ZAMORANO Learning-by-Doing

Director's Newsletter
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Escuela Agrícola Panamericana
Apartado 93
Tegucigalpa, Honduras

ESCUELA AGRICOLA PANAMERICANA - Teaching today's youth to feed tomorrow's world

FROM THE DIRECTOR'S DESK

A recent visitor to our school appeared perplexed by the dynamic spirit which drives our staff and student body. "What is it that motivates your Zamorano community to work as hard as they do?" he asked. "What inspires their sense of dedication?"

Many visitors have posed this same query in an effort to understand this unique phenomenon. On sunny days, our students return after 4 hours in the field with their shirts drenched in sweat, their hands showing the effects of intensive manual labor. During the rainy season, their clothes are equally wet, as farm work goes on, rain or shine.

Zamorano owes its disciplinary and arduous traits to its strict traditions and especially to its organizational founder. Wilson Popenoe was a no-nonsense director who demanded that Zamorano students learn to appreciate the dignity and value of manual labor. Forty years later, this philosophy of learning-by-doing and its esprit de corps is as strong as ever.

Characteristically, those who appreciate the rigorous system and disciplinary traditions most are Zamorano graduates. Consequently, we have called upon the alumni to assist their alma mater in financing the reconstruction and modernization of the school's library. A school of our reputation should have a corresponding first-class study facility.

We are pleased and grateful to note that we have already received contributions from numerous graduates. In the spring edition of this newsletter (February/March) we will express our gratitude by including a list of Zamoranos who have assisted financially.

If you have not witnessed Zamorano's spirit first-hand, we invite you to do so. In the meantime, we would like to remind you that you need not be a graduate to assist in these efforts. Your demonstration of interest in developing top quality manpower for the tropical region of the Americas will be most welcome.

AGRONOMY

Hillside Cropping

A program has been started to allow students to apply appropriate technology for hillside cropping, following our philosophy of "learning-by-doing". Terraces with minimum tillage were made in an area with a steep slope, stony, with acid soil, poor in nutrients, using simple instruments and manual

tools, such as the pickaxe, and chicken manure. Different terraces were sown with corn, beans, sorghum and dolichos (green manure). Results look impressive, and will be documented once the crops are harvested and chemical characterization of the soil are completed.

Biological Nitrogen Fixation in Common Bean

The EAP is involved in two projects on Biological Nitrogen Fixation (BNF) in common bean, one in cooperation with the University of Wisconsin, and another with the University of Florida. The main objectives are to introduce a high potential of BNF into local varieties, and to identify the most limiting soil constrains in BNF. To share our work and train local agronomists in the subject, a seminar was held, from July 9 to 11, 1984, with international speakers, and more than 40 participants from the Ministry of Natural Resources, Honduran Universities and other institutions.

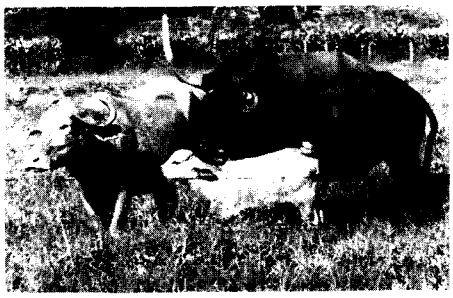
MIPH

The school's integrated pest management project, financed by U S A I D, has two objectives. The first aims to assist low-income farmers of limited resources in their efforts to improve corn and bean production. The second is to improve the educational programs and materials used in five courses and five field laboratories dealing with plant protection at Zamorano. These materials will be made available to other agricultural schools and universities in this region for use in their instructional programs. Study guides, field and lab exercises, and audiovisual materials are also being developed. The first study guide has already been printed, entitled: "The integrated management of invertebrate pests in the cultivation of field crops, vegetable gardens, and fruit trees in Zamorano." It consists of 88 pages including 30 illustrations. The subject matter covers more than 25 pests and 11 crops. This guide is available for 8 Lempiras within Honduras and US $5.00 to other countries (the price includes mailing costs). Inquiries and/or orders should be directed to the MIPH Project.

Personnel News

There are two recent valuable personnel additions to the Agronomy Department, Dr. Juan José Alam and Dr. Leonardo Corral. Dr. Alam holds a Ph.D. in Plant Genetic Conservation from the Univ. of Birmingham (England); the last 5 years he worked at CIGRAS (Univ. of Costa Rica); his current duties include a course on Plant Breeding, the Germplasm Bank and the Tissue Culture laboratory. Dr. Corral holds a Ph.D. in Plant Breeding from the Univ. of Oregon, and has had several years of experience at the Univ. Politecnica del Chimborazo (Ecuador); his current responsibilities include a course in Agronomy II, variety evaluation in cereals and technical assistance to seed production.

