

# **Escuela Agrícola Panamericana**

**Tegucigalpa, Honduras**

**Annual Report 1982**



## **ESCUELA AGRICOLA PANAMERICANA**

Escuela Agrícola Panamericana (EAP) is a private, autonomous, university-oriented institution established in 1941 with the cooperation and authorization of the Government of Honduras and registered under the laws of the State of Delaware. EAP is located 35 kms. east of Tegucigalpa in the scenic Yeguaré River Valley. The 2400 hectare property where the School is located has traditionally been called "El Zamorano". The elevation ranges between 800 meters above sea level in the Valley and 2000 meters in the Uyuca Mountain. The combination of this altitude and 14°N. latitude account for one of the most pleasant climates in the world.

EAP is an institution with a unique agricultural education provided to 425 students from 15 Latin American countries. The students are under a very strict discipline system and follow a program which is labelled "learning-by-doing". A highly qualified teaching staff provides classroom and laboratory instruction and supervises practical training in the field. The intensive 33-month program starts in January and ends in November with a month's vacation in December for students and professors. The students learn by doing and obtain practical experience in all fields of modern agriculture including Animal Science, Agronomy, Horticulture, Fish Culture, Forestry and Agricultural Economics.

In addition to classrooms and laboratory facilities, the School has faculty housing, shops and a large variety of construction and agricultural equipment. The students are accommodated in eight dormitories and are provided with a dining room, clinic and various sports facilities. The School has a complete library with more than 16,000 books and near 40,000 periodicals and publications. The herbarium is considered as one of the best in the world.

Through the years the School has graduated more than 2000 students from most of the Latin American countries from Chile to Mexico. Several of the graduates have continued postgraduate studies. The graduates from El Zamorano return to their respective countries to work in private and public institutions. The "Zamoranos" have excellent professional records and considering the relatively small number there has been an outstanding contribution to the agricultural development of Latin America. The list of alumni includes Ministers and Vice-Ministers of Agriculture, Directors of Agriculture, Extension and Research and Deans of colleges. However, the greatest contribution of the "Zamoranos" has been in the development of



*Chairman John Smith  
and Director Simon Malo*

the rural areas teaching the small farmers the advancements in modern agriculture. The role of EAP in the development of the agricultural sector is known throughout the world.

EAP accepts high school graduates from any country of Latin America who pass the entrance examination and show motivation to study agriculture. Financial assistance is provided to able students with low economic resources.

The School's operating funds are derived from various sources; student fees, endowment fund, public and private donations, alumni contributions, sale of seeds and surplus agricultural products from the teaching farm. The most important contributions are from American corporations, the Agency for International Development (USAID), Germany's Foundation for Development (GTZ) and the Inter-American Development Bank.

EAP is the most effective agricultural education institution in Latin America. Donations in support of its programs constitute the most effective and important way of helping food production and preventing malnutrition in this hemisphere. Donations are tax deductible in the United States and Honduras. Donors can send their checks to the Director of Escuela Agrícola Panamericana, Apartado 93, Tegucigalpa, Honduras or directly to Mr. R.L. Crosbie, Vice President, The First National Bank of Boston, 100 Federal Street, Boston, Massachusetts 02110. All checks should be made payable to Escuela Agrícola Panamericana.

## **CHAIRMAN'S REPORT**

The year covered by this report has again been important in increasing the capacity of Escuela Agrícola Panamericana to provide well trained graduates to serve as leaders in agricultural development in Tropical America.

Total enrollment in 1983 will be over 420 students whereas only a few years ago the average yearly enrollment was around 250. After an initial enrollment of five women in 1981, there will be forty in 1983. This phase of the school's development has been a distinct success and it is hoped that the proportion of female students will increase in future years.

Consolidation of the physical plant has continued. Two new dormitories were inaugurated early in January 1983, four staff houses are almost complete and a further six have been started. This will see the end of new construction for the time being. Renewal of existing dormitories and other buildings will continue while laboratories will be repaired, modernized and reequipped. We are indebted to the government of the United States through USAID/ASHA for financial support for our building and renewal program.

The most important initiative of the Board during the year was the authorization of a study to explore the need in Tropical America for agricultural graduates in the future and the type of graduate that will be most desirable. Dr. E.J. Wellhausen, who is affiliated with the Rockefeller Foundation, has been appointed to head this investigation, which should commence early in 1983 as soon as independent funding has been arranged. The results obtained will enable the Board and the school administration to make long term plans for the future size of the school and for any changes in the school curriculum which are judged necessary to equip our graduates with the skills required to meet future challenges. It is hoped that the results of this study will also be of help to other institutions concerned in agricultural education.

