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MEMORANDUM

To: Jesse L. Snyder
Mission Director

From: Abdel M. Moustafa
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Date: July 6, 1988

Subject: Project 632-0065 Close Out Report (Farming Systems Research)

AM July 6, 1988

PART I: Close Out Action

A. Contractor Personnel and Property

Most of the technical assistance personnel employed by the Washington State University (WSU) departed Lesotho in June, 1986. The last two technician contractors, the Marketing Specialist and the Agronomist departed Lesotho on October 31, 1986.

B. Both USAID and the contractor were involved in procurement of commodities. All commodities were delivered and bills have been paid. In July, 1986 a final inventory of commodities was conducted by the Washington State University. On July 30, 1986 the Principal Secretary of the Ministry of Agriculture approved the Mission's request to retain all the equipment and vehicles procured by the Mission and WSU for future utilization by the U.S. technical assistance team employed under the Agricultural Research Component of the Lesotho Agricultural Production and Institutional Support, (LAPIS) Project, 632-0221.

C. All PIO/actions are complete, and excess funds have been de-earmarked, decommitted and deobligated.

D. All final payments have been made. There is no outstanding claim against the project.

PART II: Close Out Report Narrative

A. PROJECT STATUS:

The original Farming Systems Research (FSR) Project was for \$9,032 Million; \$8,308 Million in U.S. Dollars (USAID's contribution) and \$0.724 Million equivalent in local currency (GOL's contribution). A major Project Agreement Amendment (No. 11) was executed on February 6, 1984 to increase the life of project funding by \$3,282 Million; \$2,886 Million in U.S. Dollars

(USAID contribution) and \$0.402 Million equivalent in local currency (GOL's contribution). Total of USAID and GOL contributions were \$11,194 Million and \$1.126 Million respectively. The same amendment extended the PACD from March 31, 1984 to July 31, 1986. On June 6, 1986 the project was extended at no additional cost to November 30, 1986.

The Grant Agreement for the FSR Project was signed in May 15, 1978 and the actual implementation of the project was launched in March 30, 1979, the date when AID/W signed the contract with WSU to implement the project.

Summary of the goals, strategies, methodologies and support assigned to the Contractor (WSU), and the Research Division (RD) by the GOL and USAID in carrying out the FSR project, 1979 - 1986.

A. National Goal: Improve quality of rural life through:

1. Higher nutritional levels
2. More rural children in school
3. Higher incomes

B. Sector Goal: Increase rural income through agriculture. Increase farm income of co-operating farmers by 33%.

C. Purpose: To create more productive agricultural enterprises that are: Acceptable to farmers; sensitive to farmers' management ability; appropriate to resources available and protective of the land base.

B. Anticipated Outputs

1. Institutionalization of a FSR unit within the MOA's RD.

2. Farming Systems Program

Determine the proper (more productive) enterprise mixes for selected areas within the prototype areas.

3. Strategies for Reaching Farmers

Determine effectiveness of alternative extension methods.

4. Trained Basotho Personnel

By the end of the project: Basotho personnel trained. (16 long-term and 10 short-term) and assigned to 26 positions in the Research Division.

5. Research and Information Data Base

a. Major findings of existing research to be collected and analyzed by December, 1979.

b. Baseline studies of farming practices, income and social attitudes to be conducted in a year. Similar studies to be conducted in year 5 to provide a comparison. A continuous series of technical, social and economic surveys to be conducted throughout the project.

c. Agricultural Research Library

(1) Adequate library for FSR Section to be established.

(2) An Agricultural Research Library to be operative by the end of the Project.

C. Planned Inputs (1979 - 1983)

1. U.S. AID, total \$8,308,000

a. Technical Assistance Field - \$4,573,000

(1) 50 staff years long-term technical assistance

(2) Six staff-years of graduate research assistants.

(3) Staff trips to international conferences and research institutions during the course of the project.

(4) Consultancies in the following areas (and possibly others): agriculture, chemistry, horticulture, animal science, plant protection, nutrition, range management, library science and agricultural engineering.

b. Technical Assistance Backstop - \$1,125,000

Campus Co-ordinator, financial and administrative assistant, secretary, staff trips and overhead.

