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INDIA TRIP REPORT

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☆ 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



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Trip report to India

E.T. Kanemasu

I arrived in New Delhi at 11:30 p.m. 13 November 1982 on Air France 179 from Hong Kong. Our Pan American flight from Hong Kong to Delhi was canceled so a change in flights was made in Hong Kong. In Hong Kong, I was informed that India had changed their policy regarding visa permits. Fortunately, I had an Indian visa and was able to enter India. This was not the case for some participants of the workshop. I was met at the airport by ICRISAT personnel and taken to the Indian International Center at 40 Lodi Estate. This Center is adjacent to the Ford Foundation. At 4:00 p.m. on 14 November, I left on Air India for Hyderabad and arrived at 6:00 p.m. ICRISAT personnel met me and I was taken to the ICRISAT Field Site. I arrived at 7:30 p.m.. I registered for the ICRISAT-WMO Symposium/Planning Meeting on the Agrometeorology of Sorghum and Millet in the Semi-Arid Tropics on Sunday evening. There were about 150 participants from all over the world. Appendix A contains the participants list.

The objectives of the symposium/planning meeting were:

- *To review the present state of knowledge regarding the agroclimatological factors that primarily influence the growth and development of these crops and identify the gaps, current needs, and future perspectives in research.
- *To review, evaluate and promulgate techniques and methods to describe and better understand the extent and intensity of

climatology or weather risks, particularly drought, in the growing of sorghum and millet in their cropping environments.

*To formulate a plan of action to identify priority items of research in various areas, with emphasis on interdisciplinary approaches that may achieve rapid results.

The Symposium began on Monday 15 November with Dr. A Bozzeni, Crops and Grassland Production Service, FAO, making the opening remarks and Dr. L. Swindale making the welcoming address.

The sessions were broken down into:

- 1) Global Sorghum and Millet Production
- 2) Climatic Requirements of Sorghum and Millet
- 3) Agroclimatological Studies in Sorghum and Millet Growing Regions
- 4) Modeling of Climatic Response

I presented a paper titled "Water Use and Water Use Efficiency of Pearl Millet and Sorghum" under the second session of the program. Other speakers in that session were Dr. C. Ong (University of Nottingham), Dr. J. Peacock (ICRISAT) and Dr. N. Seetharama (ICRISAT). That evening we were hosted to a dinner banquet by Dr. and Mrs. Les Swindale, Director-General of ICRISAT.

The last session, Modeling of Climatic Response was the most controversial. There was a lively discussion between the modelers and physiologists. This session was chaired by Dr. John Monteith.

On Thursday and Friday, planning meetings were held. Dr. Vanderlip chaired this session and the summary is included in Appendix B.

I managed to meet with several of my past students Dr. Joe Owonubi (Nigeria), Dr. Phool Singh (HAU, India) and Dr. Piara Singh (ICRISAT). In addition, I met with Dr. N. Seetharama and discussed some data he has been collecting on the canopy temperature of several genotypes. He will send the data by magnetic tape.

On Friday afternoon 19 November, Dr. Prihar and I began our review of the water management area of Farming System Research Program. We met with Dr. Virmani and each of the subprogram leaders in agroclimatology, soil physics and land and water management. These meetings continued through Saturday afternoon. On Sunday afternoon, I wrote my consultancy report on agroclimatology. Dr. Prihar and Dr. Dhruvmarayana will finish their reviews on Monday and Tuesday. I left Hyderabad on Sunday evening at 2020 Hrs. and arrived in Manhattan on November 23, 1982 at 11:00 a.m.

Chairman: R.L. Vanderlip

Co-Chairman: H.E. Dandaula

Three working groups--Asia and Australia, Africa, Americas, convened and discussed the needs for data, research information dissemination and training in the future. Reports from the three areas were similar and the needs are summarized as follows:

Environmental definition:

1. Definition of the SAT.
2. Collection of a minimum macroclimatological data set using those methods and instruments recommended by the WMO.
3. Computerization of data where feasible and insuring ready availability of data in a usable form.
4. Description of special data needs eg. soil moisture, rainfall intensity wind speed.
5. Development of a standard microclimatic and crop data set for all research sites.

Research Needs:

1. Increased synthesis of research results.
2. Increased farm level research.
3. Increased basic and applied research particularly on pearl millet as it has not received the attention sorghum has.
4. A wide range of research topics were discussed but no single problem appeared to have priority.

Information and Training:

1. Another Agroclimatology of Sorghum and Millet conference should be held within 3 years.
2. This should be supplemented by regional and national conferences.
3. There should be wider circulation of data and results including both printed and other media. This should include both technical and popular information and involve the national extension services.
4. A list of resource persons knowledgeable in sorghum and millet agroclimatology should be drawn up for each country in the SAT.

5. More workshops in which the participants can work with their own data, learn measurement techniques, etc. should be held.

6. A training manual should be developed to cover meteorology, crop phenology and description of how and in what units data should be taken.