

PD-ABP-054
93897

UNCLASSIFIED

CLASSIFICATION

PROJECT EVALUATION SUMMARY (PES) - PART I

Report Symbol U-447

1. PROJECT TITLE CRSP - Small Ruminants	2. PROJECT NUMBER 931-1328	3. MISSION/AID/W OFFICE S&T/AGR/AP
	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) <input checked="" type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION	

5. KEY PROJECT IMPLEMENTATION DATES	6. ESTIMATED PROJECT FUNDING	7. PERIOD COVERED BY EVALUATION
A. First PRO-AG or Equivalent FY <u>78</u>	A. Total \$ <u>for 9 Yrs.</u>	From (month/yr.) <u>9/30/82</u>
B. Final Obligation Expected FY <u>Cont.</u>	B. U.S. \$ <u>31,662,000</u>	To (month/yr.) <u>9/30/85</u>
C. Final Input Delivery FY <u>Cont.</u>		Date of Evaluation Review <u>8/15/85</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. Submit results of A.I.D. Triennial Review to Sector Council for Agriculture and JCARD Subcommittee on CRSPs to support request for extension of grant beyond FY 87 and present other supporting documents for the review.	W. C. Putman and Management Entity of SR-CRSP	Jan. 27, 1986
2. Prepare Project Authorization and related documents, to extend the SR-CRSP for three (3) years beyond Sept. 30, 1988 (10th, 11th, and 12th operational year).	W. C. Putman	April, 1986
3. Fold in Range Management and Nutrition research projects in Brazil and Morocco to decrease by one the number of PIs and subprojects within each of these countries.	D. W. Robinson with concurrence of W. C. Putman	Sept., 1986
4. Phase down Animal Physiology and Management research subprojects in Brazil during FY 86.	D. W. Robinson with concurrence of W. C. Putman	June, 1986
5. Conduct A.I.D. Project Manager's Annual Review.	W. C. Putman	Aug. 1986

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"/> Financial Plan <input type="checkbox"/> Logical Framework <input type="checkbox"/> Project Agreement <input type="checkbox"/> Implementation Plan e.g., CPI Network <input type="checkbox"/> PIO/T <input type="checkbox"/> PIO/C <input type="checkbox"/> PIO/P	<input checked="" type="checkbox"/> Other (Specify) <u>Grant Agreement</u> <input type="checkbox"/> Other (Specify) _____ A. <input type="checkbox"/> Continue Project Without Change B. <input type="checkbox"/> Change Project Design and/or <input type="checkbox"/> Change Implementation Plan 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
S&T/AGR/AP: WCPutman Date: _____	Signature _____
S&T/AGR/AP: RIJackson Date: _____	Typed Name <u>J. S. Robins</u>
S&T/AGR: FLi Date: _____	Agency Director for Food and Agriculture
S&T/AGR: ARBertrand Date: _____	Date _____
S&T/PO: VAnderson Date: _____	

Project Evaluation Summary (PES) - Part II

13. Summary

The major objective of the SR-CRSP is to increase the efficiency of production and total output of meat, milk and fiber by sheep and goats in order to increase the food supply and raise the income of small-holder livestock owners in developing countries. The program has been developed to expand the body of knowledge and increase the level of capability of both U.S. and developing country scientists for conducting research on small ruminants in small-holder production systems. This has led to the development and testing of new technology and practices for the improvement of small ruminant production in developing countries. The program is engaged in research and training in Brazil, Indonesia, Kenya, Morocco, Peru and 10 U.S. institutions.

One of the outstanding accomplishments of this grant has been the training provided to host country scientists and administrators to improve their capabilities for determining production constraints and in the development of programs to solve these problems. The training has not only helped to strengthen the capabilities of host country institutions but has also been beneficial to U.S. collaborating institutions. At U.S. institutions new courses, improved animal teaching and research facilities, short courses and campus-wide interest have all been generated to a substantial degree. Many U.S. scientists have provided specialized training in the U.S. and/or overseas to collaborators in both short and long-term programs. A detailed listing of all training activities appears in the report titled Research Publication and Training Roster 1978-1985 for the SR-CRSP.

