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PDAAU-386

IRN: 47346

Seedborne Microorganism Research and
Extension in Thailand

James B. Sinclair

ISR-81-13

September/October 1981

International Soybean Program, INTSOY

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Trip Report - Thailand

- I. NAME: James B. Sinclair
Professor of International Plant Pathology/UIUC and INTSOY
- II. PERIOD OF TRAVEL: 12 September through 5 October, 1981
- III. ITINERARY:

Depart Champaign 0600 - 12 September
Arrive Bangkok 2230 - 13 September

Depart Bangkok 0400 - 5 October
Arrive Champaign 1715 - 5 October
- IV. PURPOSES:
 1. To respond to a request from the Royal Thailand Government and USAID/Thailand for the assistance in the establishment of a research program in controlling seedborne microorganisms of soybeans, peanuts, mungbean, vegetables, corn and sorghum.
 2. To conduct informal seed pathology instruction for members of the Department of Agriculture, Seed and Post Harvest Pathology Division.
 3. To review results from seed assays and seed health testing studies conducted since the previous visit. To make suggestions and recommendations for further work.
 4. To visit seed processing facilities in the vicinity of Chiang Mai to collect and plan for additional seed healthy testing procedures on a variety of seed lots.
 5. To continue to plan for a national seed pathology workshop to be held in Thailand during 1982.
 6. To discuss present and future cooperative efforts between various organizations in Thailand and INTSOY.
- V. ORGANIZATIONS AND PERSONS CONTACTED:

Ministry of Agriculture and Cooperatives:

Department of Agriculture:

Dr. Riksh Syamanonda, Deputy Director-General
Dr. Arwooth Na Lampang, Chief, Field Crop Division
Mr. Amnuay Tongdee, Deputy-Chief, Oil Crop Branch
Mr. Preecha Surin, Head, Oil Crop Diseases Branch
Dr. Pornpod Thongmeearkom, Plant Pathology Division
Ms. Patra Achavasmit, Plant Pathology Division

Department of Agriculture, continued

Seed and Post Harvest Pathology Division

Mrs. Dara Buangsuwon, Chief
Mr. Nopporn Nabherrong, Ass't. Chief
Mrs. Ganjana, Seed Pathologist
Miss Anon Nach, Seed Pathologist, Bacteriology
Mr. Thanom Sookchareon, Seed Pathologist
Dr. Uematsu, Bacteriologist (Japan)

Field Crop Experiment Station - Pitsanuloke

Mr. Thanit, Chief

Horticulture Station - Lampang

Mr. Chaman, Chief

Rice Experiment Station - Chiang Mai

Dr. Baliboun, Chief

Mae-Joe Agriculture Experiment Station - Mae-Jo

Mr. Nart, Chief
Mrs. Mantha Nuntapunt, Pathologist

Khon Kaen Agriculture Experiment Station

Mr. Chalermchai Prasartsee

Department of Agriculture Extension

Seed Division

Mr. Petcharat Wannapee, Chief
Dr. Pranom Saisawat, Seed Technologist
Dr. Billy Gregg, Senior Seed Industry Specialist
Mr. George Dougherty, Seed Processing Specialist

Seed Production Station - Pitsanuloke

Mr. Tawee Pluemsab, Chief

Seed Production Station - Lampang

Mr. Amand, Chief

Department of Technical and Economic Co-operation

Miss Priya Osathanonda, Deputy-Director

Kasetsart University

Dr. Phaitoon Ingkasuwan, Rector
Dr. (Mrs.) Krisna Chutina, Vice-Rector for Academic Affairs

Plant Pathology

Dr. Chalermnarb, Head
Dr. Tharmmasek Sommartaya
Dr. Pairoj Buangsuwon
Mr. Udom Pupipat

Entomology

Dr. Swarng Charwenying
Dr. Tawatchai Sitchawat

Agronomy

Dr. Peerasak Srinives

Food Research and Development Institute

Dr. Amaia Bhumiratana, Chief
Dr. (Miss) Saijoin Manjpan
Mrs. Bulan Pitakpol

USAID/Bangkok

David D. Bathrick, Director, Office of Agr.
and Rural Development
John Foti
Billy Gregg (DOAE)
George Dougherty (DOAE)

UN/FAO

Dr. Bap Reddy, Deputy Regional Representative
Dr. John A. Lowe, Regional Program Director
Dr. Peter H. Tsao (Univ. of California, Riverside), Consultant

