ESCUELA AGRICOLA PANAMERICANA

ANNUAL REPORT

1950

This year's Commencement, held on 25 February, constituted something of a milestone in the history of the school. It was our fifth, the end of the primer lustro (the first five years). The occasion was honored by the presence of Dr Juan Manuel Galvez, President of the Republic of Honduras, who made the principal speech of the day; and by that of Doris Zemurray Stone, affectionately referred to by students as "Godmother of the School", who made a brief address from the platform and delivered the gold rings which bear the seal of the school and the numerals of the graduate's class.

Diplomas were handed to 48 students, representing nine tropical American Spanish-speaking republics, as follows: Guatemala 7, El Salvador 3, Honduras 14, Nicaragua 3, Costa Rica 5, Panama 5, Colombia 6, Cuba 2, and the Dominican Republic 3. Graduation exercises were attended by the largest group of visitors we have received since the inauguration of Zemurray Hall in 1944 - between 400 and 500 people.

This year's group brought the total number of our graduates up to 229. The tendency of these young agriculturists to enter the service of their respective governments in activities of a practical nature continues to increase. Especially in Honduras there have been important developments along these lines: at the end of the year at least 15 of our boys were engaged in what might

be termed agricultural extension.

Sometimes we are asked, "What do you mean by agricultural extension?" We think Paul Shank has answered this question succinctly: "It is showing the small farmer how to do things in the right way." However, this definition by no means covers all of the work our graduates are doing for their countries. Some are engaged in vaccinating cattle under government direction; a few are working in experiment stations; one or two are managing nurseries for the propagation and distribution of improved varieties of fruit trees and other plants. The United Fruit Company has several, assisting in the development of new crops.

Some three years ago The Rockefeller Foundation made a grant of $7500 to be used for sending especially promising graduates of this school abroad for a year of advanced study. This fund having been used to give five scholarships for training in the United States, the Foundation this year made a second grant of $15,000 to be used for the same purpose during a four-year period. Under the terms of the original grant one student, Alfredo Echeverría of Costa Rica, was sent last year to Mississippi State College, where he made such a good record that we desired to give him a second year so that he could take his B.S. degree in agriculture. The Foundation kindly consented to this.

This year two students, Van Baldwin Jackson of Honduras and Humberto Alvarez of Panama were sent to the California State College of Agriculture; and another, Rodolfo Zamora of Costa Rica, went to the Florida State College of Agriculture. These three scholarships are for one year each.

THE NUMBER AND ORIGIN OF STUDENTS

The school year commenced on Monday 5 June, with 78 students in the first year (Class of 1953), and a total enrolment of 178. This is the largest enrolment we have had and taxed our facilities considerably, as the dormitories were planned for 160 students. Two of the recreation rooms (we have never needed the four which were originally provided) were utilised to house the extras.

Membership in the first year class was made up as follows: Guatemala 10, El Salvador 10, Honduras 20, Nicaragua 5, Costa Rica 9, Panama 6, Colombia 8, Ecuador 2, Dominican Republic 4, and Cuba 4.

The number of applications for scholarships increases from year to year, though not as rapidly as we had expected when the school was first opened. We now have to deal with 400 to 500 annually, taking into account the hold-overs from previous years. Some of the latter are good prospects who were too young at the time they applied; others were held until we could obtain more information; still others were deferred because of the limitation imposed by our normal capacity of 160.

It seems to us, year after year, that the quality of applicants tends to improve. This has its advantages and disadvantages. It reduces the work involved in eliminating applicants who were obviously interested mainly in getting something for nothing; but on the other hand it makes more difficult the work of selecting the best.

The country which sends the largest number of applications is El Salvador. Competition in that country is so keen that at least half a dozen Salvadorans annually show up on the campus

before they have been instructed to come, hoping to convince us by a personal interview that they should be accepted.

Costa Rica comes next in the number of applicants, followed by Guatemala and Honduras. Nicaragua continues to supply an increasing number. The government of that country is taking an active interest in encouraging boys to come to this school. Applications from Colombia also are on the increase. Cuba and the Dominican Republic remain at about the level of previous years, while there is an increase in applications from Panama and Ecuador. We receive only an occasional one from Venezuela and Peru.