ANIMAL SCIENCE
Water Buffalos:



Our herd of buffalos including 5 males from the United States and 20 females from Trinidad and Tobago are adjusting well to their new habitat at Zamorano.

On the 22nd of August, one of the females which arrived already pregnant from Trinidad gave birth to a healthy calf weighing 80 pounds. The young buffalo was born without difficulties, and within two days had joined the herd for a swim in the pond adjoining their pasture.

Two of the young males are being trained in animal traction, using horse harnesses because the traditional central American oxen yokes will not fit over the buffalos' horns. Training in animal traction is being provided to technicians of the World Relief agency which has introduced a herd of buffalos in eastern Honduras to assist the Misquito refugees. Eventually the male buffalos obtained from our herd will be trained and used in the tillage of small-scale farmers' plots which are inundated with rainwater and where cattle do not adapt easily.

Improvement of the dairy program:

In recent years we have increased the number of cows in our dairy herd and simultaneously we have improved the milk production capability of the cows. In 1984 we hope to produce more than one million pounds of milk for the first time in the school's history. As the school's community will continue to grow, we are planning to increase the herd's size, and are striving to further improve the cows genetically for increased milk production. Three quarter Holstein heifers produced in the beef herd are confined to controlled feed lots with the hope that they will become strong milk producers.

This increase in milk production has made it necessary to purchase milking machines with larger capacity than the four-bucket system in use since 1978. Initially the construction of another parlor was considered, but the one built in 1943 has been well maintained and will continue serving the dual purpose of training and production. In May of this year, with assistance from USAID-ASHA, milking equipment was purchased from De Laval Co. with six machines and the capacity to increase to nine. Milking time has been reduced by 40%, the direct tubing system has improved the milk's hygiene, and the occurrence of mastitis has been significantly decreased. With nine machines in operation, it is believed that we can milk a herd of 150, the maximum number of cows we could handle under present conditions.

Due to the increase of the dairy herd, we have transferred beef cattle to our neighboring farm of Rapaco, thus providing more space for the calves and heifers. We have also constructed three additional silos

with a temporary capacity of 180 tons each; by the summer of 1985 their total capacity will be 900 tons.

LAND PLANNING AND DEVELOPMENT:

Since the last newsletter, we have begun construction at three sites. The first will be a Post Harvest and Marketing center for the storage, distribution and sale of school produce. This complex will give the students the opportunity to complete the agricultural cycle, from seed production to cultivation and harvesting and finally to marketing.

In the horticulture department, a cluster of laboratories is under construction, which will include facilities for studies in biology, physics, chemistry, and tissue culture. Both these projects should be completed by March of '85.

A new dormitory for students, named after Antonio José de Sucre, a Latin American liberator, is nearing completion. It blends well with the typical architecture of Zamorano, and will house sixty students.

The antiquated electrical system on campus has been substituted by a modern one which is both more efficient and safer. Lighting in public areas on campus was included in this project. We are grateful to AID/ASHA for providing the necessary financial assistance for these endeavors.

CEIBA

Two noteworthy publications have recently been released by EAP. The first, by Dr. Miguel Vélez N., is la "Crianza de Cabras y Ovejas en el Trópico", 368 pages, softcover, $24.00 postpaid. Dr. Vélez (Zamorano, 1963), who has worked in Peru, Colombia, Ethiopia and Nigeria, offers a broad perspective and assessment of goat and sheep production in the tropics. Among the topics covered are nutrition, feeding, reproduction, management, facilities, breeding, and production systems. Chapters are also dedicated to milk, meat, and wool production. The book is being used as a textbook at EAP, and it will be equally useful as a manual for goat and sheep producers.

The most recent CEIBA, volume 25 number 2, consists of nine articles covering a wide variety of topics; reproductive behavior and meat production of goats, taxonomy of the flowering plants of Central America, the Great Green Macaw, evolution of the cultivated species of cotton, and determination of tree-size in pines. The publications listed above, and back issues of CEIBA are available from the editor of CEIBA at the school address.

AGEAP:

The El Salvador Chapter of the Association of Graduates of the Escuela Agrícola Panamericana hosted the 14th alumni convention from the 6th to the 9th of November. 178 persons participated, 92 of whom are Zamorano graduates, 38 wives of graduates, 35 children of graduates, and 13 friends of the E.A.P.

