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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.



Cal. Poly. Box 2167
San Luis Obispo, Calif.
June 11, 1966

Dear Dr. Popenoe:

With much pleasure I read your letter of June 1st. I wanted to answer before but the last two weeks have been hectic, trying to wind up the course work and getting ready for finals. Fortunately the hard work has paid off, I am entering finals with a 4.0; I only hope that it will be the same at the end of this week.

I am pleased to see that things are going so well in Spain, in the department they could hardly believe the price of aguacates.

Dr. the 16th I am going to San Francisco to pick up my cousin, I am taking him back for summer vacation. I will be there till the 20th. If it is at all possible I would love to see you or talk to you by phone. I need your advice with respect to my going to graduate school. I have applied to Turrialba and I am waiting to hear from them. It happens that two of my teachers in the Biological Science department think that I should do the graduate work here in the States. Please let me know if it will be possible to see you.

I am looking forward to seeing you again. My best to your family.

Sincerely yours,

[Mathew]
Eduardo Mathew

Warkino Venencia, Teseon Guatemala
February 8, 1968

Dear Dr. Papenoe,

It has been so long since last we were together that I can not help feeling sad for not having written before, from now on I will make it a point to write regularly.

'67 has ended and January is already gone. I had hopes of being at Caracas by this time - however it was impossible due to the cut in the budget - the minister was determine not to sign any nonbrominatos - thus I am in Teseon.

Nevertheless even though this is a bad news - I have more pleasant things to write about. The trees have grown very well this past year. However some have not come out of the severe pruning they received a year ago - (they were cut back to knee length in order to obtain bud wood) This year the winter (cold weather) has been very mild and they don't want to drop the leaves - I still have hopes that they will do so by the end of this month. I am going to cut out the watering with the hope that they will be dormant ~~and~~ in May.

I have healed in the pear trees, vines and Winter Banana trees that come in last November from Bountiful Ridge, this coming week I will plant the vines and the ~~of~~ pears since they are starting to sprout. This month I am receiving 900 Winter Banana trees from Californic Nurseries and 100 Yellow Delicious - Bountiful is also sending 100 All Red Jonathans. These I will plant below the present planting.

I am happy - very happy in fact to tell you that Adrian Moroguin has a 2000 tree planting of Jonathans - last season was his first crop and from what he tells me the color was very good. He is very well, no longer drinks and he is a man full of enthusiasm. He is living now in Santa Teresa which is in the valley behind Kotok. There are several people around Tepepa very much interested in apples and Peaches in 1969 I hope to be able to provide them with seedlings - I am planning to start a nursery using the Perote as rootstock this year. If possible Adrian and I will organize a fruit Co-op so that the quality of the fruit will begin to improve and marketing will be better.

In order to make some money this year I am trying to find at least 100 cuerdas to plant of wheat and I am going to see if I can interplant potatoes in the apple Orchard - Adrien is going to give me the technical advice since he has planted potatoes for 8 years in Santa Teresa.

In San Rucos I am going to plant 4 cuerdas of Gladiolos with a friend - Asi que si Dios quiere y trabajo duro me ire mal este año.

The apple trees - Red Delicious have a fungus in the lower parts of the trunk. I painted them with slaked lime and now I am spraying Bordeaux Mixture I hope this will check the attack - However as soon as I can I am going to get a good microscope and set up a small lab so I can know for sure what is giving me trouble. There is a lack of knowledge about diseases and very little help one can get at the University or IAN. I hope I will be able to go up to Alexis in two years, even if it is only for a quarter.

As you can see there is a lot of work this year. The mozos at Vista Bella are very anxious to start their fruit plantings and I hope that something will be done

This year with peaches.

The pruning of the red Delicious this year will be very light. I am planning to cut off only the tops and in some cases some scaffolds that are too close or have double branches at the union with the trunk - I am debating how much of the tops to cut back - maybe you can give me some advice.