We continue to feel that boys from the rural districts are on the average better bets than boys from such cities as Guatemala and San Salvador. Of course there are numerous cases where a boy has been raised in one of the capitals and has a keen interest in agriculture. Our problem is to find this out in advance.

In short, the work of selection is extremely difficult and we can never hope to attain a batting average of 1000. When we find we have made a mistake, all we can do is to send the student home by the end of his first year at latest, and give his bed to someone who seems to be a better prospect.

THE TRAINING PROGRAM

In general, there were no important changes during the year. The return of Paul J. Shank from post-graduate studies at Yale, however, made it possible for us to give more training than was possible the previous year in forest conservation and the rational use of forest resources. This is a definite gain.

Dr Herbert Popenoe of Los Angeles, California came here in the summer of 1949 to see if it might be feasible to develop one or more tests which could be given applicants for scholarships, with a view to facilitating our work of selection. After familiarizing himself with our student body and experimenting extensively with the sort of tests which are used in public schools of the United States, he developed two, one which we have termed the "Examen de Capacidad" and the other the "Examen de Aptitud Vocacional". The former is in effect an intelligence test, but serves also to give us an idea of the applicant's previous preparation; the second was designed to show vocational aptitude.

The use of the first test has proved eminently successful. It was given to all students who entered this year, and without exception those students who fell below the dead line failed in most of their examinations at the end of the first semester. Most of these had to be eliminated.

The aptitude test, on the other hand, has not proved very useful. We asked Dr Popenoe if he could suggest any reason for its having failed to give satisfactory results, and he took the matter up with several educational psychologists in Los Angeles who have worked with boys of Latin American origin. The conclusion reached is this: Many Latin American students have not been exposed to such a wide range of experiences as most North American boys, hence have not had the same opportunity to find out what they like.

We have been gratified to note that several vocational schools in other tropical American countries have remodeled their programs, incorporating some of the principles which have been followed

successfully at Escuela Agricola Panamericana. One or two countries, in organising new schools of this sort, have closely followed our program. There seems, indeed, to be a steady increase of interest in this school throughout the American tropics.

BUILDINGS AND EQUIPMENT

We completed our housing program during the year, finishing the fourth and last house of a group built between the campus and the old hacienda house. These four are now occupied as follows: one by our cashier, one by our master mechanic, one by our bodegaman, and one by our teacher of English, Julio Pineda.

A new calf barn was constructed, the one originally built having proved insufficient for handling all of the work. A small but adequate dairy laboratory was built and equipped. With this it has become possible to give students better training in the handling of milk and milk products - a very important part of our program.

A large shed was constructed to house farm machinery and other equipment. This was greatly needed. As time has gone on, we have increased our stock of such things as tractors, harrows, and the like. Not only was it unsatisfactory from our standpoint, but a bad example to the students, when we had to leave them out in the weather.

We continued to make repairs to student dormitories and a number of other buildings. Much work was done on pasture fences. Most of our work in 1951 will be of a maintenance nature, there being no plans for further major structures.

PERSONNEL

There were several important changes during the year. In April, Albert S Muller, for nearly nine years Director of the

Escuela Nacional de Agricultura in Guatemala, was appointed Assistant Director, replacing Henry G. Hogaboom who transferred back to the United Fruit Company in 1949. Julio C. Pineda, a Honduran trained in the United States, was employed as teacher of the English language, replacing Alfonso H. Quintanilla who resigned in January. Arthur Melvin Eberhard of California was employed as assistant in the dairy, and later in the year took over that branch of the Animal Husbandry Department when William Armstrong resigned and returned to California for family reasons.

Nicholas Eris, for many years with the United Fruit Company, was transferred to the school as Accountant, a new post in our set-up.

Our horticulturist, Don Fiester, was on leave during the year doing post-graduate work at the Instituto Interamericano de Ciencias Agrícolas in Turrialba, Costa Rica, where he hopes to obtain the degree of M. Agr. early in 1951.

