the contract he signed with the College.
- 81 - CONFIRMING the extension of the study/training grant for Mrs. Nancita E. Puntawe, Instructor, this College, in Singapore up to December 31, 1983, as requested and presented.
- 82 - APPROVING the study leave with pay of Mrs. Sergio P. Milagrosa, assistant Professor, in connection with her desire to pursue a Ph.D. degree in Plant Pathology at the UPLB, starting with the second semester, school year 1983-1984, for three (3) years effective as of said date/term.
- 83 - APPROVING the extension of the study leave of Mrs. Lory C. Balasing, Instructor up to the end of the second semester, SY 1983-1984; Provided that this extension be annotated in the contract she signed with the College.
- 84 - APPROVING the Owner-Contractor agreement entered into by and between the MS.C, duly represented by its Officer In-Charge, Mr. Lawana T. Dacagan, as the OWNER, and the G.A. VERGARA Construction, represented by its President and General Manager, Mrs. Gloria A. Vergara, as the CONTRACTOR, for the COMPLETION OF THE MS.C WOMEN'S DORMITORY, at the contract price of ₱200,000.00, Philippine Currency, subject to work actually performed and the usual accounting and auditing rules and

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regulations of the Owner, and the pertinent provisions of Presidential Decree No. 1494, and its implementing rules, as amended.

- 85 - DEFERRING action on the request of the MTWD to drill a ~~deep~~well within the Collogo reservation, and for the College to lease about 120 square meters for the purpose; and, directing that the College come up with its recommendation based on technical/empirical data as suggested in the premise above.
- 86 - APPROVING/<sup>+</sup>ENDORISING the proposal of the Mountain State Agricultural College through the Highland Agricultural Research Center for the establishment of a Highland Rural Development Program (HRDP), with the Ford Foundation providing the initial fiscal support for the program during the first 3 to 5 years, with an annual budget of \$40,000.00; Provided, that the College shall consider to include certain Board-suggested annotations in the Memorandum of Agreement between the College and the Ford Foundation, so as to assure the viability of the program.
- 87 - NOTING the request of Mr. Lawana T. Batcagan to be relieved from his designation as Officer In-Charge, and it being clarified in the discussion above, ENDORSING the designation of Dr. Willie C. Depositario as OIC of the Mountain State Agricultural College, effective immediately.
- 89 - CONFIRMING the study leaves approved by the College OIC, of Mrs. Barbara P. Santos, Assistant Professor, and Mrs. Faustino O. Gualdo, Assistant Instructor, for one (1) semester, November 1983 to March 1984, in connection with their scholarship grants at UP Diliman in Applied Linguistics (English and Filipino, respectively) sponsored by the Language Education Council of the Philippines, Inc., as requested and presented in the premise above.
- 89-A - CONFIRMING the further extension of the study leave and scholarship of Mr. Esteban B. Akiew, Assistant Professor, up to February 1984, as requested, justified and presented above.

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| 90              | - CONFIRMING the extension for two (2) months the study leave with pay of Mrs. Remedios T. Garcia, and six (6) months for Miss Thelma G. Villanueva as requested and presented above, and APPROVING a moderate stipend for Miss Villanueva at P500.00 per month, subject to availability of funds.  |
| 90-A            | - CONFIRMING the scholarship contract entered into by Miss Rebecca B. Castillo, Assistant Professor, with the Mountain State Agricultural College, in connection with her study leave with pay, for forty-eight and a half (48 1/2) months, covering the period from February 6, 1984 to February 28, 1988, for a post-graduate award under the Colombo Plan, for a Ph.D. degree in Soil Science, at the University of Queensland, Adelaide, Australia. |
| 91              | - APPROVING the grant of a monthly stipend at P600.00 for Mrs. Sergia P. Milagrosa, Assistant Professor, as a special assistance of the College to her during the first semester of her study leave, covering the period from November 1983 to March 1984, while she seeks for a scholarship grant under the Southeast Asia Research Center for Agriculture (SEARCA), subject to the usual accounting, and auditing rules and regulations.              |
| 92              | - GRANTING authority to pay the overload/extra teaching of the above-listed members of the faculty, subject to obtaining College policies and guidelines that the honorarium shall be paid only for work done over and above the maximum required load of the faculty member, and subject further to availability of funds, and the usual accounting and auditing rules and regulations.  |
| 93              | - APPROVING the recommendation of the College to drop from the rolls of personnel one, Florentino B. Respicio, Dental Aide, due to the expiration of his one (1) year vacation leave without pay, and his desire not to return to the service with the College, as of March 31, 1983.   |

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| 94              | - CONFIRMING the appointments of Dr. LUCIO B. VICTOR, as College Vice President, Mr. OSCAR B. LIMPIN, as Chief Accountant, and Mrs. JOSEFINA M. MARQUEZ, as Budget Officer, at the rates, items, effectivity, and status for each and as presented above, subject to existing CSC rules and regulations.   |
| 96              | - APPROVING the MSAC-WECO-LEWD Memorandum of Agreement entered into by and among the Parties hereto, dated 12 October 1983, whereby the WECO shall undertake a geophysical survey for groundwater on a portion of a specified MSAC property, (a) to determine whether a drilling of another deepwell between MSAC Well Nos. 2 and 3 will adversely affect the production or efficiency of such existing wells, and, should the answer be positive, (b) to recommend to the Parties, other possible sites within or outside the property of the First Party that may be suitable for water drilling by the Second Party; Provided, that the First and the Second Party hereto shall pay the WECO P12,500.00 each or the total of P25,000.00 for and in consideration of this Agreement. |
| 97              | - GRANTING authority to the College to allocate and use the sum of almost P10,000.00 to defray the cost of certain musical instruments of MSAC Mini Band, subject to availability of funds, and the usual accounting and auditing rules and regulations.   |
| 98              | - NOTING the proposed implementation of Executive Order No. 594, as corrected per directive from the ODM, Ministry of the Budget and giving due course to the additional steps of either one (1) or two (2) as the case may be and as rectified in the premise above-noted.  |
| 99              | - GIVING due course to the request to grant Christmas Bonus to all the personnel of the College at the rates/amounts as shall be authorized by the President of the Philippines.   |
| 100             | - APPROVING a restructured rates for each representation and transportation allowance of certain college officials, as further amendment to  |

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Res. No. 31, s. 1983, incorporating herein certain corrective suggestions pursuant to Sec. 34, BP BLG. 230, otherwise known as the General Appropriations Act, as corrected and presented above; Provided, this shall be effective November 16, 1983.