

PD-ABP-056



CRSP Evaluation Instrument

SR-CRSP Response



SMALL RUMINANT  
COLLABORATIVE RESEARCH SUPPORT PROGRAM  
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July 15, 1994

Dr. Les Swindale  
c/o Dr. Philip Warren  
G/EG/AGR Room 420C  
USAID  
Department of State SA-18  
Washington D.C. 20523-1809

RE: CRSP Evaluation Questionnaires

Dear Dr. Swindale:

As requested, the CRSP Evaluation questionnaires were distributed to the Small Ruminant CRSP participants. Enclosed are the responses that have been received. They have been assembled in a binder to include a background introduction, the responses, and several bio-sketches of distinguished SR-CRSP participants who have successfully utilized the experience and knowledge gained from the SR-CRSP.

To facilitate review of the SR-CRSP materials, questionnaire responses are organized as follows:

- Small Ruminant CRSP Background
- Section A: Management Entity Questionnaire (UCD)
- Section B: Lead Principal Investigators Questionnaire
  - Response from Dr. Travis McGuire, Washington State Univ.
  - Response from Dr. Eric Bradford, Univ. of California, Davis
- Section C: Participating Host Country Agencies
  - Response from Indonesia
  - Response from Bolivia
- Section D: Distinguished Small Ruminant Trainees

We hope this information will assist you in your assessment of the CRSP as a research and development model. If any additional questionnaires are received, we will forward them immediately. Please contact us if you need any additional information.

Sincerely,

Montague W. Demment  
Program Director

cc: Richard Gray  
Joyce Turk

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## EVALUATION OF THE U.S. COLLABORATIVE RESEARCH SUPPORT PROGRAMS (CRSP)

### **Small Ruminant CRSP Background**

In December 1975, the U.S. Congress approved an amendment to the Foreign Assistance Act of 1961. Included in the amendment was Title XII, "Famine Prevention and Freedom from Hunger." A prime purpose of the title was to provide the means by which U.S. universities could make their expertise in science and technology more accessible to low income countries in their search for technical solutions to food and nutrition problems. This provision is being implemented by the Collaborative Research Support Programs (CRSPs). The CRSP format has been designed to tackle broadly focused but interrelated multidisciplinary research needs, and draws upon the capabilities of several institutions rather than any single one. By mid-1977, Small Ruminants and Sorghum/Millet were selected as the first two CRSPs to be funded.

Since the Small Ruminant CRSP was one of the first two programs to be initiated, it did not have the advantage of a model to guide implementation of program strategies. The goals of the Small Ruminant CRSP were established. These are to increase meat and milk production for the food supply and incomes of smallholders, using environmentally sound practices. The SR-CRSP objectives include expanding knowledge, understanding, increasing the efficiency and sustainability of subsistence-level small ruminant production systems, as well as strengthening the research capacity of overseas and U.S. agricultural institutions and organizations.

As ideas for research programs were formulated, close attention was given to the need for small ruminant research. The need is reflected in the fact that there are over 1,500 million sheep and 600 million goats in the world, more than half of which are in developing countries. Most of these animals are owned by small pastoralist and farmers with very limited resources. Due to the size of their population, small ruminants make a significant contribution to the economy and food supply in developing countries. Improving the performance of small ruminants, under smallholder management, provides a direct route to improving the diets and living standards of more than 150 million people living in some of the poorest regions of the world. The majority of the research needed must be carried out in the countries where the technology will be used and the national research systems lack the capability or resources to achieve this unaided. A major research program was required to adopt technology to meet farmers' needs and the environments found in developing regions, the Small Ruminant CRSP was just such a program.

In 1980, the Small Ruminant CRSP was awarded a \$20 million grant to cover the first five years of research. The Program consisted of seventeen projects carried out in five countries by twelve U.S. institutions. Three of these institutions and projects were discontinued in 1982. After the first grant ended, the SR-CRSP was awarded two additional grants of five years each. As projects reached maturity they were graduated and resources redirected to new or more junior projects. In 1987 one such site, Brazil, was declared a graduate country by USAID/W which led to the SR-CRSP phasing out of Brazil. In 1990, political unrest led to the closure of the SR-CRSP in Peru. As a result, in 1991 an agropastoral project was initiated in Bolivia. In 1993,

activities in Morocco were considered mature, so the SR-CRSP phased out. As of October 1, 1993, the Small Ruminant CRSP is active in three countries, Bolivia, Indonesia and Kenya. There are ten Principal Investigators carrying out eleven multidisciplinary projects in an interdisciplinary mode. The principal disciplines in the SR-CRSP include genetics, breeding, animal nutrition, animal health, range ecology, veterinary medicine, sociology, economics, and production systems. The current five year grant ends September 30, 1995. The total amount allocated for the 1990-95 grant is \$10.8 million and a grant modification for an additional \$900,000 is being prepared, bringing the total to \$11.7 million. The program has been an evolving one; changing to accommodate unforeseen circumstances, budget constraints, to enhance effective management, and to revise research directions.

The contributions of the Small Ruminant CRSP can be seen in many areas but one of the most important is training. Since its inception, the SR-CRSP has trained more than 400 men and women in formal degree programs, and countless others in workshops, seminars, and professional meetings. Approximately 58% of those in degree programs were from the U.S. Women account for 29% of the degree participants. There have also been 1,795 formal publications generated from research carried out under SR-CRSP and an additional 300+ technical reports and oral presentations produced by participating scientists.

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EVALUATION OF THE U.S. COLLABORATIVE RESEARCH  
SUPPORT PROGRAMS (CRSP)

EVALUATION INSTRUMENT

A. MANAGEMENT ENTITIES (MEs)

*Title of CRSP:* Small Ruminant Collaborative Research Support Program (SR-CRSP)

*Year of Initiation:* The SR-CRSP was initiated in 1978.

*Names of Program Directors and Years of Service:*

<i>Current:</i>	Montague Demment	<i>Years:</i> 1994
<i>Past:</i>	Barbara D. Webster	1993-1994
	John Glenn	1991-1993
	Maurice Peterson	1990-1991
	James W. Oxley	1988-1990
	William Weir	1987-1988
	David Robertshaw	1986-1987
	William Weir	1985-1986
	David Robinson	1978-1985

*Name/Title of Current Director's Supervisor:* Robert Shelton, Vice Chancellor-Research

*Names of Evaluators:* Les Swindale, Charlotte Miller, John Eriksen, Richard Gray and Gary Jensen

*Interview Location:* University of California, Davis

*Names, Title/Affiliation of Person(s) Interviewed:*

Montague Demment	SR-CRSP Program Director Elect
Barbara D. Webster	SR-CRSP Interim Program Leader
James W. Scott	SR-CRSP Assistant Program Director
Jennifer Barber	SR-CRSP Bookkeeper
Susan Sainz	SR-CRSP Administrative Assistant
Jim Hafner	SR-CRSP Student Assistant
Robert Shelton	Vice Chancellor-Research
Charles Hess	Director-International Programs, UC Davis
Eric Bradford	SR-CRSP Principal Investigator, Dept. of Animal Science
Ed Price	Chair, Department of Animal Science
Dan Brown	Associate Professor, Dept. of Animal Science
Hakan Sakul	SR-CRSP Postdoctoral Researcher
Willy Cushwa	SR-CRSP Graduate Student
Patricia Conrad	SR-CRSP Faculty Assistant, VM: Pathology, Microbiology & Immunology
Bennie Osburn	Assoc. Dean-Research, School of Veterinary Medicine
Tilahun Yilma	Professor, VM: Pathology, Microbiology & Immunology
Terri Hill	SR-CRSP assisted Graduate Student

*Date of Interview:* May 16 and 17, 1994

*Date(s) and Type(s) of Any Follow-up Interviews:* Not Applicable

*1. What progress has been made toward meeting the original CRSP objectives (explain):*

The primary objective of the Small Ruminant CRSP is to improve the efficiency of small ruminant production by developing technologies and interventions which generate economic development and which enhance and sustain the environment to benefit the social and economic well-being of people. This continuous process is carried out through research activities which increase the production of meat, milk, fiber, and by-products of small ruminants in areas of the world where they are a source of income for smallholders. Strengthening the research capability of the United States and overseas agricultural institutions, especially through on-site training, is also an objective of the SR-CRSP. The SR-CRSP is constantly making advances towards these goals but we are faced with a situation of demand exceeding supply.

*2. What are the specific target groups for which the CRSP research activities are being undertaken:* As stated in the objective of the Small Ruminant CRSP the target groups are smallholder farmers, and United States and overseas agricultural institutions.

*3. Is the CRSP providing the types of research, training, and technical progress most needed in your subject matter area to address priority global problems in sustainable agricultural production and utilization of food crops, livestock, fisheries, and natural resource management, etc.:*

*a. In US:* Yes, the research the Small Ruminant CRSP performs provides the results needed for small ruminants in the United States as well as abroad. The U.S. benefits from research performed in the humid regions of the world to control parasites; development of a vaccine for common recombinant ruminant viruses; work with prolific sheep to increase breeding potential; and research in developing a breed of sheep with no wool for warm climates where wool is not a necessary by-product.

*b. In LDCs:* Yes, the Small Ruminant CRSP is providing the research, training, and technical progress most needed as fifty-three percent of the world's sheep and ninety-four percent of the world's goats are in the developing countries, and are owned primarily by farmers of very limited means. Small ruminants contribute significantly to the economy and food supply in these regions and the supply of these products does not meet the demand. The SR-CRSP is able to improve performance of small ruminants and directly improve the diet and standard of living for a great many people.

*4. What is your understanding of the goals and objectives of the CRSP:*

*a. Goals and objectives:* The primary objective of the Small Ruminant CRSP is to improve the efficiency of small ruminant production in order to generate economic development. Another objective is to strengthening the research and training capability of the United States and overseas agricultural institutions.

*b. Are they realistic:* Yes, they are directly realistic in the countries where the SR-CRSP conducts research and indirectly in other LDC's, through publications, international meetings, training and formal SR-CRSP networks. While it may not be realistic to believe we can improve all of the developing countries in existence, we can achieve our goals in the communities we work with by developing technologies and interventions which enhance and sustain the environment to benefit the social and economic well-being of the people, and can be applied worldwide. This is achieved through research activities which increase the production of meat, milk, fiber, and by-products of small ruminants, and especially through on-site training.

5. *How is the CRSP supporting realistic strategies and agendas developed through a functioning network process that insures realistic and effective research efforts (explain):*

The SR-CRSP supports three regional small ruminant networks, Latin America, Africa, and Southeast Asia. The SR-CRSP Bolivia coordinates the Latin America Network, SR-CRSP Indonesia provides information to the Southeast Asia Network and SR-CRSP Kenya assists KARI in supporting the Africa Small Ruminant Network. These networks allow an exchange of information among scientists from large geographical regions, produce newsletters, manuals, workshops, short courses, seminars, and disseminate small ruminant research information. These networks are supported by the SR-CRSP in terms of supplying manpower, research results, technical information, communications, and funding.

6. *How is the CRSP research program designed to address multi-sectoral, biological, physical, social and economic constraints (explain):*

Since its inception, the SR-CRSP has functioned as a multidisciplinary program. Each site has included a combination of social and biological sciences. The U.S. scientists work with the HC counterparts in developing detailed research plans drawing on each discipline. The research plan addresses the constraints deemed as the highest priorities by the combined team of U.S. and HC scientists. To address constraints several target areas of research have been identified and pursued. These areas include nutrition, forage, range management, animal health, parasitology, reproduction, genetic improvement, sociology, economics, and systems research. Due to overlap of resources in many of these areas there is strong interdisciplinary interaction between and among biological and social scientists.

7. *How are the multi-disciplinary, inter-disciplinary team efforts successful in producing results (explain):*

SR-CRSP activities are organized and managed to encourage and facilitate multi-disciplinary research on specific projects at designated worksites. This stimulates cooperation among scientists of different disciplines in U.S. participating institutions, and also collaboration between them and host country scientists. They are successful in pooling resources in order to prevent duplicative efforts. This is also evident between the social and biological sciences, as the social scientists provide the baseline background, biographical information, sociological and economic impacts of the work the biological scientists are performing. This type of team effort is essential if we are to have an understanding of how our presence has impacted the community involved.

8. *How critical is the CRSP in assisting the developmental process within the food and agricultural sectors:*

*a. In US:* The SR-CRSP has had a relatively minor role in assisting the developmental process in the U.S. The greatest impact has been to increase the number of scientists with expertise in small ruminant research. Many of the SR-CRSP research projects are applicable to various regions in the U.S. such as work done with small ruminants in humid climates, increased prolificacy, disease resistance, etc.

*b. In CRSP collaborating countries:* The SR-CRSP has had an extremely critical role in the development of LDC's in which we work. In most cases the extent of small ruminant knowledge was extremely limited at the time of initiation but the SR-CRSP has now developed a cadre of well trained scientists. These scientists will remain as a lasting impression of our work and will continue to aid in the development of their country.

*c. In a global context:* The SR-CRSP has heightened worldwide awareness, interest in, and knowledge of small ruminants and the research pertaining to them.

*9. What types of formalized cooperative agreements exist between the ME, US collaborating institutions, HC institutions and USAID country missions:*

*a. In US:* The SR-CRSP Management Entity (ME) at the University of California, Davis, has a formal grant agreement with USAID under Grant No. DAN-1328-G-00-0046-00. The ME has formal subgrant agreements with eight U.S. land-grant institutions and one NGO.

*b. In CRSP countries:* The SR-CRSP has a Memorandum of Understanding (MOU) with each of the collaborating host country institutions.

*c. USAID country missions:* Not applicable.

*10. What are the assurances that CRSP funded science is addressing high priority development needs or problems in LDCs and US:*

*a. In LDCs:* When a small ruminant research project is proposed it is subjected to a rigorous review process. Small ruminant scientists worldwide are called upon to serve as peer reviewers, to read and evaluate the proposed research on the basis of need and scientific merit. Based on these evaluations a recommendation of action is made. After this recommendation is forwarded to USAID they again confirm that the project addresses a high priority development need before funding is committed. To assure that the research continues to meet that need after funding is granted, the External Evaluation Panel performs annual reviews of projects and publishes a report stating evaluations and recommendations for improvement.

*b. In US:* Since our research focuses on and takes place in lesser developed countries, one of the factors we take into consideration when evaluating a proposed research project is how it will benefit the United States. The research conducted in the LDC's is widely applicable to small ruminant needs and problems such as parasites, infectious diseases, increased production, etc. which are concerns in both the U.S. and LDC's making the research mutually beneficial and applicable.

*11. How do CRSP priorities match-up with USAID Country Development Strategy Statements (CDSS):* All MOU's are proposed and reviewed with the USAID Host Country Mission and the Mission representative assigned as liaison keeps the project informed of any potential conflicts.

*12. How do CRSP priorities relate to and support USAID global issues and thrusts:*

The Small Ruminant CRSP integrates a wide variety of priorities into the research performed to meet our objectives,. Based on input from the USAID Program Manager, the SR-CRSP designs the grant proposal as well as annual workplans. Some of priorities are environmental impact and relevance, agricultural sustainability, contributions to U.S. agriculture, linkages and networking, gender analysis, collaboration with IARCs and other CRSPs, support for free markets, contribution to and compliance with Mission objectives, concern for individuals, support for democracy and humanitarian assistance. All of these relate to and support integral USAID global issues and thrusts.

13. Explain how the HC participants contribute to problem identification, research priority setting and planning:

The Small Ruminant CRSP is structured to include a host country counterpart collaborating scientist to complement each expatriate resident scientist. The collaborating scientist and the resident scientist work as a team and equally contribute to problem identification, priority setting and planning.

14. What is the research capability equivalence between US and HC institutions in performing CRSP projects:

a. *Staff:* This varies incredibly by country but for the most part their capabilities are similar to that of the U.S., especially Ph.D.'s trained in the U.S.

b. *Facilities:* Again this varies incredibly by country, although on the average U.S. facilities are more technologically advanced than those found in LDC's.

c. *Institution/agency support:* Institution support has been good in the LDC's.

15. To what extent are social science disciplines integrated into CRSP activities:

The social sciences have been an integral part of the SR-CRSP since the inception of the Program. They have had continuous representation on the TC, Board, and the EEP. The research structure of the SR-CRSP is based on components. For example, the Dual Purpose Goat Component in Kenya is composed of a breeding project, an economics project, a systems project and a sociology project. This is a consistent pattern within the SR-CRSP, all components have either sociology, economics or both associated with it.

16. How have HC institutions integrated CRSP activities into their traditional programs:

The following are examples from each country of how the SR-CRSP activities have been integrated into the HC institutions. The greatest example of integration in each country is the training of scientists which will continually influence the traditional programs of the HC institutions. In Bolivia, the SR-CRSP has facilitated the integration of a socio-economics program into the traditional programs of IBTA. In Brazil, the SR-CRSP provided guidance essential to the development of the Brazilian National Goat Research Center (CNPC) as part of the Brazilian institution EMBRAPA. In Indonesia, the SR-CRSP has worked with SBPT and various other institutions in the development of Outreach Programs. We also had a key role in the development of the Indonesian Small Ruminant Network (ISRN), now a part of CRIAS. In Kenya, the SR-CRSP has played a pioneering role of institutionalizing multi-disciplinary research and on-farm trials to existing applied agricultural research. In addition the CRSP has made significant contributions to the development of physical facilities for research for KARI. In Morocco, the SR-CRSP collaborated with Hassan II and established a sheep experiment station, providing facilities for continued small ruminant research.

*17. What evidence exists to document that new knowledge has been generated from CRSP activities:* Evidence that new knowledge has been generated from SR-CRSP activities can be seen in the multiple technology manuals which have been written as a mode of technology transfer that will remain even after the SR-CRSP is gone; the proceedings of the 1993 Small Ruminant Workshop held in Puerto Rico in which past, present and future SR-CRSP scientists came together in a scientific exchange; and through the thousands of publications generated as a result of SR-CRSP research, which are listed in the "SR-CRSP Publication 1978-1993" document and have been circulated worldwide.

*18. How is the joint US/HC research collaboration exemplified in reports, articles and other outputs and results of CRSP activities:* Many of the reports, articles, presentations at international scientific meetings and other outputs produced by SR-CRSP scientists are written and co-authored by both resident and collaborating scientists exemplify the joint US/HC research collaboration. This can be seen in "SR-CRSP Publications 1978-1993"; "Proceedings: Small Ruminant Workshop, 7-9 September 1993"; and in the "Training Report 1978-1994".

*19. What criteria were used to determine the CRSP foreign sites:* Previous overseas research experience suggests that future sites be selected in accordance with the following criteria:

1. The site must have small ruminants.
2. The country must maintain friendly relations with the United States and must have a USAID mission supportive of CRSP activities.
3. The site must have local institutions which are capable of providing scientific counterparts in most of the disciplines involved in the program and which have the potential for providing students for training.
4. The site must require only limited investment for its development.
5. The host country must be prepared to invest in the program.
6. The host country must agree to permit research by U.S. students.
7. The host country must agree to the willingness to accept the presence of an expatriate site coordinator.
8. The site must have the potential of generating technology of regional applicability.
9. Commitment for collaboration and ability of collaborating personnel to work at the site.
10. Security for program employees.
11. The collaborating host country institution should have an identifiable linkage to the small ruminant producers. A clear example of this is an extension component, although there are other acceptable mechanisms.

*20. How are CRSP research standards determined and monitored to assure that results are credible and replicative:* Research standards are determined when a small ruminant research project is proposed. Small ruminant scientists worldwide are called upon to serve as peer reviewers to read and evaluate the proposed research on the basis of need, credibility, replicativity and scientific merit. Recommendations are made based on these evaluations. The recommendations are forwarded to USAID where they again confirm that the project addresses a high priority development need. To monitor the research and assure that results are credible and replicative, the External Evaluation Panel, consisting of accomplished scientists, performs annual reviews of projects and publishes a report of their evaluations and recommendations for improvement.

21. Describe the peer review process used to maintain high quality research standards: The peer review process is a fundamental part of the SR-CRSP. It occurs at three levels concurrently. The TC reviews workplans and budgets, publications are critiqued by participating SR-CRSP scientists as well as external scientists, and the External Evaluation Panel (EEP) conducts peer program reviews. The EEP consists of five senior scientists recognized by their peers and selected for their in-depth knowledge of biological and social science research disciplines associated with the SR-CRSP and experience in research and/or administration, international research experience is also a crucial element. In reviewing the SR-CRSP programs the EEP evaluates:

1. Whether the project goals and objectives are being maintained and accomplished.
2. The effective balance between research and training.
3. The balance between domestic and overseas research.
4. The effectiveness of dissemination of results.
5. The effectiveness of utilization of results.
6. The cost effectiveness.
7. The performance and development relevance, and relative strengths of activities.

Based on the data obtained from the reviews the EEP makes recommendations. (See the EEP Scope of Work for a more complete description, pg. 51 of the 1993 EEP Report.)

22. How effective, biased and efficient are the current planning and evaluation processes:

a. *Strengths:* The SR-CRSP planning and evaluation process draws strength from the input of scientists outside the CRSP. They are asked to evaluate and give an unbiased and objective recommendation. The information obtained is extremely beneficial. In addition, the Chair of the EEP observes the planning process and annual workplans and comments as appropriate.

b. *Weaknesses:* The greatest weakness of using external evaluators to achieve an unbiased opinion, is that it is not always an efficient method. These scientists have other commitments and are volunteering their time to work with our program, therefore we are not always their first priority which can make timing difficult. Detail understanding of external issues can be overlooked by reviewers unfamiliar with a particular site.

23. What is the total USAID contribution to this CRSP for each of the years of funding since initiation of the CRSP to present FY:

Grant	Year	USAID Funds
DAN-4178-A-00-6040	9/1/78	\$4,652,000
	8/29/79	2,700,000
	8/25/80	3,200,000
	1/23/81	615,000
	6/25/81	35,000
	3/4/82	3,200,000
	9/20/82	50,000
	4/28/83	1,125,043
	9/29/83	2,574,957
	2/23/84	1,510,043
<b>Grant Subtotal:</b>		<b>\$19,662,043</b>

23. (continued)

DAN-1328-G-SS-4093	9/26/84	\$3,134,988	
	3/12/85	4,000,000	
	1/26/86	2,580,000	
	6/30/87	346,000	
	9/30/87	1,634,000	
	5/1/88	2,800,000	
	4/30/89	2,800,000	
	6/19/90	1,005,120	
<i>Grant Subtotal:</i>			\$18,300,108
DAN-1328-G-00-0046-0	9/30/90	\$1,794,880	
	4/26/91	3,360,000	
	7/31/92	2,960,000	
	5/7/93	2,700,000	
<i>Grant Subtotal:</i>			\$10,814,880
<b>TOTAL from Initiation:</b>			<b><u>\$48,777,031</u></b>

24. *How does the cost of CRSP-funded activities compare to alternatives for conducting research and benefiting target groups:* The cost effectiveness of the SR-CRSP is very high, particularly in terms of probable long-term local impact. As a small budget program, the SR-CRSP has had to seek and develop substantial input from host country scientists and institutions.