THE MEDICAL DEPARTMENT

This has remained under the direction of Manuel Sandoval. Ninety-six man days were spent in the student infirmary during the year, 766 treatments were given to students in the clinic, and there were 1346 consultations with students. Fifty-four man days were spent by students in hospitals in Tegucigalpa.

The following details in connection with the above figures may be of interest: Twenty-eight students were treated for amebas, 26 for tonsillitis, 4 for appendicitis (all included an appendectomy in Tegucigalpa), 9 for bronchitis, 2 for bone fractures, 59 for grippe, 12 for lacerations, 22 for laringitis, 4 for malaria (which they

may have brought with them to the school, as it is now very rare in our valley), 21 for intestinal parasites other than amebas, and 20 for athlete's foot. There were 201 cases of common colds, and 125 classified as "gastric disturbances". There were, of course, a number of minor matters not mentioned in this brief resumé.

Up to now, there have been no deaths among students at the school, and only one graduate has died.

METEOROLOGY

Rainfall during the year was above average. From the standpoint of weather the year was on the whole quite satisfactory. Monthly rainfall, as well as maximum and minimum temperatures, are shown in the following table:

Month	Rainfall (inches)	Max. temp. (Fahr.)	Min temp. (Fahr.)
January	1.68	81.5	56
February	--	91.5	53.5
March	0.24	92.5	50
April	---	90.5	52.5
May	1.75	93	57
June	12.13	91.5	68
July	7.20	88	58
August	5.05	86	68
September	5.68	89	61
October	12.11	86	59
November	2.21	82	48
December	--	82.4	58
	Total 48.15		

RELIGIOUS SERVICES

It has never been the intention of this school to include religion in its curriculum. At the same time, about 98% of our students are Roman Catholics, and it has always been Mr. Zemurray's desire that they should be able to worship in accordance with the established practice of the Church.

This year for the first time it has been possible, through the cooperation of the group of North American missionaries of the Franciscan Order now working in Honduras, to have Mass regularly every Sunday. Attendance at Mass is not obligatory, but usually 60 to 75 students are present in addition to numerous members of the staff and employees of the school. Services, which are available to outsiders as well, are held in the school auditorium through the provision of an attractive movable altar placed upon the stage.

FIRST YEAR: HORTICULTURE

Shortly after the school was opened we found that it made for better training if we kept new students for a year in one department; then transferred them for the second year to another, and for the third to another - there being three main departments so far as concerns the <u>prácticas</u> or practical training in the field. Only in this way are we able to make sure that all students leave here adequately prepared in all branches; for there are boys who would like to spend all of their time in the dairy, or riding range with the steers, and so on. Even if the boy is going to be a stockman (as is the intention of the majority) he should have a good vegetable garden, and he should know something about field crops in general.

Since work in the Horticultural Department is not heavy, and is the easiest place to break in new boys who are not accustomed to manual labor, we decided to have all of them do their first year's practicas in this department. They learn to plant and grow vegetables, to prepare them for the market or for home use; to propagate and care for various kinds of fruit trees, including pruning, fertilizing, and cultural attention in general, and to take an interest in the ornamentation of the dooryard through the cultivation of decorative plants.

During the year under review, the students conducted some interesting trials with onion varieties, which produced results of interest. They learned the importance of length of day and of temperature in onion culture, and found that the varieties Excel, Louisiana Red Creole and an unnamed variety widely cultivated in Central America gave the best results.

Some of the new avocado varieties from Mexico came into bearing for the first time, and one, which had borne a good crop in 1949 and did the same this year, was named Aztec and a pomological description was published in "Ceiba". Budwood of this and several other Mexican introductions was distributed to various parts of tropical America, to the United States, and even shipped successfully to South Africa. We believe our work in the introduction, testing, and distribution of new avocados will prove of considerable value.

Our plantings of temperate zone fruits on Uyuca were increased considerably through importations of apples, peaches, plums, pears, berries, and pecans from California, Texas and Florida; while we had some interesting results from our experimental plantings of grapes at Zamorano. The varieties Niagara and Isabella continue

to succeed much better than any of the European or vinifera grapes.

