



Intsormil

TRIP REPORT

BY

VICTORIA MARCARIAN
UNIVERSITY OF ARIZONA

NIAMEY, NIGER
AUGUST 19 - SEPTEMBER 4, 1983

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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



The University of Arizona
Trip Report
Evaluation of INTSORMIL/INRAN
Cooperative Drouth Screening Nursery
Niamey, Niger
19 August - 4 September, 1983

Victoria Marcarian

Summary: INTSORMIL Sorghum Nurseries composed of entries from Texas A & M University and the University of Arizona were planted at Kolo and Ouallam, Niger. These entries had been previously evaluated under the sprinkler irrigation gradient in Yuma, Arizona and had been identified as promising with respect to drouth tolerance by Mr. J. Peacock, ICRISAT Physiologist.

Although there were problems with stand establishment, differences existed among genotypes. Based on environmental conditions selection for sorghum & millets with respect to water requirements should be in 250 - 300 mm and 300 - 350 mm water application rate, respectively.

Due to constraints imposed by space, personnel and controls i.e. rainfall, it would be preferable to have large scale drouth screening in the U.S. and sending promisory sorghum and millet germ plasm to Niger for further evaluation.

INTSORMIL TRIP REPORT
NIGER
August 19 - September 4, 1984
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Purpose:

To evaluate the INTSORMIL/INRAN Sorghum Drouth Tolerance Nurseries in Ouallam and Kolo, Niger.

Itinerar

August 19, 1983 - Left Tucson, Arizona

August 21, 1983 - Arrived in Niamey, Niger. With the exceptions of August 23, and August 30, 1983 when visits were made to experimental sites in Ouallam (Sahelian Zone) and Bengui (Sudanian zone), respectively, the time was spent mostly at the Kolo research site and Niamey.

Chief Persons Contacted:

Dr. John Clark - Purdue Cereals Project Sorghum Breeder

Director General Moussa Saley - INRAN

Mr. Wuendeba, Buturo - INRAN Station Director - Kolo.

Mr. M. Magah - INRAN Cowpea Breeder

Mr. Rudy Vigil - AID Desk Officer

Mr. Irving Rosenthal - Mission Director

Mr. Wilbur Thomas - AID Desk Officer

Dr. John Clark, Purdue University, Sorghum Breeder, has taken charge of the INTSORMIL/INRAN Sorghum Drouth tolerance Nursery. Sorghum entries submitted by the University of Arizona and Texas A & M University were included in the first INTSORMIL nursery. A total of 26 entries including a local check were planted at the Kolo Station. Although there were problems with stand establishment, some of the entries appeared to be promising. During our visits, I assisted John Clark in the field in making crosses with this material. Due to rainfall, drouth stress was not a serious problem during my stay.

Effects of drouth stress were quite apparent at Ouallam, the experiment station located in the arid regions. However, due to extreme differences in soil fertility, it would be difficult to determine if variability observed in the germplasm was due to drouth or fertility. In addition, observations made approximately one month later may have been more revealing.

As a result of the first years work, it was agreed that INTSORMIL would continue to provide nurseries to Purdue/INRAN project.

Discussions with AID personnel indicated that they were quite pleased with INTSORMIL's performance to date. Also we discussed the appropriateness of installing a sprinkler irrigation gradient system for screening sorghum and millets for drouth tolerance in Niger. The general consensus was that limitations of space, people, unpredictability of rainfall, and extreme soil variability would prevent reliable results. The recommendation was that large scale screening be conducted in the U.S. with selected germplasms be sent to Niger for further screening and incorporation into the breeding program.

A second INTSORMIL Drouth tolerance Nursery will be provided in 1984.