25. *What is the cost of management and administration of the CRSP as a percentage of total budget and as a percentage of total budget plus all program contributions both domestic and foreign for each year of funding:*

Program Year	ME Cost	USAID Funds	%	Total Funds	%
Year 6 (84/85)	\$376,300	\$4,000,000	9.41%	\$9,220,750	4.08%
Year 7 (85/86)	\$426,800	\$3,600,000	11.86%	\$9,021,050	4.73%
Year 8 (86/87)	\$438,000	\$2,449,200	17.88%	\$7,685,430	5.57%
Year 9 (87/88)	\$453,400	\$2,808,000	16.15%	\$5,842,700	7.76%
Year 10 (88/89)	\$442,200	\$2,800,000	15.79%	\$5,906,050	7.49%
Year 11 (89/90)	\$584,700	\$2,800,000	20.88%	\$5,457,600	10.71%
Year 12 (90/91)	\$439,000	\$3,305,000	13.28%	\$6,707,900	6.54%
Year 13 (91/92)	\$498,500	\$2,800,000	17.80%	\$8,533,900	5.84%
Year 14 (92/93)	\$588,100	\$2,960,000	19.87%	\$9,336,250	6.30%
<b>TOTAL</b>	<b>\$4,247,000</b>	<b>\$27,522,200</b>	<b>15.43%</b>	<b>\$67,891,630</b>	<b>6.26%</b>

26. What percentage of the budget is charged as overhead by ME grant and any sub-grants:

Institution	On-Campus rate	Off-Campus rate
Univ. of California, Davis (ME)	44.0%	25.4%
Univ. of Missouri-Columbia	46.0%	23.0%
North Carolina State Univ.	47.5%	27.9%
Texas A&M Univ.	45.0%	23.0%
Texas Tech Univ.	47.0%	24.0%
Utah State Univ.	37.0%	21.5%
Washington State Univ.	45.0%	26.0%
Winrock International	50% of Personnel and a 7% CDA rate	
Univ. of Wisconsin, Madison	43.0%	24.0%

Except for Winrock International, the rates apply to the total modified direct costs (MTDC).

\* By agreement, Univ. of Missouri does not charge the grant for indirect costs. In return, the amount that would have been charged is used as their matching contribution.

27. As budget reductions have occurred what criteria are used to determine which CRSP activities or projects are cut or eliminated: While there is no predetermined list of criteria to determine which projects are cut or eliminated, there are several factors that are considered such as the stage of development of the host country science and institution; the host country interest and commitment; political stability and safety of project personnel; and the productivity of the program.

28. How much have the universities provided as "cost sharing" contributions for each year of USAID funding; how effective have these contributions been in helping to meet CRSP objectives:

a.	Year	Amount of Cost Sharing
	Planning Year (78/79)	\$249,600
	Year 1 (79/80)	\$934,200
	Year 2 (80/81)	\$1,735,100
	Year 3 (81/82)	\$1,215,500
	Year 4 (82/83)	\$1,330,200
	Year 5 (83/84)	\$1,224,000
	Year 6 (84/85)	\$1,398,959
	Year 7 (85/86)	\$1,368,884
	Year 8 (86/87)	\$1,094,731
	Year 9 (87/88)	\$968,306
	Year 10 (88/89)	\$1,014,192
	Year 11 (89/90)	\$801,449
	Year 12 (90/91)	\$704,129
	Year 13 (91/92)	\$829,039
	Year 14 (92/93)	\$663,299
	Year 15 (93/94) *	\$304,687
	<b>TOTAL</b>	<b>\$15,836,275</b>

\* The Year 15 figure reflects reported cost-sharing through June 1, 1994; estimated total as of 9/30/94 is \$475K.

b. *Effectiveness:* These contributions have served as supplemental resources that are helping to reach the CRSP objectives by providing personnel, supplies, equipment, travel, etc. and have been extremely effective.

29. *What are different opportunities for cost-sharing and how is cost-sharing documented for auditing purposes:* There are many opportunities for institution cost-sharing such as supplying university funds to support research or support staff for the SR-CRSP programs, not charging the grant program overhead, purchasing equipment for use by the program, providing funds for travel related to the CRSP program, etc. Cost-sharing is documented by the accounting office of each participating institution and a summary is provided to the ME. In the case of an audit the records would be obtained from the university in question.

30. *What and how are the collaborating foreign institutions and agencies providing in-kind contributions to the CRSP for each year of USAID funding:*

a.	Year	Value of Contributions
	Year 6 (84/85)	\$3,821,879
	Year 7 (85/86)	\$4,052,238
	Year 8 (86/87)	\$4,321,508
	Year 9 (87/88)	\$2,066,417
	Year 10 (88/89)	\$2,091,904
	Year 11 (89/90)	\$1,856,176
	Year 12 (90/91)	\$2,698,825
	Year 13 (91/92)	\$4,904,971
	Year 14 (92/93)	\$5,712,989
	<b>TOTAL</b>	<b>\$31,526,907</b>

b. *What is being provided as in-kind:* In-kind contributions include the value of services provided voluntarily by the host country institution such as professional and technical personnel, consultants, skilled and unskilled labor; the value of donated expendable personal property such as equipment, office supplies, lab supplies, workshop and classroom supplies; the value of donated land and buildings; the value of nonexpendable personal property; the value of donated use of space; the value of loaned equipment.

31. *What are specific possible cost-sharing mechanisms/opportunities and how are they documented for auditing purposes:*

a. *Cost-sharing mechanisms:* There are many cost-sharing mechanisms, which include the value of services provided voluntarily by the host country institution such as professional and technical personnel, consultants, and skilled and unskilled labor for SR-CRSP programs; the value of donated expendable personal property such as equipment, office supplies, lab supplies, workshop and classroom supplies; the value of donated land and buildings; the value of nonexpendable personal property; the value of donated use of space; the value of loaned equipment; not charging the grant program overhead, providing non-grant funds for travel related to the CRSP program or a cash contribution from non-grant funds for payment of actual expenses.

31. (continued)

*b. Documentation:* Cost-sharing is documented by each individual institution and a summary is provided to the ME. In the case of an audit, verifiable records would be obtained from the institution in question. These records must include proof of that rates reported for volunteer services are consistent with those paid by the institution; proof of market value for donated expendable and nonexpendable personal property of the same age and condition at the time of donation; proof of fair market value for land and buildings as established by an appraiser; proof of fair rental value for donated use of space as established by an independent appraiser; and proof of fair rental value for loaned equipment.

32. *Have formal buy-ins (through basic ordering agreements) and informal buy-ins (through direct mission grants) from USAID Missions, or host country, private sector and other donor agency contributions been a key aspect of the CRSP:*

*a. Formal buy-ins (type, source, amount, when):* For the Small Ruminant CRSP as a whole buy-ins have not been a key aspect but some of the projects involved with the SR-CRSP have leveraged funds from other sources. The Missions in Morocco and Kenya have provided funds to support SR-CRSP projects and in Bolivia the Mission has provided PL-480 support.

*b. Informal buy-ins (type, source, amount, when):* Same response.

33. *How have buy-ins contributed to achieving CRSP objectives and how can they be expanded:*

*a. Contributions:* The funds received from Morocco and Kenya facilitated the SR-CRSP development in these countries in earlier years. The funds were used to improve research facilities in each case. In Bolivia the PL-480 funds have provided salaries and supplies for the counterpart agency.

*b. How expand:* We should research available opportunities to combine research efforts with USAID Missions, IARCs, and other CRSPs. However, the donor agencies are experiencing budget reductions. Consideration of more in kind and volunteer services must be explored.

34. *How can USAID Missions support the CRSP through buy-ins and how can they be more involved in the future:*

*a. How to support:* USAID Missions can support CRSP activities through buy-ins if they are interested in some research component of the CRSP being done in that country and if the Management Entity of that CRSP agrees that such a research effort is related to the CRSP objectives and is capable of being conducted. The Mission would discuss the type, amount and method of support they wish to provide with the Management Entity of the CRSP in the country and an agreement would be formed.

*b. How to extend support:* To increase future Mission involvement CRSPs could actively seek new research sites which have Missions that support similar research activities. This could facilitate an active participatory relationship between the CRSP and the USAID Missions. Perhaps a regional approach to small ruminant research could be explored, i.e., several Missions contribute to a project aimed at constraints common to each Mission.

35. *How can CRSP projects continue and be supported in countries with no USAID country mission:* Through joint development with the host country and USAID, modify the procedures for handling responsibilities normally falling on the Mission such as international travel approvals.

36. *How effective are the linkages between the CRSP and USAID Mission staff and programs in the collaborating countries and how can these linkages be strengthened in the future to include a feedback loop from USAID Missions to CRSP management on program changes?*

*a. How effective are linkages:* This is highly variable and depends on the country and the current situation.

*b. How to strengthen:* Closer collaboration between USAID/Washington and the USAID Missions so that they have similar priorities and interests.

37. *What have been the direct impacts of the CRSPs' activities:*

*a. In the US:* Over 230 U.S. students trained and working to continue the small ruminant research and technologies worldwide. The SR-CRSP activities directly impact the U.S. in terms of increased opportunities for women to participate in international research, research performed in the humid regions of the world to control parasites; development of a vaccine for common recombinant ruminant viruses; work with prolific sheep to increase breeding potential; improved flock management methods and farming systems; and research in developing a breed of sheep with no wool for warm climates where wool is not a necessary by-product. All of these can be applied to certain geographical regions of the U.S. where small ruminants exist.

*b. In CRSP collaborating countries:* Over 170 host country students trained and working to return and continue the small ruminant technologies within their country. Provided farmers with improved flock management techniques and farming systems, in order to make their land more productive. Strengthened the national agricultural research capacity by training scientists, introducing socio-economic research in some instances, teaching interdisciplinary research methods, development of on-farm research, and facilities development. Development of sheep and goat breeds to provide additional nutritional and economical benefits to the host country communities. Developed alternate uses of resources, such as grazing sheep under rubber plantations or feeding them natural waste products from factories as opposed to purchasing expensive feed supplements. Development of various vaccines to provide local farmers with a method of curing diseases or parasites which kill their animals. Improved the environment through reduction of herbicides.

*c. In non-CRSP collaborating countries:* The SR-CRSP has made their resources available to all countries and scientists through access to regional networks, and numerous publications, such as technology packages, providing them with the opportunity to utilize our research to the benefit of their countries.

*d. Other impacts:* The SR-CRSP has also been a model for conducting research in LDC's. As well as an example for LDCs of the democratic principles which are inherent in the CRSP.

38. *What CRSP baseline data were collected against which impacts could be measured:*

The Small Ruminant CRSP socio-economic activities carried out baseline studies at the various host country sites. The data collection was designed to provide the information needed to respond to the requirements as proscribed by USAID/W in the grant document and Logframe. Recently, greater emphasis has been given to impacts as distinguished from output. Impacts as currently defined have not been measured through out the life of the CRSP. The SR-CRSP is in the process of rectifying that and reconstructing the analysis of accomplishments and incorporating impact assessments in current information collection and reporting systems.

39. *Have there been indirect or unexpected impacts of the CRSP:*

a. *In the US:* U.S. students have gained international research experience.

b. *In CRSP collaborating countries:* In several instances by-products of the research being conducted have turned out to be extremely valuable to the community involved. An example of this is in Bolivia, due to the large herds of animals being studied, the amount of animal waste increased drastically, it turned out that there was a large market for this as fertilizer and the community has developed a new economic trade.

c. *In non-CRSP foreign locations:* There has been an enormous amount of interest in response to our research and an increasing number of scientists from non-CRSP locations are requesting SR-CRSP publications and attending SR-CRSP sponsored workshops and seminars.

40. *Are additional impacts anticipated from CRSP supported activities over the next 3-5 years?*

In the US, in CRSP collaborating countries, and in non-CRSP countries substantial impacts are anticipated from CRSP supported activities over the next few years, assuming continued financial support and authorization to conduct research.

41. *Do annual project planning and reporting documents contain estimates of impacts in addition to stated plans and/or methods for measuring such impacts:*

Annual Workplans and Budgets contain results to date and future plans to increase the impacts from these results. Annual Reports contain summaries of the impacts realized during that year. External Evaluation Panel Reports contain estimates of impacts, provide recommendations for increasing the impact of the research, and methods for measuring the impact.

42. *What are the "lessons to be learned" from your CRSP activities:*

The most important lesson learned is that multidisciplinary small ruminant research at an international level requires much time. There are several factors that contribute to a lengthy research cycle, these are small ruminant production cycles, fragile lands requiring years to show recovery from improved management practices, demonstration research, on-farm trials, limited resources, lack of trained host country personnel, training time, governmental regulations, and site variability's.

43. *How has the CRSP effected the level of competence and productivity to identify constraints, plan and conduct agriculture research, and to extend the results to end-users (explain):*

a. *Scientists and institutions in developing countries:* The SR-CRSP has a very strong commitment to the training of individuals interested in small ruminant research. The SR-CRSP has supported over 170 host country men and women in formal degree programs and countless others in workshops, seminars, and professional meetings. This has improved the overall level of competence and productivity, allowing host country nationals to be active participants in the planning and implementation of small ruminant research and to move into high level government positions involved in setting policies on animal production. The results of this research are extended to end-users through short courses, technology packages, publications, and the existing networks.

b. *Scientists and institutions in US:* The SR-CRSP has trained over 230 U.S. students in formal degree programs and countless others in workshops, seminars, and professional meetings. This has given U.S. students an opportunity to gain international experience and incentive to continue expansion of small ruminant research and technologies worldwide. Results are extended to end-users through teaching, research and extension in public as well as private sectors.

44. *How and to what success are CRSP research results being extended to the target groups and clientele (explain):* Each country in which the Small Ruminant CRSP works has a functioning network. In Kenya and Indonesia the SR-CRSP collaborates with existing small ruminant networks which allows an exchange of ideas among scientists from large geographical regions and the SR-CRSP has established extension programs for training long past the life of the CRSP. In Bolivia the SR-CRSP operates its own network which is accessible to all of Latin America. These networks produce newsletters, manuals, workshops, short courses, seminars, and disseminate small ruminant research information. These networks are supported by the SR-CRSP in terms of supplying manpower, research results, technical information, communications, and funding. These networks have proven to be an extremely successful method of extending the technologies learned to the target groups.

45. *Relative to the scope of work, how effective has the CRSP been in helping to disseminate and transfer research results (explain):* Very effective. See #44 for more detail.

46. *How has the CRSP network disseminated and shared research information with developing country research collaborators, technology transfer specialists, private sector and USAID:* All research results are shared through the same channels, for method examples please see questions #5, 44, 45, 47, and 48.

47. *How effective is this dissemination and how can it be improved in the future:*

a. *How effective:* Very effective.

b. *How to improve:* Increased support to these existing networks.

48. *What is the availability of CRSP-funded results, how are US and foreign clientele made aware of its availability and how can they access it:*

a. *Availability:* Available to any interested party.

b. *Awareness:* Announcements of publications/reports are placed in various newsletters from organizations with ties to small ruminants.

c. *Accessibility:* Results are accessible to anyone who sends a request to the SR-CRSP.

49. *How are non-participating universities kept informed of CRSP activities and opportunities for participation:*

a. *In US:* Announcements are placed in journals, newsletters, presentations at academic and professional meetings/conferences and other media. The SR-CRSP also sends out announcements or requests for proposals to eligible universities and/or collaborating institutions in the U.S. and abroad.

b. *In HC:* See a.

c. *Other LDCs:* See a.

50. *How can the CRSP most effectively provide benefits to potential end-users in non-CRSP countries:* The SR-CRSP can most effectively provide benefits to potential end-users in non-CRSP countries through their participation in SR-CRSP sponsored short courses, seminars, and workshops; through worldwide dissemination of various publications; and through existing small ruminant networks, including an electronic bulletin board accessible worldwide.

51. *What primary and secondary factors should be considered when deciding to expand, continue or terminate a CRSP (explain):*

a. *Primary factors:* The primary considerations should be the quality of the research, the contributions to the host country's development and the relevance to the scientific community as well as to the community of lesser developed nations.

b. *Secondary factors:* The secondary considerations should be quantity and quality of the outputs, e.g., number of trainees, publications, products, etc.; cost effectiveness of the projects; total benefits, i.e., research opportunities for U.S. and host country institutions and students, expanded markets for U.S. industry, as well as humanitarian and international political advancement.

52. *What major factors or variables were important in selecting present "prime" or principal sites overseas versus potential sites at other locations (explain):* The major factors included ecological representation, potential to apply research results regionally and globally, host country commitment, availability of collaborating personnel, logistical infrastructure, eligibility for USAID support and USAID Mission approval.

53. *How successful have these "prime" sites been in supporting CRSP objectives (explain):* All of the sites have been supportive of the CRSP objectives. However, there has been a "break-in" period with each new site. Typically, it takes at least one year for each side of the partnership to adjust to the unique operating style of the other and work out details that meet each other's needs. The fundamental commitment of each partner is essential for working out the necessary compromises and sustaining a productive working relationship.

54. *How many persons for degree and non-degree training have been supported by CRSP funds since the beginning of the CRSP by year, e.g. B.S., Ph.D., other:* Over 400 persons have received degree training since the inception of the Small Ruminant CRSP. A complete listing, entitled, "Training Report 1978-1994", was given to each member of the CRSP Evaluation team during their visit to the Management Entity at UC Davis.

55. *Where is training conducted, e.g., HC, US, other foreign country; breakdown by number and degree:* See the "Training Report 1978-1994" cited above. Degree training is usually conducted at a U.S. institution but in some instances the training is carried out at an institution in the host country, a neighboring country or in a country that shares the native language of the trainee. Non-degree training is usually conducted in the U.S. or host country. Exceptions are international symposia or conferences held in other lesser developed countries.

56. *What percentage of persons by country origin trained complete their training or degree program:*

US 98%

HC 96%

Other 99%

*57. Are the research results and training appropriate to benefit the target groups (explain):*

*a. Research results:* Yes. Examples of research results benefiting the target group are: 1) the Dual Purpose Goat developed for the Kenya smallholder to improve protein intake of children and adults; 2) prolific sheep researched in Morocco and Indonesia have increased the production of smallholders' flocks in those countries; and 3) nutrition research involving sheep under rubber trees in Indonesia has aided the Indonesian government with reducing the use of herbicides as well as lowering the feeding costs of producing sheep and cutting the labor costs of weeding for the rubber plantations.

*b. Training results:* Examples of the benefits of formal training will be discussed in more detail in an appended item but, in brief, some of the degree trainees have moved into senior government offices in the countries where the SR CRSP has worked, e.g., Adiel Nkonge Mbabu received his Ph.D. at University of Missouri in 1988 and now heads up the Socio-Economics unit of the Kenya Agricultural Research Institute (KARI) and Subandriyo who received his Ph.D. in genetics is the Assistant Head of the Central Research Institute of Animal Sciences (CRIAS) for the Government of Indonesia. Non-degree training conducted by the Small Ruminant CRSP is exemplified in the Farming Systems Project in Kenya and the Outreach Pilot Project in Indonesia; both projects worked directly with the farmers in the community to help the farmers improve their animal production and management.

*58. How does the CRSP complement on-going research of International Agriculture Research Centers (IARC's) and national agriculture research systems (NARS) and other US funded international research programs (explain):* The Small Ruminant CRSP has a long history of cooperation with International Livestock Center for Africa (ILCA) and the International Laboratory for Research on Animal Diseases (ILRAD) in Kenya. The SR CRSP has provided research staff and ILCA and ILRAD have made laboratory space available. Each has shared research findings and work cooperatively in developing research plans. Dr. Robert Booth, Director of the International Center for Agricultural Research in Dry Areas (ICARDA) is currently a member of the SR CRSP Technical Committee.

In Kenya, the Small Ruminant CRSP enjoys a close working relationship with the National Agricultural Research Program (NARP) which is under KARI, the SR CRSP's collaborating agency. NARP has shared personnel with SR CRSP and facilitated communications and logistical support in Kenya for the SR CRSP. In Indonesia, the Agency for Agricultural Research and Development (AARD) is the national agricultural research arm of the Government and happens to be the cooperating agency for the SR CRSP/I. AARD has representation on the SR CRSP Administrative Council and is an active participant in the SR CRSP planning sessions. SR CRSP projects are planned to complement the NARS activities and research observations and conclusions are shared freely.

*59. What are the roles and how effective are the External Evaluation Panels, Board of Directors and Technical Committees in guiding the direction of CRSP research activities (explain):*

*a. EEP:* In the SR-CRSP, the EEP consists of five scientists from the major disciplines active in the Program, e.g. veterinary medicine, animal science, range science, economics, and sociology. The EEP reviews the projects each year, visits at least one overseas site and submits a report on the Panel's observations with recommendations to the Program Director. The SR-CRSP EEP has been very effective and been a valuable source of objective information for the Director.

59. (continued)

b. *BOD*: The Board of Directors was reconfigured in 1990, reducing it in size to seven people which now functions more effectively and efficiently. The effectiveness of the Board is dependent on the Chair's commitment to the Program. The Board's duties are described in the By-laws which were given to the Evaluation Team when they visited the Management Entity.

c. *TC*: The role of the TC is set forth in the SR CRSP By-laws. Essentially, the TC is concerned with the scientific/technical plans and progress; it serves as an in-house peer review body. It is a respected source of information for the Director. The effectiveness of the TC has varied over time. There was a period when the TC was not as objective in critiquing each other's work and plans; and they became more concerned with management matters than was appropriate. Over the past few years that trend has been reversed and the TC is focusing once more on the technical aspects of the Program. In 1991, the By-laws were amended to include two scientists to the Technical Committee who are not Principal Investigators. The TC is now comprised of the Director of an IARC, the Director to the U.S. Sheep Experiment Station, as well as all U.S. Principal Investigators and one technical representative from each host country.

60. *How has the CRSP developed new knowledge through collaborative research and who applies it to create impacts (explain)*: New knowledge is developed through universally accepted procedures for scientific research, i.e., identify the problem, make observations, set up and carry out experiments, draw conclusion then test and verify findings. This is done jointly by the U.S. and the HC participants. Much of the research is carried out in the host country site; sometimes testing and verification work is done in parallel at U.S. institution, or procedures requiring equipment or conditions not available in the host country will be done in the U.S. Often U.S. graduate students assist with the research or conduct a portion of the research. Information acquired is disseminated in papers, professional meetings, instruction manuals, published books, etc. In addition, on-farm demonstrations, field days, workshops and community meetings are carried out in the host country through out the life of the Projects. The collaborating agency then is responsible for implementing the information dissemination model as the agency sees fit.

