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About the Institute

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

April 22, 1954

Dr. A. Abraham
Professor of Botany Trivendrum
Travancore University
State of Travancore
Southern Madras, India

Dear Dr. Abraham:

Through Dr. B. P. Pal of the Indian Agricultural Researching Institute at New Delhi, I have learned that you are carrying on research with Manihot utilisima. I have been in the process myself of making a systematic study of the variation within the specie. I should like to know if it is possible to exchange or receive mounted, dried specimens of some of the plants with which you are working.

My work so far has been confined to the New World, and I should like to have some specimens from your areas which may have been developed there. Also, if you have any reprints of published work on tapioes, I should be very happy to receive these, also. If it is at all possible to send these specimens and papers, I shall be glad to defray the expense of mailing them.

I shall be very happy to hear from you. Thank you.

Yours very truly,

David J. Rogers
Assistant Professor of Biology

DJR:mhn

September 9, 1952

Dr. John Aikman
Estacion Agricola del Ecuador (Pichilingue)
% American Consul General
Guayaquil, Ecuador

Dear Dr. Aikman,

Dr. Claude Horn, Office of Foreign Agricultural Relations, United States Department of Agriculture, has mentioned your name to me as having some interest on problems concerning some aspect of Manihot esculenta (M. utilissima). If you would be so kind as to assist me I should like to make a survey of the work done on any aspect on this species which you may be carrying on or which you may have completed. Furthermore, if you have any publications I would very much appreciate a reprint, if available, or at least a reference where I may find it. If you have any projected work in this particular field, I would like very much to hear of it.

All of this survey is intended to give me some assistance in outlining the project which I have concerning this species. Briefly, the project which I have in mind consists of (1.) making a taxonomic revision of the varieties of the species (2.) correlation of genetic data (3.) determine vitamin contents of varieties as indicators of divergence or convergence of the varieties.

It is my feeling that before any solid improvements can be made in the food producing capabilities of this group, we must know all of the varieties and their interrelationships. This project, I realize, is one of great complexity and will require the cooperation of as many people as can be interested in it. First of all, the dried material available in the United States herbaria is wholly insufficient. Firsthand field observation is of more importance and can be of much more value than observations of herbarium material.

I should like to know if you or your assistants are interested in such a cooperative project. If you are, what part of the project would interest you most and what facilities are available for such work?

If you know of others in the field, I would appreciate your mentioning this proposed project to them and also I should like to have their names and addresses.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

December 14, 1954

Dr. Ralph Allee
Director
Inter-American Institute of
Agricultural Sciences
Turrialba, Costa Rica

Dear Dr. Allee:

I have just been notified by the National Science Foundation of a grant for my work with yuca.

It is my plan at the moment to spend about two months (or six weeks) in Turrialba working with the plants that you have there.

I should like to know if there is any possibility of having a house for that period since I should like to bring my family along with me. If one of the staff members is planning to be away from, say, the first or second week in June to about the last week in July and you are not in dire need of housing for some of your staff members, we would be very happy to sublet for that time.

I am looking forward to my return to Turrialba and renew acquaintances there.

Sincerely yours,

David J. Rogers
Assistant Professor
of Biology

DJR/rp



INTER-AMERICAN INSTITUTE OF
AGRICULTURAL SCIENCES

AN ORGANIZATION OF THE GOVERNMENTS
OF THE AMERICAN REPUBLICS FOR THE
ADVANCEMENT OF THE AGRICULTURAL SCI-
ENCES THROUGH RESEARCH AND EDUCATION

TURRIALBA, COSTA RICA

20 May 1953

Dr. David J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Pennsylvania

Dear Dr. Rogers:

It was encouraging to learn from your letter of 30 April that you are going ahead with the manihot project. I trust that Leon will send us the project in the near future or at least will bring it with him when he arrives next month.

We will be looking forward to your arrival about the first of August of this summer. The disease transmission question is always important in making plant collections. It certainly should be taken up with the pathologists and quarantine people when you arrive. Except for such as the witches'-broom disease of cacao and similar virulent infections, we have usually managed to work out a safe technique.

Sincerely,

Ralph H. Allee
Director

April 30, 1953

Dr. Ralph H. Allee, Director
Inter-American Institute of Agricultural Sciences
Turrialba, Costa Rica

Dear Dr. Allee:

I must apologize for not keeping you informed of my progress and intentions concerning my research on the taxonomy of Manihot utilissima. I have been in fairly constant communication with Jorge Leon in St. Louis, and have sent him a write-up of the experimental work following the outline which you suggested to me in Ithaca on the first of January.

I asked Leon if he would amend my write-up and send it on to you. I do not know whether he has had the opportunity to complete the write-up and send it to you or not since he is very busy in completing his work for the Ph.D. I trust he has sent the work to you. If not, I would very much appreciate your notifying me and I shall rewrite the project and submit it directly to you.

I have received grants for this summer's work from the American Philosophical Society and from Allegheny College which will enable me to at least do the preliminary spade work. On this problem my plans for the summer are as follows: I will spend six weeks in Jamaica where I will be cooperating with the Department of Agriculture. They have promised me an experimental plot and one of their substations. At the end of the six weeks period or about the first of August, I expect to come to Turrialba to work with you there. While in Jamaica, I hope to establish my experimental plot in one of the drier areas in order to have a basis of comparison of growth of as many import varieties of yucca as we can get. I trust we can make some sort of comparison between the environmental relationships in Jamaica and Costa Rica with the various varieties.

The Department of Agriculture in Jamaica has already done some preliminary studies on the taxonomy of the local varieties which should give us some insight into the problem. One difficulty which has arisen already is the fact that a disease of yucca known as "Mosaic Disease", has caused the Jamaican people to put a ban on the importations

Dr. Ralph H. Allee--2--April 30, 1953

of Manihots from several areas. I do not know such limitations exist in Costa Rica, but should not like to incorporate some disease of the plant which may cause permanent damage to those varieties which are there.

Since, however, this summer's work is of exploratory nature, it will be well if I can find out during this period all of the restrictions which will be placed upon growing import varieties, and to learn something of actual agricultural procedures with the plants. I had hoped to get a much larger grant than I did, but since my funds are quite limited, I shall not be able to extend my travels into South America. If there are any questions which you have concerning this work, please feel free to ask me. I am looking forward to my visit in Costa Rica this summer.

Yours very truly,

David J. Rogers
Assistant Professor of Biology

DJR:vw

February 24, 1956

Dr. Edgar Anderson
Director Missouri Botanical Gardens
2315 Tower Grove Avenue
St. Louis 10, Missouri

Dear Dr. Anderson:

Thanks for sending the paper on the Philippines. Like most of those things you can't tell what they are dealing with because of the lack of good names for them.

I have received notice (as perhaps you also have) that I have received \$8,000, two years on the National Science Fund. Although this is a considerable reduction below what I asked, I think it will be adequate. As you know I plan to spend the summer here working up the data already collected. I hope you will be able to spend a few days here with us. Then the year following, if things go well I will get a sabbatical and make Turisiba my headquarters, from which I can make forays into South America. This is of course where all the money will go.

Hope things are well with you.

Yours,

C
O
P
Y

Head of Department:

Prof. A.S. Boughey Ph.D.

BOTANY DEPARTMENT
University College of the Gold Coast
Achimota, Gold Coast

30th November 1955.

Ref: UC/Bot. No.172/55-56

Dear Professor Anderson, *Edgar*

I am glad that you were able to give Dr. Harris the information for which he asked because he is studying the Garden Eggs (Solanum melongena) of West Africa in a manner which I know will appeal to your heart. I see in your letter to him that you have a research student who is interested in Manihot. Cassava (M.utilissima) is of course very widely grown here in the Gold Coast, forming one of the chief items of diet. It is very frequently infested with a virus but we do not know how much this affects the yield.

I do hope that you will keep us in mind if you consider sending this student abroad to make collections and studies. I am very anxious that this Department should play its part in international activities and we should be very happy to receive, for example, a Fulbright scholar.

Since I arrived I have interested myself chiefly in members of the Bombacaceae and some of the heterostylous taxa of the Rubiaceae. I do not suggest that hybridization is not of importance here but it does seem that the Flora of West Africa, being a very ancient one, does not produce as many examples of natural hybridization as some other parts of the world. There are however, a few interesting examples of interaction between native species and those which have been introduced. The herbaceous flora of the Accra Plains is predominantly made up of introduced species.

I hope that we can co-operate fully in our studies and in this connection, may I make a request? I have not received any of your reprints since about 1949. This is a very serious gap in my literature supply particularly now that I am away from the major libraries in the United Kingdom. I should be very grateful indeed if you could fill in the gap particularly as I wish to quote some of your recent papers to younger research workers who are just beginning the study of natural populations.

Best wishes for the Christmas and the New Year.

Yours sincerely,

(Signed) H. G. Baker

H. G. BAKER

Professor of Botany

September 23, 1955

Dr. Edgar Anderson
Director Missouri Botanical Gardens
2315 Tower Grove Avenue
St. Louis 10, Missouri

Dear Dr. Anderson:

I am sorry I have not been more prompt in making a report on my summer's activities. I took a vacation after I got back in order to get acquainted with my family again.

The summer's work was a mixture of success, taxonomically, and failures for the continuation of the program. On the last day I was in Jamaica I fell upon a beautifully differentiating set of characters which splits clones beautifully into two groups. The crazy thing about this is that from all observations I have made so far on these plants, this is a sharp break with not too much evidence of intermediates. After having worked with Stillingia I should have had enough sense to know that root characters are very significant in this family. For it is on the roots that this set of characteristics occurs for Manihot. What other characteristics go with this I don't know yet, but now that I've got my foot in the door I will be able to make some sort of crude classification.

The unsuccessful portions of my summer's activity were due to the lack of finances in one way or another. For example, I didn't allow myself enough living money and ran out before I was really ready to stop. The plants in Costa Rica had suffered because Jorge Leon just did not have enough funds or time to properly oversee the care of our clonal collection there. As a result only about thirty-five clones were in any kind of condition for study. He needs two men more to carry on proper care of these plants but the Institute does not have funds to hire them.

I only spent six days in Colombia most of the time getting on or off airplanes. I only visited three places: Palmira, Chinchina and Medellin. Here I met and talked to men who have done some agronomic work with Yuca, mostly local collections of clones. I have bumped into Harrar, Chief of Agriculture Services, of the Rockefeller Institute in Medellin. Although I didn't get to talk to him more than two minutes I thought I would get a chance to see him this fall in New York to see if they would not undertake backing this problem. What is your opinion of getting tied up with him?

In Jamaica they have done a pretty good job for me except that at one station the collections were nearly wiped out by a combination of causes: insects, drought and agronomists. However, it was at one of these stations where they had done a good job that I ran across this differentiating character. I feel quite obligated to them to continue this study more or less directing their agronomic studies for them. I tried to suggest to the Director of the Department of Agriculture that it was time for them to take over, but his argument was that none of his people had the know-how or real desire to continue such studies.

I think this a short run down on my activities for the year. I have applied to the National Science Fund for a second grant to continue this work, but did not include in my budget any travel funds since I must spend some time now with the collected material, and there is no use kidding myself - I can't get much research done during the winter. I hope this report will give you some clues as to what I'm up to. I'll be glad to have your opinion on support of the Rockefeller people.

Yours,

February 17, 1955

Dr. P. Bouffil,
Le Directeur du Centre de Recherches Agronomiques,
Bambey, Senegal, Africa.

Dear Dr. Bouffil:

My former student, Dr. David Rogers of Allegheny College, Meadville, Pennsylvania, is making an intensive study of the cultivated varieties of Manihot. Since he has been working intensively in Central America and the Carribbean he will be able to put you in touch with seed sources if he has none himself.

I am sure he will want to write you in any case, so I am taking the liberty of forwarding your letter to him.

Sincerely,

EA:ep

Edgar Anderson
Director

BAMBEY, le

29 JAN 1955

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DIRECTION GÉNÉRALE des SERVICES ÉCONOMIQUES

INSPECTION GÉNÉRALE DE L'AGRICULTURE

Centre de Recherches Agronomiques

DE

BAMBEY (Sénégal)

LE DIRECTEUR DU CENTRE
DE RECHERCHES AGRONOMIQUESA Monsieur le Docteur EDGAR ANDERSON
Missouri Botanical Garden
2515 Tower Grove AvenueOBJET: demande de
semences de Manioc.SAINT-LOUIS 10
Missouri (U.S.A.)

V/Réf.:

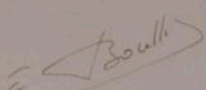
N/Réf.:

Cher Dr. Anderson,

Je me permets de vous écrire sur le conseil de Mr.
le Professeur WILLIAM O. Jones Podd Research Institute,
Université de Stanford, CALIFORNIE.

Je vous serais très reconnaissant de bien vouloir
me faire parvenir des graines de manioc (*Manihot utilis-*
sima) ou de m'indiquer l'adresse d'organismes que je
puisse contacter à ce sujet.

Avec mes remerciements anticipés, veuillez agréer
Docteur l'assurance de ma considération distinguée.


Dr. F. BOUFFIL*Hi, Dave**U.*

September 23, 1954

Dr. Edgar Anderson, Director
The Missouri Botanical Garden
2315 Tower Grove Avenue
St. Louis 10, Missouri

Dear Dr. Anderson:

Enclosed is a copy of the talk I gave at
Gainesville.

You recall that you had some information recorded
from Africa (leaf prints, I believe). I believe that I
am now in a position to make some use of that data. If
you will forward it to me, I shall be, of course, care-
ful with it and maintain it in good condition.

Yours,

DJR/rp
Enclosure

MISSOURI BOTANICAL GARDEN

2315 TOWER GROVE AVENUE

ST. LOUIS 10, MISSOURI

PREFECT 5567

June 24, 1954

Dr. David Rogers
"Maryfield," 60 Hope Road
Half-Way Tree P. O.
Jamaica, B. W. I.

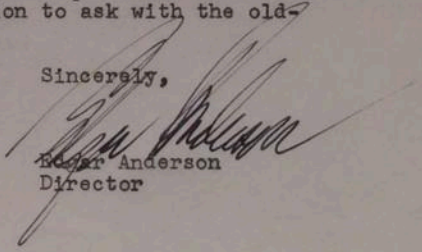
Dear Dave:

I was delighted with your letter and glad you have the stuff and know what to do with it.

I am confident with this beginning you should be able to make a good enough showing so that you can set up as a National Science Foundation grant for three years or so. You can count on my support and on Prof. Sauer's I am sure and I think it will go through. Sometime when I am in Washington I will see Erlanson about such a project and find out just what they can or cannot do.

If you are used to making ordinary herbarium specimens, making good inclusive herbarium specimens will seem like the most awful paddling. When you learn, however what can be done with a comprehensive set of good ones, then you discover that they are worth all the time and trouble and a good deal more. It is not merely that they are better: you can answer questions with them you are not even in a position to ask with the old-fashioned stuff.

Sincerely,



Roger Anderson
Director

EA:au

May 17, 1954

Dr. Edgar Anderson, Director
Missouri Botanical Gardens
2315 Tower Grove Avenue
St. Louis 10, Missouri

Dear Dr. Anderson,

Thanks a lot for the additional contribution.
I shall probably be leaving here about the eighth of
June for Jamaica and will stay there until approximately
the seventeenth of July. This I think will give me enough
time to learn how to make necessary specimens and will
give me enough material for some real work this time.

Any time that you wish to send the money, it will
be appreciated.

Sincerely yours,

DJR/p

ALLEGHENY COLLEGE
MEADVILLE, PENNSYLVANIA

May 11, 1954

Dr. Edgar Anderson, Director
The Missouri Botanical Garden
2315 Towergrove Avenue
St. Louis 10, Missouri

Dear Dr. Anderson:

I heard by indirect channels (specifically through Pavcek whom I met ^{in Panama}) that you had been appointed director. Let me add my congratulations to the long string which I know I have also ~~incurred~~ ^{accumulated}.

Concerning my problem, as yet I have had no success in getting together any more funds. Although I have blanketed the country side with letters and applications, it is just too late to make any applications. If you could find any where, any of the \$200 for me, I will be able to make a five or six weeks sojourn in Jamaica and will call on Jorge to take care of the Costa Rican planting for at least another year. I believe I will be able to make it to Jamaica for the amount you sent, plus an additional \$200. I am still [^] working on our own private sources here.

I shall be pleased to hear from you as soon as possible, since time is getting very close to when I must decide upon this summer's work. If it is impossible to send me more funds, I shall spend the time working on material on hand and perhaps work with some of the nomenclatorial problems, perhaps in Washington.

I trust this finds you and your family well. We are waiting impatiently for spring here which has not yet arrived.

Sincerely,

Dane

DJR:aem

*I can let you have
\$250.00
How soon do you
want it?
24.*

May 11, 1954

Dr. Edger Anderson, Director
The Missouri Botanical Garden
2315 Towergrove Avenue
St. Louis 10, Missouri

Dear Dr. Anderson:

I heard by indirect channels (specifically through Pavcek whom I met) that you had been appointed director. Let me add my congratulations to the long string which I know I have also incurred.

Concerning my problem, as yet I have had no success in getting together any more funds. Although I have blanketed the country side with letters and applications, it is just too late to make any applications. If you could find any where, any of the \$200 for me, I will be able to make a five or six weeks sojourn in Jamaica and will call on Jorge to take care of the Costa Rican planting for at least another year. I believe I will be able to make it to Jamaica for the amount you sent, plus an additional \$200. I am still working on our own private sources here.

I shall be pleased to hear from you as soon as possible, since time is getting very close to when I must decide upon this summer's work. If it is impossible to send me more funds, I shall spend the time working on material on hand and perhaps work with some of the nomenclatorial problems, perhaps in Washington.

I trust this finds you and your family well. We are waiting impatiently for spring here which has not yet arrived.

Sincerely,

DJR:sam

April 5, 1954

Dr. Edgar Anderson
The Missouri Botanical Garden
St. Louis 10, Mo.

Dear Dr. Anderson:

Thanks muchly for the check. I know that you are as disappointed as I am that such a project cannot get more support.

However, rather than spend any time on worrying about it, I immediately set to work on two sources which may provide additional support. Let me see how these come out before you have to go any farther into your own research funds. The first effort is right here on our campus. I have a real champion in Bugbee, and he's going all out to get additional funds from the college. The president is sympathetic, and I have more or less tossed the problem in his lap.

The other effort is with Claud Horn of the Office of Foreign Ag. Serv., USDA. I've written him for his suggestions, telling him what I have and what I need. He may come up with something real.

In the meantime, I've thought of curtailing my activities quite a bit this summer, rather than spend the small amount I have. The only thing I don't want here is that I've made commitments in Jamaica, and they have gone ahead with the plans we set up last summer. It will be difficult for them to continue such work in my continued absence. In addition Jorge Leon reports that things are growing in great shape in Turrialba, and he's anxious for my return.

We'll see what happens within the next two or three weeks. In the meantime, be assured that I appreciate your efforts in my behalf.

Yours,

MISSOURI BOTANICAL GARDEN

2315 TOWER GROVE AVENUE

ST. LOUIS 10, MISSOURI

PROSPECT 5567

March 19, 1954

Dr. David Rogers
Allegheny College
Meadville, Pennsylvania

Dear Dr. Rogers:

Dr. Edgar Anderson requested that I send you a set of his inclusive herbarium specimens of *Manioc*. These are sent as a gift to you.

This set of specimens illustrates the technique he uses in preparing material for critical study.

Sincerely,

Howard C. Reynolds

Howard C. Reynolds

Ass't. to Dr. Anderson

February 18, 1954

Dr. Edger Anderson, Assistant Director
The Missouri Botanical Garden
2315 Tower Grove Avenue
Saint Louis 10, Missouri

Dear Dr. Anderson:

I hope it doesn't seem that I'm getting a little over eager to find out just what sort of plans you have for me this coming summer. The reason that I ask about it is that I may have an opportunity to work in a program this summer, with one or two different possibilities. One is a research program concerning right-of-way brush control for power companies, (this is very indefinite) and the other, more definite possibility, is teaching nurses. The latter of these two would occupy my time for only seven weeks of the summer period; the other could be organized to occupy no more time than this. This would still give me time to spend about six weeks in either Jamaica or Costa Rico, but would not allow time for both.

I am still working out details with the specimens which you saw, plus those from Costa Rico, according to the suggested method of attack which you made last November. Nothing startling has yet appeared.

I hope that Mrs. Anderson is well again, and that everything is going smoothly for you.

Sincerely,

DJR/dls

October 2, 1953

Dr. Edgar Anderson
Missouri Botanical Garden
2315 Tower Grove Avenue
St. Louis 10, Missouri

Dear Dr. Anderson:

Your letter yesterday shocked me into answer. I intended to write before some sort of a report. The enclosed paper is a summary of the general activity of my summer. The problem as yet has no real basis because the varieties represent quite a bit of variation. I don't know how much of the total range it represents.

I found that Jorge had collected most of the variations in Costa Rica. As indicated in the report, I don't think I got the more primitive varieties of the native Indians of Costa Rica.

I am in the process at the moment of making applications for next summer's work from the Guggenheim Foundation. I should probably make other applications in case that doesn't go through.

If it is at all possible for you to take a day or two out of your trip to Philadelphia. I would be happy to meet you in Pittsburgh and bring you up to Meadville. If this isn't possible, then I can bring all my material to Pittsburgh with me and we might take a few hours working over it at the Carnegie Museum. However, I hope you will find time for a day or two with us.

Yours,

MISSOURI BOTANICAL GARDEN

2315 TOWER GROVE AVENUE

ST. LOUIS 10, MISSOURI

PROMPT 5567

September 29, 1953

Dr. David Rogers
Botany Department
Alleghany College
Meadville, Pennsylvania

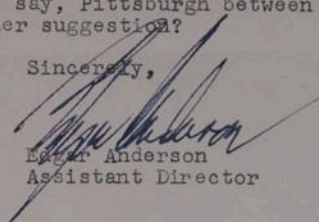
Dear Dave:

I heard a little about your doings second-hand. I now have quite a sheaf of crude drawings and data from Professor Jones. As might be expected they are mostly from government stations but a few of them are actually from villages. Let me know when you want to borrow them and I will send them on!

How is your project making out? As soon as you are into it, I would like to work with you and your data and make an estimate by my method of what the basic taxa might be like.

I have got to lecture in Philadelphia in a couple of months, could you meet me in, say, Pittsburgh between trains? Or have you some other suggestion?

Sincerely,



Edgar Anderson
Assistant Director

EA:au

MISSOURI BOTANICAL GARDEN

2315 TOWER GROVE AVENUE

ST. LOUIS 10, MISSOURI

PERSPECT 5567

March 31, 1953

Dr. David Rogers
Allegheny College
Meadville, Pa.

Dear Dave:

Yesterday, Jorge and I had a visit from Dr. W.O. Jones, an economist from Stanford University, who is on his way to Africa to look into the Cassava situation there. He has promised to make some field records to help us in working out the distribution of the cultivated clones. He is going to make his records directly on typewriter paper for your work, as well as ours. I thought you should have a copy of the suggestive information. It is to be as follows:

Manihot schedule.

March 30, 1953

Jones-Leon-Anderson

Number of collection

Leaf tracing of typical leaf indicating
slant of veins at mid-leaf for one
leaflet.

Cross section of root, with notes on color
inside and outside.

Is fruit smooth or ribbed (this can be de-
termined soon after flowering, even if
the plant does not set seed).

The name of the place.

Status and tribe of the grower.

Kind of garden or field.

Local name of the variety.

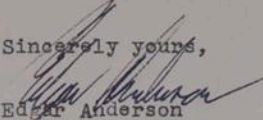
Its main use.

How poisonous.

When planted and harvested.

How are you getting along for funds? I did not go to Central America this winter, as I had planned and there is more in my budget than I had hoped. If you get stuck I can probably let you have enough for round trip air fare to Costa Rica.

Sincerely yours,


Edgar Anderson
Assistant Director



UNITED STATES DEPARTMENT OF AGRICULTURE
FOREIGN AGRICULTURAL SERVICE
OFFICE OF AGRICULTURAL ATTACHE

American Embassy
Bogotá, Colombia

October 18, 1955

Mr. David J. Rogers
Associate Professor of Biology
Allegheny College
Meadville, Pennsylvania

Dear Mr. Rogers:

Your letter of ^{August} April 29th arrived just after the former Agricultural Attache left for the United States after being in Foreign Service for nine continuous years.

I regret greatly that I have only now gotten down to your letter in the pile of accumulated correspondence. Yesterday the Director of Sanidad Vegetal stated, as a result of a personal call at his office, that the export of the yuca plants for experimental purposes could be handled very simply. I have just telephoned the necessary steps to Dr. Ramos Nuñez in Palmira as follows:

1. He should prepare a "certificate" in which he would simply state that the yuca cuttings are in a very good sanitary condition.
2. Address that certificate to the Minister of Agriculture, but mail that certificate to me here in the American Embassy so that I can take it personally to the Sanidad Division and obtain the Government certificate which I was told would be given me promptly. I would then mail it to Dr. Ramos Nuñez.
3. Dr. Ramos Nuñez then would have the official certificate needed for him to mail the cuttings directly to Turrialba.

I was disappointed, as you probably will be, by Dr. Nuñez's reply that he did not have time to take the above listed steps and send the cuttings direct to Costa Rica.



UNITED STATES DEPARTMENT OF AGRICULTURE
FOREIGN AGRICULTURAL SERVICE
OFFICE OF AGRICULTURAL ATTACHE
Bogotá, Colombia

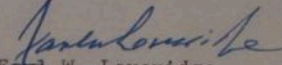
2

Mr. David J. Rogers

If there is anything further I can do , let
me know.

I assure you prompt action will be taken
now that we are on an operating basis again.

Sincerely yours,


Earl W. Loveridge
Agricultural Attache

August 29, 1955

Agricultural Attache
American Embassy
Bogota, Colombia

Dear Sir:

For the past three years, I have been making a systematic study of the varieties of "yuca", Manihot utilisima. So far, my work has been confined to the varieties which exist in Central America and in Jamaica, but I have approached a point now where I should like to expand this work to include most of the South American material.

My method of study is to grow the varieties together in "museum" plots on the grounds of the InterAmerican Institute of Agricultural Sciences at Turrialba, Costa Rica, and to compare the similarities and differences under similar environmental conditions. We have at present most of the varieties from Central America and Mexico, and I have just completed examination of this material.

Since these plants are propagated by cuttings almost 100%, the problem of viable material reaching Costa Rica in sufficient time for growth is very great. About two weeks is the length of time that the cuttings remain viable. One valuable shipment from Paraguay last year was completely lost due to the length of time needed to clear customs and quarantine officers. Actually the plants had been approved for shipment, but many delays prevented their prompt arrival in Costa Rica.

I spent two days in July with Dr. Ramos Nunez at the Agricultural Experiment Station in Palmira. He would be happy to send cuttings of his collections of yuca (representing most of the varieties of the Cauca Valley) to Costa Rica, but said that because of so much difficulty in clearing his own customs, he doubted that he could get the cuttings away in sufficient time. At this point, he suggested that I contact you, or one of your assistants, to see whether it would be possible for you to expedite the shipment of such material for him.

I am not sure what the procedure to enlist your aid is, but would like to know if it is possible for you to give us some assistance in this problem. If you can be of assistance, I will appreciate hearing from you, and will notify Dr. Ramos immediately since his plants are just at the right state for shipment, either now, or during the next two months.

Looking forward to hearing from you,

Sincerely yours,

David J. Rogers
Associate Prof. of Biology

September 4, 1956

Dr. Ted. P. Bank II
Hokkaido Expedition
South 16, West 12
c/o Nazarene Keckei
Sapporo, Hokkaido, Japan

Dear Dr. Bank:

I accept with pleasure your invitation to become a member of the subcommittee on ethnobotany of the Standing Committee on Pacific Botany of the Pacific Science Association.

I will be pleased to learn of my duties at your convenience. At the moment, the only name that comes to mind as a possible contributor to the meetings in Bangkok is Dr. Jorge Leon of the Interamerican Institute of Agricultural Sciences, Turrialba, Costa Rica, who could make contributions in several areas, I feel sure. Among them, his specialty is the genus Inga, but he knows considerable about coffee, and other tropical crops.

Sincerely yours,

David J. Rogers

Copy to Univ. of Mich.

February 13, 1958

B. D. A. Beck, Esq.
Department of Agriculture
Ibadan, Nigeria

Dear Sir:

If available, I would appreciate a reprint
of your article in *Tropical Agriculture*, 35:59.
1958. entitled "A Preliminary Investigation on
the Effect of Mosaic Virus on Manihot utilissima
Pohl. in Nigeria."

Sincerely yours

David J. Rogers
Editor, ECONOMIC BOTANY

DJR:MDF

April 19, 1956

Dr. F. Bouffil
Le Directeur Du Centre
De Recherches Agronomiques
Bambey (Senegal)
L'Afrique Occidentale Française

Dear Dr. Bouffil:

Thank you for your letter of April 12, 1956. I should like to know if you would like to receive a small packet of open, pollinated seeds of Casseva which I collected in Jamaica in July, 1955. These seeds are from a mixture of varieties, and I have no certification as to their viability. As I understand it Manihot seeds are typically of low viability. I shall hold this package until receiving word from you whether these seeds are desirable.

Will you please send instructions or permission for entry of these seeds into Bambey?

I will be very pleased to have cuttings of your varieties of Casseva sent to Dr. Jorge Leon, I.I.A.A., Turrialba, Costa Rica. I shall be happy to reimburse you for whatever expenses are involved in this shipment. The cuttings must of course, be sent by air in order to arrive in a viable condition.

Concerning your request for seeds of other material, I am sorry I have none available. One suggested source which you may not have tried is The Agricultural Experiment Station; University of Florida, Gainesville, Florida. I think that you will be able to get some of these seeds from them. Thank you again for your letter. I hope to hear from you soon.

Sincerely yours,

David J. Rogers
Associate Professor of Biology

M.T./C.E.J.

GOUVERNEMENT GENERAL
DE

L'AFRIQUE OCCIDENTALE FRANÇAISE

DIRECTION GÉNÉRALE des SERVICES ÉCONOMIQUES

INSPECTION GÉNÉRALE DE L'AGRICULTURE

Centre de Recherches Agronomiques

de
BAMBEY (Sénégal)

OBJET :

Your/Réf. : February 22, 1955.

N/Réf. :

N° 01370/LP

BAMBEY, le

12 AVR 1956

195

LE DIRECTEUR DU CENTRE
DE RECHERCHES AGRONOMIQUES

A Professor DAVID J. ROGERS
Associate Professor of Biology
Alleghany College

=MEADVILLE-PENNSYLVANIA=

U . S . A .

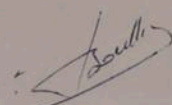
Dear Sir,

Reference to your letter February 22, 1955 I am happy to write you that it will be possible to send you cuttings of some varieties from my cassava collection next April or May after harvesting.

I am always much interested by seeds of your collection of Jamaica and Costa-Rica cassava Strains. Would you have other material from these countries such as Cowpea, Tepary, Hyacinth bean (Dolichos Lablab)?

We have no print concerning cassava from C.R.A. BAMBEY except a short one by M.TARDIEU.

Sincerely Yours,


Dr. F. BOUFFIL

M.B./C.E.J.

GOVERNEMENT GENERAL
DE
L'AFRIQUE OCCIDENTALE FRANÇAISE

DIRECTION GÉNÉRALE des SERVICES ÉCONOMIQUES

INSPECTION GÉNÉRALE DE L'AGRICULTURE

Centre de Recherches Agronomiques

DE
BAMBEY (Sénégal)

OBJET: Remerciements suite
demande semences Manioc.

V/Réf.: v/lettre 22/2/55.

N/Réf.:

00965 /LP

BAMBEY, le -8 MARS 1955 195

LE DIRECTEUR DU CENTRE
DE RECHERCHES AGRONOMIQUES

A Docteur David J. ROGERS

Allegheny College

MEADVILLE (PENNSYLVANIA)

U.S.A.

Cher Docteur ROGERS,

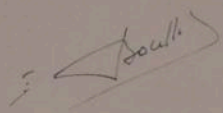
Suite à votre lettre citée en référence je vous adresse mes remerciements les plus vifs pour votre offre très aimable et pour les renseignements que vous avez bien voulu nous donner.

Nous écrirons sur votre conseil au Docteur JORGE LEON.

Nous ne pouvons vous fournir avant un an des clones de Manihot utilissima étant donné que nous sommes seulement au stade : création de collection.

Nous nous empresserons de vous donner satisfaction dès que possible.

Veuillez agréer Cher Docteur ROGERS, l'assurance de ma considération distinguée. (R)


Dr. F. BOUFFIL

February 22, 1955

Dr. F. Bouffil
Le Directeur du Centre de Recherches Agronomiques
Bambey, Senegal, Africa

Dear Dr. Bouffil:

Dr. Edgar Anderson, to whom you wrote concerning seeds of Manihot utilisima, has referred your letter to me.

For the past three years I have been working with the Central American and West Indian clones of Manihot utilisima and have collected quite extensively in Jamaica and in Central America. At the moment I have museum plots of most of the varieties growing in Jamaica and a good representation of the varieties occurring in Central America.

Until last year I did not have an opportunity to collect seeds from these plants and those which I now have I fear would not be satisfactory for your purposes. It is very likely that at the end of July or August of this year I will be able to collect from my museum plots a fairly good supply of seeds from Jamaica. I am not sure whether the plants growing in Costa Rica (which is my second station) are at the moment sufficiently mature to produce fruit and seed. You may be interested, however, in writing directly to Dr. Jorge Leon whose address is: The Inter-American Institute of Agricultural Sciences, Turrialba, Costa Rica; and if he has any plants which are mature at this time, there may be a supply there. If you will mention to him that I suggested that you write to him, perhaps he will permit some of the seeds to be sent to you.

