# INTER-AMERICAN INSTITUTE
## of
# AGRICULTURAL SCIENCES

*Announcement of Fellowships*

WASHINGTON, D. C.

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## INTER-AMERICAN INSTITUTE OF AGRICULTURAL SCIENCES

EARL N. BRESSMAN
*Director*

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*Secretary*

The Inter-American Institute of Agricultural Sciences is an international organization, which up to date comprises fourteen of the American Republics, whose purpose is to encourage and advance the development of the agricultural sciences in the American Republics through research, teaching and extension activities in the theory and practice of agriculture and related arts and sciences. It is particularly interested in laying the foundation for a scientific approach to the development of important strategic and local agricultural products. In a broader sense it will serve to promote friendship and better understanding by fostering constructive cooperation in the agricultural field among the republics of the American continent.

*Administrative Office*
PAN AMERICAN UNION
WASHINGTON, D. C.
U. S. A.

*Principal Field Headquarters*
P. O. Box 74
TURRIALBA, COSTA RICA
CENTRAL AMERICA

*Rubber Substation*
P. O. Box 146
GATÚN
REPUBLIC OF PANAMA

# *Announcement of Fellowships*

The Inter-American Institute of Agricultural Sciences, organized under the auspices of the Pan American Union, with field headquarters at Turrialba, Costa Rica, announces the opening of its doors. The Institute is offering 21 fellowships in agricultural education in the course of the academic year 1945–46 to male students holding the equivalent of the B.S. degree in agriculture—one each to the American Republics. Applications for fellowships must be forwarded through the foreign office of the applicant's country, to the headquarters of the Institute, Pan American Union Building, Washington, D. C.

It is visualized that scholarships, day students, visiting scientists and various types of short courses will play a role in the educational work. In addition specific research projects will be undertaken above and beyond those carried on by graduate students. It is hoped that the Governments of the American Republics and private agencies will center some of their agricultural research work at the Institute. This announcement concerns but one phase of the Institute's program—an award of one fellowship to each of the twenty-one Republics.

### Purposes of the Institute

The purposes of the Institute are to encourage and advance the development of agricultural sciences in the American Republics through research, teaching and extension activities in the theory and practice of agriculture and related arts and sciences.

The Institute was organized on October 7, 1942. The cornerstone of its first permanent building at Turrialba, Costa Rica, was laid by President Rafael Ángel Calderón Guardia of Costa Rica, and Vice-President Henry A. Wallace of the United States on March 19, 1943. The Institute is an agricultural research and training center for all of the Americas, supported by those countries that have signed and ratified the convention governing its organization and operation. Its chief function is to train men in a specific field of agriculture so that they may advance the agriculture of their countries, looking forward to building a better hemisphere.

It is the aim of the Institute to offer to adequately trained students facilities for advanced study and for research, with the two-fold purpose of providing each such student with a comprehen-

sive view of a field of knowledge and of training him for independent investigation in that field. A high grade of scholarly work, as distinguished from the fulfillment of routine requirements, is expected of every student.

A candidate for an advanced degree is expected to develop ability to meet new problems, at least in his own field, and to solve them by his own ingenuity. A candidate should, in addition, acquire a feeling of responsibility to add to the sum total of human knowledge and should develop qualities of leadership, particularly in his special field of study.

### Requirements for Candidates

Fellowships in the Institute are awarded to those who have already shown outstanding ability in research and who expect to return to their own countries to continue their work in agriculture.

A candidate must meet the following requirements:

1. He must have recognized high professional and intellectual qualifications.
2. He must be in good physical condition.
3. He must devote his entire time to the pursuits for which the fellowship is awarded.
4. He must spend not less than one year nor more than three years in residence at the Institute.
5. The student should be well grounded in basic courses such as chemistry, physics, botany and zoology.
6. The student will present himself at the Institute at his or his country's expense, and it is expected that he or his country will pay his return transportation to his home.

Each student is expected to present a thesis summarizing the results of the thesis problem assigned to him. If publications result from this activity the Institute must approve and the publication should carry an acknowledgment of the Institute's role in the activity.

There are no language requirements of candidates before entering the Institute, but during the course of his studies, each student is expected to become conversant with two of the four official languages of the Pan American Union—Spanish, English, Portuguese, and French. A service designed to assist students in these four languages will be set up. No formal instruction in languages will be offered.

