Intsormil

TRIP REPORT

BY

SAMUEL C. DALMACIO
VISITING ASSISTANT PROFESSOR
FROM PHILIPPINES

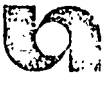
JUNE 12 - JULY 17, 1983

CONTRACT NO.: AID/DSAN/XII-G-0149

☆ International
Sorghum/Millet

☆ Collaborative Research
Support Program
(CRSP)

A Research Development Program of the Agency for International Development, Participating Land-Grant Universities, Host County Research Agencies and Private Donors.



Institute of Agriculture and Natural Resources
University of Nebraska-Lincoln

OFFICIAL TRAVEL REPORT

1. Name: SAMUEL C. DALMACIO

2. Position: Assistant Professor

3. Office: Department of Plant Pathology/Institute of Plant Breeding

4. Travel Authority: Special Detail

5. Date of

   a) Departure: June 12, 1983

   b) Arrival: July 17, 1983

6. Destination(s): Texas A & M University, College Station, Texas
   Texas Agricultural Experiment Station,
   Lubbock, Texas
   Plainview and Hereford, Texas
   Purdue University, West Lafayette, Indiana
   Iowa State University, Ames, Iowa
   University of Nebraska, Lincoln, Nebraska

7. Natur/Purpose of Travel: To study/observe sorghum improvement, pathology, entomology and utilization researches in different INTSORMIL institutions in the U.S.; to observe sorghum seed production operations of big commercial sorghum seed companies; and to attend the American Phytopathological Society annual meeting.

8. Activities undertaken:

   a) Gave a seminar on sorghum improvement program in the Philippines which was attended by sorghum researchers at Texas A & M University.

   b) Conferred with sorghum researchers at Texas A & M University, Purdue University and University of Nebraska and was informed of the various on-going researches on sorghum pathology, entomology, physiology, breeding and utilization.

   c) Joined visits to commercial sorghum fields in Texas to investigate reported disease problems in sorghum.

   d) Attended a two-day sorghum field day and symposium at Corpus Christi, Texas where papers on breeding for resistance to sorghum insects and diseases were presented and insect and disease screening nurseries were visited.

   e) Visited commercial seed companies like Pioneer, Cargill, Asgrow, Garner, Northrup King and DeKalb and was informed of their operations in the U.S. as well as overseas.

f) Attended the annual meeting of the APS at Ames, Iowa to learn the recent developments in plant pathology particularly in plant disease control and breeding for disease resistance.

9. Impressions:

Sorghum as a food grain is a major crop in Texas, second only to cotton in hectares planted. Farmers grow only hybrid sorghum, hence, hybrid seed production in Texas is also a big business. Although federal/state research institutions like Texas A & M develop hybrids like private seed companies, commercial hybrid seed production is done mainly by private seed companies, oftentimes utilizing lines and hybrids developed by public institutions. Hence, government institutions doing research on sorghum improvement contribute to a large extent to the growth of private seed companies.

The sorghum improvement program at Texas A & M University is quite impressive. The program is run by three senior sorghum breeders with support from senior sorghum pathologists, entomologists, physiologists, biochemists and food technologists. What is even more impressive is the close, good working relations among these scientists.

The Texas A & M program is more comprehensive in that it is directed towards the development of varieties/hybrids with resistance to diseases, insects, environmental stresses and nutritional quality. The Purdue University sorghum program is confined more to food quality and sorghum utilization researches including tannins in sorghum. On the other hand, the University of Nebraska emphasizes more on the development of techniques for physiological studies and the development of random mating sorghum populations.

Research facilities in all the universities I visited are equally impressive.

On June 26-30, 1983, phytopathologists from all over the United States (APS) met for the 75th annual meeting of the society. Also meeting in the same date and venue were members of closely related societies - The Society of Nematologists (SON) and the Mycological Society of America (MSA). A total of 823 papers and posters were presented, with the APS accounting for 625 of them. Interesting topics discussed in plant pathology include:

a) Recognition and specificity in plant disease

b) Molecular basis for disease resistance and susceptibility

c) Plant protoplasts and cell cultures as physiological tools for modification of germplasm

d) Plant disease control by recombinant DNA Technology

e) Development of disease management models

10. Recommendations:

a) In view of the great potential of sorghum in the Philippines as a dry season feedgrain crop, a comparative study on the yield and monetary benefits derived from growing corn and sorghum should be undertaken. Results of such study may convince policy makers on the importance of sorghum which in turn, would result to increased research support for sorghum and sorghum production.

b) Sorghum can be utilized in various ways - as feed for livestock; as food in the form of flour for bread, cookies, tortillas, chips, breakfast cereals, and many native delicacies; it can also be used in the manufacture of beer and alcohol. Research on sorghum utilization should therefore be pursued.

c) To facilitate sorghum improvement program in the Philippines, cooperative research with international institutions doing research on sorghum should be established and/or strengthened.

d) There should be continuous upgrading of sorghum researchers through fellowships to obtain advanced degrees or attendance to workshops and/or training programs.

Sept. 23, 1983
(Date)

S. C. DALMACIO
(Signature)

NOTED:

T. T. REYES
Chairman, Dept. of Plant Pathology

R. M. LANTICAN
Head of Office