

CLASSIFICATION  
PROJECT EVALUATION SUMMARY (PES) - PART I

Report Symbol U-447

1. PROJECT TITLE Dryland Farming Oregon (Moisture Conservation & Utilization in Low Winter Rainfall Areas of LDC's)			2. PROJECT NUMBER 931-0162	3. MISSION, AID/W OFFICE DS/AGR
5. KEY PROJECT IMPLEMENTATION DATES			4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY)	
A. First PRO-AG or Equivalent FY <u>75</u>	B. Final Obligation Expected FY <u>75</u>	C. Final Input Delivery FY <u>81</u>	<input checked="" type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION	
6. ESTIMATED PROJECT FUNDING			7. PERIOD COVERED BY EVALUATION	
A. Total \$ <u>1,000,000</u>			From (month/yr.) <u>June 1975</u>	
B. U.S. \$ <u>1,000,000</u>			To (month/yr.) <u>June 1980</u>	
			Date of Evaluation Review <u>July 1980</u>	

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
1. Grant has been extended without additional funds and will terminate Dec. 31, 1980	NA	NA
2. Final report due	O.S.U.	Feb 9, 1981
3. Third edition of Dryland Agriculture Bibliography will be provided to DS/AGR for distribution to Regional Bureaus and AID/Missions.	O.S.U. & DSB/AGR	Jan 5, 1981
4. O.S.U. will continue to expand research effort in dryland agriculture	O.S.U.	continuing
5. O.S.U. will prepare a memo detailing its technical expertise in dryland agriculture and staff availability for distribution to Regional Bureaus and AID Missions. DS/AGR will distribute the memo.	O.S.U. and DS/AGR	Sept. 15, 1981
6. Issue: AID has not developed mechanism to assure access to expertise developed by the 211(d) at O.S.U.		

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS			10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT		
<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input type="checkbox"/> Other (Specify)	A. <input checked="" type="checkbox"/> Continue Project Without Change		
<input type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	_____	B. <input type="checkbox"/> Change Project Design and/or		
<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIC/C	<input type="checkbox"/> Other (Specify)	<input type="checkbox"/> Change Implementation Plan		
<input type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P	_____	C. <input type="checkbox"/> Discontinue Project		

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)		12. Mission/AID/W Office Director Approval	
Dillard H. Gates, RSSA/USDA		Signature <i>Keith Byergo</i>	
<i>G. L. Corey, DS/AGR/TSWM</i>		Typed Name Keith Byergo	
		Date 7/10/80	

### 13. Summary

Oregon State University has made significant progress toward achievement of the grant purpose. Institutional response capability has been increased and a core staff is available to address problems of dryland agriculture production in semi-arid areas. It is a joint responsibility of the grantor and grantee to see that the expertise developed as a result of the grant is utilized to help alleviate food production problems in LDCs.

The purpose of the grant was largely fulfilled through achievement of five outputs, development of a centralized information system, training and education program, increased institutional research capability and knowledge base, increased advisory capacity and strengthened domestic and international linkages.

Through April 30, 1980, \$844,341 of grant funds had been expended by Oregon State University. The remaining balance of the \$1,000,000 grant will be utilized prior to the end of the grant period which has been extended to December 31, 1980.

It is obvious that Oregon State University has increased its technical competency and institutional response capability as a result of the 211(d) grant. The University has strengthened its interest in agriculture production in dryland regions of the world. However, as the end of the grant period approaches, scientists who have been affiliated with and partially supported by the grant are being "reabsorbed" by their respective subject matter departments. As this happens they will be reassuming increased teaching and/or research responsibilities and will thus be less available to A.I.D. or other donor agencies to assist with food production problems in dryland areas of LDCs. The University proclaims an increased interest in assisting under developed countries. A core staff has been provided additional training and allegedly stands ready to provide its services. Despite this, the highly skilled staff cannot be retained and remain available to A.I.D. on a stand-by basis. Some cooperative arrangement should be worked out between the University and the agency so that the agency has access to professional talents it has helped to develop. This could possibly be accomplished by the agency continuing a modest funding level to the University that would make a given amount of professional talent readily available to A.I.D.

Unless the problem of 211(d) grantee staff availability to the agency is resolved the real value and goal of the grant will not be achieved.