Since I have been interested in the variation of Manihot utilisima, I should like to know if you have in your station any clones of Manihot utilisima which could be exchanged. We would be very happy to have any of your material incorporated into our museum plots in Costa Rica.

In the event that no seeds are presently available from Costa Rica, I will send to you whatever seeds I can possibly collect this coming August in Jamaica. I trust that you will be successful in getting some seeds at an earlier date.

I will be happy to hear of your work with cassava and to have any reprints of articles which you may have had published.

Sincerely yours,

David J. Rogers
Associate Professor of Biology

DJR/rp

THE INSTITUTE OF INTER-AMERICAN AFFAIRS

FOOD SUPPLY DIVISION

AZARA ESQ. ANTEQUERA
ASUNCION - PARAGUAY

October 26, 1953

Mr. David J. Rogers
Inter-American Institute of Agriculture
Turrialba - Costa Rica

Dear Dr. Rogers:

You are probably wondering why we have not sent you the Manihot utilisima that we promised to mail to the Institute at Turrialba. The reason is that the collection was already too far along in developement when we were able to pack it. Most of the varieties would not have grown on arrival. We have therefore decided to wait until next fall. At that time we feel the collection will arrive in good condition.

Sincerely

Charles Breitenbach

Charles Breitenbach
Plant Breeder

September 14, 1953

Dr. Charles Breitenbach
The Institute of Inter American Affairs
Azara Esq. Antequera
Asuncion, Paraguay

Dear Dr. Breitenbach;

Your letter of August 19 was forwarded to me from Costa Rica. I am very pleased to have your cooperation in sending varieties of Manihot utilisans to Turrielba. With regards to the certification, I do not think any special certificates will be needed to get the plants through the Costa Rican plant quarantine.

It is certainly wise to notify Dr. Jorge Leon in advance of their arrival since the plants could sit in the office of the Department of Agriculture for some time before any action was taken with them.

Dr. Wellman is certainly a great assistance to me on this project since he has offered his services to take care of any diseased plants which might show up. He will be a prime factor in the success of the whole program.

Thanks again for your fine cooperation in this project. My plans for next year are to make a visit in your direction at which time I hope to have the opportunity of meeting you.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

DJR/emp

THE INSTITUTE OF INTER-AMERICAN AFFAIRS

FOOD SUPPLY DIVISION

AZARA ESQ. ANTEQUERA
ASUNCION - PARAGUAY

August 19, 1953

Mr. David J. Rogers
Inter-American Institute of Agricultural Sciences
Turrialba - Costa Rica

Dear Mr. Rogers:

I am glad to hear that it has been decided to establish the international nursery of Manihot utilissima in Turrialba. I certainly believe that this crop is to play an ever increasing role in tropical agriculture and for that reason I consider the Institute at Turrialba a good choice for such a nursery.

Within the next month we will prepare you representative sample cuttings of the varieties in our collection. This material will be selected as you have suggested and sent via air cargo to Dr. Jorge Leon. We will send a previous letter to Dr. Leon so as to inform him on what day and what plane the cuttings will arrive. If any special certificates are needed to get this material through the Costa Rican Plant Quarantine I wish you would let me know immediately.

You will be interested to know that Dr. Wellman has written me for information on the work we are doing on Manihot in Paraguay. I am answering his letter today.

Sincerely

Charles Breitenbach

Charles Breitenbach
Plant Breeder

August 2, 1953

Dr; Charles Breitenbach
Ministerio de Agricultura Y Ganaderia
Servicio Tecnico Interamericano de Cooperacion Agricola
Asuncion, Paraguay

Dear Dr; Breitenbach:

Please forgive my Spanish typewriter; Too many letters
in the wrong places; .

I trust you will recall my previous letter inquiring whether
it was possible to obtain cuttings of Manihot utilisima to
be incorporated into a museum plot here in Costa Rica.
If possible, I should like to have whatever material you can
send at your earliest convenience;

The materials should be sent to Dr; Jorge Leon, who will
be in charge of planting the cuttings and will cooperate with
me in the taxonomic study of the varieties;

It is not our desire to receive all of the named varieties,
but rather to have those which show the widest range of variation;
In our problem, the primary interest is to determine the total
range of variation, rather than to consider the economic ~~an~~ value
or the starch producing capacities of the varieties; once the
range of variation has been established, then we can begin to
concentrate on which varieties are best for certain purposes;

If possible, we should like to have at least six cuttings,
each not less than 8 to 10 inches long, either cut to these
dimensions or sent in longer sections, whichever is most
practical for you; Of course, these materials would have to
be sent by air, and only those plants which seem free of disease.
Although it is not an essential requirement, if you could
supply the local name of each variety sent, plus whether of the
so-called "sweet" or "bitter" type; we would appreciate it very
much.

I trust that this request will not cause you too much bother.
We shall be grateful for whatever aid you may give us;

Yours very truly;

David J. Rogers

May 14, 1953

Mr. Charles Breitenbach
Ministerio de Agricultura Y Ganaderia
Servicio Tecnico Interamericano De Cooperacion Agricola
Asuncion, Paraguay

Dear Mr. Breitenbach:

Thank you kindly for your letter of May 5. It is certainly a pleasure to hear that you are so far along in the studies with Manihot.

I am planning to leave for Jamaica the first of June and hope to be able soon thereafter to begin the experimental plots. I shall contact you when we will be ready and when we should like to have viable material for the work there.

Thank you again for your letter. Hoping to be in contact with you soon.

Yours very truly,

David J. Rogers
Asst. Professor of Biology

DJR/amp



MINISTERIO DE AGRICULTURA Y GANADERIA

SERVICIO TECNICO INTERAMERICANO DE COOPERACION AGRICOLA

TELEFONOS: 429 - 8298
AZARA Y ANTEQUERA
ASUNCION - PARAGUAY

May 5, 1953

Mr. David J. Rogers
Assistant Professor of Biology
Department of Biology and Geology
Allegheny College
Meadville, Pennsylvania
U. S. A.

Dear Mr. Rogers:

Your letter of March 5, directed to Mr. Crocker has been brought to my attention. Dr. Michalowski of whom you write has made considerable study of Manihot utilisima in Paraguay. His work is presently being prepared for release in June. Just as soon as it is ready we shall send you a copy.

The publication deals with the classification of a large group of species. It suggests their probable evolution and the peculiar characters of the outstanding types.

I am glad to hear that you are working with this crop and expect to establish experimental plots for its study in Jamaica and in Costa Rica. Manihot utilisima is one of the most important crops in the human diet, yet perhaps one of the least studied.

We are maintaining a collection of native and introduced varieties here and will be glad to cooperate in sending you viable material just as soon as your experimental plots are ready.

Sincerely,

Charles Breitenbach

Charles Breitenbach
Plant Breeder

April 22, 1954

Dr. Louis Frank, Director
Food Supply Division
Institute of Inter-American Affairs
Asuncion, Paraguay

Dear Dr. Frank:

Through Dr. Robert C. Moncure of the U. S. D. A. Foreign Agricultural Service, I have learned that you hope to have some copies of the work done by Dr. Michael Michalowski entitled "Album de las Mandiocas Paraguayas." If it is at all possible, I should like to receive a copy of this work since I have been very interested in the systematic study of mandioca varieties in general. It seems to me that Dr. Michelowski comes closer to doing the sort of work I am interested in than any other, and I shall be very happy to see his work.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

DJR:mhn

THE INSTITUTE OF INTER-AMERICAN AFFAIRS

FOOD SUPPLY DIVISION

ASACRA ES-1, ANTEQUERA
ASUNCION - PARAGUAY

December 29, 1953

Mr. Robert C. Moncre
Agriculturist, Technical Assistance
Foreign Agricultural Service
U.S. Department of Agriculture,
Washington 25, D.C.
U. S. A.

Dear Mr. Moncre:

Thank you very much for your letter of December 3, in which you express an interest in the "Album de las Mandiocas Paraguayas", by Dr. Michael Michalowski, of STICA, and which came to your attention through Miss Elsie Marclay of the Institute of Inter-American Affairs.

Due to the fact that a very small number of copies of this work were micrographed, we have run out of copies. We are in the process of making a second printing of this work, which consists mainly in a botanical description of mandiocas varieties found in Paraguay.

In view of your interest in this crop, however, we are enclosing two copies of our Bulletin N° 160 "La Industria de la Mandioca", written by Mr. Julio C. Cristaldo, of our Economics Section, and which contains some references to Paraguayan mandiocas.

We are placing your name on our mailing list for future shipment of copies of the Album when these become available.

Very truly yours,

Louis Franke
Director

November 14, 1952

Dr. E. G. Brieger
Escola Superior de Agricultur
Piracicaba, Est. Sao Paulo
Brazil

Dear Dr. Brieger:

Dr. Hugh Cutler of the Chicago Natural History Museum has told me that you could possibly give me some information on the present status of the taxonomy of Manihot.

I am trying to find out as much as possible concerning what has been done on the systematics particularly of M. esculenta, in order to outline a taxonomic research program. Since I plan to come to Brazil to make some specimens of Manihot, I should like to know which are the most important centers of Brazil which should be visited.

If you have any work which you could tell me of in respect to M. esculenta and its varieties, I should be very happy to hear about it.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

DJR/amp

NOV 14 1952

DEPARTMENT OF AGRICULTURE

PACC:JDA

No. 15/52.

Georgetown,
British Guiana.

17 October, 1952.

Dear Sir,

I have to acknowledge receipt of your letter of 10th September, 1952, concerning your project on Manihot esculenta. This is a very interesting project indeed, and we would like to render you assistance on it, but our staff is at present too deeply engaged on other research problems of greater priority to divert their attention.

I believe the Departments of Agriculture in Jamaica and Trinidad would be interested in your project, and I suggest you contact the Directors in those countries.

Yours faithfully,

A. D. Cleave

Acting Director of Agriculture.

David J. Rogers, Esq.,
Assistant Professor of Biology,
Allegheny College,
Meadville,
Pennsylvania,
U.S.A.

September 10, 1952

Director
Department of Agriculture
Georgetown, British Guiana

Dear Sir:

Dr. Claude Horn, Office of Foreign Agricultural Relations, United States Department of Agriculture, has mentioned you name to me as having some interest on problems concerning some aspect of Manihot esculenta (M. utilisissima). If you would be so kind as to assist me I should like to make a survey of the work done on any aspect on this species which you may be carrying on or which you may have completed. Furthermore, if you have any publications I would very much appreciate a reprint, if available, or at least a reference where I may find it. If you have any projected work in this particular field, I would like very much to hear of it.

All of this survey is intended to give me some assistance in outlining the project which I have concerning this species. Briefly, the project which I have in mind consists of (1.) making a taxonomic revision of the varieties of the species (2.) correlation of genetic data (3.) determine vitamin contents of varieties as indicators of divergence or convergence of the varieties.

It is my feeling that before any solid improvements can be made in the food producing capabilities of this group, we must know all of the varieties and their interrelationships. This project, I realize, is one of great complexity and will require the cooperation of as many people as can be interested in it. First of all, the dried material available in the United States herbaria is wholly insufficient. Firsthand field observation is of more importance and can be of much more value than observations of herbarium material.

I should like to know if you or your assistants are interested in such a cooperative project. If you are, what part of the project would interest you most and what facilities are available for such work?

If you know of others in the field, I would appreciate your mentioning this proposed project to them and also I should like to have their names and addresses.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology



DEPARTAMENTO DE NARIÑO

SECRETARÍA DE AGRICULTURA
Y GANADERÍA

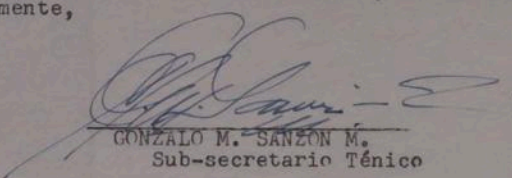
Pasto, marzo 18 de 1.955

Señor Don
GUIDO GUAYASAMIN
Meadville

Para resolver la consulta que Ud. formula al señor Delfín Guayasamín Corredor, en relación con las conexiones que existen actualmente en esta ciudad para viajar a la región del Putumayo, me permito manifestarle que son las mismas que existían hace algunos años, es decir con el aprovechamiento del servicio de buses y automóviles que viajan a Mocoa, Puerto Asís e intermedios. De tal suerte que el Dr. David Rogers puede dirigirse a ésta Dependencia con el fin de proporcionarle mayor información sobre el particular.

Respecto al estudio emprendido por el Biólogo Dr. Rogers, y el cual se relaciona con los experimentos que está llevando a cabo con la yuca silvestre, quiero manifestarle que la Secretaría de Agricultura y Ganadería del Departamento tiene un Profesional Agrónomo radicado en la población de Mocoa, y cual ya ha recibido instrucciones sobre el particular.

Sin más por el momento, me suscribo de Ud. atentamente,


GONZALO M. SANZÓN M.
Sub-secretario Técnico

GMS/onc.

April 19, 1956

Bureau of Entomology and Plant Quarantine
Department of Agriculture
Washington 25, D.C.

Gentlemen:

Will you please send me full details on requirements
and restrictions for sending viable seeds of Manihot utilisima
(Cassava) to Bamby (Senegal), French West Africa.

Sincerely yours,

David J. Rogers
Associate Professor Biology

PIONEER HI-BRED CORN COMPANY
DEPARTMENT OF PLANT BREEDING
JOHNSTON, IOWA

August 3, 1956

Dr. David J. Rogers
Allegheny College
Meadville, Pennsylvania

Dear Dave:

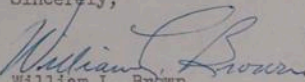
I have not seen any Fulbright literature for quite some time and for that reason do not know what is available in the way of research opportunities in the West Indies. However, I think your idea of spending some time in Trinidad is an excellent one and I am sure that that would be a very desirable place to grow and study cassava.

For information on openings in the West Indies, and particularly in Trinidad, I would suggest you write the Conference Board of Associated Research Councils, Committee on International Exchange of Persons, 2101 Constitution Avenue, Washington 25, D.C. They will send you application forms and should be able to advise you as to whether or not openings are available at the Imperial College. If nothing is listed for the Imperial College at the present time, I feel reasonably sure that some arrangements could be made for an opening there by working through the college administration. If you are really interested and if there is a possibility of your going there, I would suggest you write Mr. N. W. Simmonds, Department of Botany, Imperial College of Tropical Agriculture, Trinidad. If for any reason you do not hear from him in a reasonable time, I would then suggest that you write Mr. Jake Wilson and the Principal at the same address. Simmonds is a very able person, he is a first rate geneticist and cytologist as well as a rather good taxonomist and knows a lot about tropical plants. I think you would enjoy spending some time with him. I suppose Wilson is now head of the Botany Department there, although I am not sure of this.

Should this work out for you, I would be glad to have you write me again and I think I can give you some pointers that would be useful relative to places to live, and other people on the island whom you might want to get in touch with.

With kind regards, I remain

Sincerely,


William L. Brown
WB:ps

I believe Fulbright awards are made for periods of not less than one academic year. However, I do not believe it is required that one spend all of this time at one place.

February 24, 1956

Dr. Jose M. Capinpin
Department of Agricultural Botany
College of Agriculture
University of Philippines
Leguna, Philippine Islands

Dear Dr. Capinpin:

Dr. Edgar Anderson has called to my attention your paper on Floral Biology and Cytology of Manihot utilisima published in the Philippine Agriculturist, November, 1955. Since I have been working on the taxonomy of this species I am very interested in the work you have done and would appreciate very much a reprint of this paper.

Sincerely yours,

David J. Rogers
Associate Professor Biology

THE UNIVERSITY OF WISCONSIN
MADISON 6

DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY
STERLING HALL

March 22, 1956

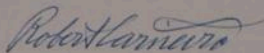
Dr. David J. Rogers
Department of Biology
Allegheny College
Meadville, Pennsylvania

Dear Dr. Rogers:

Thank you very much for your recent letter concerning the literature on manioc. I did not have a reference to any of the last three sources that you cited. I think they will be most useful to me in my work on manioc cultivation in South America.

I would certainly appreciate hearing from time to time of any publications of your own that may come out.

Very sincerely,



Robert Carneiro
Instructor in Anthropology

RC:las

March 8, 1956

Mr. Robert Carneiro
Department of Sociology and Anthropology
University of Wisconsin
Madison 6, Wisconsin

Dear Mr. Carneiro:

Please forgive me for having delayed so long in answering your letter of February 8th. It is certainly a pleasure to hear that you have these interests in Manioc. You have already discovered that the literature on Manioc is scattered, and I can offer you very little more than my sympathy. Studies of Manioc usually turn up as a sort of a parenthetic expression in some other work, and I am sure you will find this very true from the standpoint of the ethnology.

Only a few good places to look can be suggested; for example, the publications of the Bureau of Ethnology, the Smithsonian Institute should have good data for you, but probably under the heading of some specific Indian tribe. Dr. Sauer's father has written a fairly useful summary in Bull. 143, Handbook S. Am. Indians. Vol. 6. pp. 487-543. You might be interested in his comments on Manioc in Agricultural Origins and Dispersals, the American Geographical Society, New York, 1952. One or two other places you may look are as follows:

- 1) Tastevin, R. P. C. "Preparation et utilisation du Manioc dans la region du moyen Amazone et de ses affluents" L' Ethnographie nouvelle serie no. 49, 1954. pp. 53-59.
- 2) Furness, William Henry 3rd, Home Life of the Borneo Headhunters, Phila. 1902. p. 176 on preparation of tapioca in Borneo.
- 3) Ciferri, Raffaele, "Saggio di classificazione delle razze di Manioca (Manihot esculenta, Crantz)" in Relazione e Monografie Agrario-Coloniale, No. 44, Inst. Agric. Coloniale Italiano, Florence, Italy, 1938. 60 pp. (This is the latest work on the taxonomy of the group and only works with certain Antillean plants.)

These may get you started. I shall keep your request in mind and if further information is available I'll send it on to you. I am still in the process of making an up-to-date bibliography, but it will be some time before it is complete.

Sincerely yours,

David J. Rogers
Associate Professor Biology

The University of Wisconsin

DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY
STERLING HALL



February 8, 1956

Madison 5

Dr. David J. Rogers
Department of Biology
Allegheny College
Meadville, Pennsylvania

Dear Dr. Rogers:

I recently learned from Dr. John Sauer that you have done a good deal of work with manioc, and that in fact you are probably the leading expert in this country on that plant.

I recently carried out field work among the Kuikuru Indians of central Brazil who subsist largely on bitter manioc. I am currently writing my doctoral dissertation on the Kuikuru, with the emphasis being on their ecology, especially the mode of subsistence. I have become extremely interested in manioc ethnobotanically and have done some research on it. Unfortunately I have found very few recent studies of manioc in the literature I have consulted. For example, as far as USDA sources go, I have seen no references to any comprehensive studies of manioc later than Tracy's study of 1903. I have found one or two very interesting articles dealing with the cyano-genetic principle in manioc in a handbook of (Asian) Indian agriculture, but this again is a rather old source.

I would appreciate any references you could give me of recent studies of manioc either strictly botanical or ethnobotanical, especially of research that you yourself have carried out.

If there is any information about the use of manioc by the Kuikuru Indians which you would be interested in having, I would be very happy to furnish it if I could.

Very sincerely,

A handwritten signature in cursive script, reading "Robert Carneiro".

Robert Carneiro
Instructor in Anthropology

RC:las

October 12, 1954

Dr. Hampton L. Carson
Department of Zoology
Washington University
St. Louis, Missouri

Dear Hamp:

Thank you kindly for sending along your letters. They are indeed a big help. The type of information which you gathered is the type of thing which most people don't observe but which are significant to me.

I am making copies of several of the places in the dittoed letter. I hope you don't mind. I assure you that they will not be published as such but will serve as a store of information for me. I am going to return the dittoed letter shortly, but it is such a beautiful job of writing that I can't help but share it with some of my friends here. It is a beautifully done piece of work and to my way of thinking could be published almost without any further editing. I feel sure that there are many others who have had the same feeling about it.

Thank you very much for letting me have this material. I certainly do appreciate it.

Yours,

David J. Rogers

DJR/rp

WASHINGTON UNIVERSITY
SAINT LOUIS

DEPARTMENT OF ZOOLOGY

October 5, 1954

Dear Dave:

In the big cities in Brazil, like Sao Paulo, mandioca forms a popular and staple dish. In one of my letters about noonday meal in Sao Paulo was this: "There was, first of all, cheese, three delicious kinds, all of obscure Brazilian vintage and I nibbled at them all during the meal, which proceeded with a fish course, served with potato, followed by the main course, veal cutlets, salad, rice, palmetto and farofa. About the latter, I can rave. The basis is a coarsely-ground mandioca flour, farinha de mandioca. In it is mixed a little shortening, some chopped olives and various other things. It is lightly fried. The whole is quite dry and resembles nothing in my experience. The consistency is that of dry Wheaten, but the comparison does not do justice to farofa and I do not mean that dry Wheaten is edible. I had to ask several times before I got the name, "farofa" straight. It was pointed out to me that you cannot eat farofa and say its name at the same time: no exhalation of any sort is possible when it is in your mouth!"

Where possible, I am trying to copy things out of my letters because most memories, and mine in particular, seem to be capable of getting things bawled up after several years. Anyhow, farofa is a very popular dish; it is eaten with meats and so on much as we would eat potatoes. In Sao Paulo, the meal is about the consistency of yellow cornmeal. I do not know the means of making it in the south. The tropical staple, which is referred to in the ~~next quote~~, farinha da agua, is only known in the north. I tried to buy some in Bahia on my way back but it wasn't the real tropical stuff - it was more like the farinha of ~~the~~ Sao Paulo. I tried to get this in the city, tho, and it may be that the country natives in Bahia make farinha da agua.

I have decided to send you a copy (dittoed) of one of the letters from the Rio Negro. It is the last copy I have of this and I would like to have it back. I think it is mentioned in there that the main pattern of agriculture along the Rio Negro is to make a little clearing on a high bank and plant a few mandioca plants, bananas and perhaps a little corn.

Best regards,

Hampton
Hampton L. Carson

Department of Biology

September 23, 1954

Dr. Hampton Carson
Department of Zoology
Washington University
St. Louis 5, Missouri

Dear Hamp:

I was serious in my desire to have whatever information you could give me about manioc (*Manihot utilissima*). You remember that I asked you for this information at the Gainesville meetings.

Whatever information of uses, methods of cultivation, ethnographic data you may have will be very welcome. There is no rush for this material and I am only writing this to solidify my request for this information. I will appreciate whatever you have.

Yours,

David J. Rogers

DJR/rp

March 5, 1953

Mr. Carson O. Crocker
Chief of Field Party
Division of Agriculture and Natural Resources
Institute of Inter-American Affairs
In care of the American Embassy
Asuncion, Paraguay

Dear Mr. Crocker:

Through Mrs. Elsie C. Mercley, of the Washington office of IIAA, I have found that you could give me some information concerning the status of research on Manihot utilisima.

I am in the process of outlining a program of research on the taxonomy of the varieties of this food producing species and would like to know the state of work from as many areas as is possible in order to avoid duplication of effort. According to Mrs. Mercley, Dr. Michaelovsky is prominent in the studies of this plant. I should be very happy if you could ask him to tell me something of his work with the varieties of *Mandioca*. Furthermore, if you have any publications concerning the taxonomy of the varieties, or if you are considering publication, I should be glad to hear about it. Whatever information you can give me concerning any aspect of the study of this group of plants will be most helpful to me.

I am hoping to establish experimental plots in Jamaica and in Costa Rica in order to grow as many of the varieties as is possible. I wonder if it would be possible through your office to supply us with visible material of whatever varieties you have for these plots. This is a cooperative project with the experimental stations of both these countries, and we hope to derive much benefit from many aspects, concerning both the taxonomy and the agricultural possibilities. I shall be very pleased to hear from you at your convenience.

Yours very truly,

David J. Rogers
Assistant Professor of Biology

DJR:cjs

February 26, 1953

Dr. Hugh C. Cutler
Missouri Botanical Garden
2315 Towergrove Avenue
St. Louis 10, Missouri

Dear Hugh,

Thank you for your lead on Dr. Willems. I am in the process of writing him a letter to find out whether he is still at Vanderbilt University and whether or not he is still collecting data on the anthropology of Manioc.

I am sorry I didn't get to see you in St. Louis at Christmastime, for I had hoped to learn much from your first hand experiences in Brazil. No doubt Andy has told you of my projects and my cooperation with Jorge Leon. I expect to profit much from the cooperation with Jorge. This summer I hope to get a grant from the American Philosophical Society to go to Kingston, Jamaica, where they have done some preliminary work on Manioc, and to establish an experimental plot there and the same thing for Costa Rica, later in the summer. I hope to lay the ground work this year for a much more extensive study, perhaps beginning a year from this coming June.

If you ever have time to dig out those photos you mentioned you had, and any other data, I shall be glad to see them. Please give my regards to one and all at the Garden.

Yours,

CHICAGO NATURAL HISTORY MUSEUM

FORMERLY FIELD MUSEUM OF NATURAL HISTORY

ROOSEVELT ROAD AND LAKE SHORE DRIVE

CHICAGO 3, ILLINOIS

November 3, 1952

Dear Dave:

I don't think there would be much advantage in stopping at Meadville as far as Manihot is concerned, although I would like to see your department.

The center of the Manihot region is in northern Bahia and adjacent parts of Pernambuco and nearby Piauí and Ceará. I think that Dr. F. C. Brieger, Escola Superior de Agricultura, Piracicaba, Est. São Paulo, Brazil; and Dr. Almes Viegas, Instituto Agronomico, Campinas, Est. São Paulo, Brasil, might be able to tell you who has been working on the taxonomy of Manihot. Viegas did some work on the many kinds and has some manuscripts on it. Brieger had several students growing varieties and studying the genetics of it. I have some of the papers and more have appeared in Bragantia and other Brazilian journals.

The Manihot area is rather primitive, the people polite but a bit dirty. There is endemic typhoid, typhus, occasional bubonic plague, malaria, and food is often scant in the interior and roads almost lacking in most places. I don't think much can be done without field work in this area.

However, Johnson Wax Co. has a biologist (I can't recall his name at the moment but he has an article in the last Economic Botany on Carnauba wax) and it may be possible to arrange to study manihot with some help from them for transportation. The Brazilian end is run by Brazilians and they have little equipment and they are centered at Fortaleza which is quite a ways north.

Bob Schery was in the manihot center or at least on the eastern margin of it and probably can give you some help.

I am moving to the Garden January 1st and when I get there will look thru my photographs for some on manihot. I made a collection of about 32 kinds in Mato Grosso (which is outside the center) and sent stem cuttings to Viegas and Brieger and left herbarium specimens with Croizat, who later could not find them when he left for Venezuela. I took photos of about half of them, altho photos are of little value, and had to stop because of rain. You have a difficult job. Have you thought further on sources of travel and expense funds?

Sincerely yours,

Hugh C. Cutler

October 20, 1952

Dr. Hugh C. Cutler
Chicago Natural History Museum
Roosevelt Road and Field Drive
Chicago, Illinois

Dear Hugh:

Andy has just spent the weekend here with me. He suggests that I get in touch with you in hopes that I can catch you before you make your trip East. The purpose being that I should like to talk to you, if it is at all possible for you to arrange your schedule for either a stopover here in Meadville or some other arrangement which would probably be better for you.

The purpose of all this being that I should like to know what you can tell me about Manihot esculenta. I have decided to tackle this problem and need all the help I can get in any aspect which you can help me on. I should like to know, for example, what parts of South America are critical for collection and study purposes. Further, if you know any people in South America who are working on this problem, I should like to hear about them.

If you can't possible arrange to stop by here (and it isn't easy to make arrangements for that purpose) a quick note would perhaps satisfy.

Hoping to hear from you soon.

Yours,

David J. Rogers

DJR/amp

CHICAGO NATURAL HISTORY MUSEUM

FORMERLY FIELD MUSEUM OF NATURAL HISTORY
ROOSEVELT ROAD AND LAKE SHORE DRIVE

Dave Rogers

CHICAGO 5, ILLINOIS

March 8, 1951

Dear Dave:

Manihot certainly needs working over. You probably knew that Croizat (formerly at Arnold Arboretum) occasionally messed with the genus but didn't help it much. And that there is little use in trying to do anything with the available herbarium specimens.

Dr. Ahmes Pinto Viegas, a mycologist at the Instituto Agronomico, Campinas, Estado de Sao Paulo, Brasil, did some work on the genus with the intention of finding out how many varieties of cultivated mandioca were in Brasil. He thinks the center of the genus and the place to do most work is in northern Bahia and southern Piaui. There are some roads in this area, most of them very poor and frequently impassable...nearly always so in the rainy season even via jeep with winch. Viegas may be helpful but most of his information is in the form of several bulky manuscripts, unpublished and rather rambling and not suitable for publication in the form I last saw them.

I think you will almost as well starting out from scratch. Living in the interior of Bahia and Piaui is rather hard and dirty but a good hammock, net, water can and DDT and insect repellent make it very comfortable and quite safe. If you can stay alone for awhile and find some country fellow to go with you when you know how to judge them, you will find it very interesting. In the interior it is often helpful to know how to play the guitar and it is a good way to make friends among the country people who know the area. Some of the publications of the Inspectoria de Obras Contra as Secas have photographs which will give you an idea of the country and the narrative in books like those of Luetzelberg will show you how you have to travel in many places even today.

I see little advantage in studying or collecting in any other area than this one in Brazil. But there are some difficulties, besides the arid country, the poor people and poor roads. Brasil has a rule about collecting trips needing licenses from a division in Rio and while this is not always adhered to, it is often difficult to operate unless you have such a license. There is a way in which this can be avoided, for it is considerable trouble to get the licence and there is some obligation. You might be appointed special collector or some such thing, of the Instituto Agronomico do Norte. You might write to Dr. W. Andrew Archer, Div. of Plant Exploration and Introd., USDA, Beltsville, Maryland, for he spent some time down there. He was not very popular with the Brazilian administration at the time I was there so do not use his name when you write to the place in Brazil.

Talk to Anderson about the possibility of a Guggenheim or a Rockefeller grant for the project. For Guggenheim, your project could be the taxonomy of the genus, ~~its~~ the development of the cultivated mandioca and their spread. For Rockefeller it might be a project to cooperate with the Brazilian ag stations in collecting forms of cultivated and wild mandioca and the money should be larger to allow you to have a fairly well educated helper as well as your sertanejo. I know of no firm interested in mandioca, altho it would be a good plant if you intended to live in the tropics, for it has a good yield and can be produced cheaply.

Shery knows the eastern margin of that country. He is a bit naive about sanitation and disease but I suspect he is a Christian Scientist, a difficult thing in the tropics. Incidentally, there are typhus, bubonic plague and yellow fever in the area altho they usually are not listed as part of the Brazilian reports because they consider these as signs of backwardness. Schery may also have some maps, and if you do go, you can see the ones at the Amre. Geographical Soc. in N.Y.

There apparently are a lot of hybrids in the genus, so you are going to have a mess to work with. Perhaps you could write a better monograph if you didn't do any collecting and defined your species on the available herbarium sheets. By better, I mean one that would have definite limits to the species you describe.

Sincerely yours,

August C. Cutler

April 25, 1950

Dr. Bailio Willems
Vanderbilt University
Department of Sociology & Anthropology
Box 7
Nashville 4, Tennessee

Dear Dr. Willems:

Under separate cover I am sending you a short article on rubber in Ceará, which is related to your problem in that some of the species in southern Ceará and nearby Pernambuco, Piahy and Bahia are used during the dry seasons as emergency food sources.

Dr. Ahmes Viegas at the Instituto Agronomico, Campinas, has amassed a considerable volume of material on manioc. He is very generous with his materials, and if you have not seen him I suggest you do so.

There has been no recent reliable taxonomic study on the genus Manihot, but the center of the genus appears to lie in north central or northwestern Bahia. This coincides with the area in which a large number of species of Manihot, other than the mandioca, are sometimes utilized for food. I will be interested in your studies on the manioc, and if I find any references of value to you I will forward them.

Sincerely yours,

Hugh C. Cutler
Curator of Economic Botany

jc

VANDERBILT UNIVERSITY
NASHVILLE 4, TENNESSEE
DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY
Box 7

March 13, 1950

Dr. Hergh Cutler
Chicago Natural History Museum
Roosevelt Road and Lake Shore Drive
Chicago, Ill.

Dear Dr. Cutler:

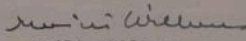
A few days ago Dr. Edgar Anderson of Washington University mentioned your name in connection with your interest in manioc and suggested me that I write you.

I am professor of Anthropology at University of S. Paulo, Brazil and at the present time visiting professor at Vanderbilt University. Since 1945 I have been gathering anthropological data about manioc in Brazil, and now I am trying to get some materials from American scholars who have worked on manioc. My interest is of course limited to the edible species and their role in Mestizo and Indian cultures of South America.

I would certainly appreciate your sending me reprints of some of your own publications as well as recent bibliographical indications of importance.

Thanking you in advance, I am

Sincerely yours,


Emilio Willems

January 29, 1953

Dr. Luther P. Eisenhart
American Philosophical Society
Philadelphia, Pennsylvania

1045 Fifth St.
Phil. 6, Pa.

Dear Dr. Eisenhart:

I should like to know whether you have a formal application form for the submission of applications for research grants. If so, I will be pleased to have the form in order to submit an application for funds to assist in the study of varieties of Manihot utilissima, the plant whose product is known as "tapioca".

The funds will be primarily needed to support a trip to the West Indies and to Costa Rica, where I have made arrangements with local scientists to collaborate in a combined study. In this study, my primary interest is the taxonomy of the varieties which today is in a chaotic state, while the collaborating scientists are mainly interested in the improvement of the product of this very important food plant. The men with whom I intend to collaborate are located at the Department of Agriculture, Jamaica, B.W.I., and at the Inter-American Institute of Agricultural Sciences, Turrialba, Costa Rica.