The right is reserved to withdraw a fellowship in case of a student's conduct that is, in the opinion of the officers of the Institute, prejudicial to the object for which the fellowship was awarded.

No fellowship will be awarded unless a candidate is recommended by the foreign office of his own country.

No candidate will be accepted at the Institute unless he has been issued a formal certificate of entrance by the Institute. These will be sent to the successful candidate at the time of his selection by the Institute.

### Typical Schedule

| | | |
|---|---|---|
| January 8 | Monday | Work begins |
| February 1 | Thursday | Examinations |
| May 10 | Thursday | Guest Lecturer |
| June 29 | Friday | Guest Lecturer |
| July 23 | Monday | Guest Lecturer |
| August 1 | Wednesday | Final term examination |
| August 10 | Friday | Preliminary thesis examination |
| August 25 | Saturday | End of first term |
| September 3 | Monday | Guest Lecturer |
| December 21 | Friday | End of school year |

### Facilities

The Institute owns and operates 2,500 acres of land in Turrialba, Costa Rica, and 2,800 acres of land on Gatun Lake in the Republic of Panama. Both locations are equipped with buildings for housing. However, all training of students will be at Turrialba, Costa Rica. The substation on Gatun Lake, Panama, is for rubber research only. The land is devoted primarily to investigational work in agriculture, particularly that of the tropics. The fire-proof, reinforced concrete dormitory building just erected at Turrialba will provide all the modern facilities to the student body. Class rooms, offices, laboratory facilities and field plots have been provided. Each student will be given ample equipment to carry on his research.

### Turrialba, Costa Rica

The town of Turrialba is on the main railroad between San José and the Atlantic port, Puerto Limón, in what is called the Valley of the Reventazón, after the river of that name. It is also

on a hard-surface highway from San José, negotiable by automobile in about one and one-half hours. It is 112 kilometers from Limón and 70 kilometers from San José. The Institute grounds adjoin the outskirts of Turrialba. The lands lie along, and form a part of the area on both sides of a paved highway and on a branch of the railroad to Pejevalle. It is at an altitude of 2,000 feet. The climate is typical of the wet tropics for agricultural purposes. The annual rainfall is about 100 inches a year, well distributed, but with a drier season, January to March. The average temperature is about 75 degrees Fahrenheit and ranges from 60 degrees to 95 degrees. In general, the days are warm and the nights are cool.

The region is suited to the cultivation of coffee, cacao, and sugarcane; corn and rice; fruit trees and vegetable crops. Though the climate is too moist for the best production of certain fruits, such as mangoes and avocados, it is well adapted for experimental work on livestock, and dairying, under tropical conditions. Rubber and abacá grow well. The region also lends itself to investigation of tropical problems on erosion control. Due to the well-distributed rainfall, there is no opportunity in Turrialba itself for irrigation studies, but it is entirely suited to investigation and demonstration of drainage practices. The Institute has an extensive collection of tropical plants. The altitude is satisfactory for cultivating all species common to the tropical lowlands.

Experimental work is under way with cinchona and other crops requiring high elevations within 2 to 3 kilometers on the slopes of the neighboring hills. There are greater opportunities for crops of this type within 10 kilometers on the slopes of the Turrialba volcano. Barley, wheat, potatoes, and other sierra crops are now grown commercially on the slopes of the Irazú Volcano above Cartago and about 30 kilometers from the Institute. Within 40 kilometers of the Institute and toward the east coast there are extensive areas of wet lowlands suitable for studying production of rubber, abacá and oil palms. Excellent areas are available in the Alajuela region, about 100 kilometers distant, for the studying of problems under seasonal conditions of intermediate elevations.

The United States Department of Agriculture Rubber Experiment Station adjoins the Institute, and the extensive Goodyear Rubber Plantation at Cairo is 52 kilometers distant by railroad. These offer excellent opportunities for collaboration on Hevea rubber and in the cooperative use of facilities.

The Institute offers, within a distance of less than two hours by car or train, an almost complete cross-section of Tropical American conditions. Furthermore, without being actually on the seacoast, it represents the wet lowlands that are so extensive in Tropical America. To a large degree the future development of Tropical American agriculture depends upon the solution of the problems of these wet lowland areas.