Dr. Albert S. Muller, who died early in 1982, had served the school in many capacities for over twenty years, including the post of acting director on three occasions. The death of Mr. Joseph V. Scibetta who had been a trustee since 1976 is mourned by the Board. Dr. Samuel Stone of Costa Rica and Mr. Fernando Eleta of Panamá were elected to the Board during the year.

The Director of the school, Dr. Simon E. Malo and his staff have given their full support to the Board and their efforts have allowed many new programs to be undertaken with minimal delay and disruption.

The program of expansion and quality improvement which the School is undertaking is taxing traditional financial resources. Efforts to make the operations of the school more efficient here yielded good results and the fees charged for tuition were raised. In addition, the Board is embarking on a campaign to broaden financial support for the school and find new sources of funding. One of the most effective ways in which individuals and corporations can help is in the granting of scholarships or loans for individual needy students.

When Zamorano started forty years ago all students received full scholarships, which were made possible by the generosity of our original founders. More recently the school has been charging for an increasing part of the cost of the services that it provides. During 1983 each student will pay \$3500 for education, board, lodging and equipment. However, the annual cost of providing these services is still more than double what the student is asked to pay. The Board feels that this policy of asking students to pay for an increasing share of the cost of their education is sound because many of the families of our students are able to pay for the top quality education that their sons and daughters are receiving and others are able to make their own arrangements for scholarships or loans. This greatly broadens the base of financial support which the school receives indirectly.

In addition the school is able, through the generosity of certain donors, to provide full scholarships to over ninety students each year. Each of these students fully meets the qualifications required for admission and must document the need for financial assistance.

It is the stated policy of the Board that no qualified student shall ever be denied a Zamorano education for lack of financial resources. We shall continue to expect students to pay for part of the cost of their own education when they are able to do so. Offering top quality education to a student body representing varied social and financial backgrounds undoubtedly helps the political as well as the agricultural development of the area and it is one of the principal objectives of Escuela Agrícola Panamericana.

More than ever we need the generosity of our friends to make possible the continuation of this policy.



Chairman

## DIRECTOR'S REPORT

During 1982 Escuela Agrícola Panamericana has perhaps experienced the largest growth in the last decade. A master development plan, prepared two years ago, is being implemented in a moderate and wise manner. Enrollment has been steadily growing since 1980 and in January 1983 we admitted 423 students from 15 countries. All students are accommodated in 8 dormitories. The newest dormitories, "Simón Bolívar" and "José de San Martín", as well as four new housing units for professors, were built with a grant from the Office of American Schools and Hospitals Abroad, AID/Washington. This agency is helping the School to renovate most of its facilities and buildings. Escuela Agrícola Panamericana is getting ready to cope with food shortages foreseen for future years which will require more practical agronomists and many more human resources than presently available in Latin America. Many other institutions and governments have intensified their support to the School, especially Germany's GTZ and the Inter-American Development Bank by granting several scholarships to able students with very low economic resources. On December 5, 1982, 65 students from 15 countries, graduated as "Agrónomos Zamoranos". Several will continue their studies at other universities in the United States. There are 35 institutions in the United States that recognize the curriculum of EAP which allows Zamoranos to continue postgraduate studies. The School has a special agreement with the University of Florida where the



"Zamorano" is granted a state resident status allowing an out-of-state fee waiver and financial help. This agreement also covers the interchange of graduate students and professors to benefit both institutions.

In 1982 the School offered 58 courses and 45 "modules" of field laboratory. These "modules" are three-week periods in which the student learns by doing a specific task related to the management of a productive farm such as El Zamorano. This phase of our education is considered the most efficient in the general training of an "Agrónomo Zamorano". No other institution in the democratic world offers such advanced and diversified programs of "learning by doing". The student works more than 3000 hours during the 33 months of his curriculum in "modules" contributing therefore to the production of his own food which is a valuable education.

## **FACULTY AND ADMINISTRATION**

The faculty has been strengthened by several new appointments during the year. Dean Jorge Roman continues to improve the program of studies and field work. Mr. Federico Fiallos was appointed to the post of Comptroller by the Board of Trustees. He and the business manager have together strengthened the financial management, accounting and farm operations of the school.

