

PDHAV-713

50348

Soybean Diseases in Colombia

James B. Sinclair

ISR-80-4

May 1980

International Soybean Program, INTSOY

College of Agriculture  
University of Illinois at Urbana-Champaign  
113 Mumford Hall, Urbana, Illinois 61801 U.S.A.

College of Agricultural Sciences  
University of Puerto Rico, Mayaguez Campus  
Mayaguez, Puerto Rico 00708

International Soybean Program, INTSOY  
University of Illinois at Urbana-Champaign  
University of Puerto Rico, Mayaguez Campus  
Trip Report - Colombia

- I. NAME: James B. Sinclair  
Professor of International Plant Pathology/UIUC and INTSOY
- II. PERIOD OF TRAVEL: 2 - 5 March 1980
- III. ITINERARY:  
Arrive Cali 2205 - Depart Cali 0700  
(2 March) (5 March)
- IV. PURPOSES:
1. To become acquainted with a serious disease of soybean in Colombia called "Machismo," caused by a mycoplasma-like organism.
  2. To become acquainted with the occurrence and importance of soybean rust in Colombia, which has been reported on soybean and common bean in the country.
  3. To discuss the possibilities of having a Ph.D. graduate student do a portion of his or her research at CIAT with ICA cooperating.
- V. ORGANIZATIONS AND PERSONS CONTACTED:

ICA, Palmira

- Dr. Jorge I. Victoria, Head, Plant Pathology Dept.
- Ing. Gilberto Bastidas Ramos, Breeder and Head, Legumes Program
- Ing. Fulvia Garcia Roa, Entomologist and Head, Entomology Dept.
- Ing. Francisca Varon de Agudelo, Plant Pathologist
- other technical persons

CIAT, Cali

- Dr. John Nickel, Director
- Mr. Fernando Fernandez, Training Officer
- Mr. Fritz Kramer, Communications Officer
- Mr. Fernando A. Mora, Information Officer
- Dr. Howard F. Schwartz, Bean Pathologist
- Dr. Art Schoonhoven, Coordinator, Bean Program
- Dr. Paul Gepts, Bean Breeder
- other technical persons

VI. RESULTS AND ACCOMPLISHMENTS:

Dr. Victoria provided fresh and preserved specimens of "Machismo" for examination and study. We reviewed the present knowledge concerned with the disease and the pathogen that causes it. It is similar to diseases reported in Peru and East Africa.

The pathologists from ICA and CIAT had an informal meeting about rust of soybean. Fresh specimens were brought from Bitaco and examined.

Conversations were held with the administrators at CIAT and they are all agreed that a Ph.D. graduate student in plant pathology would be welcomed to do a portion of his thesis research at CIAT. There would be no direct financial aid available at this time, but use of laboratory and field facilities and personnel are available.

#### VII. OBSERVATIONS AND REMARKS:

A great deal of time was spent reviewing the bean pathology program at CIAT and the soybean program at ICA. The disease that both crops have in common in Colombia is *P. pachyrhizi*, the causal fungus of soybean rust. It is a limiting factor in the *Phaseolus* bean breeding plots at Bitaco. Dr. Paul Gepts, Bean Breeder, must spray with a fungicide to control the disease so that he can obtain seeds from his crosses. Paul Hepperly, INTSOY, UPR-M, and Jorge Victoria, ICA found the disease on soybeans in the Cauca Valley in December. They are preparing a report on this discovery.

Dr. Victoria said that one of the most serious diseases of soybean in Colombia is "Machismo." I was shown several examples of this mycoplasma disease, as well as photographs. Infection can range from 0.5 to 80% in some fields. It is hoped that Dr. Goodman may be able to assist them in doing further work on this disease when he visits in April. Dr. Victoria requested publications on soybean diseases. These have been provided.

#### VIII. FOLLOW-UP ACTION:

1. Keep in contact with the pathologists at ICA and CIAT concerning the development of "Machismo" and rust of soybean, two very destructive diseases that have not been reported on soybeans in the U.S.
2. Consider sending a Ph.D. student in plant pathology to do a portion of his or her thesis research in Colombia.
3. It was requested that Drs. Goodman and Irwin stop over during one of their trips to South America for discussions on "Machismo" and soybean mosaic diseases.