61. *Explain how the private-sector participates in CRSP research, demonstration, planning or other activities*:

a. *In the US*: Historically, the private sector involvement in the U.S. has been indirect. The private sector has not become directly involved in research plans and procedures. The U.S. sheep and goat producers are interested in the vaccine work that has been done in Kenya under the direction of Washington State University. Similarly, the genetics research on disease and parasite resistance is of interest in the U.S. Information is made available through publications and seminars and extension programs to anyone.

b. *In CRSP collaborating countries*: The private sector is directly involved in the host countries. Since the primary target of the SR-CRSP are small holders, they are active participants in decision making, planning and procedures. The Outreach Pilot Project in Indonesia works with the local farmers and some testing is done on private farms. Similarly, the nutrition research on the rubber plantations in Indonesia requires direct participation of the plantation owners. In Kenya, farming systems project works directly with the farmers in helping them use the methods developed by the SR-CRSP for improving the size and health of their herds. In addition, a few Dual Purpose Goats have been placed with private breeders as a means of breeding and marketing the DPG.

61. (continued)

*c. How if any should private-sector involvement increase:* The SR-CRSP could invite representatives from the U.S. small ruminant producers to advise the Director on research plans and agenda as well as offer suggestions on program planning. Private producers could be invited to help sponsor research of particular interest and help with the cost of U.S. conferences and seminars aimed at sharing research findings.

62. *How has the CRSP established long-lasting networks among U.S. institutions and scientists, and between U.S. and host country research institutions and scientists (explain):*

*a. Within US:* The principal source of networking has been through regional newsletters and international meetings and conferences. See #5 and #44 for more detail.

*b. Between US and host countries:* See (a). In addition, post-doctoral studies, presentations at scholarly meetings and sabbatical leaves have established long-lasting links between scientists.

63. *How has CRSP networking with USAID Missions, BIFADEC, U.S. Universities, host country institutions, NGOs/PVOs and the private-sector helped identify and resolve priority constraints?*

When a project plan is being developed the principal participants, the Mission, U.S. Institutions, and host country institutions, must agree on the constraints to be researched. The initial plan requires the concurrence of BIFADEC, which also receives copies of all reports and publications produced. The host country private sector's interests are part of host country institutions' considerations. As pointed out above the U.S. private sector's involvement in the past has been indirect. The NGOs/PVOs, who are not direct participants, have limited input. However, there are often informal meetings and cooperative arrangements worked out with NGOs and PVOs working on similar small ruminant projects in the host countries with SR-CRSP research sites. Examples of these arrangements are Heifer Project International assisting with the distribution and breeding of DPGs in Kenya; the Indonesia International Animal Science Research and Development Foundation assisting with parasitology research on the SR-CRSP sheep in Indonesia; and the Bolivian SR-CRSP team meets regularly with PVOs working in the same geographic area to share information and insure there is no duplication of effort.

64. *How does the CRSP network with IARCs and National Research Centers to complement research work and avoid duplication of effort:* As pointed out in question 58, the SR CRSP interacts directly with IARCs and NARCs when developing project plans at any given site; one of the primary objectives is to avoid duplication and conflicts.

65. *How do expatriate resident scientists (full-time in host country) hamper or enhance the development of local leadership, program development, and sustainability (explain):*

Resident scientists can be extremely important in establishing a new site or overseas project. It is essential to have at least one expatriate in country to train the nationals on administrative procedures, particularly all of the USAID regulations that pertain, and insuring that the collaborators fully understand their role in a collaborative program. It is not uncommon for administrators of a collaborating agency in at a new site to expect the SR-CRSP to be a development project that is executed entirely by expatriates instead of a collaborative research program. Once the CRSP becomes established and the collaborating agency understands the Program, the number of resident scientists can be reduced. At least one resident scientist is

65. (continued)

needed to facilitate work flow and interact with U.S. and host country administrators. Often, the local culture is such that an expatriate can cut some of the bureaucratic tape that would not be possible by a national. Resident scientists also serve as a role model for the nationals. As the program matures and more responsibility is passed on to the host country nationals, the role of the resident scientist changes from leader to advisor.

66. *What do the External Evaluation Panel and Administrative Management Reviews contribute to CRSP management; are they objective and conducted by the appropriate technical specialists (explain):* As mentioned in question 59, the EEP has been very helpful to the SR-CRSP Director. The Panelists are selected for knowledge and achievements within their disciplines; they provide a very objective review of the Program. The value of the Administrative Management Reviews is less certain. There should be enough information from the Annual Reports and EEP reports for USAID to determine the progress and achievements of the Program. It is questionable if the benefits of the administrative review warrant the cost.

67. *What types of persons are recruited to participate on the TC and EEP; are they closely associated with the CRSP:* As mentioned in questions 59 and 66, the Technical Committee is made up of each of the Principal Investigators, Host Country Technical Representatives plus a senior IARC representative and a small ruminant researcher who is not a subgrantee. EEP members are senior scientists in the disciplines represented in the SR-CRSP but from institutions that do not hold SR-CRSP subgrants.

68. *Since institutionalization of program activities is critical to long-term sustainability, how effective has the CRSP been in this regard and what are future prospects:* The SR-CRSP research site in Kenya is well instituted in KARI; the future prospects for DPG and Farming Systems Projects are very good. In Indonesia the SR-CRSP is well seated, the scientists are trained but a few more years will provide the experience factor that will ensure sustainability. Morocco was graduated when it was capable of sustaining the research. Bolivia is still in the early stages of development; considerable training and experience is needed before it will be sustainable and institutionalized.

69. *How effectively has the CRSP addressed gender issues and integrated women into their activities:* The SR-CRSP has included the social sciences in all of the projects since the inception of the program but gender has grown in emphasis over the past five years in Program plans. Studying the roles of women and children has been a priority of the socio-economic studies. Evidence of female participation can be seen in every arena of the SR-CRSP, for example, approximately 28% of the degree trainees were women, all sites have included women as Resident Scientists, one woman Principal Investigator, two women Co-Principal Investigators, and a woman Associate Director who resigned June 30, 1994. In addition, the number of female researchers at the host country sites has increased appreciably since the inception of the Program.

*70. How are women and children reached by and benefited from CRSP-supported activities:*

Women have received degree and non-degree training by SR-CRSP and have been included in field training. Several socio-economics projects have focused on the roles of women and children in the participating host countries, the information generated has been incorporated into the biological research work and influenced dissemination of the research findings. Women and children are included in the community meetings in Bolivia; a women's group was included in the DPG breeding program in Kenya and the Kenya Farming Systems Project included women in the training sessions. In Indonesia, the Outreach Pilot Project includes women sheep producers. Most of the small ruminant tenders and herders in the lesser developed countries around the world are women and children, and they are the benefactors of the research results passed on from the scientists.

*71. Who are the principle advocates for the CRSP and why are they advocates:*

The principle advocates are governments of lesser developed countries with small ruminants, scientists interested in small ruminants and livestock as an element of the ecosystem, and small-holders who are trying to improve their livestock holdings. The CRSP offers a government the opportunity to gain access to the information and methodology of outstanding universities; institutionalize research programs and strengthen political relations with the small farmer, who constitutes a large percentages of the population. The universities have an opportunity to expose students to international agriculture and carry out research in an applied environment. Considering the total contributions of the universities, host countries and U.S. government the CRSP is an economical and beneficial program for all participants.

*72. How and to what extent do 1890 institutions participate in CRSP activities:*

The SR-CRSP had one 1890 institution as a subgrantee in Brazil in the first two years but it was phased out in 1982 by mutual agreement. Since that time there have been a couple activities in which 1890 institutions have participated, but they have not been competitive in terms of projects offered through open solicitation.

73. There was no question #73 on the disk provided.

*74. What are the principle strengths and weaknesses of the CRSP concept and its application to other research programs:*

*a. Strengths:* The collaborative concept forces involvement by the lesser developed country thereby increasing the chances for sustainability of the research program. The CRSP concept broadens the exposure and understanding of all of the participants and their institutions to intercultural relations. CRSPs can be very cost effective. The ripple effect of the training that takes place in a CRSP is difficult to measure but is very significant and lasting. The CRSP also has positive political effects at the grass roots level.

*b. Weaknesses:* Progress and impacts are not immediate. The meshing of any bureaucracies can be difficult, intercultural conflicts can be time consuming, and the program can be adversely affected by political shifts and changes.

75. *To what extent has this CRSP been active in inter-CRSP activities; how can this be facilitated:*

*a. Examples:* The SR-CRSP has had limited joint activity with other CRSPs; however, there have been discussions of opportunities, e.g., in Bolivia, one activity was suitable for Soils Management and in Kenya a potential project with the Peanut CRSP. The SR CRSP sociology project worked with the Bean/Cowpea CRSP on a project. Funding is a major impediment.

*b. Suggestions for improvement:* Perhaps in the future, a segment of new grants for CRSPs could include a "cross-CRSP" plan that would become an integral part of the grant award. This would capitalize on existing experience and knowledge of collaborative research techniques.

76. *To what extent do CRSP participating institutions seek supplemental funds from other potential donors:*

*a. US institutions:* The Principal Investigators continuously search for additional funding for their research. Most of the Principal Investigators have been successful in getting awards for research which is closely related to and complementary to their SR-CRSP work from a variety of public and private sources, e.g., NIH, USDA, Kenya NARP, etc. This information is not routinely reported to the Management Entity. The incentives are the opportunities afforded the Principal Investigator to expand or sustain his/her research work. There are not disincentives, i.e., SR-CRSP does not reduce budgets if a Principal Investigators obtains funds from other sources.

*b. In HC:* The collaborating agencies seek additional funding but typically they are not as aggressive and sophisticated in soliciting funding. Kenya has received funds from the USAID Mission, the NARP, and Indonesia has received support in various forms from other countries, e.g., Holland, Germany, Canada, etc. Bolivia has received \$400,000 from PL-480 funds. The incentives often relate to salary of the participants. The disincentives usually has to do with government procedures related to allocation and use of the funds.

77. *What percentage of budget has been expended on training of HC participants by year since beginning of CRSP:* Since we were not required to report this information to USAID, we did not collect expenditure data for training each year. Spot checks indicate that our training expenditures during the first two grants were much higher than the present grant. Our training expenditures were about 15% in 1985 and we now are running between 3% and 4%.

78. *Has a trend developed recently to shift funding priorities from long-term (10-20 years) to short-term research (1-5 years):* Definitely. The instability of funding makes it extremely difficult to develop sound long-term scientific research projects. Animal research programs require longer times to evaluate and validate the research, therefore requiring eight to ten years of stable funding.

79. *How does CRSP respond to foreign and domestic changes, e.g. political, problems, policy, budgets:*

*a. Responses:* This is a major challenge to any international activity. Changes usually require diplomatic negotiations and compromises; it can result in substantial changes in scope of research or even closure of projects, e.g., domestic budget decisions for 1993/94.

*b. What changes are most difficult:* The most difficult changes are those made without full consultation of parties involved and based on illogical, unsubstantiated reasoning.

80. *How have annual EEP and USAID administrative reviews been helpful to advancing the CRSP and improving its effectiveness:*

- a. *EEP:* See questions 59 and 66.
- b. *USAID:* See questions 59 and 66.

81. *How effective is the current planning process:*

a. *Strengths:* The annual planning process used in the SR CRSP is very effective. Principal Investigators working in a given country meet as a body with the host country counterparts to discuss the objectives for the coming year and jointly develop workplans which each P.I. then submits with his/her budget request. All workplans and budget requests are reviewed by the Technical Committee for comments and suggestions. The Program Director submits the proposed budget and workplan to the Board for advice and recommendations. The whole process takes about nine months.

b. *Weaknesses:* The weakness is related to instability of funding. The workplans and budgets are developed based upon an estimated funding level given by USAID. The SR-CRSP does not know the final budget allotment by USAID until the process is about two-thirds complete or in some cases completed.

82. *What are the incentives, benefits and problems for US and HC institutions to participate actively in CRSP projects:*

a. *Incentives:* The incentive for US institutions to participate is funding for research. The host country incentive is funding, the opportunity to work and train with outstanding scientists, linkage with U.S. universities, and exposure to internationally renowned researchers.

b. *Benefits:* The benefits to the U.S. institution are the knowledge gained on a particular topic, opportunity to engage U.S. graduate students in international research giving the students cross cultural experiences and exposure to constraints that may not easily be replicated in the U.S. The benefits to the host country are the strengthening of their research capabilities, training, solving problems of major importance in the host country, and expanded knowledge and research resources.

c. *Constraints:* The constraints for U.S. scientists can be related to their institution's criteria for promotion and tenure, difficulties in meeting teaching schedules while supervising an overseas research program, and the challenge of maintaining a stable research plan with erratic funding. The problems for the host country institution can be changing priorities of changing governments, complying with USAID regulations which impose "buy American" restrictions when American-made products are not available or compatible with the host country environment, and gaining the time and attention of the U.S. Principal Investigator(s).

83. *Have any of the recommendations cited in the 1986 Hogan, et.al. report on "Collaborative Research Support Program Review Study" been implemented:*

*a. Recommendations implemented:* The Hogan report was supportive of the four CRSPs reviewed. Most of the recommendations were actions for USAID. Those that are in purview of the Management Entity have been addressed by the SR-CRSP. For example, all international travelers are instructed to seek entrance and exit meetings with the missions. Plans include development relevance as an element of the plan. The SR-CRSP has taken steps to link with IARCs and expand the cooperation with IARCs, and instituted the dissemination of the research findings through programs like the Outreach Pilot Project in Indonesia and the Farming Systems Project in Kenya.

*b. Usefulness of report:* The recommendation for continued programmatic and financial support from USAID has not been upheld. The Hogan report has aided the SR-CRSP in its planning and program implementation but many of the recommendations suggested changes in operating practices of USAID. Few of those recommendations seem to have been implemented.

Date: Thu, 14 Jul 1994 10:56:36 PST8PDT  
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Subject: SR-CRSP evaluation

EVALUATION OF THE U.S. COLLABORATIVE RESEARCH  
SUPPORT PROGRAMS (CRSP)

EVALUATION INSTRUMENT

B. PARTICIPATING UNIVERSITIES

Title of CRSP: Small Ruminant Collaborative Research Support Program

Initial Participation: 1980

Principal Investigators:

Current: Travis C. McGuire (since 1982)

Past: Francis R. Abinanti (prior to 1982)

1. a. Have the original CRSP objectives been met?

The objective of SR-CRSP has been to improve production among small ruminants in herds owned by small farmers. The project evolved to the development of a dual purpose (milk- and meat-producing) goat in Kenya and the development of technology packages for farmers to use for optimum economic benefits from the goats. A specific breed has now been developed and recognized in Kenya as a separate breed. The development and use of this breed and the on-farm testing of the technology packages in Western and now Eastern Kenya represent a substantial accomplishment in achieving the goals of the project.

b. What progress has been made toward meeting those objectives?

The project continues to have unmet training objectives and some of the research interests remain unmet. Principal Investigators made plans based on the current contract expiration date of September 30, 1995. Final research analysis and the completion of some training objectives will not be accomplished without funding through the termination date.

The dual purpose goat is still in KARI's control although some goats are now available to farmers in Kenya and, to a limited extent, to farmers in other countries in Africa that have expressed an interest. Breeding of the animals continues and they will be made available as animal numbers increase. Some small farmers in Kenya have adopted this breed and technology packages and are now raising the goats that have resulted from SR-CRSP research.

2. What are the specific target groups for which the CRSP research activities are being undertaken:

SR-CRSP's work in Kenya has been related to the needs of owners of small herds of goats in East Africa. A dual purpose goat and technology packages will enable farmers with small amounts of land to raise animals that can provide both milk and meat for their families and, in the event of surplus, for sale.

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3. Is the CRSP providing the types of research, training, and technical progress most needed in your subject matter area to address priority global problems in sustainable agricultural production and utilization of food crops, livestock, fisheries, and natural resource management, etc.?

a. In US:

My specific area of research is animal health with an emphasis on the immune mechanisms that can be used to produce vaccines. Some of the technology that we have developed in SR-CRSP work has been applicable to studies of animal disease problems in the United States. Our work on *Haemonchus contortus*, a nematode infection of small ruminants, has been most directly applicable to the United States because *Haemonchus* infection affects sheep and goats in this country as well as overseas. The rest of our work has been on diseases unknown to livestock in the United States but devastating to herds and flocks in the developing world. Turning our attention to overseas diseases has broadened our scope of inquiry and added substantially to our general knowledge in this area of research.

b. In LDC's:

Our SR-CRSP work has been important in addressing priority global problems in sustainable agricultural production and utilization of livestock by improving the quality of the animals farmers are able to raise. The dual purpose goat and technology package has the potential to reduce the need for the number of animals raised per person because goats are now versatile. Forages research sponsored by SR-CRSP has resulted in better understanding of how animals can use crops or parts of individual plants previously regarded as waste or even a nuisance. The sociology and agricultural economics components have documented how people actually use livestock, enabling the project to focus on goals for sustainable agriculture that are realistically attainable for small farmers in East Africa. The animal health component that I head is developing vaccines that will make herds more efficient and, therefore, able to produce more milk and meat with less use of resources. This component has developed a lyophilized vaccine against contagious caprine pleuropneumonia that is now being manufactured in Kenya and used to protect animals in East Africa against this disease.

4. What is your understanding of the goals and objectives of the CRSP?

a. Goals and objectives:

As the name implies, the Collaborative Research Support Program has as its primary goal the development of research projects in collaboration with overseas scientists that will enhance the lives of people in the developing world.

b. Are they realistic?

SR-CRSP's objectives in Kenya are very realistic. The project from the beginning has sought the involvement of scientists, government officials, and local farmers. The description of this process of collaborative development of research projects is explained in more detail elsewhere in this evaluation.

5. Is the CRSP supporting realistic strategies and agendas developed through a functioning network process that insures realistic and effective research efforts?

As explained in 4b above, SR-CRSP in Kenya has sought the opinions of government leaders, scientists, and farmers in developing projects. The involvement of farmers has been mainly through studying the economics and sociology of their activities, but they have also been present

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and made contributions at annual meetings of Principal Investigators and other scientists. Appropriate government officials and Resident Scientists, who are all Africans, are fully involved in all aspects of project planning.

6. Is the CRSP research program designed to address multi-sectoral, biological, physical, social and economic constraints?

The SR-CRSP project in Kenya has had or now has components on breeding, forages, animal health, sociology, and agricultural economics.

7. How are the multi-disciplinary, inter-disciplinary team efforts successful in producing results?

The investigators have attended joint meetings, particularly an annual workshop in Kenya. During the annual meeting in Kenya, they also developed the workplans and budgets for the various integrated projects. SR-CRSP in Kenya just completed its twelfth annual scientific workshop involving representatives from all of the disciplines represented in SR-CRSP.

8. How critical is the CRSP in assisting the developmental process within the food and agricultural sectors?

a. In the US:

SR-CRSP is developing technology and approaches to agricultural problems that are important to industry in the United States. The raising of small ruminants will be improved by techniques that develop from SR-CRSP research. This is the only large scale effort at research involving small ruminants sponsored by the United States government.

b. In CRSP collaborating countries:

SR-CRSP in Kenya has been crucial to agricultural development in Kenya as evidenced by the ready acceptance of the dual purpose goat. Farmers began using the new breed as soon as it became available and demand has continued to grow. Local farmers have been anxious to collaborate with SR-CRSP scientists as the research has proceeded and they have adopted new techniques once they were ready for widespread use.

c. In a global context:

SR-CRSP scientists have spread their newly developed knowledge around the world as they have presented papers at international meetings and published in scientific journals. For example, the Resident Scientist for the Animal Health project in Kenya, Dr. Fred Rurangirwa, has presented research papers as an invited speaker at the Pan-African Symposium on Mycoplasma and Associated Diseases in Harare, Zimbabwe, and at the International Organization for Mycoplasma on several occasions. He also spoke on vaccines and diagnostics at the Fifth International Conference on Goats in New Delhi, India. The Production Systems Resident Scientist, Dr. Patterson Semenyé, presented a paper at the All-Africa Conference on Animal Agriculture, conducted a two-week workshop on principles of livestock production and development for a non-governmental organization in Zimbabwe, and was elected a committee member of the Small Ruminant Research Network. Other CRSP scientists have become similarly recognized on an international basis.

9. What are the assurances that CRSP funded science is addressing high priority development needs or problems in LDC's and US?

a. In LDC's:

As explained in 11 below, the Host Country scientists and institutional representatives are deeply involved in establishing research priorities. This involvement is the primary way of ensuring the meeting of high priority development needs with CRSP funded science.

b. In US:

The Principal Investigators generally have other projects funded by agencies in the United States to meet the needs of US agricultural problems. In this way, research oriented toward problems in the US and research oriented toward development issues overseas complement each other.

10. How do CRSP priorities relate to and support USAID global issues and thrusts?

In an April 11, 1994, memorandum to USAID Administrator J. Brian Atwood, Deputy Administrator Carol Lancaster wrote that in areas of the world "where agriculture is virtually the only source of income and food," "what is needed are the infrastructure and technologies that will permit farmers. . .to produce the crops and livestock that can be grown more productively, cheaply and in an environmentally sustainable manner." The SR-CRSP emphasis on training to develop an infrastructure and on research that enhances local agricultural productivity within the context of environmental sustainability is meeting these stated goals of USAID.

11. Explain how the HC participants contribute to problem identification, research priority setting and planning.

The Host Country representatives and counterparts participate fully in all of the major decisions involving the direction of research and selection of trainees. Whenever Principal Investigators meet in Kenya to discuss these issues, the Host Country representatives, counterparts and trainees are present and participate in all discussions. The Host Country representatives to the various projects are government officials from agencies concerned with agricultural development and research.

12. What is the research capability equivalence between US and HC institutions in performing CRSP projects.

a. Staff:

Senior Host Country staff usually have PhD degrees from institutions in North America or Europe. Junior staff have degrees from local universities and often have master's degrees earned under SR-CRSP sponsorship at institutions in the United States. The Host Country staff in Kenya is talented and educated.

b. Facilities:

Facilities in Kenya are adequate to the research tasks, but they do not live up to standards in the United States. Some supplies are available locally, but many of the laboratory supplies have to be shipped from the United States. Equipment is usually available because of the support of SR-CRSP and other US agencies in equipping laboratories. Other more general aspects of the facilities infrastructure, such as electricity and water, are adequate but not of the same quality as laboratories in the US.

c. Institution/agency support:

Since the Host Country representatives, as noted in 11 above, are fully involved in the making of all major decisions, SR-CRSP enjoys whatever support local institutions and agencies can provide.

