

University of Illinois  
International Soybean Program (INTSOY)  
TRIP REPORT - PUERTO RICO

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1968  
NAME: R. W. Howell

PERIOD: January 7-11, 1978

ITINERARY: Mayaguez, Puerto Rico

- PURPOSE:
1. To review new program in Soil Microbiology recently established by Dr. R. Stewart Smith.
  2. To plan for transitional phase of the INTSOY breeding program prior to and following resignation of Dr. E. H. Paschal II.
  3. Explore possibility of graduate student Roger Elmore carrying out some of his thesis research on sorghum at Puerto Rico.

ORGANIZATION AND PERSONS CONTACTED:

Dr. R. Stewart Smith, Microbiologist, INTSOY, UIUC  
Dr. E. Hamer Paschal II, Agronomist, INTSOY, UIUC  
Dr. Mike Ellis, Plant Pathologist, INTSOY, UPR-M  
Dr. Roger Smith, Microbiologist, UPR-M  
Mr. Luis Ortiz, Administrator, Isabela Substation, UPR Expt. Sta.  
Dr. Jaime Jordan-Molero, Assistant Director, Puerto Rico AES  
Dr. Lehel Telek, Mayaguez Institute of Tropical Agriculture, USDA

RESULTS:

1. The program of Dr. R. S. Smith, now approximately six months old, is proceeding satisfactorily. The laboratory, which is shared with Doctors Roger Smith, Ellis, and Paschal, is large and well-equipped. A second autoclave, larger than the first, has been acquired as has a temperature-controlled shaker. Several experiments have been conducted concerning (1) seed vigor effects on nodulation, (2) temperature tolerance of Rhizobium strains. He has planned and will soon plant a field study designed for a five-year period to study field survival of Rhizobium after inoculation of populations from  $10^9$  to  $10^7$  per foot of row.

Of special interest were results showing that two strains survived exposure to  $40^{\circ}\text{C}$ . This could be very significant if verified and transferable to field conditions.

2. David Sammons, a graduate student nearing completion of his degree, visited Mayaguez with his wife as a possible candidate to succeed Paschal. Sammons will also assume some additional responsibility during the transition phase, including another trip later this year to plant or perform other duties related to the project.

With Sammons, we visited the field laboratory at Isabela, talked with Isabela Administrator, Luis Ortiz, about the project and plans for expansion of project facilities, toured the plots, and toured the station at Lajas. We also visited Assistant Director Jordan-Molero. Director Abrams was out of town; Sammons and Paschal were to visit him after I left.

The question of what should be carried on during the transitional period was discussed in various aspects. Increase of seed for ISVEX and other trials should probably have high priority. The seed quality work in which Dr. Paschal and Dr. Minor are cooperating is very important. However, with both Paschal and Minor leaving, I believe the seed quality work should be suspended until new staff members are on the job.

I informed Paschal and Jordan-Molero of our opinion that the assistant agronomist position should not be filled until we have a successor to Paschal. I have written Dr. Abrams to that effect, also.

3. There seems to be little or no sorghum work in Puerto Rico AES at this time. MITA has a sorghum breeder, Dr. A. Sotomayor. Dr. Sotomayor was out of town when we visited MITA, as was the Director, Dr. F. Martin. We visited with D. L. Telek, who was acting in charge. He was cordial and seemed confident that arrangements for Roger Elmore to cooperate with Dr. Sotomayor would be possible. However, we can only hope that Dr. Sotomayor and Dr. Martin will be equally agreeable. This meeting was summarized in a note for Dr. Jackobs.

Dr. Telek showed us some of his work on leaf proteins. He has developed extraction processes, which are the subjects of two patents, and has prepared protein from leaves of many species. However, he said he has concluded that leaf proteins have only limited potential for meeting nutritional needs. He is abandoning his work on leaf proteins.

FOLLOW-UP:

No special follow-up is required regarding Dr. Smith's project.

The transition of the plant breeding project will require continual monitoring, especially prior to selection of Paschal's successor.

Dr. Jackobs will be following-up regarding Elmore's program.