### Organization

The administrative staff consists of the Director, Business Manager and the Superintendent. Besides these, two chiefs of division act as Dean and Head of Research, respectively. Assistants to the division chiefs will be provided in the form of a sub-professional staff, some of whom will undoubtedly be advanced research students. Administrative details are vested in the Business Manager and the Superintendent.

The Institute is organized into four broad divisions as follows: Animal Industry, Agricultural Engineering, Plant Industry and Soils, and Economics and Rural Life. Each division is headed by a chief whose primary concern is to organize and conduct research and to teach a limited number of graduate students. It is contemplated that each division will be assigned not more than ten graduate students so that specialized instruction may be had. Each division will offer formal seminar courses, not only for the students assigned to the division but for the entire student body.

Fully 50 percent of the student's time will be devoted to selecting, organizing, carrying out, and presenting the results of a comprehensive research problem. This problem will be selected after the student reaches Turrialba and after consultation with and approval of the division chief and the Director.

The head of each research division is an outstanding scientist from one of the American Republics. He will be selected not only for his abilities in a particular field of agricultural research but also for his ability to pass on to his students some of those characteristics that have made him an outstanding scientist in his field.

### Curriculum

No formal curriculum is offered, inasmuch as the student's time will be devoted largely to a research problem and participation in seminars in each of the divisions of work. Each student will be

expected to devote considerable time to library work. An extensive collection of botanical books gathered by the late Dr. William A. Orton of the Tropical Plant Foundation has been obtained as a nucleus of a library on tropical agriculture. This library will be expanded as rapidly as possible to include all the important works on agriculture, particularly those dealing with research.

No student will be accepted for less than one year's work, and no course of instruction will run longer than three years. Students should be well grounded in such courses as chemistry, physics, botany and zoology.

As a center of research and training, the Institute will attract outstanding men in the agricultural field, and it is hoped to utilize these men in bringing to the students recent and important information in the field of agriculture. These specialized lecturers, referred to later in this announcement, will be provided as a part of the educational program.

For the student's guidance and information, examples of projects for research topics are given. In no way is the student limited to these particular projects. They are merely suggestive and are as follows:

I. ***Division of Plant Industry and Soils***

1. Culture of strategic crops such as rubber, quinine and abacá.
2. Relationship of soil moisture to root growth of derris and lonchocarpus.
3. Effect of soil fertility upon the growth of Hevea rubber.
4. Improvement of edible soybeans for the tropics.
5. Effect of shade on coffee production.
6. Improvement of pastures and forage crops.
7. Tropical fruit and vegetable cultural problems.
8. Life history of major field crops, fruit and vegetable insects.
9. Types of corn available in this hemisphere.
10. Biological control of insects in the tropics.
11. Insecticides and their value under tropical conditions.
12. Systematic studies of tropical insects.
13. Relationship of pH to phosphorus availability in tropical soils.
14. Soil erosion in the tropics.
15. Classification of tropical soils.
16. Soil management under irrigation.
17. Value of fertilizer in soils under tropical conditions.

II. ***Division of Animal Industry***

1. International sanitary measures for livestock.
2. Meat cutting, packing and inspection in the tropics.
3. Processing and inspection of dairy products.
4. Improvement of livestock and poultry through breeding.
5. Tick eradication and its effect on the livestock industry.
6. Studies of the control of *Trypanosomiasis,* a disease of horses and cattle.
7. Nutritive value of tropical feeds for livestock.
8. Insects affecting man and livestock.
9. Systematic studies of tropical insects.
10. Improved transportation and the spread of livestock diseases and pests.

III. ***Division of Economics and Rural Life***

1. What should (a given country) produce as a basis for stronger national development and international trade?
2. The economics of single-crop versus diversified agriculture.
3. Economic consequences of various combinations of land, labor and capital equipment.
4. Problem of local education, health and sanitation, roads, etc.
5. The cost of producing specific farm products, particularly strategic crops.
6. The economics of various combinations of enterprises on individual farmers.
7. The marketing of specific farm products, particularly strategic crops.
8. The level and content of farm family living.
9. The group and institutional participation of farm people.
10. Factors effecting social and economic progress among farm people.
11. Development of techniques of education and extension to achieve greater local acceptance of improved knowledge and agricultural practices.
12. Effects of tariffs and taxation on agricultural production.
13. The agriculture of various countries—its possibilities and future.
14. Balanced agricultural production in the hemisphere.