My first effort in this study will be one of organization and of orientation. Herbarium specimens now in American herbaria are entirely inadequate, so much so that I have only a very hazy notion of the general structures which make up the plant. Existing specimens give no adequate knowledge of the type of variation which exists since the specimens have been collected in widely separated geographical areas, and form no consistent sequence. Therefore, I must work in areas where the plants are in actual cultivation, and the two areas mentioned above offer such a situation. Work on the species is in progress at these two stations, and I can get a good foundation from perhaps a three month's stay in these areas.

If no formal application blank is required, I can still give you a much more detailed analysis of my plans upon which to base your consideration of this request. It might be well to state at this time that I have discussed this problem with numerous interested people, and all agree wholeheartedly that this project is one of some importance, both from the standpoint of agriculture and of taxonomy. Dr. Edgar Anderson, Assistant Director of the Missouri Botanical Garden in St. Louis has offered his support, but the funds which he has at his disposal are quite limited. Dr. Claud Horn of the Office of Foreign Agriculture Relations of the USDA is most enthusiastic and has offered the services of his offices as a coordinator of information. Dr. Ralph Allee, Director of the Experiment Station at Turrialba, Costa Rica has given official blessing to the cooperative study at his station. The Director of the experiment station at Jamaica has asked to give what assistance he can. These are but a few of the men whom I have contacted, and in all areas I have found great enthusiasm for this work.

My own qualifications in this area of study are: graduate work done under the direction of Dr. R. E. Woodson, Washington University, and the Missouri Botanical Garden. Area of research: taxonomy of the angiosperms, specializing in the Euphorbiaceae. Publications: A Revision of Stillingia (Euphorbiaceae) in the New World in Ann. Mo. Bot. Gard. 38: 1951; Stegnosperma: a New Species and Generic Commentary in Ann. Mo. Bot. Gard. 36: 1949. Since Manihot utilisima is a member of the family Euphorbiaceae, I have some insight into the type of problems to be encountered, having specialized in this group. I completed my PhD in 1951, and have since been employed as assistant professor of biology, Department of Biology, Allegheny College.

I trust that this information will be of some value in consideration of my request. I shall be happy to supply whatever additional information is required. I have made quite a thorough investigation of the costs of such a trip, and can supply details in the formal application.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

July 14, 1953

Dr. Carl O. Erlanson, Head
Division of Plant Exploration and Introduction
U. S. Dept. of Agriculture
Beltsville, Maryland

Dear Dr. Erlanson³

Through the advice of Dr. R. C. Moncure, I am writing to you for advice and assistance on the problem of introduction of propagating material of cassava. I think Dr. Moncure sent a copy of my letter (dated Feb. 28, 1953) which explains my problem. In this letter, I mentioned that I hoped to establish experimental plots in Jamaica and Costa Rica, to which places could be sent varieties from all areas where cassava is grown.

Upon arrival in Jamaica, I found that they had just established a ban upon introduction of any propagating material into Jamaica. The cassava mosaic of South America was their greatest fear, but there is little, if any, knowledge concerning the present distribution of this disease. Since the ban existed, however, there was nothing to do but to work only with those varieties which occurred locally.

Although there is no ban on the introduction of varieties into Costa Rica, I should hate to be responsible for the introduction of a damaging disease to an area where the crop is of great importance. However, in order to continue with the study of the taxonomy of the varieties of cassava, it is imperative that we have at least one place where the varieties may be grown together. In order to do so, it seems necessary to establish an intermediate station where the plants may be observed in order to establish their disease conditions.

This is the problem. I should like to know if it is possible to grow cuttings of cassava in the greenhouses at Beltsville for observation and then to ship them on to Turrialba for final establishment if free of disease. I hope to have varieties from both the Eastern and Western Hemispheres grown together. I can only hazard a guess as to the size of the project. If I could get all the varieties sent in, there would probably be between 200 and 300 different varieties to be handled. I am not sure that I can get that many actually sent and cannot predict in what numbers they would be. It is highly probable that there would be no more than 100 at any one time. There should be at least 5 cuttings of each in order to be assured of sufficient propagating materials.

If it is possible to make arrangements for handling these plants through your good offices, I should like to hear from you at your earliest convenience. I only plant to be here in Turrialba for six weeks, and would like to have your reactions on the subject in order to establish my plans for continuance of the work.

Yours very truly,

David J. Rogers

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF PLANT INDUSTRY, SOILS, AND
AGRICULTURAL ENGINEERING

DIVISION OF
PLANT EXPLORATION AND INTRODUCTION

PLANT INDUSTRY STATION
BELTSVILLE, MARYLAND

October 24, 1952

Prof. David J. Rogers
Department of Biology and Geology
Allegheny College
Meadville, Pennsylvania

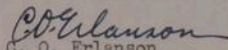
Dear Professor Rogers:

I have your letter of October 20 suggesting that we might be interested in supporting your investigations and the collection of Manihot esculenta in South America.

This is a worth while study but one for which at the present time it would be impossible for us to find support. We have only a limited amount of money per year for plant exploration and the demands upon this money are very heavy, controlled in policy by our government programs with State Experiment Stations. Manihot esculenta is not a crop of more than passing interest to the growers in the United States. There have been times earlier in our history when it was grown in the most tropical parts of our Gulf States. Funds which we receive now must necessarily be used to promote the agriculture of continental United States first.

The Office of Foreign Agricultural Relations in the U. S. Department of Agriculture, through its technical assistance programs, has had an interest in Manihot as a subsistence crop in Latin America for some years. Funds from that office are contributed to stations established in Peru, Ecuador, and several places in Central America. It may be that experimental work with Manihot has reached a stage with them where they might be interested in obtaining collections from the center of variation of this plant for breeding purposes. You might write a letter to Mr. Claud Horn, Technical Collaboration Branch, Office of Foreign Agricultural Relations, U. S. Department of Agriculture, Washington 25, D.C., describing the general area where you propose to travel, the amount of time, and an approximate sum of money it would take for you to make this trip on the principle that they might have funds which could be used for this purpose. I can think of no other suggestion at the present time that would offer a possibility on obtaining financial support from the federal government for this purpose.

Very sincerely yours,


C. O. Erlanson
Head of Division

COE:MME

October 20, 1952

Dr. Carl Erlanson
Bureau of Plant Introduction, United States Department of Agriculture
Beltsville, Maryland

Dear Dr. Erlanson:

Dr. Edgar Anderson, who has just spent the weekend with me, suggests that I contact you concerning possibilities of working in your department as a plant collector in South America.

I am interested in the systematics of Manihot esculenta and find almost no material available in this country for study. It will be necessary to make extensive field studies and since South America and particularly Brazil seem to be primary or secondary centers of distribution, it is in this area that I must concentrate.

Since I have teaching duties at Allegheny College which tie me up for nine months, it is only possible to get away during the summer months (June through the middle of September). I wonder if it is possible to finance such a collecting expedition through your office. I have already become eligible through civil service exams at the old ratings of either P2 or P3 as a plant taxonomist.

I am trying to work this problem on a cooperative basis with several people including Mr. George Leon of the Escuela Agrícola at Tegucigalpa, Edgar Anderson, and Hugh Outler. I should like to have whatever suggestions you have to make as to the possibilities of financing this trip. If you are interested, I can supply you with more accurate data as to just where I want to go in South America.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

DJR/amp

October 14, 1952

October 14, 1952

Chairman, Department of Biology
Slippery Rock State Teachers College
Slippery Rock, Pennsylvania

Dear Sir:

I should like to call to your attention the fact that Dr. Edgar Anderson, Assistant Director of the Missouri Botanical Garden, author of "Introgressive Hybridization," and "Plants, Men and Life," will be on our campus Thursday evening October 16, to deliver a lecture. The title of the lecture is "What Is a Species and Why Bother?"

You, your staff members and members of the student body are cordially invited to attend. The lecture will be held at 8:15 P.M. in Ford Memorial Chapel on the campus of Allegheny.

Very truly yours

David J. Rogers
Assistant Professor of Biology

DJR/amp

David J. Rogers
Assistant Professor of Biology

DJR/amp

Turrialba
July 23, 1953

Mr. Carlos A. Gonzalez
~~Asesoramiento de Agronomía~~
Ministerio de Agricultura e Industrias
San José, Costa Rica

Dear Mr. Gonzalez:

This letter is written to confirm our plan for visiting several areas of the Meseta Central in order to examine the varieties of yuca to be found there.

I will be in San José on the afternoon of July 28th, in order to go with one of your agents on Wednesday, July 29th. I will telephone, or call personally at your office Tuesday afternoon.

Thank you for your cooperation.

Yours very truly
David J. Rogers

Nov. 30, 1953

Mr. R. Burton Gordon
Isaiah Bowman School of Geography
Johns Hopkins University
Baltimore, Md.

Dear Mr. Gordon:

Fritz Kramer tells me that your experiences in Panama and northern Colombia might have in some way contacted the types of yuca (Manihot utilissima) of the region.

I've been studying the variation in yuca from the standpoint of the taxonomy, and spent last summer in Jamaica and Costa Rica working on it. While in Costa Rica, I heard it said that the native Indians of SE Costa Rica had bitter yuca, but didn't get a chance to check the story. So far, all I've found in Costa Rica have been the sweet yucas, and Sauer seems to think that the bitter is a post-Spanish introduction. I don't have any opinions on the subject yet, but would like to know if you ran across any bitter varieties in Panama or northern Colombia.

Any information you may have, whether specifically oriented in the above direction or not will be most interesting to me.

I shall appreciate hearing from you.

Sincerely,

David J. Rogers
Ass't. Prof. Biol.

August 3, 1953

Dr. J. Guiscafne-Arrillaga, Director
Centro Nacional de Agronomia
Republica de El Slavador, C.A.

Dear Dr. Guiscafne-Arrillaga:

I trust that you will recall my inquiry concerning a taxonomic study of Manihot utilissima (yuca). I think that I have now arranged all the preliminary requirements, and can begin to ask for specimens.

It is my hope to establish here a museum plot for all of the variations which occur, from all areas where yuca is an important crop. With this view in mind, I will appreciate your assistance in sending here propagating material of all of the varieties which are grown in your country.

The materials should be sent to Dr. Jorge Leon, who will be in charge of planting the cuttings and who will cooperate with me in the taxonomic study of the varieties.

If possible, we should like to have at least six cuttings of each variety, each cutting not less than 20 cm. long, either cut to this length or sent in longer sections, whichever is most practical for you. Of course, these materials would have to be sent by air, and only those plants which seem free of disease. Although it is not an essential requirement, if you could supply the local name of each variety sent, plus whether it is of the so-called "sweet" or "bitter" type, we would appreciate it very much.

I trust that this request will not cause you too much bother. We shall be grateful for whatever aid you may give us.

Yours very truly,

David J. Rogers

MINISTERIO DE AGRICULTURA Y GANADERIA
CENTRO NACIONAL DE AGRONOMIA

REPUBLICA DE EL SALVADOR, C. A.
TELEFONO 121. SANTA TECLA

E - 561

Office of
the Director

September 26, 1952.

Mr. David J. Rogers,
Asistant Professor of Biology,
Allegheny College,
Meadville, Pennsylvania.

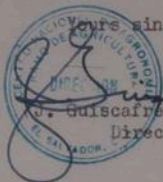
Dear Mr. Rogers:

Our work with the crop you are interested in studying consists mainly in the testing of newer items and finding their adaptability to various conditions.

I suggest that you get in touch with the Ministry of Agriculture in Venezuela, S. A., and also with the Ministry of Agriculture in Colombia since Manihot esculenta is one of the principal food crops and probably they could be interested in a cooperative project of the nature you point out.

I am including with this letter our three last anual reports, in these you will find out some information on our work with this plant.

Yours sincerely,


J. Guiscaire-Arriaga
Director

Encl. 3 reports 44-48, 49, 50.

JGA/mrm

CS:

September 8, 1952

Dr. Jaime Guisasafré, Director
Centro Nacional de Agronomía
San Salvador,
Republic of El Salvador

Dear Dr. Guisasafré,

Dr. Claude Horn, Office of Foreign Agricultural Relations, United States Department of Agriculture, has mentioned your name to me as having some interest on problems concerning some aspect of Manihot esculenta (M. utilissima). If you would be so kind as to assist me I should like to make a survey of the work done on any aspect on this species which you may be carrying on or which you may have completed. Furthermore, if you have any publications I would very much appreciate a reprint, if available, or at least a reference where I may find it. If you have any projected work in this particular field, I would like very much to hear of it.

All of this survey is intended to give me some assistance in outlining the project which I have concerning this species. Briefly, the project which I have in mind consists of (1.) making a taxonomic revision of the varieties of the species (2.) correlation of genetic data (3.) determine vitamin contents of varieties as indicators of divergence or convergence of the varieties.

It is my feeling that before any solid improvements can be made in the food producing capabilities of this group, we must know all of the varieties and their interrelationships. This project, I realize, is one of great complexity and will require the cooperation of as many people as can be interested in it. First of all, the dried material available in the United States herbaria is wholly insufficient. Firsthand field observation is of more importance and can be of much more value than observations of herbarium material.

I should like to know if you or your assistants are interested in such a cooperative project. If you are, what part of the project would interest you most and what facilities are available for such work?

If you know of others in the field, I would appreciate your mentioning this proposed project to them and also I should like to have their names and addresses.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

SMITHSONIAN INSTITUTION
BIO-SCIENCES INFORMATION EXCHANGE
1113 DUPONT CIRCLE BUILDING, WASHINGTON 6, D. C.

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STELLA LECHE DEIGNAN, Ph.D., *Director,*
Bio-Sciences Information Exchange

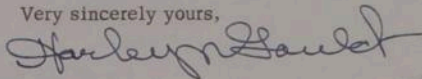
November 19, 1954

Dr. David J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Pennsylvania

Dear Doctor Rogers:

In reply to your inquiry of November 15, 1954, we regret that a careful search of our records does not bring to light any research registered with us on studies of the genus *Manihot*. We hope that if you have other inquiries, we may be able to serve you better.

Very sincerely yours,



HNG/am

Harley N. Gould, Ph.D.
Professional Associate
Biological Sciences
(A.B. Allegheny College, 1910)

P.S. a form for reporting your own research on the above genus is enclosed. HNG

UNIVERSITY OF PITTSBURGH
GRADUATE SCHOOL OF PUBLIC HEALTH
PITTSBURGH 13, PENNSYLVANIA

DEPARTMENT OF
EPIDEMIOLOGY AND MICROBIOLOGY

December 8, 1954

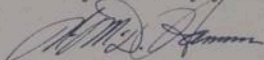
Mr. David J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Pennsylvania

Dear Professor Rogers:

I have delayed in answering your letter of November 30 in an effort to give it more thought than was possible on first reading it. The problem you present to me is a very interesting one and I wish I could be of some help, but the more I think about it the less useful any information I have becomes.

When I was in the Congo I had training only in the field of tropical medicine particularly parasitology and knew nothing about nutrition. I do not believe that I would have recognized any specific nutritional deficiencies at that time since it is nearly 25 years since I left the Congo. My recollections at the present are so vague they might well be inaccurate. I do deeply remember distinctly that during one year of great starvation when all crops failed because of locust there was almost complete starvation and emaciation due probably to a lack of all types of food. To my best recollection there was no evidence otherwise of specific protein deficiency. However, these people were fairly clever in trapping or spearing animals and in catching fish. And although from time to time they lacked animal protein, much of the time they probably had an adequate amount. In addition to this they raised large amounts of peanuts and this probably also provided some protein. Thus I do not believe that it would be of any great value to express an opinion regarding what the leaves of the cassava plant might have furnished in a way of protein and whether this made a difference in so far as the people in our area were concerned. I'm sorry I can do no better.

Very sincerely yours,



W. McD. Hammon, M.D.
Head of Department

H/f

November 30, 1954

Dr. W. M. Hammon
Graduate School of Public Health
University of Pittsburgh
Pittsburgh 13, Pennsylvania

Dear Dr. Hammon:

In the December issue of the Scientific American Hugh C. Trowell describes a condition called "kwashiorkor" which he studied in Uganda. This, he claims, is a condition specifically described as produced by a protein deficiency and he says that it is a condition common to all tropical peoples where protein in the diet is low.

You will recall, perhaps, from our conversation when you were here at Allegheny last year that I have been involved in the study of one of the tropical food plants, namely, cassava, or tapioca. This is one of the plants which Hugh Trowell describes as of low protein content and one of the main staples of their diet. I think I recall you saying that it was your experience while in the Belgian Congo that you found the natives eating the foliage of cassava.

The question I have in mind is: Do you recall any protein deficiency symptoms amongst the natives to whom you administered? The reason I ask is that I have found from several analyses that the protein content of the foliage of some varieties of cassava is remarkably high. I should like to know if perhaps there was a low protein deficiency diet amongst the people of your administration; whether or not the cassava foliage had any special significance.

I know that this is perhaps a difficult question for you to answer, but if there is any kind of correlation here, then I shall henceforth write to Dr. Trowell and suggest to him that if his people in Uganda are not at present utilizing this possible source of protein, he might institute a development program to get them to use some cassava variety.

I hope that this inquiry of mine does not take too much of your time.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

DJR/rp

October 12, 1954

Mr. V. C. Harnett
Crop Agronomy Division
Hope, Liguanea, P. O.
Jamaica, B. W. I.

Dear Vic:

It has not been my intention to wait so long before writing. I have been carrying the little card you gave me with your address in my pocket every day, and before it became too difficult to read I decided I better write.

Several things have occurred since my return to the States which have delayed my activities concerning cassava much longer than anticipated. This usually happens that there are so many details left over when I depart from the States that it takes some time to "recover" upon returning.

I have finally gotten around to getting labels made for my specimens and will soon have all of the material mounted on herbarium sheets and thus available for study. I hope that this process will be complete within the month so that I can actually get down to making sense out of the numerous varieties you folks had there awaiting me.

How are things in the Crop Agronomy Division? I hope that Bell got his scholarship, or whatever he wanted, from California and everybody is working along. Did your brother get all of the necessary assistance to permit him to visit in the States? If not, let me know what I can do to help. You mention that you would like to have had a letter for him. If you still desire such, please send me all the information necessary to supply my assistance.

I am writing a letter to both Aston and to Mr. Richardson for some specific information on our problems last summer, so I shan't bother you to relate any questions to them.

Please give my best regards to your wife and to others there at the Division.

Yours,

DJR/rp

David J. Rogers

ALLEGHENY COLLEGE
MEADVILLE, PENNSYLVANIA

September 29, 1955

Dr. J. G. Harrar
Rockefeller Foundation
Rockefeller Center
New York

Dear Dr. Harrar:

For the past three years, I have been studying Manihot utilissima (cassava) supported by grants from the American Philosophical Society and the National Science Foundation. In these studies, I have had the cooperation of the Department of Agriculture in Jamaica and the Interamerican Institute of Agricultural Sciences at Turrialba, Costa Rica.

I have made some progress in these studies, sorting out the clones occurring in Jamaica and in the Central American countries, and trying to establish some sort of system to determine just how many varieties actually exist. This has been a part-time research job for me, with no pay attached. The two organizations mentioned above have contributed their services without charge, and their assistance has been tremendous, but they cannot afford to spend the money necessary to keep up this work indefinitely, nor can I expect them to.

In order to extend this work into the regions where the greatest number of varieties exist, South America, it will be necessary to have more time for this work than I presently have, and to have some backing to support the care and cultivation of the clonal ~~xxx~~ plots in Costa Rica. I wonder if the Rockefeller Foundation would be interested in this study? If you feel that there is any possibility of doing so, I would be very glad to come to New York to give you a more detailed picture of my work, and my plans for future work ~~in~~ with these plants.

I shall appreciate hearing from you.

Sincerely yours,

June 1, 1956

Mr. John Houghton
Chief Agricultural Officer
Crop Agronomy Division
Department of Agriculture
Hope, Liguanea
Jamaica, BWI

Reference No. 2959/56

Dear John:

I recently received the results of the latest analyses of cassava tubers over the signature of Mr. Higgins. I trust that you will thank him for me for these analyses, as well as the chemists who ran the analyses.

There has not been time to determine the significance of these analyses, but I think they support our contention that there is no real distinction between bitter and sweet varieties, as far as botanical species is concerned. A more critical statistical analysis may reveal some interesting and significant results, however.

Towards the business of making some real and significant progress, I am devoting this whole summer (June-August) to working up and publishing the data which I have accumulated during the past three years. At that time, I hope to return in part something for the very good assistance which you and others there in the department have so generously given.

This does not mean that the work with cassava comes to a close, but I think that my own contribution will be nearly finished, except in an advisory capacity, should you so desire it. When we know the extent of the variation in cassava, then agronomic work with the best varieties should certainly be undertaken. I had hoped that you would be able to forge ahead with this with Taylor there, but I fear that he is no longer with you, from the fact that Higgins, not Taylor signed the letter to me.

I intend to write to Mr. Gregory some time in the near future, explaining to him what my plans are. In the meantime, I hope that Taylor has given instructions for the planting of the cassava according to the planting scheme I made up last year. If you have any question concerning this planting, I will be more than happy to help you out.

Hoping that things are well with you, I am

Sincerely yours,

David J. Rogers
Associate Professor of Biology

Oct. 10, 1953

Dear Dave,

It was good to hear from you, and thanks for the photos. If everything turned out as good you must really have a fine set. Yes, your box was sent sometime ago and should reach you before too much longer.

Before I forget I want to mention a drawing I saw of "preparing manioc in Brazil". It's in the end pages of Plants and Plant Science in Latin America, and it's possible that you might want to use it someday.

I finally made it to Irazu but the pastures go all of the way to the top so that one has to search for some really good stands of original vegetation. I have also been part way up Poas, to Vara Blanca, and La Lola. It was cool along the Old Line compared to La Lola. We still haven't been to Limon but I think we're going next weekend and stay in the guest house of the Northern R. R.

I now have about a half dozen species of wild "Capsicum," one is very common around here, in fact. One comes from La Lola, two from Vara Blanca, and one -- of all places--comes from the zoo here in San Jose. I must have walked by the plant a half dozen times before I recognized it for a Capsicum. I also have a couple of Lycianthes that I haven't been able to place at all. But best of all is the Solanum nigrum problem -- as I thought true S. nigrum doesn't occur here at all but we do get three or four other species -- the common weedy form that goes up to 4500 feet is S. nodiflorum, a diploid; from 4500 feet to 9000 feet we get S. amethystinum, also diploid; and from 7000 to 10,000 feet on Irazu we get another species which I thought was S. irazuense but which I am now inclined to regard as something ~~else~~^{is}, probably new, and it is tetraploid. There is possibly a fourth taxon from Vara Blanca. I wish you could see my smears now -- I sure that they would satisfy even you!

This morning we attended Socrates' wedding and reception in Cartago. Last week I made a couple of visits to the hospital to see Jorge Soria-- amoebas. Les~~e~~ has been back for two weeks and had a wonderful time in Peru. Orellana came in yesterday ~~but~~ I have not had a chance to talk to him yet. I have been rooming with Alvim during his absence. Well-man is fine -- he is certainly interested in your problem. Jorge is working in coffee again and seems much happier now that he has something definite to work on. No, Andy never did show up but is talking about making a visit here the first of next year.

That's about all the news I can think of. The family are^{is} healthy and happy. Dot found a nice(?) little gift shop with imported goods from Denmark and nearly bankrupted us. If we have any money left I think I shall get a Contessa.

Hasta luego,

Charley
Heiser

February 26, 1953

Dr. Charles Heiser
Department of Botany
Indiana University
Bloomington, Indiana

Dear Charlie,

Thank you for your letter of recommendation. I hope that I will not spoil your betting average. I think my request was modest enough, so that it will not take the breath away from the American Philosophical Society.

I am sorry I broke in when you were so busy with your extensive duties, but you must realize that big shots got troubles. I will let you know how I make out after the middle of April, when the next board meets on selections.

Yours,

THE INTERNATIONAL BUREAU OF TROPICAL AGRICULTURE

RESEARCH AND EXTENSION OF TROPICAL AGRICULTURE
U. S. A. & FOREIGN COUNTRIES

ADMINISTRATIVE AND TECHNICAL SERVICES

STATION "TROPICAL" PO BOX 2836

TRINIDAD, B.W.I.

In reply please refer to No. 2836

28th October, 1953

Dear Moncur,

I am most grateful to you for the copy of Dr. Hitchcock's "Manual of the Grasses of the West Indies". I have already given this a tough brown paper jacket to protect it from the hard wear which it will certainly receive! Please convey my very sincere thanks to Mrs. Spicer.

2. Should Dr. David J. Rogers come to Trinidad we would of course, give him all the help possible, including laboratory facilities.

3. You probably know that we have not got cassava mosaic in Trinidad. We have always opposed, and shall continue to oppose, the introduction of mosaic resistant varieties of cassava into the West Indies, for these varieties are not necessarily immune and may be only tolerant to the disease, and therefore the introduction of these varieties would offer an easy way of introducing the disease into the West Indies. Should any cassava disease occur here it would be preferable to breed and select varieties in this hemisphere, which is the home of cassava, rather than import varieties from East Africa. This is not to belittle Dr. Storey's most excellent work, but to take the obvious precaution of avoiding any risk. I have not written to Dr. Rogers or to Dr. Wellman, if you think this viewpoint of any value, perhaps you would pass it on to them.

With kind regards,

Yours sincerely, C. C. Merklots

(C. C. Merklots)
Principal

Dr. R. C. Moncur,
Agriculturist, Technical Collaboration Branch,
United States Department of Agriculture,
WASHINGTON 25, D.C.,

FG

October 14, 1954

Dr. W. H. Hodge
Plant Introduction Section
USDA
Beltsville, Maryland

Dear Dr. Hodge:

Thank you for your letter of October 12 concerning specimens of Manihot esculenta.

I would indeed be happy to have these sent to: Dr. Jorge Leon
Interamerican Institute of Agric. Sciences
Turrialba, Costa Rica

We should like to have as full data as you have sent along with the specimens, and since we have not yet established a contact in Peru, these will be welcome additions to the growing collection.

If you could, we would be happy to have your collectors send more clones directly to the above address, since there is no ban on their introduction into Costa Rica, and Dr. Frederick Wellman has volunteered to inspect the clones from time to time to insure their freedom from diseases.

At the time you have the specimens shipped, I should be happy to have a copy of the data which you supply to Dr. Leon for my own files.

Thank you again for offering this service.

Sincerely,

David J. Rogers
Ass't. Prof. Biology

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
HORTICULTURAL CROPS RESEARCH BRANCH
BELTSVILLE, MARYLAND

Plant Introduction Section

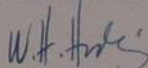
October 12, 1954

Dr. David J. Rogers
Department of Biology & Geology
Allegheny College
Meadville, Pennsylvania

Dear Dr. Rogers:

In view of your interest in a clonal garden of Manihot esculenta I should like to call your attention to the fact that we have at present at our Glenn Dale, Maryland Plant Introduction Garden three accessions of this species collected by one of our men in Peru during the early part of the present year. It may be that this material originated from Tingo Maria, I am not sure. Should you be interested in having this material shipped to one of your cooperating locations in Latin America, we would be happy to oblige.

Yours sincerely,



W. H. Hodge
Assistant Head of Section

WHH:SSP

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF PLANT INDUSTRY, SOILS, AND
AGRICULTURAL ENGINEERING

DIVISION OF
PLANT EXPLORATION AND INTRODUCTION

BUREAU OF PLANT INDUSTRY STATION
BELTSVILLE, MARYLAND

July 23, 1953

AIR MAIL

Mr. David J. Rogers
Inter-American Institute
of Agricultural Sciences
Turrialba, Costa Rica

Dear Mr. Rogers:

This will acknowledge your letter of July 14 addressed to Mr. Erlanson. Through Mr. Robert Moncure of the Foreign Agricultural Service of this Department notice has also come of your proposed taxonomic work and it has been my intention to write you earlier concerning your problem.

It seems to us that your whole problem of establishing an accessible germ plasm collection of Manihot species and varieties could be solved by locating it in an area apart from the chief producing regions in the American tropics.

You are perhaps aware that this Division operates a subtropical Plant Introduction Garden at Coconut Grove, Florida, where it is believed cooperative arrangements might be made for the establishment of a collection of cassava types. Since there is no commercial production of Manihot in Florida at this time, my guess is that there should be no quarantine problem involved. The plants could very likely be grown in the field with little if any danger of frost. Laboratory space is available. In addition the location would be far more readily accessible to you and at a fraction of the cost (when travel is concerned) of a similar site in the general Caribbean area.

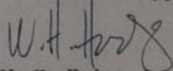
What has been suggested above might be accomplished pending approval of the Bureau of Entomology and Plant Quarantine who would have to act on whether this crop plant could be grown in this country outside of quarantine greenhouse facilities. The propagation in quarantine of cassava cuttings under glass at our Glenn Dale Introduction Garden would be a costly proposition and we would have to have a very exact idea of the size of such a project before

2-David J. Rogers

its feasibility could be considered. Cassava is a tropical crop. This Division's primary interest is in crop plants for the continental United States and available funds must be budgeted with that in mind.

Any work carried on by you at Coconut Grove would have to be on a cooperative basis. We would be interested therefore in knowing in what way the holding of a germ plasm collection of Manihot at Coconut Grove would serve the interests of this Division.

Yours sincerely,



W. H. Hodge
Assistant Head of Division

WHH:mlr

COPY
United States Department of Agriculture
Foreign Agricultural Service

COPY

To: Frederick L. Wellman, Regional Consultant (Plant Path.),
c/o Inter-American Institute of Agricultural Sciences,
P.O. Box #74, Turrialba, Costa Rica

From: Claud L. Horn, Head, Research Development Division,
Technical Collaboration Branch

Subject: Furthering Dr. Rogers work on cassava

This refers to your July 18 memo about cassava. Seems to me that Dr. Rogers is in position to really do the tropical agriculture a mighty good turn. It is good to see you interested in furthering his work. We have technicians in many locations who may be of help. Please assure Dr. Rogers; as we did when he visited us here, that we all will help him wherever we can.

Copy

s/
Claud

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREIGN AGRICULTURAL SERVICE
WASHINGTON 25, D. C.

Dr. David J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Pennsylvania

APR 14 1954

Dear Dr. Rogers:

I am glad that you wrote to me on April 3 about developing support for your Manihot studies. I want to see you carry that to completion. After taking it up with Bob Moncure, we have these things to suggest:

1. Dr. Harold J. Coolidge, Executive Director of the Pacific Science Board, National Research Council, 2101 Constitution Ave., Washington, D. C. is interested in scientific activities within and related to the Pacific. He is a member of the "board" of the National Science Foundation. You may wish to ask his opinion as to whether your project would conform with the criteria used to determine that the Foundation will give financial support to a project. Also he might give suggestions as to how best to present your project proposal.
2. Dr. R. R. Baldwin, Director, Biochemical Laboratory, General Foods Corporation, Research and Development Department, 11th and Hudson Streets, Hoboken, New Jersey, may see that General Foods should support your project. Further he may be able to suggest that Geismar and Co., or other U. S. industrial concerns may be able to give support.
3. Mr. James W. Stevens, Commodity Analysis, 595 Madison Ave., New York 22, has had considerable interest in cassava. He may be able to lead you to support.

If you believe that a word from us to any such may help them to make up their mind in your favor, we would be glad to have your suggestions.

Sincerely yours,

Claud

Claud L. Horn, Chief
Sugar and Tropical Products
Analysis Branch

April 3, 1954

Dr. Claud L. Horn, Head
Research Development Division
Foreign Agricultural Service
United States Department of Agriculture
Washington 25, D.C.

Dear Dr. Horn:

I should like to ask your advise on problems of financing the continuance of my work with Manihot.

To bring you up to date on my status with this work, it is only necessary to say that my work of last summer is continuing, and I have reports both from Jamaica and Costa Rica that the experimental plots which I established there are in fine shape and will be ready for my work this coming summer. It is necessary, therefore, that I return to both of these places.

During the winter, I made a few efforts to get foundation support for my work, but did not press this aspect after the Christmas meetings of the AAAS. The reason for not pressing was the fact that Edgar Anderson agreed at that time to underwrite my work, and to pay for my expenses. He was confident, at the time, that he would have no trouble in getting funds, and as a result, I made no further effort to finance my studies. Unfortunately, his efforts were not as successful as he had hoped, (through no fault of his, I must add) and he could only grant me \$500.00. This would just about pay for travel expenses. My experience last summer was that \$1300.00 was no more than just adequate for 3 months work. This is, after all a very small amount, and I had to dig into my own pocket to support my family during this work.

What I should like to do is to find out whether you have any suggestions as to methods of financing this work this coming summer to the tune of at least \$1000.00, and a little more if it is at all possible. If you think it would be worth-while, I can come down to Washington, at your convenience, to talk this thing over.

I shall be pleased to hear from you at your earliest convenience.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

UNITED STATES DEPARTMENT OF AGRICULTURE
~~OFFICE OF FOREIGN AGRICULTURAL RELATIONS~~
WASHINGTON 25, D. C.
FOREIGN AGRICULTURAL SERVICE

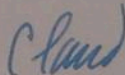
- OCT 7 1953

Dr. David J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Pennsylvania

Dear Dr. Rogers:

Thank you for your September 25 letter which told
me of your good initial work to develop useful
knowledge about Manihot. You have our best wishes.

Sincerely yours,



Claud L. Horn, Head
Research Development Division
Technical Collaboration Branch

September 25, 1953

Dr. Claude L. Horn, Head
Research Development Division
Technical Collaboration Branch
Foreign Agricultural Service, U.S.D.A.
Washington, D. C.

Dear Dr. Horn;

Enclosed please find two copies of papers which will give you some indication of my summer's activity. Enclosure number 1 is the line project with the Institute at Turrialba which is more of the same type of report as you already have from me. This at least shows some definite advance. Enclosure number 2 is my progress report to the American Philosophical Society which includes to some extent my activities of the past summer.