Please send me the address of your friend at Denies since I want to write to him concerning disease and insect information - I misplaced the address you gave me when you left. I could also use the address of the people in the East that have experience with Melin Menton rootlocks - if you know of anyone please let me know.

Well I am curious to see you again so that we might go out to see trees and fruit - when will you be down?

Give my regards to Dr. Hugh - I hope that you are enjoying good health - Please drop me a few lines - I hope the book is coming along as you wish -

With my warmest regards,

Very regards to
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Carnegie Mellon University, Pittsburgh, PA

Seu amigo y pupilo,
Eduardo
[Matheu]



GUATEMALA, C. A.

Guatemala, July 9, 1968

Mr. T. Van der Zwet
Research Plant Pathologist
Fruit and Nut Crops Research Branch
United States Department of Agriculture
Crop Research Division
Beltsville, Maryland 20705
U.S.A.

Dear Mr. Van der Zwet:

Recently I was talking with Mr. Donald Fister, Head of the Agricultural Section of AID in Guatemala. We discussed the serious problem of Pear Rootstocks in Guatemala. He told me about your extensive research in Pears and your interest in coming to Guatemala. He recommended that I write to you.

Most of the pears in Guatemala are on Crataegus mexicana and Crataegus stipulata. These rootstocks are very resistant to drought and to several diseases, probably because they are very rustic. However, one has to plant Crataegus in place and graft two or three years later in order to prevent the formation of Elephant's foot at the union since the rootstock grows too slowly.

For the last two years Dr. Wilson Popenoe has been trying to obtain Pyrus calleryana seeds, for rootstocks, without success. So far the only experience we have with this rootstock is four trees that Don Arturo Falla planted four years ago in Concepcion farm. The growth has been very satisfactory and vigorous under sandy conditions. We do not know how the trees will produce. It might be that Pyrus calleryana is a partial solution of the lack of a rootstock that can withstand dry soil during the dormant period.

In the Highlands of Guatemala the rainy season runs from



GUATEMALA, C. A.

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May to October. The cold and dry season runs from November to February. Very few people irrigate fruit trees in Guatemala; as you can see, the early varieties suffer from lack of water at flowering time.

French Pear (Bartlet) rootstocks were introduced and the general consensus is that they are a failure if they are not irrigated. Thus the great need for rootstocks that can withstand dry soils.

I would appreciate very much any information you could provide us. I am well aware of how extensive the subject is and would gladly send you any other information you might want.

Do let me know if it would be possible to obtain seeds of Pyrus calleryana from you. If this is not possible we would appreciate your telling us who can provide this seed in the States.

Thanking you for your attention to our request and hoping to hear from you in the near future we remain,

Very truly yours,

Ing. Eduardo Antonio Matheu B.
Asesor Técnico del Proyecto de
Fomento de Frutales Deciduos

Fomento de Cultivos y Desarrollo Pecuario
para la Comercialización con el Exterior
Dirección General de Desarrollo Agropecuario
12 Avenida 19-01, zona 1
Guatemala, Guatemala C.A.

c.c. Jefe Unidad Sectorial de Planificación Agrícola

EAMB/ocm

Davis, California
March 15, 1970

Miquerido Doctor y maestro,

Of all the letters that I should have written this is the one that has top priority. Please forgive my undue silence, I do not really have an excuse for it. I might point out that last quarter for a while it looked like I would be back in Guatemala for Xmas, visiting you and explaining how I was not able to remain here at Davis. My choice of courses for the first quarter was poor. I was barely able to get a hold on myself and continue studying, fortunately with the good advice of Dr. Brown, chairman of the department, and my major advisor, I was able to re-arrange the study program and complete the quarter successfully.

I wanted to write to you and be able to give you good news, this was not possible since I was very depressed. So I put it off and kept on doing it till now. However you have been present on my mind all this time and from the things you have told me and advised me in the past I drew strenght and was able to continue so you have played a very important part in my life and continue to do so.