The SR-CRSP scientists, both U.S. and foreign, have generated over 1,200 research reports, papers, abstracts and verbal presentations related to small ruminant production. A working paper series and a SR-CRSP Technical Report Series have been established within the SR-CRSP whereby research results and experimental data is quickly documented and disseminated. Many of these reports are developed into publications for peer-reviewed journals and then, as a research packages are validated and tested, the information is developed into practical reading material for farmers, extensionists and laymen to use in the field. A complete compilation of these publications as well as verbal presentations is provided in the recent publication titled Research Publication and Training Roster 1978-1985 for the SR-CRSP.

An obvious accomplishment of the program activities has been the professional and personnel relationships that have developed between institutions, scientists, and administrators in the U.S. and host countries. Most of the U.S. and host country personnel had little relationship with other scientists or other departments out of their immediate area of speciality. The SR-CRSP has encouraged and promoted

integration between: (1) U.S. scientists working in different subject areas on campuses and within host countries, (2) host country scientists from different agencies within the host country, and (3) between all host country administrators involved with the SR-CRSP. This latter integration process was initiated by placing host country administrators on the Board of Institutional Representatives.

The program is completing its seventh year with work plans in place for years eight and nine. An A.I.D. Triennial Review conducted in August, 1985 indicated that significant progress has been made and that the future program objectives are sound. One of the major changes underway is to modify the funding of some of the original research subprojects by providing additional support to some while decreasing support to others being phased out as they complete their initial objectives. Detailed information on all of these matters is available in the Seventh Annual EEP Report, the Management Entity Response to the Seventh Annual EEP Report, the Minutes of BIR Meeting - April, 1985 and the A.I.D. Triennial Review Team Report, 1985.

14. Evaluation Methodology

S&T/FA recommends that CRSPs be evaluated every third program year by an A.I.D. team and that this review be coordinated with activities of the permanent External Evaluation Panel (EEP). The procedure conserves the time of host country collaborators, allows for "modus operandi" of the EEP, and provides a convenient method for interactions between A.I.D. grant, subgrant, and institutional representatives (U.S. and host country collaborators). Therefore, an A.I.D. Triennial Review Team was organized to evaluate the SR-CRSP during June-August, 1985.

The A.I.D. Triennial Review Team included Mission, Bureaus and S&T/AGR representatives and actually consisted of four (4) different compositions or subteams. In arranging the visitation schedule for the A.I.D. Review Team, consideration was given to: (1) making as many contacts with subgrantees as possible while excluding subgrantees evaluated in the previous triennial review, (2) accompanying the EEP during its review of a host country program; and (3) interacting with missions cooperating with the SR-CRSP. The evaluation included observations on two host country programs and three U.S. institutions, on home campuses. The three U.S. institutions visited have been responsible for five of the 17 total SR-CRSP research subprojects through the Principle Investigator (PI) representing the institution. Each of the PIs visited were responsible for programs in one to three countries so the A.I.D. Review Team got an impression of some of the programs in host countries not visited as well as being able to relate to the PI and his programs in host countries visited. Comments on each of the site visits (host country and U.S. campus) by the A.I.D. Review Team are presented in detail in the A.I.D. Triennial Review Team Report.

15. External Factors

The Title XII specified that A.I.D. administer and fund Title XII with money from their existing budget and authorized the President to create the Board of International Food and Agricultural Development (BIFAD) to initiate implementation of the act. BIFAD appointed the Joint Research Committee (JRC) to oversee the research-related aspects of Title XII. It was their recommendation that Title XII-sponsored research be implemented through Collaborative Research Support Programs (CRSPs) and among their suggested topics was small ruminants. (The JRC has now been replaced by the JCARD to continue with attention to all CRSPs.)

Forty percent of the world's sheep and 77 percent of the world's goats are in the LDC's, owned primarily by small pastoralists and farmers of very limited means. Despite their low production, these animals contribute very significantly to the economy and food supply in these regions and demand for their products exceeds the supply.

Improving the performance of small ruminants would directly improve the diet and standard of living of a great many people because the animals are inherently well suited to the needs of small-holders and the conditions prevailing in the LDC's. For example, they:

- o Have low initial maintenance costs
- o Are able to use marginal land and crop residues
- o Produce milk and meat in small, readily usable quantities
- o Are easily cared for by any member of the family

The Small Ruminant CRSP (SR-CRSP) is now beginning its eighth fiscal year. Since the SR-CRSP was the first CRSP, it undertook much of the pioneering work associated with development and implementation of all future CRSPs. There was an incredible amount of groundwork to be done in establishing foreign work sites and educating many constituencies about the concept of Title XII in general, and CRSPs in particular. The CRSP mode of operation is still not completely understood by some persons concerned with the programs.