I will soon be on the trail of further research monies which will carry me back to both Jamaica and Costa Rica and will further extend my activities into South America. If things go well I shall again be on the road next summer and hope to have a leave of absence from Allegheny College for the first semester of 1954 in order to make the South American trip. My first thought on funds is the Guggenheim Foundation. However, I may need further assistance since the top limit of funds is \$3000 per year.

I shall probably notify you of progress along these lines and may ask your advice if my own efforts fail. I certainly appreciate the cooperation which you have given this project and especially the assistance given by Dr. Wellman.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

DJR/amp
enc. 2

UNITED STATES DEPARTMENT OF AGRICULTURE
OFFICE OF FOREIGN AGRICULTURAL RELATIONS
WASHINGTON 25, D. C.

- DEC 18 1952

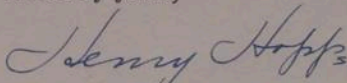
Dr. David J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Pennsylvania

Dear Dr. Rogers:

Your letter of December 15 came in during Mr. Horn's absence; he will not be back until after the holidays. I will therefore try to answer your letter as best I can, so that you will have a reply before you go to the AAAS meetings in St. Louis.

The financing of a possible cooperative project on manioc does present some problems as you quite well realize. As important as manioc is to the nutrition of the peoples of the Western Hemisphere, work on this plant is very much worth while. There are various programs operating in the Western Hemisphere that would have an interest in at least certain parts, such as the Research Program on this plant. Frankly, I do not think that Point IV could undertake to carry on the program completely. However, certain other country programs would doubtlessly cooperate by doing some of the work as part of their regular Point IV activities. The funds for a possible collecting trip by you would have to come, almost surely, from some organization other than Point IV. My suggestion is that you continue with your contacts and develop a real cooperative plan involving those who are interested in the work and develop it to the point that the plan spells out what each of the cooperating groups would do. Parts of the plan carried on by Mr. Peterson, Ramon Mejia and the Department of Agriculture in Jamaica would probably be financed with their regular funds. Other parts of the program might need some extra financing, including your proposed collecting trip. After we see the plan in its entity, along with the activities to be carried along with the various interested parties, and the extra financing that would be required, we might be able to make some suggestions as to how this extra financing may be secured. I believe it is premature at this time to discuss financing until we see the picture of the whole project more clearly, including the activities of the cooperators and the portions of the programs that will require additional financing.

Sincerely yours,



Henry Hopp, Acting Head
Research Development Division
Technical Collaboration Branch

December 15, 1952

Dr. Claud Horn
Office of Foreign Agriculture Relations
USDA, Washington, D. C.

Dear Dr. Horn:

During the past few months I have been contacting people in the West Indies, Central America and South America to find out about research work on Yuca, cassava, manioc, etc. As a result of these contacts, I have found several people who are very eager to cooperate on a project to make an up to date inclusive classification of all the varieties of Manihot utilissima.

These people are rather widely scattered, but my best contacts so far have come from Central America, (Nicaragua, Dr. Peterson) Columbia (Ramon Majia) and Jamaica. As a matter of fact, I think the best one has been the Department of Agriculture in Jamaica. I am planning to make a contact with Mr. Jorge Leon of Tegucigalpa during the Christmas holidays while at the AAAS meetings in St. Louis. I hope that while there, I can get him interested in assisting in raising plants at the experiment station in Tegucigalpa.

The one perennial question which rises in any of these projects is how to get the financial backing for such a project. As was mentioned in conference with you and Dr. Moncreux while I was in Washington last summer, any request for funds from Point Four funds has to be started by the countries directly interested in this work. Could you outline the procedure for instigating such a request? I should like to be able to say to Mr. Leon, or to the people in Jamaica, that they could get some financial assistance in this project, but I fear to make any such statements from my very meager knowledge concerning such commitments. Do you have any way of saying whether there would be funds available? I should very much like to know about the possibilities.

Furthermore, I should like to find out if there is any possible way for me to get finances for a collecting trip to several points in Central and South America and the West Indies through your office. I have a civil service rating as a taxonomist, but at present am on the inactive list. Could it be arranged for a

temporary assignment of say six months? I don't think I could do anywhere near a decent job in any less time. I can get a leave of absence from my present position, but would not be paid during that time. Since I have family obligations, it would be impossible to make such a trip without some sort of security for my dependents.

I hope that these requests will not be too difficult to answer. It would be very helpful to know something of your reactions before I go to St. Louis on December 26.

Yours very truly,

David J. Rogers
Assistant Professor of Biology

DJR/amp

THE ARNOLD ARBORETUM
HARVARD UNIVERSITY
JAMAICA PLAIN — CAMBRIDGE — WESTON
MASSACHUSETTS, U. S. A.



HERBARIUM, LIBRARY AND LABORATORIES
22 DIVINITY AVENUE
CAMBRIDGE 38, MASSACHUSETTS

January 3, 1955

Dr. David J. Rogers
Department of Botany
Allegheny College
Meadville, Pennsylvania

Dear Dave:

Your letter of December 30th and the photographs arrived in good shape this morning and I am very pleased to have them. They fill a significant gap in the teaching requirements here at the Arnold Arboretum and I assure you they will be put to good use as time goes by.

I would, indeed, like to borrow one or two kodachrome transparencies showing about what is illustrated in the black and white photographs. It will take about three weeks to have those duplicated and if you are willing to send them on I will process them through this office. Some of the kodachromes that you displayed at the Gainesville meetings were truly magnificent and caught my eye. Hence this request for an illustration of the complete plant.

Hope the Christmas holidays went well with you and that the New Year is off to a good start. That seems to be the situation around here, although we are extremely busy. With best wishes.

Sincerely,

Richard A. Howard
Director

RAH/sw

THE ARNOLD ARBORETUM
HARVARD UNIVERSITY
JAMAICA PLAIN — CAMBRIDGE — WESTON
MASSACHUSETTS, U. S. A.



HERBARIUM, LIBRARY AND LABORATORIES
22 DIVINITY AVENUE
CAMBRIDGE 38, MASSACHUSETTS

October 19, 1954

Dr. David J. Rogers
Allegheny College
Meadville, Pennsylvania

Dear Dave:

I enjoyed meeting you at the Gainesville meetings and having the chance to talk. However, I did not have the chance to tell you after your presentation how much I enjoyed your talk and how much I enjoyed seeing what you had done in the way of photographing the specimens of Cassava. This letter is the direct result of that latter impression, for I am wondering if you have a duplicate or extra photograph showing the complete Cassava plant with its root system that you could donate or sell to us for use in our teaching here. I never had the opportunity during my recent visit to Jamaica to dig up a Cassava plant completely to duplicate what you had shown so well on the screen. If you can help us out on this, it would be much appreciated.

Incidentally, I find that you have made an excellent impression everywhere you have gone in Jamaica. In talking with the Department of Agriculture, I find they are very anxious to continue cooperation on their plant products with anyone who has interests similar to yours. Keep up the good work on that line, for we need the excellent contacts with the Caribbean area. I hope that you had a successful stay in Jamaica and that you enjoyed the trip back. School has started here, too, and we are having an influx of visitors, but we are really delighted to show anyone around the building and to describe what we have in mind for the future.

Sincerely,

Richard A. Howard
Director

RAH/sw

COPY

Indian Agricultural Research Institute
New Delhi

September 29, 1953

D. O. No. FB/27072

Dear Mr. Parker,

I thank you for your letter dated the 15th September, 1953. As desired, a short note on tapioca indicating the various lines of work in India is enclosed. As you are already aware, tapioca is grown mostly in Travancore-Cochin and in the Malabar district of Madras State. Investigations on the tapioca plant have, therefore, been in progress mostly in Travancore-Cochin.

Regarding copies of the publication referred to in the enclosed note under "references", it is regretted we do not have extra copies of these with us. I think a more satisfactory arrangement would be for the United States workers interested in tapioca to get into touch with Dr. A. Abraham, Professor of Botany at Trivandrum (Travancore University) - under whose supervision the entire work on tapioca is being carried out.

Sir, of Travancore
Arabia S. Malabar
India

Yours sincerely,

/s/ B P Pal

F. W. Parker, Esquire,
Chief Agriculturist,
American Embassy,
New Delhi.

KEMENTERIAN PERTANIAN
(Ministry of Agriculture)

BALAI BESAR
PENJELIDIKAN PERTANIAN
(GENERAL AGRICULTURAL RESEARCH STATION)

BOGOR (Indonesia), March 15th, 1955.
Ditlan Tjkeureuh No. 99.

Our ref. No. 479/076
077
Your ref. No. —

BY AIR MAIL

Please quote our reference number
and date in your reply.

Enclosures: —

Subject: publications.

Mr David J. Rogers
Assistant Professor of Biology
Allegheny College
MEADVILLE
Pennsylvania, U.S.A.

Dear Sir,

Referring to your letter dated February 15th, 1955, we have the pleasure to inform you that simultaneously has been dispatched free of charge to your address the following publications as printed matter by surface mail.

1. "Mededelingen van het Algemeen Proefstation voor de Landbouw", No. 92-94 (by Ir G.G. BOLHUIS, written in Dutch with summaries in English),
2. "Mededeling voor de Praetijk" No. 14 (by Ir G.A.W. WAGENAAR and Ir G.A.W. van de GOOR, without summary).

Moreover, you are advised to contact with: Ir G.G. BOLHUIS, c/o Lab. voor de Tropische Landbouw- Plantenteelt, Wageningen, the Netherlands. We suppose that in the last years many papers concerning casava which are written in English were issued by him.

Faithfully Yours,
General Agricultural Research Station



For Director

(E. Adm.)

Head of the Administration

February 15, 1955

The Director
The Agricultural Experiment Station
Bogor, Indonesia

Dear Sir:

For the past three years I have been engaged in a systematic study of the variations within the species Manihot Utilissima (M. esculenta). Most of my activities have been confined to plants of the Western Hemisphere; more specifically, those occurring in the West Indies and Central America.

Through Dr. A. G. van Veen of FAO, I have heard that a good deal of interesting work has been done on Manihot Utilissima at your station. He has suggested that I write to you for reprints of articles available concerning any aspect of the study of Manihot Utilissima. Of course, I am primarily interested in any varietal studies, but I am also interested in any aspect, such as, genetics or agronomics which has been done there.

If it is at all possible for you to supply me with these reprints, I shall be very happy to receive them. If there is a charge for the mailing of these reprints, I shall be most pleased to defray such expense.

Very truly yours,

David J. Rogers
Assistant Professor of Biology

DJR/rp



KEMENTERIAN PERTANIAN
DJAWATAN PENJELIDIKAN ALAM
(KEBUN RAYA INDONESIA)

B O G O R , March 16, 1955.

No.139/H.B.L.N.

Allengheny College,
Meadville, Pennsylvania - U.S.A.

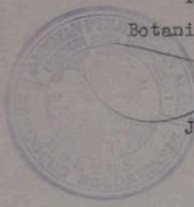
Dear Sir,

In reply to your favour of February 15, concerning Manihot utilissima, I beg to inform you, that this Botanic Garden has not one publication on this subject. But I am practically sure you will have more success in writing to the Director of the General Agricultural Experiment station at Bogor, where much research work has been done on Manihot.

The Indonesian address is: Balai Besar Penyelidikan Pertanian, Tjikeumeuh, Bogor, Java.

Hoping this information will meet your purposes,
I remain, dear Sir,

Yours faithfully,
Botanic Garden of Indonesia,



J. Douglas
J. DOUGLAS.
Curator.

February 15, 1955

The Director
Botanical Gardens
Bogor, Indonesia

Dear Sir:

For the past three years I have been engaged in a systematic study of the variations within the species Manihot Utilissima (M. esculenta). Most of my activities have been confined to plants of the Western Hemisphere; more specifically, those occurring in the West Indies and Central America.

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Very truly yours,

David J. Rogers
Assistant Professor of Biology

DJR/rp

Crop Agronomy Division,
Department of Agriculture,
Hope, Liguanea,
JAMAICA, B.W.I.,

21st June, 1956.

3969/56

Dr. David Rogers,
Department of Biology and Geology,
Allegheny College,
Meadville,
Pennsylvania,
U.S.A.

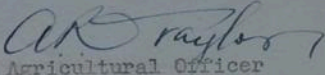
Dear Dr. Rogers,

With reference to Paragraph 5 of your letter No. 2959/56 dated June 1, I wish to inform you that the cassava plot was planted at Bodles in August, 1955, according to the planting scheme which you left with us. The plants are in good healthy condition and are now nearing "maturity".

We are sorry that other duties will prevent your visiting Jamaica this summer, but we hope that the findings from your analyses of the data you now have in hand will prove significant to the study of cassava.

When your letter arrived, the Food Crop Agronomist was on leave from his duties. This accounts for the results of analyses having been sent by the Pineapple Agronomist, Mr. Higgins.

Yours faithfully,


for Chief Agricultural Officer

ART:munw

February 9, 1955

The Director of Agriculture
The Department of Agriculture
Hope, Jamaica, B.W.I.

Dear Sir:

I was very pleased to receive your letter of January 17, including the analysis of cassava tubers. This data is of great value to me and will be most useful in the determination of the variations amongst our cassava varieties in Jamaica.

It is perhaps just as well that the proposal which I made to you in a previous letter (that I bring an assistant with me for chemical analyses) is not necessary. A student of mine who had planned to accompany me at the time of my proposal has now found it inconvenient and would not be able to go along. I certainly do appreciate your fine cooperation and the cooperation of Mr. Hewitt and Mr. Richardson. Their work is certainly beautifully done.

I hope that I shall have some good information for you by this coming summer in order that the cassava studies may be able to return some benefit.

Sincerely yours,

David J. Rogers
Assistant Professor of
Biology

DJR/rp

DEPARTMENT OF AGRICULTURE,

JAMAICA, B.W.I.

PLEASE QUOTE

REFERENCE No. G 326

17th January, 1955

Dr. David J. Rogers,
Department of Biology and Geology,
Allegheny College,
Meadville,
Pennsylvania,
U. S. A.

Dear Dr. Rogers,

I regret the delay in replying to your letter of the 9th December, 1954, but I have delayed it pending the completion of the analyses of cassava which I know you urgently required.

I am sorry we have been so long in completing these analyses, but we have been held up because of urgent other work in connection with special development projects. I am now enclosing 2 copies of the analyses of cassava tubers from Bodles Agricultural Station which I hope will be of interest to you. We shall endeavour to let you have the remaining analyses as soon as possible.

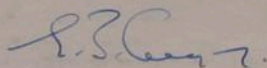
I am sorry that Mr. Richardson gave you the impression that we would be unable to undertake further analyses of material and it is probable that he was influenced in making this statement by the pressure of immediate work to be undertaken. Mr. Hewitt has now returned from leave and it is his opinion that there should be no difficulty in carrying out any further analyses that you wish on your next visit, though it is possible that there might be a short delay in completing them depending upon the demands made on our analytical staff. I should not like you to be put to the expense and trouble of providing a special worker of your own and it would be difficult to fit him into our laboratory.

My personal opinion is that as you are making such a useful contribution to our knowledge of cassava varieties in Jamaica, we on our part should do all we can to assist you and to carry out the analyses of material on your behalf should be our minimum contribution.

We shall look forward to seeing you some time in August this year and will do our best to assist you in every way possible.

With best wishes for the New Year,

Yours sincerely,



Acting Director of Agriculture.

December 9, 1954

The Director
Department of Agriculture
Hope, Kingston, Jamaica

Dear Sir:

I was just informed that my grant has been approved for next summer which assures the continuation of the study with cassava.

It has been impossible for me to complete any correlations of my work of last summer by this date. (You will recall, perhaps, that I had hoped to publish some of the data which I gathered while in Jamaica in Tropical Agriculture.) I am not sure how long it will be before I can submit something for publication.

I was sorry to hear from Mr. Richardson, the agricultural chemist, that he had been unable to run analyses which we had projected last July. I can understand that he has too many other pressing problems to consider those of the analyses of cassava. In view of this fact, that Mr. Richardson will more than likely continue to be busy with departmental activities, I am trying to think of some way whereby these analyses of the carbohydrate, protein and HCN content can be accomplished without overstressing your department. Please let me outline a method which I would like to submit for your approval:

I have a student well versed in methods of analyses who could take care of the actual undertaking. I think that I can get funds for paying his maintenance and travel. I do not think, however, that I will be able to get sufficient monies to pay for equipment or materials for running the analyses. If this student could work in your laboratories and utilize your equipment for these analyses, he could be responsible to Mr. Richardson for his activities but at the same time would relieve your own staff of the job of the actual analyses.

If this plan meets with your approval, I should be happy to hear from you as soon as is convenient in order that I may make applications for funds for this activity. I would hope that we could start his activities in June and continue them perhaps through the end of August.

At present I am planning to spend about six weeks in Costa Rica working with another aspect of the cassava study but hope to spend an equal amount of time in Jamaica recording results of this year's planting.

Please let me take this opportunity to extend to you and your staff a very pleasant Christmas and a Happy New Year.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

DJR/rp

DEPARTMENT OF AGRICULTURE,

JAMAICA, B.W.I.

PLEASE QUOTE

REFERENCE No. G 326

[#]
20 March, 1954

Dr. David J. Rogers,
Assistant Professor of Biology,
Allegheny College,
Meadville,
Pennsylvania,
U. S. A.

Dear Sir,

I have delayed replying to your letter of February 18, 1954 until I have had time to check on the growth of the collections of cassava varieties planted on your behalf. The plots of cassava varieties planted at Grove Place and Bodles in July, 1953 have made excellent growth and from a vegetative point of view would be of interest to you. I am afraid, however, that tubers would be too immature for study although some of the sweet varieties may be approaching maturity.

If you consider the material suitable for a systematic study, we should be very pleased to see you between June and August of this year. Would it not be possible for you to visit both Costa Rica and Jamaica? Should you decide to come to Jamaica, we should do all we can to assist you and I hope that this will be possible.

Yours sincerely,

F. B. C. 7

f Director of Agriculture

February 18, 1954

Director, Department of Agriculture
Hope Gardens
Kingston, Jamaica

Attention: Director of Research

Dear Sir:

I am writing to find out if you can give me a report on the progress of our joint program for the systematic study of the locally occurring varieties of cassava. I should like to know if the experimental plots have been developed as we had hoped they would at the Bodles Experimental Farm and at Grove Place.

I am in the process of programming my activities for the months of June, July, and August, and should like to know if you think the plants at these places will be matured sufficiently to make a trip to Jamaica worthwhile at this time. It is my present plan to spend approximately six more weeks in either Costa Rico or Jamaica, depending upon the status of the plants, either on your stations or in Costa Rico. I shall have to inform you of more definite plans, once I know how things are coming there. Please be assured of my warmest personal regards for you and the staff members whom I met there last June and July.

Very sincerely yours,

David J. Rogers
Assistant Professor of Biology

May 7, 1953

Director of Agriculture
Department of Agriculture
Jamaica, B. W. I.

Dear Sir: G326

Just a short not to inform you that I shall
arrive in Kingston on June 15, 1953. I will
notify you after my arrival.

I am looking forward to my experiences with
you.

Yours very truly,

David J. Rogers
Assistant Professor of Biology

DJR:vw

DEPARTMENT OF AGRICULTURE,

JAMAICA, B.W.I.

ANY REPLY OR SUBSEQUENT
REFERENCE TO THIS COM-
MUNICATION SHOULD BE AD-
DRESSED TO THE DIRECTOR OF
AGRICULTURE AND NOT TO
ANY OFFICER BY NAME
AND THE FOLLOWING
REFERENCE QUOTED:-

No. ~~25~~ 326

17th April. 1953

Dear Sir,

In reply to your letter of the 27th March, 1953, it will not be necessary for you to bring equipment for the preparation of herbarium specimens as we have presses, drying paper and vasculum available for your use here.

Looking forward to seeing you in the near future.

Yours faithfully,

P. J. C. .

for Director of Agriculture

David J. Rogers, Esq.,
Allegheny College,
Meadville,
Pennsylvania,
U.S.A.

Reference No. G 326

March 27, 1953

Director of Agriculture
Department of Agriculture
Jamaica, British West Indies

Dear Sir:

In answer to your letter of March 3, I am very pleased to know that you can give me some space in which to operate this coming summer. Let me say that I have great respect for the Mosaic disease and have no desire to spread it about the world. This is one of the problems which I hope to find out about this summer before going too extensively into the problem of importation.

I should like to know whether it would be necessary for me to bring along equipment for the preparation of herbarium specimens, or whether I might depend upon the good nature of one of your assistants to supply presses and dryers? If I arrive by plane, I must make arrangements in advance to have such equipment sent ahead of me in order to have it available for use there.

Thank you kindly for your recommendations on the house situation. I have written Messrs. Graham, Associates, and have received satisfactory information from them.

Hope to hear further from you.

Sincerely yours,

David J. Rogers

DJR/bls

DEPARTMENT OF AGRICULTURE,

JAMAICA, B.W.I.

PLEASE QUOTE

REFERENCE No. G 326

3rd March, 1953

Dear Sir,

In reply to your letter No. A 49 of the 2nd February we shall be very pleased to see you in Jamaica between June and August of this year and to give you all the assistance you require in further studying the varieties of cassava grown in Jamaica. It should be possible to supply you with a small area of land on our station at Bodles some thirty miles from Kingston. This station is in a dry area and is operated under irrigation.

Before considering the importation of wild cassava varieties from Brazil we would need more details about the disease position in that country. I am not sure whether Mosaic disease occurs in Brazil, but if it did, we certainly would not be prepared to import cassava varieties from that region. In any case it is probable that any varieties imported from the American mainland would have to pass through the Plant Quarantine Station in Trinidad.

I am afraid there would be no housing facilities at our Bodles station but you could obtain accommodation in Kingston. That would mean that you would need your own transport facilities. It is usually possible to rent a furnished house in Kingston for short periods during the summer at a rental of £35 to £45 a month. Alternatively, hotel accommodation could be obtained at a cost varying between £2 and £3 per day per person. If you are more interested in obtaining a furnished house I would suggest that you contact Messrs. Graham Associates Limited (Real Estate Agents), 26 Duke Street, Kingston, who make a business of renting houses and are a reliable firm.

Hoping to hear further from you in this matter.

Yours faithfully,

F.S.C. 7

for Director of Agriculture

David J. Rogers, Esq.,
Assistant Professor of Biology,
Allegheny College,
Meadville, Pennsylvania.

February 1, 1953

Director of Agriculture
Department of Agriculture
Jamaica, B.W.I

Reference No. A 49

Dear Sir:

I trust you will understand that my delay in answering your letter of November 29, 1952 is not caused by lack of interest in your generous offer of cooperation, but rather by the necessity of contacting as many interested people as possible. Unfortunately some of my correspondents were not so prompt in answering my enquires.

There has been, of necessity, some revision of my original plan for attacking the project of classifying the variation within the species of Manihot esculenta, but the fundamental plan is still tenable. For example, the studies of the vitamin content will have to be delayed, but in lieu of this portion of the experimental work, workers in Guatemala and Costa Rica have agreed to run nutritional tests on the varieties, both of the roots and of the foliage. In addition, the Director of the Inter-American Institute of Agricultural Sciences at Turrialba has agreed to provide cultural plots and personnel to grow whatever varieties we can bring into cultivation there.

For most of the cultivated varieties of ^{Manihot} ~~yuca~~, the environment of the experimental plots in Costa Rica is satisfactory, but I feel sure that the areas are uniformly too moist for some of those varieties which have been on the edges of civilization in the areas which are the probable centers from which manioc originally spread, namely the semi-arid regions of eastern Brazil. It is at this point that I feel that you may give yeoman service to this study in that some areas of Jamaica come closer to providing similar habitats to those areas of the uplands of eastern Brazil than do any other regions outside Brazil itself.

Since Jamaica is much more accessible than is Brazil, and since my travel funds are extremely limited, I would be very pleased if you could allow a small test area in a rather dry region in which to bring some of the wild-type varieties from eastern Brazil into cultivation. Through contacts with workers in Brazil, I hope to be able to have some of these varieties sent to you there in Jamaica, and in addition, if you so desire, some of the 128 clonal variations with which experiments are now being conducted in Campinas, Brazil.

It is obvious that I must spend time with the plants in their growing condition, so much more so since your keys (enclosed in your letter) demonstrate how much farther along you are than I in this study. It is my hope that I may accomplish this during the months of June, July and August of this year studying the varieties in Jamaica and in Costa Rica, for the purpose of further organizing the approach to the study, and to make final arrangements for importation of plants from Brazil. Before any real progress is made, I feel that I must know something of the agricultural procedures: propagation techniques, planting methods, age at harvesting, etc., all of which I have no satisfactory knowledge of at present.

The length of my stay is largely dependent upon my ability to secure travel funds, which may or may not be forthcoming this year. At any rate, may I beg upon your good nature to enquire if any housing facilities exist near your station, or in the city of Kingston? I would like very much to bring my wife and two children along, and would like to know to whom or to what agency I should apply for suitable housing.

I hope that my requests for your cooperation in this ~~important~~ study are not too burdensome, and further that I have not

Answer sent.
Feb 1, 1952

DEPARTMENT OF AGRICULTURE,

JAMAICA, B.W.I.

PLEASE QUOTE

REFERENCE No. A 49

29 November, 1952

Dear Sir,

This is to acknowledge your letter dated 11th September, 1952, on the subject of Manihot esculenta (M. utilisissima). I am in complete agreement with your view that there is a great need for increased knowledge of the varieties and their inter-relationships and I shall be glad to offer all the assistance I can in collecting and forwarding to you botanical specimens for use in taxonomic revision.

There exists considerable confusion locally in the nomenclature of the varieties. We have found the same name applied to the same variety according to districts. To remedy this state of affairs we undertook to collect the varieties commonly grown in Jamaica and prepare a key by which they may be readily identified. Some work has already been done in this direction and I enclose herewith a copy of the provisional key listing our best known varieties under the names by which they are most generally known.

We are also engaged in carrying out variety trials to determine the highest yielders and results of our experiments will be published in our annual Bulletin of Investigations.

This Department has issued no recent publications on Manihot esculenta; I have, however, attached hereto a list of a number put out in the past.

I shall welcome co-operating with you on the project you outline and have already indicated the way in which my Department might help. Please let me know how else you think I might be of assistance.

Yours faithfully,

RSC
Director of Agriculture

Dr. David J. Rogers,
Assistant Professor of Biology,
Allegheny College,
Meadville, Pennsylvania,
U. S. A.

September 11, 1952

Director
Dept. of Agriculture
Kingston, Jamaica

Dear Sir:

Dr. Claude Horn, Office of Foreign Agricultural Relations, United States Department of Agriculture, has mentioned your name to me as having some interest on problems concerning some aspect of Manihot esculenta (M. utilisima). If you would be so kind as to assist me I should like to make a survey of the work done on any aspect on this species which you may be carrying on or which you may have completed. Furthermore, if you have any publications I would very much appreciate a reprint, if available, or at least a reference where I may find it. If you have any projected work in this particular field, I would like very much to hear of it.

All of this survey is intended to give me some assistance in outlining the project which I have concerning this species. Briefly, the project which I have in mind consists of (1.) making a taxonomic revision of the varieties of the species (2.) correlation of genetic data (3.) determine vitamin contents of varieties as indicators of divergence or convergence of the varieties.

It is my feeling that before any solid improvements can be made in the food producing capabilities of this group, we must know all of the varieties and their interrelationships. This project, I realize, is one of great complexity and will require the cooperation of as many people as can be interested in it. First of all, the dried material available in the United States herbaria is wholly insufficient. Firsthand field observation is of more importance and can be of much more value than observations of herbarium material.

I should like to know if you or your assistants are interested in such a cooperative project. If you are, what part of the project would interest you most and what facilities are available for such work?

If you know of others in the field, I would appreciate your mentioning this proposed project to them and also I should like to have their names and addresses.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

December 5, 1952
November

Director of Research
Johnson Wax Company
Racine, Wisconsin

Dear Sir:

I understand that you have a Brazilian branch operating from Eblam, Brazil which has extensive interest in the carnuba wax of that region. I should like to know if it is at all possible to accompany some of the collectors or inspectors in this region where transportation is extremely difficult.

I am planning a collecting trip throughout the eastern states of Brazil for Manihot utilisima (yuca, tapioca, or manioc). If it is at all possible, through the facilities which your representatives have there, I should be able to get into regions otherwise inaccessible to me.

If you can give me any information and permission to accompany some of your representatives, I should be extremely grateful.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

DJR/amp

November 21, 1957

Dr. William O. Jones
Stanford Research Institute
Menlo Park, California

Dear Dr. Jones:

I would be pleased to receive a reprint of your article, "Manioc: An Example of Innovation in African Economies," published in ECONOMIC DEVELOPMENT AND CULTURAL CHANGE (University of Chicago Serial) Vol. 5, No. 2, January, 1957, pp. 99-117.

If you have other papers in this relation--I seem to recall that you have another on the distribution of manioc in Africa--I would appreciate receiving them.

Sincerely yours

David J. Rogers
Curator, ECONOMIC BOTANY

DJR:MDP

August 2, 1953

Dr. Carlos Arnaldo Krug
Instituto Agromico
Caixa Postal 28
Campinas, Brasil

Dear Dr. Krug:

I trust you will recall my previous letter inquiring whether it was possible to obtain cuttings of Manihot utilisima to be incorporated into a museum plot here in Costa Rica. If possible, I should like to have whatever material you can send at your earliest convenience.

It is not our desire to receive all of the named varieties, but rather to have those which show the widest range of variation. In our problem, the primary interest is to determine the total range of variation, rather than to consider the economic value or the starch producing capacities of the varieties; once the range of variation has been established, then we can begin to concentrate on which varieties are best for certain purposes.

The materials should be sent to Dr. Jorge Leon, who will be in charge of planting the cuttings and who will cooperate with me in the taxonomic study of the varieties.

If possible, we should like to have at least six cuttings of each variety, each cutting not less than 20 cm; long, either cut to this length or sent in longer sections, whichever is most practical for you. Of course, these materials would have to be sent by air, and only those plants which seem free of disease; Although it is not an essential requirement, if you could supply the local name of each variety sent, plus whether of the so-called "sweet" or "bitter" type, we would appreciate it very much;

I trust that this request will not cause you too much bother. We shall be grateful for whatever aid you may give us.

Yours very truly,

David J. Rogers

February 26, 1953

Dr. Carlos Krug
Departamento de Producao Vegetal
Instituto Agronomico
Caixa Postal, 28
Campinas, Brasil

Dear Dr. Krug:

My apologies for my leixity in answering you letter of November 25 concerning my research project on the varieties of Manihot Utilissima. I have been in contact with many scientists in Central and South America in order to establish the procedures which will give us the best results.

In as much as my duties as a professor limit my free time for experimental work with Manioc, it is imperative that I establish a base of operation much closer to this country than is Bresil. With this in mind, I have asked the cooperation of the Department of Agriculture in Kingston, Jamaica, British West Indies, and the Director of the Inter-American Agriculture Institute at Turrialba, Costa Rica, to cooperate in growing as many of the varieties as is possible to collect throughout the range of the species. Both of these stations are well equipped to handle such experimental work and are fully appreciative of the value of a systematic study of the species. Through these stations it will be possible to correlate information from many sources concerning the genetics, the general agricultural methods, the starch contents, the value of the foliage as stock food, and what other information is applicable to our combined efforts.

It is certainly a pleasure to know that you maintain the large collection which you have. I am sure that you have done more work in this respect than any other one group, and I think that with your cooperation, it will be possible to produce a sound and useful classification of this useful species.

It is my intention to spend the summer(June - September)in Jamaica and in Coste Rica, where I will make final arrangements for the establishment of experimental plots. Soon after these experimental plots have been established, I hope to be able to ask you to send reproductive material(cuttings), or other methods of reproduction to these stations, where data concerning their aspects will be collected.

It is my long range intention to visit your fine experimental stations in Campinas. Time and lack of funds prevent my doing so this summer.

Dr. Carlos Krug

2

February 26, 1953

Thank you very kindly for your considerations and I trust that we shall be able through our cooperative efforts to produce a sound piece of work.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

DJR:cja

Campinas, 25 de novembro de 1952

DEPARTAMENTO DA PRODUÇÃO VEGETAL
DIVISÃO DE EXPERIMENTAÇÃO E PESQUISAS
INSTITUTO AGRONÔMICO
CAIXA POSTAL 28
CAMPINAS
BRASIL

ans. 2/26/53

N.º 9133
Mencionar este número na resposta

Prof. David J. Rogers
Allegheny College
Meadville, Pennsylvania
U.S.A.

Dear Dr. Rogers

We have received your letter of September 8, asking for reprints of papers on cassava and proposing a cooperative work in order to study the varieties of that plant.

In separate cover we are sending you by ordinary mail three of our recent papers and also a list with references of publications, which may interest you. I should like to call your attention for the paper of our colleague E.S. Normanha - Aspectos Agronômicos Da Cultura Da Mandioca (*Manihot utilisima*, Pohl), where a general review is given of the work that is being carried on at this Agronomic Institute.

The papers of E. Graner are the only ones we know in Portuguese about the Genetics and Cytology of the cassava plant.

Work on several aspects of breeding and cultivation of this plant are still being done at the Roots and Tubers Dept. of this Institute and a relation of these projects are inclosed for your guidance.

We maintain a rather large collection of about 158 varieties (clons) and 431 seedlings from the best varieties. This collection is in Campinas Expt. Station and 6 smaller ones, comprising only commercial varieties, are in other Exp. Stations of this Institute located in regions with different soil conditions.

Determinations of chemical composition of dried leaves in several varieties of cassava are being done by the Dept. of Animal Industry of São Paulo, and Fisiology Dept. in the Medicine School, University of S. Paulo. We believe that a survey of vitamin contents of other varieties should be done not only in the roots but also in the dried leaves.

We should like to assist you in your study of manioc and we may contribute with material of our collection for the cooperative project you have in mind.