This second quarter has been very good. I am taking a course in physiology of fruit trees, given by five lecturers, among them Dr. Brown, Dr. Julian Crane and Dr. Hartman, the propagation man. Also with Dr. Crane a course in pruning responses, training of trees, etc. In the pomology seminar I presented the work I will be doing with doctor Martin. I will try to establish what is the sequence of the onset of rest in the apricot. At the same time I am conducting experiments with two apple varieties applying Elgetol and dormant oil to see what the response is ~~xxxx~~ in blooming. This past winter was the mildest in 40 years or so. At the beginning of April I hope to run similar spray tests in Viselia, there is an apple orchard that presents the same problems of late foliation that we have in Guatemala. The other course I am in, is Statistics.

Next quarter I'll be taking a course in plant pathology with emphasis on fruit diseases and laboratory techniques. A course in pomology, looking at flower set, pollination, etc. By June or July I should have finished the experiments which will be written up as the Master thesis. After that I'll continue with courses in botany and pomology and related subjects to culture of fruit trees in order

to complete the requirements for the degree. As you can see I have plenty of work ahead of me.

I am very happy in writing this letter to you, now that I ~~am~~ am back into the routine of studying I can say that I like Davis and am glad to be here. The people in the department are find and Dr. Brown, Martin and Crane are certainly interested in seeing that I do well and graduate from here as a pomologist.

I am glad that to be here after your inquiries and advice, the choice was good.

Needless to say, until now I am beginning to write, thus I have no news of what is happening in Guatemala with the program or what you have been doing. Please let me know.

I hope that you are in good health as well as Alice. Often I think of the trips and the visits at the house. I am trying to arrange a trip to Guatemala in order to see you and take a tour of inspection of the New Jersey materials. I hope I can do it at the end of the summer or if not for Christmas vacation. Dad is now in Mexico and when he gets to New Orleans will be phoning, then I'll know what the possibilities are.

I hope this one finds you in Guatemala and that it is not long before I hear from you. I am making it a point to write to you often from now on, this long silence has not been good.

Give my best regards to Alice. Please say hello to Arturo for me when you see him. My regards to Sally. I hope Hugh is fine.

Bueno Doctor, hasta la próxima, que no tardaré mucho en escribirla. Reciba un fuerte abrazo con mi cariño,

Eduardo

1421 Drake Drive Apt. C
Davis, California 95616
U.S.A.

Davis, California, 25 May 1970

Dear Doctor,

I received your letter which I enjoyed reading very much. I am particularly pleased with what you have to say about the work Guillermo Arriaga is doing.

I am finishing up research on the dormancy of apricots, probably will be done at the end of June or early July thus it looks like I won't be able to make it to Guate. during the growing season. I plan to have the thesis written by the end of August.

I hope that there is still time for Juan Jose Lopez to visit you. He is in charge of Vista Bella and I have send him a note telling to be sure to send you a telegram letting you know when he will go to see you. I hope that you could take him out to Arturo's place. From what Juan Jose writes the apples are doing ok at Vista Bella except for the lot that is on Malling Merton root stocks, which is to be expected.

As you know we have some Pyrus calleryana at Vista Bella and I would appreciate it if you can tell Juan Jose when and where to get material to do the grafting.

School is going very well we are finishing up this quarter during the third week of June. This summer I'll try to get some work with Dr. Crane, I told him about your letter.

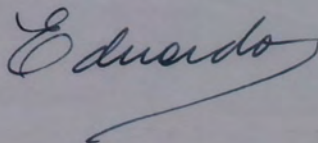
I am glad you will be in Europe this summer. I imagine you will be traveling most of the time or are you going to a particular place? I hope I will here from you during the summer.

Sorry to hear about the Aguacates at Aposentos, Maximo is a very lucky person if he still is with the program. It seems that he should stay away from nursery work.

Give my regards to Alice. I look forward to your news.