The convention was inaugurated by the Vice-President and Minister of the Interior of El Salvador, Mr. Rodolfo Antonio Castillo Claramount. El Salvador's Minister of Agriculture, Mr. Carlos Aquilino Duarte Funez, also contributed some opening remarks. Zamorano's Director, Dr. Malo, the dean, Dr. Román, and the Chairman of the Board of Trustees, Mr. Smith, were also present.

Zamorano Staff were responsibile for six of the ten presentations:

1) PROBLEMS AND ALTERNATIVES OF ANIMAL BREEDING IN THE TROPICS.
   Dr. Jorge Román O.
2) NEW APPROACHES IN RESEARCH AND EDUCATION IN AGRONOMY.
   Dr. Jorge Chang G.
3) NUTRITIONAL EVALUATION OF TROPICAL FORAGE.
   Dr. Mauricio Salazar
4) FEEDING HABITS OF THE BABOSA AND ECONOMICAL WAYS OF CONTROL.
   Agrónomo Víctor Valverde
5) INTEGRATED PEST MANAGEMENT HONDURAS (MIPH).
   Mr. Alfredo Rueda
6) MIPH AND THE INSTRUCTION OF PLANT PROTECTION AT EAP.
   Agrónomo Marco A. Quiroz

Presentations were also shared by Zamorano graduates:

1) DISCONTINUED COTTON PRODUCTION TECHNIQUES IN EL SALVADOR STILL APPLIED SUCCESSFULLY IN GUATEMALA.
   Agrónomo Manuel Mauricio Martínez (51).
2) MINIMUM TILLAGE, A MODERN SYSTEM OF CULTIVATION.
   Dr. Víctor M. Urrutia (62).
3) MERISTEM CULTIVATION: FUTURE PROMISE FOR THE PROPAGATION OF HEALTHY STOCK.
   Mr. Mario R. Bustamante (62).
4) CONTROL OF BLACK SIGATOKA IN BANANAS.
   Agrónomo Rivaldo Oyuela (60).

The ideas offered in these presentations will be beneficial to the EAP's curriculum.

On behalf of the Guatemalan AGEAP Chapter, its president, Mr. Luis Solórzano ('57), who is also the President of AGEAP-International, we confirm that they will be hosting the XV international AGEAP Convention in Guatemala City from the 14th to the 16th of November, 1985.

ZAMORANO IN THE NEWS

In its November, 1983 issue, National Geographic printed an article on Honduras. The authors had visited Zamorano,

and shared these impressions: "The Pan-American Agricultural School at El Zamorano believes in getting dirt under the fingernails . . . No agricultural school in Latin America enjoys a better reputation. Students work hundreds of hours on its 12,000 acre farm, besides going to classes . . . Some 15 nations, including Nicaragua, are represented among this year's 425 students. Many graduates take advanced degrees in the U.S.".

From Rochester, Minnesota, an article quotes Dr. Harry Peirce, a farm management specialist and advisor to President Reagan's review of agricultural education in Central America: "The students learn how to work. They learn responsibility. They have confidence in themselves. It's beyond a doubt the best agricultural institution in this hemisphere, probably in the world . . . From the practical agriculture teacher standpoint, I recommended that the public institutions adopt the successful practice already being followed at EAP — local autonomy in administrative decision-making, competency-based practical instruction, improved teaching methodology and more relevant curricula."

And from the University of Florida, the dean, Dr. Zachariah wrote that having "students from the Pan-American School of Agriculture in our programs is one of our real success stories."

EXTRA-CURRICULAR ACTIVITIES

International Music Festival

Our community recently experienced an unforgettable day. In typical Zamorano fashion, we joined hearts, hands, and voices in the first of Zamorano's international music festivals.

Many Zamorano students and professors, as well as international communities in Tegucigalpa prepared songs and dances representing 14 different Latin American countries. Typical food of eight different cultures had also been prepared for 1,600 persons who attended the musical festival.

We are hoping to organize another such festival next year, and as with the rodeo, have it become an annual event at Zamorano.

With the proceeds gained during this festival, we are hoping to construct — together with the children's parents — desks for the elementary school in the neighboring village of Jicarito.

Rodeo

On a bright, sunny Sunday the Zamorano community crowded together with friends and visitors from around the country to watch the annual performance of Zamorano's more daring farm hands.

The first event was a contest between various groups of three students demonstrating their prowess at lassoing a young, feisty bull, and bringing it under control. The second event featured bull-riding. Ten courageous zamoranos and a recent graduate hurtled into the ring, clinging to the madly thrashing bulls.

This excitement was followed by horseback riding events, which included an obstacle course, jumping, and a four hundred meter race.

Zamoranos used these activities not only to demonstrate their hands-on capabilities, but their organizational skill as well, as they were responsible for putting the entire show together.

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