

9311318/49

Revised

February 9, 1981

ACTION MEMORANDUM FOR THE DEPUTY ASSISTANT ADMINISTRATOR
FOR FOOD AND NUTRITION, BUREAU FOR DEVELOPMENT SUPPORT

From: DS/AGR, Donald Fiester, Director

Problem: Your approval is required for a three and one-half month unfunded extension (June 1, 1981 through September 15, 1981), and a four and one-half month funded extension (September 16, 1981 through January 31, 1982), of the project "Control of Barley Diseases," with Montana State University (MSU), Bozeman, Montana. A letter from Dr. Gene Sharp, Principal Investigator, MSU, requesting the unfunded extension is attached.

Discussion: This project was initiated in August 1978. It is currently being implemented under a two year and ten-month contract (AID/DSAN-c-0024), which is now funded for \$723,148 for August 1, 1978 through May 31, 1981. The contractor, MSU, has requested a three and one-half month extension requiring no additional funds in order to continue the work as set forth in the contract. DS/AGR also proposes a four and one-half month extension for \$96,852. During this combined period, AID/W will complete the review and documentation required for a full three year extension of the project.

Barley is probably grown under more extremes than any other cereal crop. Furthermore, under the less favorable environments where barley is the most extensively grown cereal, as in the Middle East and North Africa, it is doubtful that varieties of any other cereal can be developed that will equal or exceed barley in the production of total available nutrients per unit area of land. Barley is an important component of the diets of millions of people living under dryland conditions, often the transition zone between the areas normally planted to wheat and the desert. This for the most part involves areas with low rainfall, relatively low soil fertility, uncontrolled barley diseases, insects and low grain yields. The opportunities for irrigation under these conditions are also minimal. For the benefit of these people, it is basic that barley be improved in productivity and in nutritive quality.

The basic goal of this project is to improve the control of barley diseases for the LDCs with particular emphasis on the semi-arid areas of the world. Wherever possible and feasible, this will be done by accumulation of resistance genes into acceptable barley stocks. After the various different sources of resistance have been determined, crosses will be made to incorporate these resistance genes into a base of widely adapted but diverse barley germ plasm. Evaluations will be made on both seedlings and mature plants and, in both cases, the barley stocks will be

exposed to a wide range of virulences. Selections of the most resistant and agronomically acceptable barley types will be repeated in several cycles of recombination. When resistance is adequately established for specific diseases, combinations will be made to combine resistances to two or more diseases. This project should lead to broad-based resistances to major diseases of barley which will be effective in the barley growing areas of the world.

During the past two years, considerable progress has been made in the development of barley stocks with broad-based resistance to specific diseases. Emphasis has been placed on barley scald and net blotch. Resistant stocks are also being developed for leaf rust and barley yellow dwarf virus. Good working relationships have been established with representatives of ICARDA and CIMMYT, and also with various scientists stationed in target areas of the IDCs. MSU has taken the approach of producing resistant stocks rather than varieties, and this has enabled CIMMYT and ICARDA to utilize the superior material in their barley breeding programs. The methodical assembling and pyramiding of major and minor genes for resistance cannot be done easily at CIMMYT or ICARDA, but fits well into the developed expertise of the barley program at MSU; thus, resulting in a very desirable and worthwhile relationship. During the past two years, considerable progress has been made in development of barley stocks with broad-based resistance to specific diseases. These stocks have been incorporated into the barley programs of the IDCs cooperating with MSU. Furthermore, the training program has been attractive and the number of applicants has exceeded financial and space limitations. The fully-qualified and unique research staff at MSU working on barley diseases has stimulated several foreign students to apply for graduate and short-course training. An external in-depth evaluation was conducted on the project in July 1979 at MSU. The team concluded that the project is progressing in a very excellent and timely fashion and recommended that it be continued.

The three year project extension will be reviewed by the TPCA Crops Subcommittee and by the TPCA Full Committee. This three year project extension proposal will be on the June 1981 meeting agenda of the RAC. If RAC recommends approval of the three year extension, AID/W will prepare a PIO/T and amend the contract for this extension. DS/AGR feels strongly that the eight month extension requested herein is justified and appropriate to permit continuous and orderly progress of the project.

Recommendation: That you approve the three and one-half month unfunded extension and the four and one-half month funded extension of this project by signing the attached PAF.