With my best regards,

Sincerely,

A handwritten signature in cursive script, appearing to read "Eduardo", with a long horizontal flourish extending to the right.

Davis, California
16 de abril de 1971

Mi querido Doctor,

Por fin me siento a escribir. Forgive me for doing it until now. Ever since I got back from Guatemala I was so tied up with the thesis that I did not have time for anything else. Fortunately I did finish the thesis on time and was duely approved. Next Monday I am mailing your copy. The couerse work went very well, especially the course in flower production and greenhouse management.

I have not been able to see to the grapes, I have had no luck trying to see Dr. Olmo. However I will make all arragements with him so that we get the collection in Guatemala.

En lo personal muy bien, aunque debo de confesar que he perdido el corazón a una gringuita de Marysville. Me da gran gusto comunicarle que voy a casarme el 12 de junio. Conoci a Kathryn Kirkpatrick el treinta de enero y a principios de febrero le propuse casamiento. You can see that it is until now that I am able to breath again, it was too much between studies, the thesis and her. I wish you and Alice could be here for the wedding since having one's dear friends in such ocassions makes them so much more happy. But it is not always possible, nevertheless on that day I'll be drinking a glass to your health.

It won't be too long before we are back in Guatemala. My plans stand as they did in December. I am going to get experience in greenhosue flower growing during this summer. I hope to start next week or at the most in two weeks. I'll be in a greenhouse operation in Santa Cruz county. In September I am driving back to Guatemala. I'll be working with Arturo as soon as I get back and hope to start planting a small orchard near Vista Bella next spring.

It looks like we are going to be en el mismo vecindario since we are planing to live in Antigua. In this manner I'll be near the job and at the center of Pomologos de Guatemala. I can hardly wait to get back and start working. Studies are great but somehow I really miss planing and executing in the fields. My head is full of plans, and with your help and my hard work I think we can expand field work in the highlands. In this manner we will be able to get the full fruit of your work. Now it will be possible

to materialize your hopes for a foundation to the fruit industry in the highlands.

Dad and Mom were here for a month and left for Europe the 14th. I was able to talk to him and it looks like in the next five years I'll be able to create an operation that will give us the means of supporting long range observations, as well as short range studies in fruits, vegetables and flowers. This does not mean that we have to wait five years to do it. We can start as soon as I get back, in a small way and build from there. I am so very anxious to get back.

I hope that you and Alice are in the best of health. You are cordially invited and are the guests of honor at our wedding. Give my best regards to her.

Please let me know what your plans are this year. Will you be away from Guatemala?

Reciba un gran abrazo con mi cariño,

Eduardo

1460 Wake Forest Dr. Apt. 116
Davis, California 95616
U.S.A.

Antigua, Guatemala, 24 April 1971

Dear Guayo:

Many many thanks for your letter of 16 April with that fine news about the gal from Marysville. I am glad she is from Marysville. I would have been worried if you were going to marry a girl from Hollywood or any other part of Los Angeles. But Marysville is in a good honest agricultural region. That kind of country produces good gals. I have never been right in Marysville but I knew that region pretty well, through having been in charge of the Chico Garden of USDA (now on the ground at Chico, but visiting it from Washington) and I knew the Sacramento Valley pretty well.

I wish we could be with you at the wedding, but as you know, it will be impossible. I wish Dean Ryerson, who was Dean at Davis for 15 years and is now retired, in Berkeley, could bring his wife Edith to the wedding in place of Alice and myself. But right here we come up against a problem which has been in the back of the minds - not only Alice and mine but other best friends of yours - You have got to get rid of that big crop of alfalfa on your mug and wait until you have made a name for yourself and have the right to pose as a distinguished man of science. Do you get me? I wish you would talk this matter over with Kathryn. Tell her how fond Alice and I are of you. How many friends you have down here who expect to see you become an outstanding man in the field of tropical horticulture! To do so you must not let yourself be carried away by any childish ideas.