IV. *Division of Agricultural Engineering*

1. Design of processing machinery for strategic crops such as rubber, quinine and abacá.
2. Design of agricultural machinery for use on small farms.
3. Utilizing small streams for farm power.
4. Planting and harvesting equipment for intercalary crops.
5. Dehydration problems in the tropics.
6. Equipment and methods for lowland crop production.
7. Drainage of low, coastal lands.
8. House designs for small farmers in the tropics.
9. Storage and shipment of perishable products.
10. Utilization of soils in the manufacture of adobe, brick, tile, and other construction materials.
11. Irrigation on small farms.

### Master's Degree

After the satisfactory completion of work a student will be awarded the degree, Master of Science (M.S.). In order to obtain this degree the student must be in residence one year. However, approved candidates may complete part of their work elsewhere subject to the approval of the Faculty and Director.

Each student will be required to present a thesis, prepared according to the regulations of the Institute. One copy of the thesis must be filed in the Institute Library.

It is expected that the thesis will constitute a report of results obtained in an original investigation or problem. The problem in question may be of limited scope, but it must be attacked for solution in a systematic and scholarly way. The preparation and presentation of a satisfactory thesis will be of the greatest importance in determining the award of the Master of Science degree.

### Guest Lecturers

Tropical Latin America has lacked an outstanding gathering place for scientists interested in tropical agriculture. This alone is responsible for much of the lack of progress in this hemisphere as compared to that in the Far East where notable strides have been made in the production and development of rubber, quinine, abacá and other strategic products.

The Institute, with good facilities for living and working in a tropical setting, should attract many of the foremost scientists in

agriculture of this Hemisphere. In addition, it is planned to invite from time to time outstanding scientists to visit the Institute, give a series of lectures and act as consultants on research problems. Both from the standpoint of training of students and the development of a sound agricultural program, this activity should offer much.

### Tuition and Other Fees

The student will present himself at Turrialba at his or his country's expense, and it is expected that he or they pay his return transportation.

Students on fellowships from countries that have signed the Convention governing the operation of the Institute will pay no tuition, dormitory, board or laboratory fees. It is expected that special fellowships, in addition to those offered by the Institute will be granted. These will be announced from time to time and made available to worthy students.

Tuition for all other students will be $300 U. S. per annum or any portion of that year, regardless of the length of time spent at the Institute. All students will be expected to live in the dormitory on the Institute campus. Rooms will be assigned in the Director's office in the order of application. Rental will be $250 U. S. per annum. The dining room of the dormitory will be open to all students. Board will be $350 U. S. per annum.

Each student will provide his own clothing and incidental items of personal expense. The Institute will provide laundry facilities at a nominal rate to resident students.

### Clothing

No special clothing is required. It is suggested that during the day and when on duty farm clothing be commonly used. A dark suit will be the accepted formal clothing. Because of the rains, particularly in the afternoons, it will be well to be equipped with such articles as rubbers,raincoat, etc.

### Commencement

Commencement will be held but once a year. All candidates on whom degrees are to be conferred are to be present at the commencement exercises unless excused for urgent reasons by the Director.

### Hospitalization

There is a hospital and health center in Turrialba under the direction of the Costa Rican government. Arrangements have been made with the Institute to provide medical care for students at a nominal fee. The hospital is in charge of a well-trained physician. Also, San José is only 70 kilometers distant, where there are fine hospitals and medical services of all kinds.

### Exemptions and Privileges for Personnel and Students

Each of the Contracting States agrees that it will accord to persons engaged in the work of the Institute or pursuing studies under the auspices of the Institute, such privileges with respect to exemption from taxation and other burdens affecting the entry, travel and residence of such persons as may be appropriate under its laws and regulations.

### General Information

The Institute operates under a treaty or convention which at this date has been signed by fourteen countries, namely: Bolivia, Chile, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Panama, United States, Uruguay, and Venezuela and ratified by five—Guatemala, El Salvador, Costa Rica, Nicaragua and the United States. Since the required five countries have ratified the Convention the treaty is now in effect, thereby assuring the permanent support of the organization. The administrative headquarters of the Institute are located in the Pan American Union, Washington, D. C., the field headquarters are at Turrialba, Costa Rica. The Institute also maintains a rubber substation on Gatun Lake, Republic of Panama.