Rockefeller Foundation

Dr. Bill Young, Head of the R. F. Office
Dr. Ben Jackson, Plant Breeder and IRRI Representative

CIMMYT

Dr. Gene Saari, wheat pathologist
Dr. Bobby Renfro, corn pathologist

Japan Embassy

Mr. Seiichi Igarashi, First Secretary

ASEAN

Mr. Vudhi Chuchom, Director-General
Dr. Amaia Bhumiratana, Chrmn. ASEAN Subcommittee on Proteins

UNDP

Mr. Winston R. Prattley, Regional Representative
Mr. Robert England, Assistant Regional Representative

EEC

Mr. A. J. Hansen, Head
Mr. Bennison, Head, Development Section

American Soybean Association - Singapore Office

Mr. Bushman

VI. RESULTS AND ACCOMPLISHMENTS:

1. Presented illustrated talks, had informal discussions on seed health testing, reviewed the data from seed testing accumulated since my last visit in June 1981, and had discussion on methodology with members of the Seed and Post Harvest Pathology Division.
2. Visited seed processing stations at Pitsanuloke and Lampang; experiment stations at Pitsanuloke, Lampang; Chiang Mai, and Mae-Jo. Collected seed samples of soybean, peanut, mungbean, and other crops to be used for analysis in the seed pathology laboratory in Bangkok. Conferred with scientists at these stations.
3. Visited numerous soybean fields and saw rust, anthracnose, bacterial pustule, and other diseases. Samples were collected for laboratory study and analysis.
4. Visited with the personnel in the Seed Division, Department of Agriculture Extension and learned about the expansion and development of the seed production system in Thailand to include about 18 to 22 stations.
5. Dr. Harold Kauffman, Director Designate, INTSOY, joined me for three days, 17-19 September, and we visited representatives of the Department of Agriculture, Department of Agriculture Extension, Department of Technical and Economic Co-operation, Food Research and Development Institute, Kasetsart University, FAO, ASEAN, UNDP, EEC, USAID, Japan Embassy, ASA, etc. to discuss the present and future of soybean production and programs in Thailand.
6. Discussed possible cooperative program development with administrators, staff and faculty of several organizations.

VII. OBSERVATIONS AND REMARKS:

1. From a variety of sources, the Seed Division of DOAE has received approximately 100 million Bhat for development of about 15 additional seed production stations in Thailand. This will require additional personnel and training of existing personnel in seed pathology. Working with the present group in the Seed and Post Harvest Pathology, it is hoped that they will form a core of expertise that can be used for training in the future.

2. Further planning for a national seed pathology workshop was made. It was tentatively decided that the workshop will be held the week of 10 May, 1982. Members of the seed and post harvest pathology group will take an active roll in the planning and executing the workshop.
3. Soybean anthracnose was found to be the most serious disease at this time. Reports from Dr. Arwooth Na Lampang and others indicate that this disease has become more important than soybean rust. There are no known resistant cultivars at this time. Some cultivars vary in their tolerance to the disease. The presently used Thai cultivars are all susceptible. The pathogen is seedborne.
4. As the members of the Seed and Post Harvest Pathology Division become more acquainted with the seed problems of the seed stations, they should develop a program of routine testing and observation of seeds at different times of the year. Information on the effect of geographic area, storage, handling, packaging, etc. on seedborne pathogens is needed.
5. Conditions are favorable for the development of cooperative program planning between the University of Illinois at Urbana-Champaign and INTSOY, and Kasetsart University and the Ministry of Agriculture and Cooperatives.

VIII. FOLLOW-UP ACTION:

1. In addition to the large amount of educational and research material on seed pathology, soybean diseases and plant pathology in general already carried or sent to Thailand, additional materials were requested. These requests have been met or will be met in the near future.
2. Additional plans for the seed pathology workshop will be developed and sent to the Seed and Post Harvest Pathology Laboratory for their consideration and discussion.
3. Arrange for the third mailing of a gift of books and journals dealing with agriculture to the Kasetsart University libraries.
4. Proceed with informal and formal discussions concerning cooperative programs with the various institutions in Thailand.
5. Information on the INTSOY training program and possibilities was requested by the Seed Division, DOAE. John Santas has replied to this request.
6. Kasetsart University is interested in developing a Memorandum of Agreement with UIUC. This will be pursued.
7. The Department of Agriculture is interested in collaborating with INTSOY in planning a conference on "Soybean Seed Production, Storage and Distribution" for either 1983 or 1984.