Mr. E. Normanha, that is in charge of the experimental work with cassava has recently received a Guggenheim fellowship and is at present, studying at the University of California in Berkeley (International House - Room 665 Berkeley).

I advise you to be in touch with him.

Sincerely yours.

written 2/26/53

Ernesto

Carlos Arnaldo Krug
SECRETARIO

September 8, 1952

Dr. Carlos Krug, Director
Instituto Agronomico
Caixa Postal 28
Campina, Sao Paulo
Brazil

Dear Dr. Krug,

Dr. Claude Horn, Office of Foreign Agricultural Relations, United States Department of Agriculture, has mentioned your name to me as having some interest on problems concerning some aspect of Manihot esculenta (M. utilissima). If you would be so kind as to assist me I should like to make a survey of the work done on any aspect on this species which you may be carrying on or which you may have completed. Furthermore, if you have any publications I would very much appreciate a reprint, if available, or at least a reference where I may find it. If you have any projected work in this particular field, I would like very much to hear of it.

All of this survey is intended to give me some assistance in outlining the project which I have concerning this species. Briefly, the project which I have in mind consists of (1.) making a taxonomic revision of the varieties of the species (2.) correlation of genetic data (3.) determine vitamin contents of varieties as indicators of divergence or convergence of the varieties.

It is my feeling that before any solid improvements can be made in the food producing capabilities of this group, we must know all of the varieties and their interrelationships. This project, I realize, is one of great complexity and will require the cooperation of as many people as can be interested in it. First of all, the dried material available in the United States herbaria is wholly insufficient. Firsthand field observation is of more importance and can be of much more value than observations of herbarium material.

I should like to know if you or your assistants are interested in such a cooperative project. If you are, what part of the project would interest you most and what facilities are available for such work?

If you know of others in the field, I would appreciate your mentioning this proposed project to them and also I should like to have their names and addresses.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

October 10, 1952

Dr. George H. M. Lawrence
Bailey Hortorium
Cornell University
Ithaca, New York

Dear George;

I should like to know if you have any herbarium specimens of the cultivated varieties of Manihot esculenta. If so, is it possible for me at Allegheny College to borrow those?

I realize I am tackling an awful chore in trying to do something with this mess. Be that as it may I think it is a worthwhile job.

I shall appreciate hearing from you as to what you could let me have.

Yours truly,

David J. Rogers
Assistant Professor of Biology

DJR/amp

April 19, 1956

Dr. Jorge Leon
I.I.A.A.
Turrialba, Costa Rica

Dear Jorge:

I have just had a letter from Dr. Bouffil, Senegal, West Africa, saying that he will have cuttings of selected varieties of Yuca available late this month or next month. I have asked him to send them directly to you and have further informed him that I will pay for them.

I hope, at long last, that the records which Aida ordered are on their way. They got as far as Miami once, but were returned because of some irregularity in mailing procedures. Hope things are going well there.

Sincerely,



EL INSTITUTO ES UN ORGANISMO ESTABLECIDO
POR LOS GOBIERNOS DE LAS REPUBLICAS AME-
RICANAS PARA PROMOVER EL ADELANTO DE LAS
CIENCIAS AGRICOLAS POR LA INVESTIGACIÓN
Y EDUCACIÓN.

INSTITUTO INTERAMERICANO DE
CIENCIAS AGRICOLAS

TURRIALBA, COSTA RICA

10 March 1955

Dr. David J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Pennsylvania

Dear Dave:

In relation to your proposed trip to the Putumayo region I think the best person to give you information on the area is Dr. R. E. Schultes, Botanical Museum, Harvard University. You probably know him well; he is a taxonomist and for several years worked for the United States Department of Agriculture in Colombia. He may give you the names of Colombian people that you need to contact.

The yuca collection here is doing fine. I hope you may stop here first because in June it will be already mature.

With best regards, very truly yours,

Jorge
Jorge León
Botanist

February 15, 1955

Dr. Jorge Leon
Inter-American Institute of
Agricultural Sciences
Turrialba, Costa Rica

Dear Jorge:

As a part of my itinerary this summer I want to get down into Colombia and would like very much to get into the southern part of the country, particularly around the area known as Putumayo. This will be more of an exploratory trip than anything else, but I should like to get some of the yuca clones from this relatively primitive district.

Such a trip would be much easier if I could have the assistance of some of the Colombian people to help me out. I should like to know if you could tell me the names and addresses of some people in the Colombian Department of Agriculture to whom I may write who could either accompany me or send representatives with me into this particular area.

I shall be writing you again a little later to ask for some assistance from your carpenter to make a suitable photographic board against which I can photograph the plants there at Turrialba, but I shall give you full instructions in a subsequent letter for this. It might be well to ask whether or not I should include some money to assist in the purchase of materials for such a board.

Our extremely cold winter is making me very, very eager to get into some of the temperatures which you are now (I hope) enjoying. Too bad that I can't leave right now and get away from the 8-10 inches of snow which is covering the ground. I am looking forward to this summer's visit with you. I shall be pleased to have the names of the Colombian people mentioned above.

Yours,

DJR/rp



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TURRIALBA, COSTA RICA

24 December 1954

Dr. David J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Pennsylvania

Dear Professor Rogers:

Dr. Allee has asked me to answer your letter of
December 14.

We are delighted to know of your National Science
Foundation grant for work on yuca, and will expect to have
you with us in June and July. Space will be reserved in
the Guest part of the dormitory or in the "Coffee House"
for you as soon as we have definite word of your time of
arrival. As you may recall, the cost for room and meals
is three dollars per day or sixty per month. We will keep
you informed about the possibility of occupying a house
here. At the present moment we have a few empty houses,
but expect that they will all be occupied ~~in~~ before June
as a result of an expanded program. However, if you will
let us know the size of your family, we can give you definite
word later on.

I am passing your letter to Dr. León, since you
will be working most closely with him.

Sincerely yours,

Damon Boynton
Damon Boynton, Head
Plant Industry Dept.



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TURRIALBA, COSTA RICA

30 November 1954

Dr. David P. Rogers
Allegheny College
Meadville, Pa.

Dear Dave:

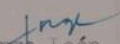
The yuca plants ~~from~~ Paraguay arrived here in bad condition (full of larvae, etc.) The man at the Plant Inspection burned the whole thing. The other material, of which Dr. Hodge wrote to you on October 20, arrived in fair condition and is doing all right.

The Jamaica material three cuttings did not sprout; the rest is fine.

Of course, go ahead in mounting the specimens.

Things here are much the same. As I told you in the last letter Dr. Woodson has been here twice. The family is growing normally (I hope), and Maruja and the two children sent to you and your family their best regards. I hope you can find some way to come next summer.

Yours,


Jorge León

Plant Introduction Section

October 20, 1954

AIR MAIL

Dr. Jorge Leon
Interamerican Institute of
Agricultural Sciences
Turrialba, Costa Rica

Dear Dr. Leon:

We have recently received some introductions of Manihot esculenta from Peru. We have contacted Dr. David J. Rogers of Allegheny College who states that you would be happy to receive this material for growing in the clone collection at Turrialba. We are accordingly ordering this material out to Turrialba immediately. Information regarding each of the introductions is contained on the order slip which will accompany the material from our Glenn Dale, Maryland Plant Introduction Garden.

A copy of this letter is being sent to Dr. Rogers so that he may be aware of this shipment.

Yours sincerely,

W. H. Hodge
Assistant Head of Section

WHH:SSP

cc: Dr. D. J. Rogers ✓

Tunialba,
July 5, 1934.

Dear Dave:

the yuca cuttings arrived here today in perfect conditions. I planted them at once for propagation purposes in the greenhouse plot. We are harvesting now the other varieties. I will inform you later.

A shipment of yuca cuttings from Lagway came about two weeks ago. Our boy in San Iñe took them to the quarantine and they were turned loose of the large numbers of snails.

We are going to start imbrising in the interchange between Campinas (Brazil) and Bogor (Indonesia). As cuttings from both places are going to be planted and tested here for diseases, we will get material from both sources.

Things are going as usual here. The family has the minimum - and more common addition (a girl.)

My wife sends you best regards.

Yours
Jorge

I got the information on the variegated yuca at Hope from a well known Florida horticulturist, Mr. Newbill.

Tumalba, May 26, 54

Dear Dave:

I was very sorry to hear that you are not coming. I was expecting your trip so we could have the varieties, and this year also, some seeds, as the conditions were good for setting fruits.

We also have the possibility of receiving some of the best clones from Indonesia, establish them here and exchange them for Brazilian materials. Of course we would keep some stuff here - There are however, some financial difficulties, but we expect the interchange will be possible in the next months.

I talked to Dr. Allen about the possibility of giving you tickets here - Officially the Institute could do this only with members of its staff. One way he suggested is to appoint you as a research fellow. This has to be discussed in the Board next month. The easiest way seems that anybody here would buy your ticket - But I wanted to wait until Dr. Allen's decision. So if next year you get the funds, please write us in advance -

I would like to have here some of the variegated yuca. May be you remember it bordering in summer the entrance to the Palm house at the MBO. A fellow told me recently that it is common at Hope Gardens - If you have a chance please send cuttings or seed of this yuca or anything else you think suitable that grows there.

We are expecting an addition to the family today or tomorrow. This, not the age, is the cause of the shaking

in the handwriting - excuse also the bad paper. Hoping
to hear soon from you,

yours,
Loyle

April 5, 1954

Dr. Jorge Leon
Institute of Inter-American Sciences
Turrialba, Costa Rica

Dear Jorge,

I have waited to answer your letter until I had received word from Anderson of the support money for continuation of the yuca work.

Unfortunately, Andy was not as successful as he had expected to be and I have received such a small stipend that unless I can get some support from other sources immediately, I shall have to cut down drastically on the time that I can devote to the work this summer. I am still in the process of looking for money. Needless to say I will not be bringing my family to Costa Rica this summer but will come alone, if at all.

One way I have thought of which might give me extra maintenance money is to have round trip airplane tickets from the nearest airport here to San Jose purchased through the Institute, which I would of course reimburse. The ticket would be from Youngstown, Ohio to San Jose via Miami. Would you please check with La Prade or whatever business manager is present at the Institute concerning the legality and possibility of purchasing such tickets which originate here in the States rather than in San Jose. I should like to know if this is possible and the cost of such tickets so that I may make further plans.

I hope that such a problem will not be too much of a trouble to ~~you~~. Thanks very much in advance for your efforts.

Yours,

DJR/amp

Tunialba, Feb. 1954

Dear Dave:

it is good news that you are coming again. The yucas are growing wonderfully; they will be well mature when you get back. It would be convenient if you come as early as possible -

No plants from Brazil have been received yet.

Did you get a letter from the USDA in relation to the interchange of yuca material between Java (Indonesia), Brazil, etc. They want the Institute to take charge of handling the material, the expenses paid by the interested governments - As we are so short of money the last proposition make it unacceptable.

I found out about the cost of the photostatic copy of the paper on the Paraguayan manihots - It seems to me to high. When you get back you may copy it easily. Bring blocks of transparent

paper, as the ones that are sold for engineering -

It would be fine if you bring the family along - If possible reach a decision as soon as you can, and write immediately to Dr. Allen. There are several empty houses now, and you may be able to obtain one. I know this possibility has been discussed. The sooner you decide the chances are better -

Thanks for the beautiful Kodachrome.
Best regards to the family.

Sincerely,
Jorge



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ENCES THROUGH RESEARCH AND EDUCATION

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TURRIALBA, COSTA RICA

11 November 1953

Dr. David Rogers
Allegheny College
Meadvile, Penn.

Dear Dave:

Thanks for your letter and the copy of the report. I think it is fine and hope we can continue it. Mrs. Stone is not here now, as she left for the United States but as soon as she is back in Costa Rica I will talk to her about the bitter yuca.

get there Manure → There are two papers that you should see. They are called "Mandiocas Paraguayas", by Dr. M. Michalowski, Servicio Técnico Inter-Americano de Cooperación Agrícola, Asunción, Paraguay. The first volume deals with variability, description, etc. of the Paraguayan yucas. The second is a collection of crude drawings but very interesting. Dr. Wellman showed them to me, and we thought that you should have them. In case no more copies are available we could send the library set.

Maruja, Piquín, Charles, etc. send you their best regards. We hope it is not very cold yet up there. It is dark, rainy and "cold" (72°) in tropical Turrialba.

Yours very truly,

Jorge León
Jorge León
Botanist

JL/ar.

October 29, 1953

Dr. Jorge Leon
Inter American Institute of Agricultural Sciences
Turrialba, Costa Rica

Dear Jorge:

I just had word from Carl Sauer that there are some freely seeding varieties of Manihot in Haiti and that he could get some for me. I hastily wrote and asked that he have seeds sent to you there for propagation.

Recalling the conversation you had with Doris Stone, I should like to know what more information she has on the subject of bitter yuca grown by the Indians of southern Costa Rica. Sauer has the idea that any bitter yuca in that area was a post-Spanish introduction. Frankly, I cannot see how such could be. Let me know if you have any chance to talk to Mrs. Stone on this subject.

As yet I have not received the box of specimens but have had definite word that it is on the way to our nearest custom's office and should be available today or tomorrow.

Give my best to one and all.

Yours,

April 30, 1953

Mr. Jorge Leon
The Missouri Botanical Garden
2315 Tower Grove Avenue
St. Louis 10, Missouri

Dear Jorge:

I have just recently found that I have been granted sufficient funds to make my field work with Manihot an actuality. I did not get enough funds to really get to the center of the problem. I will have to confine my actualities to the so called "fringes". My plans for the summer are as follows: Six weeks in Jamaica working with the people who have already done some studies with the indigenous varieties there. I hope that I can also establish an experimental plot where we can compare the varieties which we can get together. They have already told me that they are not willing to import varieties which are afflicted with the disease called by them "Mosaic". I will be in Jamaica, as I said, until the first of August, and then come on over to Costa Rica. I wrote a letter to Dr. Allee telling him of my plans, and also, told him that I had hoped that you would forward our write-up of the project. I do not know how soon he needs this write-up in order to have it approved for action this summer. You perhaps have much more knowledge of this sort of thing than I do, and so I am not particularly worried about what happens in that respect.

This whole project seems to have caught the attention of a great number of people. I was interested to see that we have the cooperation of an economist from Stanford working on the African plants. Perhaps you have heard of a chap named Normanha who is presently at the University of California, but who comes from Campinas, Brazil. He has been interested for some time in some of the agronomic aspects of Manihot and reports that they have something like 158 varieties in cultivation at various stations at Campinas. There is another chap who is now at the University of Michigan whom I contacted through Hugh Cutler who has been working on the anthropological aspects of Manihot largely in Brazil. This, of course, is in addition to our own interest plus those of the United States Department of Agriculture. It looks as though we will have at least a lot of assistance in working on this particular problem, although I venture to say

Mr. Jorge Leon--2--April 30, 1953

that when they get into the aspects of taxonomy, they will be glad to leave that part up to you and me.

What are your present plans for the summer? Are you still hoping to go to Columbia previous to your return? I certainly hope that we will at least be able to cross tracks in Turrialba. It looks as though there will be quite a collection of people there this summer. I just got a letter from Charles Heiser saying that he expected to be there sometime in July. We will probably have a regular reunion of the alumni of the Missouri Botanical Garden. Best of luck to you, hoping that your thesis is now complete and that your oral exam will soon be over. That is probably your last worry in the whole problem.

Yours,

March 26, 1953

Mr. Jorge Leon
Missouri Botanical Garden
2315 Tower Grove Avenue
St. Louis 10, Missouri

Dear Jorge:

I can certainly appreciate your circumstance concerning theses. I remember too well how I was this time about two years ago. It is quite all right to have waited this long. I don't think there is really any hurry. The only thing is, it would be nice probably to let Dr. Allee have a copy of our proposed research program. Since I didn't make a carbon copy of the one which I sent to you, if you would just toss that one back into an envelope and send it to me, I will incorporate the changes which you recommended and shall forward them to Dr. Allee as soon as possible.

Things are going quite well concerning the research project. I am still waiting to here from the American Philosophical Society on the grant, but have received a small stipend from the College here which will make my traveling a little easier.

I hereby extend to you my deepest solitations and felicitations on your present condition. Let me offer you these words of confidence if I may. If anybody can get through that program at the Garden, I am sure you can. Best of luck to you.

Yours,

Dave

DR/bls

J. Keane

St. Louis, March 16, 1953.

Dear Dave:

Anybody writing a thesis has the right to any kind of excuse. I hope you remember this and forgive me for not answering before.

The outline seems fine to me. Among the leaders, it seems convenient to put first Dr. H. C. Thompson. He is now the head of the Plant Industry Department. A fine man from whom we could expect much help. I think that would be convenient also, to say in Objectives, that the material will be used also for agronomic studies, like rate of planting, cultivation, etc., as well as a source of entomological and Phytopathological studies.

I fully agree with the rest. Sooner I will send you the material I brought here.

Best regards

J. Keane

December 8, 1952

Mr. Jorge Leon
The Missouri Botanical Garden
2315 Tower Grove Avenue
St. Louis 10, Missouri

Dear Mr. Leon:

I am planning to come to St. Louis for the AAAS meetings which are to be held there from December 27-30, and would like to talk to you about the possibilities of a cooperative project for the study of the varieties of Manihot utilissima (esculenta). Dr. Anderson, while here for a lecture, thought that you might have some interest in such a problem.

For some time I have been interested in this particular group, but have been unable to get a start on the project due to the fact that no good material is available in this country for a straight herbarium taxonomy approach to the problem. I feel sure that a straight morphological approach to the varieties will not yield a satisfying answer to the taxonomy of the species, and more data will be needed as to chromosome numbers and activities and perhaps even physiological data.

For the last two mentioned types of study, an ample supply of growing material must be available. It is obviously impossible to raise the plants in the rigorous climates of this country, and no greenhouse facilities of sufficient size are available for the numbers of plants involved. Even if a greenhouse were available, I doubt that we could get entirely satisfactory growth of the plants. It is with this aspect of the problem that Dr. Anderson thought that you might be interested. If we could establish an experimental plot at Tegucigalpa, I feel sure that we could successfully raise the plants needed for our studies. Since I have to make rather extensive collections in various parts of Central and South America, it would be very valuable at the same time to collect living material, and send it directly to you for incorporation in the experimental plot.

I hope that we can arrange to talk about this project during the time I will be in St. Louis.

Yours very truly,

David J. Rogers

DJR/amp

September 14, 1953

Dr. S. C. Lötzenberger
Servicio Tecnico Agrícola De Nicaragua
Apartado 137
Managua, Nicaragua

Dear Sam;

Thanks for your letter of September 9 concerning my letter to Mr. Francisco Urey. I think it is probably just as well to drop this aspect of the program since there is so much else to be done. I know how busy you are and I will be very happy just to have your plant materials sent over to Turrialba.

If you decide to go ahead with problems of use on the varieties and differences in starch contents, I'll be happy to hear about that work. However, I would suggest before any work is done on it that you write to Dr. Nevins Scrimshaw in Guatemala to find out whether he can handle your essay work. He is doing some at the moment for me on four varieties which I gave him in August and he is willing to expand his studies on Yuca if he sees any need for it. Perhaps a little pressure from you will be a big help. He is a good guy but is very busy with a small staff at the present. It was

It was certainly a pleasure to visit you there in Nicaragua and I hope our tracks will cross again soon.

Yours,

DJR/ump

SERVICIO TECNICO AGRICOLA DE NICARAGUA

EN REPRESENTACION DEL
MINISTERIO DE AGRICULTURA Y TRABAJO
Y
DEPARTAMENTO DE AGRICULTURA
DE LOS
ESTADOS UNIDOS DE AMERICA

APARTADO 137
MANAGUA, NICARAGUA

September 9, 1953.

Dr. David J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Pennsylvania.

Dear Dave:

I am answering your letter which was addressed to Mr. Francisco Urey and dated November 14, 1952. Apparently Mr. Urey had never acknowledged receipt of your letter as it was found in his desk the other day when we were cleaning it out. As you will recall he recently accepted an appointment with the Extension Service of STAN at Jinotega.

Before I go into any detail in answering this letter and now that you know our circumstances, I would like to know whether or not you are still interested in setting up a cooperative program as you had outlined in your letter of Nov. 14? If you are, we would gladly do so; but the active phase of the work would have to wait until we actually have our staff complete. Currently we are waiting to get local clearance on some applicants for this and other posts now vacant.

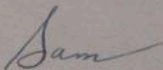
What do you consider essential in setting up a laboratory for evaluating the starch contents of different varieties or types of yucas? We have not gotten started in this respect yet, but we hope to do so shortly. Furthermore, we hope to also begin a little work in evaluating yucas for forage purposes.

The material requested from our introduction garden is not ready for shipping since the stocks are too green. As soon as they are sufficiently mature we will send you some seed stocks of the different Nicaraguan lines planted in the Introduction Garden.

Your trip into Nicaragua was enjoyed and we hope you will be able to make your trip more profitable on your next trip here.

With best regards and good wishes,

Sincerely,

A handwritten signature in dark ink, appearing to read "Sam", with a long, sweeping horizontal stroke extending to the right.

S.C. Litzenger
Research Advisor and
Agronomy Dept. Head.

SCL:MC.

cc. Mr. Virgil C. Peterson, Director
cc. Mr. Claud L. Horn
cc. Inter-American Institute of Agric.
Sciences, Turrialba, Costa Rica.

THE INSTITUTE OF INTER-AMERICAN AFFAIRS
AN AGENCY OF THE GOVERNMENT OF THE UNITED STATES OF AMERICA

333 THIRD STREET NW.
WASHINGTON 25, D. C.

September 15, 1952

Dr. David J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Pennsylvania

Dear Dr. Rogers:

This is in reply to your letter of September 9 concerning your study of *Manihot esculenta*. We are interested in the study as you have described it and will be glad to assist you in any way that we can.

Perhaps the most useful suggestion we can make will be to put you in touch with Dr. Michaelovsky, a botanist in the employ of STICA in Paraguay. STICA is the name given to the cooperative agricultural program sponsored jointly by the U. S. Government, through the Institute of Inter-American Affairs, and the Paraguayan Government, through its Ministry of Agriculture. It is financed by both governments and aided by an agricultural field party which provides technical and managerial assistance. Dr. Michaelovsky has prepared a botanical description of the varieties of mandioca found in Paraguay. STICA had considered publishing this paper, but has delayed doing so because the funds at its disposal are for the implementation of technical assistance and not for research as such. It may be possible, however, for you to get a copy or to review the paper in draft. To inquire about this you may write to Mr. Carson O. Crocker, Chief of Field Party, Division of Agriculture and Natural Resources, IIAA, c/o American Embassy, Asuncion, Paraguay. Dr. Michaelovsky will also know of others in South America who are studying mandioca.

Ans. see
Breitenbach

written
5/5/53

At its experimental farm STICA has also had under observation 48 varieties of mandioca to determine comparative resistance to a disease caused by "*Bacterium manihoti*", which is becoming more and more prevalent throughout Paraguay. The result so far of this work might also be of interest to you.

If there are other ways in which we can be of help after

you have explored this possibility, we will be glad to hear from you.

Sincerely yours,

(ms.) *Elsie R. Marcley*

Elsie R. Marcley
Division of Agriculture and
Natural Resources

September 9, 1952

Mrs Elsie R. Marcle
Division of Agriculture and Natural Resources
Inst. of Inter- American Affairs
333 Third St., N.W.
Washington 25, D.C.

Dear Mrs Marcle:

Dr. Claude Horn, Office of Foreign Agricultural Relations, United States Department of Agriculture, has mentioned your name to me as having some interest on problems concerning some aspect of Manihot esculenta (M. utilissima). If you would be so kind as to assist me I should like to make a survey of the work done on any aspect on this species which you may be carrying on or which you may have completed. Furthermore, if you have any publications I would very much appreciate a reprint, if available, or at least a reference where I may find it. If you have any projected work in this particular field, I would like very much to hear of it.

All of this survey is intended to give me some assistance in outlining the project which I have concerning this species. Briefly, the project which I have in mind consists of (1.) making a taxonomic revision of the varieties of the species (2.) correlation of genetic data (3.) determine vitamin contents of varieties as indicators of divergence or convergence of the varieties.

It is my feeling that before any solid improvements can be made in the food producing capabilities of this group, we must know all of the varieties and their interrelationships. This project, I realize, is one of great complexity and will require the cooperation of as many people as can be interested in it. First of all, the dried material available in the United States herbaria is wholly insufficient. Firsthand field observation is of more importance and can be of much more value than observations of herbarium material.

I should like to know if you or your assistants are interested in such a cooperative project. If you are, what part of the project would interest you most and what facilities are available for such work?

If you know of others in the field, I would appreciate your mentioning this proposed project to them and also I should like to have their names and addresses.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

FEDERACION NACIONAL DE CAFETEROS
DE COLOMBIA

TELEGRAMA:
"FEDERACAPE"

AL CONTEN-
TAR ESTE NUMERO

DT-800

BOGOTÁ, Marzo 22/55

Señor Dr.
David J. Rogers
Associate Professor of Biology
Allegheny College
Meadville, Pensilvania, U.S.A.

Muy estimado señor:

Nos referimos a su atenta comunicación para el
Dr. Ramón Mejía Franco, quien actualmente se encuentra en va-
caciones.

Mucho nos interesa su visita a este país y des-
de ahora nos ponemos a sus ordenes para aquello en que podá-
mos servirle.

Buscando informaciones que le sean útiles, nos
hemos dirigido al Ministerio de Agricultura, Sección de In-
vestigaciones, Dr. Daniel Mesa Bernal y a nuestro Centro Nal.
de Investigaciones de Café, en Chinchiná.

Esperamos poderle enviar pronto algunos datos
útiles antes de su viaje.

Nos place suscribirnos de usted atentos, seguros
servidores y amigos,

FEDERACION NACIONAL DE CAFETEROS
Departamento Técnico

Eduardo Talero G.
P./ Jefe

ETG/mtc.

March 10, 1955

Dr. Ramon Mejia F.
Federacion Nacional de Cafeteleros
de Colombia
Chinchina, Caldas
Colombia

Dear Dr. Mejia:

I trust that you will recall our correspondence of two years ago concerning the subject of the taxonomy of Manihot utilisima. For the past two years I have been doing preliminary work in this problem in both Costa Rica and in Jamaica. This year I have been granted sufficient funds to extend my work with the Manihot to the most important region of all, Colombia.

It is my hope that I shall be able to visit Colombia either in July or August. I hope to be able to visit the Putumayo country in order to secure relatively primitive clones of the species. I feel that I have fairly good representations of the more commonly cultivated varieties, and it is my hope now to have a collection made in a region which may give some light on the possible origin of the species. This is the basis for my selection of the Putumayo country.

I should appreciate very much any information you may have concerning agricultural officials of Colombia whose headquarters are sufficiently close to this area to be of assistance to me upon my arrival. It will be of great value to me to have someone who is intimately familiar with this area either to accompany me or to advise me about the best methods of approach into this region. At the time of my visit to Colombia it is my hope to visit you in Chinchina if you plan to be there during that period.

I will appreciate any information which you may be able to give me about the Putumayo country.

Sincerely yours,

David J. Rogers
Associate Professor of Biology

DJR/rp

FEDERACION NACIONAL DE CAFETEROS
DE COLOMBIA

TELEGRAMA:
"FEDERACAFE"

AL CONTAR
CITASE ESTE NUMERO

DT-444

BOGOTÁ, Marzo 10/53

Señor Dr.
David J. Rogers
Assistant Professor of Biology
Allengery College
Department of Biology and Geology
Meadville, Pennsylvania, U. S. A.

Apreciado señor:

En mi poder su atenta comunicación de 5
de los corrientes, relativa al estudio taxonómico del -
"Manihot Utilissima". .

Le agradezco mucho su comunicación y es-
pero que el importante trabajo que va a iniciar en Jamai-
ca y Costa Rica resulte de mucha utilidad para todos los
países que tenemos esta planta como una fuente económica
de productos agrícolas.

Estaré a la espera de la comunicación que
me anuncia para enviarle las variedades comunes en este
país.

Con sentimientos de consideración y apre-
cio, me suscribo atento, seguro servidor,

FEDERACION NACIONAL DE CAFETEROS
Departamento Técnico

Ramón Mejía
Jefe

RM/mtc.

March 5, 1953

Dr. Ramon Mejia F., Jefe
Federacion Nacional de Cafeteros de Colombia
Bogoto, Colombia

Dear Dr. Mejia:

After many months and many letters to various scientists throughout the world, I have established something of a plan for experiments with the taxonomy of Manihot utilissima. I can only ask your pardon for having been so long before I answered your letter of last September.

It is my hope to establish experimental plots for the varieties of Manihot utilissima in two areas which are relatively close to the United States, so that I may have the opportunity to study these specimens personally and at the same time raise them in favorable climatic conditions. For this purpose I have selected Jamaica and Costa Rica. In Costa Rica I have the assistance of Mr. Jorge Leon, of whom you may have heard. He is a first class taxonomist and is well versed in the agricultural procedures with Manihot. We hope to have varieties from your country grown along with the varieties from all over the world in order that we may establish a comprehensive classification of these plants. It will be possible at these stations to correlate information not only about the taxonomy, but also concerning the relative food producing abilities of these varieties.

Our most direct needs for your assistance in the first part will be a collection of viable materials of all the varieties, which you raise in Colombia. We hope to ask your assistance in other directions at a later date, but will have to work very slowly at the beginning of this experiment. It is my hope that we shall be able to establish our experimental plots within the next six months.

As soon as our experimental plots are ready, I shall write to you asking for your specimens and at that time I shall furnish to you the information which I should like to have regarding these specimens.

Very truly yours,

David J. Rogers
Assistant Professor of Biology

DJR:cjs

FEDERACION NACIONAL DE CAFETEROS
DE COLOMBIA

TELEGRAMA:
"FEDERACAFE"

AL CONTESTAR
CITARSE ESTE NUMERO

DT-1926

Bogotá, Septiembre 26/52

Señor Doctor
David J. Rogers
Allegheny College
Meadville, Pennsylvania, U.S.A.

Apreciado señor:

Me refiero a su atenta comunicación de 9 de los corrientes, relacionada con el estudio en que usted está interesado sobre el Manihot esculenta (M. utilissima).

Las estaciones experimentales de la Federación Nacional de Cafeteros, bajo mi cuidado, estarían dispuestas con el mayor gusto a cooperar con sus investigaciones, lo cual considerarían un gran honor. Respecto a investigaciones sobre variedades aun no se han hecho entre nosotros, existen algunas colecciones que llevan los nombres vernáculos con que se conocen en las varias localidades donde se cultivan. Estas colecciones de campo, disponen de las descripciones generales de los tipos cultivados. Si a usted le interesan estos datos, con el mayor gusto se los envío.

En la Estación Experimental de Chinchiná, se han adelantado algunos experimentos, pero desde el punto de vista de cultivo, estos experimentos están publicados en los boletines Nos. 4 y 5 que en esta fecha le estoy despachando.

Con respecto a los puntos de su investigación que nosotros fácilmente pudieramos ayudarle, podría ser el "(1.) making a taxonomic revision of the varieties of the species", naturalmente obrando bajo sus respectivas instrucciones, las cuales con mucho gusto seguiremos.

Las personas que en este país pueden suministrarle datos de algún valor, se encuentran en las siguientes entidades: MINISTERIO DE AGRICULTURA, División de Investigación, Bogotá, Colombia; ESTACION EXPERIMENTAL DE PALMIRA, Valle, Colombia; FACULTAD NACIONAL DE AGRONOMIA, Medellín, Colombia.

Con sentimientos de consideración y aprecio me es grato suscribirme Atto. S. S.,

FEDERACION NACIONAL DE CAFETEROS
Departamento Técnico

Ramon Mejia F.
Jefe

RM/mto.

September 9, 1952

Dr. Ramon Mejia F.
Federacion Nacional de Cafeteleros de Columbia
Chinchina, Caldas
Columbia

Dear Dr. Mejia:

Dr. Claude Horn, Office of Foreign Agricultural Relations, United States Department of Agriculture, has mentioned your name to me as having some interest on problems concerning some aspect of Manihot esculenta (M. utilissima). If you would be so kind as to assist me I should like to make a survey of the work done on any aspect on this species which you may be carrying on or which you may have completed. Furthermore, if you have any publications I would very much appreciate a reprint, if available, or at least a reference where I may find it. If you have any projected work in this particular field, I would like very much to hear of it.

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I should like to know if you or your assistants are interested in such a cooperative project. If you are, what part of the project would interest you most and what facilities are available for such work?

If you know of others in the field, I would appreciate your mentioning this proposed project to them and also I should like to have their names and addresses.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

July 14, 1953

Dr. R. C. Moncure OFAR,
USDA
Washington, D.C.

Dear Dr. Moncure:

Please forgive this typing. I'm not too used to a machine set up for Spanish.

I just arrived in Turrialba Sunday, and received your letter yesterday. I have just written to Dr. Erlanson on the business of plant introduction. I've asked him to handle the trans-shipment of all varietal propagating materials of cassava.

This is especially important to me since the Dept. of Ag. in Jamaica put a ban on any importation of any kind. Absolutely nothing will be permitted to enter. Unless we can get some sort of intermediate station in which to test the disease condition of a plant, then I shall have to change my whole procedure once again. I fear that the whole process and study will fall apart without some place in which to grow the plants side-by-side. I should hate to see that happen, after getting this far with it. I do not think that establishing experimental plots in each country for its own varieties is advisable, both from the economic and scientific standpoint.

I was fairly well received in Jamaica, and think I have two experimental plots for raising the local varieties, of which there are some 40-50 odd names. The one problem which hampered me was the difficulty of transportation. It was very difficult to get around because the Dept. there has very little of its own transportation available. I rented a car for a week, but couldn't keep it any longer at the price wanted.