Attachments:

1. PAF I and PAF II
2. Letter from Dr. G. Sharp, Montana State University

Jackson -
 You signed
 copy 5/11/81

AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUNDS PART I		1. TRANSACTION CODE <input type="checkbox"/> A A = ADD C = CHANGE D = DELETE	PAF
3. COUNTRY ENTITY DS/AGR/AP Type a. Research		4. DOCUMENT REVISION NUMBER <input type="checkbox"/> 1	2. DOCUMENT CODE 5
5. PROJECT NUMBER (7 digits) <input type="checkbox"/> 931-1318	6. BUREAU OFFICE A. SYMBOL DSB B. CODE <input type="checkbox"/> 10	7. PROJECT TITLE (Maximum 40 characters) <input type="checkbox"/> Control of Barley Diseases for LDCs	
6. PROJECT APPROVAL DECISION <input type="checkbox"/> A A = APPROVED D = DISAPPROVED DE = DEAUTHORIZED		9. EST. PERIOD OF IMPLEMENTATION (for 8 month extension) YRS. <input type="checkbox"/> - <input type="checkbox"/> QTRS. <input type="checkbox"/> 3	

10. APPROVED BUDGET AID APPROPRIATED FUNDS (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. Thru 9/30/80				H. 1st FY 81		K. 2nd FY 82	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN		
(1) ARDN	111 I	963	-	724	-	97	-	0	-		
(2)											
(3)											
(4)											
TOTALS				724	-	97	-	0	-		

A. APPROPRIATION	N. 3rd FY 83		O. 4th FY 84		LIFE OF PROJECT		11. PROJECT FUNDING AUTHORIZED		
	Q. GRANT	P. LOAN	H. GRANT	S. LOAN	T. GRANT	U. LOAN	ENTER APPROPRIATE CODE(S) 1 = LIFE OF PROJECT 2 = INCREMENTAL LIFE OF PROJECT	GRANT	LOAN
(1) ARDN	0	-	0	-	821	-		2	-
(2)									
(3)									
(4)									
TOTALS	0	-	0	-	821	-			

12. INITIAL PROJECT FUNDING ALLOTMENT REQUESTED (\$000)

13. FUNDS RESERVED FOR ALLOTMENT: N/A

14. SOURCE/ORIGIN OF GOODS AND SERVICES: 000 541 LOCAL OTHER

15. FOR AMENDMENTS, NATURE OF CHANGE PROPOSED

This amendment extends the life-of-project by 8 months (from June 1, 1981 to January 31, 1982) which includes an unfunded extension to September 15, 1981 and a funded extension costing \$97,000 (approximately) to January 31, 1981. The scope-of-work and all other conditions of this project remain unchanged by this extension.

16. SOURCE/ORIGIN OF GOODS AND SERVICES: 000 541 LOCAL OTHER

17. ACTION DATE: MM DD YY

18. ACTION REFERENCE (Optional):

19. ACTION REFERENCE DATE: MM DD YY

FOR PFC R/AS USE ONLY

PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUNDS

PART II

ENTITY : Bureau for Development Support
PROJECT TITLE : Control of Barley Diseases
PROJECT NUMBER : 931-1318

I hereby authorize a three and one half month extension (from June 1, 1981 to September 15, 1981) requiring no additional funds and a four and one half month funded extension (from September 16, 1981 to January 31, 1981) requiring FY 81 funds of approximately \$97,000, for the research project on "Control of Barley Diseases for LDCs". The current scope of work and all other conditions of this project remain unchanged by this extension. This extension will provide the time required for proper review, approval and contracting of a proposed full three-year extension of this project.



Curtis Farrar
Acting Assistant Administrator

Bureau for Development Support

Date: July 16, 1981

References:

- Action Memo: Fiester to Babb (Attached)
- Letter: Sharp/Montana to Darwin/AID, dated January 5, 1981 (Attached)

Clearances:

DS/AGR/AP:RIJackson RSJ Date: 1/28/81
DS/AGR/AP:JMYone RSJ Date: 1/25/81
DS/AGR:MZozynski MEM Date: 1/28/81
DS/AGR:JWalker J.Walker Date: 2/7/81
DS/AGR:DFiester D.Fiester Date: Feb 18, 81
DS/PO/RES:MRchcigl MR Date: 2/13/81
DS/PO:ASilver AS Date: 2/13/81
DS/PO:BChapnick BChapnick Date: 7/7/81

June 23, 1981

ACTION MEMORANDUM FOR THE ACTING ASSISTANT ADMINISTRATOR
BUREAU FOR DEVELOPMENT SUPPORT

Donald R. Fiester

From: DS/AGR, Donald Fiester, Director

Problem: Your approval is required for a three and one-half month unfunded extension (June 1, 1981 through September 15, 1981), and a four and one-half month funded extension (September 16, 1981 through January 31, 1982), of the project "Control of Barley Diseases," with Montana State University (MSU), Bozeman, Montana. A letter from Dr. Gene Sharp, Principal Investigator, MSU, requesting the unfunded extension is attached.