The group of people towards whom the activities of SR-CRSP are directed are the limited resource producers in the LDC's like the small-holders and nomadic husbandmen. The programs unique to their situation make research overseas not only appropriate, but essential if meaningful progress is to be made in improving small ruminant productivity under these conditions. Because the overseas research component of the SR-CRSP was considered the cornerstone of the project, great care was taken to select appropriate overseas work sites which meet the following criteria:

- o Representative of the various ecozones and production systems encountered in the tropics. The applicability of findings should extend beyond the borders of any nation in which the research was conducted and be useful in other areas of similar climate and topography.

o Countries in which the sites are located already have established agricultural institutions, staffed by scientists, trained personnel, and students with whom the investigators have an opportunity to collaborate. These institutions also provide the extension links which are pivotal to the implementation of research findings. Current overseas collaborating institutions are:

-- Brazil	:	EMBRAPA
-- Peru	:	INIPA
-- Indonesia	:	AARD
-- Kenya	:	Ministry of Agriculture
-- Morocco	:	Hassan II University

The individual projects were designed to help alleviate some of the major problems which severely hinder small ruminant productivity in the LDCs.

<u>Problem Area</u>	<u>Research Area</u>
Inadequate Year-Round Feed Supply	Nutrition and Feeding
Improper Grazing Practices	Range Management
Poor Reproductive Performance	Research on Reproduction
Non-Selective Breeding	Genetic Improvement of Local Breeds and Cross-Breeds
Disease-Parasitism	Animal Health
Sub-Optimum Utilization of Available Resources	Management
Cultural Constraints and Lack of Capital	Socio-Economic Research
Lack of Coordination and Integration in Improvement of Efforts	Systems Research

16. Inputs

Funds for the SR-CRSP have been committed by A.I.D. under the terms of the Grant which requires a minimum cost-sharing contribution of 25 percent from the participating U.S. institutions. The terms of the grant are favorable for a research program, always a long-term venture. The SR-CRSP budget for the initial five-year funding period was 15 million U.S. dollars. For the next four years budgets were/are four million dollars

annually. The overseas host country collaborators are also supporting the program with direct funds and/or research services at a rate of over 15% - a very significant contribution to the program. U.S. institutions have matched A.I.D. funds at a rate of over 40% to date. The Management Entity and PIs have developed precise schedules for routine reports, committee meetings, and program reviews which result in program activities being accomplished in an expeditious manner.

The Organization of the SR-CRSP

o The Management Entity (ME)

Seventeen research proposals were selected to initiate the SR-CRSP activities and University of California/Davis, one of the participating institutions, was designated the Management Entity (ME). A Program Director was appointed, and groups were established to play distinct roles in the function of the SR-CRSP.

o The Technical Committee (TC)

The Committee is a body of the SR-CRSP which develops and implements research projects in the U.S. and overseas. It includes each Principal Investigator (17 members).

o The Board of Institutional Representatives (BIR)

The Representatives serve as Board of Directors responsible for approving budgets and policies. It consists of one representative from the administration of each U.S. participating institution and each of the five host countries. Members cannot be Principal Investigators.

o The External Evaluation Panel (EEP)

The Panel is an Advisory Committee of the SR-CRSP responsible for review and evaluation of research activities and progress annually. It consists of a multidisciplinary group of five eminent scientists from institutions not participating in the SR-CRSP. Each year, one member retires and a new member is selected to assume the duties.

o The Overseas Counterparts

Host collaborators have attended and contributed to the Technical Committee actions for every country. For example, in Kenya this is accomplished by a Program Administration Committee (PAC) which is composed of representatives of the Ministry, University, USAID Mission, and the U.S. Principle Investigators. Similar organizations are active in Brazil (EMBRAPA), Indonesia (AARD), Peru (INIPA), and Morocco (MSP) to influence program directions.

17. Outputs

The five important units of the SR-CRSP have all developed an excellent working relationship:

- The Management Entity
- The Technical Committee
- The Board of Institutional Representatives
- The External Evaluation Panel
- The Overseas Counterparts

Their work has been thoroughly documented and distributed to all constituencies. Annual work plans, budgets, and progress reports, by each Principal Investigator, are submitted to the ME for review and forwarded to both the EEP and the BIR for evaluation and/or approval.