In answer to your questions about various men, I have received word from Guiscafre-Arrillaga and from Van Doren, both have indicated their willingness to cooperate. I have not contacted Aikman, but did hear from Dr. Lee Hines in Quito. I shall write to Dr. Aikman some time in the future, when time permits and when I find out about the process of introduction.

I trust that you have had some opportunity to gather more bibliography for me. I've got some references, but probably will have to fall back on you to actually get either a photo¹ stat or reprint of some of the articles.

Inter-Am. Institute

UNITED STATES DEPARTMENT OF AGRICULTURE
OFFICE OF FOREIGN AGRICULTURAL RELATIONS
WASHINGTON 25, D. C.
FOREIGN AGRICULTURAL SERVICE

<i>Allen</i>	<i>July 153</i>	<i>QND</i>	<i>P</i>
<i>Emper Thompson</i>			<i>AS</i>
<i>Leah</i>			<i>HCT</i>
<i>Dye files</i>			<i>9W</i>
JUN 30 1953			

AIR MAIL

Mr. David J. Rogers
c/o Inter-American Institute
of Agricultural Sciences
Turrialba, Costa Rica

Dear Mr. Rogers:

Your letter of February 28, 1953, was received during my several month's absence from the United States, and I am presuming that you are now in Turrialba, Costa Rica. Upon my return a few days ago, I immediately talked to Mr. Carl O. Erlanson, Head, Division of Plant Exploration and Introduction, EPIS&AE, U. S. Department of Agriculture, Beltsville, Maryland, with whom you should communicate immediately by air mail concerning permit for importation of living material of Manihot species, for experimental purposes, and to whom I have sent a copy of your letter. It might be that the material would have to be retained by that Division in its greenhouses for your use and study. However, Mr. Erlanson and the Bureau of Entomology and Plant Quarantine will give you the answer direct on that matter. If I can be of any further assistance, please let me know.

I am wondering whether or not you received any reply to your inquiry to Dr. J. Guisafre-Arrillaga, Director, Centro Nacional de Agronomia, c/o American Embassy, San Salvador, El Salvador, and to Dr. Cornelius A. Van Doren, Director, Estacion Experimental Agricola en Tingo Maria, c/o American Embassy, Lima, Peru, both of whom are very much interested in Cassava, as well as Dr. John M. Aikman, Agronomist, Estacion Experimental Agricola del Ecuador (Pichilingue), c/o American Consulate General, Guayaquil, Ecuador.

With best regards and hoping to hear from you again upon the completion of your first summer's work.

Sincerely yours,

R. C. Moncre, Agriculturist
Technical Collaboration Branch

cc: C. O. Erlanson
✓ Inter-American Institute of Agricultural Sciences
F. L. Wellman
D. J. Rogers, Penn.

UNITED STATES DEPARTMENT OF AGRICULTURE
 OFFICE OF FOREIGN AGRICULTURAL RELATIONS
 WASHINGTON 25, D. C.
 FOREIGN AGRICULTURAL SERVICE

AIR MAIL

Dr. Ralph Allee
 Director
 Inter-American Institute
 of Agricultural Sciences
 Turrialba, Costa Rica

Dear Dr. Allee:

JUN 30 1953	
Allee Thompson (Sampson) Allee Dye-fles	amt HST Al in

Enclosed is a copy of the letter of February 28, 1953, from Mr. David J. Rogers, Assistant Professor of Biology, Allegheny College, Meadville, Pennsylvania, concerning his proposed grant from the American Philosophical Society of Philadelphia for travel funds to work this summer on Manihot species at Turrialba, Costa Rica and in Jamaica, which was received during my several month's absence from the United States.

We are very much in favor of this study and have given Mr. Rogers encouragement and information whenever possible.

Presuming that he is now in Turrialba, it will be appreciated if you will deliver the enclosed letter to Mr. Rogers.

Very truly yours,

Robert C. Moncure
 Robert C. Moncure, Agriculturist
 Technical Collaboration Branch

Enclosures - 2

UNITED STATES DEPARTMENT OF AGRICULTURE
OFFICE OF FOREIGN AGRICULTURAL RELATIONS
WASHINGTON 25, D. C.
FOREIGN AGRICULTURAL SERVICE

AIR MAIL

Mr. David J. Rogers
c/o Inter-American Institute
of Agricultural Sciences
Turrialba, Costa Rica

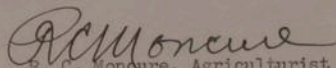
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I am wondering whether or not you received any reply to your inquiry to Dr. J. Guiscafre-Arrillaga, Director, Centro Nacional de Agronomia, c/o American Embassy, San Salvador, El Salvador, and to Dr. Cornelius A. Van Doren, Director, Estacion Experimental Agricola en Tingo Maria, c/o American Embassy, Lima, Peru, both of whom are very much interested in Cassava, as well as Dr. John M. Aikman, Agronomist, Estacion Experimental Agricola del Ecuador (Pichilingue), c/o American Consulate General, Guayaquil, Ecuador.

With best regards and hoping to hear from you again upon the completion of your first summer's work.

Sincerely yours,


R. C. Moncre, Agriculturist
Technical Collaboration Branch

C
O
P
Y

(Agricultural Experiment Station)
Postbus (P.O.Box) 160, Paramaribo
Suriname, South America

Paramaribo, 26 November 1952

U.S.D.A. Office of Foreign Agricultural
Relations

No. 748

Onderwerp: Manihot

WASHINGTON 25, D.C.

U.S.A.

For attention of Mr. R. C. Moncure

We received your letter of September 8, 1952, and wish to thank you for your valuable information about rice varieties in Guatemala. We have already written to the Instituto Agropecuario at Guatemala City to apply for a sample of their most promising variety in exchange for our selections.

With regard to *Manihot saxicola* we regret having to inform you that the plants in our garden have died so that we cannot supply you with material. In 1939 the Government Agricultural Experiment Station at Bogor (formerly Buitenzorg), Indonesia, received seeds from Suriname, so that you might perhaps be able to obtain the species from them. We shall try to get the species again from the interior of Suriname but this will not be easy on account of its limited distribution and inaccessibility.

Your refer to *M. saxicola* as "bitter cassava"; however, what we generally call "bitter cassava" is simply a group of mostly high-yielding and rather long-lived forms of *M. esculenta* - *M. utilissima*, with high content of hydrocyanic acid; moreover, at Buitenzorg the protein content was found to be about 12% of the fresh root. However selection experiments (crossing with *M. esculenta*) led to nothing since the high protein content was coupled to the unfavourable habit of growth.

Yours very faithfully,

For the Director, Agricultural Experiment
Station

(Ir J.G.P. Dirven, Agronomist)

UNITED STATES DEPARTMENT OF AGRICULTURE
OFFICE OF FOREIGN AGRICULTURAL RELATIONS
WASHINGTON 25, D. C.

- SEP 19 1962

Dr. David J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Pennsylvania

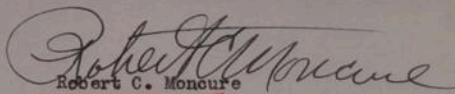
Dear Dr. Rogers:

I am sorry to say that I have no further information concerning the list of "variedades de Mandioca da Colecao da Seccao de Raizes e Tuberculos" of the Departamento da Producao Vegetal, Campinas; but I am sure that Dr. Carlos Krug, Director, Instituto Agronomico, Campinas, will be glad to answer your queries.

Since seeing you, I have received a voluminous publication from Sao Paulo by Juvenal Mendes de Godoy, published by Secretaria da Agricultura, Industria e Comercio do Estado de Sao Paulo, 2a Edicao, entitled Fecularia e Amidonaria, which contains some short bibliographical references on Manihot, mostly relating to utilization, and a number of references to publications by Carlos Teixeira Mendes of Brazil on the vegetative cycle, propagation, culture, etc.

Please let us know how you are progressing in securing answers and cooperation from the persons we suggested, and do not hesitate to call on us if we can be of further assistance.

Sincerely yours,


Robert C. Moncure
Agriculturist
Technical Collaboration Branch
Research Development Division

*P.S. Did you see Dr. Baldwin, et al
at General Foods?*

September 9, 1952

Dr. Robert C. Moncure, Agriculturist
Research Development Division
Technical Collaboration Branch
Office of Foreign Agricultural Relations
U.S.D.A.
Washington 25, D.C.:

Dear Dr. Moncure:

I received from your office last week a copy of the "variedades de Mandioca da Colectao da Saccos de Raizes e Tuberculos" of the Departamento da Producao Vegetal, Campinas, for which thanks very much.

I should like to know something more about this list of varieties, if you can enlighten me. For example, what do the numbers on the left of each varietal name mean? Is this the sample number in their herbarium, or is this a fresh collection, actually of growing plants in their experimental plots? If these were growing, it would be a wonderful place to start on such a problem as I have. Even if they were dried, they would represent a tremendous aid in such a problem.

Do you know if they have the practise of lending specimens from their herbarium for study outside of their own labs? Sometimes those fellows will, sometimes they won't bother to send their specimens out.

One more thing about the list--what does the sequence of numbers mean? That is, they start with the number 4, then 6, then jump up rather erratically. Are these collector's numbers, or are they some sequence of experimental numbers.

I realize that I've asked some questions which you may have no answer to, but whatever light you can throw on the subject will be of great aid.

In connection with the research work, I am in the process of writing to all of the various addresses which you so kindly supplied me with, and hope that I will be able to get my teeth into the problem soon. Hoping to hear from you again.

Yours truly,

David J. Rogers
Ass't. Prof. of Biology

SECRETARIA DA AGRICULTURA
DO
ESTADO DE SÃO PAULO

DEPARTAMENTO DA PRODUÇÃO VEGETAL
DIVISÃO DE EXPERIMENTAÇÃO E PESQUISAS
INSTITUTO AGRONÔMICO
CAIXA POSTAL, 28
CAMPINAS
BRASIL

Campinas, 26 de Julho de 1952.

Original by Air Mail.
Copy by ordinary Mail.

N.º 5175

Dr. Robert C. Moncure
Agriculturist

Mencionar este número na resposta

Research Development Division
Technical Collaboration Branch
Office of Foreign Agricultural Relations
United States Dept. of Agriculture
Washington 25, D.C.

Dear Dr. Moncure:

Following my letter 3917 of June 14th in reply to yours of June 8, I wish to inform that we have asked Mr E.A. Graner to be as kind as to send you directly his bibliography on Manihot, as requested by you and hope that he has already forwarded to you.

2. I am sending you attached hereto, by air mail, a bibliography made out by our Tubers Dept..

3. By ordinary mail I am sending you 3 reprints as listed below:

0 Superbrotamento ou "envassouramento" da mandioca
Secretaria da Agricultura, 1942: 1-8.
Melhores épocas de plantio para mandioca.
Rev. de Agricultura (Piracicaba) 23 (7/8) : 237-248, 1948.
Aspectos Agronômicos da cultura da Mandioca (Manihot utilisima
Pohl) Bragantia 10 (1/4) : 179-202, 1950,

as well as, under separate cover, "Fecularia e Amidonaria" by Juvenal Mendes de Godoy.

Sincerely yours,

Processo 38.007.

Via aérea c/1 lista
Mala comum - c/3 separatas.
br/-

Carlos Arnaldo H.
DIRETOR

Instituto Nacional de Nutrición
Quito, Ecuador

September 17, 1952

Dr. David J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Pennsylvania
U. S. A.

Dear Dr. Rogers:

Your letter of September 8 has been received.

From 1946 to 1950 I had the privilege of directing the laboratory work at the Massachusetts Institute of Technology connected with the analysis of some over 900 samples of fruits and vegetables from Central America. Among these were samples of *Manihot esculenta*, eleven of roots and nine of growing points representing leaves. Three of the root samples came from Guatemala, two from Honduras, one from Nicaragua, three from El Salvador and two from Costa Rica. One of the samples of growing points came from El Salvador and the others from Honduras.

The results from these studies on the foods of Central America were published in *FOOD RESEARCH* as follows: Vol. 14 (1949) p. 144; Vol. 15 (1950) pp. 16, 34, 263, 355, 379, 421 and 439. Dr. R. S. Harris of the Department of Food Technology of the Massachusetts Institute of Technology had the supply of reprints but I doubt very much if he has any left and therefore I am sending you a copy of the data.

In Ecuador this plant grows in the lowlands almost like a weed. We have collected one sample of roots for analysis.

My contract here will be up in December and I will be leaving then. I do not know what arrangements you might make with the staff of the Instituto but at present I would advise against trying to make any as things here are too uncertain.

Dr. Horn may have told you that the U.S.D.A. has a station here. The director is Dr. Lee Hines and the address Estación Experimental Agrícola, Pazmiño 256, Quito. I do not know if they are doing any particular work on this plant but you may wish to contact him.

At the Escuela Agricola Panamericana, Tegucigalpa, Honduras Dr. Williams and Dr. Standley are working on the identification of plants of the area but there again I do not know if they are doing any special work on the yuca. At the Instituto de Nutrición de Centro America y Panama in Guatemala City they are analyzing food samples as we are here. The director there is Dr. Nevin Scrimshaw.

I hope that this information will be of use to you.

Sincerely yours,

Hazel E. Munsell

Hazel E. Munsell
Director
Bromatological Laboratory

September 8, 1952

Dr. Hazel Munsell
Institute of Nutrition
% American Embassy
Quito, Ecuador

Dear Dr. Munsell,

Dr. Claude Horn, Office of Foreign Agricultural Relations, United States Department of Agriculture, has mentioned your name to me as having some interest on problems concerning some aspect of Manihot esculenta (M. utilissima). If you would be so kind as to assist me I should like to make a survey of the work done on any aspect on this species which you may be carrying on or which you may have completed. Furthermore, if you have any publications I would very much appreciate a reprint, if available, or at least a reference where I may find it. If you have any projected work in this particular field, I would like very much to hear of it.

All of this survey is intended to give me some assistance in outlining the project which I have concerning this species. Briefly, the project which I have in mind consists of (1.) making a taxonomic revision of the varieties of the species (2.) correlation of genetic data (3.) determine vitamin contents of varieties as indicators of divergence or convergence of the varieties.

It is my feeling that before any solid improvements can be made in the food producing capabilities of this group, we must know all of the varieties and their interrelationships. This project, I realize, is one of great complexity and will require the cooperation of as many people as can be interested in it. First of all, the dried material available in the United States herbaria is wholly insufficient. Firsthand field observation is of more importance and can be of much more value than observations of herbarium material.

I should like to know if you or your assistants are interested in such a cooperative project. If you are, what part of the project would interest you most and what facilities are available for such work?

If you know of others in the field, I would appreciate your mentioning this proposed project to them and also I should like to have their names and addresses.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

February 6, 1956

The Head Librarian
The Library of the Agricultural University
Wageningen, The Netherlands

Dear Sir:

Some time ago, our librarian received copies of

Koch, L., Cassaveselectie, and
Zijl, C.E. v. d., Verbertering der cassavacultuur door middel
van veldproeven.

In return for these reprints, I am sending, under separate cover,
selected reprints in exchange for these.

I am sorry that I have not been more prompt in this exchange, and
I am very pleased to receive these two papers. Thank you.

Sincerely yours,

David J. Rogers
Associate Professor of Biology

September 19, 1955

The Head Librarian
The Library of the Agricultural University
Wageningen, The Netherlands

Dear Sir,

I should like to know if it is possible to receive the
following papers in exchange for reprints of my own work:

Koch, L., Cassaveselectie (proefschrift Wageningen) (1934).

Zijl, C.E. v. d., Verbetering der cassavecultuur door middel
van veldproeven (proefschrift Wageningen) (1930).

I shall appreciate hearing from you.

Sincerely yours,

David J. Rogers
Associate Professor Biology

EC

Berkeley May 4, 1953

Mr. David J. Rogers
Allegheny College
Meadville, Pennsylvania

Dear Mr Rogers

- I am sorry that I have been slow in answering your letter of April, 9 since we had some troubles, which now are overcome. Regarding the color, as a characteristic to help the classification of cassava plants, may be I have not been clear in my last letter. I think the same way you do: we have to resort to that character, but as it fleets to much, according to various factors, we would have to establish definite and equal conditions, to make a good use of it in cassava classification.
- In Brazil we have the mosaic disease in cassava plants. As far as I know, the mosaic disease which has been found in plants in the State of S. Paulo, but not spreading in the commercial plantations, and being no problem for farmers, is caused by Maripot virus I. On this matter you may receive good advices from Dr. Alvaro S. Costa, Institute Agronomico, Campinas, S. Paulo, Brazil, who has been working on this field for many years.
- I will be very glad hear from you about your experiments with cassava in Jamaica and Costa Rica.

With my best wishes I am Cordially yours

Edgard S. Normandia
Edgard S. Normandia

April 9, 1953

Mr. Edgard L. Normanha
2223 Marin Avenue
Berkeley 7, California

Dear Mr. Normanha:

I certainly appreciated receiving your letter of March 14 and your advice on the problems of Manihot utilissima. It's my hope that I will have some better characteristics for establishing patterns of variation and classification schemes than to have to depend on the relatively fleeting characteristic of color. Of course, I may have to resort to this character, but I hope that something else will show up.

As I think I told you in my first letter, it's my hope to establish experimental plots in Jamaica and in Costa Rica where as many varieties as possible may be compared. One of the difficulties I have run up against already is the Department of Agriculture's restriction on importation of Manihot plants which may harbor the Mosaic disease. This disease is something of which I have no knowledge whatsoever. I wonder if you could tell me whether or not this Mosaic disease is a common factor in the plants in Brazil? Furthermore, I should like to know if you could tell me anything about what causes the Mosaic disease? Is it a bacterial infection, or is it caused by virus?

I shall be pleased to hear from you.

Yours very truly,

David J. Rogers

DJR/bls

Berkeley March 14, 1953

Mr. David J. Rogers
Allegheny College
Meadville, Pennsylvania

Dear Mr. Rogers

I wish to thank you for writing me, and I will be glad to inform you about my experimental work in Campinas. I have been dealing mainly with field trials regarding the most important problems of cassava crop in the State of São Paulo, such as: varieties, time and systems of planting, fertilizing, disease and insect pests resistance, crossing and self pollinating, etc. Actually, I did not begin in taxonomy of Manihot utilisissima, since I had to devote my attention to other problems being claimed by farmers.

I think that very little has been done on that field, and I may cite the work "Key for classification of cassava varieties", by Raphaeli Cifferri, an Italian author. The work is written in Italian, and I don't remember the exact title of it. The work is based on the varieties grown in Africa.

- One of the characteristics which appear in a great range of variation, in cassava varieties, is the colour of the different parts of the plant. In this particular, I would suggest the use of a colour chart, instead of mentioning the names of the colours as it was done in Cifferri's work.

The colours of stems, leaves, petioles, veins, vary according to the age of the plant, and according to the situation in the plant. Exposure to the sun, and climatic conditions, as well as soil fertility may also influence, as you know.

- I wish congratulate you for planning this work with cassava, and I will be very glad to know about this important work, its results and conclusions.

I shall be pleased to hear from you, and remain
Sincerely yours

Edgard S. Normanha
Edgard S. Normanha
2223 Marin Avenue
Berkeley 7, California.

February 26, 1953

Mr. E. Normanha
International House
Room 665
University of California
Berkeley 4, California

Dear Mr. Normanha:

Through Dr. Carlos Krug I have learned that you are in charge of the experimental work with Cassava at the Instituto Agronomico, Campinas, Brasil. I have been for some time interested in the Taxonomy of Manihot Utilissima, and have begun a project to try to make some systematic approach or study of the varieties which exist. It was Dr. Krug's suggestion that I try to correlate my efforts with you.

The present state of knowledge concerning the taxonomy relationships of the species are, as you know, chaotic. It is impossible for me to begin to study this important food plant until I have made extensive studies of the plants in their growing condition. For this purpose I have planned for this summer, a trip, which will take me to Jamaica and Costa Rica. This, I realize, is not the center of distribution of Yuca, however, it is impossible for me to go farther during my three months vacation from teaching.

I should like to know what suggestions you may have to offer, which will prevent any duplication of effort and, which will give us a more scientific classification.

It is my hope to establish experimental plots to grow as many of the varieties as we can at stations in both Jamaica and Costa Rica, where we can observe these varieties under comparable conditions. If you can offer any suggestions, I shall be most grateful to receive them and I shall be very glad to cooperate with you in any way that I possibly can in this study.

I shall be pleased to hear from you.

Yours very truly,

David J. Rogers
Assistant Professor of Biology

DJR:cja

Dr. David Rogers

UNITED STATES DEPARTMENT OF AGRICULTURE
OFFICE OF FOREIGN AGRICULTURAL RELATIONS
WASHINGTON 25, D. C.

AIR MAIL

Dr. Edgard Sant'Ana Normanha
Botany Department
University of California
Berkeley, California

DEC 11 1952

Dear Dr. Normanha:

Dr. Carlos Krug was here a few days ago on his way to Florida for a coffee meeting and he tells me that you are studying on a graduate scholarship from the Guggenheim Foundation. He believes that you would be interested in corresponding and perhaps even meeting later Dr. David Rogers, Botany Department, Alleghany College, Meadville, Pennsylvania, who is very much interested in the Manihot species, both from the taxonomic standpoint and biological assay for food value of the various species on a comprehensive basis. Of course, you are already familiar with the work done by General Foods Corporation in cooperation with various Brazilian technicians. On the chance that you may not have all the references mentioned, I am sending you a copy of a short bibliography on the technology of various starches, including tapioca flour, furnished me recently by the Central Laboratories, General Foods Corporation, Hoboken, New Jersey.

I will be glad to hear more about your graduate work in California. If I can be of any assistance, please write me.

Very truly yours,

Robert C. Moncure, Agriculturist
Research Development Division
Technical Collaboration Branch

Enclosure

cc: Dr. David Rogers, Botany Dept., Alleghany Coll., Meadville, Pa. ✓

SERVICIO TECNICO AGRICOLA DE NICARAGUA

EN REPRESENTACION DEL
MINISTERIO DE AGRICULTURA Y TRABAJO
Y
DEPARTAMENTO DE AGRICULTURA
DE LOS
ESTADOS UNIDOS DE AMERICA

APARTADO 137
MANAGUA, NICARAGUA

November 5, 1952.

Mr. David J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Pennsylvania.

Dear Mr. Rogers:

It has been some time since I received your letter of September 9 regarding work with Yucca Manihot Esculenta. I have been trying to get some one here to help you with your project. We have an Agronomy Department organized now and one of the members of that Department will be willing to help you with your work on this plant. His name is Francisco Urey. He has just returned from a year in the States and worked with me while I was working with Yucca.

We ran a yield and starch content on 12 varieties. These varieties were from Nicaragua and Honduras. There are several varieties in the Country which were not included in the test and Urey has started to collect material for a more comprehensive trial. He will cooperate with you in any way you like.

We have a very limited laboratory facilities, but we can do all of the Agronomic work necessary. We can take care of starch analysis but cannot analyse for Vitamin A content. We would also like to leave any taxonomic work up to you.

I would suggest you correspond directly with Urey about work on Yucca. We have never published anything on Yucca but we are very anxious to start working on it again. It is a very important crop in Nicaragua.

Sincerely,
Virgil C. Peterson
Virgil C. Peterson
Director.

85

September 9, 1952

Dr. Virgil C. Peterson
Servicio Tecnico Agrícola De Nicaragua
% American Embassy
Managua, Nicaragua

Dear Dr. Peterson,

Dr. Claude Horn, Office of Foreign Agricultural Relations, United States Department of Agriculture, has mentioned your name to me as having some interest on problems concerning some aspect of Manihot exculenta (M. utilisima). If you would be so kind as to assist me I should like to make a survey of the work done on any aspect on this species which you may be carrying on or which you may have completed. Furthermore, if you have any publications I would very much appreciate a reprint, if available, or at least a reference where I may find it. If you have any projected work in this particular field, I would like very much to hear of it.

All of this survey is intended to give me some assistance in outlining the project which I have concerning this species. Briefly, the project which I have in mind consists of (1.) making a taxonomic revision of the varieties of the species (2.) correlation of genetic data (3.) determine vitamin contents of varieties as indicators of divergence or convergence of the varieties.

It is my feeling that before any solid improvements can be made in the food producing capabilities of this group, we must know all of the varieties and their interrelationships. This project, I realize, is one of great complexity and will require the cooperation of as many people as can be interested in it. First of all, the dried material available in the United States herbaria is wholly insufficient. First hand field observation is of more importance and can be of much more value than observations of herbarium material.

I should like to know if you or your assistants are interested in such a cooperative project. If you are, what part of the project would interest you most and what facilities are available for such work?

If you know of others in the field, I would appreciate your mentioning this proposed project to them and also I should like to have their names and addresses.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

Porto Alegre, January 27, 1953.

David J. Rogers
Allegheny College
Meadville, Pennsylvania

Dear Sir:

You are right that Sapium is a troublesome genus. By comparing all material I have I came to the conclusion that there are not more than three really distinct species in southernmost Brazil and that all the other names cited for this region are synonyms; perhaps, there are only two: one with long, linear, narrow leaves; and another with obovate or elliptic ones. The crumpled or flat leaf tips and the length of the leaf stalks ~~is~~^{are} desperately inconstant and useless for classification.

Now to Manihot. RGS has only one wild growing species of this genus, M. tweediana, sometimes named M. flabellata, a small tree in the whole region of the rain forests, with woody roots; the leaves, flowers and fruits are very similar to those of the cultivated species. Manihot esculenta and the other useful species belong to the most cultivated species of useful plants in RGS, especially in the sandy plains of S. Leopoldo, Montenegro, Taquara near P. Alegre. The not poisonous varieties (aimim) are largely used for direct culinary purposes; the poisonous (mandioca) for farinha, tapioca and pig breeding.

Since I never gave much attention to cultivated plants, my collection of Manihot is utterly poor, and will be of no use for you; but I will undertake the easy task to collect specimens and notes. It will take a year or so.

Unfortunately the time disponible for your trip to Brazil is the most inappropriate of the whole year, at least for southernmost Brazil. June, July and August are the winter months, when Manihot loses its leaves and sometimes all exposed parts by frost. I don't know whether this is the case in central and northern Brazil where there is no real winter, but I suppose so because the southern winter there is represented by a dry season.

Manihot is in full growth with flowers and fruits in February and March and the roots are fully developed only towards winter. Nevertheless, the fast growing varieties of "aimim" may be found well developed in October.

Although Manihot is more at home in tropical Brazil than here, I think it would be of great interest for your practical purposes to study it in RGS, where the borderline conditions of the climate are at some extent similar to those of the subtropical regions of your country. In this case, I am entirely at your disposition.

Very sincerely yours

B. Rambo S.F.

October 15, 1952

Dr. B. Rambo, S. J.
Colegio Anchieta
Caixa Postal 358
Porto Alegre, Rio Grande do Sul
Brazil

Dear Fr. Rambo:

In the year which has passed since I last wrote to you, I have decided to change the direction of my research to some extent. Rather than continue with a monograph of the genus Sepium, which is in great need of revision, I have decided rather to work upon a group of the Euphorbiaceae of still more importance to mankind, and one which is probably even more difficult than Sepium would be.

The species of the genus Manihot have always interested me, and the great variation within one of the species, M. esculenta, particularly, has attracted my attention. No classical monographer has ever touched this group, and probably with good reason, but it seems to me that something must be done with it if ever we are to develop its usefulness to man to its fullest extent.

Since the center of diversity is in Brazil, and also apparently the center of distribution, it is in your country that I must do my greatest amount of work. Unfortunately, there are extremely few useful specimens of M. esculenta in this country. None of the large herbaria have made collections of this group. Therefore, I must turn to you and to your colleagues throughout Brazil to supply me with such specimens as you may have on hand. In addition to the specimens which you have, your personal observations of this group will be of immense value in making some decisions concerning the innumerable varieties which must exist.

If you have made any observations, notes, publications, or other information concerning M. esculenta and other closely related species, I should be most grateful to hear of them. If you know of any other workers in Brazil who might be interested in the study of the group,

I should like to have their names and addresses, so that I may contact them to see if they have any specimens which I might borrow.

Since I hope to be able some day to make a trip to Brazil, I should like to know what part of the year would be most suitable to find the specimens of M. esculenta in flower and fruit. If it is at all possible, I would make the trip during the time when my teaching duties would not interfere, during the months of June, July, August, and part of September. I am not sure, however, whether this would be a suitable time for making such collections and observations as I need to make. Could you tell me the approximate flowering times of this group?

If you have herbarium specimens which I may examine of the species, I should very much like to examine them.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

DJR/amp

Agricultural Chemistry Division,
Department of Agriculture,
Hope, Liguanea,
Jamaica, B.W.I.,

884/54

24th November, 1954.

Dr. David J. Rogers,
Allegheny College,
Meadville,
Pennsylvania,
U.S.A.

Dear Dr. Rogers,

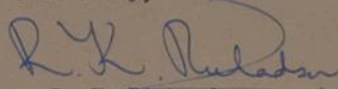
Thank you for yours dated October 13, which need-
less to say arrived some time ago, but which I am just now
answering.

Due to pressure of high priority work we have had
to put on one side the analysis of the cassavas. The starch
and sugar determinations on the tubers are still being done
and the protein determinations on the leaf and stalk samples
are so far untouched.

As soon as these determinations are completed you
will receive a copy of same.

With very best wishes,

Yours truly,


R. K. Richardson.

October 13, 1954

Mr. R. K. Richardson
Agricultural Chemistry Division
Department of Agriculture
Hope, Kingston
Jamaica, B. W. I.

Dear Mr. Richardson:

I should like to inquire if you have any data available on the analyses of cassava varieties which you were in the process of running this summer. If it is not convenient to send a complete list of data, I should like to have some preliminary figures with which to work.

Since I am starting my analyses of the varieties from the standpoint of their morphological variation, it would be extremely handy to incorporate the chemical data at the same time. Please do not consider that this is a demand on my part, but a request made with the realization that you have very many other activities going at the same time.

Please give my best regards to your wife.

Sincerely,

David J. Rogers
Assistant Professor of Biology

DJR/rp

May 17, 1954

Dr. Duane Roller
The Scientific Monthly
1515 Massachusetts Avenue, N.W.
Washington 5, D. C.

Dear Dr. Roller,

In response to your letter of May 12, let me say that I appreciate the knowledgeable comments of the referee on my paper "Cassava; Bread of the Tropics". I agree with a good share of his comments and will recast in light of his criticism.

I don't think that he and I disagree in the great body of the information there, but in some of the statements which perhaps do not bear too much examination. If you will keep the illustrations until I recast the manuscript, I would appreciate it very much.

If it is not a breach of policy, I should like to know the name of the referee since I feel that I could probably gain more information concerning my problem by correspondence with him. It is a pleasure to find someone whose interest parallels mine.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

DJR/p

PUBLISHED BY THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

SCIENCE

the NEWSWEEKLY
for scientists

The SCIENTIFIC MONTHLY
the LITERARY magazine of science



1515 MASSACHUSETTS AVENUE, N. W.
WASHINGTON 5, D. C. • ADams 4-7111

6 April 1954

Professor David J. Rogers
Department of Biology & Geology
Allegheny College
Meadville, Pennsylvania

Dear Professor Rogers:

It would seem to me that the article you describe
in your letter of 2 April is of the sort that we pub-
lish in The Scientific Monthly. I should be very glad
if you would submit it for our consideration.

Sincerely,

Deane Roller
Editor

DR/chb

April 2, 1954

Dr. Duane Roller, Editor
Scientific Monthly
1515 Massachusetts Avenue N.W.
Washington 5, D. C.

Dear Dr. Roller,

I would like to know if you would be interested in an article of about 2200 words written in a style similar to those usually found in the Scientific Monthly. This article deals with the plants which produce tapioca. I have written an article which largely stresses the systematics of these plants.

Would you like for me to submit this manuscript?
I shall be happy to hear from you.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

DJR/amp

May 26, 1954

Dr. Reed C. Rollins
Gray Herbarium
Harvard University
Cambridge, Mass.

Dear Dr. Rollins:

I am sure that I had an application for presentation of papers at the AIBS meetings in Gainesville next September, but have lost it somewhere. I am not sure that I have the right person in addressing my letter to you to get the paper included in the program, but I hope that if you are not the right one that you will kindly forward my title and abstract to whomever should receive it.

Title: Preliminary Considerations on the Intra-specific Variation of Manihot utilissima Pohl

Abstract: Problems of classification of the variants within the species M. utilissima and a discussion of the variations found in Jamaica and Costa Rica. 15 minutes, illustrated, Kodachrome, 35 mm.

I trust that I am not too near the deadline to be included.

Sincerely yours,

David J. Rogers
Ass't. Prof. Biol.

UNIVERSITY OF PUERTO RICO
AGRICULTURAL EXPERIMENT STATION
RIO PIEDRAS, PUERTO RICO

OFFICE OF THE DIRECTOR

October 30, 1952

Professor David J. Rogers
Department of Biology
Allegheny College
Meadville, Pennsylvania

Dear Professor Rogers:

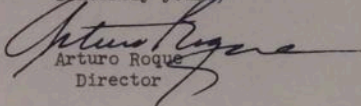
This is in reference to your letter of September 10 in connection with your proposed comprehensive study of Manihot esculenta (M. utilissima). I regret to inform you that deeply interested as we are in the type of study you propose to carry out we are not at present, however, working with this crop. In the past we have conducted regional variety tests to determine yields of a relatively large number of varieties from Puerto Rico and other countries of the world. We have also in the past conducted work on the industrial utilization of this crop. We still have available a small number of varieties of which we shall be glad to send you material on request.

The attached statement contains in more detail a review of the work we have conducted here and the references in which the results obtained may be found.

As much as we would like to cooperate with you effectively in some phases of your project I regret to inform you that due to present limitations in the size of our technical staff we cannot assign anyone to carry out here some phase of the project. We will be very glad, however, to supply you with fresh or dry material as is available in Puerto Rico.

Wishing success in the outcome of your proposed study I remain,

Sincerely yours,


Arturo Roque
Director

encl.