#### PROJECT EVALUATION SUMMARY PART II

### 14. Evaluation Methodology

The 211(d) grant originally scheduled to terminate June 30, 1980 has been extended, with no additional funds through December 1980. This terminal review was to evaluate performance of the grantee against outputs called for in the original grant proposal dated May 15, 1975.

The review was conducted under a USDA/OICD RSSA by a professional agriculturist who had previously served as US-AID Grant Manager. The evaluation was conducted by an on-the-ground review of grant supported research at Oregon State University experiment stations, a meeting with the O.S.U. III(d) technical committee, additional meetings with the O.S.U. Grant Director, and inspection of laboratories where grant funded equipment is utilized and the O.S.U. library facilities utilized by the grant. In addition, an inventory of non-expendable equipment purchased entirely, or in part, by grant funds was made and is attached to this PES as Annex 1.

15. External Factors

N/A

16. Inputs

Inputs to the grant activities have been generally made as planned. As of April 30, 1980 the grantee had expended \$844,341 leaving a grant balance of \$155,659 (see Annex 2). The major item of expense has been salaries, wages and related payroll expenses which accounted for \$527,845. Other major expenditures have been made for travel (\$85,815), equipment (\$56,906) and materials and services (\$46,728). Estimated expenditures for the remainder of the grant period are shown in Annex 2.

Oregon State University staff have been assigned to the project as called for in the grant proposal. The staff time has varied during the grant but has generally included the Grant Director, an Agronomist, Rangeland Specialist, Soils Specialist, Agricultural Engineer, Librarian and research assistants. An example of the staffing pattern for the period July 1, 1978 to June 30, 1979 is shown in Annex 3.

17. Outputs

A. Establish and operate a centralized information system.

A computerized dryland bibliographical collection has been developed and established in the O.S.U. library. This includes numerous reports and documents not normally referenced in libraries. The dryland library serves as a ready reference for O.S.U. students with special interest in dryland agriculture. In addition, literature searches are made upon request of interested scientists in the U.S. & LDC utilizing a key word methodology.

O.S.U. is a functioning member of CIDNET. Computer tapes of all materials stored in the dryland collection will be sent to University of California, Riverside as a part of the centralized CIDNET systems. The library accessions, however, will remain in the O.S.U. library.

The grantee is planning to publish a Third Edition of the Dryland Agricultural Bibliography prior to termination of the grant. Copies of the bibliography will be made available to A.I.D. for distribution to appropriate Bureaus and Missions. The first two editions of the Dryland Agricultural Bibliography have been well accepted and have been given wide distribution to A.I.D. Missions and in LDCs.

- B. Develop and provide an education training program specifically addressed to problems of LDCs.

The Saerman Branch Station at Moro, Oregon has been revitalized as a dryland training and research center as a result of 211(d) funding and interest in dryland agriculture problems. Funds from the grant have been used to purchase equipment needed to conduct field research at the station (Annex 1). This equipment will continue to be used for that purpose as the University now plans to continue and expand research efforts in dryland agriculture. Several graduate students (foreign and domestic) under the direction of 211(d) supported faculty are conducting or have completed thesis research at the Dryland Station.

During the last reporting year (1978-79) ten graduate students were addressing problems related to dryland agriculture production under the direction of three research professors supported in part by 211(d) funds. A complete list of all graduate students and projects supported by grant funds will be included in the final grant report.

A two-week short course covering dryland agriculture production problems was developed with grant funds. The short course was presented June 11-22, 1979, to nine students from Algeria, Turkey, Peru and one from the U.S. The foreign attendees were graduate students at O.S.U. or members of a CIMMYT training program. The short course emphasized cereal and livestock production in dryland areas. Classroom lectures were interwoven with seminars and field trips.

Tentative plans are being made to present the short course again this fall. Final plans will be dependent upon CIMMYT plans to send students for the training.

O.S.U. joined with the University of California, Riverside, and in April 1977 presented An International Symposium on Rainfed Agriculture in Semi-Arid Regions. The Symposium was attended by over 100 people from 17 nations. Proceedings from the symposium have been published and widely distributed to Regional Bureaus, A.I.D. Missions and LDCs. The proceedings serve as a valuable reference source for those interested in problems of agriculture production in dryland regions of the world.