The SR-CRSP established Memoranda of Understanding with all five of the original target countries where work is now underway: Indonesia, Kenya, Morocco, Brazil and Peru. Excellent relationships have been established with the administrators and scientists in each host country. Most of the Missions are showing a keener interest in program activities and a couple of them have helped to strengthen the in-country programs.

Perhaps, most significantly, it has been particularly exciting to see that the SR-CRSP has focused on the needs of the small-holder or limited resource farmer. In Indonesia and Kenya, all the effort has been conducted to support a baseline survey work at the village level in every discipline. In Peru most of the work has concentrated in the Central and Southern High Sierra working with cooperatives formed after land reform or with ethnic groups in isolated villages; in Brazil the SR-CRSP has complemented EMBRAPA's Sheep and Goat Research Center which was inaugurated in 1978; and in Morocco the SR-CRSP has established new animal research facilities with Hassan II University.

Site development overseas has been very significant. SR-CRSP resources have been used as seed money--the catalyst that has inspired substantial investment from local governments. Many lasting facilities are in place only because the SR-CRSP scientists collaborated with particular counterparts.

SR-CRSP scientists have been publishing their research findings. There have been over 1,200 research reports, papers, abstracts and verbal presentations related to small ruminants. They have participated in symposia, seminars and short courses. A few of the U.S. scientists have been invited to present talks on SR-CRSP activities at Bureau and International Center sponsored meetings.

The training portion of the SR-CRSP has been extremely successful. To date, 85 scientists from developing countries have received or are presently earning graduate degrees in U.S. institutions while 20 U.S. graduate students have received long-term training in host countries. The

program also provides support to students attending host country universities for MS and Bachelor Degrees. Forty students have been supported during their MS Degree work in host country universities/colleges. Also, the training of 25 students in host countries has been supported to assist them in earning Bachelor Degrees. The percentage of females in both U.S. and host country long-term degree programs, supported by the SR-CRSP, has been encouraging. Eight overseas counterpart researchers have been sent to the U.S. for short-term, intensive instructions on advanced research techniques. Likewise, many of the U.S. scientists have given specialized training in research methodology and facility development during overseas TDY's. The SR-CRSP scientists have participated in and/or sponsored 16 short courses in host countries which have attracted from 10 to 117 attendees. A complete list of these short courses is shown in the recent publication titled Research Publication and Training Roster 1978-1985 for the SR-CRSP.

In addition to sponsoring the publication of research results via varied methods, the SR-CRSP has published general materials on the program. The Research Publication and Training Roster 1978-1985 listing all research reports, trainees, and short courses has been already sited. A fold-out flyer and a glossy booklet on the program publicize the SR-CRSP. A separate directory, listing all persons in U.S. institutions, A.I.D., and in host countries involved in SR-CRSP activities, is also available. An annual progress report is distributed each year and informal newsletters are circulated. Copies of all of these publications are available upon request from the Management Entity Office in Davis.

U.S. scientists have achieved a direct "hands on" experience with the worlds most prolific breeds of sheep (which all exist outside of the U.S.A.). The SR-CRSP has been instrumental in the detection and elimination of a goat virus (CAE) in one country which has saved approximately \$2 M in animal losses per year. A heat stable vaccine for contagious caprine pleuropneumonia (CCPP) has been developed, through program efforts, which will have regional ramifications to the tune of at least \$15 M per year. Increased production from sheep and goats, through the introduction of improved management practices, is occurring in all of the host countries. Thus, a program such as this one, directed at the small producer in the LDC's, is showing excellent progress and also shows a potential to have far reaching repercussions in our own industry in the U.S.A.

18. Purpose

The approved project purpose is to link institutions (including U.S., international and developing country agricultural institutions) having compatible interests for organizing research programs in small ruminant production. Developing these research linkages will aid in the mobilization and coordination of research talent to ameliorate world food nutrition and lessen problems associated with research activities in sheep and goats. The mandate of Title XII - Famine Prevention and Freedom from Hunger - is answered with the strengthening of capacities of U.S.

institutions and supporting the application of science to solving food and nutrition problems of developing countries. The outputs set forth in number 17 of this document show consistent thrusts towards accomplishing the approved project purpose and the recent A.I.D. Triennial Review of 1985 was able to document significant progress in this endeavor.

