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Soybean Diseases in Costa Rica

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International Soybean Program, INTSOY

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

- I. NAME: James B. Sinclair
Professor of International Plant Pathology/UIUC and INTSOY
- II. PERIOD OF TRAVEL: 27 Feb. - 2 March 1980
- III. ITINERARY:
Depart Champaign 0930 - Arrive San Jose 1535 (March 27)
Depart San Jose 1730 - Arrive Cali 2205 (March 2)
- IV. PURPOSES:
1. To advise on the diagnosis and control of soybean diseases.
 2. To visit production fields with Dr. Q. Nguyen and aid in the identification of diseases and assess any losses.
 3. To assess the soybean rust situation in Costa Rica.
 4. To provide resource materials for the development of soybean.
- V. ORGANIZATIONS AND PERSONS CONTACTED:
- CARE-Costa Rica
- Mr. Justin J. Jackson, Director, CARE-Costa Rica
 - Ing. Hector Madrigal, Agronomist
 - Ing. Francis Hsu, Agronomist
- USAID-Costa Rica
- John A. Fasullo
- INTSOY, UPR-Mayaguez Campus
- Dr. Q. Nguyen, Agronomist/Soybean Breeder
- PEACE CORPS
- Daniel Whitehair, Volunteer
- VI. RESULTS AND ACCOMPLISHMENTS:
1. Advice on the diagnosis and discussions on the control of soybean diseases was a major activity in Costa Rica. We met with soybean growers, visited commercial and experimental field plots and examined field plants for diseases. Discussions were held with growers and CARE representatives concerning individual problems.
 2. Discussions were held concerning the occurrence of soybean rust. There are several records of the disease occurring in Costa Rica. It is not a problem on soybeans at this time.
 3. Visited the soybean processing plant and saw some of the products being developed by CARE for food.

4. Mr. Jackson requested copies of all the INTSOY publications, literature, books, reprints and slides concerned with soybean diseases, information on weed control, irrigation and effect of weather on Jupiter plant growth. A seminar on nature of seedborne pathogens of soybean was given. Every effort has been made to provide the materials he has requested.

VII. OBSERVATIONS AND REMARKS :

I was impressed with the CARE Program in Costa Rica. The processing plant is now complete and ready for full-scale operation. All indications are that soybean production can be profitable in Costa Rica. The yields from 13 field plots in 1979 are summarized in the attached table. Dr. Nguyen and I had occasion to visit several growers' fields. I refer to Dr. Nguyen's trip report for his assessment of soybean production in Costa Rica.

The following diseases were observed in the field or were reported to have occurred in earlier plantings: stem canker, pod and stem blight, anthracnose, Phytophthora root rot (?), soybean mosaic virus, Sclerotium blight and Rhizoctonia damping-off and root rot. Symptoms of purple seed stain were described, but I did not observe it in the field. There appeared to be no serious losses attributable to diseases. Weed control was a major problem.

VIII. FOLLOW-UP ACTION :

1. Mr. Jackson requested that INTSOY personnel are welcomed to CARE-Costa Rica anytime that they are in the area. He requested that I make a return visit to provide further assistance in disease diagnosis and control. CARE-Costa Rica is working with a number of small growers as well as large ones. The knowledge being gained from their experiences should be of interest to many of the INTSOY staff.
2. I will keep in contact with Mr. Jackson, providing him with up-to-date information on soybean diseases. He will provide me with information on rust of soybean and other diseases in Costa Rica.

Costa Rica
1979 SOYBEAN PROJECT RESULTS
GUANACASTE

Growers	Location	Estimate of Area planted (Ha)	Area measured harvested (Ha)	Net Weight harvested		qq/ha	bu/Ac
				(Kg)	Kg/ha		
Aguero Hnos	Liberia	15	9.66	10571	1094.2	24.1	16.3
Arrieta Antonio	Santa Cruz	3	3.09	2044	661.5	14.6	9.8
Baltodano Danilo	Liberia	20	21.20	13905	891.7	19.7	13.3
Brenes J. M.	Santa Cruz	12	10.49	19864	1893.6	41.7	28.2
Cooperativa Espavelar	Santa Cruz	10	5.75	8203	1426.6	31.5	21.2
Chavarría Rodrigo	Bagaces	2	1.23	1604	1304.1	28.7	19.4
Gonzalez Fernando	Bagaces	10	7.58	7448	982.6	21.7	14.6
Luconi Lorenzo	Cañas	12	8.07	3750	464.7	10.2	6.9
Marin Rosendo	Liberia	6	3.02	1460	483.4	10.7	7.2
Navarrete Tomas	Liberia	10	9.14	4283	468.6	10.3	7.0
Roman T. Luis	Liberia	6	5.34	1433	268.4	5.9	4.0
Semper Luis	Liberia	23	21.05	42879	2037.0	44.9	30.3
Stewart Larry	Bagaces	8		7576			
TOTALS		137		130020			

Not Harvested

() Achío Enrique	Cañas	3					
() Alarcon Luis	Liberia	7					
() lackmon George	Bagaces	5					
(2) Briceño Alejandro	Canas	2					
(1) Chaverri Eugenio	Nandayure	3					
(3) Montiel Alejandro	Cañas	2					
(2) Villegas Emel	Nandayure	2					
(2) Villegas Orlando	Canas	3					
Total		27					

NOTES:

- (1) Planted late and incorporated cultivation at approximately 40 days.
- (2) Cultivation badly handled, no control of weeds and low population.
- (3) Bug attacked at the time of pod development.