September 10, 1952

Dr. Arture Roque, Director
Agricultural Experiment Sta.
Rio Piedras, Porto Rico

Dear Dr. Roque:

Dr. Claude Horn, Office of Foreign Agricultural Relations, United States Department of Agriculture, has mentioned your name to me as having some interest on problems concerning some aspect of Manihot esculenta (M. utilisima). If you would be so kind as to assist me I should like to make a survey of the work done on any aspect on this species which you may be carrying on or which you may have completed. Furthermore, if you have any publications I would very much appreciate a reprint, if available, or at least a reference where I may find it. If you have any projected work in this particular field, I would like very much to hear of it.

All of this survey is intended to give me some assistance in outlining the project which I have concerning this species. Briefly, the project which I have in mind consists of (1.) making a taxonomic revision of the varieties of the species (2.) correlation of genetic data (3.) determine vitamin contents of varieties as indicators of divergence or convergence of the varieties.

It is my feeling that before any solid improvements can be made in the food producing capabilities of this group, we must know all of the varieties and their interrelationships. This project, I realize, is one of great complexity and will require the cooperation of as many people as can be interested in it. First of all, the dried material available in the United States herbaria is wholly insufficient. Firsthand field observation is of more importance and can be of much more value than observations of herbarium material.

I should like to know if you or your assistants are interested in such a cooperative project. If you are, what part of the project would interest you most and what facilities are available for such work?

If you know of others in the field, I would appreciate your mentioning this proposed project to them and also I should like to have their names and addresses.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

October 22, 1953

Dr. Carl O. Sauer, Chairman
Department of Geography
University of California
Berkeley 4, California

Dear Dr. Sauer:

Thanks kindly for your letter of October 20.

The information that there are races in Haiti and the Dominican Republic that seed freely is really exciting and I would be very eager to receive especially mature seeds from these plants. If it is possible for some of your boys to collect these seeds, I would appreciate it very much having them sent to Dr. Jorge Leon at the Inter American Institute of Agricultural Sciences, Turrialba, Costa Rica; and if the seed production is good, I should like to have a few of them here to try to raise in my limited greenhouse space. It is much more important that they be sent to Turrialba. If it isn't too much trouble, I should, of course, like to have herbarium material and full data on these specimens.

A recent letter from Andersenn says that I should not yet get a grant from the Guggenheim. I do not know why but suspect that he thinks that I have not gone far enough with the work. I am to meet him in Pittsburgh the fifth of November and will know more about his thought on the subject at that time. I am sure he will have something in mind to allow more field work.

Thanks again for your letter.

Yours,

David J. Rogers

DJR/amp

UNIVERSITY OF CALIFORNIA

DEPARTMENT OF GEOGRAPHY
BERKELEY 4, CALIFORNIA

October 20, 1953

Dr. Dave Rogers
Department of Biology and Geology
Allegheny College
Meadville, Pennsylvania

Dear Dave:

I am pleased to hear that you are going to try for a Guggenheim. I do not know how much you have got on the record for this competition, but we might as well find out. I know that you were a good member of that unusually fine group of students Anderson had gathered about him: one of the most promising groups of young scholars I have ever seen working *anywhere*.

You are going to need field work and facilities you do not have at Meadville to get on with this study of manioc. I want to help you in any way I can to do so. It is a big job and one that has remained in systematic confusion and one that may throw light on variation by asexual reproduction. Do you know, incidentally, that there are races in both Haiti and the Dominican Republic that seed quite freely, though they are not planted from seed? If you are interested in any such material, I think I can get some for you since we have boys working in both countries at the present time. I do not know whether this is a relict trait of primitiveness or whether the seeding faculty is commoner than I have gathered from the literature.

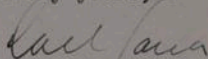
My limited field experience in the West Indies is that both bitter and sweet forms are generally inter-planted. The people who grow them and even the local people who see a planting for the first time apparently can distinguish them very well. The trouble with me was that the distinguishing characteristics pointed out on one locality were not the same that would be indicated in another one. This is a far more mysterious difference to me than the difference between toadstools and mushrooms. In spite of the fact that the Indians have long since disappeared, the varietal difference maintained is impressive. In the Island of Haiti they are not *déclassé*, but in the English islands I got the impression that they were provision crop for the Blacks - below the dignity of White attention.

As to your Costa Rican work, have you reckoned with the possibility that the bitter forms are all post-Spanish introductions? I have never found any documentary indication that anything but sweet yuca was grown from the Magdalena Valley to the west. The people in western Colombia thought I was joking when I asked for the poisonous plant. One of our men has just come back from a field season on the Caribbean border of Panama and Costa Rica including the Guaymí Indians, and his notion was that only the sweet forms belonged into the native agriculture. That fact that you saw fields of one planting in Costa Rica is indicative that they have broken away from really native practices there.

I will be looking forward to reading your plans for work.

I am sure you would like Fritz. He is a good boy to have around.

Sincerely yours,



Carl O. Sauer
Chairman

COS:Wlh

October 8, 1958

Dr. Bernice G. Schubert
U.S.D.A., A.R.S.
New Crops Research Branch
Beltsville, Maryland

Dear Dr. Schubert:

I should have long ago acknowledged the receipt of the roots which you sent from Mexico and also the receipt of the Kodachromes. However, thanks a lot for sending the material. Could you give me an estimate of how many variations you saw in that area.

Sincerely yours

David J. Rogers
Curator of Economic Botany

DJR:MDF

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
CROPS RESEARCH DIVISION

New Crops Research Branch
October 6, 1958

Dr. David J. Rogers
New York Botanical Garden
Bronx Park
New York 58, N. Y.

Dear Dr. Rogers:

At last I have been able to go through my
Mexican collections and find the one sheet
of *Manihot*. This is going to you under
separate cover, today.

With best wishes,

Sincerely,

Bernice G. Schubert

Bernice G. Schubert, Botanist
Plant Introduction Section

January 30, 1958

Dr. Bernice Schubert
New Crops Research Branch
U.S.D.A., A.R.S.
Beltsville, Maryland

Dear Dr. Schubert:

Here are the major points of interest in Manihot specimens:

1. Habit photo with some sort of scale--a man standing by will be satisfactory.

2. Specimen should include one mature vegetative leaf, separate, that is, cut from the stem, including the stipules at the base of the petiole; a section of the inflorescence, if in flower or fruit. If neither flower or fruit available, take short section (6") of apex of vegetative shoot.

3. Record following: surface condition and color of mature root (epidermal layer smooth, or roughened, dark brown or light tan). Color of stem (silver meaning light gray, brown or yellowish. Color of youngest foliage, near the bud (green, or reddish-blue). If you can't photograph the specimen, note its branching pattern--unbranched, branched once, twice, or whatever number of branching levels occur.

These are the main items. If you can get any of the above items, I will really appreciate it. Perhaps you can ask the approximate number of varieties grown in the vicinity, or estimate the number of these in any one planting.

Sincerely yours

David J. Rogers
Editor, ECONOMIC BOTANY

DJR:MDF

March 24, 1955

Dr. R. E. Schultes
Botanical Museum
Harvard University
Cambridge, Massachusetts

Dear Dr. Schultes:

Perhaps you will remember that we met in Costa Rica in July 1953 as you were returning to the United States from Colombia. I was in Turrialba beginning a study of Manihot utilissima and its varieties.

I have continued with this work and I am now ready to extend my studies into South America. This coming summer I will have a short period, perhaps not more than two to three weeks, to visit areas either in Colombia or along the coast of Venezuela but not both. Since you have had so much experience with the "back areas" of Colombia, I should like to have your opinion as to the significance of the country leading from Pasto, Colombia, down into the valley of the Futumayo as far as primitive types of Manihot are concerned. I have found that it is possible to go by bus from Pasto to Mocoa and Puerto Asis.

What I think I am looking for is an area along the eastern slopes of the Andes which might produce some of these more primitive variants of yuca and I'm not quite sure whether this would be the most significant area of investigation. If you have any thoughts along this line, I should appreciate your comments. And further, if you know any people in Pasto or vicinity who could be of assistance to me in any way when in this area, I should be pleased to have their names and addresses.

Thank you for any information you can help me with.

Sincerely,

David J. Rogers
Associate Professor of Biology

DJR/rp

February 25, 1954

Dr. Nevin S. Scrimshaw, Director
Instituto de Nutricion de Centro America y Panama
Jardin Botanica
Guatemala, C. A.

Dear Dr. Scrimshaw:

Thank you very kindly for your letter of February 12 enclosing the analyses of the four varieties of yuca from Costa Rica. These analyses are definitely of value in terms of selection of indigenous varieties to a country, but from my standpoint are of even more value as far as their overall significance in a taxonomic work. These analyses I should hope to incorporate into what is already a definite experiment on my part, to try to bring order out of what is now chaos within the species *Manihot utilisima*. If we can utilize some data, such as the content of ascorbic acid, which seems to show quite a bit of variation, even within the four species which you analyzed for me, this will put some definite significance to the otherwise purely morphological studies.

I will return to Costa Rica again this coming summer and will, at that time, contact you, even, perhaps, by a visit at Guatemala, in order to give you the full details of my study.

In answer to your question as to the value of yuca leaves as a forage, I am not willing, at the moment, to say. The best that I can do is to cite for you a reference in "Turrialba" 2: (4) 166-169, 1952, a work by Echandi which discusses the value of the dried meal from the leaves and stems of yuca in the production of milk. Briefly, this article demonstrates that this meal is quite comparable to alfalfa as a protein diet for cattle. Perhaps this will give you some data as to its value.

Thanks again for your analyses, and I shall keep you informed of my activities and hope that I can in some way repay you for your kind efforts.

Yours very truly,

David J. Rogers
Assistant Professor of Biology

DJR/dls

INSTITUTO DE NUTRICION DE CENTRO AMERICA Y PANAMA

COSTA RICA
EL SALVADOR
GUATEMALA

OFICINA SANITARIA PANAMERICANA
OFICINA REGIONAL DE LA
ORGANIZACION MUNDIAL DE LA SALUD
GUATEMALA, C. A.

HONDURAS
PANAMA
CABLE: INCAP

Guatemala, February 12, 1954.

Dr. David J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Penna.

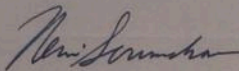
Dear Dr. Rogers:

Thank you for your letter of February 5th. I am enclosing the data for the four samples of yuca which I obtained from you in Turrubal last August.

The iron values probably represent contamination and should not be taken into account. If full data will be available on the sample and it is part of some definite experimental plan, we would be glad to run protein analyses and perhaps more complete analysis on the leaves. Are yuca leaves likely to be of value and to be used as a forrage?

Let me know your comments on the enclosed values and your suggestions for future work.

Sincerely yours,



Nevin S. Scrimshaw
Director

NSS/rmm
163
encl.

February 5, 1954

Dr. Nevin S. Scrimshaw
Director, Instituto de Nutricion de Centro America
Jardin Botanico
Guatemala City, Guatemala

Dear Dr. Scrimshaw:

I received a copy of a letter to you from Dr. Moncure recently. I was wondering, from the content of the letter, if you might have asked him what disposition you should make of some data you collected from assaying some varieties of yuca.

If you will recall, we met while you were in Turrialba last August, and at that time I collected four samples of varieties growing at Turrialba which you took with you to Guatemala. Have you had an opportunity to make assays of these? If you have and it would not be too much trouble I should like to have an informal report of these analysis. I will be very appreciative for this material.

If you like at some future date to continue analysis of various kinds of yuca, I shall endeavor to be the intermediary to secure these for you. In the tests that you ran I think you had only samples from the roots. Is it possible to run protein analysis at you laboratory on leaves? I would be very interested to know something about the variation in protein content of the different varieties.

I shall be very glad to hear from you at your convenience.

Yours very truly,

David J. Rogers
Assistant Professor of Biology

DJR/amp

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREIGN AGRICULTURAL SERVICE
WASHINGTON 25, D. C.

January 22, 1954.

Dr. Nevin S. Scrimshaw
Director, Instituto de Nutricion de Centro America,
Jardin Botanico
Guatemala City, Guate.

Dear Dr. Scrimshaw:

Reference is made to your letter of August 28 concerning protein value of yuca flour, which I have delayed not only because of pressure of other work but also because I have been gradually trying to work some additional details.

Recently I accidentally ran across a brief reference to some nutrition work by Bigwood in Belgium on cassava and as a result the USDA library ran down the attached copy of material from Archives Internationales de Physiologie, Juin 1952 on amino acid and other work on cassava, which I think will be of particular interest to you. Also enclosed is copy of "Java Tapioca, Its Manufacture, Grading and Use", L. W. L. Molleman, Indonesian O. S. R. Publication 22, and copies of letters of November 28 and December 7 from Mr. Hubert of USOM staff in Bogor, Java, together with the list of available material from Bogor for exchange with Brazil, U.S.A., etc. for which the U. S. Operations Mission will pay the air freight charges for two way exchange. I have been working on this exchange for nearly two years and now have it up to point of actual exchange. I am writing a letter today to Dr. Ralph H. Allee, Director, Inter-American Institute of Agricultural Sciences, Turrialba, Costa Rica, requesting that the Institute receive this propagating material direct and arrange for its propagation, and also make arrangements for securing the material from Instituto Agronomico, Campinas, Sao Paulo, Brazil, for sending to Java. Since General Foods and their Brazilian subsidiary, Geismar & Co., approached us a couple of years ago about securing material from Java, I am suggesting to Dr. Allee that perhaps Dr. Baldwin or others in General Foods research might secure for him funds to assist in propagating and distributing this planting material through Turrialba, and also perhaps securing some of the superior disease resistant cassava varieties developed by Dr. Storey in East Africa (which Dr. F. L. Wellman saw in his travels). The stations in Tingo Maria, Peru, Nicaragua, El Salvador, Guatemala, the coffee station at Chinchina, Colombia, as well as Imperial College of Agriculture in Trinidad and ~~the~~ Dr. Carlos Krug and his staff at Campinas have a real interest in this and other work on cassava. The most extensive work on breeding and selection for yield and disease resistance in this hemisphere has been done at Campinas, and they have cooperated also closely with General Foods on processing and quality tests of flour.

Also you have doubtless heard that Dr. David Rogers, Alleghany College, Meadville, Pa., with our moral support, started last summer a taxonomic and biological assay study of the cassava species at Turrialba and some minor cooperation from Jamaica and Trinidad. He has applied for a Guggenheim grant to enable to continue and complete this work, but I do not believe he has worked out any satisfactory means of making assays, unless some of the material from Costa Rica you mention is from him. He is in correspondence

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREIGN AGRICULTURAL SERVICE

WASHINGTON 25, D. C.

- 2 -

with a number of persons and stations in Latin America and elsewhere in connection with his work. Also recently I sent him some information on cassava work in India sent me by Dr. B. P. Pal, Director, Indian Agricultural Research Institute, and likewise I have kept him informed of developments from time to time, including the material I am sending you herewith.

Recently Standard Brands has approached this Office and also Dr. Krug on the subject of cassava production, yields, etc., but we do not know how great their interest is in this subject. Should you or anyone desire world production figures (estimated) for 1950 I can send the most recent information I received from Brazil. There is also an excellent publication on historical and research story of cassava, particularly as it relates to recent research work in the Belgian Congo, contained "Le Manioc", second edition, published by La Direction de L'Agriculture, Ministere des Colonies, 7 Place Royale, Bruxelles, including a list of subjects discussed at Congress of Manioc and other starch plants at Marseilles, September 1949. Also the USDA Library now has a photostat copy of a rather complete bibliography by Dr. Gerner of Brazil through 1938, and I have some additional references sent me from time to time by General Foods and Dr. Krug.

I am giving you all this background because I believe you would want to follow through on this study and perhaps participate in some way in the study. Copy of this letter is being sent jointly to Mr. Lorenz and Dr. Squibb but without the attachments, except the list of varieties at Bogor, since I have no extra copies available of the other attachments.

I hear Dr. and Mrs. Arroyave are back at INCAP and also Miss Marina Flores. Please give them my regards and also any other friends and acquaintances there.

I received copy of your letter to Miss Scheel suggesting she work on teocinte and Mr. Horn hopes to discuss this matter at the National Maize Committee meeting today of National Research Council, together with the counter proposal of her working on a representative sample of some of the Guatemalan corns from the national corn bank of indigenous corns. Also I have dropped a note to Dr. Squibb concerning another matter, in which I have asked him to also discuss some additional phases.

With best regards to you and your family,

Sincerely,

Robert C. Moncre

Agriculturist, Foreign Agricultural Service.

P.S. I don't know how much longer I will be here so therefore I want to get this cassava work in good shape for continuous work in Turrialba or some other place outside of USDA before my departure - if that is necessary.

INSTITUTO DE NUTRICION DE CENTRO AMERICA Y PANAMA

COSTA RICA
EL SALVADOR
GUATEMALA

OFICINA SANITARIA PANAMERICANA
OFICINA REGIONAL DE LA
ORGANIZACION MUNDIAL DE LA SALUD
GUATEMALA, C. A.

HONDURAS
PANAMA
CABLE: INCAP

Guatemala, March 17, 1953.

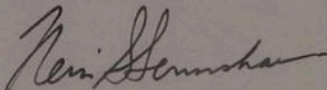
Dr. David J. Rogers
Assistant Professor of Biology
ALLEGHENY COLLEGE
Meadville, Penna.

Dear Dr. Rogers:

As you indicate in your letter of March 5th. it is still a long time in advance for detailed planning, but I am sure that we could include detailed chemical analyses of varieties of *Manihot* grown in this area providing the total number of samples is not large.

I shall look forward to hearing from you again when the project is well under way.

Sincerely yours,



Nevin S. Scrimshaw
Director

NSS/mm
254

March 5, 1953

Dr. Nevin S. Scrimshaw, Director
Instituto de Nutricion de Centro America y Panama
Jardin Botanico
Guatemala, Guatemala

Dear Dr. Scrimshaw:

Please accept my apologies for delaying so long my answer to your letter of October 21 concerning the possibilities of cooperation on my project with Manihot utilisima.

I have made several inquiries at various other places throughout Latin America in order to establish some sort of a cooperative project. I have finally made plans to establish experimental plots in Turrielba and in Jamaica. I imagine that you know both Dr. Allee and Mr. Jorge Leon, of the Turrielba station, both of whom have been most agreeable in setting up such a project there.

It looks as though I will get most of the world's varieties established in these two experimental plots sometime within the next year or two. It would well if we could ask your assistance to carry farther our studies beyond just the process of classification. If we could ask you to study the nutritional aspects of these varieties which we raise in our experimental plots, then I feel sure that we could make the study one of much greater value.

Since it will take some time to get our studies under way and our plants growing, it may be well over a year before we can actually start the nutritional studies. I realize that this request for cooperation in such a long away station requires probably more than you are willing to promise in the way of cooperation at this time. I am sorry that we cannot begin sooner, but I am sure that you understand the difficulties involved in such a cooperative project. Again, forgive my being so lax in answering your fine letter. I am hoping that I can get to see you in Guatemala this coming summer.

Yours very truly,

David J. Rogers
Assistant Professor of Biology

DJR:cja

INSTITUTO DE NUTRICION DE CENTRO AMERICA Y PANAMA

OFICINA SANITARIA PANAMERICANA
OFICINA REGIONAL DE LA
ORGANIZACION MUNDIAL DE LA SALUD

JARDIN BOTANICO
GUATEMALA, GUATEMALA

CABLE: INCAP

Guatemala, October 21, 1952

Dr. David J. Rogers
Assistant Professor of Biology
ALLEGHENY COLLEGE
Meadville, Penn.

Dear Dr. Rogers:

I am sorry to have delayed so long in answering your letter of September 8th. This was due partly to my absences from Guatemala, and partly to my lack of familiarity with the problem of manihot use in Central America.

Since we are carrying out extensive dietary surveys and food analysis work in Central America and Panama we will be able to cooperate with you. We have been doing considerable work on variations in nutritive value of varieties of bean and corn in Central America which should be of direct interest to you.

The Technical Advisory Committee of the Institute is meeting here in Guatemala early in November. I will discuss your interest in this subject with them and write you in more detail later in November. I assume that you have already written to the Inter-American Institute of Agricultural Sciences in Turrialba, Costa Rica, and the Centro de Agronomía in El Salvador. You should write them if you have not already done so. I will discuss the problem with appropriate individuals in these and other Central American agricultural Institutions when I have the opportunity. The taxonomic work of Stanley and Williams, and particularly, Williams, at the Escuela Agrícola de Zamorano, Honduras, may also be helpful to you.

Sincerely yours,

J. Nevin S. Scrimshaw
Director

NSS/agr

September 8, 1952

Dr. Nivins Scrimshaw
Institute of Nutrition for Central America and Panama
Jardin Botanica
Guatemala City, Guatemala

Dear Dr. Scrimshaw,

Dr. Claude Horn, Office of Foreign Agricultural Relations, United States Department of Agriculture, has mentioned your name to me as having some interest on problems concerning some aspect of Manihot esculenta (M. utilisima). If you would be so kind as to assist me I should like to make a survey of the work done on any aspect on this species which you may be carrying on or which you may have completed. Furthermore, if you have any publications I would very much appreciate a reprint, if available, or at least a reference where I may find it. If you have any projected work in this particular field, I would like very much to hear of it.

All of this survey is intended to give me some assistance in outlining the project which I have concerning this species. Briefly, the project which I have in mind consists of (1.) making a taxonomic revision of the varieties of the species (2.) correlation of genetic data (3.) determine vitamin contents of the varieties as indicators of divergence or convergence of the varieties.

It is my feeling that before any solid improvements can be made in the food producing capabilities of this group, we must know all of the varieties and their interrelationships. This project, I realize, is one of great complexity and will require the cooperation of as many people as can be interested in it. First of all, the dried material available in the United States herbaria is wholly insufficient. Firsthand field observation is of more importance and can be of much more value than observations of herbarium material.

I should like to know if you or your assistants are interested in such a cooperative project. If you are, what part of the project would interest you most and what facilities are available for such work?

If you know of others in the field, I would appreciate your mentioning this proposed project to them and also I should like to have their names and addresses.

Sincerely yours

David J. Rogers
Assistant Professor of Biology

August 27, 1956

Mr. N. W. Simmonds
Department of Botany
Imperial College of Tropical Agriculture
Trinidad, B.W.I.

Dear Mr. Simmonds:

At the suggestion of Dr. William L. Brown, I am writing to inquire whether or not there is an opening in your department for a Fullbright Fellow.

For the past three years, I have been studying the species Manihot utilissima (esculenta) from the standpoint of its variability and have been making an effort to work out the taxonomy of the taxa involved. In order to accomplish this, I have been working cooperatively with the Department of Agriculture of Jamaica, and with the Interamerican Institute of Agricultural Sciences, Turrialba, Costa Rica. I have made sufficient numbers of studies of the clones in Jamaica to feel confident that I know the range of variability there. I have made sufficient numbers of collections in various Central American countries (Nicaragua, Honduras, Costa Rica, and Panama to know most of the variability existing in that region.

What I should like to do is to further my studies of the plants to determine whether there is (and I feel confident that there is) more variability in Trinidad, and to extend my studies to the coastal regions of Venezuela, and to make fairly extensive studies in northeastern Brazil. In order to accomplish this, I felt that Trinidad and the Imperial College offered the best focal point from which to work.

If there is a possibility for this work, I shall be pleased to hear from you. Upon receipt of your reply, I shall make application to the proper authorities in Washington for the Fullbright award.



The Biblical Seminary in New York

Two-thirty-five East Forty-ninth Street
New York 17, New York

28 Jan '56

Dr David Rogers
Allegheny College
Meadville, Penn.

Dear Sir :-

Dr. Thompson of Cornell University
refers me to you for your studies on
manioc (cassava). I would be glad to
receive information on good yields
from improved varieties, and more good
ways to cook it.

I am an agricultural missionary
of the Methodist Church in Katanga
Province of southern Belgian Congo
Africa. We are interested in improving
the African's diet, "sweet" or "sour" varieties.

Their traditional method is to
plant on a ridge in or about November
2 years later more or less they harvest.
There are two varieties of the "sour"

Cassava planted mostly. I can only describe them by saying the tallest does not branch much - 8-10 ft tall; a shorter kind does branch at nearly every stalk - the branches tend to leave at nearly 90°. The color of the latter is lighter and more likely to make seed balls. Both require near 2 years to mature roots, they are soaked, dried and pounded into a flour that is mixed in hot water to make a thick, heavy, sour mush. The new tender leaves are used for greens. I have heard of an annual variety but do not know it. There is a "sweet" variety that grows in one year but I am not acquainted with it.

Can you refer me to helpful sources?

I would thank you.

Ray Smalley

until June 15

443 S. Division St. Ann Arbor, Mich

after July 5

Mulungwishie, Elisabethville. Belgian Congo,
Africa.

Office of our board: Methodist World Missions
150 Fifth Ave, New York City 11

April 26, 1957

Dr. A.C.Smith
Program Director for Systematic Botany
National Science Foundation
Washington, D.C.

Dear Al:

In New York last week, I found that in the New York Botanical Garden, as with most botanical institutions these days, there is a sad lack of proper herbarium space. You are probably as aware of the problems they face as anyone, and you know that Dave Keck is seriously concerned.

An immediate problem facing me when I transfer to New York is the proper storage of the material I have collected and mounted for my studies in Manihot. The best that can be afforded is the temporary expedient of the cardboard cases known in the trade as Merrill's cases. While these work well for dead storage, they are certainly not effective for work. Further, I do not feel in a position to urge that my specimens take precedent over the collections which the Garden must house.

With this problem in mind, I wonder if it would not be a satisfactory solution to utilize some of my funds of NSF grant 2327 for the purpose of purchasing three steel cases explicitly for storage of my working collection. Dave Keck and I talked this over, and thought that I should at least approach you on this subject. I know the statement made in your last letter, and realize that this is not in agreement with that statement, but in light of the rather serious problem, I wonder if some adjustment can't be made. I will appreciate your opinion on this subject.

Sincerely yours,

David J. Rogers
Associate Professor Botany

February 18, 1953

Dr. A. C. Smith
Curator
Division of Phanerogams
Smithsonian Institute
U. S. National Herbarium
Washington 25, D. C.

Dear Dr. Smith:

Thank you kindly for your recommendation to the American Philosophical Society. I am very happy to hear that you have received your grant for studies in the Fiji Islands.

If you perchance happen to find Manihot cultivated in the islands, I should be happy to have whatever notes and specimens you may happen to be able to collect. Feliz viaje!

Sincerely yours,

David J. Rogers

DJR/amp

ans 2/17/53
SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON 25, D. C.

February 11, 1953

Dr. David J. Rogers
Allegheny College
Meadville, Pennsylvania

Dear Dr. Rogers:

Upon receipt of your letter of February 5th, I sent the desired recommendation to the American Philosophical Society. I certainly hope that you will receive the grant and in fact I feel that you stand a very good chance. It is too bad that the National Science Foundation did not approve your request; but I was rather skeptical that you were asking for ~~so~~ much permanent equipment.
Too

My own request to the National Science Foundation fared better and I am going ahead with my plans for another Fijian trip. At present I am scheduled to leave Washington on March 6th.

With best wishes for the success of your work,

Very sincerely yours,

A. C. Smith

A. C. Smith
Curator
Division of Phanerogams

December 18, 1957

Dr. P. H. A. Sneath
National Institute for Medical Research
London, N. W. 7, England

Dear Dr. Sneath:

I have read with considerable interest your two articles, "Some Aspects of Bacterial Taxonomy" and "Computers in Taxonomy", which were published in the Journal of General Microbiology, Vol. 17, 1957. If possible, I would like to have separates of these two for my personal library.

Sincerely yours

David J. Rogers,
Editor, ECONOMIC BOTANY

DJR:MDF

INSTITUTO AGROPECUARIO NACIONAL

SERVICIO TECNICO COOPERATIVO
MINISTERIO DE AGRICULTURA DE GUATEMALA
U. S. DEPARTMENT OF AGRICULTURE

"LA AURORA," GUATEMALA
GUATEMALA, C. A.
TEL. 9626

No. W. 52-~~36~~2

September 20, 1952

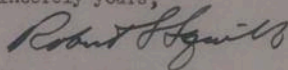
Dr. David Rogers,
Assistant Professor of Biology
ALLEGHENY COLLEGE
Meadville, Pennsylvania

Dear Dr. Rogers:

I am enclosing a reprint on yuca meal in baby chick rations.
For the present we have discontinued work on Manihot utilissima.
I can not give you any idea on whether we would be able to aid you
with your project until after the first of the year.

You may write to Dr. Louis Williams at the Tela Railroad
Company, Tegucigalpa, Honduras. Dr. Williams is a botanist who
has covered most of Latin America. Without a doubt his numerous
contacts may be of value. Dr. Robert Harris of MIT may also be
of help.

Sincerely yours,



Robert L. Squibb
Head, Animal Husbandry and Nutrition
Department

RLS:ejc

September 15, 1952

Dr. R. L. Squib
Instit. Agropecuario Nacional
% American Embassy
Guatemala City,
Guatemala

Dear Dr. Squib:

Dr. Claude Horn, Office of Foreign Agricultural Relations, United States Department of Agriculture, has mentioned your name to me as having some interest on problems concerning some aspect of Manihot esculenta (M. utilisima). If you would be so kind as to assist me I should like to make a survey of the work done on any aspect on this species which you may be carrying on or which you may have completed. Furthermore, if you have any publications I would very much appreciate a reprint, if available, or at least a reference where I may find it. If you have any projected work in this particular field, I would like very much to hear of it.

All of this survey is intended to give me some assistance in outlining the project which I have concerning this species. Briefly, the project which I have in mind consists of (1.) making a taxonomic revision of the varieties of the species (2.) correlation of genetic data (3.) determine vitamin contents of varieties as indicators of divergence or convergence of the varieties.

It is my feeling that before any solid improvements can be made in the food producing capabilities of this group, we must know all of the varieties and their interrelationships. This project, I realize, is one of great complexity and will require the cooperation of as many people as can be interested in it. First of all, the dried material available in the United States herbaria is wholly insufficient. Firethand field observation is of more importance and can be of much more value than observations of herbarium material.

I should like to know if you or your assistants are interested in such a cooperative project. If you are, what part of the project would interest you most and what facilities are available for such work?

If you know of others in the field, I would appreciate your mentioning this proposed project to them and also I should like to have their names and addresses.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

DJR/amp

September 10, 1952

Dr. H. Stehle, Director
Station de Recherches Agronomiques des Antilles
et de La Guyanne Francaise
Basse Terre, Guadeloupe
French West Indies

Dear Dr. Stehle:

Dr. Claude Horn, Office of Foreign Agricultural Relations, United States Department of Agriculture, has mentioned your name to me as having some interest on problems concerning some aspect of Manihot exculenta (M. utilisissima). If you would be so kind as to assist me I should like to make a survey of the work done on any aspect on this species which you may be carrying on or which you may have completed. Furthermore, if you have any publications I would very much appreciate a reprint, if available, or at least a reference where I may find it. If you have any projected work in this particular field, I would like very much to hear of it.

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I should like to know if you or your assistants are interested in such a cooperative project. If you are, what part of the project would interest you most and what facilities are available for such work?

If you know of others in the field, I would appreciate your mentioning this proposed project to them and also I should like to have their names and addresses.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

STANDARD BRANDS INCORPORATED

595 MADISON AVENUE, NEW YORK 22, N. Y.

PLAZA 9-4400

April 29, 1954

Mr. David J. Rogers
Asst. Prof. of Biology
Allegheny College
Meadville, Pennsylvania

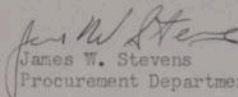
Dear Mr. Rogers,

We have given very careful consideration to your letter of April 19, 1954, in regard to your research project. It is indeed surprising that so little work has been done on the classification of tapioca varieties, and it may well be that one of the larger direct importers of tapioca would be interested in encouraging such a study.

This Company is not a direct importer of tapioca, and our allocation of funds for research work does not permit us to finance such a project. I believe you can get a list of the principal importers of tapioca either from the United States Department of Commerce, or from the Brazilian or Indonesian government trade bureaus.

I sincerely hope that you succeed in finding a sponsor for this project, and that you are able to carry it forward to a successful conclusion.

Sincerely yours,


James W. Stevens
Procurement Department

/Enc

March 10, 1955

Dr. Gunther Tessmann
Museu Paranaense
Curitiba
Parana, Brazil, S.A.

Dear Dr. Tessmann:

For the past three years I have been engaged in a study of the taxonomy of Manihot utilisima (esculenta). Up to this date I have concentrated my work on plants of this species which are found in the lands bordering on the Caribbean. I feel that I now have a sufficient amount of familiarity to extend my work into South America.

Since I recognize that there are few people who have as intimate a knowledge of South America generally as you, I am writing to you for advice on the most critical areas of South America where Manihot utilisima is grown. Since you have done work in many areas, I felt that you could probably give me valuable information as to your opinion on the most likely area of origins of this species.

As you know, there is a great deal of controversy as to which area is the center from which this species has spread. Dr. Karl Souer feels that the dry coastlines of Venezuela constitute one of the areas of most likely origin. He also feels that there is a possibility that the extreme slopes of the Andes could have also been a point from which Manihot utilisima has spread. Vavilov had, of course, preferred the regions of eastern Brazil.

It is my hope to visit some areas in South America during the months of July and August. Since my time is quite limited and my transportation funds not too great, I should like to get to a region of high significance and to try to get to an area that would have some representatives of the most primitive variants of Manihot. I should deeply appreciate your opinions as to which areas are most significant.

As a part of my work I have begun to establish a center in which I collect as many of the variations as possible. At the moment I have two "museum plots": One in Jamaica; the other at Turrialba, Costa Rica. I hope to send back to these two plots living material from this "center of origin" in South America.

I shall be very grateful for any information which you can supply me on this topic.