The School has teaching personnel specialized in all important fields of modern agriculture. The list of the Faculty on page 20 states degrees and specialty of each professor. There are few institutions of agricultural education in Latin America that have such a high academic level along with such varied knowledge and experience. The academic effort of the faculty is reinforced by visiting professors who participate in short courses, seminars, conferences and practical demonstrations. In the last few years agricultural research has been intensified and expanded. The research is conducted with funds provided by several institutions and we would like to recognize the support to these projects provided by USAID. The important fields at the moment are in Animal Science with small ruminants, dairy and beef cattle. In Agronomy we have production of new varieties of grains and legumes. A new program of Integrated Pest Management is being financed by USAID/Honduras to find biological and natural ways to control important pests in Central America in order to decrease the use of pesticides that contaminate and poison the environment.

## DEPARTMENT ACTIVITIES

**Animal Science:** Production and efficiency were considerably raised in 1982. Dr. Mauricio Salazar assumed the duties of head of the department in mid 1982 and is organizing programs and projects to benefit the School.

The output of the Department has increased especially where the production of pork, poultry, cheese and butter are concerned. The production of ice cream decreased (see following table) due to failures in the equipment and the problems being experienced in Honduras for the importation of spare parts. The department's production depends solely on the student as a result of the teaching programs. Most of the products are consumed by the students and Zamorano personnel and the surplus is sold to help finance the operation of the institution.

A modern laboratory of Animal Nutrition has been equipped with a donation from the Inter-American Development Bank. This laboratory will be used for teaching purposes, research and technical service to the country.





## Production of the Animal Science Department

<u>Product</u>	<u>1982</u>	<u>1981</u>	<u>%</u>
Eggs (doz.)	39,654	37,335	+ 6.21
Poultry (lbs.)	65,603	54,295	+ 20.83
Milk (lbs.)	758,979	684,260	+ 10.92
Goat Milk (lbs.)	30,712	34,654	- 11.38
Beef (lbs.)	120,636	119,170	+ 1.23
Pork (lbs.)	83,318	51,000	+ 63.37
Butter (lbs.)	4,860	4,128	+ 17.73
Cheese (lbs.)	38,958	30,007	+ 29.83
Ice cream (qts.)	11,818	13,098	- 9.77

**Agronomy:** The field operations of this department increased with regard to cultivated area and preparation of land for planting. Total grain production for the year was as follows:

Corn	8,328 quintals
Rice (CICA-8)	5,239 quintals
Soy (SIASTA-194)	200 quintals
Sorghum	2,011 quintals
Beans	413 quintals

Most of the production was consumed by the School with the exception of corn, rice and sorghum which were partially sold as seeds.

The Forestry section being administered by Agronomy planted thousands of pine, *Gmelina arborea*, *Leucena* sp. and various other legumes adapted to the dry tropics. Precious woods such as Teak, Mahogany, Rosewood and others have been planted in strategic sites. In cooperation with Florida International University and CATIE thousands of experimental Neem trees were planted using seeds from Haiti. Thousands of feet of pine wood were cut from our own forest to be used in the new constructions of the School. The students participate and do most of the work related to the forestry activities. One of the necessary activities is fire protection of the forest through rounds and preventive burning. This year the forest was divided in several sections with their own rounds to isolate fires.

The fish-culture program continues to grow and provide education and research dividends. This year's production exceeded 36% of what was expected. The following figures demonstrate the production in pounds of fish and fresh water shrimp:

<i>Tilapia nilotica</i> :	2,721 lbs. live weight (3,542 units)
Shrimp ( <i>Macrobrachium</i> sp.)	285 lbs.

The research being conducted consists of testing various population densities, types of feeds, combination of tilapia and other fish, test hybrid tilapias and other species. We must mention the support received from Aquafinca (subsidiary of General Mills) which has donated hundreds of thousands of shrimp seed making it possible to test the biology of this crustacean at Zamorano elevation and latitude.



**Horticulture:** This department initiates the first-year students in the arduous field laboratory. The students during 1982 worked in two sections, one in the morning and one in the afternoon, and attended classes with the same arrangement. This increased the efficiency of Horticulture and allowed other projects to be conducted with the same number of students.

The production is important with the harvesting of 30 different varieties of vegetables. The total production of vegetables reached 141 tons. Six varieties of citrus were harvested (3000 boxes of 50 lbs.) and nine varieties of tropical fruits. The production of fruits amounted to 130 tons. The coffee harvest was 1631 lbs., processed for the dining room. Honey production accounted for 1665 bottles and 500 lbs. of *Dolichos* sp. seed were sold. Following is the production of the most important vegetables:

Onion	52,321 lbs.
Tomato	43,980 lbs.
Yuca	24,980 lbs.
Lettuce	22,617 lbs.
Cucumber	21,962 lbs.
Carrot	18,588 lbs.
Sweet Potato	15,587 lbs.
Cabbage	12,690 lbs.
Beet	10,880 lbs.