13. To what extent are social science disciplines integrated into CRSP activities?

a. In US:

SR-CRSP in Kenya includes now or has included components on sociology and agricultural economics based at a US university and a US non-profit research foundation. These components have sponsored the major social science research in their respective disciplines as they pertain to SR-CRSP research that would change the agricultural practices in Kenya or other parts of the developing world.

b. In HC:

The sociology and agricultural economics components have had host country activities, as have the other components. These activities have included training Kenyan sociologists and economists as well as conducting the field research that has provided the basis for the project directions in the first phase and, later, for research conclusions.

14. What evidence exists to document that new knowledge has been generated from CRSP activities?

SR-CRSP has published its results in scientific journals, books, book chapters, and special SR-CRSP publications. The agency has sponsored scientific workshops (12 in Kenya to date) and scientists have made presentations at international meetings covering a variety of topics.

15. How is the joint US/HC research collaboration exemplified in reports, articles and other outputs and results of CRSP activities?

Resident Scientists and Principal Investigators are typically joint authors on SR-CRSP publications. In the case of the Animal Health Project in Kenya, for example, only three of the 25 publications in refereed journals since 1987 do not list either a Resident Scientist or Host Country student as co-author with the investigators in the United States. These three publications involved a collaborative project in the US studying an organism also of interest in Africa. Other published material has had a similar very high rate of joint authorship involving scientists in the US and in Kenya.

16. What criteria were used to determine the CRSP foreign sites?

Kenya was chosen as a foreign site based on its infrastructure, which is detailed in 12 above, and based on interest within the Host Country. This has proven to be a wise choice for an Africa site because of the strong commitment on the part of government officials and the ready availability of young scientists suitable for entry into a training program and for providing highly skilled assistance in the research.

17. How are CRSP research standards determined and monitored to assure that results are credible and replicative?

The publication of research results in peer reviewed journals of recognized merit assures the maintenance of high standards in CRSP research. The Principal Investigators typically meet on an annual basis to review and evaluate projects with publications lists an important part of this review process. The constant sharing of published material is an important part of the process of ensuring that CRSP results are accepted as credible within the respective disciplines of their investigators.

18. Describe the peer review process used to maintain high quality research standards. With investigators from several disciplines, it is difficult to review research before its results are published. The Principal Investigators for Kenya projects, however, review all projects annually to make sure that they are proceeding according to plans and that they are meeting SR-CRSP goals.

19. How effective, unbiased and efficient are the current planning and evaluation processes?  
a. Strengths:

The planning and evaluation processes involve committees with representatives of the Principal Investigators and other people chosen by the Management Entity. These bodies, whether they are planning for the future or evaluating performance, can be effective in providing overall guidance from a broad perspective. The people who serve are generally capable and they take their responsibilities to the project seriously.

b. Weaknesses:

Like any committee structure, this one can be cumbersome. Unless everyone involved pays close attention to communication, the evaluation and planning process can only proceed in the midst of confusion. Fortunately, SR-CRSP Principal Investigators and those who evaluate them have been careful to maintain effective communications.

20. How does the cost of CRSP-funded activities compare to alternatives for conducting research and benefitting target groups?

SR-CRSP has made the most effective use of its money, in part, by requiring that institutions receiving awards match this money with at least one third the amount from non-federal sources. This has ensured other contributions that make CRSP-funded activities especially effective. In addition, Principal Investigators always have other federal and non-federal support that makes SR-CRSP part of a bigger research effort and, once again, enhances CRSP expenditures. Since SR-CRSP deals with state universities and one private research foundation, overhead costs are relatively low compared with what they would be in the case of more expensive private universities and private companies.

21. As budget reductions have occurred, what criteria are used to determine which CRSP activities or projects are cut or eliminated?

SR-CRSP has used its already existing planning and evaluation process to institute changes brought about by budget cuts. Some projects have been eliminated because they are complete. Other projects have been eliminated in an orderly manner when SR-CRSP decided that a given Principal Investigator was supervising too many projects to be effective. The SR-CRSP bylaws require that the Principal Investigators collectively approve any elimination of a project and they have been consulted about major cuts in given projects whenever that has become necessary.

22. Have formal buy-ins (through basic ordering agreements) and informal buy-ins (through direct mission grants) from USAID Missions or host country, private sector and other donor agency contributions been a key aspect of the CRSP?

a. Formal buy-ins:

The NARP planning process in Kenya incorporated the SR-CRSP program and working methods into its budget, providing significant funds to integrate and continue small ruminant research. Washington State University has a formal memorandum of understanding with the Kenya Agricultural Research Institute (an agency of the Government of Kenya) with regard to shared research and training interests in regard to animal health. The agreement requires the two parties to provide each other with ready access to whatever research and training efforts are of mutual interest. With the phaseout of the production systems component, more of its research responsibilities have shifted to KARI.

b. Informal buy-ins:

The USAID Mission in Nairobi agreed to manage a project to develop a monoclonal antibody assay for detecting Nairobi sheep disease virus. The Mission is committed to approximately \$50,000 over two years.

23. How have buy-ins contributed to achieving CRSP objectives and how can they be expanded?

a. Contributions:

The memorandum of understanding with KARI has been important in providing a framework for continuing collaboration among the parties involved. It has assisted in the development of projects of mutual interest and in the identification of trainees when money for training has been available. The same is true of the association of the production systems component with KARI. The Mission's funding of the Nairobi sheep disease virus project is important because SR-CRSP is working on the same virus.

b. How expand:

We will continue to seek ways to expand these methods of sponsoring research, but cuts in funding levels of the US government make such expansion very uncertain. The inclusion of small ruminant research into NARP phase II assures some continuity.

24. How can USAID Missions support the CRSP through buy-ins and how can they be more involved in the future?

a. How to support:

SR-CRSP Resident Scientists and Principal Investigators are in contact with specialists at the USAID Mission in Nairobi as part of the process of exploring alternative funding and keeping the Mission informed of research direction and results. As opportunities for Mission funding of projects become available, CRSP scientists will explore these opportunities just as they did in obtaining NARP funding.

b. How to extend support:

The current state of the USAID budget makes it doubtful that the Mission will be able to expand its support enough to keep CRSP scientists working at their current rate. CRSP personnel, however, will continue to work with the Mission to develop projects of mutual interest.

25. How can CRSP projects continue to be supported in countries with no USAID country mission?

The Mission in Kenya has not been targeted for closure and it seems very unlikely that it will be closed in the foreseeable future.

26. How effective are the linkages between the CRSP and USAID Mission staff and programs in the collaborating countries and how can these linkages be strengthened in the future to include a feedback loop from USAID Missions to CRSP management on program changes?

a. How effective are linkages:

The linkages with the USAID Mission in Nairobi are based on appropriate members of the Mission staff attending SR-CRSP annual workshops and other events. The Mission staff is, therefore, well informed about the direction of research. The Mission also receives progress reports on CRSP-sponsored trainees in the United States at the end of every academic term. This process keeps the Mission staff up to date on training activities.

b. How to strengthen:

SR-CRSP personnel will certainly maintain these contacts. As projects of mutual interest develop, CRSP scientists will discuss the nature of those projects with Mission personnel to work toward goals shared by SR-CRSP and the Mission.

27. What have been the indirect or "causality" impacts of the CRSP?

a. In the US:

As a result of SR-CRSP activities, scientists and administrators in US institutions have become more mindful of overseas development activities. SR-CRSP has advanced the cause, in general, of research that benefits people overseas, thereby drawing the attention of people who might have been unaware of these issues.

b. In CRSP collaborating countries:

SR-CRSP has developed an integrated, multi-disciplinary approach to the problems of development that has had a major influence on issues related to development in Kenya. Scientists are no longer isolated from one another but are working together to solve problems associated with animal agriculture in East Africa.

c. In non-CRSP countries:

The CRSP approach of multi-disciplinary efforts to solve development problems is now well known in other countries and is a part of planning for future development.

28. Are additional impacts anticipated from CRSP support activities over the next 3-5 years?

a. In the US:

That part of SR-CRSP research that has influenced technology development in the United States will undoubtedly continue to be important for the next three to five years. In the animal health area, we know more about disease pathogenesis and appropriate strategies to combat animal disease as a result of our SR-CRSP research. This influence will undoubtedly remain strong. If the SR-CRSP animal health component were to continue, we would add significantly to our knowledge of vaccine technology based on the attempt to develop a multi-valent virus vectored vaccine that would protect sheep and goats from several infectious diseases.

b. In CRSP collaborating countries:

The SR-CRSP training effort will certainly have a major impact on development in Kenya for many years to come. The scientists trained by SR-CRSP will be part of Kenya's scientific infrastructure for the next few decades. Several of the research activities have been passed on to the Kenya Agriculture Research Institute, which will continue to move forward with some of those projects. The dual purpose goat will change the way milk and meat are produced on small farms in Kenya so that the same amount of land will be able to support more people.

**c. In non-CRSP countries:**

The dual purpose goat technology has already spread to other countries and will undoubtedly continue to be used by farmers elsewhere in Africa. The overall CRSP strategy of multi-disciplinary research efforts combined with training of local nationals will also continue to influence scientific activities in non-CRSP countries for several years.

29. What specific changes in farming, processing or other commercial practices have occurred as a result of CRSP activities?

**a. Examples:**

The dual purpose goat has become an important part of farming in Kenya, although breeding stock is not available in sufficient quantity to satisfy the demand for the animals. Farmers have also adopted other management practices, such as growing certain crops or trees for feed, as SR-CRSP research has proved these methods effective. The Government of Kenya is now producing a vaccine against contagious caprine pleuropneumonia that was developed by SR-CRSP and over a million doses have been distributed.

**b. What was time between start of research and initiation of change:**

In most cases, it has taken about five years from the start of research until some farmers were changing their habits. The need to plan the research and collect preliminary data has sometimes added one to two years to this process. In the case of the dual purpose goat, the lack of availability of large numbers of goats has slowed the adoption of their use.

30. What additional changes or measurable impacts have occurred from the adoption or use of CRSP research findings or output products since this initiation of the CRSP?

The research and extension activities of SR-CRSP have made small farmers more aware of the importance of research that has been tested on farms in the way they manage their herds. SR-CRSP has encouraged farming practices that make better use of land and animals, a process that has made farmers aware of how their lives can be improved with the adoption of new, more effective methods of using their land.

31. Do annual project planning and reporting documents contain estimates of impacts in addition to stated plans and/or methods for measuring such impacts?

Yes. Principal Investigators typically detail evaluation criteria in their planning documents. Comparison with progress reports indicates whether or not a given project has met its objectives.

32. What are the "lessons to be learned" from your CRSP activities?

The importance of a multi-disciplinary approach cannot be overemphasized. Including several disciplines in the CRSP approach to the overall problem of animal production in Kenya resulted in new developments that were practical and acceptable to local farmers. The ability to plan for somewhat long-term projects has also been important, although the threatened premature end of the CRSP has meant that some research and training will end before its completion.

33. How has the CRSP affected the level of competence and productivity to identify constraints, to plan and to conduct agricultural research, and to extend the results to end users?

**a. Scientists and institutions in developing countries:**

The overall process of using multi-disciplinary teams to identify constraints and carry out research to the point of introducing results to farmers for their use is a permanent part of the way agricultural development will continue in Kenya. The Government of Kenya, with KARI as the lead agency, is incorporating this approach. In addition, the training that the CRSP has offered to scientists in Kenya will affect the conduct of agricultural development for decades to come.

b. Scientists and institutions in US:

The people who conduct research on agricultural issues in the United States are more aware of international problems because of SR-CRSP. Results showing the importance of overseas work have been published in widely read journals. SR-CRSP scientists have participated in conferences and discussed research with their colleagues. All of this interaction has meant that more experts are generally aware of overseas research issues and how scientists are moving to help solve them.

34. How and to what success are CRSP research results being extended to the target groups and clientele?

a. In the US:

The target group in the United States is largely other scientists. They are aware of SR-CRSP activities through publications in scientific journals and presentations of SR-CRSP scientists at meetings. The quality of the publications is an indication that other scientists are paying attention to the results developed during SR-CRSP research.

b. In CRSP countries:

The target group in Kenya is small farmers. The demand for the dual purpose goat, which exceeds supply, is an indication of acceptance of SR-CRSP research results. Surveys conducted by the sociology component indicate acceptance of SR-CRSP agricultural methods, such as growing better forage crops, on the part of significant numbers of small farmers.

c. In non-CRSP countries:

Several countries have expressed interest in CRSP research results. Mali, for example, is exploring the use of the vaccine against contagious caprine pleuropneumonia that SR-CRSP has developed. As CRSP scientists have presented results at international meetings, other scientists have expressed interest and sometimes exchanged reagents and other materials.

35. Relative to the scope of work, how effective has the CRSP been in helping to disseminate and transfer research results?

a. In the US:

Dissemination of results in the United States has been mainly in the form of publications in journals, which SR-CRSP has paid for but not otherwise been involved with. SR-CRSP has paid for a few publications, such as technical reports, and it has published books and manuals, such as the book, *On-farm Research and Technology for Dual-purpose Goats*. These activities have been very effective in alerting the scientific community in the US to results obtained from SR-CRSP work.

b. In CRSP collaborating countries:

SR-CRSP in Kenya has sponsored workshops and training sessions on the dual purpose goat and on other results of the research. Small farmers have thereby become aware of the work that the project is completing and how it affects them. The Government of Kenya often co-sponsors the meetings and provides most of the personnel, stretching SR-CRSP dollars and making the CRSP more effective in disseminating and transferring research results relative to the scope of work.

c. In non-CRSP foreign locations:

The Kenya Dual-purpose Goat Technical Package has been well received in Kenya and elsewhere. One thousand copies were printed and are being distributed in Africa and around the globe. This material summarizes the experience developing the dual purpose goat and application of the animal within small farm settings. The Technical Package is a single publication that will explain the work the project has accomplished; this is a very effective way to disseminate results.

36. How has the CRSP network disseminated and shared research information?

CRSP publications are widely available to scientists in the developing world and in the United States and Europe. Network publications inform recipients of these publications. Recipients include developing world scientists, private sector agencies, USAID country missions, and other donor organizations.

37. How effective is this dissemination and how can it be improved in the future?

a. How effective:

The dissemination of information is quite effective, judging by the number of requests we get for more material. Researchers at other institutions and in other countries are definitely aware of SR-CRSP work and its results.

b. How to improve:

Improving dissemination seems unlikely because the SR-CRSP appears on the verge of ending. With severe budget constraints, travel to international conferences is already curtailed and probably will not resume unless budgets are increased. This travel and the publication of a newsletter are the best way of continuing to disseminate SR-CRSP research results.

38. What is the availability of CRSP-funded results, how are US and foreign clientele made aware of their availability and how can they access results?

a. Availability:

CRSP-funded results are generally available in scientific journals, at meetings sponsored by SR-CRSP, or in special CRSP-funded publications.

b. Awareness:

Aside from publications in scientific journals, SR-CRSP makes people aware of the availability of information through newsletters, both sponsored by CRSP and others. This type of networking has been effective in disseminating results.

c. Accessibility:

Principal Investigators are happy to make reprints available to anyone who asks for them and requests often come from scientists in the developing world. The CRSP, the Principal Investigators, and Resident Scientists in Kenya make special publications available to other researchers around the world.

39. How are non-participating universities and research agencies kept informed of CRSP activities and opportunities for participation?

a. In US:

SR-CRSP has kept universities in the United States informed of opportunities through advertisements in standard newsletters and other publications. The best indication that this system

works is the applications that came from several universities not associated with SR-CRSP during the recent effort to develop a proposal for the 1995-2000 period.

b. In HC:

SR-CRSP annual workshops regularly include participants from outside the program who learn about SR-CRSP during the course of their participation. CRSP investigators often have collaborators outside the program, which helps spread information about SR-CRSP. Investigators at the animal health project, for example, are working with scientists at ILRAD and at the University of Nairobi. Former SR-CRSP trainees who have earned their degrees and moved into the broader research community have substantial knowledge about SR-CRSP. They keep themselves and their colleagues informed of opportunities for collaboration.

c. Other LDC's:

Scientists from other LDC's often attend meetings that CRSP scientists are also attending, which provides an opportunity for exchanges of ideas. This exchange is especially prevalent at all-Africa meetings where research problems are similar for the investigators attending from various countries in the continent.

40. How can the CRSP most effectively provide benefits to potential end-users in non-CRSP countries?

The five-year plan for the period 1995-2000 for the animal health component included expanding to at least one other country, but budget constraints now make this development not likely to occur. The continuation of current efforts, especially the dissemination of the technology package and making dual purpose goats available for sale, seem to be the most effective way of providing benefits to other people in Africa and the rest of the developing world.

41. What primary and secondary factors should be considered when deciding to expand, continue or terminate a CRSP?

a. Primary factors:

The primary factors should be the quality of the work done to date, adequacy of a work plan, relevance to problems facing the developing world, and the probability that whatever interventions are suggested would be safe and effective.

b. Secondary factors:

Secondary factors pertaining to the expansion, continuation, or termination of a CRSP have to do with the adequacy of infrastructure overseas. Projects must identify an overseas collaborative site and show that facilities are available to perform the necessary research and extension work.

42. What major factors or variables were important in selecting present "prime" or principal sites overseas versus potential sites at other locations?

As explained in 16 above, Kenya was chosen as a foreign site based on its infrastructure and based on interest within the Host Country.

43. How successful have these "prime" sites been in supporting CRSP objectives?

As indicated in item 12 above, Kenya has had the infrastructure to conduct this kind of research and training effort. The Government of Kenya has been very supportive of CRSP objectives as indicated by a continuing collaboration with the Kenya Agricultural Research Institute, which

provides some of the facilities CRSP uses as well as paying salaries for technicians and trainees doing research in Kenya.

44. Are the research results and training appropriate to benefit the target groups?

a. Research results:

The research results of CRSP work have been adapted by significant numbers of farmers in Kenya. These changes in farming practices and the use of the dual purpose goats indicates that SR-CRSP has been effective in providing benefits to the target group.

b. Training results:

Trainees who have completed work under SR-CRSP sponsorship are now a part of the scientific infrastructure in Kenya. In the case of the animal health project, nine Kenyan students earned master's degrees (two others are still studying) at least partly under the project's sponsorship; all but one returned to Kenya to continue with scientific research. Of the two Kenyans who earned PhD degrees (two others are still studying), both returned to Kenya to continue research careers. This record of adding to the trained scientific talent in Kenya is the best indication of the success of the training program.

45. How does the CRSP complement on-going research of International Agriculture Research Centers (IARC's) and national agriculture research systems (NARS) and other US funded international research programs?

CRSP scientists have regular contact with scientists at ILRAD and ILCA. Complementary projects are being undertaken, particular with regard to ILRAD. At the 11th SR-CRSP scientific workshop, for example, two people from ILRAD and three from ILCA were among the participants. KARI, which is Kenya's national agricultural research agency, is also collaborating with SR-CRSP as explained in item 22 above. The CRSP interaction with US funded international research programs is based on Principal Investigators in the US securing money from other agencies, both US government agencies and non-federal sources. The animal health project, for example, has had assistance from the Rockefeller Foundation with regard to training students also supported by SR-CRSP.

46. What are the roles and how effective are the External Evaluation Panels, Boards of Directors, and Technical Committees in guiding the direction of CRSP research activities?

a. EEP:

The EEP, as its name implies, provides overall guidance for the program by reviewing work that has been accomplished. This agency is very effective because it is comprised of recognized experts in particular scientific fields and because its members are drawn from outside the CRSP. The EEP can, therefore, offer effective direction based on the expertise of its membership.

b. BOD:

The BOD is a larger body that develops and implements policy. It is effective because its members are drawn from both the scientific and administrative aspects of the CRSP and because of its authority to make major decisions.

c. TC:

The Technical Committee represents the Principal Investigators before various decision making bodies. Since it is comprised of scientists, it focuses narrowly on the quality of the science being

conducted by each project. It is this focus that lends the TC its weight in the decision making process.

47. How has the CRSP developed new knowledge through collaborative research and who applies it to create impacts?

a. New knowledge:

The focus of SR-CRSP on the development of new knowledge that will be directly applicable to farming techniques has been instrumental in the project's success. The scientists in various projects and in various institutions all worked toward the same overall goal, which early in the project's life became the development of a dual purpose goat. This new knowledge created through collaborative research has been disseminated throughout the life of the project and has been applied in Kenya to change farming habits.

b. Users:

Some of the application of new farming techniques has been directly in the hands of SR-CRSP as scientists and technicians taught workshops for local farmers. Other aspects of the application of techniques has been undertaken by the Government of Kenya's extension efforts. Surveys by the sociology component have indicated acceptance of CRSP research results by large numbers of people in Kenya. The impending end of the project will preclude any accurate, quantitative measure of changes for average farmers, but it is obvious that owners of small plots of land are considering SR-CRSP research when they make decisions about agricultural production.

48. Explain how the private sector participates in CRSP research, demonstration, planning or other activities.

a. In the US:

The private sector is important in supporting SR-CRSP activities in the United States, although small ruminants are of limited economic importance in this country. Organizations of sheep and goat raisers have expressed the judgment that SR-CRSP should continue because of the importance of this research to the raising of small ruminants in the United States. Some of the CRSP recommendations on changing management practices, especially with regard to raising sheep on semi-arid lands, have been adopted in the United States.

b. In CRSP collaborating countries:

Farmers who adopt changing practices based on CRSP research constitute an important participation of the private sector in research activities. As these changes have taken place, they have underscored the importance of consulting farmers, as SR-CRSP has done, during the research design phase of a project.

c. How if any should private-sector involvement increase:

SR-CRSP will continue to deal with farmers in Kenya to make sure that proposed changes are acceptable to the people who will have to make the changes. Here in the US, CRSP scientists are also in contact with small ruminant production organizations and will undoubtedly maintain that contact. As the raising of goats becomes more important in US agriculture, SR-CRSP research will undoubtedly expand its influence and project scientists will maintain stronger lines of communication with this increasingly important sector of US agricultural production.

49. How has the CRSP established long-lasting networks among US institutions and scientists, and between US and host country research institutions and scientists?

a. Within US:

As explained in 34 and 36 above, SR-CRSP Principal Investigators have developed networks among US institutions and scientists by publishing results in journals of merit and by attending international meetings. In this way, scientists with similar efforts have become informed of CRSP-sponsored research and the results of the research.

b. Between US and host countries:

In a similar way, Principal Investigators and Resident Scientists have communicated and collaborated with colleagues in Kenya. The annual scientific workshop is a major effort to ensure that scientists in Kenya outside CRSP are aware of the results of CRSP-sponsored research. Specific collaborations have developed from this networking--collaborations that will undoubtedly continue.