You may argue that whiskers are now accepted in the USA; I say they are not accepted, they are ^{not} tolerated when they are worn by kids and even by men of your age, who have not yet made their mark in

the world. You are no kid. At your age plenty of young men are Assistant Professors in a good college. You must devote your attention to fitting into Society, conservative Society, and by your work gain the respect and admiration of your colleagues and Society in general. We all want you to do this. You know I have tried hard to help you become an expert in your field. You have the intelligence, and you have had good training. And don't forget that you have taken a long time to get started, to get into the right field. You are in it, and now you must make the most of it.

I realize that it has been hard to get in personal contact with Prof Ulme. I hope when you come down you can bring propagating material of anything which they have available up there and which they think we ought to try. I am in touch with the folks at the Leesburg station on Florida and they also have some interesting material for us. Our problem is to line up an experimental planting and then take care of it. Probably the only place where this can be done is San Sebastian. Apesentes would be allright but one cannot depend on any of the government stations for permanent work. You should see the station at La Alameda, where Rodolfo Guillen had so much material started two years ago. I was up there yesterday. Practically nothing is left. What is left is material which has had no care nor water, apparently. They told me up there, that Marie Velasquez is going to move out there in a month or so. and devote himself to avocados. I wonder how long that will last? I cannot say enough for the work Gmo Arriaga is doing, both at Apesentes and at San Cristobal. Both nurseries in fine shape.

You ask about our plans: We don't expect to be far from Guatemala this year; of course Honduras occasionally and perhaps a short trip to Costa Rica and maybe even Mexico. Alice joins in warmest regards

Antigua, 10 May 1974

Dear Guayo:

We don't know exactly what day you plan to come next week but this is to tell you we are going to be tied up on Thursday the 16th. Any other day will be fine - Wednesday, Friday or Saturday. Please send us a telegram a day or so in advance so I will be sure to have ice cubes ready.

About your abstract of "Manzanas y Peras" for Santo Domingo. I have gone over it more carefully and suggest you make the following changes; they won't have sent it to the printer yet, I feel sure, so you get a corrected copy to them in time.

I would just say Winter Banana and Wealthy are the basis of commercial production at present. There is some confusion as yet, about Juarez "Red Delicious"; of course we have the authentic thing somewhere but don't you think Winter Banana and Wealthy are really our two important varieties today?

The "Tenn" pear is probably Eyres, not Ayers - just a matter of spelling. Ralph Sharp is not too sure of this but old Dr Drain the originator was. The manzanilla is more commonly called *Crataegus pubescens* now; but I prefer *C. mexicana*, and previously we used *C. stipulosa*. I would say "*Crataegus mexicana*, syn. *C. stipulosa*, *C. pubescens*". Last paragraph of the English text, I would put it: "which will be of value only if they take into account the diversity of micro-climates". This, by the way, is an important point.

I think we should get to work on the paper itself right away or you are going to be on your way to Santo Domingo without having it finished! It is going to be a valuable contribution. I think

you can elaborate a bit on the Malling Merton business based in part on the literature I have. Ever yours

MANZANAS Y PERAS,
DESARROLLO EN EL ALTIPLANO GUATEMALTECO
Eduardo A. Matheu* y Wilson Popenoe**

RESUMEN

El factor crucial en la producción de manzanas y peras en el altiplano de Guatemala es el requerimiento de frío (chilling requirement). Las temperaturas adecuadas para manzanas y peras usualmente cultivadas ocurren entre 1,800 y 2,400 m. (6,000 y 8,000 pies) de elevación.

Ocho años de observaciones en el campo indican que Winter Banana y Wealthy (~~Red Delicious?~~) son la base de la producción comercial de manzanas debido a su requerimiento de frío. Con introducciones se ha logrado "Vista Bella" y "Anna", de la universidad de Rutgers e Israel, respectivamente. Vista Bella es roja y la primera en madurar a finales de Julio a 2,280 m. (7,500 pies). Anna produce bien a 1,500 m. (4,950 pies), lo que amplía la zona de cultivo considerablemente. Los patrones Malling Merton desarrollan lentamente, forman árboles muy enanos y sus prácticas culturales son muy complejas; por lo que continúan en la fase experimental.