The fruit nurseries produced 12,482 grafted plants. In addition 2,811 ornamental plants were sold and many others were planted on the school campus.

**Basic Sciences, Applied Biology and Agricultural Economics Department:** This Department prepares the students for the more advanced applied courses and provides scientific bases necessary for a professional life. El Zamorano, with students from various countries, experiences large differences in the basic high school preparation of the students. This is the reason why we have to emphasize subjects such as Mathematics, Physics, Chemistry and Biological Sciences in order to be sure that the students reach adequate levels during the first months of study. During this period, the students with deficient high school education have to make a special effort to cope with the level of the rest of the class. This Department also teaches English to allow students in 8 trimesters to be able to pass the TOEFL examination that will eventually permit them to enter one of the universities in the United States for postgraduate studies.



**Renovations and Improvements to the Campus:** As in past years the support of AID/ASHA (Office of American Schools and Hospitals Abroad) was present again in 1982 with grants for the construction of two new dormitories for 60 students each and four faculty housing units. The cost of the project reached US\$625,000 and the buildings were ready for occupancy in early 1983. During 1982 designs and drawings were completed for an Agricultural Development Student Center prepared by Oudens and Knoop of Washington, D.C. The plans and drawings for the renovation and expansion of the kitchen-dining room were also ready allowing the start of construction at the beginning of the year on this most important facility. Various renovations are contemplated for 1983 which are within the Master Plan.

**Graduation and International Convention:** On December 5, 1982 the 37th graduation ceremony was held with 65 graduates from 15 countries who received their diplomas as "Agrónomos Zamoranos" from the School's godmother, Dr. Doris Stone. The principal speaker was Dr. Edwin J. Wellhausen who spoke on Latin American Rural Development and the role of Escuela Agrícola Panamericana in the multinational effort to improve human resources for the social and economic development of the small farmer. Government officials, local leaders, members of the diplomatic corps and of international institutions attended this important event.

The Alumni Association of EAP (AGEAP) held its Annual convention in Tegucigalpa and attended the Commencement ceremony at El Zamorano. This meeting allowed graduates from various countries to personally inspect the academic improvements and advancement of the installations at EAP, to express their opinions and to contribute to the progress of the School with new ideas and donations.





**Short Courses and Seminars:** This academic activity for professionals and employees from other institutions constitutes another one of the contributions of El Zamorano to the agricultural development of Central America. Short courses and seminars are planned within the practical system of the School "learning by doing".

Various courses were conducted in 1982 in the fields and classrooms of El Zamorano with the help of International Centers. These extracurricular activities, in addition to having a necessary function of continuing with the training of professional agronomists, agricultural professors and extension agents, allows the School to make contributions to other countries by demonstrating that the "learning by doing" system could be the answer for a quick rural development in Latin America. The agronomists that attend these courses have the opportunity to observe and participate in the practical operation of EAP and gather ideas for similar programs to be implemented in their countries.





**Financial and Donations Report:** Due to various combined factors such as inflation, late or temporarily suspended donations, etc., the School experienced a cash shortage problem at the end of the year preventing the payment of certain debts. This situation forced the Administration of the School to request a long term loan from the endowment fund to meet the standing obligations. Nevertheless, most of the scholarship sources such as Germany's GTZ and USAID have continued their support of EAP. It is expected that 1983 will be a better year than 1982 where donations by individuals and corporations are concerned.

The Escuela Agrícola Panamericana has demonstrated a desirable record of efficiency and stability for a private institution without direct financial support from the State. Situated in one of the most unstable regions of the hemisphere it continues its academic course of 40 years of contribution to Latin America. With a relative low budget in relation to its programs and impact, it has been able to expand its activities and improve the academic level without a considerable increase in its operation costs. This would not be possible without its team of dedicated employees and friends. Everybody who contributes to and supports the School can be proud to be part of a resource whose model will not be duplicated in the history of Latin America.