Several thousand budded citrus fruits, mangos, avocados, and roses were produced by the students, who were free to take or send these to their homes or to friends. Some were distributed locally through other channels.

SECOND YEAR: FIELD CROPS

In March the students made 21,560 pounds of panela (raspadura, dulce, or crude sugar) about half of which was reserved for use of the messhall, and the rest sold, receipts being put into the Students' Benefit Fund. Only one variety of cane, Mayagüez 28, was harvested this year. The planting was almost two years old and yielded at the rate of 70 tons of cane per acre.

We extended greatly our plantings of Guatemala grass (Tripsacum latifolium) under irrigation, as we have found this plant highly valuable to us during the dry season, when it is cut by hand and stall fed to our dairy herd. We also increased our plantings of pigeon peas and several grain sorghums. An experiment was made with ten sorghum varieties, from which we have selected Plainsman and Caprock, combine type grain sorghums, for more extensive planting in 1951; and Japanese or Honey Drip cane as a good sweet sorghum for ensilage. A serious effort is being made to reduce our purchases of stock feed through the production of grain sorghums and pigeon peas.

We harvested a fair crop of rice - probably sufficient to supply the mess hall until the next crop comes in; and we decided that we might be able to increase our rice production through the use of

better varieties. Several of these will be tried on a fairly extensive scale in 1951.

Large quantities of sweet potatos were grown for stock feed and the use of the mess hall. An experiment was commenced with sweet potatos grown from seed received from the Louisiana State College of Agriculture.

In September we filled our two silos, one with sorghum plus a good percentage of pigeon pea tops; the other with Guatemala grass, pigeon pea tops and sugar cane. We constructed a new silo in one of our pastures, and filled it for use of the steers during the dry season. Experiments were continued with the making of hay, using Jaraguá grass cut in our Monte Redondo pastures. The hay made in 1949 turned out very satisfactorily and was very useful during the dry season.

THIRD YEAR: ANIMAL HUSBANDRY AND DAIRYING

For more than five years we have been engaged in breeding up a dairy herd based upon crossing imported Jersey and Guernsey bulls with the best criolla or native cows. Early this year we reviewed the results obtained to the end of 1949. Half-blood Guernseys have produced 15.65 lbs of milk per day; half-blood Jerseys 14.14 lbs. and criollas 13.49 lbs. All groups were fed alike. These figures seem to stress the importance of good feeding.

In June, Perry Garst reported upon a lengthy experiment which he conducted in our dairy, aimed to determine the practicability of increasing the protein-content of our low-protein tropical feeds through the addition of small quantities of Urea. He thus summarised

the results: "Urea added to a low-protein basic ration at the rate of 1/8 lb per feeding had no effect on milk production. A possible explanation is that the ration containing Urea lacked palatability. Sufficient feed was refused by the cows to lower the protein intake in the Urea ration to that of the control ration." He suggested that lack of palatability might be overcome by adding molasses, but as this is not readily available here it was not tried.

Ample supplies of milk and butter were available during the year, except during the latter part of the dry season when we always have to expect milk production will drop off somewhat. However, during the latter part of the year we increased our production of cheese and made more ice cream for the students' mess hall than we have been able to do in previous years. Manufacture of ice cream was facilitated by the arrival of an electric freezer from the States.

After having suffered for nearly two years from an outbreak of brucellosis among our hogs, the disease this year seemed to be under control and we were able once more to commence breeding for the production of pork and pork products. Excellent ham and bacon was made by the students in considerable quantities, and if there is no recurrence of brucellosis we shall have abundant supplies of pork in 1951.

A disease appeared among our chickens during the wet season, which could not be diagnosed either by members of our own staff or several experts who visited the school. This disease reduced considerably our flocks, but quieted down with the termination of the rains.

Our herd of milk goats has not developed as rapidly as we had hoped. We are discontinuing the Anglo-Nubian breed and concentrating on the Toggenburg.

THE SCHOOL AS A CENTER OF KNOWLEDGE

No agricultural school can operate efficiently without having within its reach accurate information on most of the subjects which it touches. In the United States, schools have access to good libraries, herbaria, and the like. This is not the case in most parts of Central America.