* Finca Vista Bella, Tecpán Guatemala, Guatemala, C. A.

** Antigua Guatemala, Guatemala, C. A.

2,280 m. (7,500 ft.). Anna does well at 1,500 m. (4,950 ft.), increasing the growing area considerably. Malling Merton rootstocks continue to be experimental since they develop very slowly, form exceedingly dwarfed trees, and require complex cultural practices.

Ayers, a pear from the South East of the United States, is a hybrid that does well at 2,000 m. (6,600 ft.). In quality it competes favorably with European pears which require higher altitudes. The introduction of Pyrus calleryana, Dcn. as a rootstock permits establishing an orchard three years earlier than when "Manzanilla" (probably Crataegus stipulosa) is used. Although Pyrus calleryana is still at the experimental level, it is commercially employed.

These observations have created a new context that requires appropriate cultural practices; which will be of value only if they account for the diversity of micro-climates.

Take into

La pera Ayers del sur de los Estados Unidos es una híbrida que produce bien a 2,000 m. (6,600 pies). Compite en calidad con las peras europeas que necesitan mayor altura. La introducción de Pyrus calleryana, Dcn. como patrón permite formar huertos tres años más rápido al sustituir la "Manzanilla" (probablemente Crataegus stipulosa). Calleryana aunque esta en observación ya se usa a nivel comercial.

Estas observaciones han creado un nuevo contexto que requiere prácticas culturales apropiadas. Estas prácticas seran de valor unicamente si toman en cuenta la gran variedad de micro-climas.

ABSTRACT

The crucial factor in the production of apples and pears in the highlands of Guatemala is the chilling requirement. Adequate temperatures for apples and pears commonly grown occur between 1,800 and 2,400 m. (6,000 and 8,000 ft.) above sea level.

Eight years of field observations indicate that Winter Banana and Wealthy (~~Red Delicious?~~) provide a basis for commercial apple production because of their low chilling requirement. "Vista Bella" and "Anna", from Rutgers University and Israel, respectively, represent successful introductions. Vista Bella is a red variety maturing in late July when planted at an elevation of

Tecpán Guatemala, 4 de junio de 1974

Dr. Wilson Popenoe
Escuela Agrícola Panamericana
Zamorano, Honduras
América Central

Dear Wilson:

I was not able to visit before you left for Honduras, I hope that you and Alice have a pleasant stay.

This week I am sending the final draft of the paper for the congress, the due date is the last of the month. A copy for your files will be awaiting in Antigua.

Hugh and Linda came by to say adios, somehow we already miss them. We did manage to talk them into staying over the weekend and on Sunday we went to Atitlán on a picnic. The event was super even though we did not have any eclairs for desert. Which reminds me, Kit went into rapture when she saw the cheese pie, and the coffee cke was also great. Alice thank you very much.

Hugh and Linda left in fine spirits, they were very anxious to return. Hugh has decided on opening a business in Oregon to be able to return to Guatemala. At the same time he wants to take courses in Agriculture. They enjoyed there stay with you very much. Told us about having several interesting chats with you. They promised to write, we will see.

In Vista Bella we are moving along, today we are planting five new varieties of asparagus that came from California. It is half a manzana, could be the beginning of something good.

The applex trees are looking well, the crop should be very good. Last week I went to see the Ministro de Agricultura, today I am suppose to get "una resolución de su asunto" as they say. We will see if they can help with the trip.

Give my warm regards to Kermit and his wife, I hope that not to long in the future I will be able to see them and see Zamorano for the first time.

To Alice and you un saludo con mucho cariño de Kit y yo. Enjoy your stay and we will see you in Antigua. We might go down to see Sally.

Alvaro
Edmundo