50. How does the CRSP network with IARC's and National Research Centers to complement research work and avoid duplication of effort?

As indicated in 45 above, CRSP scientists are in constant contact with collaborators and colleagues at ILRAD, ILCA, and KARI. This communication and joint development of research projects of mutual interest ensures avoiding duplication of effort.

51. How do expatriate resident scientists (full-time in host country) hamper or enhance the development of local leadership, program development, and sustainability?

All of the Resident Scientists currently in SR-CRSP employment in Kenya are native Africans. They are inherently a part of the scientific infrastructure and will be instrumental in continuing the research already begun when SR-CRSP leaves. Their experience with SR-CRSP has been exceptional, particularly in their ability to develop leadership skills and to learn about developing programs.

52. What do the External Evaluation Panel and Administrative Management Reviews contribute to CRSP management; are they objective and conducted by the appropriate technical specialists?

a. Contributions EEP:

The EEP is important in providing broad guidance for the CRSP. The panel members evaluate progress from the standpoint of stated goals and help provide direction to the program. These reviews have been crucial in fine tuning the project to continue working toward its objectives.

b. Contributions administrative management:

This panel has met less often and provided guidance from an even broader perspective. For individual Principal Investigators, the External Evaluation Panel review is more important because of the nature of its membership.

c. Objectivity:

The EEP has been objective and its membership has been drawn from appropriate technical fields. The members have the expertise needed to review the program. Administrative management panels have not focused so clearly on scientific progress and, consequently, have not been as useful to Principal Investigators.

53. What types of persons are recruited to participate on the TC and EEP; are they closely associated with the CRSP?

a. Types:

The Technical Committee is drawn from the Principal Investigators on the project. Members of the External Evaluation Panel are taken from the senior ranks of administrators and researchers in international research programs at American universities.

b. Association with CRSP:

Since people on the Technical Committee are all Principal Investigators, they are very closely associated with SR-CRSP. Members of the EEP are not associated with the CRSP except for their service on the panel.

54. Since institutionalization of program activities is critical to long-term sustainability, how effective has the CRSP been in this regard and what are future prospects?

a. Effectiveness with examples:

As indicated in 22 above, the NARP phase II for KARI has plans to continue SR-CRSP research activities after the CRSP is gone. The general nature of CRSP work (multi-disciplinary collaborative projects) will surely continue under the leadership of these two agencies.

b. Future prospects:

The prospects for continuing research and development are, in a certain sense, bright and, in another sense, not very bright. The number of people provided graduate educations under SR-CRSP sponsorship indicates that the scientific infrastructure in Kenya is populated with talented, educated people. SR-CRSP will also leave behind equipment that will be important in continuing research efforts. It is doubtful, however, that research can continue at current levels because of a lack of hard currency to purchase supplies and to cover other research costs. Continuing cuts in support from the United States add to the uncertainties.

55. How effectively has the CRSP addressed gender issues and integrated women into their activities?

a. How integrated in US:

Some graduate students in the United States, particularly in sociology, have been women. A woman is now leading the networking project. Women have been numbered among the collaborating scientists in the United States.

b. How integrated at foreign sites:

Women have been included both among the trainees on the project and among the clients served by SR-CRSP. Three women have received SR-CRSP support through the animal health project to earn master's degrees. The agricultural economics component provided support to a woman to earn a Ph.D.; she is now a consultant to the project. When the sociology component offered preliminary results on its survey of acceptance of SR-CRSP farming techniques, it divided the responses between male and female farm decision makers to make sure that women were accepting technological change as readily as men. While some differences existed between the two groups, women overall were adopting new methods as readily as men, indicating that information was being disseminated to women as well as to men.

c. What baseline data exist:

The major baseline information is the comparison of acceptance of new farming techniques by men and women showing that both sexes are about as likely to accept new ways of raising animals for milk and meat.

56. How are women and children reached by and benefitted from CRSP-supported activities?

a. How reached:

Training and extension opportunities in Kenya include opportunities for women to learn about SR-CRSP research results in the same way that men do. The fact that they are adapting SR-CRSP techniques is an indication that these efforts have been successful.

b. How benefitted:

The main benefit of the dual purpose goat is the availability of milk from a herd that previously produced only meat. This is an obvious benefit for children because of the nutritional value of goat milk. Women who are owners of herds benefit because they do not have to sell goats for meat and use the money to buy milk. With a dual purpose goat, they can raise their own milk and meat and by adopting other SR-CRSP technologies involving food and forage crops, they can do so without the need for more land for pasture.

57. Who are the principle advocates for the CRSP and why are they advocates:

a. Who:

Government officials and scientists in the host countries are the strongest advocates for the SR-CRSP. Producer organizations involved with small ruminant production in the United States are also strong advocates of the program.

b. Why:

In both cases, advocates are aware of the quality of SR-CRSP research and the direct applicability to issues of concern to them. Scientists and officials overseas recognize the value of collaborative research and are especially mindful of the way that SR-CRSP has integrated people from host countries in the decision making process. The structure of SR-CRSP has been especially conducive to including the expressed needs of people overseas into its goals. Producers in the United States have also applied SR-CRSP research and would like to see a continuation of the only large scale small ruminant research effort sponsored by the US government.

58. How and to what extent do 1890 institutions participate in CRSP activities?

Investigators from historically black colleges have been involved with CRSP projects, although no investigators from these institutions are current Principal Investigators. The animal health project, for example, has performed collaborative research on small ruminant health issues with investigators from Tuskegee University.

59. What are the principle strengths and weaknesses of the CRSP concept and its application to other research programs:

a. Strengths:

The multi-disciplinary, collaborative nature of CRSP research is its greatest strength. The ability to gather scientists and policy makers from the United States and from overseas in order to set common goals is much of the source of SR-CRSP's strength.

b. Weaknesses:

Gathering diverse scientists can be a serious problem; sometimes it seems that they do not even speak the same language. But SR-CRSP's democratic structure and consensus-based problem solving practices greatly ameliorates this weakness.

60. To what extent has this CRSP been active in inter-CRSP activities; how can this be facilitated?

Much of this activity has been at the Management Entity or administrative level. The CRSP's are generally communicating with each other at high levels concerning broad policy matters then these issues come to the attention of the Principal Investigators as appropriate. This level of inter-CRSP activity seems adequate.

61. To what extent do CRSP participating institutions seek supplemental funds from other potential donors?

a. US institutions:

i. Experience:

US institutions have aggressively applied for additional funding from several sources.

Applications have been submitted to other USAID programs, other federal agencies, and private organizations. These applications are in addition to the SR-CRSP requirement that institutions match one third of the budget with non-federal funds.

ii. Successes:

SR-CRSP projects have obtained considerable funding from other sources. In the case of the Animal Health Project in Kenya, money has come from the USAID, the US Department of Agriculture, and the Rockefeller Foundation. (See attached list of funded projects supporting Animal Health.) This money has been crucial in supplementing the budget from SR-CRSP, although current resources will fall far short of replacing SR-CRSP funds when they are no longer available.

iii. Incentives/disincentives:

Being able to make more effective use of SR-CRSP money is the most obvious incentive to apply for additional support. SR-CRSP has provided a financial base for work in Kenya; other money has added substantially to this base. Since SR-CRSP has never discouraged or stood in the way of other applications, we have no disincentives to apply.

b. In HC:

i. Experience:

The experience in the host country is almost identical to that in the United States except that overseas research are applying to different programs than the ones of interest to their US colleagues. Our collaborators in Kenya have applied for money available only to researchers overseas when such applications have been appropriate.

ii. Successes:

Overseas collaborators have been successful in the same way that researchers in the United States have been successful. Applications have gone to the International Foundation for Science (an agency in Sweden) as well as USAID, including one successful application from the Animal Health Resident Scientist, and other agencies in the United States.

iii. Incentives/disincentives:

The incentives for Host Country scientists applying for money from other agencies are the same as the incentives for scientists in the United States. SR-CRSP poses no disincentives for overseas applications.

62. Has a trend developed recently to shift funding priorities from long-term (10-20 years) to short-term research (1-5 years)?

a. Contributing factors for length of research:

The Animal Health project in Kenya has definitely shifted its funding priorities to short-term research and training because of the length of the USAID contract. Training has been curtailed recently for fear that students who started training programs late in the term of the contract would not have enough support to complete their degree objectives. Research projects have been similarly designed, as much as possible, so that they can be completed in a short time. Since USAID has decided not to fund the final year of the contract, even these careful plans will not be carried to fruition.

b. Desired length(s) of research to fund:

The projects in Kenya are all scheduled to come to a conclusion by the end of the current contract on September 30, 1995. Training and research activities will come to a logical close. Unfortunately, as indicated in a above, USAID's decision to end the funding prematurely puts these plans in considerable jeopardy. A five-year research plan, which is allowed in the current contract, is the minimum time needed to develop a project that will produce results. Effective reduction of the contract to four years by not funding year five will seriously curtail the ability to complete research and training projects.

63. How does CRSP respond to foreign and domestic changes, e.g. political, problems, policy, budgets?

a. Responses:

The democratic structure of SR-CRSP, the established rules and procedures, and the always open lines of communication make the agency capable of responding to various changes. Shifting priorities and difficulties imposed from outside the program are constant problems, but the structure of SR-CRSP makes the response easier than would otherwise be the case. SR-CRSP has responded to crises by using established procedures to eliminate countries, to eliminate specific projects, to curtail or combine existing projects, or to adapt projects to new needs. Having established procedures and a definite structure makes these changes as smooth as possible, although drastic measures are never easy to take.

b. What changes are most difficult:

The most difficult change is any dramatic reduction in the budget. SR-CRSP has curtailed its activities considerably over the years, but the current crisis involving the final year of a budget period is far more difficult than anything the agency has adapted to in the past.

64. How have annual EEP and USAID administrative reviews been helpful in advancing the CRSP and improving its effectiveness?

a. EEP:

As indicated in 52 and 53 above, the External Evaluation Panel is very valuable in helping Principal Investigators focus on particular research problems and overall goals. It is a respected body whose views are taken seriously by Principal Investigators.

b. USAID:

USAID administrative reviews are more helpful to the Management Entity than to Principal Investigators, as indicated in 52 above, because of the broader nature of this evaluation.

65. How effective is the current planning process?

a. Strengths:

The main strength of the planning process is the wide involvement of people in the program. Administrators, Principal Investigators, Resident Scientists, Host Country representatives, and reviewers outside SR-CRSP all participate in one way or another in the preparation of research and training plans. This inclusive process results in the feeling that all people have had their voices heard.

b. Weaknesses:

With so many people involved, the process can appear cumbersome. This appearance, however, is an unfortunate fact of democratic life. The use of representative bodies, as opposed to everybody involved with a decision participating directly, is an effective management tool even though some people might feel under-represented.

66. What are the incentives, benefits and problems for US and HC institutions to participate actively in CRSP projects?

a. Incentives:

The main incentive to participate in SR-CRSP is the ability to join an already functioning, effective research and training effort. Someone with a project that might be of interest to SR-CRSP would be drawn to the agency by the collaborative nature of the organization and by the quality of the work already accomplished.

b. Benefits:

The benefits for the Host Country institutions involve developing infrastructure and an opportunity to undertake research that meets the country's objectives. For US institutions, an SR-CRSP project is an opportunity to continue research interests overseas in collaboration with other US investigators and with capable scientists from the host country.

c. Constraints:

The major constraint is an uncertain budget future. The current threat to the last year of funding for the contract is of particular concern because it prevents the rational planning that is at the heart of SR-CRSP's work. If USAID prevents Principal Investigators from completing projects, that action will also decrease interest in any future CRSP programs or even USAID programs.

July 14, 1994

Other support at Washington State University for the project sponsored in part by SR-CRSP

Principal Investigator	Funding Agency and Number	Title of Project	Direct Cost	Total Cost	Grant Period
Douglas P. Jasmer	USDA NRICGP	T helper lymphocytes and immunity induced by <i>Haemonchus contortus</i> gut antigens			The project has been funded, but the amount and period of performance are not established
Travis McGuire	USAID grant to University of Florida LAG-1328-G-00-3030-00	Heartwater research	233,960	312,952	Oct 1 93- Oct 31 96
Francis N. Karanu and Douglas P.	Rockefeller Foundation	Cysteine proteases from adult worm excretory-secretory (ES) products as targets for protective immunity against <i>Haemonchus contortus</i>	19,830	19,830	Jan 1 94- Feb 29 96
Timothy B. Crawford	USAID-PSTC DHR-5600-G-00-1028-00	A ruminant-restricted general-purpose poxvirus vaccine vector	97,752	129,954	Jul 12 91- Jul 11 95
Fred R. Rurangirwa	USAID-PSTC COM-5542-G-00-0014-00	Identification of mycoplasma surface proteins that induce protection against	114,397	150,000	Aug 30 90- Sep 30 94
Douglas P. Jasmer	USDA NRICGP 91-37204-6452	Native gut surface antigens which induce protection against hemophagous nematodes	175,439	200,000	Sep 1 91- Aug 31 94
Reuben K. Soi and Timothy B. Crawford	Rockefeller Foundation	Development of a ruminant-restricted capripoxvirus vaccine vector	28,018	28,018	Jan 1 91- Jun 30 94

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Principal Investigator	Funding Agency and Number	Title of Project	Direct Cost	Total Cost	Grant Period
Patrick S. Shompole and Travis C. McGuire	Rockefeller Foundation	Conserved <i>Babesia bigemina</i> antigens expressed on the surface membrane of infected erythrocytes will induce a protective immune response in calves	31,000	31,000	Feb 1 90- May 31 92
Travis C. McGuire	USAID-PSTC DPE-5542-G-SS- 7073-00	Development of a subunit vaccine for heartwater in domestic ruminants	116,095	150,000	Oct 1 87- Dec 31 91

EVALUATION OF THE U.S. COLLABORATIVE RESEARCH  
SUPPORT PROGRAMS (CRSP)

EVALUATION INSTRUMENT

B. PARTICIPATING UNIVERSITIES

*Title of CRSP:* Small Ruminant CRSP

*Year of Initial Participation:* 1978

Names of Project Investigators and Years of Service:

Current: Years: 16

Past: Eric Bradford

1. a. *Have the original CRSP objectives been met (explain):* Yes. Objective was to increase scientific knowledge of small ruminant biology and production systems in different areas of the world and to apply this knowledge towards increasing productivity. This has been done and is continuing in the countries in which I have been involved.  
  
b. or what progress has been made toward meeting those objectives (explain):
2. *What are the specific target groups for which the CRSP research activities are being undertaken:* Sheep and goat producers, large and small host country research and extension workers.
3. *Is the CRSP providing the types of research, training, and technical progress most needed in your subject matter area to address priority global problems in sustainable agricultural production and utilization of food crops, livestock, fisheries, and natural resource management, etc.:*
  - a. In US: Needed information? Yes Most needed? Possibly some room for debate, but in general the relevance of SR-CRSP research has been very good.
  - b. In LDCs: Same as above.
4. *What is your understanding of the goals and objectives of the CRSP:*
  - a. Goals and objectives: See 1 (a)
  - b. Are they realistic (why): Yes
5. *Is the CRSP supporting realistic strategies and agendas developed through a functioning network process that insures realistic and effective research efforts (explain):*  
Research agenda in Morocco and Indonesia (the two countries where I have worked most) has been set in consultation at every step with local scientists. I believe this has resulted in realistic agendas in most cases. The long term nature of the collaboration has established a very good degree of mutual understanding and trust between US and host country participants which has been valuable to all.

6. *Is the CRSP research program designed to address multi-sectoral, biological, physical, social and economic constraints (explain):* Yes - multidisciplinary team involving biologists, economists and sociologist has been involved throughout.

7. *How are the multi-disciplinary, inter-disciplinary team efforts successful in producing results (explain):* Example: In Indonesia, the geneticists and nutritionists developed more productive strains of sheep and improved feeding strategies; the US/Indonesian socioeconomic team established village programs (OPP and ORD) involving small farmer participants who put these advances into practice with help from regular visits involving participants from all disciplines.

8. *How critical is the CRSP in assisting the developmental process within the food and agricultural sectors:*

a. *In US:* Relatively minor direct effect. Greatest impact has been in increasing the number of scientists with expertise in small ruminant biology and production.

b. *In CRSP collaborating countries:* In developing countries, extremely critical. In Indonesia, the small ruminant expertise has developed from very little to a cadre of several dozen well trained and experienced scientists.

c. *In a global context:* The total knowledge of and interest in small ruminant production has been remarkably expanded by the SR-CRSP.

9. *What are the assurances that CRSP funded science is addressing high priority development needs or problems in LDCs and US: see #5*

a. *In LDCs:*

b. *In US:*

10. *How do CRSP priorities relate to and support USAID global issues and thrusts:*  
Hard to say - the latter change much too often and capriciously.

11. *Explain how the HC participants contribute to problem identification, research priority setting and planning:* Through regular consultation - at annual or semiannual meeting, through frequent exchanges of FAXES, etc.

12. *What is the research capability equivalence between US and HC institutions in performing CRSP projects:*

a. *Staff:* Varies by country. Morocco - host country scientist capabilities very comparable to US - many US trained Ph.D.'s. Indonesia - scientific qualification have not yet in general reached equivalence to US scientist abilities to plan or conduct research.

b. *Facilities:* Rather variable in LDC's (and also in US, though at an average better level).

c. *Institution/agency support:* Institution support has been good in LDC's.

13. *To what extent are social science disciplines integrated into CRSP activities:*

a. *In US:* limited

b. *In HC:* good in the CRSP; limited in the host institutions.

14. *What evidence exists to document that new knowledge has been generated from CRSP activities:* Extensive publications, from working papers to refereed scientific articles. CRSP results included in proceedings of international symposia held in many countries including in France and UK.

15. *How is the joint US/HC research collaboration exemplified in reports, articles and other outputs and results of CRSP activities:* see publication lists. Extensive outputs.

16. *What criteria were used to determine the CRSP foreign sites:* USAID Mission interest; Host Country institution interest; small ruminant populations and/or production potential.

17. *How are CRSP research standards determined and monitored to assure that results are credible and replicative:* PI review of research proposals and publications. EEP review. Peer review of papers submitted to scientific journals.

18. *Describe the peer review process used to maintain high quality research standards:*  
Same as above.

19. *How effective, unbiased and efficient are the current planning and evaluation processes:*

a. *Strengths:* The multi disciplinary team approach followed at all overseas worksites results in considerable peer pressure for each project/discipline to perform. Very capable host country scientists also contribute in this way.

b. *Weaknesses:*

20. *How does the cost of CRSP-funded activities compare to alternatives for conducting research and benefiting target groups:* Compared to IARC's, the cost effectiveness of CRSP's is very high, particularly in terms of provable long term local impact. This is because, as a small budget program, we have had to seek and develop substantial input from host country scientists and institutions.

21. *As budget reductions have occurred what criteria are used to determine which CRSP activities or projects are cut or eliminated:* Stage of development of host country science/institution. Host country interest and commitment. Political stability/safety. Productivity of the program.

22. *Have formal buy-ins (through basic ordering agreements) and informal buy-ins (through direct mission grants) from USAID Missions, or host country, private sector and other donor agency contributions been a key aspect of the CRSP:*

a. *Formal buy-ins (type, source, amount, when):* Yes. Morocco - FIS grants to SR-CRSP participants. Indonesia - EEG and CSIRO collaborative projects (\$50,000 each for 2-3 year projects starting 1993).

b. *Informal buy-ins (type, source, amount, when):*

23. *How have buy-ins contributed to achieving CRSP objectives and how can they be expanded:*  
a. *Contributions:* Maintained prolific sheep research in Indonesia when CRSP cut off funding for this.

b. *How expand:* Communication of CRSP results at international meetings is one of the best ways.

24. How can USAID Missions support the CRSP through buy-ins and how can they be more involved in the future:

a. How to support:

b. How to extend support:

25. *How can CRSP projects continue and be supported in countries with no USAID country mission:* Need a hassle-free mechanism for supporting at least travel.

26. *How effective are the linkages between the CRSP and USAID Mission staff and programs in the collaborating countries and how can these linkages be strengthened in the future to include a feedback loop for USAID Missions to CRSP management on program changes?*

a. *How effective are linkages:* Highly variable - excellent to atrocious (within some country over time).

b. *How to strengthen:* Send a message from USAID Washington to Missions that CRSP's are an important component of USAID.

27. *What have been the indirect or "causality" impacts of the CRSP (explain):*

a. *In the US:* More trained scientists in the fields (see #8)

b. *In CRSP collaborating countries:* More trained scientists, more respectability for small ruminant research/

c. *In non-CRSP countries:* considerable impact of international conferences sponsored by SR-CRSP e.g. in SE Asia.

28. *Are additional impacts anticipated from CRSP supported activities over the next 3-5 years?*

a. *In the US:* yes

b. *In CRSP collaborating countries:* yes

c. *In non-CRSP countries:* yes

29. *What specific changes in farming, processing or other commercial practices have occurred as a result of CRSP activities:*

a. *Examples:* a) grazing of sheep under rubber and other tree crops in Indonesia. b) use of D'mann crossbreeds to increase productivity of Moroccan sheep flocks. c) by-product feeding in Morocco.

b. *What was time between start of research and initiation of change:* a) 3-5 years, b) 5-8 years, c) was already in practice. Effectiveness has improved.

30. What additional changes or measurable impacts have occurred from the adoption or use of CRSP research findings or output products since this initiation of the CRSP:

31. Do annual project planning and reporting documents contain estimates of impacts in addition to stated plans and/or methods for measuring such impacts:

32. *What are the "lessons to be learned" from your CRSP activities:* Much broader knowledge of the range of genetic variation in sheep and goat populations of the world - appreciation for the diversity of production objectives and systems around the world - major impact on teaching.

33. *How has the CRSP effected the level of competence and productivity to identify constraints, plan and conduct agriculture research, and to extend the results to end-users (explain):*

a. *Scientists and institutions in developing countries:* Very large effect, from opportunity of (usually) young scientists to work on a long term project, involving planning, conduct, analysis and interpretation, with senior scientists.

b. *Scientists and institutions in US:*

34. *How and to what success are CRSP research results being extended to the target groups and clientele (explain):*

a. *In the US:* Most of the US PI's are also involved in teaching, research and/or extension in US. CRSP experience enhances all (see #32)

b. *In CRSP countries:* Variable. Linkage of research and extension functions in LDC's usually less effective than in US, and the CRSP's have not had adequate funding for extension.

c. *In non-CRSP countries:* Through international conferences, proceedings, scientific publications.