The school has undertaken, therefore, to develop a good reference library; a first-class herbarium of Central American plants; specimens of Central American woods; and to a more limited extent, collections of animals, birds, fishes, reptiles and insects.

This work commenced in 1943, but was put on a more definite basis with the inauguration of our Science Building in 1949. Gradually we are bringing together an excellent reference library - already the best in Central America so far as concerns many subjects related to agriculture. Our herbarium, thanks to the work of Juvenal Valerio, Paul C. Standley, Dr Louis O Williams and his assistant Antonio Molina (one of our graduates), now contain some 35,000 specimens from all parts of Central America. During their four years here, Dr and Mrs Archie F. Carr brought together many specimens of birds, reptiles and fishes; and Paul J. S honk is assembling a collection of the principal Central American commercial woods.

This library and these collections are of value not only to the school itself, but more and more are coming to be used by scientific workers from other regions.

OUR SCIENTIFIC JOURNAL "CEIBA"

Appreciating the paucity of available information regarding Central America, in so far as concerns the natural sciences and allied

subjects, the school has commenced the publication of a scientific journal called "Ceiba", three issues of which appeared during 1950. This is printed in Tegucigalpa at a very reasonable cost (about $250 per issue of 500 copies) and is sent in exchange to some 300 institutio and individuals, principally in the Americas.

Not only does "Ceiba" furnish an outlet for much information of basic value which otherwise would not appear in print. It brings to us in exchange many technical periodicals to which we would otherwis have to subscribe by paying the usual rates. Hence the actual cost to us is negligible.

"Ceiba" does not appear at regular intervals, but it is planned to get out three or four numbers per year. It is edited and managed by Dr Louis O Williams of our staff. Articles, both in English and in Spanish, are devoted principally to the botany, agriculture and horticulture of Central America, but it is planned eventually to cover (as far as possible) such fields as zoology, geology, climatology and the like.

THE MONTHLY NEWS LETTER

In July 1946 we commenced to issue a Monthly News Letter which was intended primarily to provide officials of the United Fruit Company with information regarding interesting visitors to the school. It developed into a general news letter, and at the beginning of the year under review we decided to put it on a more formal basis.

Numerous interested people, not officials of the Company, had expressed a desire to receive it. We therefore commenced the year with a list of about 110 recipients, which had grown to 140 by Decembe

Commencing with January 1951 the list was increased to 160. It includes many prominent agriculturists and educators in the United States and Latin America; agricultural schools and experiment stations; libraries; and especially people who have been here and are interested in our progress.

Each issue consists of one page only, single-spaced, and multigraphed on the letterhead of the school. It goes by air mail and has been dispatched shortly after the end of the month which it covers. We hold it to one page because we believe many people might not read it if too extensive. In each issue we attempt to present a few facts concerning the students, activities in the various departments (horticulture, field crops and animal husbandry) and notes regarding our most important visitors and why they came here.

This little "publication" seems to have met with a popular reception, as indicated by requests to be put on the list, and we believe it assists in maintaining a sustained interest in the school in many quarters.

THE CENTRAL AMERICAN NUTRITION FOUNDATION

In our Annual Report for 1946 we outlined rather fully the objectives of the Central Nutrition Foundation, which was established in that year by the United Fruit Company under the aegis of this school, with technical direction from the Massachusetts Institute of Technology, or more particularly, from Dr. Robert S Harris, Professor of the Biochemistry of Nutrition at that institution.

During the year under review the work of this Foundation, so far as the tropical end is concerned, was completed. Dr Louis O.

Williams, botanist for some years at Harvard University, who had carried out the assembling of plant products and data in Central America with headquarters at Escuela Agricola Panamericana, was transferred to the staff of the school where he will continue as Botanist and will teach as required.

Four technical papers on the Composition of Food Plants of Central America based on biochemical analyses carried out at the Massachusetts Institute of Technology have already appeared in the journal "Food Research" and further results are in press. All of the results will shortly be combined and elaborated in the form of a monograph on the subject.

