

## TRIP REPORT

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PERIOD OF TRAVEL April 18 - April 30, 1981

ITINERARY April 18-24, Rabat, Morocco  
April 25-27, Tunis, Tunisia  
April 28-30, Cairo, Egypt

PURPOSE Carry out an evaluation of the Montana State University Project, Control of Barley Diseases, in three LDCs

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Dr. Gene Sharp, Principal Investigator  
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## RESULTS AND ACCOMPLISHMENTS:

A team evaluation of the project was carried out at Montana State University (MSU) during July 1979. The team's recommendations were that the project was progressing in a very satisfactory manner and that it should be continued and extended at the end of the three year contract.

It was decided that rather than do another evaluation at MSU at this time, it would be better to visit LDCs which are cooperating with MSU. The workshop provided another activity to evaluate.

The contract with MSU provided funds for a workshop to be held in an LDC on barley diseases. This workshop was held in Rabat, April 20 to 23, 1981 and was attended by about 60 participants and represented eight LDCs. Three days were devoted to discussing the 12 prevalent diseases of barley and means of controlling the diseases by breeding for resistance. One day was spent looking at nurseries, including the material from MSU, and farmers' fields in Morocco. Specialists working on the diseases of barley from MSU were able to find diseased plants infected with nearly all, if not all, of the diseases discussed at the workshop. The MSU disease resistant nurseries were less infected with disease than the varieties found in the farmers' fields.

During the sessions at the workshop there was a free exchange of information among the participants. The consensus was that it was well organized and provided an excellent opportunity for barley research workers to have free and open discussions of their problems and solutions.

Copies of the new publication, Field Manual of Common Barley Diseases, prepared by Department of Plant Pathology staff at MSU were distributed to the workshop participants. Some of the costs of this publication were covered by the A.I.D. contract. The publication was well received and requests for many additional copies were made. It is a well prepared manual and will be of great assistance to barley workers, particularly those in LDCs.

After we arrived in Morocco, it was decided that the three of us should spend the long weekend in Tunisia rather than Egypt.

This was a very worthwhile visit and give us the opportunity to include a third LDC in the project review. One and half days were spent in the field observing nurseries and farmers' Because of better rainfall and perhaps better crop husbandry, the barley growth was better than that in Morocco. Furthermore, the stage of maturity to observe diseases was very good. Just as in Morocco, diseased barley plants were in all the fields and nurseries. The MSU barley nursery looked particularly good in Tunisia. There were four different nurseries at one location, each with resistance to at least one disease. It was very obvious that disease resistance had been incorporated into each of the disease-specific nurseries.

It was unfortunate that the seed for the MSU nursery had not been received in Egypt. We visited the research station at Sakha and again saw the great ponderance of diseased barley plants.

#### GENERAL CONCLUSIONS:

It was obvious from the discussions among the barley research workers at the workshop that there are several diseases which attack barley. During at least two or three of the sessions, the amount of losses due to barley diseases were brought up. No one had any data to show what the exact losses were and only estimates could be given. It was agreed however that in nearly all cases the yield reduction caused by diseases was significant and could vary from 10 percent up to a crop failure in some instances. There is no question that improved disease resistant barley could appreciably increase barley production.

We met some of the researchers from LDCs who had been trained under this project or the Spring x Winter Wheat Project at Oregon State University. These people were enthusiastic about their programs, were knowledgeable about barley diseases and took a lead in some of the discussions.

We discussed the possibility of obtaining mission funds to assist in supporting this project. Both Morocco and Tunisia are extremely limited in funding and could not take on any additional activities. The Egyptian Major Cereals Improvement Project is fully programmed. All of the host country officials that we met were very enthusiastic about the barley project and the assistance it has been able to provide. Egypt has 500,000 acres of new land and most of this area could be planted with barely. Of the three countries we visited, Egypt has the greatest potential for increased barley area.

This is a trip report and not an evaluation of the Project. Dr. Poehlman is preparing the evaluation and this should be completed by the middle of May.

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