The 211(d) supported staff at O.S.U. have developed a specialized curriculum leading to a master of Agriculture in Dryland Agriculture. This is a highly flexible and practically oriented program in which the student undertakes a supervised field project supported by appropriate courses taught on campus. Disciplines in which majors have been developed for the program are: Agriculture and Resource Economics, Soils, Crop

Science, Rangeland Resources and Agricultural Engineering Technology. A leaflet describing the Master of Agriculture in Dryland agriculture was developed and distributed widely in 1977 and 79.

- C. Expand, improve, and marshal an institutional research capability and knowledge base.

A status of the technical art (SOTA) was published in 1979 under the title "Dryland Agriculture in Winter Precipitation Regions of the World." The publication covers a wide range of topics and information concerning dryland agriculture. It is written in a style easily read and understood by scientists and technicians alike. Each of the 13 chapters is followed by extensive references and additional information sources. Thus, in addition to being an excellent reference, it also serves as an extensive bibliography of subjects closely related to dryland agriculture.

The SOTA report has been widely distributed to Regional Bureaus, A.I.D. Missions and LDCs. Additional copies are available for distribution on a request basis.

The revitalization of the Sherman Branch Station as a major center for dryland agriculture research was discussed in 17-B above. In addition, research supported by the 211(d) grant has been conducted with cooperating farmers near the station and on research stations and with cooperating farmers in western Oregon. The research work has been in the areas of: soil moisture conservation and utilization, soil moisture/fertilizer/crop relationships, cereal/legume rotations, mineral deficiencies in cereal production, nutritive value of cereal aftermath, minimum tillage techniques, and root-rot of wheat. For the most part the research has been conducted by graduate students under the supervision of major professors supported by the 211(d) grant.

Members of the O.S.U. staff associated with the grant have traveled extensively to observe problems of dryland agriculture, review research work and discuss problems and research with agriculture scientists in both LDCs and developed countries. In general the 211(d) grant related staff have a good overview and understanding of agronomic and soils problems of dryland agriculture production as well as research being conducted world-wide.

- D. Develop and provide increased advisory capacity.

Oregon State University is developing a reputation as a center of expertise for dryland agriculture. This serves to compliment long standing international programs in weed control and cereal breeding and production. Grant supported staff have been invited to participate in international meetings and to provide consulting services for dryland agriculture related problems both domestic and foreign. These include: (1) Fifth Regional Cereals Workshop, Algiers, Algeria, May 5-9, 1979; (2) CID, Logan, Utah, regarding the Kenyan Kiboko Range Project; (3) Dominican Republic, Aug. 1978; (4) Society of Agronomy Editorial Committee on dryland agriculture,

Chicago; (5) Northwest Agricultural Show, Portland Oregon, Jan. 1979; (6) Pakistan, Barrani project 1979; (7) Turkey wheat production projects, 1979; (8) Tunisia dryland agricultural area, and (9) several requests to assist CID in project design and review in LDCs.

The 211(d) grant staff has contributed to its advisor role by providing information upon request and through discussions held with agricultural scientists visiting the university campus. For example: During the reporting year ending in September 1979, the staff responded to 33 requests for publications, recommendations and information. During this same period the staff was visited by 15 scientists; all of whom were foreign or working on dryland agriculture production problems in foreign countries. Those activities contributed not only to increased advisory capacity but to improved linkages as well.

E. Promote and strengthen domestic and international linkages.

During the years of the 211(d) grant the university has considerably strengthened its linkages with other organizations and institutions concerned with problems of dryland agriculture production. This has been accomplished through O.S.U. staff travel to International Research Centers dealing with dryland agriculture production problems, visitations to universities and ministries of agriculture in developed and under-developed countries in semi-arid regions of the world. Details of visitations have been presented in the four annual reports which have been published to date and will not be repeated here. However, major visitations include: (1) CIMMYT; (2) ICARDA; (3) ICRISAT; (4) Syria; (5) Tunisia; (6) Turkey; (7) Australia; (8) Morocco and, (9) Iran.

The university 211(d) grant staff has also established linkages with ministries of agriculture, major universities and libraries in LDCs and provides information to them on request.