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c. Training - \$823,000

(1) Long-term primary in U.S. but some also in Africa

(2) Short-term training both overseas and in-country

d. Construction - \$457,000

(1) Senior technicians housing (6) - \$210,000

(2) Field staff housing (6) - \$102,000

(3) Office/Library extension - \$118,000

(4) Field Shed (3) - \$27,000

e. Commodities -- \$382,000

To include vehicles, research equipment, office and training equipment and supplies, library books, and periodical subscriptions.

f. Other costs -- \$948,000

Guarantees for co-operating farmers, vehicle operation and maintenance, computer services, and secretaries.

2. Government of Lesotho, total \$724,000

a. Training Support - \$118,000

60% or 100% of participants' base salaries, depending upon marital status and length of training.

b. Farming Systems Research Support - \$286,000

Salaries for returning trainees, technical assistants, maintenance personnel, temporary wages, building site maintenance.

c. Farming Systems Program Support - \$189,000

Salaries and benefits for extension personnel, wages for labor, field shed and site maintenance, office supplies, equipment for field sheds, and operations.

d. Land - \$100,000

For office/lab/library extension, staff housing, and for field sheds and research plots in the prototype areas.

e. Furnishings - \$31,000

For staff housing

The results of the first external evaluation in April 1981 led to agreement by the concerned parties on certain changes in project approach and outputs. First, the revised approach of the project is to work with the Research Division towards the joint goal of added emphasis on the farming system approach rather than to create a separate Farming Systems Unit per se. Secondly, the revised approach extended the focus of field research from being limited to three prototype areas exclusively to include work in other areas of Lesotho.

The results of the second external evaluation in March 1983 led to agreement to extend the project two years, to July 1986, to ensure further strengthening of the MOA's research capability until the Lesotho Agricultural Production and Institutional Support project (LAPIS), which has an agricultural research component, was approved and implementation commenced.

D. Planned Inputs (1984 - 1986)

(1) USAID, total \$2,886,000

a. Technical Assistance Field \$2,293,000

1. 15 staff years long term technical assistance
2. 2 staff years of graduate assistants
3. Short term consultants
4. Local hires
5. Technical assistance backstop

b. Training - \$174,000

1. Long term (2 M.S.)
2. Short term (U.S. and Local)

c. Commodities and Equipment - \$126,000

To include library materials/books, tractor,
reproduction equipment, vehicle, seeds and fertilizer

d. Miscellaneous/other costs - \$383,000

(2) Government of Lesotho - \$402,000

(M478,690, 1 M = \$1.19)

a. Training Support \$ 10,000

Salaries, dependency allowance, short term training
in and out of the country

b. Other costs - \$392,000

Counterpart contribution, (salaries) office space,
office equipment and supplies, research materials,
farm equipment, vehicles, farm lands, furnishings
etc.

SUMMARY OF CONTRIBUTION: (s=000)

	USAID PLANNED	USAID ACTUAL
Technical Assistance	9,680.0	9,499.5
Participant Training	195.0	109.6
Commodities	319.0	348.4
Construction	829.0	799.3
Other Costs	171.0	92.2
Total	11,194.0	10,849.0

USAID has deobligated \$345,000 unutilized balance in the Project. The total expenditure of WSU contract has been classified as technical assistance in the USAID Macs report. Breakdown of expenditures of Washington State University contract by elements are as follows.

a. Technical Assistance	6,887.4
b. Equipment	154.8
c. Participant Training	877.3
d. Other Direct Costs	1,554.5
Total	9,474.0 (Voucher date Oct. 27, 1987)

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	GOL PLANNED	GOL ACTUAL
Training	128.0	40.3
Other Costs (Counterpart salary)	392.0	40.5
Land & Household Furnishings	131.0	623.3
Research Support	286.0	430.4
Program Support	189.0	286.6
Total	1,126.0	1,421.0

E. PROJECT ACCOMPLISHMENTS:

The FSR Project has succeeded in achieving most of the goals identified in the project paper. Some, like the establishment of a FSR Section in the Research division, were abandoned and replaced by other approaches for reaching the project's overall objectives. Project activities have resulted in:

A better understanding of deficiencies in traditional production practices and how cultural and economic factors influence the acceptance of technologies proposed to overcome these barriers. The goal of adoption of a new technology by 5% of the prototype area farmers was surpassed. The willingness of farmers to put their own money into improved technology and new practices is evidence of their interest in increasing production and income.

