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INTSOY/ICA Training Course--Pathology

Paul R. Hepperly

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December 1980

International Soybean Program, INTSOY

College of Agriculture
University of Illinois at Urbana-Champaign
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INTSOY INTERNATIONAL SOYBEAN PROGRAM

COLLEGE OF AGRICULTURAL SCIENCES

UNIVERSITY OF PUERTO RICO-MAYAGÜEZ CAMPUS

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NAME: Paul R. Hepperly
TITLE: Asst. Prof. of Plant Pathology

ITINERARY:

- Dec. 1, 1980 - Mayaguez to San Juan (ground personal car)
- Dec. 2, 1980 - Iberia Flight 987y, Ticket No. 075-454-425-732 San Juan to Bogota, Depart 6:05AM, Arrive 9:30AM
- Dec. 2, 1980 - Avianca 333y, Bogota to Cali, Depart 11:30AM, Arrive 12:30PM
- Dec. 2, 1980 - Taxi to Hotel
- Dec. 3, 1980 - Bus to Instituto Colombiano Agropecuario (ICA), Palmira,
- Dec. 4, 1980 - ICA, Palmira
- Dec. 6, 1980 - Avianca 050y Cali to Bogota, Depart 8:10AM, Arrive 9:10AM
- Dec. 9, 1980 - Iberia 988y, Bogota to San Juan, Depart 4:55PM, Arrive 8:55PM
- Dec. 9, 1980 - San Juan to Mayaguez (Ground personal car)

PURPOSE: To give lecture on soybean seed pathology and help in presentation of soybean pathology for ICA/INTSOY soybean production short course for Latin America

ORGANIZATIONS AND PERSONS CONTACTED.

INSTITUTO COLOMBIANO AGROPECUARIA (ICA),
Palmira, Colombia

Ing. Ag. Gilberto Bastidas (Breeder and Research
Leader Grain Legume Section, ICA).

Dr. Jorge Victoria (Pathologist)

Prof. Francia V. de Agudelo (Nematologist)

Ing. Ag. R. Varela (Agronomist)

Prof. Fulvia García (Entomologist)
Sr. D. Arenas (Publications, Outreach,
and Organization ICA).

INTSOY/Peru

Dr. Tom Fullerton (Plant Scientist)

RESULTS:

1. Revised and updated text for the formal written presentation on soybean seed pathology and lectured on the same topic.
2. Participated in field trip on recognition of soybean diseases in the field.
3. Collected popular literature on pathology and agronomy in Colombia.
4. Gave information to interested parties on advanced studies at the Universities of Illinois and Puerto Rico.

OBSERVATIONS:

During the past two years, I have had the opportunity to participate as a teacher in the Soybean Production in Palmira, Colombia. The course is given in Spanish at the Instituto Colombiano Agropecuario with INTSOY and other support. As a course site, Colombia is ideal due to its central location, the presence of its own soybean production, and the advancement of its educational system which is superior to many of its neighbors. It was a pleasure to find 29 students attending this year's course from 7 countries compared to less than 20 from only Peru and Colombia the year before.

The Soybean Short Course in Colombia continues to be an important help in fulfilling INTSOY's aim of increasing soybean production in the tropics. During the 1st Soybean Production Course, a team of extensionists from Peru attended. Their efforts plus those of 4 Peruvian students who studied various aspects of soybean production with INTSOY in Puerto Rico are helping introduce soybeans in developing areas of the Peru frontier.

The Soybean Course in Colombia covers a variety of topics including: i) the origin, history, and the vegetative and reproductive cycles of soybean, ii) genetics and soybean breeding, iii) soil preparation and equipment and methods of soybean planting, iv) fertility requirements of soybean, v) soybean physiology, vi) inoculation and nitrogen fixation, vii) weed management and control in soybeans, viii) soybean harvesting, ix) soybean entomology, x) pathology, xi) soybean certification, xii) production credit, and xiii) industrial processing of soybeans.

INTSOY personnel add a great deal to course development because, unlike ICA personnel, they are not diluted with multicrop responsibilities and have sufficient resources for personal libraries and opportunities for professional travel. INTSOY effectively contacts more prospective course candidates than ICA can. The Soybean Production Course effectively utilizes the strengths of all cooperating institutions.

Opportunity to explore the Colombian soybean production has been rewarding. During 1979, an unusually wet and cool year, Dr. Jorge Victoria and myself discovered soybean rust on soybean for the 1st time in Colombia. Within Colombia, soybean production is centered in the Cauca Valley which slopes from 1,300 m to 500 m before it reaches the Coastal Plains. Soybean rust is endemic at high elevations in Latin America on field beans and other legumes. As soybean production expands, soybean rust could adapt to soybean and spread to warmer production areas. The Colombian soybean area offers a site where soybean rust development should be monitored.

During the soybean course, students have been concerned about seed discolorations which limit the acceptance of soybean as a new crop. Although the Cauca Valley has low rainfall, seed discoloration by the purple stain fungus (Cercospora kikuchii) is common. Unpublished work at Puerto Rico has shown that short photoperiod predisposes soybeans to this condition. Information on the resistance of Improved Pelican soybeans and use of chemical control was passed to ICA researchers and course students.

When traveling to Colombia, I have found it useful to arrive early to meet with cooperators and to make necessary adjustments to changes in food, climate, and elevation. Slide sets from Illinois are useful in illustrating general concepts in soybean pathology and slides from Puerto Rico highlight specific information on tropical diseases of importance in Latin America. I thank all the people for INTSOY/Ill and ICA for their support.

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