This project, which has cost the United Fruit Company about $125,000, is a definite contribution to knowledge of the nutritional value of Central American plant products. For many years to come it should be of fundamental value to government and other agencies not only in Central America, but throughout the American tropics generally.

INTERESTING VISITOR

When this school was founded in 1942, we had the feeling that few people from the outside world would come to see it. After all, it is located in a rather remote part of the Americas.

We wonder if officials of the United Fruit Company have been as gratefully surprised as we have been at the number and character of the visitors who have come here. During the first years, we thought perhaps it was the novelty of the thing which attracted them. The novelty has worn off, and still they come.

What is it that attracts so many interesting and important visitors to this school? Many factors, of course, enter into the

picture. But we like to think that the philosophy behind this institution, as originally formulated by Mr. Zemurray, is something different from the usual. Something so practical, so sound, that it invites attention.

We cannot mention more than a few of the visitors who have come during 1950. We shall, however, try to present a fair cross-section of the more important ones:

January. Dr Hugh C Trumble (of Australia) and party, of the FAO, who were going to conduct a survey of Nicaraguan agriculture and wanted to talk about what kind of an agricultural school that country might advantageusly use. Dr Robert S Harris of the Massachusetts Institute of Technology, who was directing the biochemical side of the Central American Nutrition Foundation, the field work of which was based here.

February. Dr Gabriel Gutiérrez of the College of Agriculture, Medellín, Colombia. He had been in the States on a Rockefeller fellowship, and that Foundation instructs practically all of its South American fellows who have been studying agriculture in the States to drop in here on their way home. Dr Elmer D Merrill, dean of American botanists, and a member of our Board of Directors. Dr Harold Hume, Provost Emeritus of the Florida State College of Agriculture.

March. Romeo P. Martínez of Davao City, Phillipine Islands, an authority on abacá cultivation. Dr Stringfellow Barr, president of St John's College, Maryland. Gove Hambidge, well-known writer on agricultural subjects, godfather of the excellent series of Yearbooks issued by the U. S. Department of Agriculture in recent years. The Ambassadors of Costa Rica and Guatemala in Honduras.

April. Four distinguished diplomats from Nicaragua. Mr. Crede H Calhoun, representative of the New York Times in Central America. The Ministro de Educación of Honduras. Dr Alberto Varela of Colombia, another Rockefeller scholar.

May. Dr Alberto Lleras Camargo, Secretary-General of the Organization of American States, who came with the President of Honduras and about 50 diplomats and officials. Some 75 delegates to the convention held in Tegucigalpa of the coffee growers of Central America and the West Indies. Dr Manuel Elgueta of the Instituto Interamericano de Ciencias Agricolas. Dr José Rafael Berli, Director of Agriculture in Venezuela.

June. Dr and Mrs A Curtis Wilgus from the University of Florida. Lloyd Cobb, president of International House in New Orleans, together with Prof. Julian C. Miller of the Louisiana State College of Agriculture and others. The newly-appointed Minister of Panama in Honduras. Hon. Edward G. Miller, Asst. Secy. of State at Washington, with the President and Vice-President of Honduras and some 75 distinguished diplomats and officials.

July. The District Convention of Lions Clubs, some 350 people. Mr. G. Edward Nicholson of Lima, Peru. Dr Thomas F Carroll of Cornell University.

August. Dr S. H. Work of the U. S. Dept of Agriculture. Prof. Walter H. Hodge of the University of Massachusetts. Dr. I. D. Clement of the Atkins Institution of Harvard University in Cuba. Hon. Spruille Braden, formerly Asst. Secy. of State at Washington.

September. The Ambassador of Israel to Central America. Mr. Claud L. Horn of the U. S. Dept. of Agriculture.

October. Ing. Antonio Garcia S., Director of Agriculture for the government of Ecuador. Senator Dennis Chavez of New Mexico. Dr Vernon D. Bailey and Ing. Guillermo Sagrera of the Centro Nacional de Agricultura, El Salvador. Dr Jorge de Alba and family, of the Instituto Interamericano de Ciencias Agrícolas.