*Simón E. Malo*

Director



**ESCUELA AGRICOLA PANAMERICANA, INC.**

**STATEMENT OF REVENUES AND EXPENSES—OPERATING FUND  
YEARS ENDED DECEMBER 31, 1982 and 1981**

(Expressed in 000's of U.S. Dollars)

Condensed Financial Statements derived from Audit  
by Mendieta y Asociados, Representatives of  
Arthur Young and Company

	<u>1982</u>	<u>1981</u>
REVENUES		
Investment Income	\$ 540	\$ 416
Gifts and Grants	768	990
Matriculation Fees	719	486
Sale of School Products and Services	388	446
Internally Produced Assets	<u>471</u>	<u>261</u>
Total Revenues	<u><u>\$2,886</u></u>	<u><u>\$2,599</u></u>
EXPENSES		
Education and General Expenses		
Instruction and Department Expense	\$2,046	\$1,885
Operation and Maintenance of Plant	459	403
Administration and Institutional Expense	<u>418</u>	<u>265</u>
Total Expenses	<u><u>\$2,923</u></u>	<u><u>\$2,553</u></u>
Net Operating (Deficit) Surplus	<u><u>\$ (37)</u></u>	<u><u>\$ 46</u></u>

# **ESCUELA AGRICOLA PANAMERICANA**

## **Number of graduates by years and by country**

Country	Years																						Total
	46-62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82		
1 Honduras	185	7	8	5	11	14	16	17	20	13	16	10	15	17	14	34	33	24	20	17	14	510	
2 Costa Rica	109	5	2	11	9	9	9	8	11	7	13	10	8	9	19	11	9	6	6	9	9	289	
3 Guatemala	85	2	1	6	6	8	5	6	4	3	4	4	6	4	6	5	7	6	6	6	6	186	
4 Colombia	66	6	8	4	4	6	6	5	3	4	2	6	10	8	6	7	7	5	8	8	11	190	
5 Ecuador	52	4	2	5	4	3	6	4	4	6	7	6	6	5	6	5	7	4	8	4	6	154	
6 Nicaragua	80	3	2	3	3	3	1	2	3	2	1	3	3	5	7	6	5	8	4	5	4	153	
7 El Salvador	98	1	6	6	2	5	4	3														125	
8 Panama	59	4	3	6	4	2	1	2	3	3	3		2	1	2	6	4	2	2	5	5	119	
9 Republica Dominicana	21			4	4	4	4	5	7	9	8	9	10	3		1		3	5	2	2	101	
10 Mexico	12		1	1				1	2	5	2	2	1	3		2	1	2	1	2		38	
11 Belize		4		3	1		1	1	1	1	1	3	4	2	1	4	5	1	2	1	3	39	
12 Peru	10	7	4	4	1	2								1				4	1	1	1	36	
13 Venezuela	3												1	1	1	20				1		27	
14 Bolivia	5	2	3			1	2	1	1	1		1		3		2	3	5	5	2	4	41	
15 Cuba	20																					20	
16 Chile	3	3		1																		7	
17 Argentina										1												1	
18 Brazil																			1			1	
19 Uruguay																			1			1	
Totals	808	48	40	59	49	57	55	55	59	55	57	54	66	62	62	103	81	70	70	63	65	2038	

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Esso Standard Oil, S.A.  
First National Bank of Boston  
Fundación Shell, S.A. (Caracas)  
Gardner Charitable Trust  
Grace Foundation, Inc.  
Hitachi Limited  
International Business Machines  
Ralston Purina Trust Fund  
Standard Fruit Company  
Texaco Caribbean, Inc.  
United Brands Foundation  
U.S. Tobacco Company  
Wallace Genetic Foundation, Inc.

### **INDIVIDUALS & INDIVIDUAL FOUNDATIONS**

Armour, Robert P.  
Ashley, Austin S.  
Becerra, Miguel  
Bonilla, Bonifacio  
Brick, Albert  
Brooker, Marvin A.  
Corrales, Alonso  
Crist, R. E.  
Donnelley, Gaylord  
Flanders, Charles L.  
Freitag, George  
Gardner, George P., Jr.  
Grace, Oliver R.  
Greenman, J. R.  
Goeppinger, W. W.  
Hurtado C., Leto  
Kreitle, Robert D.  
Lopez P., Jaime  
Meyer, Charles A.  
Midence, Adolfo  
Miller, Janet B.

- Putnam, George E.
- Reitz, J. Wayne
- Rosengarten Jr., Frederick
- Sanz-Agero, Grace de
- Sites, J.W.
- Smith, John G.
- Solanilla, Gustavo
- Stillman, Charles L.
- Torres F., Francisco J.
- Weeks, Mr. and Mrs. J.W.
- Wheeler, C.B.
- Winthrop Jr., Frederic
- Wolfe, H. S.

#### **GOVERNMENT GROUPS**

Government of Honduras  
 USAID/Mission to Honduras  
 USAID/Mission to Nicaragua  
 Embassy of West Germany  
 Interamerican Institute for Agricultural Cooperation  
 Interamerican Development Bank  
 AID/American Schools and Hospitals Abroad

#### **EAP ALUMNI ASSOCIATION**

AGEAP—Capitulo Dominicano  
 AGEAP—Internacional

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