Discussion: This project was initiated in August 1978. It is currently being implemented under a two year and ten-month contract (AID/DSAN-c-0024), which is now funded for \$723,148 for August 1, 1978 through May 31, 1981. The contractor, MSU, has requested a three and one-half month extension requiring no additional funds in order to continue the work as set forth in the contract. DS/AGR also proposes a four and one-half month extension for \$96,852. During this combined period, AID/W will complete the review and documentation required for a full three year extension of the project.

Barley is probably grown under more extremes than any other cereal crop. Furthermore, under the less favorable environments where barley is the most extensively grown cereal, as in the Middle East and North Africa, it is doubtful that varieties of any other cereal can be developed that will equal or exceed barley in the production of total available nutrients per unit area of land. Barley is an important component of the diets of millions of people living under dryland conditions, often the transition zone between the areas normally planted to wheat and the desert. This for the most part involves areas with low rainfall, relatively low soil fertility, uncontrolled barley diseases, insects and low grain yields. The opportunities for irrigation under these conditions are also minimal. For the benefit of these people, it is basic that barley be improved in productivity and in nutritive quality.

The basic goal of this project is to improve the control of barley diseases for the LDCs with particular emphasis on the semi-arid areas of the world. Wherever possible and feasible, this will be done by accumulation of resistance genes into acceptable barley stocks. After the various different sources of resistance have been determined, crosses will be made to incorporate these resistance genes into a base of widely adapted but diverse barley germ plasm. Evaluations will be made on both seedlings and mature plants and, in both cases, the barley stocks will be

exposed to a wide range of virulences. Selections of the most resistant and agronomically acceptable barley types will be repeated in several cycles of recombination. When resistance is adequately established for specific diseases, combinations will be made to combine resistances to two or more diseases. This project should lead to broad-based resistances to major diseases of barley which will be effective in the barley growing areas of the world.

During the past two years, considerable progress has been made in the development of barley stocks with broad-based resistance to specific diseases. Emphasis has been placed on barley scald and net blotch. Resistant stocks are also being developed for leaf rust and barley yellow dwarf virus. Good working relationships have been established with representatives of ICARDA and CIMMYT, and also with various scientists stationed in target areas of the LDCs. MSU has taken the approach of producing resistant stocks rather than varieties, and this has enabled CIMMYT and ICARDA to utilize the superior material in their barley breeding programs. The methodical assembling and pyramiding of major and minor genes for resistance cannot be done easily at CIMMYT or ICARDA, but fits well into the developed expertise of the barley program at MSU; thus, resulting in a very desirable and worthwhile relationship. During the past two years, considerable progress has been made in development of barley stocks with broad-based resistance to specific diseases. These stocks have been incorporated into the barley programs of the LDCs cooperating with MSU. Furthermore, the training program has been attractive and the number of applicants has exceeded financial and space limitations. The fully-qualified and unique research staff at MSU working on barley diseases has stimulated several foreign students to apply for graduate and short-course training. An external in-depth evaluation was conducted on the project in July 1979 at MSU. The team concluded that the project is progressing in a very excellent and timely fashion and recommended that it be continued.

The three year project extension will be reviewed by the TPCA Crops Subcommittee and by the TPCA Full Committee. This three year project extension proposal will be on the meeting agenda of the RAC. If RAC recommends approval of the three year extension, AID/W will prepare a PIO/T and amend the contract for this extension. DS/AGR feels strongly that the eight month extension requested herein is justified and appropriate to permit continuous and orderly progress of the project.

Recommendation: That you approve the three and one-half month unfunded extension and the four and one-half month funded extension of this project by signing the attached PAF.

Attachments:

1. PAF I and PAF II
2. Letter from Dr. G. Sharp, Montana State University

Clearances:

DS/AGR/AP:RIJackson RIJ Date 2/6/81
DS/AGR/AP:JMYoha JY Date 2/6/81
DS/AGR/AP:SEngberg SE Date 2/6/81
DS/AGR:Mozynski MCM Date 2/6/81
DS/AGR:JWalker JW Date 2/6/81
DS/PO:ASilver AS Date 2/23
DS/PO:MRehcigl MR Date 2/23
DS/PO:BChapnick BC Date 1/7

DS/AGR/AP:RIJackson:ts:02/06/81