There have been unplanned outputs that reflect the strength of the dryland agriculture program developed through the 211(d) grant. These include: (1) a full-time tenure track position has been created in the Rangeland Resources Program; (2) the Dryland Agronomist position (tenured) has been secured in the Agronomic Farm Crops Department; (3) a grant supported graduate student in Agriculture Economics is being considered for a position with ICARDA; (4) a graduate student in Agronomy has been selected for Post-Doctorate work at CIMMYT, and (5) an original 211(d) grant staff member has taken a position with Ford Foundation in Egypt.

18. Purpose

"The purpose of this grant is to mobilize and focus on institutional response capability at Oregon State University to deal with moisture conservation and utilization in relation to food production with emphasis on small farms in low winter rainfall (mediterranean climate) areas of the LDCs."

The grant purpose has been generally well achieved through outputs discussed in item 17. Oregon State University has strengthened its response capability through strengthening its research program in dryland agriculture, by training both graduate and undergraduate students, by increasing staff capability and awareness of dryland agriculture problems in LDCs, by becoming familiar with dryland agriculture research world-wide and establishing linkages with organizations and institutions with similar interests.

The administration of the School of Agriculture has confirmed the added interest of O.S.U. in agriculture development in LDCs. The university is now involved in developing and negotiating a major dryland agriculture program with Tunisia.

The agency should carefully examine its procurement policies so that it could make more direct use of the dryland agriculture capabilities which it has helped to develop at Oregon State University.

19. Goal/Subgoal

A specific goal was not stated in the grant proposal. However, the fourth year review PES states the goals as follows: "To solve problems of moisture conservation and dryland farming systems in the areas where most rainfall occurs during the winter as a means of improving the quality of life for farmers in the lowest income brackets in LDCs."

If this was in fact the goal of the grant, strictly speaking, it has not been achieved as problems have not been solved in LDCs. However, project outputs as discussed in item 17, has placed the university in a position to be able to address dryland agriculture problems in LDCs. The institutional response capability of the institution has been increased significantly. It is now in a position to assist A.I.D. and other donor agencies or host governments to solve dryland agriculture problems and increase food production and the quality of life for the rural poor in LDCs.

20. Beneficiaries

Direct beneficiaries to date have been the domestic and foreign students that have received training under the 211(d) grant and the O.S.U. faculty who have had the opportunity to broaden their horizons, better understand dryland agriculture problems in LDCs and to grow professionally as a result of their grant activities. The Agency, International Research Centers, institutions and organizations, other donors and agricultural scientists who have consulted with and discussed dryland agriculture problems with O.S.U. staff have also benefited from the 211(d) grant. The institutional strengthening as a result of the 211(d) grant is but one of a chain of events which must take place if the rural poor in LDCs are to be helped.

21. Unplanned Effects

N/A

22. Lessons Learned

Provisions for utilization of grant developed expertise must be made in the original grant document. Unless the institutional capabilities are utilized, the grant has done little or nothing to help meet A.I.D. broad objectives. Grant documents should be more sharply focused on specific objectives which A.I.D. wants to accomplish. Activity and funding priorities should be carefully considered and established in the grant agreement and should (within reason) be adhered to. A.I.D. grant management should carefully monitor grant expenditures, especially travel.

ANNEX 1

Inventory of non-expendable equipment purchased, entirely or in part, with 211(d) grant funds.