19. Goal/Subgoal

The long range goal of the SR-CRSP is to increase the food supply and raise the income of small farmer units engaged in small ruminant production through collaborative research projects by U.S. and developing country institutions. Research programs have been designed by U.S. Principal Investigators in collaboration with overseas counterpart scientists which mesh with the ideals of collaborating institution and complement host country government's current development programs. There is a high level of cooperation among all of the project's participants in the U.S. and abroad. In many instances, research facilities and experimental animals, as well as data collection and dissemination are being adequately shared. Integration concepts are being strengthened very rapidly. An active exchange of graduate students, technical personnel and counterparts is very evident. Actual outputs concerned with achieving the stated goals are detailed in Section 17 of this document.

20. Beneficiaries

The direct and immediate beneficiaries of the SR-CRSP activities to date have been the scientists of U.S. and host country collaborators through the development of improved research programs. All of the institutions have strengthened their capabilities for small ruminant research and production training components. Some of the U.S. institutions also have reported an increase of student interest in sheep and goat undergraduate and graduate programs. Both the U.S. and overseas research collaborators are reporting their findings for dissemination to the actual producers. This accumulation of data is forcing the embryonic development of extension linkages in all countries. This latter trust has been emphasized through the sponsorship of short courses and field days and the promotion of seminars at varied locations. Most of the U.S. institutions are establishing long lasting relationships with developing country agricultural policy and planning administrators as well as collaborating scientists. The rapid expansion of activities in sheep and goat research by the SR-CRSP has also stimulated the interest of U.S. commercial producers and international organizations in program support efforts.

21. Unplanned Effects

One of the most obvious unplanned effects from the SR-CRSP was the sudden interest in Caprine Arthritis Encephalitis (CAE) uncovered in Kenya. The SR-CRSP scientists were responsible for bringing CAE to the attention of Kenyan collaborators. The end results were that the GOK implemented procedures to eliminate CAE in the country and established policies to keep virus out through direct attention by the SR-CRSP scientists.

Focusing attention on CAE by SR-CRSP efforts has also stimulated interest by the USDA and several U.S. institutions for additional research at U.S. sites on CAE. Reports on the CAE problem are now appearing more frequently in U.S. scientific and trade publications. The influence on the U.S. and world goat producers by this one unexpected condition is developing into a valuable contribution that was not anticipated.

Another unplanned effect from the SR-CRSP activities, has been the changes occurring in teaching and research programs at U.S. institutions. New courses, improved facilities, short courses, increased collaboration between campus departments and campus-wide interests have all been generated to a substantial degree. The intensity of the campus collaboration has surpassed the expectations of U.S. University Administrators and encouraged them to be more responsive to support for the SR-CRSP activities of their faculty.

22. Lessons Learned

The mode of operations for any CRSP are more complex than for standard USAID contracts which took years to develop. Adjustments have been implemented in ME procedures as per recommendations by the SR-CRSP internal bodies, BIFAD, JCARD, EEP and USAID. The Principal Investigators have also had to modify some of their original work plans to better fit the objectives of host country scientists and upon the recommendations of the EEP. The Principal Investigators have also had to strengthen their procedures for selecting U.S. scientists to place in long-term positions overseas. A.I.D. Project Managers need to be better informed of the activities of other CRSPs so that experiences can be shared which might be helpful in management procedures. Normal management procedures in one host country are not always appropriate for implementation in another host country. Although utilizing one set of standard procedures for all research sites is the most convenient management method, they are not always appropriate for all situations.

23. Special Comments or Remarks

Although conditions have improved, interactions between the Mission staff and SR-CRSP personnel continue to need strengthening. Both parties must share the blame for this deficiency. The Management Entity has been instructed to promote seminars for Mission staff and at the same time missions are being encouraged to visit research sites and to attend in-country SR-CRSP meetings.

The scientists concerned with the SR-CRSP continue to receive national and international recognition from their peers by receiving special awards for services rendered to the industry. The number of invitations to participate in and make presentations to international meetings on behalf of the SR-CRSP has increased. Some of these presentations are subject specific while others are of a general nature about the overall SR-CRSP program. Most recently, the Management Entity has become involved with the FAO in the development of networks for small ruminant production.