Sincerely yours,

David J. Rogers
Associate Professor of Biology

DJR/rp

NEW YORK STATE COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION
CORNELL UNIVERSITY
ITHACA, NEW YORK

WILLIAM I. MYERS, DEAN

DEPARTMENT OF VEGETABLE CROPS

February 3, 1956

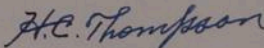
Dr. David J. Rogers
Associate Professor
Allegheny College
Meadville, Pa.

Dear Dave:

Enclosed are three films, the last of the
lot you sent me with your letter of December 15.
These made very good illustrations - enlarged. I
have not decided yet how many will be used in my
book, but probably two.

Thanks again for the pictures and best re-
gards.

Sincerely yours,



H. C. Thompson
Professor Emeritus

GM
Enc.

NEW YORK STATE COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION
CORNELL UNIVERSITY
ITHACA, NEW YORK

WILLIAM I. MYERS, DEAN

DEPARTMENT OF VEGETABLE CROPS

January 3, 1956

Dr. D. J. Rogers
Allegheny College
Meadville, Pennsylvania

Dear Dave:

I am returning, herewith, several of your films which you sent to me with your letter of December 15th. Prints are being made of three others. As soon as I get the prints these films will be returned.

You will be glad to know that our Visual Aids specialist says the films are good and will make excellent illustrations.

Happy New Year.

Sincerely yours,

H.C. Thompson

Homer C. Thompson
Professor Emeritus

HCT:mhs
Encl.

December 15, 1955

Dr. H.C.Thompson
New York State College of Agriculture
Agricultural Experiment Station
Cornell University
Ithaca, New York

Dear Dr. Thompson:

I am finally getting around to sending you the negatives which I believe will be satisfactory for your requirements. I am chagrined to find how few photographs I have made which would be of general illustrative interest. I shall have to change this and take more general pictures next summer.

The enclosed negatives still have some use to me and I will be happy to have them back at your convenience.

Best wishes for a Merry Christmas and a Happy New Year.

Sincerely,

David J. Rogers
Associate Professor

NEW YORK STATE COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION
CORNELL UNIVERSITY
ITHACA, NEW YORK

WILLIAM I. MYERS, DEAN

DEPARTMENT OF VEGETABLE CROPS

November 28, 1955

Professor David J. Rogers
Biology Department
Allegheny College
Meadville, Pennsylvania

Dear Dave:

I am returning herewith the prints you sent me with your letter of November 17th for which please accept my thanks. I have written on the back of two that might be used. You may have some similar to these that would reproduce better. If you have, and will send me the negatives I can have prints made.

What I would like to have is a picture showing a good plant or group of plants showing character of growth, a plant with a good crop of tubers, or one showing tubers and another showing good top growth either a single plant or a patch close up. Maybe I want too much.

1 or 2 pictures

I am bothering lots of folks for illustrations and am having considerable luck. Most people like to have their pictures used.

Again thanking you and with best regards, I am

Sincerely yours,

H. C. Thompson

H. C. Thompson
Professor Emeritus

HCT:mhs

NEW YORK STATE COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION
CORNELL UNIVERSITY
ITHACA, NEW YORK

WILLIAM I. MYERS, DEAN

DEPARTMENT OF VEGETABLE CROPS

November 16, 1955

Dr. David J. Rogers
Department of Botany
Allegheny College
Meadville, Pennsylvania

Dear Dave:

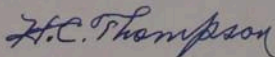
In the 5th edition of my book "Vegetable Crops" there will be a short chapter on Tropical Crops used as vegetables, including Yuca (cassava), chayote, dasheen, and true yams. Of course, there should be some illustrations showing what these look like and I am wondering if you might have one or two pictures of yuca that you would let me have. If you do not have any to spare, can you tell me where I might get some. Credit will be given for any pictures used.

I have not found very much material on the botany, culture, etc. of yuca. Do you have any papers of your own, or can you refer me to others that I should read? I have read the article by Scherry in Economic Botany Volume I and material in two or three books - Hill Economic Botany - a Textbook of Useful Plants and Plant Products and Scherry's Foods for Man. These books do not have much information on these plants.

Since we returned from Turrialba I have spent most of my time catching up on the literature on vegetables for the revision of my book. I hope to finish the revision in a month or two. After that I must start something else to keep me out of mischief.

Thanks in advance for any help you can give me and with best regards I am,

Sincerely yours,



H. C. Thompson
Professor Emeritus

HCT:mhs

November 14, 1952

Sr. Francisco Urey
Servicio Tecnico
Agricola De Nicaragua
Apertado 137
Managua, Nicaragua

Dear Sr. Urey:

Through Dr. Virgil C. Peterson, I have learned that you would possibly be interested in working on the varieties of Manihot esculenta. I should like to do a systematic study of all the varieties of this species and to incorporate into such a study a knowledge of the starch content of each of them. It is my hope that through a trip through Central and South America sometime in the near future, I can make a collection of all the known varieties or at least through contacts to be able to have them sent to me. In order for you to make assays of the starches it would probably be necessary for you to raise each variety where you could have an available supply of the plants. It would be possible I feel sure to arrange to have all the varieties which I collect to be sent to you for growth at your experimental station.

I further think that it would be possible through the Office of Foreign Agricultural Relations of the United States Department of Agriculture to get some funds for whatever equipment and personnel you might need to assist you in such a project. If you have interest in such a program as this one which I have outlined, in which you and I jointly would work on the systematics and the starch contents of the varieties of Manihot esculenta, I should like to hear from you in the near future.

Yours very sincerely,
HOASGUPOL 14 7623

David J. Rogers
Assistant Professor of Biology

DJR/amp



LIMA - PERU

PROGRAMA COOPERATIVO DE EXPERIMENTACION AGROPECUARIA
ESTACION EXPERIMENTAL AGRICOLA EN TINGO MARIA

Tingo María, June 16, 1953

REF: 314

Mr. David J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Pennsylvania

Dear Mr. Rogers:

Your letter of March 5, was not received in this office until May 20. Although I failed to notice at the time, the letter undoubtedly was forward by surface instead of air mail.

Eng. Julio Vargas M., Head of the Department of Agronomy, will be pleased to supply you with the following varieties of yuca upon request:

San Martín N° 2
San Martín N° 3
Morada Blanca
Provinciana
Negra Norteña

We could also supply you with two common varieties of the zone (Blanca y Negra) If you desire pressed, dried specimens, we will appreciate explicit instructions on the type of material desired.

We will be very much interested in receiving progress reports on your work as they become available.

Very truly yours,

PROGRAMA COOPERATIVO DE EXPERIMENTACION AGROPECUARIA
Estación Experimental Agrícola en Tingo María

Cornelius A. Van Doren

DIRECTOR TECNICO

Cornelius A. Van Doren

CAVD/nrs

March 5, 1953

Dr. Cornelius A. VanDoren, Director
Estacion Experimental Agricola
En Tingo Maria
Tingo Maria, Peru

Dear Dr. VanDoren:

Thank you very kindly for your letter of last October including the results of your analyses of seventeen varieties of Yuca. Since I wrote to you, I have made a few changes in my approach on this particular plant as far as its taxonomy and genetics is concerned, in that I have asked the Department of Agriculture in Jamaica and the same American Agricultural Institute at Turrialba to cooperate in the cultivation of varieties collected from sources all over the world. We are hoping to bring together as much information concerning these varieties as possible in addition to learning something of the classification of them. I am hoping to establish these experimental plots sometime during the coming six months, and to be able to ask you to send viable specimens of whatever varieties you have in cultivation there in Tingo Maria and at other places you may be able to collect specimens from in Peru.

I have requested the assistance of Dr. Nevin Scrimshaw, in Guatemala, to assist in the nutritional studies of a similar basis to that which you have made at your station, plus the studies of the food values of the foliage as a concentrate in animal feed. In other words, we will try to find out as much as is possible to make Yuca a more useful agricultural plant. I shall let you know as soon as we are ready to receive specimens at these two stations and ask you at that time for specimens. I trust that this will not be too much of a difficulty to provide them. At the same time that I write you, I shall probably ask for pressed, dried specimens of each of the varieties in order that we can have some check as to the morphology of the varieties as it grew in this environment. I shall give you more explicit data at the next time. Thank you very kindly for your cooperation.

Very truly yours,

David J. Rogers
Assistant Professor of Biology

DJR:cjs



ESTACION EXPERIMENTAL AGRICOLA
EN TINGO MARIA

En cooperación con el Departamento
de Agricultura de los Estados Unidos
de Norte América

MINISTERIO DE AGRICULTURA

DIRECCION DE COLONIZACION Y BOSQUES
LIMA - PERU

Tingo Maria, Peru
October 23, 1952

REF.: 1410

Dr. David Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Penn.
U. S. A.

ans 3/5/33

Dear Dr. Rogers:

Yucca (*Manihot esculenta*) is extensively cultivated in the Peruvian jungle, and serves as principal nourishment for many people. Technicians in the Department of Agronomy have tested the yield of several varieties and types, as well the manner of planting. We have done no investigational work on taxonomy and genetics, we are very much interested in your studies. We enclose some data on yield and chemical composition of the varieties tested.

We had received a letter from Dr. Claud L. Horn to which he attached a copy of your proposed work plan. We will be glad to cooperate with you in any way within the limitations of our facilities. If you wish we could send you samples of some of the varieties being grown here. We are not equipped to do morphological work or to make assays of vitamins.

Very truly yours,

Cornelius A. Van Doren

cc: Horn
Henney
Ambassy
Agronomy Dept.
File

Cornelius A. Van Doren,
DIRECTOR

CAVD/jc.

September 9, 1952

Dr. C. A. van Doren
Estacion Exptel. Agricola en Tingo Maria
% American Embassy
Lima, Peru

Dear Dr. van Doren

Dr. Claude Horn, Office of Foreign Agricultural Relations, United States Department of Agriculture, has mentioned your name to me as having some interest on problems concerning some aspect of Manihot esculenta (M. utilisima). If you would be so kind as to assist me I should like to make a survey of the work done on any aspect on this species which you may be carrying on or which you may have completed. Furthermore, if you have any publications I would very much appreciate a reprint, if available, or at least a reference where I may find it. If you have any projected work in this particular field, I would like very much to hear of it.

All of this survey is intended to give me some assistance in outlining the project which I have concerning this species. Briefly, the project which I have in mind consists of (1.) making a taxonomic revision of the varieties of the species (2.) correlation of genetic data (3.) determine vitamin contents of varieties as indicators of divergence or convergence of the varieties.

It is my feeling that before any solid improvements can be made in the food producing capabilities of this group, we must know all of the varieties and their interrelationships. This project, I realize, is one of great complexity and will require the cooperation of as many people as can be interested in it. First of all, the dried material available in the United States herbaria is wholly insufficient. Firsthand field observation is of more importance and can be of much more value than observations of herbarium material.

I should like to know if you or your assistants are interested in such a cooperative project. If you are, what part of the project would interest you most and what facilities are available for such work?

If you know of others in the field, I would appreciate your mentioning this proposed project to them and also I should like to have their names and addresses.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

December 20, 1954

Dr. A. G. van Veen, Senior Supervisory Officer
Nutrition Division, FAO
Rome, Italy

Dear Dr. van Veen:

I was very glad to have your letter of December 10. There are several comments I should like to make in the way of clarification of my remarks in a letter of December 3.

You are quite correct in commenting on the vagueness of my utilization of the term "tapioca". I realize that tapioca refers only to one of many different products from the group of plants now referred to as either Manihot utilisima or M. esculenta; but there is no one common term to be applied to this group which will have meaning in all areas where these plants are grown. Nor is there any definition (except agronomically) inherent in the scientific epithets. For example, in Brazil, one finds M. dulcis, or M. sipi applied to those variants which have a low content of HCN in the roots, or the HCN content confined to the phelloderm.

Brazilian workers have collected more than 400 different named clones in plots in Campinas. I have over one hundred different named clones in Jamaica alone. No one would question the fact that there are many duplications of names in either of these plots, but that there is great variation can hardly be questioned either. The plants in Jamaica are of both "bitter" and "sweet" types, and any farmer will have both growing side by side in the same field. This would seem to indicate at least in part genetically fixed differences.

You are correct in stating that many analyses have been made in various areas on prussic acid content, and all are in agreement with you on the higher content in the peel. Further, analyses have been made of all kinds, on carbohydrate, on protein and non-protein nitrogen content of roots and foliage, on vitamin content, etc. I am not denying these many efforts, nor the fine hybridizing work being carried out in India, Indonesia, or the fine work done by Storey in Africa.

My main point in making such a statement is that none of these studies apply to more than local variants, and cannot be related generally to all plants in this complex. What is needed, and what I am trying to do, is to provide a body of information on the total range of variation, and at the same time, relate information as to prussic acid content, individual variation caused by varying environments, etc., within a framework of systematic botany.

If a worker in Indonesia could determine what relation his clones had to those of another worker in Brazil, then it would seem that he could advance more rapidly with his work, whether it be genetic, cytologic, agronomic or any other. At the present time, this cannot be done.

I am writing to Bogor to ask for reprints they may have. Generally, more good scientific work has been done there than at many other stations studying tropical plants, and I hope to be able to see the results of their work. I have already read some of these papers, but do not have them in my own library.

I hope that this letter clarified some of my statements to you, and let me take this opportunity to thank you for your consideration in my behalf.



FOOD AND AGRICULTURE ORGANIZATION
OF THE UNITED NATIONS

Viale delle Terme di Caracalla
R O M E

Cable Address: FOODAGR, ROME
Tel. 590011 - 590211 - 599071

Please quote:
Référence:
Sirvase citare:

Nu

10 December 1954

Dear Dr. Rogers,

Thank you for your letter of 3 December, which I have also referred to Dr. Knoll, Chief of the Plant Production Branch of the Agriculture Division, who I hope can give you more advice than I can.

There is a lot of confusion in connection with the term "tapioca". Sometimes only cassava flour is meant, sometimes all sorts of flours which have been manufactured from roots. I cannot quite agree with your statement that "there is no present knowledge as to the extent of variation nor is there any knowledge yet whether the plants producing tapioca are of one species or several". The second part depends mainly on the definition of tapioca, but I can assure that much work has been done in Indonesia and probably also in other Far Eastern countries on the variability of the starch and prussic acid content or vitamin content of the roots.

For example, it was found in Indonesia that the prussic acid content, which is always higher in the peel than in the root itself, depends on variety and on soil. So does the total nitrogen content. I myself found that roots with a rather high total nitrogen content contained more non-protein nitrogen than the others. Usually about half of the total nitrogen in protein poor roots consists of non-protein substances. As far as the vitamins are concerned, one has to take into account that the cassava root, because of its prussic acid content, is nearly always intensively washed or dried or fermented, so that the resulting residue usually is very poor in vitamin B content. And when a real tapioca flour is made out of it, nothing is left.

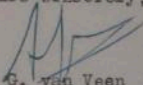
It would be useful to ask, for example, the Agricultural Experiment Station and the Botanical Gardens in Bogor, Indonesia, for the material they have.

I myself worked on the protein content of the young leaves, their nutritive value, and wrote a publication, of which to my regret I have no copies left (Geneeskundig Tijdschrift voor Nederlandsch-Indie (Batavia) 78, 2548-2552, 1938). It is certainly worthwhile to investigate cassava and cassava leaves in Central America and the Caribbean Area.

Dr. D. J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Pennsylvania

I have not been able so far to find the name of an organization which could supply the necessary personnel and funds for your interesting program, but I hope that Dr. Knoll will be able to do so.

Yours sincerely,

A handwritten signature in blue ink, appearing to be 'A. G. van Veen', written over the typed name.

A. G. van Veen
Senior Supervisory Officer
Nutrition Division

December 3, 1954

Dr. A. G. Van Veen
Nutrition Division
Food and Agriculture Organization
Viale delle Terme di Caracalla
Rome, Italy

Dear Dr. Van Veen:

I trust that you will recall a preliminary inquiry which I made to you last April 22 concerning the problems of assistance in research on tapioca.

In that letter I asked if there were any possibility of financial assistance for a research program, and I am sorry to find that the FAO cannot afford financial assistance. Perhaps, however, through your organization you can suggest some agency, either government or private, which would have funds available to carry along a rather extensive program.

Let me outline for you the program I have under way, which may give you some insight as to the needs that I have:

My research is primarily the classification of the variation which exists amongst the plants which produce this important crop. There is no present knowledge as to the extent of variation nor is there any knowledge yet as to whether the plants producing tapioca are of one species or several. There is no knowledge of the variability (except on local levels) of starch content, of HCN content, or vitamin content of the roots. There is no really valid data as to the protein content of the foliage of these plants. It seems to me a significant thing that assays of crude protein have run as high as 35%.

With the assistance of two organizations (namely, the Department of Agriculture of Jamaica and the Inter-American Institute of Agricultural Sciences in Turrialba, Costa Rica) I have instituted introduction gardens and museum plots where samples of as much of the world's variation as possible of these plants can be grown together. This study is now in its second year and has been to this point financed through private philanthropic organizations for my own expenses and by the two institutions named above for the growing of the plants.

In addition to growing the plants in Jamaica, the Department of Agriculture agreed to run analyses of carbohydrate and protein content of the plants. Unfortunately, the Department of

Agriculture in Jamaica is short-handed in number of trained investigators as well as in finances and can only make these analyses for me after everything else is done. I have just had a letter from the agricultural chemist of the Department of Agriculture in Jamaica that due to other pressing requirements he has not been able to even start analyses. This is no fault of his, but it certainly delays my program.

It is, therefore, essential that if my program is to succeed, then I must have some organization willing to supply necessary personnel and funds to carry this program out.

This whole investigation on my part is purely for the scientific merit involved, and I am not seeking salary for myself but feel that I must have some sort of continuing assistance if my program is to succeed.

I trust that you will be able to give me some suggestions as to where I might apply if the FAO cannot handle such.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

DJR/rp

December 1, 1954

Dr. A. G. Van Veen
Nutrition Division
Food and Agriculture Organization
Viale delle Terme di Caracalla
Rome, Italy

Dear Dr. Van Veen:

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12/1/54

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Sincerely yours,

David J. Rogers
Assistant Professor of Biology

DJR/rp

ORGANISATION DES NATIONS UNIES POUR
L'ALIMENTATION ET L'AGRICULTURE



ORGANIZACION DE LAS NACIONES UNIDAS
PARA LA AGRICULTURA
Y LA ALIMENTACION

FOOD AND AGRICULTURE ORGANIZATION
OF THE UNITED NATIONS

Mu

Viale delle Terme di Caracalla
R O M E

11 May 1954

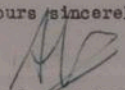
Dear Sir,

Your letter of 22 April to the Director of Information, FAO, has been transmitted to us by our Regional Office in Washington.

I understand that the assistance you ask for research in tropical foods is meant to be financial assistance, and not just technical or scientific advice. We were interested to learn that you are working on a research program concerning tapioca. If you would be so kind as to specify the kind of tapioca research you are interested in, we might perhaps be somewhat more helpful. Some research on tapioca is done at the present time at the Central Food Technological Institute in Mysore, South India, and also in one of the institutes connected with the Botanical Gardens in Bogor, Indonesia.

Much to our regret, FAO has a limited budget and is not in a position to make funds available for the assistance of private research workers.

Yours sincerely,


A. G. van Veen
Senior Supervisory Officer
Nutrition Division

Dr. David J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Penna.



SECRETARIA DA AGRICULTURA

DEPARTAMENTO DA PRODUÇÃO VEGETAL

DIVISÃO DE EXPERIMENTAÇÃO E PESQUISAS

(INSTITUTO AGRÔNOMO)

CAIXA POSTAL, 28

CAMPINAS - BRASIL

*
S. P.Pito 221/52

Campinas, November 24, 1952

Professor Daniel J. Rogers
 Assistant Professor of Biology
 Allegheny College
 Meadville, Pa., USA

Dear Professor Rogers:-

The present status of taxonomy of Manihot continues to be in the same level it was when Pohl investigated the genus, many years ago. At the time of Pohl, the hybrids were not known, and for this reason, species overlapped.

I tried to collect as many as possible species, and planned things for a collecting trip, in the central part of Brazil. But my plan did not reach its goal. My idea was to follow Pohl's itinerary.

My experience collecting Manihot over S. Paulo, Rio de Janeiro and Minas Gerais showed that Manihot should be gathered as maniva, (the plant, and by extension, the stems) and planted in an area for at least two years. We started a garden like this here at Campinas. It was very small, for the material gathered. The worst of all was the "murcha", or wilt, caused by Xanthomonas manihotis. Our collection was overridden by the disease, which killed some species down to the roots.

I would suggest this garden in some place in Minas Gerais or Goyaz. Goyaz has the advantage of being right there in the center of distribution of the genus, you wish.

You will be intrigued respecting this collection garden. We had to have one in order to study thoroughly a given species. Even when we travel at the time most of the species



SECRETARIA DA AGRICULTURA

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CAIXA POSTAL. 28
CAMPINAS - BRASIL

✱
S. P.

-2-

are in flower, we will not get some blooming and fruiting. Pohl, and other collectors reported vegetative Manihots in their writings and herbaria. I had a species or two which consistently refused to bloom.

I do not recognise Manihot esculenta Cranz as a good species. It is a synonym of Manihot utilissima Pohl (which is the type of the genus?) Manihot aipi Pohl in my judgement is the same as Manihot utilissima. I was not able to tell the difference between Manihot utilissima, brava, and Manihot aipi mansa.

The literature dealing with Manihot is large and scattered. I presume you are familiar with the paper by Zentner.

Yours sincerely

Viegas
Ahmes Pinto Viegas

November 14, 1952

Dr. Ahmes Viegas
Instituto Agronomico
Campinas, Est. Sao Paulo
Brazil

Dear Dr. Viegas:

Dr. Hugh Cutler of the Chicago Natural History Museum has told me that you could possibly give me some information on the present status of the taxonomy of Manihot.

I am trying to find out as much as possible concerning what has been done on the systematics particularly of M. esculenta, in order to outline a taxonomic research program. Since I plan to come to Brazil to make some specimens of Manihot, I should like to know which are the most important centers of Brazil which should be visited.

If you have any work which you could tell me of in respect to M. esculenta and its varieties, I should be very happy to hear about it.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

DJR/amp

Crop Agronomy Division,
Department of Agriculture,
Hope, Liguanea,
Jamaica, B.W.I.

REF. NO. 1716: 157

28th March, 1957.

Dear Dave,

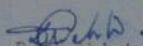
Thank you for the geography text and photographic copy of reprint which are now to hand. I am sure they will be very useful. I hope by this time you have decided on your future activities. I am quite familiar with the journal you mentioned and I think it would be a very good thing if you were Editor.

Interest in cassava is growing at a terrific pace. Shortly after you left a Mr. Pirie, Head of the Department of Biochemistry, Rothamsted, arrived and started investigating leaf protein. Like you, he has the idea of utilizing this protein in a food chain. He has got the Nutrition Committee of the Medical Research Council very interested in this matter and I will keep you posted as to developments. Other enquiries concerning the crop have been coming in and it is too bad that we are not in a position to advise on selected varieties and provide planting material, but this will come after our own experiments are completed.

I am enjoying the classes in Taxonomy at the School, but they take a big drain on my time and I hope very soon to be relieved of these extra duties.

Let me hear from you soon particularly about what you plan to do re the journal.

Yours sincerely,


D. C. Webster,
Food Crop Agronomist.

Dr. D.J. Rogers,
Associate Professor of Biology,
Allegheny College,
Meadville,
Pennsylvania.

DCW:pes

Crop Agronomy Division,
Department of Agriculture,
Hope, Liguanea,
Jamaica, B.W.I.

Ref.No. 1297/57

12th March, 1957.

Hello Dave,

Thank you for your letter dated February 11, 1957.

I enjoyed every moment spent working with you and I am glad that you were able to achieve so much.

The Museum plot will shortly be replanted and a variety trial of all 49 cultivars is being designed. This will be laid down at Bodles with another to follow at Rhymesbury when sufficient planting material is available.

I can sympathise with you in the cold of the frozen north land but then, there are so many compensations and the winter will soon be over.

I look forward to receiving printed material you mentioned and shall write again as soon as they arrive.

Yours sincerely,



D. C. Webster,
Food Crop Agronomist.

Dr. David Rogers,
Associate Professor of Biology,
Allegheny College,
Meadville,
Pennsylvania.

DCW:pes

18 July 1953

Mr. John A. Stevenson,
Principal Mycologist in Charge
Division of Mycology and Disease Survey
Plant Industry Station
Beltsville, Maryland

My dear Stevenson:

I want to thank you very much for your letter giving me identification on the *Phyllachora* spots on corn leaves. Cross sections I had made of what I believe now was younger material were most inconclusive. I am going to write up a short report on this, copy of which I will send to you.

I am also in your debt respecting the two standard cultures of *Alternaria* and *Stemphylium*. These were received in good condition, and have been put right to work in our spray studies.

You are always so much help to me, and yet all that I ever do in reprisal is to ask for more assistance. May I present another request?

The diseases of Manihot have been of considerable interest to me, as you know. I did some work in El Salvador on these troubles. Here in Costa Rica I have seen recently *Colletotrichum*, *Uromyces*, a *Cercospora*, probably two bacterial diseases, mosaic of Harcor type, *Rosellinia*, and *Diplodia* as well as *Penicillium* and some other saprophytes attacking dead and senescent tissues. Would you be able to get for me a list of all the known diseases of Manihot? or is that possible? I would also appreciate citations that I can use in this regard.

Thank you again and again, and in advance,

Sincerely

cc. Claud L. Horn
Roy M. Hill
Howard H. Gabbert
U. S. Embassy, C.R.
David J. Rogers ✓

Frederick L. Wellman
Regional Consultant in
Plant Pathology



INTER-AMERICAN INSTITUTE OF
AGRICULTURAL SCIENCES

AN ORGANIZATION OF THE GOVERNMENTS
OF THE AMERICAN REPUBLICS FOR THE
ADVANCEMENT OF THE AGRICULTURAL SCIENCES
THROUGH RESEARCH AND EDUCATION

TURRIALBA, COSTA RICA

21 May 1953

MEMORANDUM

25 May 1953
cc Rogers
Basil (Guarino)

San Jose

Super. files

To: Ralph H. Allee, Director, IIAS

From: Frederick L. Wellman, Regional Consultant, Plant Pathologist,
Turrialba, Costa Rica

Subject: Disease question on Yuca (Manihot utilisima)

I was much interested in reading the letter from Dr. David J. Rogers about his plans relating to his studies on yuca, or mandioc, in the Western Hemisphere. This needs study, and one of the supremely productive projects of British East Africa has been along just those lines. I think Rogers can build on that, and take it even farther. He knows all about it, undoubtedly.

We have on mandioc in the Americas: rusts, *Cercospora*, virus mosaic, mildews, *Phyllosticta*, *Rhizoctonia*, dry rots, bacterial troubles, and a lot of mineral deficiency troubles. The most serious of all these troubles are mosaic and bacterial rot, mosaic first.

While in Kenya Colony, at the KAFFRO station near Nairobi, and while in Uganda and Tanganyika as well as in India, I heard and discussed much about mandioc. The needs for mandioc work in the Western Hemisphere are great, and they have been selecting and breeding mandioc for years in Kenya.

The work of Dr. H. H. Storey in Kenya on mandioc is one of the outstanding success stories in tropical research for assistance in starvation countries. Some years ago he started studying the virus of mandioc, learned all of its inwardnesses and found out details of its basic methods of living and attack. He began to find out how to handle it under controlled conditions, and with an associate launched out onto studies of control. Briefly, they found varieties and clones that were highly tolerant and in some cases practically immune. They learned the genetic reactions involved, and then they studied inheritance of horticultural characters and starch storage. In something like fifteen years they developed varieties (clones) that outyielded the usual types from 7 to 10 times, and are further more immune from disease.

In this one job Storey did enough for the British Colonial Office in increasing food potential to pay for the whole establishment and carrying on of their research work in all of East Africa, and the Indian Empire.

It seems to me that somewhere in the Western Hemisphere we should have some of those Storey lines of yuca.

I do not know whether there are any unusual quarantine bans on yuca importations into Costa Rica. I shall ask the specialists in the Ministry and let you know. I shall also discuss with them their reaction to importation of those noblest of all mandioccs from my good friend Storey.

Fred.

cc. Claud L. Horn
Rey M. Hill
Howard M. Gabbert
Harold Mowry

FLM/ar.

*P.S. Have investigated and found no unusual
quarantine applicable to Yuca in Costa Rica.
F.H.H.*

THE IMPERIAL COLLEGE OF TROPICAL AGRICULTURE
(INCORPORATED BY ROYAL CHARTER)

PRINCIPAL AND DIRECTOR OF RESEARCH:

H. J. PAGE, C.N.S., O.B.E.

CABLES: "STOMATA," PORT-OF-SPAIN.



TRINIDAD, B.W.I.

In reply please refer to No. 6654

23rd September, 1952.

Dr. David J. Rogers,
Assistant Professor of Biology,
Allegheny College,
Meadville,
Pennsylvania.

Dear Sir:

I have to acknowledge your letter dated 10th September dealing with Manihot esculenta. At the present time there is nobody at the College working on either the botany or the genetics of this root crop and I regret therefore that it is not possible to assist you in the manner requested in your letter. I would suggest that you might wish to contact the East African Agricultural and Forestry Research Organisation whose headquarters are in Kenya and whose address is P.O. Kikuyu, Kenya, since I know some little time ago work was done at that institution on the interspecific hybridization and other breeding problems associated with Manihot esculenta.

Yours faithfully,

(A. B. KILLICK),
Acting Registrar.

ABK:AB.

September 10, 1952

Director
Imperial College of Tropical Agriculture
St. Augustine, Trinidad

Dear Sir:

Dr. Claude Horn, Office of Foreign Agricultural Relations, United States Department of Agriculture, has mentioned your name to me as having some interest on problems concerning some aspect of Manihot esculenta (M. utilissima). If you would be so kind as to assist me I should like to make a survey of the work done on any aspect on this species which you may be carrying on or which you may have completed. Furthermore, if you have any publications I would very much appreciate a reprint, if available, or at least a reference where I may find it. If you have any projected work in this particular field, I would like very much to hear of it.

All of this survey is intended to give me some assistance in outlining the project which I have concerning this species. Briefly, the project which I have in mind consists of (1.) making a taxonomic revision of the varieties of the species (2.) correlation of genetic data (3.) determine vitamin contents of varieties as indicators of divergence or convergence of the varieties.

It is my feeling that before any solid improvements can be made in the food producing capabilities of this group, we must know all of the varieties and their interrelationships. This project, I realize, is one of great complexity and will require the cooperation of as many people as can be interested in it. First of all, the dried material available in the United States herbaria is wholly insufficient. Firsthand field observation is of more importance and can be of much more value than observations of herbarium material.

I should like to know if you or your assistants are interested in such a cooperative project. If you are, what part of the project would interest you most and what facilities are available for such work?

If you know of others in the field, I would appreciate your mentioning this proposed project to them and also I should like to have their names and addresses.

Sincerely yours,

David J. Rogers
Assistant Professor of Biology

UNIVERSITY OF MICHIGAN

ANN ARBOR, MICHIGAN

COLLEGE OF LIT., SCIENCE, AND THE ARTS

DEPT. OF ANTHROPOLOGY

March 10, 1953

Dr. David J. Rogers
Department of Biology and Geology
Allegheny College
Meadville, Pennsylvania

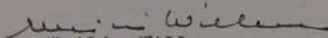
Dear Dr. Rogers:

I wish to thank you very much for your kind letter of February 26. In fact, three years ago I began to work on an anthropological monograph "The Manioc Complex in Tropical South America", but several other research projects prevented me from finishing it.

I am sure that some of your data are of great interest to me. Within a few weeks I shall be able to look over my notes and communicate with you again. At the time being a report to the UNESCO ^{in absorbing} every free hour.

Thanking you again, I am

Sincerely yours,


Emilio Willems

February 26, 1953

Dr. Emilio Willems
Department of Sociology and Anthropology
Box 7
Vanderbilt University
Nashville 4, Tennessee

Dear Dr. Willems;

Through Dr. Hugh C. Cutler, formerly of the Chicago Museum of Natural History, I have learned that you are interested in anthropological data about Manioc. For some years I have been interested in Manioc, from the standpoint of its taxonomy. At the present I am engaged in a research program concerning systematics of the species Manihot Utilissima. It may sound as though I do not have much to offer you. I hope that before too long I may be able to offer you some concrete information, which will be helpful to you in your very worthwhile project. Likewise, I am sure that much of the data which you have collected will be of great value to me in my studies.

I hope that we may be able to cooperate to whatever degree you may desire, in order to bring as much data together as is possible concerning Manioc. Please let me know if I may be of some assistance to you, and I shall be pleased to hear from you at your convenience.

Yours truly,

David J. Rogers
Assistant Professor of Biology

DJR:cja

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
OFFICE OF EXPERIMENT STATIONS
MAYAGUEZ, PUERTO RICO

FEDERAL EXPERIMENT STATION
IN PUERTO RICO

September 16, 1952

Mr. David J. Rogers
Assistant Professor of Biology
Allegheny College
Meadville, Pennsylvania

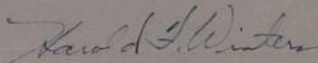
Dear Mr. Rogers:

This will acknowledge your letter of September 11 regarding your interest in Manihot esculenta (M. utilissima).

I am sorry to tell you that we are not doing anything with this crop and so far as I know have none growing on the experiment station property. Some of it is grown on the island as a food crop, however, and the roots are sometimes seen in the markets. It might be that the University Experiment Station has some investigations with this crop. You might write to Mr. Arturo Roque, Director, Insular Experiment Station, Rio Piedras, P. R., for complete information.

I am sorry that we cannot be of more help to you but we have never undertaken investigations on this crop since it is of such minor importance in the island.

Very truly yours,



Harold F. Winters
Horticulturist