35. *Relative to the scope of work, how effective has the CRSP been in helping to disseminate and transfer research results (explain):*

a. *In the US:*

b. *In CRSP collaborating countries:* The publication record of the SR-CRSP is very substantial and effective!

c. *In non-CRSP foreign locations:*

36. *How has the CRSP network disseminated and shared research information:*

a. With developing scientists:

b. With TT specialists:

c. Private-sector:

d. USAID country missions:

e. Other donor organizations:

37. How effective is this dissemination and how can it be improved in the future:

a. How effective:

b. How to improve:

38. What is the availability of CRSP-funded results, how are US and foreign clientele made aware of its availability and how can they access it:

- a. Availability:
- b. Awareness:
- c. Accessibility:

39. How are non-participating universities and research agencies kept informed of CRSP activities and opportunities for participation:

- a. In US:
- b. In HC:
- c. Other LDCs:

40. How can the CRSP most effectively provide benefits to potential end-users in non-CRSP countries:

41. *What primary and secondary factors should be considered when deciding to expand, continue or terminate a CRSP (explain):*

a. *Primary factors:* Productivity - research output, training record, Host country evaluation of the program.

b. *Secondary factors:*

42. *What major factors or variables were important in selecting present "prime" or principal sites overseas versus potential sites at other locations (explain):* See #16.

43. *How successful have these "prime" sites been in supporting CRSP objectives (explain):*

Very - Kenya and Indonesia - 14 years Morocco - 12 years. In all cases with increasing productivity as the program progressed, because of training, increased trust and confidence, and expanded information base.

44. Are the research results and training appropriate to benefit the target groups (explain):

- a. Research results:
- b. Training results:

45. *How does the CRSP complement on-going research of International Agriculture Research Centers (IARC's) and national agriculture research systems (NARS) and other US funded international research programs (explain):* CRSP's are (of necessity) more involved in local institution building and less in "big research". CRSP's have provided catalytic funds and senior scientist consultants to NARS's - and therefore very helpful to their development.

46. *What are the roles and how effective are the External Evaluation Panels, Board of Directors and Technical Committees in guiding the direction of CRSP research activities (explain):*

a. *EEP:* Good, Members have been knowledgeable and committed

b. *BOD:* Have in many cases not been as knowledgeable, committed or involved as they should have been.

c. *TC:* Have been the backbone of the program, providing a sense of direction and purpose and providing continuity through Program Director changes. At times have exercised too much initiative, to the detriment of program direction (and Director).

47. How has the CRSP developed new knowledge through collaborative research and who applies it to create impacts (explain):

- a. New knowledge:
- b. Users:

48. Explain how the private-sector participates in CRSP research, demonstration, planning or other activities:

- a. In the US:
- b. In CRSP collaborating countries:
- c. How if any should private-sector involvement increase:

49. *How has the CRSP established long-lasting networks among U.S. institutions and scientists, and between U.S. and host country research institutions and scientists (explain):*

a. *Within US:* Through the TC, primarily. I have personally been involved with both the TC and Regional Research project (NC-111) for many years - and have exchanged much information via that group.

b. *Between US and host countries:* In country workshops and international conferences, e.g. 3 major conferences for S.E. Asia held in Indonesia, in 1986, 1990, 1993.

50. *How does the CRSP network with IARCs and National Research Centers to complement research work and avoid duplication of effort:*

- a. *IARCs:* not very well
- b. *National research centers:* via host country institutions

51. *How do expatriate resident scientists (full-time in host country) hamper or enhance the development of local leadership, program development, and sustainability (explain):*

Generally have played a key role - e.g. current team of Gatenby and Horne in Indonesia have greatly enhanced Research capability of the local team - they speak the language, and have a very upbeat approach. In a few cases the match has not been good.

52. *What do the External Evaluation Panel and Administrative Management Reviews contribute to CRSP management; are they objective and conducted by the appropriate technical specialists (explain):*

- a. *Contributions EEP:* Positive
- b. *Contributions administrative management:* Variable - from strong favorable leadership to serious interference with program.
- c. *Objectivity:*

53. *What types of persons are recruited to participate on the TC and EEP; are they closely associated with the CRSP:*

- a. *Types:* TC is primarily PI's. The few external members have been carefully selected and helpful.
- b. *Association with CRSP:* OK

54. Since institutionalization of program activities is critical to long-term sustainability, how effective has the CRSP been in this regard and what are future prospects:

a. Effectiveness with examples:

b. Future prospects:

55. *How effectively has the CRSP addressed gender issues and integrated women into their activities:* Very well - resident scientists, trainees and host country collaborators (variable by country). Unfortunately, few women have been PIs.

a. *How integrated in US:*

b. *How integrated at foreign sites:*

c. *What baseline data exists:*

56. *How are women and children reached by and benefited from CRSP-supported activities:*

a. *How reached:* OPP, ORP

b. *How benefited:* CRSP has recognized contribution of women; improved their status in some cases.

57. *Who are the principle advocates for the CRSP and why are they advocates:*

a. *Who:* Participants - PIs, resident scientists, host country scientists.

b. *Why:* Involvement; understanding of CRSP accomplishments.

58. *How and to what extent do 1890 institutions participate in CRSP activities:*

One involved in SR-CRSP in early years. Unfortunately, they have not well represented by the person participating.

59. *What are the principle strengths and weaknesses of the CRSP concept and its application to other research programs:*

a. *Strengths:* Collaborative mode: US - host country, University of Cal. - US (members of interdisciplinary teams.)

b. *Weaknesses:* Cumbersome structure; difficulty to manage (program director has for too many "bosses").

60. To what extent has this CRSP been active in inter-CRSP activities; how can this be facilitated:

a. Examples:

b. Suggestions for improvement:

61. To what extent do CRSP participating institutions seek supplemental funds from other potential donors:

a. US institutions:

i. Experience:

ii. Successes:

iii. Incentives/disincentives:

b. In HC:

i. Experience:

ii. Successes:

iii. Incentives/disincentives:

62. Has a trend developed recently to shift funding priorities from long-term (10-20 years) to short-term research (1-5 years):

a. Contributing factors for length of research:

b. Desired length(s) of research to fund:

63. *How does CRSP respond to foreign and domestic changes, e.g. political, problems, policy, budgets:*

*a. Responses:* A sound research program tries to minimize the impact of these not-scientific issues. Not always easy.

*b. What changes are most difficult:* *Dealing with changing agenda of USAID Missions.*

64. *How have annual EEP and USAID administrative reviews been helpful to advancing the CRSP and improving its effectiveness:*

a. EEP: External spokesperson for the CRSP.

b. USAID:

65. How effective is the current planning process:

a. Strengths:

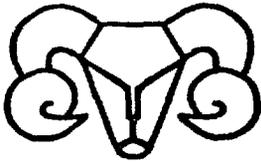
b. Weaknesses:

66. *What are the incentives, benefits and problems for US and HC institutions to participate actively in CRSP projects:*

*a. Incentives:* Funding; support for an area for which domestic sources of support are very limited.

*b. Benefits:* International experience for faculty and graduate students; broadening of horizons; in my case access to genetic material not available in US.

*c. Constraints:* Time, other responsibilities, incompatibility between travel and teaching or administrative responsibilities.



*Small Ruminant Collaborative Research Support Program  
Central Research Institute for Animal Sciences  
P.O. Box 308, Bogor 16003  
Indonesia*

Telephone No. 62.251.328384  
Facsimile No. 62.251.322954/328382

Bogor, July 07, 1994

To : Dr. L.D. Swindale, Evaluation Team Leader  
From : Dr. Subandriyo  
Subject: Evaluation Questionnaire

Dear Dr. Swindale:

Enclosed please find the Evaluation Questionnaire that have been filled by myself and Dr. M. Rangkuti.

We apologize that sending the questionnaire by July 7, 1994, since we just received from Sungai Putih on July 5, 1994, late afternoon.

Thank you for your attention.

55

Subandriyo &  
M. Ronggih.

EVALUATION OF THE U.S. COLLABORATIVE RESEARCH  
SUPPORT PROGRAMS (CRSP)

EVALUATION INSTRUMENT

C. PARTICIPATING HC UNIVERSITIES AND RESEARCH AGENCIES

Title of CRSP: SMALL RUMINANT Year of  
Initial Participation: 1980 Names of  
Principal Investigators and Years of Service: DR. G. E. BRADFORD  
Current: 1980 - NOW Years Past:

1. a. Have the original CRSP objectives been met (explain):

YES; SINCE THE RESEARCH IS FOR SMALL  
HOLDER, AND IN INDONESIA THE  
SMALL HOLDER IS ~ 90%

b. or what progress has been made toward meeting those objectives  
(explain):

RESEARCH CONDUCTED ON FARM

2. What are the specific target groups for which the CRSP research activities are  
being undertaken: SMALL HOLDER FARMER

3. Is the CRSP providing the types of research, training, and technical progress  
most needed in your subject matter area to address priority global problems in  
sustainable agricultural production and utilization of food crops, livestock,  
fisheries, and natural resource management, etc.:

a. In US:

YES, BY USING THE DATA FROM  
FARMER'S FLOCK, AND IT WAS  
USED FOR THE THESIS AND  
DISSERTATION

b. In LDCs:

By ON FARM RESEARCH AND  
By OUTREACH PROJECT

4. What is your understanding of the goals and objectives of the CRSP:

a. Goals and objectives:

TO HELP THE SMALL HOLDER FARMERS  
TO INCREASE THE SMALL RUMINANT PRODUCTION

b. Are they realistic (why):

YES, SINCE MOST OF THE  
FARMERS IN LDC IS SMALL HOLDER

5. Is the CRSP supporting realistic strategies and agendas developed through a functioning network process that insures realistic and effective research efforts (explain):

YES, THE MOST OF RESEARCH AGENDAS  
IS TO SOLVE THE CONSTRAINTS FOR  
SMALL HOLDER FARMERS

6. Is the CRSP research program designed to address multi-sectoral, biological, physical, social and economic constraints (explain):

YES, BECAUSE THE PROGRAM OF SR-CRSP  
ARE MULTIDISCIPLINE AND ~~THE~~ THE  
PROGRAM ALSO HELPING TO ~~BUILD~~ SUPPORT  
LAB EQUIPMENT.

7. How are the multi-disciplinary, inter-disciplinary team efforts successful in producing results (explain):

ESPECIALLY FOR ON-FARM RESEARCH  
THE MULTI-DISCIPLINARY EFFORTS HAVE  
BEEN SUCCESSFUL, FOR EXAMPLE IN  
OUTREACH PROGRAM

8. How critical is the CRSP in assisting the developmental process within the food and agricultural sectors:

a. In CRSP collaborating countries:

THE RESEARCH BY SR-CRSP  
HAS IMPACT ON DEVELOPING GOVERNMENT  
PROGRAM IN INDONESIA - MALAYSIA - THAILAND  
GROWTH TRIANGLE FOR DEVELOPING SHEEP  
PRODUCTION FOR EXPORT PURPOSES

b. In a global context: TECHNICAL HANDBOOK PRODUCED BY  
SR-CRSP USED BY SOUTHEAST ASIAN COUNTRIES  
VIA FAO

9. What types of formalized cooperative agreements exist between the ME, US collaborating institutions and HC institutions:

BY MEMORANDUM OF UNDERSTANDING  
ME - AARD and for executing agency  
IS CRIAS  
CRIAS collaborate with ESTATE CROPS RESEARCH  
INSTITUTE

10. What are the assurances that CRSP funded science is addressing high priority development needs on problems in LDCS and US:

a. In LDCs:

The program of SR-CRSP is supporting  
Program of SR in Indonesia

11. Explain how the HC participants contribute to problem identification, research priority setting and planning:

Program of SR-CRSP in Indonesia is  
based on the program of Research in  
Indonesia

12. What is the research capability equivalence between US and HC institutions in performing CRSP projects:

a. Staff: US - helping the junior scientist

b. Facilities: Office provided by HC

c. Institution/agency support: Provide all the clearance

13. To what extent are social science disciplines integrated into CRSP activities:

a. In US:

b. In HC: They study socio-economics constraints  
in HC

14. How have HC institutions integrated CRSP activities into their traditional programs:

The SR-CRSP support the program of HC institutions

15. What evidence exists to document that new knowledge has been generated from CRSP activities:

In Annual meeting, it is identified that Javanese sheep possessed single gene for prolificacy

16. How is the joint US/HC research collaboration exemplified in reports, articles and other outputs and results of CRSP activities:

- published in journal article, Working Paper Proceedings. The authors join between US scientist & Indonesian

17. What criteria were used to determine the CRSP foreign sites:

For Indonesia based on humid tropics

18. How are CRSP research standards determined and monitored to assure that results are credible and replicative:

By replicate the experiment

19. Describe the peer review process used to maintain high quality research standards:

By review the article that publish in the journal

20. How effective, biased and efficient are the current planning and evaluation processes:

a. Strengths: The evaluator should be the person never involve the SR-CRSP

b. Weaknesses: The evaluation is short-time therefore probably biased.

21. What percentage of the budget is charged as overhead by ME grant and any sub-grants: I do not know

22. How can CRSP projects continue and be supported in countries with no USAID country mission: Funded by the government project or private sectors

23. How effective are the linkages between the CRSP and USAID Mission staff and programs in the collaborating countries and how can these linkages be strengthened in the future to include a feedback loop from USAID Missions to CRSP management on program changes?

a. How effective are linkages: Now, the linkages are not effective and miss understanding are happened

b. How to strengthen: Need communication between USAID/W and USAID mission and Representative of HC

24. What have been the indirect or "causality" impacts of the CRSP (explain):

The technology introduced by CRSP used by farmers and extension workers

25. Are additional impacts anticipated from CRSP supported activities over the next 3-5 years?

a. In CRSP collaborating countries: We hope the new breed develop by SR-CRSP will use widely by farmers and North Sumatra.

b. In non-CRSP countries: They will use the SR-CRSP technology widely.

26. What specific changes in farming, processing or other commercial practices have occurred as a result of CRSP activities:

a. Examples: Fattening sheep in Bogor is one of the sheep farmers use the technology from SR-CRSP. Now, the farmer is one of the bigger sheep farmer in W. Java  
b. What was time between start of research and initiation of change:  
Approximately 4-5 yrs

27. What additional changes or measurable impacts have occurred from the adoption or use of CRSP research findings or output products since the initiation of the CRSP:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

28. Do annual project planning and reporting documents contain estimates of impacts in addition to stated plans and/or methods for measuring such impacts:

- No, only last two years

29. What are the "lessons to be learned" from your CRSP activities:

\* I have improved my knowledge in animal breeding & genetics  
\* I have good relationship with scientist in US and another countries

30. How has the CRSP effected the level of competence and productivity to identify constraints, plan and conduct agriculture research, and to extend the results to end-users (explain):

\* The SR-CRSP provide the technical hand book and collaborate with extension worker for on-farm study.

31. How and to what success are CRSP research results being extended to the target groups and clientele (explain):

In OPP in North Sumatra, some farmer start with no sheep, but know they have a number of sheep and part of the income coming from sheep raising

32. Relative to the scope of work, how effective has the CRSP been in helping to disseminate and transfer research results (explain):  
 By using Working Paper and published in international journal or Indonesian Journal, Proceeding & through networking
33. How has the CRSP network disseminated and shared research information with developing country research collaborators, technology transfer specialists, private sector and USAID:  
 a. With developing countries: By exchange publication and networking newsletter  
 b. With TT specialists: By exchange publication, seminar, workshop and through networking  
 c. Private-sector: By doing research that need the private-sector
34. How effective is this dissemination and how can it be improved in the future:  
 a. How effective: Publication of newsletter  
 b. How to improve: We need to publish the newsletter continuously, but we need funding support.
35. What is the availability of CRSP-funded results, how are US and foreign clientele made aware of its availability and how can they access it:  
 a. Availability: Available in HC and US institutions that involve  
 b. Awareness: By publication  
 c. Accessibility: By correspondent
36. How are non-participating universities and research agencies kept informed of CRSP activities and opportunities for participation:  
 a. In HC: By publication and Small Grant Network by CR-CRSP and Indonesian  
 b. Other developing countries: By publication & Small Grant

37. How can the CRSP most effectively provide benefits to potential end-users in non-CRSP countries:

By publication, hand book and  
newsletter

38. What primary and secondary factors should be considered when deciding to expand, continue or terminate a CRSP (explain):

a. Primary factors: The research is long term / or short term, support the program of HC or nat, research will has impact or that.

b. Secondary factors: Availability of man power and infrastructure

39. What major factors or variables were important in selecting present "prime" or principal sites overseas versus potential sites at other locations (explain):

Should be considered the agroecosystem that suitable for small ruminant and the availability of cooperative institutions and development countries

40. How successful have these "prime" sites been in supporting CRSP objectives (explain):

Since most of the prime sites are developing countries that most of farmers are small-holder, therefore the prime sites will support the objective of SR-CRSP

41. Are the research results and training appropriate to benefit the target groups (explain):

a. Research results: Yes, since the research results is for small-holder and based on on-farm.

b. Training results: Training mostly support the problem in HC.

42. How does the CRSP complement on-going research of International Agriculture Research Centers (IARC's) and national agriculture research systems (NARS) and other US funded international research programs (explain):

CRSP research are based on the program priority of IARC's.

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43. What are the roles and how effective are the External Evaluation Panels, Board of Directors and Technical Committees in guiding the direction of CRSP research activities (explain):

a. EEP: To evaluate the research program of SR-CRSP is suitable or not

b. BOD: Board of directors support the HC national programs as part of the CRSP research.

c. TC: Helping in solving the technical constraints

44. How has the CRSP developed new knowledge through collaborative research and who applies it to create impacts (explain):

a. New knowledge: Based on the field study results the SR-CRSP tried to formulate new knowledge for the farmers

b. Users: and we hope that give impact to the users

45. How has the CRSP established long-lasting networks between U.S. and host country research institutions and scientists (explain):

Continues relationship between Indonesian scientist and U.S scientist and among institution in HC and US through publication, correspondence, seminar etc

46. How does the CRSP network with IARCs and National Research Centers to complement research work and avoid duplication of effort:

a: IARCs: By exchange information & publications  
and newsletters

b. National research centers: By using reviewers to review  
the proposal

47. How do expatriate resident scientists (full-time in host country) hamper or enhance the development of local leadership, program development, and sustainability (explain): They should help junior  
scientist and not working for him/herself  
for their credit

48. Since institutionalization of program activities is critical to long-term sustainability, how effective has the CRSP been in this regard and what are future prospects:  
a. Effectiveness with examples: By using local resources,  
for example by funding agricultural by  
products that are available  
b. Future prospects: In North Sumatra the future  
prospects is very good since in that area  
Indonesia - Malaysia - Thailand Growth Triangle  
will take place

49. How effectively has the CRSP addressed gender issues and integrated women into their activities:  
By supporting studies in women role  
for small - business

50. How are women and children reached by and benefitted from CRSP-supported activities:  
a. How reached: By extension  
b. How benefitted: They improved their knowledge

51. Who are the principle advocates for the CRSP and why are they advocates:  
a. Who: The USMID Mission and Agency for  
Research and University

b. Why: Since they are doing research

52. What are the principle strengths and weaknesses of the CRSP concept and its application to other research programs:

a. Strengths: The research based on the discipline that to basic and pure science based on the research priority of HC

b. Weaknesses: The research based on the discipline that to basic and pure research

53. To what extent has this CRSP been active in inter-CRSP activities; how can this be facilitated:

a. Examples: There is only informal relationship inter SR-CRSP and TROT/STLS - CRSP.

b. Suggestions for improvement: Should be link in formal relationship

54. To what extent do CRSP participating institutions seek supplemental funds from other potential donors:

Usually one research that have been funded by one donor would not be supporting for other donor. But in case of breeding project in relationship with Animal Health the SR-CRSP in Singapore will get supplemental funds. However, in this case should be formalized since SR-CRSP have memorandum of understanding with ANRP in this case CHAS.

55. How effective is the current planning process:

a. Strengths: The planning is based on national programs

b. Weaknesses: The planning usually just in research component, we need also for development

56. What are the incentives, benefits and problems for US and HC institutions to participate actively in CRSP projects:

a. Incentives: ~~to promote~~ Understanding between  
institutions

b. Benefits: To broaden knowledge and relationship

c. Constraints: Funding.



# Rumiantes Menores CRSP - Bolivia

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La Paz - Bolivia

La Paz, Junio 23, 1994  
CRSP 15/207/94

Señor  
Dr. Edmundo Espinoza  
Coordinador Nacional IBTA/SR-CRSP  
Presente

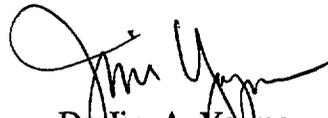
Ref.: Encuesta de evaluación. SR-CRSP

Estimado Dr. Espinoza:

USAID/Washington, ha nombrado a un equipo de consultores para evaluar los Programas de Apoyo a la Investigación Colaborativa (CRSP)s, uno de los cuales es el SR-CRSP. Para su conocimiento, adjunto a la presente carta del Dr. L.D.Swindale, líder del Equipo Consultor y una encuesta corta. EL Dr. Swindale y el Dr. Montague Demment, Director del Programa SR-CRSP me han solicitado que le haga entrega de ambos documentos.

El proceso de evaluación es muy importante a fin de justificar ante USAID/Washington la extensión del Programa SR-CRSP. Por esta razón, agradeceré su colaboración en completar la encuesta y enviarla donde indica la carta.

Con este motivo, saludo a usted muy atentamente.



Dr. Jim A. Yazman  
Representante del Programa  
SR-CRSP/Bolivia

JY/pz  
cc.: Archivo  
Adj.: Lo indicado

EVALUATION OF THE COLLABORATIVE RESEARCH SUPPORT PROGRAMS

TO: Dr. Edmundo Espinoza  
IBTA

FM: Dr. L.D. Swindale, Evaluation Team Leader

Subject: Evaluation Questionnaire

We have found our visits to participating organizations and agencies most interesting and informative, but time has not allowed us to obtain answers to all our questions nor to visit some of you to learn at first hand about your contributions to the CRSP programs.

Because we are very interested in receiving your inputs to this evaluation, we have prepared a short questionnaire, a copy of which is attached to this memo. Would you please answer the questions therein as completely as you can and return the completed questionnaire to the Management Entity no later than July 7, 1994. The Management Entity will assemble the completed questionnaires and forward them by July 15, 1994 to me.

Thank you for your cooperation.