November. Dr Paul B. Sears of Yale University. Dr. Salvador Pizzatti and Dr Audrey Johnson of the Instituto de Nutrición de Centro America y Panama. Dr William H. Cowgill of the Instituto Agropecuario Nacional, Guatemala.

December. Not many visitors. Everybody staying home for Christmas.

WHAT IT HAS COST TO RUN THE SCHOOL

In 1949 we spent $221,000 on Operations and $77,000 on Betterments. In line with the policy of economy put into effect by the United Fruit Company, we had hoped to reduce our operating costs in 1950, hence our budgetary estimate for the year was set at $210,000.

We did not succeed in meeting this estimate, our final operating cost for the year having been $223,000, or two thousand dollars more than the previous year. Our failure to keep within the estimate was due to high costs in the Animal Husbandry Department, for which we had budgeted $14,000. The final cost was $27,000 - almost double the original estimate. The difference was caused principally by spending much more than we had estimated for stock feed, and for improving pastures and fences.

We have always found it interesting to break down some of the items listed under operations into cost per student. To do this,

we have to take the average number of students for the year, which is not a very accurate figure. It is obtained by taking the number of students who are on the campus at the end of each month, adding these figures, and dividing by twelve. The final figure is affected considerably by the number of students who go on vacation and the time at which they take their vacations (for example, many left this year during the last week of March, to be home for Easter, and thus did not show on the March figure although they were here during two or three weeks of that month). There are also fluctuations, from year to year, in the percentage of students who take advantage of the vacation privilege. And some years we may receive a high percentage of new students during March and April; other years a higher percentage may come just before school opens in June.

As has been pointed out earlier in this report, we began the school year with the largest number of students we have ever had on the campus at one time, - 178. The average number for the year was 159 as against 157 for the previous calendar year. Taking the figure 159 as the basis of our calculations, what was the cost per student with respect to some of the principal charges?

We do not break down the expense of administration, teaching, and the like, because so many of us double in brass - part of our time is given to administrative duties, or to supervising work in the field, or to teaching.

To provide a student with transportation to and from the school, in those cases where he was unable to assume this expense himself, cost $24.02 in in 1950 as against $25.78 in 1949.

To provide him with clothing, including shoes, cost $52.09 in 1950 against $74.30 in 1949. This very appreciable difference

is due to several factors. In the first place, we carried out a more rigid control of clothing issues. In the second, we shifted from four sets of khaki and four of blues for each student, to two of khaki and six of blues. Renewals are issued as required; the student presents items which he considers no longer serviceable, these are inspected, and if approved, he is given replacements.

To feed him, the cost was 16 cents per meal, the same as in 1949. This we consider highly satisfactory in view of the higher price of numerous items which we have to purchase (for example, coffee, which has gone up tremendously). It may be well to point out that the cost per meal does not cover all of the foodstuffs which enter into the picture because many are produced on the school farm and not billed to the mess hall.

To provide him with medical and dental attention the cost was $29.49 as against $24.30 in 1949. This includes the cost of hospitalization and medical fees in Tegucigalpa.

To wash his clothes cost $30.17 as against $32.25 in 1949.

To provide him with text books and school supplies cost $20.97 as against $37.66 in 1949. We prepared more of our texts on the multigraph which saved on the purchase of text books, and kept a closer check on issues of cuadernos (composition books) and the like.

The total cost per student, obtained by dividing the total operating cost by the average number of students, did not show any increase over the previous year - in fact there was a slight decrease, the figure for 1950 being $1406 as against $1408 in 1949.

Sometimes, when we mention that it costs us $1400 per student

per annum, people remark "Why, you could send the boys to school in the States for less than that!"

This is more or less true. Several of our students who have gone to the University of Florida on scholarships from this school have been able to pay transportation and the expenses of the school year (without tuition, which has generously been waived by the University) with $1200 to $1300. But it must be remembered that, in all such cases, the State of Florida is carrying all the overhead. The student is paying little more than his transportation and living expenses.

But all this is beside the point. Nowhere in the United States can a young man from Central America receive vocational training in agriculture under the conditions of climate, soil and crop plants which characterise the region in which eventually he is going to work. This is the main reason why Escuela Agricola Panamericana exists.