A publication series for the dissemination of research results was established. Bulletins, reports, and circulars are routinely sent to relevant offices and organizations. Handbooks are prepared, revised, and disseminated as needed.

Interaction with international centers such as CIMMYT and ICRISAT is occurring on a continual basis and agronomists are cooperating in a sorghum, and maize testing program with scientists from these centers.

Work in the three prototype areas has resulted in an understanding of the limitations and characteristics of each of the major ecological zones in the country.

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Training of counterparts, radio broadcasts and demonstration field days have been used to transfer information to farmers. An in-depth analysis of the results indicates a marked impact on the knowledge, attitudes, skills, and aspirations of farmers involved with a sustained extension training program. Farming practice changes also increased among participants.

The goal of sending 16 nationals for long-term degree programs was surpassed, a short-term training for others was a continuous part of the FSR Project program.

The Agricultural Research Library has developed into a well-organized repository that serves the needs of many agencies in Lesotho. It has already outgrown its physical facilities.

Areas where progress has been slower than desirable, are in getting increased support and recognition for the Research Division from MOA administrators and other Divisions, and in establishing a solid research capability in the Division. There is a shortage of research leaders who are capable of designing and implementing successful programs in the various disciplines. Capable support personnel are not available, and the attitude and dedication found at all organizational levels in top quality research units has not yet fully developed. However, there is no reason to believe that these essential qualities will not develop if the proper administrative guidance is provided and the Division receives the necessary resources.

The Final Evaluation (April 1986) findings are summarized as follows:

1. The technical assistance inputs have been used reasonably effectively in orienting the program of the young Research Division (RD) of the Ministry of Agriculture (MOA) to a farmer-problem solving approach that reflects relevant research needs. The combination of expatriate personnel, training and physical facilities and commodities has led to a major stride in strengthening the program and resources of the RD.
2. The farming systems program of the RD, initially oriented to establishing a FSR unit within the RD but later broadened to strengthening the entire Division, has not become clearly established. A good base is present, the strong elements being the orientation to farmers' problems, excellent linkages to farmer and community groups, and adaptive research in farm management, marketing, rural sociology and extension. Essential, but less effective, elements are a research station base of adaptive research in

- the production disciplines and a clear understanding of the need for a balanced program of research stations and sub-stations and/or prototype area headquarters experimentation, and on-farm trials, tests, and demonstrations.
3. The establishment of the program in prototype areas has been an effective strategy for reaching farmers. The Village Agricultural Committee (VAC) approach is an excellent way of getting farmer and community involvement in technology testing, transfer, and adoption. The project design target of reaching at least five percent of the farmers in the prototype areas has been attained.
 4. The project targets for training Basotho personnel by a combination of degree, non-degree, and in-country training have been achieved.
 5. Facilities and commodities support have been essential to strengthening the program of the RD at the Maseru Station and the prototype areas. Establishment of the RD library which now serves as the MOA library and base for research data and information is particularly noteworthy.
 6. The technical assistance Contractor (WSU) demonstrated flexibility in providing personnel as the focus of the project changed from the FSR unit to the entire RD. In general, WSU complied satisfactorily in terms of personnel qualifications. WSU graduate students have made an outstanding series of reports, bulletins, and circulars documenting project and RD staff accomplishments during the life of the project.
 7. Problems of coalescence of MOA, WSU, and USAID project management developed early in the project and were only partially resolved. Lack of a mechanism for joint, collaborative and co-operative management to resolve major policy, program and leadership issues detracted them returns from human, physical, and monetary resources being maximized.
 8. With respect to institutionalization of the RD, good progress has been made in Extension and in the Social Sciences (both fit naturally into the FSR approach). Much less success has been attained in building production sections because resources have been utilized mostly on "on farm" tests, whereas replicated experiments must be conducted under researcher-controlled conditions, in most cases best and most economically carried out at experiment stations.