EVALUATION OF THE U.S. COLLABORATIVE RESEARCH  
SUPPORT PROGRAMS (CRSP)

EVALUATION INSTRUMENT

C. PARTICIPATING HC UNIVERSITIES AND RESEARCH AGENCIES

Title of CRSP: \_\_\_\_\_ Year of  
Initial Participation: \_\_\_\_\_ Names of  
Principal Investigators and Years of Service:  
Current: \_\_\_\_\_ Years \_\_\_\_\_ Past:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

1. a. Have the original CRSP objectives been met (explain): <sup>POOR</sup>  
IN SOLVING PROBLEMS  
AND DROUGHT  
YES, WE WORKED ON DEGRADED AREAS,  
WHERE THE SMALL RUMINANTS (SHEEP AND  
CAMELIDS) ARE THE MAIN ACTIVITY.

b. or what progress has been made toward meeting those objectives  
(explain):  
- IMPROVE FORAGE PRODUCTION  
- IMPROVE ANIMAL PRODUCTION  
- STOP MIGRATION  
→ REDUCE

2. What are the specific target groups for which the CRSP research activities are  
being undertaken: THE PEASANTS, WHO LIVE BY  
WORKING IN AGRICULTURE AND  
LIVESTOCK ACTIVITIES.

3. Is the CRSP providing the types of research, training, and technical progress  
most needed in your subject matter area to address priority global problems in  
sustainable agricultural production and utilization of food crops, livestock,  
fisheries, and natural resource management, etc.:

a. In US:

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b. In LDCs:

YES.

4. What is your understanding of the goals and objectives of the CRSP:

a. Goals and objectives: TO IMPROVE THE LIFE LEVEL.

b. Are they realistic (why): YES, BECAUSE WE WORK IN SUCH POOR AREAS.

5. Is the CRSP supporting realistic strategies and agendas developed through a functioning network process that insures realistic and effective research efforts (explain):

YES, ACCORDING TO THE CRSP AND H.C. OBJECTIVES, THE P.I.'S AND NATIONAL, INTERNATIONAL SCIENTISTS PLAN THE RESEARCH TO BE DONE.

6. Is the CRSP research program designed to address multi-sectoral, biological, physical, social and economic constraints (explain):

YES, CRSP WORKS IN SOCIAL, ECONOMIC, RANGE AND NUTRITION AREAS.

7. How are the multi-disciplinary, inter-disciplinary team efforts successful in producing results (explain):

USUALLY ALL THE BIOLOGICAL AREAS (RANGE AND NUTRITION) COORDINATE ACTION WITH SOCIOLOGY & ECONOMY

8. How critical is the CRSP in assisting the developmental process within the food and agricultural sectors:

a. In CRSP collaborating countries: CRSP ASSIST IN DOING RESEARCH TO SOLVE THE MAIN AGRICULTURAL PROBLEMS DETECTED IN THE AREA.

b. In a global context: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9. What types of formalized cooperative agreements exist between the ME, US collaborating institutions and HC institutions:

- COOPERATIVE RESEARCH PROGRAM, WHERE  
EACH PART (CRSP/IBIA) PUT THEIR PART  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. What are the assurances that CRSP funded science is addressing high priority development needs on problems in LDCs and US:

a. In LDCs:

THE LDCs PUT THE PRIORITY PROBLEMS TO  
BE SOLVED  
\_\_\_\_\_

11. Explain how the HC participants contribute to problem identification, research priority setting and planning:

USUALLY THEY KNOW THE AREA OF WORK, AND  
THEY WORK TOGETHER WITH CRSP SCIENTIST  
IDENTIFYING THE PROBLEMS  
\_\_\_\_\_

12. What is the research capability equivalence between US and HC institutions in performing CRSP projects:

a. Staff: THE SAME  
\_\_\_\_\_

b. Facilities: H.C. PUT MOST OF THE FACILITIES.  
\_\_\_\_\_

c. Institution/agency support: Y  
\_\_\_\_\_

13. To what extent are social science disciplines integrated into CRSP activities:

a. In US: 30%  
\_\_\_\_\_

b. In HC: 80%  
\_\_\_\_\_

14. How have HC institutions integrated CRSP activities into their traditional programs:

FULL INTEGRATED

15. What evidence exists to document that new knowledge has been generated from CRSP activities:

REPORTS

16. How is the joint US/HC research collaboration exemplified in reports, articles and other outputs and results of CRSP activities:

IN EACH DISCIPLINE, THE U.S. AND H.C. SCIENTISTS PLAN, EXECUTE AND PUBLISH THE ARTICLES TOGETHER.

17. What criteria were used to determine the CRSP foreign sites:

VISIT THE PROBLEM AREAS WITH THE SAME PROBLEM, AND CONSULTING THE RESEARCHERS

18. How are CRSP research standards determined and monitored to assure that results are credible and replicative:

BY FORMAL SUPERVISION IN THE SITE BY EXPERIENCED RESEARCHERS OF BOTH INSTITUTIONS.

19. Describe the peer review process used to maintain high quality research standards:

IT IS GUARANTY BY A SEVERE SELECTION STANDARDS OF THE RESEARCHERS

20. How effective, biased and efficient are the current planning and evaluation processes:

a. Strengths: EVALUATION IS MADE BY SCIENTISTS OF OTHER INSTITUTIONS

b. Weaknesses: IS MADE ONLY ONCE A YEAR.

21. What percentage of the budget is charged as overhead by ME grant and any sub-grants: \_\_\_\_\_

DON'T KNOW

22. How can CRSP projects continue and be supported in countries with no USAID country mission: \_\_\_\_\_

By FINANCING AS NGO'S .

23. How effective are the linkages between the CRSP and USAID Mission staff and programs in the collaborating countries and how can these linkages be strengthened in the future to include a feedback loop from USAID Missions to CRSP management on program changes?

a. How effective are linkages: VERY EFFECTIVE. ALL TRANSACTIONS ARE MADE THROUGH USAID.

b. How to strengthen: PLANNING TOGETHER. THE PROJECT AND THE EXECUTION.

24. What have been the indirect or "causality" impacts of the CRSP (explain): \_\_\_\_\_

THE PEASANTS. LEARN NEW LIFE STYLES.

25. Are additional impacts anticipated from CRSP supported activities over the next 3-5 years?

a. In CRSP collaborating countries: THEY WILL IMPROVE THE FORAGE PRODUCTION AND ANIMAL GENETIC LEVEL, AND MIGRATION WILL BE REDUCED

b. In non-CRSP countries: \_\_\_\_\_

26. What specific changes in farming, processing or other commercial practices have occurred as a result of CRSP activities:
- a. Examples: FORAGE SUPPLY DURING THE DRY SEASON BY MEANS OF FORAGE CONSERVATION
- b. What was time between start of research and initiation of change: 2 YEARS
27. What additional changes or measurable impacts have occurred from the adoption or use of CRSP research findings or output products since the initiation of the CRSP: DEMAND OF GENETIC SUPERIOR ANIMALS.
28. Do annual project planning and reporting documents contain estimates of impacts in addition to stated plans and/or methods for measuring such impacts: NO
29. What are the "lessons to be learned" from your CRSP activities: WE NEED ALSO TRANSFER THE NEW TECHNOLOGIES TO PEASANTS.
30. How has the CRSP effected the level of competence and productivity to identify constraints, plan and conduct agriculture research, and to extend the results to end-users (explain):

31. How and to what success are CRSP research results being extended to the target groups and clientele (explain):

RESEARCH ARE PLANNED ACCORDING TO  
THE PROBLEMS DETECTED IN THE SITE.  
AND THEY ARE EXECUTED IN THE SAME  
SITE WITH THE COOPERATION OF THE  
PEASANTS.

32. Relative to the scope of work, how effective has the CRSP been in helping to disseminate and transfer research results (explain):

By THE COOPERATIVE WORK BETWEEN  
THE CRSP RESEARCHERS AND PEASANTS.

33. How has the CRSP network disseminated and shared research information with developing country research collaborators, technology transfer specialists, private sector and USAID:

a. With developing countries: \_\_\_\_\_

b. With TT specialists: ALL THE RESEARCH RESULTS ARE  
PUBLISHED AND DISTRIBUTED.

c. Private-sector: CONSULT THE RESEARCHERS.

34. How effective is this dissemination and how can it be improved in the future:

a. How effective: IS LOW

b. How to improve: WRITE MANUALS.

35. What is the availability of CRSP-funded results, how are US and foreign clientele made aware of its availability and how can they access it:

a. Availability: IT IS AVAILABLE TO A SCIENTIFIC  
LEVEL

b. Awareness: \_\_\_\_\_

c. Accessibility: IT IS NOT ACCESSIBLE TO THE PEASANT  
EXCEPT WHEN THEY WORK WITH RESEARCHERS

36. How are non-participating universities and research agencies kept informed of CRSP activities and opportunities for participation:

a. In HC: \_\_\_\_\_

b. Other developing countries: \_\_\_\_\_

37. How can the CRSP most effectively provide benefits to potential end-users in non-CRSP countries:  
TEACHING NATIONAL H.C. SCIENTISTS  
AND SHOWING HOW TO WORK THE  
FARMS.

38. What primary and secondary factors should be considered when deciding to expand, continue or terminate a CRSP (explain): WAS  
a. Primary factors: IF THE WORK IS COMPLETED

b. Secondary factors: IF THE FARMERS TAKE THE  
NEW TECHNOLOGIES.

39. What major factors or variables were important in selecting present "prime" or principal sites overseas versus potential sites at other locations (explain): \_\_\_\_\_

40. How successful have these "prime" sites been in supporting CRSP objectives (explain): THEY SUPPORT ALL THE JOB  
BUT THEY WANT TO CONTINUE

41. Are the research results and training appropriate to benefit the target groups (explain):

a. Research results: \_\_\_\_\_

b. Training results: \_\_\_\_\_

42. How does the CRSP complement on-going research of International Agriculture Research Centers (IARC's) and national agriculture research systems (NARS) and other US funded international research programs (explain):

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43. What are the roles and how effective are the External Evaluation Panels, Board of Directors and Technical Committees in guiding the direction of CRSP research activities (explain):

a. EEP: SHOW THE BETTER WAY TO IMPROVE THE EFFORT OF CRSP.

b. BOD: HELPING IN GETTING FUNDS

c. TC: PLANNING AND EVALUATING THE RESULTS.

44. How has the CRSP developed new knowledge through collaborative research and who applies it to create impacts (explain):

a. New knowledge: RESULTS OF RESEARCH IN SITES WITH FARMERS

b. Users: THEY LEARN NEW TECHNOLOGIES BY WORKING WITH RESEARCHERS.

45. How has the CRSP established long-lasting networks between U.S. and host country research institutions and scientists (explain):

INTERACTING WITH THEM.

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46. How does the CRSP network with IARCs and National Research Centers to complement research work and avoid duplication of effort:

a: IARCs: THEY PLAN TOGETHER.

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BT

b. National research centers: \_\_\_\_\_

\_\_\_\_\_

47. How do expatriate resident scientists (full-time in host country) hamper or enhance the development of local leadership, program development, and sustainability (explain):

THEY HAVE USUALLY NEW AND FRESH KNOWLEDGE.

48. Since institutionalization of program activities is critical to long-term sustainability, how effective has the CRSP been in this regard and what are future prospects:

a. Effectiveness with examples: \_\_\_\_\_

\_\_\_\_\_

b. Future prospects: \_\_\_\_\_

\_\_\_\_\_

49. How effectively has the CRSP addressed gender issues and integrated women into their activities:

MAINLY WOMEN WORK WITH LIVESTOCK <sup>IN</sup> ACTIVITIES.

50. How are women and children reached by and benefitted from CRSP-supported activities:

a. How reached: ~~RE~~ SCIENTIST LIVING WITH THE FAMILIES IN THE COMMUNITY.

b. How benefitted: THEY LEARN NEW THINGS

51. Who are the principle advocates for the CRSP and why are they advocates:

a. Who: \_\_\_\_\_

\_\_\_\_\_

b. Why: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

52. What are the principle strengths and weaknesses of the CRSP concept and its application to other research programs:

a. Strengths: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

b. Weaknesses: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

53. To what extent has this CRSP been active in inter-CRSP activities; how can this be facilitated:

a. Examples: <sup>RESEARCH</sup> PLANNING ACTIVITIES BETWEEN SOCIOLOGY AND BIOLOGY TEAMS.

b. Suggestions for improvement: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

54. To what extent do CRSP participating institutions seek supplemental funds from other potential donors:

IT WAS ASKED TO SOME INSTITUTIONS  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

55. How effective is the current planning process:

a. Strengths: IT IS PLANNED ACCORDING TO THE NEEDS OF ~~THE~~ FARMERS

b. Weaknesses: IT IS TOO SHORT TIME OF WORK TO SEE THE RESULTS.  
\_\_\_\_\_

56. What are the incentives, benefits and problems for US and HC institutions to participate actively in CRSP projects:

a. Incentives: \_\_\_\_\_

b. Benefits: TO IMPROVE THE LIVING STYLE OF  
PEASANTS

c. Constraints: \_\_\_\_\_

## **Section D. Distinguished Small Ruminant CRSP Participants**

This section contains a brief discussion of the current status and achievements of a representative sampling of U.S. and foreign nationals who received support from the SR CRSP. The reader will note some of these participants have moved in to positions that set or greatly influence agricultural policy, carry out research on important constraints to livestock production, educate and advise young people, heighten awareness of gender issues in livestock production and advise private smallholders on improved farming and livestock management practices which enables the smallholders to enhance their economic status.

This sampling helps to demonstrate the SR CRSP's long standing consonance with USAID's major thrusts. Included are examples of SR CRSP participants who are making national if not global contributions to sustainable agriculture, environmental conservation and protection, food security and nutrition as well as furthering privatization. The SR CRSP also has afforded the participants the opportunity to observe and participate in a Program which operates on democratic principles.

An additional listing of current employment and honors of trainees can be found on pages 66 through 73 of the 1978 -1994 Training Report.

**Roberto A. Quiroz**  
Citizenship: Panama

SR-CRSP Program: North Carolina State University  
Nutrition

BS, Chemistry, University of Panama, 1979  
MS, Nutrition/Crop Science. North Carolina State University, 1988  
Ph.D. Nutrition/Crop Science, North Carolina State University, 1986

Current Position: Research Scientist, IDRC (Canada), working in Bolivia

#### Research Activities

Milk production in Panama. During 1986 and 1987, Dr. Quiroz was appointed by the Panamanian Agricultural Research Institute (ISIAP) as the leader of a Dual Purpose Dairy farms project. This project, oriented to improve milk production by small farmers, has been a successful project. The results of this project increased the net income of the adopters more than 50%. The technology generated by INIAP's team is being transferred nationwide by the ministry of agriculture.

Andean farming systems in the southern Sierra of Peru. From January 1989 until August 1991, Dr. Quiroz worked within a multidisciplinary team, which aimed to improve the well-being of more than 500 peasant families in five communities. He and his team developed and tested several technologies that proved to be important for changing the productivity of the farming systems. Examples are the nutritional evaluation and the development of strategic use of Lake Titicaca's forages (Llachu and totora). With the improved feeding systems the increase was three fold in meat and milk production, compared to the common practices in the area. Combining pasture management and animal husbandry, they doubled the productivity of Alpaca farmers in areas above 4.200 meters above sea level (called the dry Puna).

Andean farming systems in the Bolivia highland. During the last three years Dr. Quiroz has been studying the farming systems in this part of the world. The team is now evaluating the impact of erosion of natural resources on productivity. One of several important problems is the salinization of part of the altiplano (thousands of hectares). They have proved that a halophyte forage plant (*Suaeda foliosa*) can produce good quality forage where there is no actual good quality forage available. This will benefit thousands of peasant poor families. They have also developed strategies with rough greenhouses (lettuce, tomato, strawberry, etc.) and small animals that guarantee food security and produce for the local markets, improving the well-being of these poor families.

Training:

Through some of the networks the International Development Research Center of Canada finances through Latin America (especially RISPAL) Dr. Quiroz has trained people in 13 countries in the region mainly in the quantitative analyses of FSR data. In addition, he is currently supervising 28 thesis (2 MS, 26 BS) in animal production, human nutrition, veterinary medicine and statistics.

Publications:

More than thirty scientific publications have been put together during the last ten years. It is worthwhile mentioning those that contribute the most to the people working in research and development in the third world. Dr. Quiroz has contributed in the following four books:

*Ruminant Nutrition: Methodological Research Guide.* This book was published by IICA and ALPA in Spanish and English.

*Simulation of Livestock Systems.* This book, published in Spanish by IICA, intends to be a manual to guide animal scientists in developing and using simulation models for farming system analyses.

*Perspective of Research in the High Andes.* This book published by the PISA project in Peru (with funds from CIDA and IDRC), oriented the researchers of the Andean region on what to do and how.

*Analysis of Agricultural Systems: Use of Biomathematical Methods.* This book, published by the consortium for the sustainable development of the Andean ecoregion, is a comprehensive review of most quantitative methods useful for analyzing FSR-data. The book is based on examples of real production systems of the high Andes.

**Gary Alan Rohrer**  
Citizenship: USA

SR-CRSP Program: Texas A&M University  
Genetics

Ph.D., Genetics, Texas A&M University, 1991

Current Position: Research Scientist, USDA, Clay Center, Nebraska

During his Ph.D. research in genetics, Dr. Rohrer developed Random Amplified Polymorphic DNA markers for the goat that were used to screen for genes associated with parasite resistance. His paper on this research won the student competition at the Southern Section Meeting of the Animal Science Society in 1991. He then went to work with the gene mapping group at the USDA Meat Animal Research Center in Clay Center, Nebraska, where he leads a team of researchers in a multimillion dollar project to map the porcine genome. In January of 1994, he published the world's first porcine genome map (*A microsatellite linkage map of the porcine genome*. Genetics 136:231-245) which is at present the most extensive genetic map available of any domesticated livestock species.

**Sergio Soltero**

Citizenship: Mexico

SR-CRSP Program: Texas Tech University  
Range Science

MS Range Science, Texas Tech University, 1989

Ph.D., Range Science, Texas Tech University, 1991

Current Position: Director, Centro de Investigaciones Pecuarias del Estado de Jalisco  
A.C., Mexico

The Livestock Research Center of the State of Jalisco (CIPEJ) has under its control 4 Research Stations located throughout the state. These research stations are strategically located because they cover the most important range types in the state, such as semiarid, temperate and tropical rangelands. A total of 25 researchers distributed among the stations (3 with a Ph.D., 20 with MS and 2 with BS level), comprises CIPEJ research personnel. CIPEJ has a staff of 30 people including administration personnel. The research program includes the areas of range and forages reproduction, nutrition and animal health. Technology transfer is also an important program carried out by CIPEJ. this includes extension activities such as demonstrations with producers, training courses designed for livestock producers, seminars and publications.

Jalisco has an area of 80, 137 k2 and it holds, at national level, the first place in dairy production, second in beef cattle production, first in poultry, first in egg production and first in swine production. Thus, the impact that the research program has on livestock production in Jalisco is very important.

Funding for CIPEJ comes from three sources: the Mexican Federal Government (about 80%) the State Government (5%) the State Cattle Association (5%) and resources generated by the stations (cattle, milk, and grass seed sales). During 1993 CIPEJ had a budget of \$2,355,212.00 (about \$700,000,00 US.) Funding for 1994 is going to be very similar to that of 1993, that is \$2,337,000.00 (\$697,675,00 US.)

The goal of CIPEJ is to increase livestock production in general terms by 30% in the State of Jalisco.

**Constance McCorkle**

Citizenship: US

SR-CRSP Program: University of Missouri-Columbia  
Sociology

BA, Rice University, Anthropology, 1971

MA, Stanford University, Anthropology, 1972

MA, Stanford University, Linguistics, 1979

PhD. Stanford University, Anthropology, 1983

Current Position: Director, CMC Consulting and member of the Board of Trustees, (CGIAR), International Institute of Tropical Agriculture.

Dr. McCorkle joined the Sociology SR-CRSP in Peru in 1980. With support from the SR-CRSP she conducted a baseline study of a community in Cuzco Peru, which provided the data for her Ph.D. dissertation in Anthropology at Stanford entitled *Meat and Potatoes: Animal Management and the Agropastoral Dialectic in an Indigenous Andean Community with Implications for Development.* This study focused on sociological surveys of a stratified sample of community stock owners; herd demographics; marketing and exchange of animal products; range management patterns, and women's responsibilities in all these areas. Dr. McCorkle has made substantial contributions in the US and overseas, especially in Latin America and Africa.

She coordinated the SR-CRSP Sociology project and conducted research and teaching at the University of Missouri-Colombia. In 1987 under a Fulbright Faculty Scholarship she conducted research in a highland Quechua community in Peru on indigenous knowledge systems, gender roles, and community decision-making and work groups in agriculture. She has had numerous teaching positions around the world and is currently a member of the Board of Trustees (CGIAR designee Program Committee), International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria. She also is the Director of Research and Evaluation for AID's worldwide GENESYS Project.

Dr. McCorkle has successfully trained many students and passed on her extensive skills in gender analysis and environmental impact analysis. This is evident in the many publications that she has edited. Most notable are:

*Plants, Animals, and People: Agropastoral Systems Research.* 1992.

*Improving Andean Sheep and Alpaca Production: Recommendations from a decade of Research in Peru.* 1990.

*The Social Sciences in International Agriculture Research : Lessons from the CRSPs.* 1989.

**Adiel Nkonge Mbabu**  
Citizenship: Kenya

SR-CRSP Program: University of Missouri-Columbia  
Rural Sociology

Ph.D. University of Missouri-Columbia, Rural Sociology, 1988

Current Position: Head, Socio-economics Unit, KARI

Adiel Nkonge Mbabu started his involvement with the SR-CRSP in Kenya in 1984, working as co-investigator of the Ministry of Livestock Development, for the Sociology Project of the Dual Purpose Goat Component (SR-CRSP) in western Kenya. At that time the Host-Country Institution did not have social scientists employed in research activities. Results of his doctoral dissertation were published as a chapter in Plants, Animals, and People Agropastoral Systems Research "The Transformation of the Kenyan Agrarian Sector: The Case of Western Kenya" edited by C. M. McCorkle, Westview Press, Boulder, CO in 1992. He returned to Kenya in 1989 as resident scientist for the SR-CRSP. In 1991-1992 he became research fellow with the International Service for National Agricultural Research (ISNAR) when he was awarded a Rockefeller Foundation Social Science Fellowship. ISNAR is one of the centers of the CGIAR systems. Human capital development is an important outgrowth of small ruminant research. Adiel Nkonge Mbabu currently heads the Social-economics unit at the Kenyan Agricultural Research Institute, the current host country institution which manages 100% of the government's budget for livestock research. This unit of 47 social scientists is under his leadership, a unit which at the inception the SR-CRSP did not exist.

**Patrick S. Shompole**  
Citizenship: Kenya

SR-CRSP Program: Washington State University  
Kenya Animal Health Component

MS, Animal Health, Washington State University, 1988

Current Position: Director, Biotechnology & Immunology Laboratory, KARI

Patrick S. Shompole began his association with SR-CRSP in 1986 when he traveled from Kenya to Washington State University to begin studies that would lead to a master's degree. He was a Kenyan veterinarian working for the Kenya Agricultural Research Institute (KARI). Dr. Shompole finished his master's degree in 1988 then began working toward a Ph.D. under the auspices of another project. He completed his doctoral work in 1993.