**INTER-AMERICAN INSTITUTE OF AGRICULTURAL SCIENCES**

**Turrialba, Costa Rica, Central America**

## *APPLICATION FOR FELLOWSHIP**

Date.....

1. Check (X) the field work for which you wish to be considered. If you desire to apply for more than one, indicate order of preference by 1, 2, and 3.

.....Animal Industry

.....Agricultural Engineering

.....Plant Industry and Soils

.....Rural Life and Economics

Date of Photograph

.....

Attach most recent photograph of yourself, taken not longer than one year ago. (Approximately 6 x 7 centimeters.)

HEAD AND SHOULDERS ONLY
FULL FACE

2. Name.....
*First* *Middle* *Father's name* *Family name of mother*

3. Address.....
*Street* *City* *State or Province* *Republic*

4. Date of birth.....

5. Place of birth.....
*City* *State or Province* *Republic*

6. Of what republic are you a citizen?.....If a naturalized citizen give date and place of naturalization.....

7. Name of father.....

Birthplace of father.....Is he living?.....

8. Name of mother.....

Birthplace of mother.....Is she living?.....

9. In case of emergency, notify (name):.....

Address: .....Relationship: .....

* Type or print plainly in filling out this application. Use additional sheets of paper if necessary. Please read announcement of fellowships carefully before filling out the application.

## EDUCATION

10. Secondary School

How many years did you attend?_____ In what year did you graduate?_____

From what school?_____ Address_____

11. What University did you attend?_____ Address_____

Years you attended_____ Year of graduation_____ Degree you received_____

In what fields of work did you specialize?_____

_____

What scholastic honors did you receive?_____

12. What postgraduate education have you had?_____

Name of University_____ Address _____

Years you attended_____ Year of graduation_____

In what fields of work did you specialize?_____

_____

13. Please explain any other type of education that you have had (such as correspondence school or vocation; include any degrees not listed in questions 11 and 12.)_____

_____

_____

## EMPLOYMENT (Including farm experience)

Please list below the positions you have held. Including the following information for each position; (a) title or common name of the position, (b) name of organization, company, or person employing you, (c) date you started, (d) date you left and reason why, and (e) description of your duties.

14. Present Position_____ Annual Salary _____

What part, if any, of this salary will be continued if a fellowship is granted?_____

_____

15. Former positions?_____

_____

_____

_____

16. If you are a licensed member of any profession, a member of a professional society, or author of any publications, please give details_____

_____

_____

**SUPPLEMENTARY INFORMATION:**

17. Sex†_____ Are you married?†_____ Number of dependent children_____

18. Height_____ Weight_____ Color of hair_____ Color of eyes_____

19. Do you have any physical defects?_____ If so, explain fully on separate sheet.

20. What languages do you understand?_____

What languages do you speak fluently?_____

21. Have you ever traveled outside of your country?_____. If so, please indicate countries visited, time spent in each, and purpose of your trip_____

_____

22. References. Please attach letters from three responsible people, testifying to your qualifications and ability to profit from such a fellowship. Indicate how long each person has known you.

23. If you receive the fellowship, how do you plan to use the training when you return to your country?_____

_____

† This year the Institute will accept only male candidates who are single, or married men not accompanied by families.

24. Attach a certificate of a medical examination, properly filled out by a qualified physician, certifying that you are in good health, and physically able to undertake the work at the Institute.

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In submitting this application for a fellowship with the Inter-American Institute of Agricultural Sciences, I agree to complete the prescribed program unless released or disqualified by the administrators of the Institute; during the period of the fellowship to engage in no occupation or activity other than that assigned to me, except with the written permission of the administrators of the Institute; to apply myself diligently to the program as outlined for me by those under whose supervision I shall be placed; and to fulfill and abide by all other rules and regulations now or later estabished by the Institute; at the completion of the fellowship to return immediately to my country. I hereby solemnly swear that all information given herein is true and correct to the best of my knowledge and belief.

(Signature of Applicant)_____

Subscribed and sworn to before me this_____day of_____, 19_____.

_____

*Notary Public.*