<u>Item</u>	<u>Price</u>	<u>G.S.U. Inventory Number</u>
Typewriter Ryl Kmg 4638586 <u>1/</u>	\$117	040027
File Card 15 Dwr <u>5/</u>	205	176977
Machine Soil Coring Md GSRP-S <u>3/</u>	3,699	177267
Cabinet Filing Legal Yellow <u>5/</u>	132	177350
Cabinet Filing Legal Yellow <u>5/</u>	132	177351
Cabinet Filing Legal Yellow <u>5/</u>	133	177352
Cabinet Filing Legal Yellow <u>5/</u>	133	177353
Spreader Fertilizer 8 ft. Barber <u>3/</u>	779	177527
Tractor Crawler JD SN 350CW249140 <u>3/</u>	18,008	178819
Plow Chisel JD <u>3/</u>	1,073	178820
Disk Bush-Hog JD <u>3/</u>	2,275	178821
Subsoiler No. 90 V Type JD <u>3/</u>	1,177	178822
Seeder OYJORD W/ACC <u>3/</u>	1,574	179581
Drillframe w/Packerwheels Openers <u>3/</u>	2,050	179783
Box Dry Fertilizer <u>3/</u>	450	179784
Sprayer Pul Tank Nify-50 <u>3/</u>	790	180831
Tractor Bolens Husky Used W/ACC <u>3/</u>	400	182515
Balance PL200 Mettler <u>3/</u>	1,184	184640
Typewriter Olympia SN 453787 <u>1/ 6/</u>	227	184966
Camera Pentx MX 9330911 LNS-2950449 <u>6/</u>	229	187120
Recorder Digital W/50 CH Scanner <u>3/</u>	4,962	193075
Oven Drying POM 3360 <u>3/</u>	1,676	193375
Acoustical Hood for IBM Mag Card <u>6/</u>	244	197229
Nitrogen Analytical Equipment <u>2/ 4/</u>	6,000	

1/ Purchased from surplus

2/ Total cost of equipment approximately \$30,000  
211(d) contribution \$6,000

3/ Sherman Branch Station

4/ Oregon State University Soils Laboratory

5/ Oregon State University Library

6/ Office, Grant Director

## ANNEX 2

Budget Status of O.S.U., 211(d) grant, as of April 30, 1980.

	Budget	Cumulative through April, 1980	Balance
Salaries and Wages	549,000	527,845	21,155
Other Payroll Expenses	82,822	89,901	-7,079
Materials and Services	83,678	46,728	36,950
Computer	17,000	8,705	8,295
Publications	20,000	5,440	14,560
Travel	127,000	85,816	41,684
Contribution to CID	50,000	23,000	27,000
Equipment	70,000	56,906	13,094
TOTAL	1,000,000	844,341	<u>155,659</u>

Expected Costs through December, 1980

Salaries and OPE	51,061
Unpaid Requisitions	8,580
Mini Grants	4,000
Eastern Oregon Ag. Expt. Stat.	9,200
Tunisia Travel	7,180
Australia Travel	25,000
Dryland Short Course	35,000
Travel and Contingencies	15,638
Balance	0

ANNEX 3

Oregon State University staff associated with the 211(d) grant for the period July 1, 1978 to June 30, 1979.

Floyd E. Polvon, Agronomist, 1.00 FTE, 1/  
July 1, 1978 to August 31, 1978;  
0.95 FTE, Sept. 1, 1978 to June 30, 1979.

Dean W. Booster, Agricultural Engineer, 0.25 FTE,  
July 1, 1978 to June 30, 1979.

Patty Brown, Secretary, 0.50 FTE,  
July 1, 1978 to June 30, 1979.

Allan E. Deutsch, Information Specialist, 0.10 FTE,  
July 1, 1979 to June 30, 1979.

James P. Estes, Jr., Research Assistant, 0.50 FTE,  
Jan. 1, 1979 to June 30, 1979.

Robert L. Henderson, Research Assistant, 0.50 FTE,  
Jan 1, 1979 to June 30, 1979.

Thomas J. Jackson, Soil Scientist, 0.50 FTE,  
July 1, 1978 to June 30, 1979.

Syed M. A. Khan, Librarian, 0.50 FTE,  
Nov. 15, 1978 to June 30, 1979.

Georgena S. Knapp, Fiscal/Translation Assistant, 0.10 FTE  
July 1, 1978 to June 30, 1979.

Catherine Mee, Rangeland Research Assistant, 0.50 FTE,  
July 1, 1978 to June 30, 1979.

Richard F. Miller, Rangeland Specialist, 0.25 FTE,  
July 1, 1978 to June 30, 1979.

Stanley F. Miller, Director and Agricultural Economist, 0  
July 1, 1978 to June 30, 1979.

George Smith, Agricultural Assistant, 0.50 FTE,  
July 1, 1978 to June 30, 1979.

A. H. Winward, Rangeland Specialist, 0.50,  
July 1, 1978 to June 30, 1979.

1/ FTE = Full-time equivalent.