9. Progress has been made in many areas in strengthening the Research Division and its linkages to other MOA divisions and farmers. Nevertheless, the RD does not yet have the institutional capacity to carry out an effective adaptive research program without continuing technical assistance. The critical mass of personnel is lacking in all sections and collectively. Some disciplines received little, if any, support from the FSR project. Capacity to plan, lead, and implement an effective, well-balanced, adaptive research program is a critical need.

G. USAID CONTINUING RESPONSIBILITIES:

Although all FSR project activities were completed, USAID maintains a continuing relationship with the Research Division through the Agricultural Research Component (ARC) of the Lesotho Agricultural Production and Institutional Support (LAPIS) project, 632-0221. In that respect, USAID continues supporting the Research Division and exerts influence on the Ministry of Agriculture to strengthen and improve the research Division and to enhance its effectiveness.

Recommendations from Final Evaluation:

1. Emphasize strengthening the RD through participant training, improving physical facilities, providing commodities, and generally having expatriates give more production-discipline assistance to on-station research programs.
2. Develop a 15-year plan for the institutionalization of the RD, including research programs, the organizational structure, staff number, disciplines and level of training, and physical plant.
3. Strengthen technical and leadership capabilities to plan and implement an effective and balanced adaptive research program for the Division. Support personnel in technical and administrative areas need to be upgraded. A critical need is research station development, security, and management.
4. Continue the FSR approach but make it an appropriate part of the RD program--not the program. Spell out the FSR interpretation (there are many) for Lesotho, in writing, and make copies available to all concerned.
5. The RD Director, FA Team Leader, and USAID Project officer to meet on a regularly scheduled basis, to solve any problems of co-ordination, to be kept fully apprised of progress, to inspect ongoing research and extension programs, and to adjust programs as is deemed desirable.

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6. Greatly reduce numbers of "on-farm" replicated field trials. Depend on farm demonstrations to provide first-hand information for farmers. Increase the quality and precision of replicated experience to maximize production of reliable data.

7. Have production researchers help plan on-farm demonstrations, participate in farmer meetings, help prepare educational publications and other materials, and work closely with Extension in order to maintain a close farm orientation.

8. Maintain the momentum which is underway in the Social Sciences and Extension. Social science staff should conduct much of their research with farmers.

9. Determine the number of substations Lesotho needs to cover the major ecological areas and develop these as finances permit. Close out all other substations.

10. Formalize a plan for staff members (especially expatriates at this time) to assemble on an on-going basis technology and materials from the many excellent sources outside of Lesotho. Summarize in writing pertinent information and make available to all in a numbered series in the Library.

11. Provide each potential expatriate with a plan of work, same to be made a condition of employment. This will avoid possible misunderstandings of what is expected. There should also be annual plans of work to be approved by Team Leader, Section Leaders, and the RD Director.

12. Have short-term consultants with strong technical backgrounds come to Lesotho to monitor programs, to provide counsel to the researchers, and to be available for assisting with reviews and evaluations. Consultants should not be presently or formerly employed by the RD, Contractors and sub-contractors, or USAID except in unusual circumstances. Consultants should be retained over as long a period of time as possible.

13. Continue to provide expatriate technical assistance until the various RD Sections have an adequate number of Basotho staff with the necessary educational and experience backgrounds to conduct effective programs on their own.

These recommendations are being implemented under the Agricultural Research Component of the Lesotho Agricultural Production and Institutional Support (LAPIS) Project 632-0221

H. SUMMARY OF LESSONS LEARNED:

Institution-building is a long-term proposition and requires substantially more than the usual 5-year development assistance project.

Researchers should receive in addition to technical subject matters some training in research policy, planning and management.

Long-term training should not be centered at one institution, to ensure that MOA participants be exposed to a diverse range of disciplines and approaches.