Throughout his academic career, Dr. Shompole has had three sources of support. He began his studies as an SR-CRSP trainee then developed a research project for his doctoral work that was of interest to another USAID-funded project at WSU. As he began his doctoral thesis research, he won a Rockefeller Foundation African Dissertation Internship Award.

He has continued his association with animal health research in Kenya, as have all of WSU's SR-CRSP supported students. He is now WSU's main scientific collaborator in Kenya as part of his duties as chief of a biotechnology and immunology laboratory at KARI. His research has resulted in presentations at international scientific meetings and publications in refereed journals.

Dr. Shompole's experience reflects WSU's two-pronged approach to solving small ruminant health problems in Africa. His publications indicate his contribution to the first effort, which is the conduct of scientific research that is moving toward development of vaccines against common infectious agents that afflict small ruminants. His current position as director of a laboratory in Kenya is representative of the success of the second approach- infrastructure development through training of the next generation of veterinary scientists in Kenya.

as

**Agus Mulyadi N.**

Citizenship: Indonesia

SR-CRSP Program: Winrock International  
Agricultural Economics

MS, Agricultural Economics, Texas A&M University 1993

Ph.D., Agricultural Economics, University of the Philippines, Los Banos, 1991

Current Position: Economics Resident Scientist, SR-CRSP, Indonesia

After graduating from Texas A&M Dr. Mulyadi worked as a researcher at the Central Research Institute for Animal Science (CRIAS) in Bogor, Indonesia. In relation to SR-CRSP, he was assigned as Co-PI of the economics program. In the mean time, he was on a technical team for Upland Agriculture and Conservation Project in South Sumatra, and head of data analysis at CRIAS. He wrote several papers and published in a number of Indonesian Journals. Dr. Mulyadi, as a consultant with Touche Ross Management Consultants, Jakarta, Indonesia, participated in the evaluation of Government Bank credit for feed mill factories in East Java.

Currently, Dr. Mulyadi, is in charge of several farming systems research projects in CRIAS. He has developed an integrated farming systems plan for East Nusa Tenggara which includes livestock (sheep, cattle, and native chickens). His plan will increase small farmers income in that area. The package looks promising to increase small farmers income as expressed by adoption of the package by farmers. Dr. Mulyadi is a member of the Science and Technology Committee of CRIAS and a graduate advisor to students in Agricultural Economics at Bogor Agricultural Institute (IPB). In 1992, he was appointed Secretary General of a World Bank project, the Research Extension Linkage Program, in the Agency for Agricultural Research and Development (AARD). In April, 1994, the SR-CRSP selected Dr. Mulyadi for the Economics Resident Scientist at Sungai Putih, North Sumatra. He is developing a model to determine the optimum small ruminant flock size for North Sumatra.

**Patterson P. Semenye**

Citizenship: Kenya

SR-CRSP Program: Winrock International\*  
Production Systems

\*The production systems project at Winrock did not engage in sponsoring any students in their formal degree training, however the resident scientists at the SR-CRSP in Kenya have had a significant impact on the lives of people in Kenya through informal training and experience offered to them by the SR-CRSP..

BS, Agriculture, University of Nairobi, Kenya

MS, Animal Science, Utah State University

Ph.D., Animal Production, University of Nairobi, Kenya

Current Position: Production Systems, Resident Scientist, SR-CRSP Kenya

From 1973 to 1975 Dr. Semenye worked with the Ministry of Agriculture as an extension officer responsible for Uasin Gishu District. He was then transferred to the Sheep and Goat Development Project as co-manager. After two years he resigned to take on the position of animal scientist with the International Livestock Center for Africa (ILAC). In September 1986 he was hired by Winrock International as a resident scientist until the present.

Contribution/Impact

1. Author of the first book in Kiswahili (working language of Kenya) on sheep and goat production. The book was very well received.
2. As part of his work with the SR-CRSP, Dr. Semenye discussed small ruminants, particularly goats, on Kenyan television and radio. Through these presentations he was able to clarify misconceptions of policy makers, environmentalists, extension agents and farmers concerning the environmental impact of goats. As a result, Kenyans today no longer feel goats degrade the environment.. In recognition of this contribution, small ruminants are ranked third by KARI in the National Agricultural Research Program (NARP II). In addition many private voluntary organizations (PVOs) have a component of small ruminants in their development agenda.
3. The dual purpose goat (DPG) is today a household name in Kenya. Currently the DPG's being evaluated, a doe/kid unit is generating a net profit of \$16.98 per year. This is significant in a country where GNP per capita is \$300.00.
4. Experienced gained from the SR-CRSP enabled Dr. Semenye to serve as technical expert on small ruminant farming systems for ILCA, World Vision, World Bank, FAO, UNDP and CIMMYT.
5. Through networking of SR-CRSP and personal invitations, he has extended the farming systems research approach with the dual purpose goat as the intervention in Tanzania, Ethiopia, Zimbabwe, Uganda and Malawi.

Publications

2 books, 7 refereed journal papers, and 30 other proceedings and scientific papers.



(SRNET)

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Our Ref: SRNET/00180/94

20 July 1994

Dr. L. D. Swindale  
CRSP Evaluation Team Leader  
C/O Dr. W.P. Warren  
USAID, G/EG/AGR/AP  
Room 420, SA-18  
Department of State  
Washington, D.C. 20523-1809  
U.S.A.

Sir,

Re: EVALUATION OF THE US COLLABORATIVE RESEARCH SUPPORT  
PROGRAMS (CRSP)

Following extensive review of and discussion on your CRSP evaluation instrument on the request of the DG of ILCA, I am pleased to present a brief consensus opinion of the Steering Committee of the African Small Ruminant Research Network (SRNET). SRNET is a NARS-ILCA network associated with the coordination and promotion of small ruminant research, training and information exchange on the African continent. Its members in Kenya and Morocco, including some Steering Committee and founding members, have been associated with the SR-CRSP programmes in these host countries over the past years.

In addition to the consensus opinions expressed in answering the questions in the evaluation instrument, the Steering Committee agreed:

1. That SR-CRSP has been very beneficial in:
  - a) promoting the awareness of the important but neglected small ruminant sector of the agricultural spectrum of most LDCs;
  - b) capacity building in the NARS through its collaborative research, training and information exchange efforts;

- c) infrastructural building in the NARS;
  - d) establishing and encouraging effective research management and accountability procedures;
  - e) establishing sustainable linkages between US institutions/scientists and those of the HCs;
  - f) developing appropriate techpacks for the benefit of researchers, extension services and the resource poor (women and children) associated with small ruminant production/keeping.
2. That based on these benefits:
- a) the Steering Committee supports the continuation of CRSP (especially SR-CRSP) programmes in Africa and other LDCs;
  - b) that CRSP be implemented on regional basis with a lead country and not on country basis for greater impact;
  - c) that because of its holistic approach, that funds be provided on a longer-term (10-20 years) basis for the development of appropriate techpacks.
3. That for cost effectiveness and to minimise duplication of efforts, that other stakeholders (IARCs, NGOs and existing networks) in the region be consulted or involved more extensively than done presently, in the programme planning, priority setting and even execution where possible.

I hope these contributions will be of assistance to you and others concerned in reaching your decisions on the next phase of CRSP.

Thanks for giving us the opportunity to assist in your decision making.

Yours sincerely

  
Prof. S.H.B. Lebbie  
(Coordinator, SRNET, for SRNET Steering Committee)

CC: Dr. Hank Fitzhugh, DG, ILCA

EVALUATION OF THE U.S. COLLABORATIVE RESEARCH  
SUPPORT PROGRAMS (CRSP)

EVALUATION INSTRUMENT

E. INTERNATIONAL AGRICULTURAL RESEARCH CENTERS

Title of IARC: ILCA AFRICAN SMALL RUMINANT RESEARCH NETWORK (SRNET)

Year of Initial Involvement: \_\_\_\_\_

Names of General Directors and Years of Service:

Current: DR. H. Fitzhugh Years 1 YEAR

Past: DR. John Walsh, 1987-1993

Names of Respondents: PROF. SAHR H. B. LEBBIE,  
COORDINATOR, AFRICAN SMALL RUMINANT RESEARCH  
NETWORK (SRNET).

1. What is your understanding of the goals and objectives of the CRSP:

a. Goals and objectives: TO PROMOTE SUSTAINABLE SMALL RUMINANT  
RESEARCH AND PRODUCTION IN DEVELOPING COUNTRIES  
THROUGH COLLABORATIVE RESEARCH AND TRAINING

b. Are they realistic (why): YES. THESE PROGRAMME APPROACH ALLOWS  
FOR PARTICIPATION AND CAPACITY BUILDING BOTH OF WHICH  
ARE VITAL ELEMENTS FOR IMPACT & SUSTAINABILITY OF EFFORTS.

2. Is the CRSP providing the types of research, training, and technical progress most needed in your subject matter area to address priority global problems in sustainable agricultural production and utilization of food crops, livestock, fisheries, and natural resource management, etc.:

a. In US: ??

b. In LDCs: THE INTEGRATED PROGRAMMES DEVELOPED <sup>BY</sup> CRSP  
IN COLLABORATION WITH HOST INSTITUTIONS ARE WELL FOCUSED  
AND SUITABLE FOR THE PRODUCTION SYSTEMS GENERALLY  
FOUND IN LDCs. IN KENYA AND MOROCCO FOR EXAMPLE,  
TECHNICAL PROGRESS AND CAPACITY BUILDING ARE THE  
EVIDENCE OF CRSP'S IMPACT.

3. How does the CRSP complement on-going research of International Agriculture Research Centers (IARCs) and national agriculture research systems (NARS):

IARCS ARE INVOLVED IN STRENGTHENING NARS INSTITUTIONS FOR SUSTAINABLE DEVELOPMENT IN AGRICULTURE, BUT IARCS CANNOT COVER THE DIVERSE AND COMPLEX <sup>RESEARCH</sup> PROBLEMS IN THE NARS WITH THEIR LIMITED FINANCIAL & HUMAN RESOURCES. NARS GENERALLY HAVE LIMITED RESOURCES FOR RESEARCH. THUS INPUTS FROM CRSP IN THIS AREA SOMEHOW ADDRESS THE LIMITATIONS OF IARCS AND NARS.

4. Is the CRSP supporting strategies and agendas developed through a functioning network process that insures realistic and effective research efforts (explain):

Yes. In Kenya, the strategies and agendas are a consensus of the HC institutions and the collaborating US institutions. National institutions will normally address top priorities areas as will the US collaborating institutions. The output and progress of the Kenya programme indicate realistic and effective research efforts.

5. Is the CRSP research program designed to address multi-sectoral, biological, physical, social and economic constraints (explain):

THE HOLISTIC APPROACH IN CRSP RESEARCH PROGRAMME IN KENYA AND MOROCCO ALLOWED CRSP TO ADDRESS MULTI-SECTORAL CONSTRAINTS. THIS IS PARTICULARLY IMPORTANT BECAUSE OF THE INTEGRATED AND COMPLEX NATURE OF THE FARMING SYSTEMS IN THE LDCs.

6. How critical is the CRSP in assisting the developmental process within the food and agricultural sectors:

a. In CRSP collaborating countries: VERY CRITICAL. SA-CRSP FOR EXAMPLE IS INVOLVED ADDRESSING A SECTOR OF AGRICULTURE THAT IS VERY VITAL TO THE LIVELIHOOD OF THE RESOURCE POOR BUT NOT GIVEN THE NEEDED ATTENTION.

b. In a global context: IF CRSP EFFORTS CAN INCREASE FOOD PRODUCTION IN LDCs, WHERE SHORTAGES ARE A CONCERN, THEN CRSP IS ~~VERY~~ A VERY CRITICAL LINK IN THE GLOBAL FOOD SECURITY ISSUE.

7. What types of formalized cooperative agreements exist between US collaborating institutions, HC institutions and the IARCs:

AS FAR AS IARCS <sup>THERE</sup> ARE CONCERNED, THERE EXISTS NO FORMAL COOPERATIVE AGREEMENT WITH UCI. HOWEVEr MOST IARCS HAVE MOUS WITH MOST ~~AREAS~~ HC INSTITUTIONS FOR COLLABORATION IN IARC-NARS OR IARCS PROGRAMME IMPLEMENTATION EITHER THROUGH IARC NETWORKS OR DIRECTLY ~~OR~~ BY CONTRACT.

8. What are the assurances that CRSP funded science is addressing high priority development needs or problems in LDCs and US:  
IN THE LDC, CRSP FUNDED PROGRAMMES ARE PLANNED AND IMPLEMENTED BY US COLLABORATING INSTITUTIONS AND THE HC INSTITUTIONS. THIS PARTICIPATORY APPROACH ENSURES THAT PROBLEMS ADDRESSED ARE HIGH ON THE AGENDA OF ALL CONCERNED
9. To what extent are social science disciplines integrated into CRSP activities:  
THE SRCASP PROGRAMMES IN KENYA AND MOROCCO HAVE ADDRESSED ANTHROPOLOGICAL AND SOCIO-ECONOMIC SECTORS OF THE AGRICULTURAL SPECTRUM.
10. What evidence exists to document that new knowledge has been generated from CRSP activities:  
THE DEVELOPMENT OF THE HIGHLY DEMANDED DUAL PURPOSE GOAT IN KENYA AND THE DEVELOPMENT OF SMALL HOLDER FARMING FEEDING SYSTEM ARE TWO OF MANY EXAMPLES
11. How is the joint US/HC research/IARC collaboration exemplified in reports, articles and other outputs and results of CRSP activities:  
THROUGH ~~IS~~ JOINT ANNUAL SCIENTIFIC MEETINGS AND JOINT PUBLICATION OF FINDINGS, AS IS USUAL THE CASE WITH THE SRCASP IN KENYA AND WHERE THE ANNUAL SCIENTIFIC MEETINGS ARE CONTRIBUTED TO BY US/HC RESEARCH/IARC AND SRNET.
12. What and how are the collaborating international centers providing in-kind contributions to the CRSP for each year of USAID funding:
- a. Year            Value of Contributions
- |             |                  |
|-------------|------------------|
| <u>1990</u> | <u>Man Hours</u> |
| <u>to</u>   | <u>"</u>         |
| <u>1994</u> | <u>"</u>         |
- b. What is being provided as in-kind: INVOLVEMENT OF IARC STAFF IN PROGRAMME DEVELOPMENT, MONITORING AND EVALUATION EXERCISES.
13. How can CRSP projects continue and be supported in countries with no USAID country mission: THROUGH REGIONAL PROGRAMMES APPROACH RATHER THE CURRENT COUNTRY APPROACH SUCH THE MOROCCO AND THE KENYA EXAMPLE.

14. What specific changes in farming, processing, or other commercial practices have occurred as a result of CRSP activities:
- a. Examples: IN KENYA, THE PROMOTED DEVELOPMENT OF THE DPG HAS PROMOTED THE KEENNESS DEMAND FOR DAIRY GOATS IN THE FARMING SYSTEM. THIS INTEN IS PROMOTING THE CUT-AND-CARRY SYSTEM OF FEEDING IN THE RURAL COMMUNITIES. MANY DAIRY GOAT PROJECTS NOW EXIST IN KENYA.
- b. What was time between start of research and initiation of change: ABOUT 8-9 YEARS
15. What baseline or benchmark data exist to determine future impacts or trends in quantifiable measurable terms (explain):
- a. In CRSP collaborating countries: On-farm and On-station research data and tech packs related to integrated development of the K.D.P.G.
- b. In non-CRSP foreign locations: Publications and reports emanating from the location work in Kenya.
16. What have been the indirect or "causality" impacts of the CRSP (explain):
- a. In CRSP collaborating countries: INFRASTRUCTURAL IMPROVEMENT AND DEVELOPMENT; CAPACITY BUILDING FOR RESEARCH, Better accountability.
- b. In non-CRSP foreign locations: INFORMATION EXCHANG THROUGH PUBLICATIONS AND SCIENTIFIC MEETING THAT COULD PROMOTE RESEARCH IN SUCH LOCATIONS; SPILL-OVER EFFECTS.
17. What additional changes or measurable impacts have occurred from the adoption or use of CRSP research findings or output products since the initiation of the CRSP:
- IN KENYA, SRCRSP EFFORTS HAVE PROMOTED THE HABIT OF GOAT MILK CONSUMPTION AMONG COMMUNITIES THAT DID NOT CONSUME GOAT MILK BEFORE.
18. What are the "lessons to be learned" from your CRSP activities:
1. PIs from collaborating US institutions should be equal if not better in competence to their HC counterparts for effective contribution
  2. Since the CRSP thrust is to help LDCs, more of the programme grant should be utilized in the HC than in the US.
19. How has the CRSP effected the level of competence and productivity to identify constraints, plan and conduct agriculture research, and to scientists and institutions in developing countries:
- The direct involvement of LDC scientists in the planning and implementation of the programmes and the training of LDC scientists all contribute to institution building in LDCs to plan and conduct research effectively.

The infrastructural development and building associated with CRSP programmes also help to strengthen capacity of LDC institutions to conduct research and provide the necessary training.

20. How and to what success are CRSP research results being extended to the target groups and clientele (explain):

1. The SRCRSP in Kenya and Morocco have involved farmers (the target group/clientele) in the on-farm research aspects of their programmes

2. The HC extension services are also involved in some of the programmes. Additionally, they attend the scientific meetings to share the findings of the research projects and receive the publications on the selected work which all are used in their extension services.

21. How effective is the dissemination of technological information and how can it be improved in the future:

a. How effective: Very effective at the locations of the projects; Also very effective where extension office services reach; Publications are not yet effective for the target group, most of whom are illiterate.

b. How to improve: 1. Improve extension services to cover more area. 2. Non-technical publications and use of radio and television could have additional benefits.

22. What is the availability of CRSP-funded results:

Easily available → proceedings, reports etc. are provide free-of-charge at meetings, libraries and on request.

23. How can the CRSP most effectively provide benefits to potential end-users in non-CRSP countries:

1. Regional Scientific meetings rather than local as currently done

2. Sending their results and technology information to relevant sectors of non-CRSP countries.

24. What primary and secondary factors should be considered when deciding to expand, continue or terminate a CRSP (explain):

a. Primary factors: 1. The need. 2. Lessons of past CRSP efforts 3. The potential for impact. 4. Stability.

b. Secondary factors: 1. Funds (Agreed programmes should determine funding level and not vis-à-vis). 2. HC capacity to effectively participate (human resources, infrastructure etc).

25. Are the research results and training appropriate to benefit the target groups (explain):
- a. Research results: The linkages developed so far (Feeds, health, socio-economic, breeding etc) are fairly adequate on the terms especially the DHI itself and the feeding method.
- b. Training results: Besides farmer participation in the on-farm research, their participation at field days, shows and informal training was essential for their appreciation and eventual adoption of output of the CRSP programmes.
26. How has the CRSP developed new knowledge through collaborative research and who applies it to create impacts (explain):
- a. New knowledge: In Kenya, the farming systems approach methodologies developed for the high potential smallholder areas form a relevant data information base for other researchers and extension services.
- b. Users: The users are mainly other researchers, development agents and the extension services.
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27. How has the CRSP established long-lasting networks between U.S. and host country research institutions and scientists (explain):
1. The linkages developed between US Collaborating Institutions and HC institutions will stay even at the end of CRSP programs.
2. The personal professional contacts brought about by CRSP between scientists in US and HC will remain at the end of CRSP programmes.
28. How does the CRSP network with IARCs and National Research Centers to complement research work and avoid duplication of effort:
- a. IARCs: 1. Joint planning and execution of programmes  
2. Where joint planning is not possible, information is shared on on-going or planned programmes.
- b. National research centers: Joint planning and execution of programmes.
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29. How do expatriate resident scientists (full-time in host country) hamper or enhance the development of local leadership, program development, and sustainability (explain): Competent expatriate resident scientists in HC provide relevant scientific and leadership backstopping to the programme as long as they do not cost too much to keep. Where relevant expertise is locally available, then a full time expatriate resident scientist will definitely hamper development of local leadership and bring frustration.

30. Since Institutionalization of program activities is critical to long-term sustainability, how effective has the CRSP been in this regard and what are future prospects:
- a. Effectiveness with examples: The involvement relevant host country institutions, e.g. KARI, MORD and MOA in Kenya, in the collaboration and the signing of MOU with HC was vital to the sustainability of CRSP
- b. Future prospects: These are very bright as KARI and SRCRSP are now integrated. Thus while financial <sup>in Kenya</sup> constraints may not allow for the continuation of all programmes some vital ones e.g. the distribution of KDPs and health prog. will continue.
31. How effectively has the CRSP addressed gender issues and integrated women into their activities:
- a. How integrated in US: ??
- b. How integrated at foreign sites: SRCRSP has opened <sup>equal</sup> opportunities for women, especially in the area of training and research.
- c. What baseline data exists: Over 10 Kenya Women Scientists have received post-graduate training through SRCRSP programme in Kenya; At the farm level, women and children from the core of the on-farm SRCRSP programmes
32. How are women and children reached by and benefitted from CRSP-supported activities:
- a. How reached: On-farm research and extension programmes
- b. How benefitted: 1. Participate in the on-farm technology tests and development 2. Recipients of the KDPs and associated technological packages.
33. What are the principle strengths and weaknesses of the CRSP concept and its application to other research programs:
- a. Strengths: 1. Multi-disciplinary approach, 2. Holistic approach to problem addressing, 3. Good accountability procedures.
- b. Weaknesses: 1. Location specific and not regional 2. Relatively short-term duration, especially for breeding programmes. 3. No strong links with IARCs and relevant institutions, e.g. regional or national networks e.g. SANET.
34. Has a trend developed recently to shift funding priorities from long-term (10-20 years) to short-term research (1-5 years): NO!
- a. Contributing factors for length of research: 1. On-farm implications and gaps 2. Delays in initiating research due to logistic problems 3. Unexpected circumstances e.g. changes in policies, political instabilities; natural catastrophes etc.

b. Desired length(s) of research to fund: 10-20 years  
for an integrated systems approach to be  
able to come out with effective tech packs.

35. How effective is the current planning process:

a. Strengths: Focus and flexibility.

b. Weaknesses: ??

36. What are the incentives, benefits and problems for US and HC institutions to participate actively in CRSP projects:

a. Incentives: For HC Institutions: 1. Professional development opportunities  
2. Opportunities to contribute to knowledge and development.

b. Benefits: 1. Capacity building 2. Professional contacts and linkages  
3.

c. Constraints: 1. Limited funds 2. Lack of sustainable funding  
3. Limited expertise in small HCs.