

TRIP REPORT - INTSORMIL PD-AAN-709
CIAT-Cali, Colombia
February 8-12, 1981

TRAVELERS: Earl R. Leng, Program Director, UN-L
Lynn Gourley, Mississippi State University

PURPOSE: To develop with CIAT and ICRISAT, a plan for international sorghum and millet research for northern and central South America.

PLACES VISITED: CIAT (International Center for Tropical Agricultural Research), Cali, Colombia; and CIAT cooperative branch stations Carimagua (in the Llanos) and Quilichao (on acid soils in the Cauca Valley).

CHIEF PERSONS CONTACTED:

Dr. John L. Nickel, Director-General, CIAT
Dr. Gustavo A. Nores, Director for Land Resources, CIAT
Dr. Douglas R. Laing, Director for Crops Research, CIAT
Mr. Johnson Douglas)
Dr. Federico Poey) Seed Unit, CIAT
Dr. Vartan Guiragossian, Sorghum research leader, ICRISAT/CIMMYT,
El Batan, Mexico

MAJOR ACCOMPLISHMENTS:

1. Agreement was reached on the urgent necessity for an international sorghum improvement effort aimed at the acid soil areas of the Latin American tropics.

2. A Memorandum of Intent was prepared and signed by the Director General, CIAT and the Program Director, INTSORMIL, for development of a cooperative sorghum research program based at CIAT. This is planned as a joint INTSORMIL/ICRISAT/CIAT effort, but since ICRISAT was not represented by one of its senior administrators, the memorandum could only be drafted for ICRISAT's consideration. CIAT and the ICRISAT/CIMMYT representative agreed to present the memorandum to the Director-General, ICRISAT, with the strong recommendation that it be signed.

ITINERARY: February 7-8: Travel from homes to Cali, via Miami.
February 9 - At CIAT, Cali.
February 10 - Visit to Carimagua station in the Llanos, return via Bogota.
February 11 - Visit to Quilichao branch station, afternoon in meetings at CIAT, Cali.
February 12 - Return to homes via Medellin and Miami.

OBSERVATIONS:

1. Since this was the first visit by either traveller to CIAT, we were pleasantly surprised by the extraordinarily fine climate and excellent physical working conditions at CIAT's central station. Moreover, the human resources, organization and support of CIAT obviously create a very favorable environment for active and productive agricultural research.

2. CIAT scientists have analyzed the need for sorghum research in northern and central South America, and have concluded that sorghum is a cereal species with high potential for crop production in the developing areas there. A particular research problem is presented by the almost total lack of information or germ plasm suitable for improving sorghum production on millions of hectares of acid, infertile soils which have many other favorable characteristics for development of crop production.

3. There is general agreement that intensive research in plant breeding, soil fertility amendment and applied plant physiology would have excellent prospects of success in solving problems now confronting sorghum production in extensive areas of South America, and perhaps elsewhere in Latin America. Particular initial target areas are the extensive llanos (grassland plains) of Colombia and Venezuela, and the even more extensive infertile cerrado areas of Brazil. Other countries where the research might be directly applicable include Bolivia, Peru, Haiti, and possibly Guatemala and Honduras.

4. It was agreed that the priority research needs to be supplied by international agencies are in plant breeding, soil fertility, and applied physiology. CIAT, INTSORMIL and the ICRISAT/CIMMYT representative agreed that two major efforts - plant breeding and physiology - could best be provided by INTSORMIL and ICRISAT, and that the proposed Soil Management CRSP research grouping could supply the needed expertise in soil fertility. Therefore, a proposed INTSORMIL/ICRISAT/CIAT research program in breeding and physiology was discussed and set forth in a tentative proposal. INTSORMIL and CIAT directors signed the memorandum of intent to cooperate in this program. ICRISAT's reaction, and hopefully its concurrence, will be promptly sought.

5. The program envisages stationing two senior INTSORMIL or ICRISAT scientists at CIAT headquarters, with the necessary support to launch major research programs in plant breeding and applied physiology. Initially, the CIAT stations at Palmira, Quilichao, and Carimagua will be utilized for the field research. International trials for the acid soil areas of Latin America will be organized and distributed from the CIAT location. A workshop for sorghum researchers in the Latin American countries concerned will be held early in the course of the work. January 1982 is envisaged as the target date for beginning the program at CIAT. ICRISAT is being requested to provide as much staff and financial support as possible; INTSORMIL has agreed to field the initial team by the target date and support it for the first two years of the program, if necessary.

6. Winter nursery facilities for support of the cooperative Latin American-U.S. sorghum breeding programs was discussed. Land, water, tractors and tillage equipment, glass and screened greenhouses and buildings for work and storage of supplies are available at the CIAT main station at Palmira. The possibility of growing three generations per year, two in Colombia and one in the U.S., was immediately obvious. With permanent INTSORMIL and/or ICRISAT personnel on site the cost of winter nursery work would be significantly less than that presently spent for Puerto Rico nurseries. Some small items of equipment such as head threshers and planter cones would need to be purchased for work at the Palmira site.

7. Photoperiod-sensitive and advanced U.S. lines could be evaluated in the field at Quilichao for aluminum, manganese and low pH tolerance. This

substation is only 40 kilometers south of Cali and has sufficient land and water resources to support screening work. CIAT officials reported that results of research on other crops at this station give good indications of performance on acid soils in other locations in the region.

8. Seed of inbreds, varieties and other germplasm could be easily distributed throughout Latin America by the excellent seed unit at CIAT. A working world collection in the Western Hemisphere could be maintained and disseminated from Cali provided quarantine requirements were met. Quarantine rules and procedures in Colombia appear to present no major problems.

9. The full and enthusiastic cooperation of CIAT administrators and staff was both expressed and apparent. There is no doubt that this would contribute greatly to effectiveness and the likely success of the proposed research program.

Earl R. Long